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Editor of "The Century Book of Facts," "The Capitals of the World," "Leaders of Men," "The Standard Dictionary of Facts," "Masters of Achievement," etc.

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PREFATORY

NO argument from any one need be adduced to emphasize the importance of good books. Every home and almost every individual feel their necessity as completely as that of food, clothing and shelter. The chief difficulty is that there are so many books in the world, and so diffuse, that the essential facts contained in them must of necessity be epitomized and condensed to meet the requirements of the present day. Otherwise it would be impossible for the average reader or consultor to gain the help and mental sustenance from them that they should yield because of the time, energy and outlay involved in collecting, reading and digesting a large number of volumes.

We of the present day have a rich heritage in this recorded knowledge of all countries and ages. It is the common property of mankind. Such facts belong to no individual nor set of individuals. No gloss of language nor deftness of paraphrase can re-create them into individual property. They are for all—the birthright of all; and no compiler, collater or editor can do a more important service than that of rendering them available for common use.

The Volume Library is an honest effort to compress within reasonable compass the vital, digested, practical essentials of this vast mass, adapted to the wants of a great variety of learners of varying degrees of intellectual growth. To do this, the editor has called to his aid many of the most distinguished specialists, who have prepared articles on important subjects in accord with the general design of the work. This combination of educational specialists, supplementing the editor's own experience of nearly two decades in preparing this type of books, has achieved results that, it is believed, have been hitherto unattained. At least, the quick and usually unerring judgment of practical minds in many different spheres of activity have so pronounced.

The aim of the volume is intensely practical. It is a book of facts and principles, with so much of their application as a "decent respect for the opinions" of others will permit.

The classification followed seems to be that dictated by practical needs and demands; certainly no other has been as acceptable to the large clientage of the editor's previous works of this class; and it is still more certain that no classification has ever been devised that has been entirely satisfactory to every one.

BOOK I. gives special attention to the practical aspects of education in the home and school. The kindergarten, primary education, secondary education, vocational education and higher education, have each been treated by master educators in a most helpful manner.

BOOK II. is a concise, comprehensive treatment of essential subjects and facts in the field of arts and sciences. It contains numerous valuable tabulations and other special features connected with history, language, literature, biological and physical science, philosophy, fine arts, religion and music.

BOOK III. deals in a clear and practical manner with government and law: first, with government in general, and more minutely with the governments of the United States and Canada. Then follow a classification of law, the essentials of business law, labor law and legislation, and a digest of parliamentary law.

BOOK IV. is a luminous treatise on the mechanism of trade and industry by skilled specialists. It deals specifically with the great basic industries—agriculture, manufacturing, mining, fisheries, forestry—as well as with the economics of business, commerce and finance.

BOOK V. is a comprehensive gazetteer of the world, and comprises physiography, statistics, and descriptive, political, economic and commercial geography.

BOOK VI. brings into alphabetic arrangement numerous familiar facts, and side lights relating to history, geography, science, engineering, social customs, useful arts, statistics, unusual occurrences etc., which have a wide range of interest because so freely demanded in everyday inquiry.

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BOOK IX. is a multiplex dictionary comprising, in addition to the usual features of our best concise dictionaries, the syllabication and pronunciation of words; synonyms and antonyms; and the origin of personal, geographical and curious names.

Of special interest and usefulness are the helpful bibliographies scattered throughout the volume, numerous text illustrations and the fine plates in color and sepia.

The various features combined in one volume constitute the essence of a veritable library; and in point of practical use, comprehensiveness, range of topics, clear and approved classifications, graphic presentation of facts, quick reference, and thorough up-to-date-ness it will be found an adequate equivalent for several hundred or more books. Indeed, as many thousand, almost, have been drawn upon in its preparation, in addition to the special contributions contained.

It is impossible that the early editions of the Volume Library should be without error, typographical and otherwise. We shall esteem it a special favor, therefore, to have our attention called to any real or supposed inaccuracies in order that they may be investigated and corrected in future editions.

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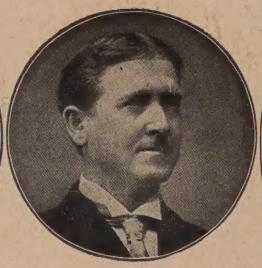

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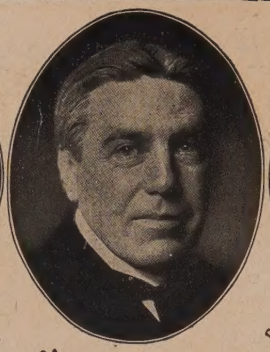

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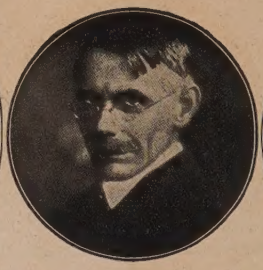

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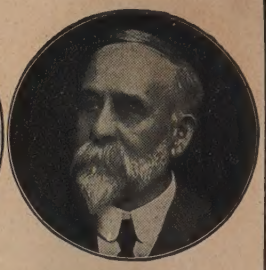

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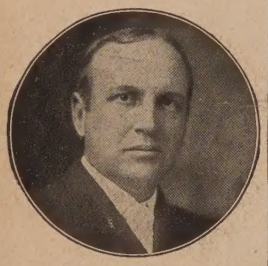

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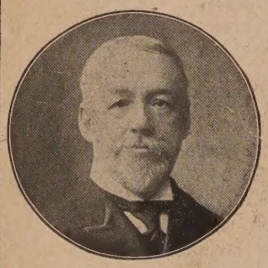

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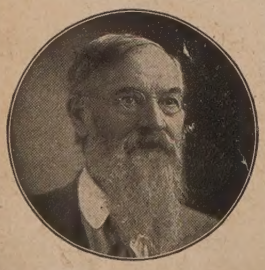

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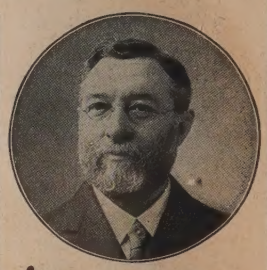

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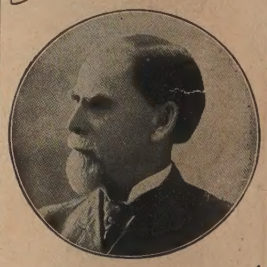

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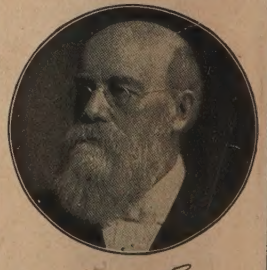

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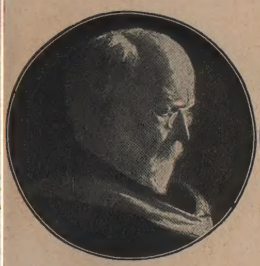
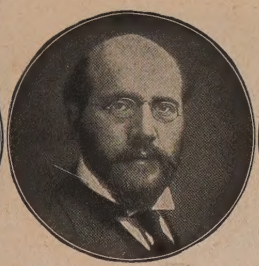
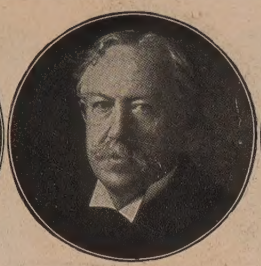
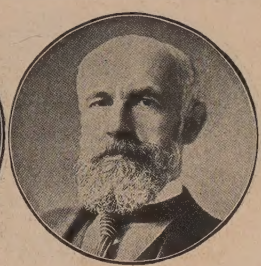

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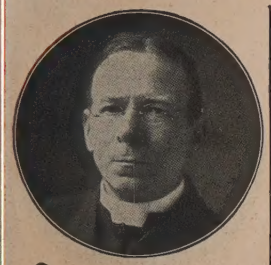

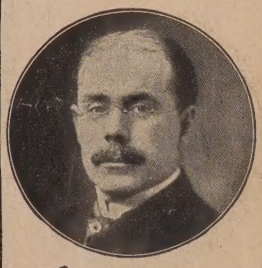

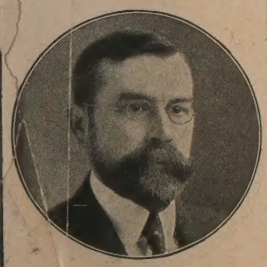

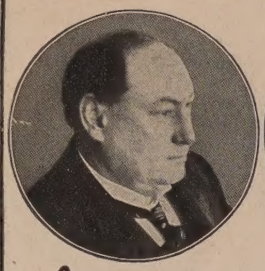

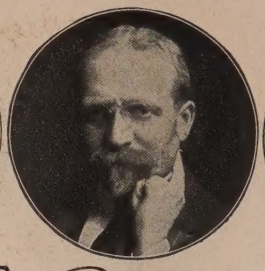
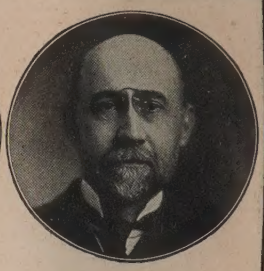

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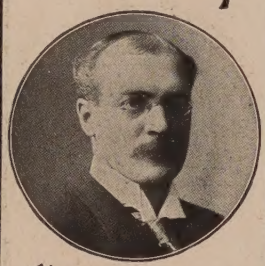

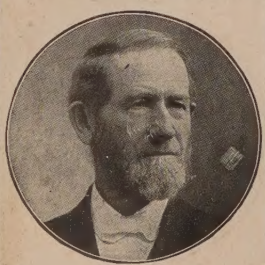
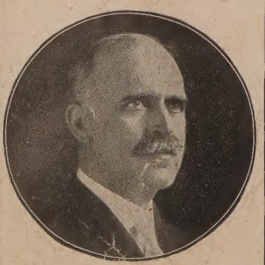

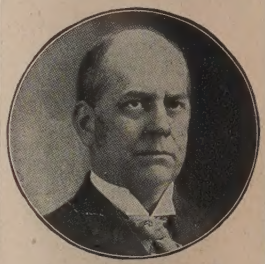
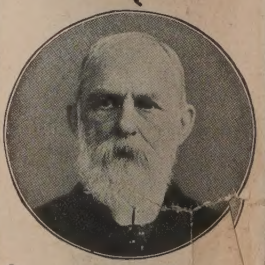
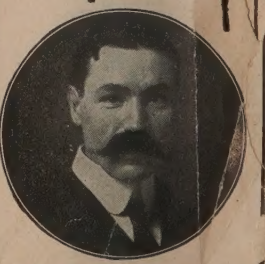

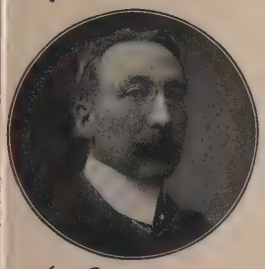

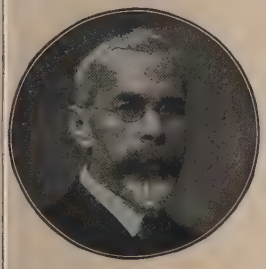

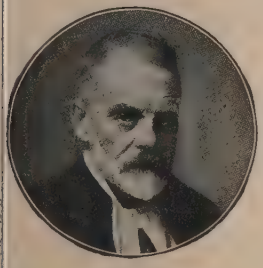

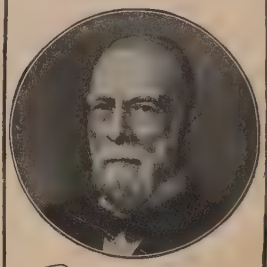

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Part VIII. Dictionary of Education and Educational Ethics. ABSTRACT AND CONCRETE; ACADEMY: French Academy; British Learned and Scientific Societies; Canadian Societies; American Societies; Alexandrian Library; Alexandrian School; Alphabet; Analytic Method of Teaching; Liberal Arts; Attention; Authority; Bachelor; Belles-Lettres; Schools of Benedictines; Bible History; Brain; Business Colleges; Calisthenics; Carnegie Institution; Chautauqua Institution; Co-education; College. COLLEGES AND UNIVERSITIES: Of the United States; Colleges for Women; Schools of Technology; Foreign Colleges and Universities. COLLEGE FRATERNITIES: General Fraternities for Men; Sororities; Medical Fraternities; Legal Fraternities. Commencement; Convent Schools; Cooper Union; Corporal Punishment; Correspondence Schools; Cramming; Deaf Mutes; Debating; Declamation; Dictation; Didactics; Discipline; Drill; Duty. OUTLINE OF EDUCATION: Elocution; Emotions; Emulation; Encouragement; Enthusiasm; Evening Schools; Faculty; Fellow; Genetic Method; Grammar Schools; Gymnasium; Habit; Humanities; Illiteracy; Illustration; Imagination; Individuality; Inductive Method; Instruction; Interest; Intuitive Method; Training of Judgment; Lecture System Liberal Education. LIBRARIES: Public Libraries; Foreign Libraries; Libraries of the United States; Library of Congress. Manners; Memory; Mischievousness; Moral Education; Newspapers and Periodicals; Object Teaching; Order; Patience; Pedagogy; Peabody Education Fund; Perseverance; Phonic Method; Physical Education; Pictures; Play; Praise and Blame; Precocity; Psychology; Recitation; Religious Education; Rhodes Scholarships; Scholasticism; School Management; Self-Command; Self-Control; Selfishness; Slater Fund; Smithsonian Institution; Sympathy; Teacher's Institute; Temper; Temperament; Truthfulness; University; University Extension; Vanity; Pride; Self-Esteem; Voice; Will 69

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Part II. Language. CLASSIFICATION OF LANGUAGES; Indo-European or Aryan Family; Semitic; Hamitic; Ural-Altaic or Scythian; Malay-Polynesian; Dravidian; Bantu; American; Australian; Isolated Languages; Universal Languages. PRACTICAL ENGLISH: Structure of Composition as a Whole; Structure of the Paragraph; Diction; Punctuation and Capitals; Proofreading; Argument and Debate; Forms of Public Speech; Journalism and Short Stories; Business English; Letters. DICTIONARY OF HOMONYMS; DICTIONARY OF WORDS FREQUENTLY MISUSED; DICTIONARY OF PREPOSITIONS; DICTIONARY OF ABBREVIATIONS, CONTRACTIONS AND DEGREES; DICTIONARY OF FOREIGN WORDS AND PHRASES: From the Classic Languages; Modern Languages; Culinary Words and Phrases 202

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Part III. Literature. GENERAL DEFINITION, ENGLISH LITERATURE: Anglo-Saxon Period; Norman-French

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Part IV. Science. CLASSIFICATION OF SCIENCES: Concerning the Heavens; the Earth; Mass and Force; Molecules and Lesser Divisions of Matter; Living Organisms; Plants; Lower Animals or Concerning Man as an Organism; Man as a Member of Society; Exact Sciences. AERONAUTICS AND AVIATION. ASTRONOMY: Sub-divisions; Solar System; Sun; Moon; Planets; Comets; Meteors; Stars; Nebula; Table of Stars and Constellations; Cosmogony. BACTERIOLOGY: Scope; Biology of Bacteria; Habitat of Bacteria; Alimentary Canal; Relation to Food; Bacteria in Milk; Relation of Bacteria to Disease. BOTANY: Departments of Modern Botany; Cytology; Histology; Morphology; Physiology; Pathology; Ecology; Phytogeography; Phylogeny, and Taxonomy. Outline of Taxonomy, or Classification of Plants. CHEMISTRY: Substances; Physical Properties; Chemical Properties; Chemical Reaction; Molecular Hypothesis; Qualitative Analysis; Quantitative Analysis; Valence; Formulae; Thermochemistry; Electrochemistry; Photochemistry; Physical Chemistry; Inorganic Chemistry; Organic Chemistry; Chemical Elements. Chemistry of Foods. ENTOMOLOGY. ETHNOLOGY: Subdivisions; Origin of Men; Unity of Mankind; Man's First Home; Migration; Races; Classification; Race Characteristics; Four Great Races; Geographical Distribution; Table of Ancient Human Remains; Table of European Peoples; Table of Asiatic Peoples. GEOLOGY: Departments or Phases; Agencies or Forces; Outlines; Table of Geological Time Divisions; Earth Materials; Origin of the Earth. MINERALOGY: Relation to Geology; Classification of Minerals; Precious Stones. ORNITHOLOGY: Place in Natural History; Classification of Birds. PHYSIOLOGY AND HYGIENE: Cells; Muscular System; Osseous System; Nervous System; Sympathetic System; Foods; Circulatory System; Respiratory System; Excretory System; Reproductive System. HYGIENE: Cause of Sickness: How Disease Germs Are Scattered; Food as a Source of Infection; Disease Conveyed by Insects; Prevention of Disease: Disinfection; Purifying Water; Preventing Tuberculosis; Keeping Germs Out of the Body; Vaccination; Antitoxins; Pasteurized Milk; Mastication; PHYSICS: Electricity: Static Electricity; Electric Currents; Thermal Electricity; Electromagnetism and Magnetism; Batteries; Distribution; Alternating Current Systems; Electrical Generators; Dynamo; Electric Lighting; Telegraph; Telephone; Electric Motors; Electric Furnaces and Heaters; Wireless Telegraphy; X-rays and Electrotherapeutics; Electric Units of Measurement; Sources of Electrical energy; MECHANICS: Dynamics; Statics; HEAT: Combustion; LIGHT; Color; SOUND. ZOOLOGY: Subdivisions; Table of Principal Groups of the Animal Kingdom; Protozoa; Metazoa; Mollusca; Anthropoda; Chordata. DICTIONARY OF ANIMALS. WEIGHTS AND MEASURES: Systems in General Use; English System; Metric System; Measures of Length, Capacity, Surface, and Weight; Measures of Time; Temperature Scales; Barometric Measurements; Weights and Measures of the Bible; Approximate Equivalents of Metric and English Systems; Force of Winds; Specific Gravity Table; Foreign Weights and Measures 321

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Botany.—*See* at close of section on Botany.

Chemistry.—Remsen: *Introduction to the Study of Chemistry* and *Inorganic Chemistry.* Roscoe: *Lessons in Elementary Chemistry.* Wurtz: *Elements of Modern Chemistry.* Ostwald: *Inorganic Chemistry.* Alexander Smith: *Laboratory Outline of General Chemistry* and *General Inorganic Chemistry.* Wiley: *Chemistry of Foods* and *Agricultural Chemistry.* Roscoe and Schorlemmer: *Treatise on Chemistry.* Watts: *Dictionary of Chemistry.* Thorp: *Industrial Chemistry.*

Entomology.—Comstock: *Insect Life.* Packard: *Text-Book of Entomology* and *Guide to Study of Insects.* Howard: *The Insect Book.*

Ethnology.—Prichard: *Researches Into the Physical History of Mankind.* Latham: *Natural History of the Varieties of Man.* Waitz: *Anthropology.* Darwin: *The Descent of Man.* Huxley: *Essays* and *Man's Place in Nature.* Quatrefages: *Classification des Races Humaines.* Peschel: *The Races of Man.* Tylor: *Anthropology.* Lubbock: *Prehistoric Times.* Ratzel: *History of Mankind.* Keane: *Ethnology* and *Man, Past and Present.* Deniker: *The Races of Man.* Hutchinson: *The Living Races of Mankind.*

Geology.—Dawson: *Story of the Earth.* Lyell: *Principles of Geology.* Geikie: *Primer of Geology.* Shaler: *Sea and Land.* Scott: *Geology.* Geikie: *Text-Book of Geology.* Chamberlin and Salisbury: *Geology.* Le Conte: *Elements of Geology.* Dana: *Manual of Geology.*

Mineralogy. — Miers: *Mineralogy.* Dana: *Text-Book of Mineralogy* and *System of Mineralogy* (most comprehensive work in English). Brush and Penfield: *Determinative Mineralogy.* Rosenbusch-Iddings: *Rock-Making Minerals.* Hatch: *Petrology.* Butler: *Pocket Handbook of Minerals.*

Ornithology.—Newton: *A Dictionary of Birds.* Headley: *The Structure and Life of Birds.* Wilson: *American Ornithology.* Audubon: *Ornithological Biography.* Coues: *Key to North American Birds.* Chapman: *Handbook of Birds of East North America.* Bendire: *Life Histories of North American Birds.*

Physiology and Hygiene.—Davison: *Human Body and Health.* Martin: *Human Body.* Huxley and Youmans: *Elements of Physiology and Hygiene.*

Physics.—Ames: *General Physics.* Ames and Bliss: *Manual of Experiments.* Hoadley: *Measurements* in *Magnetism and Electricity.* Preston: *Theory of Heat* and *Theory of Light.* Poynting and Thomson: *Heat.* Tyndal: *Light.* Schuster: *Theory of Optics.* Barker: *Physics.* Merrill: *Theoretical Mechanics.* Helmholtz: *Sensations of Tone.* Kapp: *Electric Transmission of Energy.* Crocker: *Electric Lighting.* Sewell: *Elements of Electrical Engineering.* Jackson: *Elements of Electricity and Magnetism* and *Alternating Currents and Alternating Current Machinery.*

Zoology.—Rolleston: *Forms of Animal Life.* Huxley: *Anatomy of Invertebrated Animals* and *Anatomy of Vertebrated Animals.* Lankester: *Treatise on Zoölogy.* Parker and Haswell: *Text-Book of Zoölogy.* Kinsley: *The Standard Natural History* and *Elements of Comparative Zoölogy.*

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CARNATION LILY, LILY ROSE—*Sargent*
AMERICAN SCHOOL

FIELD OF EDUCATION

THE END AND AIM OF EDUCATION.—If the 18,000,000 children of school age in this country were placed in a solid line, it would extend from the northeast coast of Maine to the southwest coast of California, and according to Professor Snyder, all except those that stood in the latter state do not go beyond the grammar-grades. Worse than that, the majority of our citizens and voters have probably not gone much, if any, beyond the end of the sixth grade. Thus the problem of doing the most and best for the grammar-school children is one of profound national importance for the safety and welfare of our country.

The end and aim of education is to develop each individual to the most complete maturity of all the powers of the body and mind. In its larger sense, education begins at birth, or with the marriage of the parents, and we must not forget, that, besides the school, there are more than fourscore different types of child-welfare organizations that are essentially educational, dealing with health, morals, recreation, occupation, religion and all the rest.

An educational system naturally falls into four grand divisions: The first deals with the child up to the dawn of the teens; the second, or intermediate or high school, includes the early, and the third, or collegiate, the later pubescent years; the fourth, or professional, deals with mature young men and women.

Primary Education.—The end and aim of primary education may be divided into (a) special, and (b) general. Under the first come reading and writing. The child who has mastered these arts has access to all the literature in the vernacular. He can transcend his own limits of time and space, and commune with the greatest minds that have left their written records and literature in any age or land. He can become a world citizen and learn from the printed page whatever he will about the life of his own community, state, nation, the world; and from this point on, in some sense, his education is in his own hands.

The point now to be stressed is how to insure that he will read the best, and not the worst, things in print. He has before him the world of letters and books. There is, alas, always the possibility that he will be degraded by reading what is vile and demoralizing, for there is printed matter which anti-vice societies destroy by the ton, which causes a moral decay that is impossible to those who cannot read. A graver danger, because one to which all are exposed, is that of spending their reading time upon the second or tenth best, for print now keeps alive masses of material which would have sunk to oblivion but for the printer's art.

Good Books.—Among the most precious educational agencies are those that determine the content of school readers, advise and list the best books and incite children to read them by means of story telling and libraries in the schoolrooms and arouse and direct the reading habit, which at about the end of the grammar grades reaches the highest point of its curve. At this age, more boys, and especially girls, are liable to have reading crazes than at any other. Hence some have gone so far as to advocate a kind of school Bible or canon so as to make certain that children shall know and feel the uplift of the greatest books that make the world's classic literature, in some epitomized form. By the aid of the story teller's art this ideal is no longer impossible. From the spontaneous reading interest of children, of which there are now several admirable special studies, it would appear that on leaving the grammar grades, each child should have some special reading interest and have acquired the habit of gratifying it in our now universally diffused libraries, to which most children have access.

Arithmetic is the door to mathematics. Although we have doubtless overemphasized it, it is essential that the child command the methods of ready and correct computation which are vital for every vocation. The simple rules of arithmetic and fractions, the laws and tables of mensuration, proportion, the elements of the roots and powers of numbers, with the elements of geometry, but not much of any algebra, should be attained. Fair penmanship and simple composition, with decent command of the English language, are of course essential. The movement to defer writing till the second grade, or the eighth year, is beneficent, and will do much to improve penmanship, while more oral and less written work will tend to give a better command of language, which lives, moves and has its being in the circuit from ear to mouth, and is a dead and lifeless thing on the long circuit from the eye that reads to the hand that writes.

Nature Study, a little school gardening and occupational work, rote singing, which should precede note reading by several years and which cultivates not only the voice but the heart, is now believed to be both possible and desirable for nearly all children.

Geography should begin with the knowledge of the immediate environment perhaps of the schoolroom and widen to the town, the state, the nation and the world, in concentric irradiation, with some map drawing and sand modeling, with industrial, commercial and transportational elements always stressed. This work can often be naturally connected with the industries of the locality, sources of raw material, markets for the finished products, and be helped out by regular school visitations to the principal industries of the town.

History and Civics are vital for citizenship. Both may well begin with the locality, with visits to the city hall and other public institutions of knowledge, the historical monuments and their significance and sentiments inspired by the flag.

Besides these, there should be a margin or fringe of accessory influences pervading the grammar grades. Arbor Day and other holidays should always bring their lessons. There should be, if possible, visits to the reformatory and charitable institutions of the vicinity, and their lessons should be inculcated. Before leaving the grades, every child should have a good repertory of plays and games, and should have some practice in the elements of manual training as introductory to some form of skilled labor. The influence of the school house, room and yard should be made the best possible, and the personal influence of the teacher should culminate in occasional serious and carefully prepared talks upon life and its duties, obligations, social relationships.

At the very beginning of the teens, teachers and systems should recognize the marvelous expansion of energy and the new interests that are awakened and therefore the new methods that are necessary to enlist the best powers of the child.

Intermediate Schools.—Every community should have continuation schools to meet the needs of the thousands of children from thirteen or fourteen to sixteen who have left school and who cannot and perhaps should not find vocational employment. The needs of this class of children are now a great problem, and there is a growing consensus that industrial occupations should be provided for all who want them.

Moral Instruction.—In this critical period of life, habits that will endure are being formed more rapidly than any other. Morals need great attention. There is now a new awakening of the community to the dangers of sex errors, and the need especially for boys, if not also for girls, of some definite and personal instruction along these lines. It is when we consider this aspect of the subject that we realize most keenly the need of more male teachers, especially for boys who in these years experience, consciously or unconsciously, something of revolt against exclusively feminine control whether in the home or the school. Every boy needs a personal mentor such as the Big Brother movement contemplates. He also ought to be looked over by a vocation bureau and given hints at least concerning classes of occupations which he should avoid and those which he can hope to enter with some advantage.

A Sound Body.—Every school child should throughout this period have stated and repeated medical examination. The teeth almost always need attention and irremediable injury may follow if it is wanting. Ears and especially eyes should also be tested. The general condition of each child should be inspected and suggestions to parents and teachers made. In some lands a life and health book is kept, recording the observations of teachers, and the suggestions of physicians concerning regimen, diet, etc. Recent studies by the scores of hundreds show how many children are handicapped for life by defects that could be remedied and diseases that could be avoided. To this end, gymnastics, playgrounds, open-air schools, excursions, school meals, dietaries, free dispensaries and all the other health-giving agencies are now greatly desired.

Secondary Education proper has two ends: (1) to fit for higher institutions, and (2) to fit for life. These two ends are disparate, and should never be confused in the present stage of our educational development. There must be fitting schools, but on a liberal allowance, less than ten per cent of those who enter the high schools will complete college courses. Hence the high school ought to be the people's college, where the work of the grammar grades can be reviewed and much enlarged. At present, vast numbers who enter the high school leave it before the completion of the course, especially at the end of the first year. The high school is the most conservative of all our educational institutions. It is prone to ape the college in its spirit and methods. The ideal should be to fit the boy and maiden for the higher vocations of life. Chief stress should be laid upon the vast resources of the *English language and literature.* The reading habit should be conserved and made very extensive, and less intensive than at present. *History* should come down to the present time and discuss vital problems and questions that are now interesting men and women. There should be always an opportunity for modern languages, which, when taken, should be taught intensively, and with a view both to conversation and to some acquaintance with the masterpieces in each. Science should be stressed, especially in its applications which normally precede interest in pure science. Lessons should be taught descriptively and experimentally with far less stress than is now customary upon mathematical formulas, with plenty of the rich historical and biographical material in which it abounds. The story of modern science to the high-school boy and girl is normally a great romance, and scientific kites, aërial navigation, motors, the telegraph and the telephone, wireless telegraphy and the rest should have their place as great generators of scientific interest. There should be abundance of apparatus and charts and diagrams galore. A high school without these is almost a body without a soul. *Biology* should be taught, not first by the technique of the microscope, but from an economic standpoint. Pests, vermin, the life histories and instincts of the great groups of animals, beginning with those with which the pupil is more familiar, should be made the center; and technical terms, while necessary, should not be overemphasized or made too abundant. The mysteries of life, health, reproduction, and disease lie in this field and should be made the most of. Physiology should anchor in regimen and give a wholesome and intelligent interest in body keeping, regimen, exercise, etc., and should not omit temperance, the sex function, and other practical applications of its profounder principles. Citizenship here, too, should be emphasized. Individual duties to parents, teachers, fellow beings, to the city, state and society at large should be brought out in a large, general and comprehensive way. Specialization should be favored only in case of those who have pronounced tastes and attitudes in specific directions, and be, as a rule, more and earlier and far easier with boys than with girls. The latter should not only have opportunity to prepare for wage-earning occupations like stenography, typewriting, bookkeeping, dressmaking, millinery and the rest, but should have both opportunity and incentive for acquiring interest and facility in domestic occupations. They should be taught the meaning of home industries and of domesticity, should have opportunities to learn the elements of marketing, cooking and personal and household hygiene. We have forgotten the educational value of the practical, which is in fact far greater than that of the purely theoretical. Utilities, therefore, in the high school should have a larger place than is now generally accorded them as compared to the abstract and scientific.

Industrial Training for the high-school grades should not be chiefly manual training, but more specifically vocational. The stated sloyd, wood and iron work that makes objects of little use makes little appeal, and the manual-training high school of the old type now seems likely to fade as compared to the more definite industrial courses which are already made possible in so many centers and which are likely to greatly increase in the next few years. The high-school graduate who does not go on should not be too proud to begin at the bottom of the industrial ladder and trust to his educational advantages to help him advance up its rungs more rapidly than he would otherwise do. The first duty of the school under the new dispensation of education that now seems to impend is to teach at least every boy to be self-supporting, for only on this basis can he make a good citizen and develop further amenities and cultures. He must be able to do something that really earns wages, for this is one of the most quickening of all intellectual spurs. The same is true to some extent for girls.

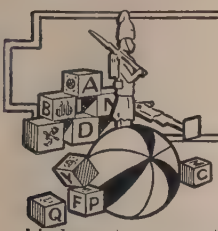
Collegiate Education.—It is hard in the present confused state of competent opinion concerning collegiate education to define its aim with positiveness. We have here two ideals, and, indeed, two types of institution. In one, the theory of general culture predominates. The collegian must be made intelligent, gentlemanly, must learn to know the resources of a vast variety of special cultures and to choose intelligently between them later. He must be humanist and scientist, idealist and realist; he must study the world, although at a distance and from the printed page, must accumulate wisdom that can be applied later, must push on in mathematics because this is now the language of all the exact sciences. He must know Latin if he is to be a biologist, physician, lawyer or clergyman, and Greek can do him no harm. He must be able to grasp the content of any book in at least French and German, and know something of the great movements of the world represented in these literatures. He must have a general knowledge of the history of the world in its different countries. In this field, a new demand is now laid upon the teacher of history. It is not enough to know the past, but with the opening of the Near and the Far East and with the widening of our own national interest to cosmic dimensions, one must know the great problems of present-day administration and policy; the present situation in China, Japan, Young Turkey, Persia, the Kongo and Africa, and South America must make each a center of vital interests, so that when he leaves academic halls he will not only find himself abreast of the great interests now pending in these fields, but will have a deep wellspring of interest for them kindled in his own heart which will enable him to be a respectable citizen of the world as well as of his own land. He must get in vital rapport with the great social, economic, charitable, and religious movements of the day, must know something of the leaders and of the arguments of both sides. Never was a present so absorbing; never were the questions of the great world so important for every part and member of it as now. Much might be said in favor of studying history backward at this stage of education, for it is just as logical to proceed from effect to cause as *vice versa.* Indeed, antiquity, full of interest as its departments are to the specialist, and rapid as is the progress made in unearthing the earliest stages of mankind's development, seems somewhat paling in interest before the multiplicity of new and pressing present issues. There is danger that the college graduate to-day will be confused by the multiplicity of electives, and perhaps overwhelmed by a sense not of how much, but of how little, he knows, for with true education the latter grows more rapidly than the former: hence the necessity that the college teacher should be a man of wide learning and devoted to the development of general ability and information on the part of his students, rather than a too sharply trained specialist.

The other collegiate ideal is practical and vocational. Thousands of young men to-day in this stage of their preparation have decided upon their field of work, and are seeking the bachelor's degree in order to make themselves more proficient in it. If they contemplate the law, they study history and economics with special reference to the demands of that profession. If they intend medicine, biology and chemistry; and if the ministry, sociology and perhaps even church history and Greek and Hebrew are taken for the professional aids that accrue therefrom; if technology, the sciences it requires are stressed. These students are more alert, active, interesting, for they have really entered upon the fourth stage, or

Professional Education.—Here we have, first, the university that is devoted to the training of experts along specific lines. Its goal is not only to make men, but to add to the sum of human knowledge. Every doctor of philosophy preparing his thesis, desires to bring some brick, however tiny, to be built into the great temple of science, which is the sublimest creation of man. He wishes to be an authority in some field, however small, and not an echo. It is amazing to contemplate how many of the epoch-making discoveries of recent decades have been due to the splendid coöperation of young men, with their enthusiasm and energy, working with and under the direction of leading and inspiring professors. The development of education in this field since the epoch-making establishment of the Johns Hopkins University in 1856 has been one of the brightest chapters in our educational history. When we come to professional schools, we find that medical education has been vastly extended, and its methods improved, especially in the direction of the discovery of the causes of various infectious bacterial diseases by the methods of immunity and therapeutics. The clinical hospital work has greatly increased, and another great extension in this seems to impend in the direction of the understanding and better control of neuroses, and especially of psychoses, which just at present have not yet an adequate representation. In legal education, the case method has brought the greatest

reformation, and has made the study of law more concrete and definite. Here, too, as everywhere else, specialization is rapidly increasing because the domain has extended far beyond the capacities of any individual mind. In technology, too, great progress has been made in methods and matter. Courses have been enriched and condensed, and our schools now turn out engineers that in many respects lead the world.

Theology, unfortunately, lags behind. It has, to be sure, been greatly quickened by new sociological studies and practical work, but it needs great extension, and more attention should be paid to psychology, or to the nature and genesis of the soul which the clergyman seeks to save.



KINDERGARTEN

AN EXPLANATION OF THE KINDERGARTEN FOR MOTHERS AND TEACHERS

Origin.—The first kindergarten was established by Friedrich Froebel, at Blankenburg, Germany, in the year 1837. The name *kindergarten* ("the garden of children") indicates the new psychological view upon which is built the system of education that has grown out of the kindergarten.

Believing that man and nature were both created by the same divine Being, Froebel felt that they must be governed by the same laws. He reasoned, that as the farmer puts nothing new into the seeds which he plants, but merely gives them the right kind of soil and the right care, keeping the weeds from choking them, giving them a sufficient amount of water and room in which to grow, putting poles or props for the tendrils of climbing plants to cling to, and loosening the roots to give more air and freedom for the growth of the plant; so, too, the parent or teacher could add nothing new to the child. He or she would merely superintend the unfolding of the child's inborn powers, and supply the suitable employment of those powers, so that they, by being rightly exercised, would grow as they were intended to grow by their Creator.

This now seems a self-evident proposition to the thoughtful person. But at the time of the founding of the kindergarten, information was considered as the one all-important thing in education, and the more information crammed into a child the better. This old and most erroneous view is now being superseded by the system of education which gradually grew out of the "kindergarten idea," so called, but which more properly should be called "the new psychological idea of education."

It has already been stated, that as all the plant was ever to grow into was already in the plant, so, too, all of the child's real self was already in the child.

Mother's Chief Work.—Therefore *the intuitions were the true basis of education*, and the understanding of what these intuitions are, and how to supply what they need, to strengthen them and make them develop aright, is the chief work of the parent as well as of the teacher. To say that this is revolutionizing the idea of "education" is making a mild statement of the changes which are taking place in the schoolroom and in the home management of children.

Pestalozzi, the Swiss reformer, from whom Froebel learned much, had already said that the inborn powers of the child were to be developed by exercising them. But Froebel, gifted with far deeper insight, insisted, that, as all the child's growth came from within, it must be *voluntary*. His deeply religious nature led him to see, that, as God was a Creator, and had created the universe out of His own inner Self, so man, made in the image of God, must learn to put forth his inner-self and to use his inborn powers, not mechanically, nor because such and such a thing was prescribed by some one in authority, but of his own free will, that is, creatively.

How the Child's Inner Nature Grows.—It can thus clearly be seen that the basis of the kindergarten is distinctively religious, though in no sense of the word denominational. This deep religious view of the inner nature of man, as the "child of God" is to be found in all of Froebel's writings. (See *Education of Man*, *Pedagogics of the Kindergarten*, *Education of Development*, etc.) In fact, his writings cannot be rightly used unless it is realized that he is thinking of the inner-self of the child rather than of his physical body. Even when he is giving instructions as to how a child's body shall be exercised, it is in order that the body may become the better instrument by means of which this inner-self may express itself.

Perhaps this fundamental basic idea of the kindergarten may be more clearly understood if the same thought is expressed in psychological terms, as *Psychology* means the science of the soul, and deals with the law by which the soul (the spirit, or inner-self) grows.

A simple statement of this profound science is that "the child is a self-creating being." The process of self-creating is as distinct a process as is the law which governs the growth of the plants. Plants, animals, and men, all created life, develop from within. The difference between the life of plants and animals and the life of man is that life in the former is unconscious life, and, therefore, governed by a law from without, whereas man life is a conscious life and is, therefore, governed by a law from within. *This conscious life is man's inner-self*. The process of self-development, or self-creating, is that this inner-self can separate itself from itself and yet recognize itself thus separated as self.

We are all of us dimly conscious of the process going on within us when "our higher self" reproves "our lower self," and we say "*I* was ashamed of *myself*;" or "*I* said to *myself*, that's wrong;" or, again, when a man's self-respect outweighs every temptation. One of Emerson's most famous sayings is, "Unless a man hath a will within him, you can tie him to nothing"; that is, unless the inner-self can control the inner-self no outward obligation is binding.

What Play Means.—This psychological insight showed Froebel to be one of the prophets or forerunners of the new world discipline, *psychology*, which is so rapidly changing not only our views of the nature of man and our method of education, but also our treatment of criminals, and our solution of many of the problems that have vexed the ages. Froebel shared this view of the nature of man with the leading minds of his age, but to him belonged the honor of first practically applying it to the training of young children. He insisted that *play*, or *voluntary* effort, was the most important activity of childhood; that in play the young child was outering, or uttering his inner-self, and that therefore it was a *spiritual activity* inasmuch as it developed the child's consciousness of his inner-self, and of his power to express, or outer that self, and that this inner-self was what was meant by the Scriptures as "the image of God."

He urged always that the development of the consciousness of the self-making power of this divine inner-self was the end and aim of all education, inasmuch as it drew man near to God, and helped him to comprehend how all men were brothers, as they all have this inner-self, or "God-image" in them, with its limitless power of unfolding.

The Right Kind of Play-Materials.—This view of education caused him to search earnestly and thoughtfully, through long years of self-sacrifice and poverty, for the right kind of play and the right kind of materials with which to engage children's instinctive activity, for he saw that idle play and haphazard activities were not the truest and best means of educating and developing this inner-self or divine element in man; and yet he knew that the plays and the activities of childhood must

be simple and happy ones. It was his organization of the right kind of games and his creations of the tools of the kindergarten that constituted his most important work and showed him to be a genius—probably the greatest in the educational world.

General Outline of the Play and Work of the Kindergarten.—For the sake of more definite explanation of the activities that take place in a good kindergarten, the morning program may be considered under three general heads:

1st—*The Play-Songs*, or morning circle.
2d—*The Play-Gifts*, or table-work.
3d—*The Play-Ring*, or the games.

objects brought in by different children.

Under the same general head may be classed the excursions which a child and his mother, a single group, or sometimes the entire kindergarten may take to nearby places of interest where beautiful aspects of nature may be seen, or where some form of the work of mankind is going on, and the out-of-doors gardens of the children, and their play in out-of-doors sand piles.

Each of these activities has its own distinctive educational value, both in the home and in the kindergarten. But the materials used and the activities engaged

value have grown many of the improved methods now seen in our best schools.

Value of Morning Talks.—The morning talks in the kindergarten in which the children are encouraged to tell of their individual experience or to express in their own way their ideas concerning this or that object, picture, story, song, or other topic introduced by the kindergartner or some other child, are valuable because each child thereby gains fluency in self-expression through words. It has done much toward the advancement of the psychological methods of teaching reading and writing.

The words in printed books are no longer

MORNING IN A KINDERGARTEN—THE TALK AND STORIES

The first, the morning circle, varies considerably according to the needs of the hour and the interests of the children. Its chief purpose is to unify the group of children by bringing them into a common interest, or exercise. It includes conversations in which a child and his mother or a group of kindergarten children tell of their individual experiences, or listen to the experiences of other children, or of the kindergartner, the learning and singing of songs, the listening to wisely selected stories, the looking at and talking about pictures, also the examination of

in are less organized and more easily understood than are the *gifts* and *occupations* (or the table-work), or than are the kindergarten games.

Froebel's *Mother-Play Songs* and the explanations which accompany them, give a general idea of the various activities referred to in this first group and of their significance, although a mother in her home life with her children can do much that will be of great value if she has grasped the purpose of the above mentioned activities.

Out of a realization of their educative

drilled into the memory of first or second grade children, but reading and writing are made a means of self-expression on the part of each child and of getting the self-expression of the other members of his class. This has produced the method of introducing many short sentences written on the blackboard by the teacher. "Little stories," the children call them.

They are accounts of some experience that they have had in common, the sentences being composed by the children and written by the teacher, or short notes and letters written by the children and read by the

teacher, and various other exercises in which the difficult task of mastering the arbitrary signs (the printed words) is accomplished by an effort of the child's own inner-self to express its-self by means of words.

Value of Stories.—Not only does the child grow accustomed to expressing himself in good, simple language in these conversations, but the earnest mother as well as the skilled kindergartner, knowing the power of the ideal to stir the emotions and arouse the imagination, uses these opportunities also for the telling of stories such as will quicken the right effort. Most of the kindergarten stories are symbolic rather than historical or informational, as the symbolic story contains an underlying truth, not expressed nor emphasized, but merely embodied in the poetic form suitable to a child's stage of development, such as *Norse Stories*, by Hamilton Mabie; *The Wonder Book*, by Hawthorne; many of Grimm's *Fairy Tales* and the like. Almost all large publishing houses now have lists of stories of this kind.

Incidental stories are, of course, occasionally introduced. But the development of the child's powers of feeling, willing and thinking can best be aided by the presentation of ideals in the art form that the symbols of literature have furnished from time immemorial. This is what is here meant by "the poetic form" of literature.

Homer's *Odyssey* can be given quite early to a child. And the great hero-stories of the Bible as Dean Hodges has told them can be told the five-year-old with profit and pleasure. The stories of the kindergarten by means of which the childish sympathy and imagination are quickened were the forerunners of the "story hour" in the schoolroom, and, better still, of "the story-tellers' league," an after-school or holiday occupation in which first one child and then another tells a story, thus learning to express himself through the avenue of literature as well as to enjoy literature as an expression of the inner-life of others.

The Value of Music.—The joyous atmosphere of music and song, with which the kindergarten is flooded, has caused the thoughtful educators of older children to realize what an enormous instrument *good* music is for the development of and the giving expression to the right emotion of children of all ages. There are now many simple but good song books for children that any kindergarten supply store can furnish.

The Value of Gardens.—Gardens small enough and simple enough to be cared for by the children themselves are an essential part of the kindergarten system. Oftentimes this is only a few pots of plants or a small window box in which the children plant a few hardy, easily grown seeds, so that they may watch the mysterious growth of the same and thus begin to feel man's power to help or hinder the growth of nature. This care of a few plants has developed into the recognized need of school gardens to such an extent that the agricultural departments of national governments are now giving generous aid to the establishment of the same. These modern developments in the educational world are spoken of here merely to make more clear the nature and value of the kindergarten activities, when understood and continued in more detailed form in the child's later school life, or in the home life, and they must not be taken as boastful and foolish assertions of the superior merits of one stage or phase of education over another. They all belong to the new psychological era of education which realizes that the child must educate himself.

PLAY CIRCLE IN KINDERGARTEN

The "Gifts" or Play-Things of the Kindergarten.—The most distinctive and original part of Froebel's work was the creation of the *Gifts* and *Occupations*, or the play-*things* and play-*materials* of the kindergarten. They are almost limitless in their creative possibilities, and are closely allied to the more essential activities of mankind; and yet they are so simple that a child of three or four years of age can use them creatively. (See *Pedagogics of the Kindergarten* and *Reminiscences of Froebel* by Baroness von Bülow.)

Commenius, the first of the modern educational reformers, made the astounding discovery that children learn more readily and more rapidly from objects than

from words; and for the first time in the history of the world, the insatiable "touch-hunger" of childhood was gratified by object lessons.

Pestalozzi, the great forerunner of Froebel, accepted the fact that self-development began with sensation; that is, he saw the value of letting a child see, hear, touch, smell or taste the things about him. And he added another important thing toward the right understanding of children, namely, he interpreted the ceaseless activity of children aright, as the indication of inner power, and realized that this activity could be used for their education instead of being rebuked and repressed. These two discoveries made a tremendous advance in educational methods as well as in the better treatment of children in the home.

But Froebel's insight was far deeper and more fundamental than that of either Commenius or Pestalozzi. He realized the truth which has been accepted by most of the psychologists since his day, namely, that nature was the great awakener of the *inner life* of man; that through the senses came the summons from the outside world to the soul within to awaken and begin its effort to express itself. He realized that sense-perception was the stimulant which began not merely "the motor-reaction of the different nerves" but that through sensations, feeling, willing and thinking also began their subtle but tremendous work of developing the inner life of the child, that immortal part in which the divine Creator manifests the infinite power of his "image" in man.

Why Froebel Organized Play-Things for the Child.—But Froebel also realized that the myriads of sensations of motion, form, size, color, texture, weight, light, heat and the like, which poured ceaselessly in upon the mind of the child from the outside world, were too many and too complex to be grasped and assimilated. He realized, also, that the young child left unguided is as apt to attend to trivial or confusing sensations as he is to attend to fundamental and helpful ones.

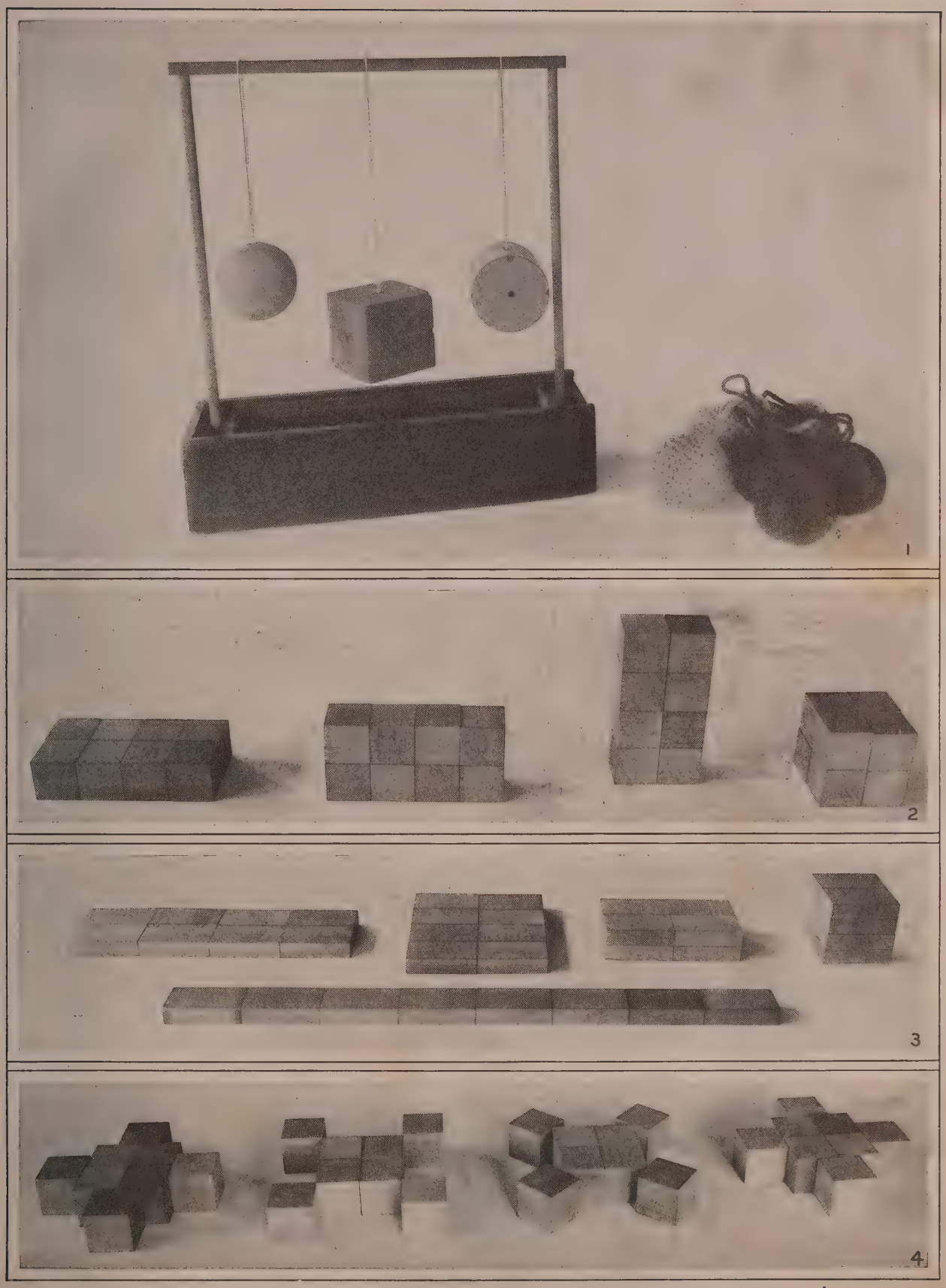
KINDERGARTEN PLAYGROUND

As mere information is a secondary thing, the all-important work for the mother and kindergartner is to stir the right emotions, and then see to it that the voluntary effort awakened by the right quickening of feeling is genuinely put forth and, if possible, is brought to a successful result, as failure after genuine effort is hard to bear and often creates a discouragement which is injurious. This is one of the reasons why the work attempted, even the creative work voluntarily attempted, and the means employed should be simple and within the possibilities of the child's power to master.

With an intellectual grasp so great that the world has not yet realized its full significance, he created and selected the playthings or play-tools of the kindergarten, which are so simple yet at the same time so suggestive that had he done nothing else they would entitle him to be recognized as a creative genius.

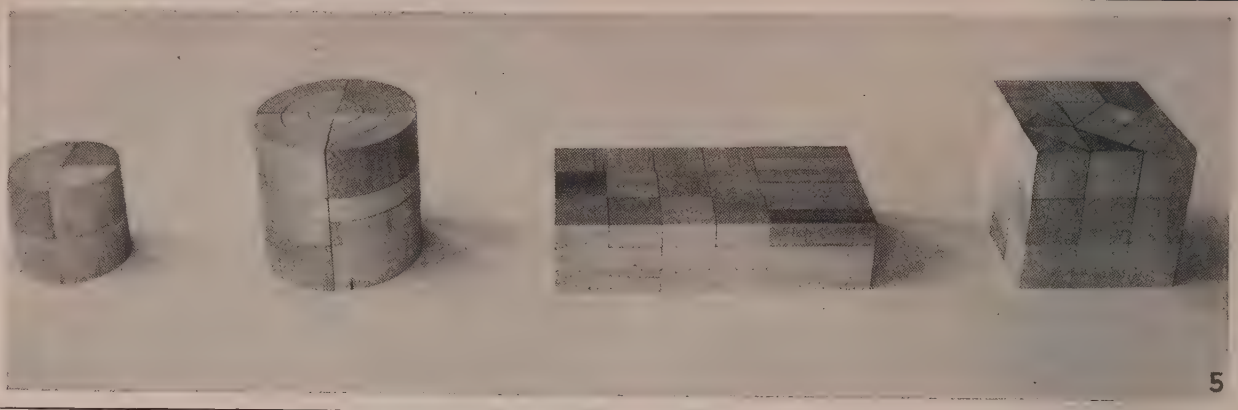
His selection of some and creation of other of these play-tools was based on the psychological explanations of God, Nature and Man. Briefly stated, his "World View" was this: he believed God to be the one Creator of all forces and phenomena of the universe, and he interpreted nature to be the outering or utterance of God. The great divine Creator *in order to be Creator* must create or outer himself; in other words, that the divine Spirit must manifest itself in an objective world. This objective world was nature. But to truly and fully manifest or outer himself, God must also create a creative being who could in his turn recreate and thus become the "image of God." This creative creature was MAN

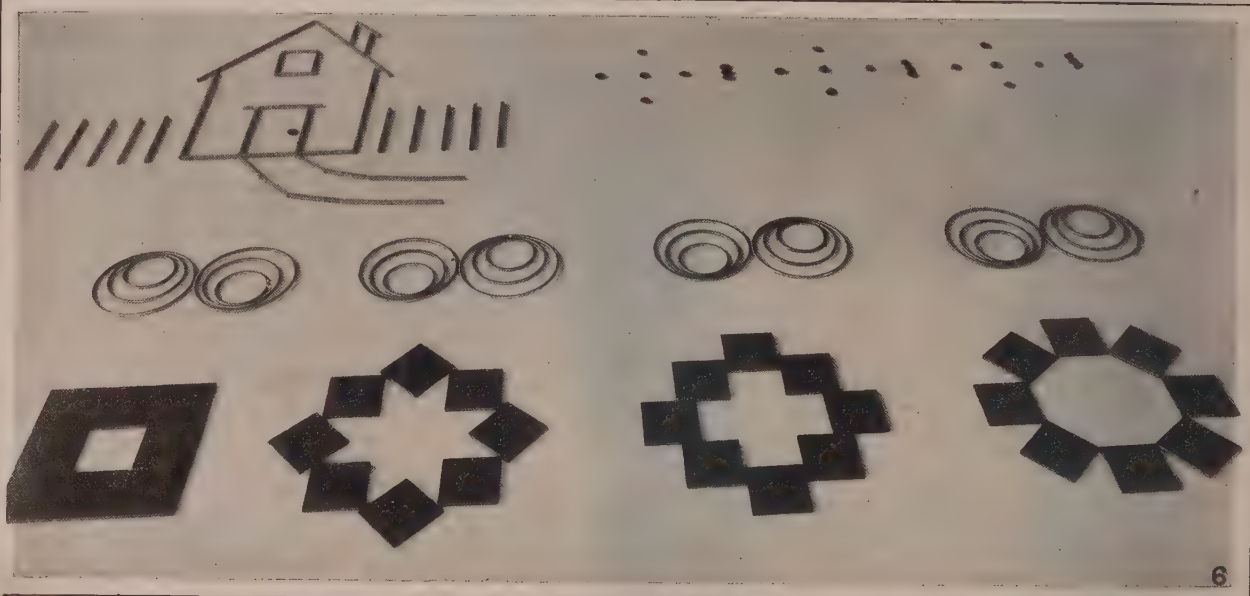
In the kindergarten, therefore, emphasis is placed upon the child's doing original, creative work rather than upon copying the work of some one else. The all-important educational value is not that things shall be made, but that the children in making things shall learn the *process of making*. The thoughtful and earnest mother or teacher who takes time to really study Froebel's *Kindergarten*



KINDERGARTEN "GIFTS." PLATE I

1. Gift first, conveys ideas of *motion* and *matter*.
2. Gift two, *matter* and *measurement*.
3. Gift three, *length*, *breadth* and *thickness*.
4. Gift four, *beauty forms*.





KINDERGARTEN "GIFTS." PLATE II

5. Gift five, *dimension* and *form*. 6. Gift six, *surface*, *line* and *point*, by use of sticks, rings and seeds. 7. Gift seven, *contour*, by use of sand.

Gifts, is filled with amazement and admiration at their simplicity and at the same time at the profound insight and significance which underlie them.

How the Kindergarten Play-Things Help the Child to Be Creative.—The three essential elements or factors that go to make up the material universe by which the child is surrounded are *motion*, *matter*, and *measurement*. (For a fuller development of this most interesting subject of the psychology of nature, read *Cosmos and Diacosmos* by Denton J. Snider).

After years of thoughtful contemplation and many unsatisfactory experiments, Froebel at last gave to the childhood of the race these "kindergarten gifts" or play-*things* which, when rightly used, lead the child easily and naturally into a familiarity with the essential factors of all creative work, and thus save him from the blundering and experimenting through which the race has learned to do its work.

First Gift.—For example, when the child is playing with the soft worsted ball and string (see Plate I) he naturally almost instinctively swings it back and forth, soon he swings it right and left, then round and round. Most children imitate the motion of objects about them. If they do not, the mother or teacher can suggest that the child shall try to swing one arm from back to front, from right to left, and round and round. Then the other arm. Then one leg, and then the other leg. This is excellent physical exercise for the child's body. If accompanied by some simple childlike song or rhythmically measured beat of time such as "tic-tac, tic-toc" or "here, there," it gives much pleasure to the child. But it does far more than this. These three movements, together with the rolling and bounding of the ball, familiarize the child, unconsciously of course, with the fundamental modes of *motion* of the universe and help him to classify and use them in his small world.

Second Gift.—Again, the kindergarten child plays with the two-inch wooden sphere, cube and cylinder, the second gift (see Plate I). These are the geometric type forms that underlie all form in the world of *matter*. They are not given as object lessons in geometry, but merely to familiarize the child in his play with the essential forms of the outside world, and to help him to instinctively classify under the broadest possible general heads the myriad forms with which he comes in contact, and thereby to select the more readily the form he may need in his play for this or that purpose.

Teach Primary Forms.—Being simple type forms rather than approximations of the type, they do not confuse him with the non-essential details. As, for example, it is easier to see the resemblance of an apple and of a pear to a sphere than to see the resemblance of the apple and the pear to each other. Their difference in shape confuses their resemblance. So, too, it can more readily be seen that a barrel and a knitting-needle are each similar in shape to a cylinder (if the child knows what shape the cylinder is) than to trace their resemblance to each other. The difference in dimension and in general appearance confuses the impression of form. So, too, it is much easier to see that a box and a chair have the same general cubical suggestion than to see their resemblance to each other—and so on, with the many forms which children use in their play.

Form Combinations.—The pleasure with which children detect these approximations to the geometric type is an evidence of the help that they are getting in their mastering of the world of form. Rightly used, these three simple forms furnish an almost endless number of suggestions and combinations for play. As many as forty or fifty different games have been created with them by one class alone. As, for example, they can be put in a bag and the child put his hand in the bag and name some object like the form he has seized, or a street roller can be made by combining the three forms, or ornamental gateway by using several of each form, etc.

But, of course, their chief educational value is that they help the child to classify form and thus advance him in the great world of form and all that depends upon the correct use of form.

Third Gift.—Again the divided two-inch wooden cube (see Plate I), being divided according to its length, breadth and thickness, brings to the child's notice, incidentally, the *axial planes* made by thus dividing the cube, and also the *diametral lines* and central *point*. These are the simplest and yet the most fundamental of all surfaces, all lines and all points with which the child will ever have to deal in the thousand-fold use of surfaces, lines and points in the workaday world. They are not given for the sake of geometric terms, but because they are the simplest and can be most readily understood and used in constructing and designing. As this two-inch cube of the "third gift" is divided into equal parts, from back to front, from right to left and from top to bottom, it necessarily falls into eight one-inch cubes. Thus the child has for his familiar plaything the simplest possible form by means of which the great cosmic element of *measurement* can be given to him.

Accuracy.—The value of establishing the habit of accurate measurement can hardly be overestimated. By means of it, all forms, all sizes, all proportions are known, from the orbit of the farthest star to the shape of the minutest crystal. Without the mastery of measurement all invention of the industrial world, all creations of the world of art are crude and clumsy; and to the degree in which they are properly proportioned are they useful or beautiful according to the purpose for which they are intended. The child by means of these small one-inch blocks gets acquainted with the present *unit of measurement* of all Teutonic and Anglo-Saxon peoples.

Form and Measurement.—However, it must again be stated that this almost universal unit of measurement is not given arbitrarily to the kindergarten child, but incidentally. He plays with his one-inch blocks; the inch check on his kindergarten table is always before him; the one, two and three inch sticks, folding paper, and other "organized materials" of the kindergarten all help to lead him to measuring and to comparing proportions in his hand work. It has been found by experience that the use of this definite mathematical unit of measurement—the inch and its multiples—does not restrict the free creative expression of children, but aids it by helping them to escape from the confusion and vagueness of undefined proportions. It also leads them the sooner to feel (not to know or to analyze) the beauty of true proportion, which, after all, is but the right use of measurement by the skilled artist. To a somewhat older child can be given a carpenter's rule, or housewife's tape-measure for length and more exact measurements.

This simple device of dividing a two-inch cube into eight one-inch cubes gives to the child not only the fundamental perceptions of form and measurement, but it familiarizes him, also, with number, size, direction and the other principles of construction of all kinds, in their most easily mastered embodiment.

Therefore the child is led to use this "third gift" in three distinct ways by the kindergartner or the mother who has taken a little time to master it herself. He finds that with it he can build houses, tables, chairs or other "forms of life"; can inclose given space, can build up given heights, or place the blocks at given distances, can count by means of them, or even learn to put them together, or add to, take away or subtract one, two, or more of the blocks from the eight, to make squares or oblong forms with them, and thus begin all unconsciously and without sense of fatigue, or fear of strained attention, the great discipline which mathematics have given to mankind. These last-mentioned plays or exercises are known as "forms of knowledge," using that term in its larger sense. Again, the blocks can be placed so as to make symmetrical forms, where one side balances another, around a common center. Many pleasing changes can be made by turning all the corners to the center or

turning the edges to the center, or alternating. Such play with balance and symmetry is known in the kindergarten as "forms of beauty." But it does not matter much what any of them are called provided the mother or kindergartner realizes that she can lead her children to represent in a general way the objects about them or those of which they have a mental picture; that she can lead them to exact mathematical expressions by means of these same blocks; or that with them, she can induce her children to love the beginnings of the art world, which are repetition, balance and symmetry.

Other objects, such as buttons, pebbles, leaves, nuts, can be played with and arranged in harmonious designs, until the child learns to love symmetry.

Value of the Occupations or Play-Materials of the Kindergarten.—In addition to the *gifts* or play-*things* provided by Froebel for the kindergarten, there are *the occupations* or play-*material*, not yet formed into any definite shape. These give freer scope to the child's creative instinct—that all-important instinct by whose use the child comes soonest into the consciousness of his inner-self. The play-*materials* of the kindergarten are selected with regard to their formability, or the ease with which they can be shaped by the child into any form he desires or can be changed by him from one form into another.

Instead of forms already made, he now turns to creating or making forms after his own fashions; in other words, he begins to learn the processes by means of which the *inner* properties of matter may be discovered, tested and used. Tools are needed to thus transform the materials of nature, only the simplest of hand-tools, such as blunt-pointed scissors, paste brush, pencil, weaving needle, but these are an introduction to that great world of machinery by means of which man has freed himself from much detailed work which once enslaved him.

It must always be kept in mind that the educational value to the child of any kind of hand work is not the form made, but the process, the changing from one shape to another, as the real aim of such work is to quicken the feeling of inner power, the faint dawning of the realization that the inner-self can change and remake the outer world to suit its spiritual and material needs.

Out of this instinctive longing of every human being "made in the image of God" to re-create the world—and thereby to prove to himself his divine power, have arisen all the arts and industries of mankind. The arts of sculpture, of architecture, of painting, of poetry, of the drama, and of music have all grown out of man's spiritual need of expressing or uttering his idea concerning the personal appearance of his God, the shelter fit for his God's abode, the language in which to worship his God, the form of worship that he deemed pleasing to his God, the sounds and gestures by means of which he could utter his praises and his petitions. All the "fine arts" were, therefore, an effort to express the beautiful, the perfect, the divine.

The industries, or "useful arts," arose not so much from man's need of food, clothing, and shelter (which is the usual reason given for their origin); as that by having food, clothing, and shelter man would be freer to go forward with his higher development, namely, the calling forth of his own inner life and the inner life of his people. When the end is *merely* the getting of food, clothing and shelter, it is not educative, it does not develop the divine nature of man.

Of course, this was not consciously realized by the early race, nor should it be realized by the child. He is led to make "something pretty" or to make something that he can use in his play, or that can give pleasure to some one he loves. But the mother or teacher is to see to it that the materials furnished and the processes taught are simple enough for the child to make and remake with ease, as it must always be remembered that it is the *power to make* rather than the thing made which is of real value. Froebel, true to his insight that from the beginning of time man had been striving to attain this power to re-create the created world, selected from the innumerable occupations of man those most typical of the processes by which the materials of the earth had been formed into shapes to serve man's purpose.

The Three Great Classes of the Work Done by Mankind.—The occupations of man, broadly speaking, may be classified as *plastic*, *industrial* and *graphic*. In order that the child may begin, in his play, to get some idea of the *plastic* process, or shaping from without, which covers so many of the occupations of man, Froebel selected sand and clay, the two simplest of moldable materials. These the children of the kindergarten at first mold and press and pat into endless forms with their hands (man's first tool). A little later they are given hollow forms with which to mold wet sand and a simple wooden modeling tool with which to carve and shape their clay. Any one who has ever watched the delight they take in such occupations will wonder why digging in the sand and making mud pies, activities of childhood as old as tradition, were never before the time of Froebel elevated into educational instrumentality.

Industrial Work.—To help the child understand *industrial* process, or the taking apart of the materials of nature and the putting of them together in man-made fashion, Froebel selected paper of various degrees of thickness, which the child could learn to bend and fold into countless shapes, to prick with pricking needle, to cut apart, to fasten together again by means of intersecting planes, by weaving, by tying with string, by sewing with thread, or, sometimes, by pasting. The giving of too difficult materials, such as

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wood, tin, or leather, is apt to discourage the childish effort to reproduce the industrial process of the world, and would, therefore, hinder rather than help him in the learning these great processes by means of which most of the commercial activities of mankind are carried forward.

Surface, Line and Point.—In the industrial process of mankind, the surface, line, and point are the three essential elements used, no matter what kind of material is to be taken apart and put together in new shapes. Therefore the industrial occupations of the kindergarten include play with *points* by means of dotting, perforating, and cutting with scissors (as the cut line is but the succession of separating points)—as for example, pictures can be outlined on paper with a large pin; play with *lines* by means of weaving, intertwining, and sewing; play with surfaces, as in the fastening of surfaces together by interweaving, interlocking, and sewing, paper folding, and what, for the want of a better term is called "construction work," or the outlining of solids by means of surfaces. This process takes on many varying and interesting forms (see *Genetic Construction*, by Jessie Davis).

Graphic Work.—To help the child understand the *graphic* process, or the representation of solid bodies upon surfaces (ordinarily called drawing), which is the third great division of man's creative, or remaking activity, the child is given chalk and blackboard, pencil and paper, or paint brush and water color paints and paper. This graphic process, or drawing with pencil or brush, calls forth the greatest amount of creativity on the part of the child inasmuch as it is the freest from the necessary limitations of all materials. With a bit of chalk, or a pencil, a child can reproduce a stone, a tree, a horse, a man, the earth, the sea, the sky, the moon, the stars, or anything else in the universe that has impressed him, and this, too, with less use of external material than was called for in his play with blocks, clay or paper. The mother or teacher must keep in mind that it is not how well the picture is made that is important but that the *child shall be genuinely expressive of himself* by means of drawing, as for example, X meant to a three-year-old child "heaven, where the little angels play (above the slanting lines), and earth where the little children play (between the lines), and fairyland where the little fairies play" (below the slanting lines).

The mastering of the materials of nature in childish fashion, of course, begins with the very simple, and slowly adds the somewhat more difficult and more developed forms of hand-work in both the "gifts" and "occupations," so as to keep pace with the inner growing power of the child to use materials. If rightly understood both can be used advantageously by children much beyond the kindergarten age. For fuller explanations of the kindergarten gifts and occupations, the reader is referred to Froebel's *Pedagogics* and Dr. Snider's *Psychology of the Kindergarten Play Gifts*, chapter III, also to an excellent and practical book now in preparation (1910) by Miss Jessie Davis, entitled *The Kindergarten Occupations*, and Elizabeth Harrison's book, entitled *The Kindergarten Building Gifts*.

In learning to draw, the child is first given chalk and board, or pencil and paper and allowed undirected use of the same. He begins aimlessly at first, but with great delight to mark dots, lines, and scribbling tangles of lines, but he soon tires of this and tries to represent some object. He is now ready to begin the organized drawing. The checked surface is given to him to guide his pencil. When he can consciously draw a straight line, a slanting line, a curved line, and lines of different lengths, the checked surface is discarded, and real drawing, albeit crude in form, begins.

Thus it will be seen that the playthings and the play materials furnished by the kindergarten for the child are not capricious toys nor haphazard materials, but are selected with the larger view of man's real significance in the universe as the creative child of God.

The Play Instinct and the Games of the Kindergarten.—What usually most attracts the looker-on in the kindergarten is the play circle or play ring. The attraction comes rather more from the unconscious grace which is so charming in children when at play than from any intellectual grasp of the real significance of play. Yet a definite advance was made in education when it was realized that play was the most natural and the deepest activity of a child between the ages of three and six and therefore the most educative.

First Impressions.—Until a child is about three years of age, he is absorbing impressions from the outside world, is learning how to use the various parts of his body—how to sit alone, to creep, to stand, to walk, to run, to climb, to grasp things, to pull, to drag, to tear, to understand the meaning of words and to speak words, as well as to dimly understand the law that governs solids by throwing things on the floor, by letting sand pour through his fingers; to understand the law of liquids by splashing in his bath tub, by dabbling in bowls of water, by pouring water into and out of a vessel, by wading in shallow water, by the thrilling play with soapsuds if that great privilege is allowed him. He is testing the law of balance by balancing his own body in dangerous positions, by piling up blocks, books or other objects, and knocking them down. He is beginning to test space by creeping from one place to another, by pushing himself about by means of a chair, by almost ceaseless trotting about when he has once learned to walk; by adventuring beyond the home gate, sometimes to the horror of his mother.

All through these precious years he is growing, is strengthening his muscles and coördinating them so that they will work easily and readily together. He is testing his senses, and increasing their keenness and accuracy. He feels everything he can lay his hand on. He stares at all objects.

He listens to sounds and tries to reproduce them. He smells and tastes all sorts of things and the unthinking mother says "I never saw such a child, he is into everything. The moment my back is turned he is into mischief," whereas, in reality, he is only preparing himself to live; exercising and strengthening his body, testing the properties of matter, and finding that he can master the materials about him—make them roll, bend, twist, or tear, as the case may be—and that he can express himself by means of them. During this all-important period of life he is largely absorbed in himself and his mother or nurse, who to him is simply his helper, and he should be left as much as possible to this self-training. It hinders these first precious years of growth to have many people about an infant. It confuses him to have many changes made in his surroundings. Therefore it is harmful for young children to travel much or to have much excitement. They need a long, slow, quiet babyhood—healthful and happy with gentle "mother-play" to guide and direct. (Froebel's *Mother-Play Songs* are as yet the best illustrations of the kind of baby-play that has been given to the world.)

But, at about three years of age the imagination begins to more definitely develop, and the social instincts begin to demand the companionship not so much of adults as of other children with about the same capacities and like interests. Almost all children, at this stage of development, make friends easily with other children. This desire for companionship of their peers and the impulse to put forth in play their inner life are as natural and as essential for fuller growth as was the absorbing in the previous period. It is at this stage that the organized play of the kindergarten supplies the needed form of activity. For the child prompted by growing imagination to seek self-expression and companionship should not be left to develop that divinely given imagination in capricious or wrong directions. It is here that the remarkable insight of Froebel is again shown. Children have played since the beginning of recorded time—probably long before that—and certain vague ideas of guiding their play have been in the minds of men since the time of Plato. But it remained for Froebel to regularly organize and establish play as part of the education of the child as soon as the social instinct is strong enough to desire companionship.

Group Play.—A mother can do much in the way of education by play with her child in the home. But the play will lack an important part of its real value unless it is joined in by other children. This kind of play is known as "group play," or in the kindergarten as "the play-ring," inasmuch as in the kindergarten the children usually gather together for their play in a circle, thereby avoiding crowding and undue preëminence of any one child.

Characteristics of Kindergarten Games.—The distinctive difference between the kindergarten games and the ordinary "street games" or "traditional games" is that the latter are often vague and aimless—sometimes even coarse and vulgarly suggestive. Many of them come from the idle and degenerate court-life of the past, drifting down through court servants to the peasantry of European countries and transported to America by them, whereas the kindergarten games retain the song, the repetition of the words and the rhythm that have made the traditional games attractive but put a new and better content into the play, keeping it free and childlike.

The games of the kindergarten usually begin with simple *rhythmic movements* of the body in time to music, either sung, or played upon a piano or other musical instrument; simple marching or hopping or skipping helps the child to definitely control his legs, catching and bounding a ball in time to music helps him to get definite control of his arms; simple childlike dances or rhythmic skipping with other children help him to get control of the whole body.

In what are known as "guessing games" one child leaves the room while the others decide on some one object that he is to discover by having described to him its properties—such as shape, color, texture, etc., or by the sound it can produce, or by some other testing of the senses of the child, who is then recalled and is expected to guess the object.

Soon are introduced more active games, depending on the coöperation of the whole group of children, such as marches, ring games, visiting games, and so on. (See Froebel's chapter on "Play" in *The Pedagogics.*)

Representative Games.—Then come games in which the children represent with their arms a windmill, or the pendulum of a clock, or flying birds, or some other objects; or with their legs, pawing or galloping horses, jumping frogs, running fowls, or some similar activities. These are the beginning of the dramatic play which is so prominent a feature in the kindergarten. The instinct which makes all children reproduce in mimic play the activities of the world about them is the most important factor in a child's development, as it is the effort of the child to understand the actions of the world around him and a putting forth on his part of his inner impressions of the same.

Dramatic Games, in which the children impersonate first one and then another form of life, if wisely guided, are of inestimable value. They direct the child's attention aright and awaken his interest in the things which will be helpful to him; and by means of the right kind of dramatic play, a love of right doing and a dislike of wrong conduct can be aroused without any moralizing or awakening of morbid self-consciousness, which is so baneful to child life.

The dramatic games of the kindergarten, in which a group of children join together in one play, are based on those activities of the race which have been fundamental in lifting man out of his savage, half-animal state into civilized conditions. These are plays and games that dramatize family life by playing the protecting care and love of mother and father bird, or animal, and later by playing the human activities of the home life. All children love to play father and mother and baby. It is this instinct which is understood and used aright in play. Again, all children love to play the activities of the economic world around them. They play they are baking or sewing, sweeping or dusting; dressing and undress-

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ing doll-babies; or they are plowing, or reaping, or driving; or they are blacksmith pounding, or carpenter sawing or nailing, or any other activity of the world by which they are surrounded. Of the multitude of such activities the kindergartner selects the most essential in the production of food, clothing and shelter, and with the children she plays them zealously and in earnest if she is a good kindergartner. Later come the games that give the child in a less degree some idea of the state and the church, so that in the course of a year the little future citizens have played themselves into a dim consciousness of the great world of "ethical institutions" that surround and guard them and into a knowledge of which they must sooner or later come. Upon a right understanding of the laws that govern this ethical life of man depends so much of happiness or misery that the value of early learning concerning the same by means of play which attracts can readily be seen. But this play must always be kept joyous and childlike. That is the *art* of the kindergarten and it is a supreme art, inasmuch as it molds human souls and builds up beauty and nobility of character.

The games of the kindergarten have led to the introduction of dramatic play in the primary and advanced grades of the public school, and the simple rhythmic exercises have caused a general awakening to the consciousness of the meaning and value of the "folk dances" of primitive people. Discrimination, however, should be made between the early dances of nations that have developed into civilization and those of primitive tribes and races that still remain in savagery or barbarism. The latter contain little or no educational value, whereas the former were the primitive or child-race utterances by the founders of great nations of their feelings, by means of body gesture, rather than of defined thought.

These dramatic games and folk-dances have done much toward the right physical development of older children's bodies, and have also diminished the idle lounging and rough—frequently brutal—scuffling so often seen on school playgrounds. But their deeper significance as a means by which the inner life of the child can express itself is not yet fully grasped. It was the joyous play of the kindergarten that first deeply interested the Empress Frederika of Germany in the kindergarten, and later on caused her to have a portion of each park in Berlin set aside for a "spielplatz" or playground for the children, where sand-piles, swings, turn-poles, seesaws and other amusements are at hand to suggest some pleasurable and developing exercise. The idea has grown and spread until now there are hundreds of playgrounds in America alone.

The Symbolism of the Kindergarten.—But there lies a deeper meaning in the kindergarten than merely the organization of the materials of nature and of human relationships, in order that the child may use the former creatively and the latter ethically, and so learn to live aright.

To Froebel, the chief aim of education was to obtain the right "world view" or the right idea of God, nature and man. In speaking of the organized gifts and games which he created for his kindergarten he says: "I have not only forms for the child's eyes which are to make him acquainted with the outward world which surrounds him. I have symbols which unlock his soul for the thought, or spirit, which is innate in everything that has come out of God's creative mind." (See *Reminiscences of Froebel*, page 210.) We have here the strongest and most definite statement of what is usually known as "the symbolism of the kindergarten." This phase of Froebel's work has been much misunderstood because it has been shrouded in mysticism by those who do not clearly understand the *symbolizing* power of the human mind. And yet, unless it is understood, one does not understand the full significance of the kindergarten.

Briefly stated, it is this: The inner-self, or soul, can only express itself and receive communications from other inner-selves, or souls, by means of a language created by itself. This the imagination of man creates for him by putting a new, or spiritual meaning into the images made in his mind by the sense-perceived world. For example, a mountain not only means, to the senses, a huge pile of rock protruding from the earth's surface, but it *symbolizes* to the inner-self great strength of soul; a dove not only means a small bird whose habits are peaceful, it *symbolizes* to the inner-self all gentle and kindly qualities of the human soul; warmth does not only mean the pleasurable sensation which the body receives from the rays of the sun, or from a fire, but it *symbolizes* to the inner-self enthusiasm, zeal and that earnest effort which is called "a *warm* interest in this or that." Men speak of "a *square* deal," of "a *crooked* life," "a *bright* idea," "a *stinging* rebuke," "a *weighty* matter," "a *turn* in affairs," "a *strong grasp* of a subject" and so on. All human language which pertains to anything beyond the mere animal existence of man is the result of this *symbolizing power* of the mind. All art is based on the fact that external forms, lines, sounds, etc., can be so used as to stir internal emotions. All religious rites and ceremonies are *symbolic*. Even the rites of baptism and communion of the Christian church are external ceremonies intended to *symbolize* the deep spiritual truths of the regeneration of the soul and communion with the divine. All that is meant by *symbolization* is the recognition of this power of the inner-self to impute more than the outer-self can perceive and to put its own meaning into the forms of the outside world.

Froebel perceived this natural *symbolizing* power in children and used it. He saw that what appeared as mathematical *facts* in the material world were analogous to, or suggestive of, the *truths* of the spiritual world. So the child playing with the mathematical laws *feels* the spiritual laws which they reflect. That which employs a child's activities interests him; what interests him he learns to like; what he likes he reflects in his conduct; what he does he becomes.

In playing with the essential elements of the created universe the child learns their laws and *feels* the inner law which they *symbolize;* as for example, playing with his box of blocks as a whole yet made up of many parts, each a whole in itself, he *feels* that he is a part of a larger whole of society, yet a distinct individual whole in and of himself. In his play he transforms one form into another and through familiarity with this simple external expression of evolution, he *feels* processes, the highest form of which is the great law of spiritual evolution, or growth. In his play of *The Bird's Nest* as he plays father or mother bird, or baby bird, he *feels* the universal relationship of family life. In his play with the materials furnished him he learns to find resemblances between things that seem to be entirely separated from one another; he learns to join opposites, and gradually he learns that there are no isolations in the universe created by the God "in whom we live and move and have our being." The failure to understand this phase of the kindergarten has arisen from the mistaken idea that the kindergartner was trying to teach the child to *understand* and to *realize* these deep spiritual truths, when she was merely giving him the external symbols which would arouse *feelings* for the same. (See Froebel's *Pedagogics of the Kindergarten*, the Baroness Marenholtz Von Bülow's *Reminiscences of Froebel*, Susan Blow's *Symbolic Education*, Dr. Denton J. Snider's chapter on *Symbols in Psychology*, and Harrison's *Kindergarten Building Gifts.*)

In short the above may be summed up as follows: The child is led to exercise his creativity in order that he may, at first, *feel* and later on gradually come into a consciousness that there *must* be a creator, a maker behind all created or made things; and thus is met the deepest instinct of human nature—the longing to know God.

Bibliography that will be helpful in the study of this subject: Arnold's *Rhythms.* Barnard's *Kindergarten and Child-Culture Papers.* Blow's *Educational Issues; Letters to a Mother; Symbolic Education.* Froebel's translated *Mother-Play Songs.* Froebel's *Education of Man; Education by Development; Last Volumes of Pedagogics; Pedagogics of the Kindergarten.* Hailman's *Laws of Childhood.* Harrison's *A*

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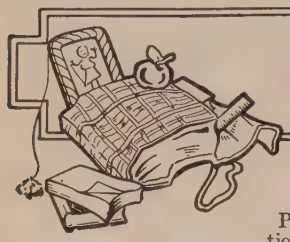
Milton Bradley, Springfield, Mass., manufactures nearly all the kindergarten supplies used in America.



PRIMARY EDUCATION

IN ITS PRACTICAL RELATION TO PUPIL, PARENT AND TEACHER

Primary instruction very properly begins in the home. In no way can parents more helpfully coöperate with the school than by taking in hand the home-work, limiting it within reasonable time and holding the child to his best and most vigorous use of the time. In this way the home may supplement the school or become a check upon the school when such check is needed.

The Child and His Mother.—The world has recognized in art and story the sacredness of mother love. The intimacy of companionship between mother and child begins in the days of earliest infancy. We scarcely need Pestalozzi to teach us that in early education nothing can be compared with a mother's influence. The home training of a good mother is a preparation which sends the child out into life ready to profit by the best that life can give. The lullabys the mother sings her baby have in them more than calming into rest. "Sleep and rest, sleep and rest, Father will come to thee soon." They give faith in mother love and father care and lead to that larger faith which illumines adult years.

The Child and His Father.—In these days of prominence given to club life, and to "mothers' clubs" in particular, there is danger that the importance of a father's relation to the child be overlooked. The boy and his father, the father and his little companion daughter, these are comradeships that give the noblest impulses to home life.

It was a woman far past the meridian of life who wrote, "My most blessed memories are of my father. He was my first teacher and all through childhood he was my best friend. I learned to love whatever he loved and all that he loved was good and noble." Again a woman writes, "It is years since my father left me, but I can hear his rich voice now as he read to me out of my favorite books and gave me an introduction into the great world of his books." It is the father's privilege as well as the mother's to begin that nursery training that gives refinement and joy through all the coming years. What delight the child and father may have together as they wander hand in hand through story-land.

The father or the mother who is a good story-teller may be the child's greatest asset of bliss. The story hour may become not only the bright spot of the day but it may be looked back upon as the brightest spot of memory. Through the gentle art of story-telling the child may be given companionship and laughter and right teaching.

The ethical value of the story of moral conduct, the story that teaches without seeming to instruct, is beyond any amount of deliberate argument—stories that inculcate the virtues of childhood, such as kindness, gentleness, obedience to parents, respect to the aged, honesty, self-denial, truthfulness, usefulness, sympathy. Stories of pure laughter are equally good, quick, responsive, joyous laughter. Oh, the merry heart of Eugene Field, and the merry heart of children who have laughed with him.

The Child and the Teacher.—It remains for an artist to express by brush or chisel what a noble-hearted teacher may become in the life of a little child—a radiance to guide throughout life. Such an influence was Pestalozzi, was Froebel, Arnold of Rugby, Horace Mann, Mary Lyon, Alice Freeman Palmer, and an innumerable host of others whose names are written in letters better than gold.

Superintendent Maxwell relates an anecdote of a teacher in his school, which shows the divine possibilities of such a worker. With the unmistakable Yiddish accent the Jewish mother exclaimed, laying a respectful hand on Miss K's arm: "I cannot help seeing how these children, they love you. You know my Bennie and Rosie? They're in your school. Do you know, lady, when you stand on that platform in the school and you say something it is just like when God speaks."

Owen Kildare gives a graphic account of the effect upon him of the first gentle touch he had ever felt. One day a strange woman, it must have been a mother or a teacher, patted him on the cheek and he tells us that he almost cried for joy. "With a light pat on my cheek and one of the sunniest smiles ever shed on me, she put a penny into my hand. She was gone before I realized what had happened. Somehow I felt that had she come back I could have said to her: 'Say, lady, I haven't got much to give, but I'll give you all me poipers, me pennies, and me knife if you'll do that agen.'" For such children it was written,

> Give me no pity, but a place
> Where falls the sunlight on my face.

Parent and Teacher.—For the mutual helpfulness of home and school it is desirable that parents and teacher should know and understand each other better. Mothers are awakening to the need of child study and are appealing to teachers for guidance. Parents and teachers are seeking mutually for instruction and parent-teachers' associations are formed. Through the intelligent direction of such organizations the school may arouse the home to a fuller sense of its duties toward the child's education, for often the ignorant or unthinking home is woefully lax. The physical and moral welfare of the child, through the neglect of the home, must often become of the deepest concern to the teacher.

Moral development depends upon physical development. This means that the child's moral welfare must depend upon the economic conditions under which he lives, and just in proportion as we improve these conditions, just to that extent do we increase the chances of the child to become a healthy, happy, moral citizen. No school has done its full duty unless it has aroused the entire community to a sense of its responsibility and acquainted it with the real meaning of intelligent coöperation in the training of children.

In some schools there are parents' meetings early in the fall for the purpose of giving teachers a chance to explain the studies to be taken up during the year, the method of procedure, the value of the subjects, and, if need be, the psychological reasons why particular studies occur at this point in the school course.

Natural Understanding.—The teacher should be intimate enough with the parent to talk candidly and freely about the interests of the child, and whenever peculiar conditions demand it, parents and teachers should together make a careful study of the nature and the needs of the child Late entrance into school, irregularity of attendance, indifference to school work, physical defects, are important causes of retardation which can often be overcome to a great extent through intelligent coöperation.

No parent should trust for his understanding of the rules of discipline of the school to the fragmentary and biased account of a child's interpretation. It is a fine service to the school when parents emphasize the fact that the school exists for the sake of helping the child and that the teacher is his good friend always.

The principal aid for children of incompetent homes must come from the school and the personal interest of the teacher. Of the worth of such a school and the method of such a teacher Judge Ben Lindsey has given this fine testimony: "Personal influence comes through personal contact, and since personal influence is perhaps the most powerful factor in moral or immoral development, there comes a grave responsibility to the teacher. With this responsibility comes also a great opportunity, that from the standpoint of service to mankind ought to be welcome, since there is no class of our citizens, not even parents themselves, who can do or are doing more to mold the character of the coming generations than the teachers in the schools."

Home Study.—The subject of "home study" has been regarded as so important that the National Educational Association gave it a place upon its program, and these are some of the points reviewed in round table discussion:

1. We must teach children how to study if we would secure the independence, concentration, organization, and persistence we desire.

2. Should children do any home study? If so, how much and when?

3. Parents should understand the aim of all home assignments and should agree with the teacher where the child should be given help in his work and where he should not.

4. Children get none too much sunshine as it is, hence the question of time for home study and time for play.

5. Children must be taught how to study, and this teaching should be by first guiding

them in pleasant work; then making them conscious of the process they are employing, noting its value and economy; third, arousing the will to do and to persist whenever desired; and fourth, selecting worthy subject-matter to give practice in the different fields—especially in concentration, persistence and independent thinking.

Home study fitted to advance this plan should in no way be detrimental to a child nor should it tax a parent unduly.

The following facts as formulated seem to be quite generally accepted: Children in the first four grades should be required to do very little, if any, study at home. The time out of school should be devoted to playing, occasional reading, and a little helpful service at home.

The children in the fifth and sixth grades should be required to do systematic reading at home under the direction of the teacher. Such reading should be closely related to the study of subjects in geography, history and literature.

The children in the seventh and eighth grades should be required to study one subject, as history, at home, and also to do systematic reading which should be closely correlated with the subjects taught in school. The home reading should be carefully selected, and graded as the subject-matter of the regular course has outlined.

WHEN THE CHILD FIRST GOES TO SCHOOL.—For most children the first grade is the first year in school, as the majority of children cannot attend the kindergarten. The program of the first year should be organized to meet the needs of the six-year-old child so that he may adapt himself to the life of the schoolroom as comfortably as possible. Ample opportunity should be given for outdoor exercise and physical development. The program of the first year work should include nature study, music, and handwork, language, reading, phonics, spelling, writing, some simple number work, not taken as separate and distinct subjects, but each illustrating and emphasizing the others, and all uniting to enlarge the child's experiences, to stimulate his curiosity, and to organize his knowledge. These subjects should be so arranged that they unify knowledge.

Course of Instruction in Language for the First and Second Years.—The following outlines of instruction for the first and second years in school are of the state of Illinois. They are arranged for the successive school months, have been adopted by a number of states and are among the best and most complete courses that have been worked out for the guidance of teachers. The course is adopted here without apology, because of its excellence.

FIRST YEAR—First Month

Subjects	Selections for Study	Sources of Material	Publishers
1. Original statements about the home of the child; its general appearance, its furniture, decorations, utensils and dishes. The occupations of the home.			
2. Nature stories.	The wee, wee man. Golden-rod and aster.	Cat Tails and Other Tales. Cook's Myths.	Flanagan. Flanagan.
3. Stories for telling.	Stories of the little red hen. Balder the beautiful.	Appleton's First Reader. Cook's Myths.	Appleton. Flanagan.
4. Mother Goose melodies.	This is the way we wash our clothes; London bridge; Pease porridge hot; Humpty Dumpty.	Nursery Rhymes.	Heath.
5. Fables.	The crow and the pitcher; The fox and the grapes.	Æsop's Fables.	Ginn.
6. Poems.	September; Golden-rod. The Noah's ark. To a honey-bee.	Nature in Verse. Pyle's Prose and Verse for Children. Alice Cary.	Silver-Burdett. Houghton. Houghton.
7. Songs to be memorized.	Autumn flowers. Golden-rod is yellow; The leaves party.	Songs in Season. Gaynor's Book.	Silver-Burdett. Silver-Burdett.
8. Picture study.	The cat family.	Adams (Perry Pictures).	Perry Picture Co.

FIRST YEAR—Second Month

1. Talks about the occupations of the father; his work and its purpose.			
2. Nature stories.	How Dame Nature got her frost; Seedlings on the wing; The little maple leaves. Clytie.	Cat Tails. Cook's Myths.	Flanagan. Flanagan.
3. Mother Goose melodies.	Old King Cole; One, two, buckle my shoe; If wishes were horses; Birds of a feather.	Nursery Rhymes.	Heath.
4. Fables.	The dog and his image.	Baldwin's Fairy Tales and Fables.	American Book Co.
5. Poems.	October's bright, blue weather; October's party; Lost, the summer; How the leaves came down. The rockabye lady.	Nature in Verse. Field's Poems of Childhood.	Flanagan.
6. Songs.	Come, little leaves. Farewell to the birds. Good-bye to summer. The woodman; The shoemaker.	Songs and Games for Little Ones. Gaynor. Eleanor Smith (II.).	Silver-Burdett.
7. Picture study.	Squirrels. The balloon.	Perry Pictures. Dupré.	

FIRST YEAR—Third Month

1. Getting ready for winter in the home. Laying in stores of food, fuel and warm clothing.			
2. Nature study.	The vapor family.	Cat Tails.	Flanagan.
3. Stories for telling.	Little Tuppon. History stories: Story of the Pilgrims, the first Thanksgiving day; How fire came to earth.	Baldwin's Fairy Tales and Fables. Judd's Classic Myths.	American Book Co. Rand-McNally.
4. Mother Goose melodies.	Pussy cat, pussy cat, where have you been? I love little pussy; Little Boy Blue; Little Bo-Peep.	Nursery Rhymes.	Heath.
5. Poems.	November. Thanksgiving. The day is done. Jack Frost	Alice Cary. Lydia Maria Child. Longfellow. Nature in Verse.	Parker's Classics. Flanagan.
6. Songs.	Thanksgiving song; November; Song of the nut. Jacky Frost; The farmer and the tailor.	Songs in Season. Eleanor Smith (II.).	Silver-Burdett. Silver-Burdett.
7. Picture study.	Brittany sheep.	Rosa Bonheur.	

FIRST YEAR—Fourth Month

Subject	Selections for Study	Sources of Materials	Publishers
1. Preparation in home, school, and stories for Christmas.			
2. Nature stories.	The fairy Mercury; What the fire sprites did.	Cat Tails.	Flanagan.
3. Stories for telling.	St. Christopher; The Christ child. Christmas in other lands. Tiny Tim. The fir tree. Holy night.	Andreas Hofer Proudfoot. Plan Book. Dickens. Hans Andersen. Menefee's Child Stories.	Flanagan.
4. Mother Goose melodies.	This little pig went to market; Mary, Mary, quite contrary; Hush-a-bye baby on the tree top; Ding dong bell, pussy's in the well.	Nursery Rhymes.	Heath.
5. Songs.	Away in the manger. Christmas carol. Why do bells for Christmas ring? Shine out, O blessed Star.	Luther's Hymn. Gaynor's Book. Field.	Silver-Burdett.
6. Poems.	'Twas the night before Christmas; Hang up the baby's stocking; Little fir trees; The strange child's Christmas.	Whittier's Child Life.	Houghton.
7. Picture study.	Murillo's Holy Family; Sistine Madonna.		

FIRST YEAR—Fifth Month

1. Winter sports. Animal life in winter.			
2. Nature story.	What broke the china pitcher?	Cat Tails.	Flanagan.
3. Stories for telling.	Story of the three bears; The little match girl. Farmyard. The story of the year. Thor and his hammer. Lady Moon.	Classic Stories. Stevenson. Andersen. Foster and Cummings' Asgard Series. Whittier's Child Life.	Flanagan. Silver-Burdett. Houghton.
4. Mother Goose melodies.	Sing a song of sixpence; Baa, baa, black sheep, nave you any wool? Three little kittens; There was an old woman who lived in a shoe.	Nursery Rhymes.	Heath.
5. Poems.	The star's fall; What the snowbirds said; The snowbird's song; The first snow. The new moon: The drum.	Nature in Verse. Field's Poems of Childhood.	Flanagan.
6. Songs.	Twinkle, twinkle, little star; Tiny little flakes of snow; The snow clouds; January.	Songs in Season.	Silver-Burdett.
7. Picture study.	Madonna of the Chair.		

FIRST YEAR—Sixth Month

1. Food used in the family. Sources and preparation.			
2. Nature stories.	The little brown seed; Pussy willow's hood.	Cat Tails.	Flanagan.
3. Stories for telling.	Prometheus. The great bear in the sky. Cinderella. Stories of the childhood of Lincoln, Washington and Longfellow. Valentine stories.	Nature Myths, Cook. Judd. Classic Myths. Gathered from the best of their biographies. Child's World, Poulsson.	Flanagan. Rand-McNally. Rand-McNally. Flanagan.
4. Mother Goose melodies.	Little Miss Muffet; Babes in the wood; When I was a bachelor.	Rhymes and Jingles.	Heath.
5. Poems.	Adventuresome buds; The crocus' soliloquy; The pussy willow. February.	Nature in Verse. Prose and Verse for Children.	Silver-Burdett. Houghton.
6. Songs.	The flag. The drum; Hurrah for the flag.	Gaynor. Eleanor Smith (Song Book I.).	Silver-Burdett. Silver-Burdett.
7. Picture study.	Baby Stuart; Feeding the birds.	Perry Pictures.	

FIRST YEAR—Seventh Month

1. House cleaning. Plans for gardens of vegetables and flowers.			
2. Nature stories.	The towels party; The magnet's choice.	Cat Tails.	Flanagan.
3. Stories for telling.	The house that Jack built; The old woman and her pig; Jack and the bean stalk. Woden, the god of the northern sky; The legend of the north wind. The bag of winds; Echo, the air maiden.	Classic Myths. Foster and Cummings' Asgard Stories. Judd.	Rand-McNally. Silver-Burdett. Rand-McNally.
4. Mother Goose melodies.	There was a little girl; There was an old woman lived under a hill; Little Jack Horner; Curly Locks.	Nursery Rhymes.	Heath.
5. Poems.	The wind. How the wind blows; The tree—Björnson; A laughing chorus. How the little kite learned to fly. The duel.	Stevenson. Nature in Verse. Prose and Verse for Children. Field's Poems of Childhood.	 Silver-Burdett. Houghton.
6. Songs.	March winds; My kite. The sap has begun to flow.	Educational Music Course for Elementary Grades. Eleanor Smith (II.).	 Silver-Burdett.
7. Picture study.	Spring.	Corot.	

FIRST YEAR—Eighth Month

Subjects	Selections for Study	Source of Material	Publishers
1. The home garden. The return of the birds to the neighborhood.			
2. Nature stories.	Fish or frogs; Old Sol's rainbow; A living flow.	Cat Tails.	Flanagan.
3. Stories for telling.	Iris, the rainbow princess.	Classic Myths.	Rand-McNally.
	Indian story of the robin.	Nature Myths.	Flanagan.
	The legend of the anemone.	Classic Myths.	Rand-McNally.
4. Mother Goose melodies.	Old Mother Hubbard; Jack and Jill.	Nursery Rhymes.	Heath.
5. Poems.	The rain—Stevenson; April showers; Who likes the rain? The polliwog.	Nature in Verse.	Silver-Burdett.
	The chicken's mistake.	Poems of Alice and Phoebe Cary.	Houghton.
	April fools.	Nature in Verse.	Silver-Burdett.
	Hepatica.	All the Year Round (I.).	Ginn & Co.
6. Songs.	April, April, are you here?	Songs in Season.	Silver-Burdett.
	April.	Songs for Children.	Silver-Burdett.
	Rainbow fairies.	Child's Garden of Song.	Silver-Burdett.
	Bubbles.	Child's Songbook.	Silver-Burdett.
7. Picture study.	Feeding the hens.	Millet.	

FIRST YEAR—Ninth Month

1. Making a calendar of May flowers. Excursions to garden and woods and fields to gather flowers.			
2. Nature stories.	The nest builders.	Fairy Stories and Fables.	American Book Co.
3. Stories for telling.	The three pigs; Puss in boots.	Fairy Stories and Fables.	Ginn & Co.
	Phaeton; Diana.	Classic Myths.	Rand-McNally.
	The flax flowers.	Andersen.	
	Legend of the dandelion.	Nature Myths.	Flanagan.
4. Mother Goose melodies.	A cat came fiddling out of a barn; Little robin redbreast sat upon a tree; I had a little pony, his name was Dapple Gray.	Nursery Rhymes.	Heath.
5. Poems.	Jack in the pulpit.	Whittier's Child Life.	Houghton.
	Marjorie's almanac.	Nature in Verse.	Silver-Burdett.
	Seven times one.	Jean Ingelow's Poems.	
	The dandelion.	Classic Stories.	McMurry.
	The sugar plum tree.	Poems of Childhood, Field.	
6. Songs.	Dandelion fashions; America; Red, white and blue.	Eleanor Smith (II.).	Silver-Burdett.
7. Picture study.	The song of the lark.	Breton.	

FIRST YEAR—Tenth Month

1. Talks about the birds and insects of June. The children can make many home observations and they enjoy reporting what they have seen.			
2. Nature story.	The story of the caterpillar and the study of cocoons.		
3. Stories for telling.	Story of the pea blossom; The town musicians.	Hans Andersen.	Ginn & Co.
	The origin of the woodpecker; How the robin got his red breast.	Cook's Classic Myths.	Flanagan.
4. Mother Goose melodies.	Sing, sing, what shall I sing? As I was going to St. Ives; Mistress Mary, quite contrary.	Nursery Rhymes.	Heath.
5. Poems.	Seven times four.	Jean Ingelow's Poems.	
	Little Nannie.	Lucy Larcom's Poems.	
	Forget-me-not; Who was she?	Nature in Verse.	Silver-Burdett.
	A fable.	Nature in Verse.	Silver-Burdett.
6. Songs.	Buzz, buzz, this is the song of the bee; A summer lullaby.	Eleanor Smith (I).	Silver-Burdett.
7. Picture study.	The melon eaters.	Murillo.	

SECOND YEAR—First Month

The work of this year consists of the long poem of *Hiawatha*, history stories in the form of conversation lessons, fables, classic stories, short poems, and picture study. As in the first year this outline is based upon the Illinois course of study, which has been adopted by several states.

Subjects	Selections for Study	Source of Material	Publishers
1. Hiawatha's childhood, lines 64, chapter III, to end of chapter. Teacher tells the story, then reads from the poem. Children memorize and act out portions of the story, arranged in form of natural dialogue. Select such portions as children can read readily for their reading lesson. Make use of sand table, paper cutting and drawing.			
2. Stories, tell and play	The wolf and the seven kids.	Language Reader II. (Baker & Carpenter).	Macmillan.
	The happy family.	Andersen's Fairy Tales.	
	The walnut-tree that wanted to bear tulips.	Cat Tails.	Flanagan.
	Rhoecus.	Lowell's Poems.	Parker's Classics.
	Appleseed John.	The Child's World, Poulsson.	Flanagan.
	Pippa.	Browning.	Menefee's Stories from the Masters.
	The last dream of an old oak.	Andersen.	
3. Fables.	The dog and his image; The dog in the manger.	Æsop's Fables.	Ginn & Co.
4. Conversation lessons.	The tree dwellers; Shelter, food; Animal enemies.	Dopp's Tree Dwellers.	Rand-McNally.
5. Poems.	A vagrant knight and lady.	Tree Top and Meadow, McMurry.	Pub. Sch. Pub. Co.
	Little Boy Blue.	Eugene Field.	
	My shadow.	Stevenson.	
	Two wise owls.	Tree Top and Meadow.	Pub. Sch. Pub. Co.
6. Picture study.	Primary school in Brittany, or September.	Zuber.	

SECOND YEAR—Second Month

Subjects	Selections for Study	Source of Material	Publishers
1. Hiawatha's friends. Conversations about these friends until the personality of each one stands out as real. Teacher read to the class. Read choice passages again and again. Children read, dramatize, memorize.			
2. Stories, tell and play.	King Midas. The linden and the oak. A fish and a butterfly. Aqua.	Language Reader II. Classic Myths. Child's Stories from the Masters. Wiggin's Story Hour.	Macmillan. Rand-McNally. Rand-McNally. Houghton.
3. Fables.	The wolf and the crane; The frog who wanted to be as large as an ox.	Æsop's Fables.	Ginn & Co.
4. Conversation lessons.	Tree dwellers; Story of the wild horse; The tree man's tools; Learning about fire.	Dopp's Tree Dwellers.	Rand-McNally.
5. Poems.	Autumn fires. A chestnut burr. Leaves and children. The wise fairy. Wynken, Blinken and Nod.	Tree Top and Meadow. Nature in Verse. Longfellow's Poems. Alice Cary's Poems. Eugene Field.	Pub. Sch. Pub. Co. Silver-Burdett. Houghton.
6. Picture study.	The return to the farm.	Troyon.	

SECOND YEAR—Third Month

1. Hiawatha. Story of Mondamin, chapter V. Tell story and then read to class. Have children retell the story in parts.			
2. Stories.	Stories of Thanksgiving; The first Thanksgiving; A Boston Thanksgiving. Old time Thanksgiving.	Child's World, Poulsson. St. Nicholas.	Flanagan.
3. Fables.	The lark and her young ones; The boy and the wolf.	Æsop's Fables.	Ginn & Co., also Parker's Classics.
4. Conversation lessons.	Tree dwellers. How the tree men made their first shelter; The first baskets. How they learned to cook their food; Their ornaments.	Tree Dwellers, Dopp.	Rand-McNally.
5. Poems.	Talking in their sleep; The fairies in winter; The night workmen. The pumpkins.	Tree Top and Meadow. Whittier's Poems.	Pub. Sch. Pub. Co
6. Picture study.	Pilgrim exiles; The return of the Mayflower.	Boughton.	

SECOND YEAR—Fourth Month

1. Hiawatha's sailing. Description of the canoe. Work out in painting, paper folding, etc.			
2. Stories.	The angel's promise; The manger; The mother of a king; The king's first journey; The boy in the temple; The story of the first Christmas. Christmas in other lands.	Stories from the Bible and from Hofer's Christ-Child Tales. Plan Book.	Flanagan. Flanagan.
3. Fables.	The lion and the mouse; The wind and the sun.	Æsop.	Parker's Classics.
4. Conversation lessons.	Cave men; The first cave home; The making of fire; Skin dressing and the making of clothes; Skin water-bags; Hunting the mammoth.	Tree Dwellers and Early Cave Men, Dopp.	Rand-McNally.
5. Poems.	While shepherds watched their flocks by night. Christmas carol. Christmas eve; Santa Claus' petition; Kris Kringle—Aldrich.	Deland. Longfellow's Poems. Tree Top and Meadow.	 Pub. Sch. Pub. Co.
6. Picture study.	The arrival of the shepherds.	LeRolle.	

SECOND YEAR—Fifth Month

1. Hiawatha's fishing. Describe the sturgeon. Tell story of the struggle, of the rescue.			
2. Stories.	The valiant blackbird (learn and play). The story of the New Year. The bird with arrow feathers. Parsifal. The milky way.	Language Reader II. Andersen's Fairy Tales. Classic Myths. Child's Stories from the Masters. Asgard Stories, Foster and Cummings.	Macmillan. Parker's Classics. Rand-McNally. Rand-McNally. Silver-Burdett.
3. Fables.	The donkey and the salt; The fox and the stork.	Æsop.	Ginn & Co., also Parker's Classics.
4. Conversation lessons.	The eskimo; Descriptions of the northland and the northland people; The reindeer and his usefulness.	Eskimo Stories.	Rand-McNally.
5. Poems.	The ferns; The frost; Snowflakes. A New Year's greeting. Wintertime poems.	Tree Top and Meadow. Lowell's Poems. Riley's Rhymes of Childhood.	Pub. Sch. Pub. Co. Houghton.
6. Picture study.	The bells.	Blashfield.	

SECOND YEAR—Sixth Month

Subjects	Selections for Study	Source of Material	Publishers
1. Hiawatha's wooing, chapter X.			
2. Stories.	One eye, two eyes, three eyes.	Language Reader II.	Macmillan.
	The giant with the belt of stars.	Classic Myths.	Rand-McNally.
	Beatrice.	Stories from the Masters.	Rand-McNally.
	Stories of boyhood and youth of Washington, Lincoln, Franklin.	The "True Story" series by Brooks.	Century Company.
	Stories of St. Valentine; Stories of carrier pigeons.	Child's World.	Flanagan.
3. Fables.	The boy and the frogs.	Æsop.	Ginn & Co.
4. Conversation lessons.	The eskimo; His house, food, dress; Eskimo dogs and their use.	Eskimo Stories.	Rand-McNally.
5. Poems.	Mt. Vernon bells.	Plan Book.	Flanagan.
	The flag goes by.	Tree Top and Meadow.	Pub. Sch. Pub. Co.
	A Norse lullaby, Pittypat and Tippytoe.	Eugene Field.	Houghton.
	To mother fairy.	Cary's Poems.	
	Lady Moon.	Tree Top and Meadow.	Pub. Sch. Pub. Co.
6. Picture study.	A helping hand.	Emile Renouf.	

SECOND YEAR—Seventh Month

1. Hiawatha's wedding feast, chapter XI.			
2. Stories (learn and dramatize).	Why the sea is salt.	Language Reader II.	Macmillan.
	Where frogs came from.	Classic Myths.	Rand-McNally.
	The Angelus.	Stories from the Masters.	Rand-McNally.
	Spring and her helpers; North wind at play.	Child's World.	Flanagan.
	The four winds.	Andersen.	Ginn & Co.
3. Fables.	The ant and grasshopper; The goose that laid the golden egg.	Æsop.	Ginn & Co.
4. Conversation lessons.	The eskimo; Hunting the seal and the bear; Life in the igloos; Children's games among the eskimos.	Eskimo Stories.	Rand-McNally.
5. Poems.	March.	Celia Thaxter's Poems.	
	The wind.	Frank Dempster Sherman.	
	Waiting to grow; Windy night, Stevenson.	Tree Top and Meadow.	Pub. Sch. Pub. Co.
	March.	Wordsworth.	Parker's Classics.
	Night wind, Stevenson.	Child's Garden of Verse.	Rand-McNally.
6. Picture study.	At the watering trough.	Bonveret.	

SECOND YEAR—Eighth Month

1. Hiawatha's picture writing, chapter XIV.			
2. Stories.	The ugly duckling.	Language Reader.	Macmillan.
	Proserpina.	Classic Myths.	Rand-McNally.
	Saul and David.	Old Stories of the East.	American Book Co.
	Little Gustava.	Thaxter.	Parker's Classics.
	Old pipes and the dryads.	Stockton's Fanciful Tales.	
	The story of Easter.		
3. Fables.	The quarrel; The wise goat.	Fairy Stories and Fables.	American Book Co.
4. Conversation lessons.	The cliff dwellers; Their homes, food, water, weaving, pottery, home customs, religious ceremonies.	Lolami.	Pub. Sch. Pub. Co.
5. Poems.	Crocus; Song of the lilies; At Easter time; The secret; What robin told me; The throstle.	Tree Top and Meadow.	Macmillan.
6. Picture study.	The willows.	Corot.	

SECOND YEAR—Ninth Month

1. Hiawatha. Death of Kwasind, chapter XVIII.			
2. Stories.	Sif's golden hair.	Asgard Stories, Foster and Cummings.	Silver-Burdett.
	Why the narcissus grows by the water; Pegasus.	Classic Myths.	Rand-McNally.
	May thirtieth.	Cat Tails.	Flanagan.
3. Fables.	The horse and the stag; The father and his sons.	Æsop.	Ginn & Co.
4. Conversation lessons.	Lake dwellers; Their home in the lake, clothing, implements, occupation.	Lake Dwellers.	Pub. Sch. Pub. Co.
5. Poems.	Robert of Lincoln.	Bryant.	Parker's Classics.
	Little white lily; Frogs at school.	Tree Top and Meadow.	Pub. Sch. Pub. Co.
	The swing, Stevenson.	Child's Garden of Verse.	Rand-McNally.
6. Picture study.	Dance of the nymphs.	Corot.	

SECOND YEAR—Tenth Month

Subjects	Selections for Study	Source of Material	Publishers
1. Hiawatha. The coming of the white man's foot, chapter XXI. The departure of Hiawatha, chapter XXII.			
2. Stories.	Hans and Gretel.	Language Reader II.	Macmillan.
	Why the partridge stays near the ground; The myth of Orpheus.	Classic Myths.	Rand-McNally.
	The flax flower.	Andersen.	Ginn & Co.
	May blossom.	Grimm.	American Book Co.
3. Fables.	Review of fables of the year.		
4. Conversation lessons.	American Indian; His home, food, shelter, occupations, customs, education.	American Indians, Starr.	Heath.
5. Poems.	June.	From Lowell's Vision of Sir Launfal	
	The swallow; Discontent; The quail's nest.	Tree Top and Meadow.	
	Daffodils.	Wordsworth.	Parker's Classics.
	At the court of Queen Flora.	Nature in Verse.	Silver-Burdett.
	The emperor's bird's nest.	Longfellow's Poems.	
	The sandpiper.	Celia Thaxter's Poems.	
6. Picture study.	The aurora.	Guido Reni.	

Picture Study. A picture study has been suggested for each month of the elementary course, but many teachers are themselves untrained in the study of pictures and need help. Books that will help in the study of pictures:

Masters in Art (series of monographs), Bates and Guild Co., Boston.
Picture study in elementary schools, Macmillan.
Story of art and artists, Macmillan.
Studies of master artists, Houghton-Mifflin.

Perry Picture Company and Brown Picture Company sell both penny and five-cent pictures which are very good for class study. Get large and fine engravings whenever possible.

LEARNING TO READ—READING TO LEARN.—The mechanics of reading are so difficult that during the first and second years the energy of the reading lesson must be directed chiefly toward learning to read. This does not mean that the first reading lessons have no thought content, but this content comes at first chiefly through the suggestion of the teacher. But this is all to be changed. By the time the child has reached the third or certainly the fourth year in school the mechanics of reading should have been pretty thoroughly mastered. He reads independently now to get the thought for himself. If books have been presented to him in the right way the printed page becomes an open door by which he enters storyland. He enters because he loves it and reading is no longer a compulsion.

Two motives are strong enough to make any intelligent child a good reader—to read to himself because he wants to know, and to read aloud to others because he wants to make them understand the thing that is so well worth knowing. This involves two things—well selected reading and companionship, some one at hand, mother or father or teacher or class, to whom there is some joy in telling the story gathered from the printed page. It is not necessary to describe the method of such a lesson or the spirit of such a teacher.

Drill in Phonics.—As children are to be made self-helpful they must be taught the method of attacking new words in their daily reading. Phonic drill should be given daily in all the lower grades.

At first train the ear and vocal organs to recognize and imitate sounds. Clear, distinct oral expression should be secured before any attempt is made to teach the written form. Not a few of the difficulties met by the child in mastering the mechanics of reading would be removed if his ear were trained to hear the correct sound. Very careful attention should be given to each child's ability to speak distinctly. If defects of hearing or speech are detected they should be attended to at once, for often such defects may be corrected in the young child.

After a little oral drill in clear and correct enunciation, written representations of sounds may be given, beginning with consonants and long and short vowels. New words which occur in the reading lesson should be broken up in the oral spelling lesson into syllables and spelled by sound or the sound of the vowel in the accented syllable should be given. As early as the second school year children should be able to pronounce with a fair degree of confidence almost any word that occurs in their reading lesson if they have been given the help of the accent and a few diacritical marks.

Exercises like the following may be multiplied for phonic drill: Review the consonant sounds in words with long or short vowels, and without using marks except over the first word of the groups. Place the phonogram *at* on the board. Let the pupils build the group of words *fat, bat, cat, hat, mat, rat, sat.* Beginning with *ate* they will construct the group—*ate, fate, gate, slate, plate, state.* In like manner use *an* and *ane, ad* and *ade, ap* and *ape, ag* and *age, am* and *ame, ack, ake* and *ace, ang* and *ange, and, ank, act, amp, ash.* Notice the effect of final *e* on the sound of *c* and *g*, and also on the sound of the preceding vowel.

Then take the phonograms containing short or long *e, i, o, u, y*, and make families of words as above. Give exercises in the same way with initial and terminal consonants: *sh, ch, wh*—she, shall, shell; cash, hash, lash; chin, chip, chick, child; much, such, touch; which, when, while, white.

Drill on final phonograms in words of more than one syllable: *ing*—coming, having, making, taking, living; *er*—hunter, mother, shiver, farmer; *en*—seven, garden, chicken, broken, woven; *est*—safest, surest, sweetest, dearest, kindest, honest; *ed*—lived, asked, raised, looked, wished, called, learned; *es*—waves, makes, takes, moves, loves, comes; *or*—sailor, honor, favor, savor; *et*—hatchet, bonnet, jacket; *y*—pithy, dusty, stormy; *ny*—sunny, funny, bunny; *ly*—slowly, truly, lovely; *ty*—kitty, empty, plenty.

In this way take other combinations and give frequent and thorough drills until the child can immediately produce the vocal sound from the written symbol. It is not sufficient to think that a sound once learned has been acquired. It must become a habit to speak with distinct utterance. Use phonics not only as a key to new words, but as an exercise in articulation. Divide words into syllables. Give drills on the small words that are frequently slurred over, as *to, was, of, for, from, get, just, can.* Attention should be given to voice and expression, such as characterize good conversation.

Such systematic drill in phonics should secure for the child the correction of bad habits of speech, such as nasal tones, drawling, dropping final sounds, mumbling, talking without movement of lips and jaw, and every kind of indistinct utterance, and in addition should give him power to read the printed page for himself.

Story-Telling as a Language Exercise.—Children delight in hearing good stories and in telling them again and again. The old, old story is the favorite. With the telling of the story there is often free dramatic action which may be developed into a fine method of interpretation. The story-teller gains power and freedom in the use of language. He enriches his vocabulary by unconsciously using the words of others; he enriches his life by entering into the lives of others and understanding the essential relation between motive and conduct.

The story may be made the basis of all kinds of language exercise. As in the first and second grades what the child reads becomes the center of the school program, so in the third grade language expression becomes the leading thought.

As *Hiawatha* has proved a very attractive story center for the second grade, so *Robinson Crusoe* has been found to furnish an excellent center for history, geography, and language in the third-year course. From the fourth grade, on through the grammar course, history and geography form two important and interrelated centers of interest and study around which crowd many human interests and from which any amount of language teaching may be derived.

Written Work should follow as a natural sequence the oral lesson. Artificial writing is poor writing. The child talks because he wishes to talk and he talks well. In the same way he should write because he has something to write about. The technique of the art of good writing is laid down in a succession of well-organ-

ized lessons in our language books, but the practice of this art belongs to every lesson in the school and to the habit of every day. The study of grammar in the upper grades is important only as it becomes an intelligent means to the one great end, power and fluency in the use of the mother tongue.

Reading to Children.—It has been often repeated that the teacher must know literature and must read often to her class and that above all she should be a good reader as well as a good story-teller. Parents and teachers, all who mingle with little children, should know and love the books and poems that the children love. Let the teacher practice on a few of the best poems and read them to her class with responsive appreciation in her voice and she will never again be afraid that she cannot learn to read or that she cannot hold the interest of her class. A few beautiful poems are suggested here as suitable selections. Let each teacher add to these others of her own choosing. Select a few poems that appeal most strongly and then read those again and again until the words seem to be your very own. Let the teacher do this and she will in time find herself classed among the very few who are worthy to be called good readers.

Poems to Read to the Children

Rock-a-bye, thy cradle is green...Nursery rhymes.
The world is so full of a number of things.....Stevenson.
What does little birdie say.....Tennyson.
Twinkle, twinkle, little star.....Jane Taylor.
Angels at the foot. (Watching Angels.).....Christina Rossetti.
Rockaby, lullaby, bees in the clover.....Josiah Gilbert Holland.
Jam and jelly and bread are the best of food for me.....Edward Lear.
The quangle-wangle's nest.....Nonsense Book.
To-whit! to-whit! to-whee! Who stole the bird's nest.....L. M. Child.
Who has seen the wind.....C. G. Rossetti.
Great, wide, beautiful, wonderful world.....W. B. Rands.
How many seconds in a minute?..Christina Rossetti
What does the bee do?.....Christina Rossetti
Baby wants a lullaby. (Innocents' Island).....William Brightly Rands.
This is the way the ladies ride (Rhymes about a Little Woman) William Canton.
Baby bye, here's a fly, let us catch him, you and I.....Josiah Gilbert Holland.
Over hill, over dale. (Midsummer Night's Dream).....William Shakespeare.
O Lady Moon.....Christina Rossetti.
While shepherds watch their flocks by night.....Found in Golden Numbers.
Dark brown is the river. (Where Go the Boats).....Robert Louis Stevenson.
When the elf king went to battle. (The Magic Casement).....R. C. Lehman, Alfred Noyes.
As soon as the fire burns red and low. (The Sleepy Song in Pinafore Palace).....Josephine Dodge Daskam.
There is ever a song somewhere, my dear.....James Whitcomb Riley.
The wind-broom sweeps so wondrous clean. (The Wind-Broom) Richard Burton.
As I walked over the hills one day. (A Nursery Song, Pinafore Palace).....Mrs. Carter.
There's a merry brown thrush....Lucy Larcom.
Now the day is over. (Childs evening hymn.).....Sabine Baring-Gould.

Both at home and in school read and reread: *Bed in Summer Time, I Saw You Toss the Kites on High, A Child Should Always Say What's True, How Do You Like to Go in a Swing?* Rossetti's *Who Has Seen the Wind? O Lady Moon, What Does the Bee Do?* Field and Riley and Cary and Others: *Waiting to Grow, Plump Little Baby Clouds, Sleep, Baby, Sleep, Rockabye Lady.* Jingles from the Jingle book and over and over read the rhymes of Mother Goose. Sometimes read selected psalms. Read with reverence and exaltation until the children, too, catch the uplift of the words. "When I look up unto the hills, behold, Thou art there." "The heavens declare the Glory of God, and the firmament showeth His handiwork."

Suggested Material for Help of Teachers.—The teacher of language and literature must know literature at its best. She must appreciate the double aim of language teaching—facility in the correct use of language and appreciation of good literature. For herself she needs the stimulation of the best that has been written and for her class she needs to know the literature for her grade. This is especially true for the teacher of the little ones. She must know the literature that children love, their poems and their stories, and she must practice well the art of story-telling.

The book-loving teacher will have a book-loving school. To lead children to the proper use of books the teacher must know children's books and enjoy using them.

An occasional period set aside during the week for the purpose of talking over with the children the books they have read will be found valuable. Every schoolroom should contain a library selected for the use of every child in every grade. Nowhere is the privilege of individual selection more valuable than in the choice of books. When "learning to read" has given place to "reading to learn" and "reading to enjoy" then the drudgery of learning has been overcome.

Poems that Children Love and Books that Help in Story-Telling

And I must follow, would I ever find
The inward rhyme to all this wealth of life.

Ingfen.....One thousand poems for children.....Jacobs Co., Geo. W.
Hazard.....Three years with the poets.....Houghton.
Burt.....Poems every child should know.....Doubleday.
Wiggin and Smith...Pinafore Palace.....Doubleday.
Smith, Eleanor.....Song books I and II.....Milton Bradley
Matthews.....Poems of American patriotism.....Scribner.
Harris and Gilbert...Poems by grades.....Maynard-Merrill.
Barlee.....Famous poems explained.....Hinds, Noble & Eldrege.
Lear.....Nonsense rhymes.....Little.
Palgrave.....Child's treasury of English song.....Macmillan.
Bryant.....How to tell stories to children.....Houghton.
Bryant.....Stories to tell to children.....Houghton.
Houghton.....Telling Bible stories to children.....Houghton.
Harrison.....In story land.....Central Pub. Co.
Harrison.....Two children of the foothills.....Sigman Pub. Co.
Wiltse.....The place of the story in early education.....Ginn.
Wiggin and Smith....The story-hour.....Houghton.
Wiggin and Smith....The posy ring.....Doubleday.
Baldwin.....Fifty famous stories retold.....Am. Book Co.
Burt.....Prose every child should know.....Doubleday.
Burt.....Legends every child should know.....Doubleday.
Mabie.....Myths every child should know.....Doubleday.
Foster and Cummings Asgard stories. (Valuable to teachers for its introduction).....Silver-Burdett.
Baldwin.....Old stories from the East. (Bible stories.).....American Book Co.
Richards.....Five minute stories.....Little.
Richards.....Golden windows.....Little.
Poulsson.....Through the farmyard gate.....Lothrop.
Poulsson.....In the child's world.....Milton Bradley.
Scudder.....The children's book.....Houghton.
Harrison.....Uncle Remus. His songs and sayings. Appleton.
Pyle.....Wonder clock.....Harper.

Fairy tales from Andersen and selected tales from Grimm belong to every child. For other books of poems and stories see lists of books for children's library. Some books have been given in both lists because they belong equally to the teacher and to the child.

For Children at Home and the First Two Years in School

Jewett.....The three baby bears.....Dutton.
Dodge.....Baby days. (Songs, stories, pictures) Century
Burgers.....Goops and how to be them.....Stokes & Co.
Burgers.....More goops and how not to be them. .Stokes & Co.
Greenaway.....Under the window.....Warne.
Potter.....The tale of Mrs. Jeremy Fiskes.....Warne.
Potter.....Peter Rabbit. Jeremy Fiskes.....Warne.
Grimm.....Fairy tales; ed. by Wiltse.....Ginn.
Adelborg.....Clean Peter and the children of Grubbylea.....Longmans.
Lear.....Nonsense books. Nonsense rhymes. .Little.
Flanagan.....Child stories and rhymes.....Flanagan & Co.
Mother Goose, or the old nursery rhymes.....Warne.
Mother Goose melodies, or songs for the nursery.....Houghton.
Æsop.....Child's version of Æsop's Fables; ed. by Stickney.....Ginn.
Andersen.....Fairy tales; selected and edited by Turpin.....Maynard.
Brooks.....Stories of red children.....Ed. Pub. Co.
Beming.....Little Indian folk. Little brothers of the West.....Stokes.
Turpin.....Child's book of poetry. Classic fables.....Maynard.
Holbrook.....Hiawatha primer.....Houghton.
Alexander Blake....Graded poetry. Separate volumes for each grade.....Merrill.
Andrews.....Seven little sisters. Each and all.....Ginn.
Brown.....Stories of woods and fields.....Globe.
Blaisdell.....Little Boy Blue and his friends.....Little.
Long.....Nursery rhyme book.....Warne.
Richards.....Five minute stories.....Estes.
Poulsson.....Child stories and rhymes. Finger plays.....Lothrop.
Grover.....Sunbonnet babies. Overall boys.....Rand-McNally.

Picture books by Nelson, Warne, Tuck, Dutton, bring a wealth of joy into the nursery.

Story of the three little pigs.....Warne.
Story of the three bears.....Warne.
All sorts of animals.....Nelson.
Animals and their young. (Natural history series).....Tuck.
Cinderella and Red Riding Hood.....Dutton.
Cosy nook farm. (Cosy nook farm series).....Tuck.
Our dogs. (Picture land series).....Tuck.
All about wild animals.....Tuck.
Johnny Crow's garden.....Warne.

LANGUAGE AND LITERATURE—Under teaching the child how to read, a detailed outline of suitable material arranged for first and second year language has been given, but the question may still be asked by the mother or the teacher how to instruct the little ones who are beginning to read. What is the method or what are the steps in the process?

Very little is heard nowadays about word method, sentence method or phonic method as separate methods in themselves. The best teaching chooses from all methods.

How the Several Methods May Be United in the First Reading Lessons: 1. Words as wholes. (a) Use of objects representing the word; (b) spoken word used in connection with the object; (c) the word as form, either script or printed form—the object, the idea, the vocal symbol, the written symbol, all in combination.

2. Words in combination. (a) Groups of words or words grouped in phrases; (b)

words arranged in sentences, grouped in paragraphs or as story wholes.

3. Analysis of words. (a) Words broken up into sounds—phonics; (b) words broken up into separate forms—letters.

The Eclectic Method as It Has Been Outlined for a Training School.—1. Conversational work whereby teacher gains knowledge of child's interests, intelligence, maturity, habits, home training, environment, and use of English. Here objects are often introduced.

2. (a) Blackboard work. Action sentences largely such in form and in content as have been used by child in conversational work. (Thought and sentence method.) (b) Discovery of parts of sentence words. (Word method introduced.) (c) Discovery of parts of words, letters, names and sounds of letters. (Phonic method.)

The test of good teaching is the drill that follows the development lesson. After the child has learned the nature of word symbols and has acquired a small reading vocabulary the importance of such drill exercises must be emphasized.

Analysis of a general plan for reading drill.—

1. Preparation through word mastery.

2. Results to be obtained. (a) Recognition of words at sight, (b) correct and easy enunciation, (c) mastery of sound and form elements, (d) knowledge of their meaning.

3. Methods by which this word mastery is acquired. (a) Writing new words, (b) reading new words, (c) spelling by sound and by letter, (d) meaning of new words, (e) use in original sentences. Briefly summarized, the reading drill should fix vocabulary and form word images.

4. Reading the new lesson. The test of good preparation is the grasp of thought and feeling as expressed through good vocal expression. The three arts of education—seeing, reading, thinking—should be combined in every reading lesson.

From the beginning give the child in his lesson something worth thinking about and from the first give him an interested audience—a teacher and a class who care for what he reads and will listen with interest. This will lead the child in his reading to form the habit of complete thought and complete expression as found not only in the single sentence but in the entire selection. Then what he reads will seem to him worth while and he will learn to love the printed page. As has been fitly said, he will enter the path "which our forefathers blazed through the wilderness and make of it a highway down which he may ride a king in his power to use the English language."

Things to Be Remembered in Teaching Reading.—1. Teach only such words as are needed for use.

2. Keep a complete list of all words taught.

3. Keep a separate list of all words found difficult. Review and review until mastered.

4. Call for silent reading. Have child tell you what he has read.

5. Call for silent reading of a dramatic passage. Have child act out what he has read.

6. Again call for silent reading, this time a longer passage. Have child tell in his own words what he has read.

7. From the very first sentence require natural tones. This can easily be done by simple, natural questioning.

8. Do not let any member of the class interrupt one who is reading aloud. There should be confidence, not confusion, when one is reading.

9. A few minutes of rapid drill in correction of errors common to the class is a good preliminary exercise. The teacher should correct, but not nag. Remember that drill exercises should be short.

10. Encourage every child to do his best and when he has done his best receive it in a pleasant, gracious manner. Children are sensitive to the atmosphere of approval. Encourage, suggest, do not repress.

11. Young children cannot study undirected. Work of a definite, concrete kind should be assigned to them. Through occupation they learn concentration.

12. Make the sentence or the thought a unit. By skillful questioning lead the child to the thought he is to give you from the reading, as, What did the dog do? Why did he like the boy? Such indirect help is the best way of suggesting right expression.

13. Short daily exercises of a rapid, decided, vigorous character should be given to train the class to quick recognition of words and sentences. It is a great gain in education to make a person quick and resourceful.

Suggestions and Devices for the Inexperienced Teacher.—The experienced teacher has long ago invented many of her own devices, has outgrown them and invented others. There are no fixed methods of teaching. It is a continual round of interesting change, the more interesting to the original mind which is always inventing something new. It must be remembered, however, that novelty is not the aim, but growth. The growing teacher welcomes that which adds new interest or in any way yields better results.

1. The first language lesson must begin with oral exercise—something interesting to talk about.

2. The unit of thought is the sentence. The child gives his thought, and the teacher writes it on the board, underlining the important word. It may be the child tells what he picked up from the table, as, "I have a book." Other children tell their story, as, "I have a ball," "I have a box." Each child finds his own story and his own particular word. This game of hide and seek gives zest and holds attention. It may be worked out in many ways.

3. Write the children's names. Let each child find the name of some other child or the age of some other child or the brother of some other child. Such exercises can be multiplied. The teacher makes her crayon talk, and the children talk to her. Write a nonsense rhyme upon the board. Read it to the class. Read again, pointing slowly to each word. Let children point to principal words.

B was a bat who slept all day,
Brown little bat!

Some teachers have enriched the child's fancy by adapting Lear's *Nonsense Rhymes* to the teaching of the alphabet.

C was a cat, crafty old cat,
D was a duck, dear little duck.

The pictures and the words make good seat exercises for copying.

4. Find and pronounce all words on the board containing a given letter, as *e*, *f*, *c*, etc.

5. Arrange the words of a paragraph in alphabetical order.

6. Write on the blackboard or on paper all the words of the reading lesson beginning with a certain letter. Instead of writing on the board the material in the word boxes may be used.

7. Words written upon the board promiscuously, so far as the initial letter is concerned, are to be grouped alphabetically in columns, each group with the initial letter at its head. Many forms of dictionary work may be given. Children must learn the alphabet, but there are better methods than the old mechanical method of the a, b, c's.

8. Build or write in columns all the words containing a given vowel sound.

9. Write in columns all words containing a given phonogram.

10. Words of the lesson are written on the board. Words are erased one by one and the child tells which word was erased.

11. Arrange words in duplicate columns except that the order of words is changed. Give to one of the class a pointer, and have him point to a word pronounced by the teacher. The game consists in seeing which child points first.

12. A child finds and pronounces all the words with a given ending or a given beginning. Valuable for prefixes and suffixes.

13. The teacher points to a word, the child arises and gives a sentence containing that word.

14. The singular form of nouns whose plurals are formed by adding *s* may be written upon the board. Let the children build the plural form by adding *s*.

15. Draw a doll house. Let children tell what furniture they want to put into it. Write these words in a column. Let children furnish by pointing to word and then to the place in the house where the furniture should be. Make, mark, or write word in the house. Picture of a ball game might be done in the same way.

16. Have pupils look through a paragraph and tell what has been read.

17. Have pupils look through a sentence or paragraph and act out the meaning.

18. Have pupils read a paragraph silently and illustrate the meaning by drawings or a series of drawings.

19. Give dialogue exercises frequently where one child replies to another. Encourage dramatic expression in voice and body.

20. The teacher should often read to the class and with the class. Exact imitation is not wanted but through suggestion and the glow of her own spirit the teacher may awaken her class to the love of interpretative reading.

Three Essentials in the Teaching of English.—1. Fixing the word in the child's vocabulary. 2. Fixing the word symbol through the activity of the eye and ear and hand. 3. Centering attention upon thought, rather than mere symbol getting, that in the end the child may gain mastery of thought and speech.

Suggestions for Seat Work Related to Primary Readings.—1. Seat work should be related to the lesson. The aim in all exercises should be to train the child to look for something in the lesson and expect to find it. It is the active mind, the attentive mind, that can be educated.

2. Provide worn-out books, magazines, advertisements, etc., which can be cut up. Provide blank books, one for each child. Print the letters of the alphabet on the board. Let the children find them, cut them out, and paste them neatly in order. *a* at top of page 1, *b* at top of page 2, etc., to *z*.

3. New words occurring in the reading lesson may be printed or written on the board; children may find these words, cut them out, and paste them on the proper page. This will give each child the printed vocabulary of his grade. When they can read words children may make dictionaries or word books by writing the words instead of cutting and pasting.

4. Put several alphabets in the same

box. From the letters in the boxes let the children build words that the teacher writes on the board.

5. Prepare sets of hektographed pictures with the name of the object printed plainly beneath the picture. Each set should contain twice as many cards as there are pupils in the class. Take half of each set and cut off the names. Now let the children, with the uncut card before them, match the separated pictures with their appropriate names.

6. Hektograph sentences on strips of cardboard. Cut these sentences into words or phrases and put each sentence into its own envelope. Write or print the sentence on the board and let the children build.

7. As soon as a few words can be recognized at sight, the pupils should build their own sentences, using separate words on bits of cardboard. Continue building sentences until the reading is taken up.

8. Copy from the board for form and punctuation. Very careful supervision should be given to all such copied work.

9. Copying memorized passages for exactness of form is a valuable extension of the previous exercises.

10. The teacher should use judgment as to the amount of seat work and its nature. Every child should be kept busy at some profitable employment. Playing with sticks, marking with a pencil, or doing anything else with no definite aim should not be permitted. The child should not be aided at every turn, but should be left to his own resources as much as possible. He should be encouraged to think himself out of his own difficulties. Independence in action, accuracy and skill in mechanical work, are the large results to be sought in seat occupation.

The Children's Book Shelf—Third Grade

Scudder	Verse and prose for beginners	Houghton.
Dodge	Rhymes and jingles. When life is young	Scribner.
Wilson	Myths of the red children	Ginn.
Husted	Stories of Indian children	Pub. Sch. Pub. Co.
Husted	Stories of Indian chieftains	Pub. Sch. Pub. Co.
Defoe	Robinson Crusoe	Am. Book Co.
Kipling	Jungle book	Century.
Johonnot	Book of cats and dogs	Am. Book Co. Ginn.
Miller	Little people in feathers and furs	Dutton.
Long	Blue fairy book	Longmans.
Ingelow	Three fairy tales	Heath.
Judd	Wigwam stories	Ginn.
	Arabian Nights; ed. by Clarke	Am. Book Co.
Andersen	Christmas tree and other stories	McLoughlin.
Coolidge	Nine little goslings	Little.
White	When Molly was six	Houghton.
Beming	Red folk and wild folk	Stokes.
Wade	Our little brown cousins	Page.
Wade	Our little Indian cousins	Page.
Wade	Our little Japanese cousins	Page.
Dodge	Stories of American history	Lothrop.
Dutton	In field and pasture. (World at work series)	Am. Book Co.
Hazard	Three years with the poets	Houghton.
Howliston	Cat tails and other tales	Flanagan.
Harris and Gilbert	Poems by grades. (2 vols.)	Scribner.
Dodge	Donald and Dorothy	Century.
Macdonald	Light Princess and other fairy tales	Burt.
Carter	Lion and tiger stories	Century.
Alden	Cruise of the canoe club	Harper.
Coolidge	What Katy did. (3 vols.)	Little
Diaz	William Henry letters	Lothrop.
Stoddard	Talking leaves. Two arrows. (Indian stories.)	Harper.
Howells	Christmas every day and other stories	Harper.
Smith	The Browns, (7 vols., a series of books describing good times in the Brown family.)	Little.
Jewett	Town and city	Ginn.
Lane	Industries of to-day	Ginn.

The Children's Book Shelf—Fourth Year

Wiggin and Smith	Golden numbers	McClure.
Wiggin and Smith	Posy ring. Fairy ring	McClure.
Shute	Land of song. (3 vols. arranged for grades.)	Silver.
Baldwin	Old Greek stories	Am. Book Co.
Francillon	Gods and heroes	Ginn.
Alcott	Little men. Little women. Aunt Jo's scrap book	Little.
Daylor	Juan and Juanita	Macmillan.
Carroll	Alice's adventures in wonderland. Through the looking-glass	Macmillan.
Otis	Ten days a newsboy	Harper.
Otis	Toby Tyler, or ten weeks with a circus	Harper.
Guerber	Stories of the thirteen colonies	Am. Book Co.
Baldwin	Four great Americans	Am. Book Co.
Beebe	Four American naval heroes	Am. Book Co.
Mulock	Adventures of a brownie	Harper.
Harris	Nights with Uncle Remus	Houghton.
Schwartz	Five little strangers and how they came to live in America	Am. Book Co.
Hawthorne	Wonder-book and Tanglewood tales	Houghton.
Brooks	True story of Christopher Columbus	Lothrop.
Brooks	True story of George Washington	Lothrop.
Brooks	True story of Abraham Lincoln	Lothrop.
Brooks	True story of the United States	Lothrop.
Mott and Dutton	Fishing and hunting. (World at work series)	Am. Book. Co.
Pierson	Among the farmyard people	Dutton
Pierson	Among the meadow people	Dutton.
Wade	The coming of the white man	Page.
Wade	Our little African cousin	Page.
Wade	Our little German cousin	Page.
Wade	Our little Italian cousin	Page.
Carter	Stories of brave dogs	Century.
Burroughs	Squirrels and other fur bearers. (School edition.)	Houghton.
Jewett	Good health	Ginn.
Cyr	Stories of three great artists	Ginn.
Cyr	Art readers	Ginn.
Foster and Cummings	Asgard stories	Silver.
Coussens	Poems children love	Dodge.
White	A little girl of long ago	Houghton.
Richards	Five mice in a mouse-trap	Estes.
Richards	Joyous stories of Toto. Toto's merry winter	Estes.
Stockton	Fanciful tales	Scribner.
Aldrich	Story of a bad boy	Houghton.
Wyss	Swiss family Robinson	Heath.
Thomas	In sunshine land	Houghton.

The Children's Book Shelf—Fifth Year

Mabie	Legends every child should know	Doubleday.
Burt	Poems every child should know	Houghton.
Æsop	Three hundred Æsop fables; tr. by Townsend	McKay.
Lamb	Tales from Shakespeare	Houghton.
Ruskin	King of the golden river	Houghton.
Baldwin	Fifty famous stories retold	Am. Book Co.
Baldwin	Thirty more famous stories	Am. Book Co.
Baldwin	American book of golden deeds	Am. Book Co.
Eggleston	Stories of great Americans for little Americans	Am. Book Co.
Brooks	True story of Benjamin Franklin	Lothrop.
Brooks	True story of La Fayette	Lothrop.
Jordan	Book of knights and Barbars	Appleton.
Kingsley	Water babies	Ginn.
Hawthorne	Great stone face and other stories	Houghton.
Myrton	Child life in Japan and Japanese child stories	Heath.
Guerber	Story of the chosen people	Am. Book Co.
Haaren and Poland	Famous men of Greece	Univ. Pub. Co.
Haaren and Poland	Famous men of Rome	Univ. Pub. Co.
Eggleston	Stories of American life and adventure	Am. Book Co.
Eggleston	First book in American history	Am. Book Co.
Boyesen	Modern vikings	Scribner.
Bull	Fridtjof Nansen	Heath.
Gilman	Discovery and exploration of America	Lothrop.
Gilman	Colonization of America	Lothrop.
Blaisdell	Stories from English history	Ginn.
Eggleston	Strange stories from history	Harper.
Kelman	Stories from the crusades	Dutton.
Coolidge	Little country girl. New Year's bargain	Little.
Morey	Little Mitchell; the story of a mountain squirrel	McClurg.
Jackson	Letters from a cat	Little.
Duncan	Mary's garden and how it grew	Century.
Seton, Ernest Thompson	Lobo, Rag and Vixen	Scribner.
Seton, Ernest Thompson	Lives of the hunted	Scribner.
Kipling	Just so stories	Doubleday.
Andrews	Stories Mother Nature told her children	Ginn.
Black	Four Macnichols. An adventure in Thule	Harper.
Yonge	Prince and page	Macmillan.
Farrington	Tales of King Arthur	Putnam.
Greene	Legends of King Arthur	Ginn.
Meadoweroft	A B C of electricity	Am. Tech.
Chase	Stories of industry	Ed. Pub. Co.
Hunter	Stories of famous children	Ormsby.
Matthews	Stories of American patriotism. (School edition.)	Scribner.
Montgomery	Heroic ballads	Ginn.
Beard	Outdoor handbook. (For boys)	Scribner.
Beard	What a girl can make and do	Scribner.
	St. Nicholas Christmas book	Century.

The Children's Book Shelf—Sixth Year

Mabie	Heroes every child should know	Doubleday.
Mabie	Heroines every child should know	Doubleday.
Palgrave	Child's treasury of English song. (School edition.)	Macmillan.
Patmore	Children's garland from the best poets	Macmillan.
Horne	Stories of great artists	Am. Book Co.
Frost	King Arthur and his court	Scribner.
Frost	Knights of King Arthur	Scribner.
Seawell	Twelve naval captains	Scribner.
Munroe	Through swamp and glade	Scribner.
Mowry	American inventions and inventors	Silver.
Lindsay	Daniel Boone, backwoodsman	Lippincott.
Johnson	Exploits of Miles Standish	Appleton.
Stuart	Solomon Crow's Christmas pockets	Harper.
Duncan	Adventures of Billy Topsail	Revell.
Bonvet	Child of Tuscany	McClurg.
Eggleston	Hoosier schoolboy	Scribner.
Cody	Four American poets	Am. Book Co.
Cody	Four famous American writers	Am. Book Co.
Tomlinson	Washington's young aids	Wilde.
Tomlinson	Tecumseh's young braves	Lothrop.
Morris	Home life in all lands	Lippincott.
Roosevelt and Lodge	Hero tales from American history	Century.
Butterworth	In the boyhood of Lincoln	Appleton.
Chamberlain	How we are clothed	Macmillan.
Chamberlain	How we are fed	Macmillan.
Chamberlain	How we are sheltered	Macmillan
Nicolay	Boy's life of Abraham Lincoln	Century.
DuChaillu	Wild life under the equator	Harper.
Converse and others	Adventures of pirates and sea-rovers	Harper.
Converse et al	Adventures of Uncle Sam's sailors	Harper.
Converse et al	Adventures of Uncle Sam's soldiers	Harper.
Dickens	Christmas stories	Macmillan.

Cooper	Last of the Mohicans and others of Cooper's	Many publishers of school editions.
Grinnell	Jack among the Indians	Stokes.
Grinnell	Jack among the Rockies	Stokes.
Munroe	Derrick Sterling. Flamingo Feather	Harper.
McLeod	Shakespeare story book	Barnes.
Scott	Stories of a grandfather	Ginn.
Warner	Being a boy	Houghton.
Warner	In the wilderness	Houghton.
Jewett	The body at work	Ginn
Jewett	Emergencies	Ginn.
Beard	Handicraft and recreation for girls	Scribner.
Adams	Harper's indoor book for boys	Harper.
Adams	Harper's indoor book for girls	Harper.
Benton	Saturday mornings, or how Margaret learned to keep house	Estes.
White	Child's rainy day book	Doubleday.
Brooks	Century book for young Americans	Century.
Brooks	Century book of the American revolution	

Book Shelf for Boys and Girls of the Upper Grammar Grades

Guerber	Legends of the middle ages	Am. Book Co.
Guerber	Story of the Greeks	Am. Book Co.
Guerber	Story of the Romans	Am. Book Co.
Guerber	Story of the English	Am. Book Co.
Mabie	Norse stories retold from the Edeas	Rand.
Wallach	Historical and biographical narratives	Am. Book Co.
Scott	Novels based on English history	Macmillan.
Rogazin	History of the world: earliest people	Harrison.
Church	Iliad for boys and girls; told from Homer	Macmillan.
Church	Odyssey for boys and girls; told from Homer	Macmillan.
Chapin	Wonder stories from Wagner	Harper.
Chapin	Stories of the Rhinegold	Harper.
Fiske	Discovery and colonization of North America	Ginn.
Fiske	Critical period of American history	Houghton.
Parkman	La Salle and the discovery of the great West	Little.
Parkman	Oregon trail	Little.
Roberts	Around the camp fire	Crowell.
Coffin	Abraham Lincoln	Harper.
Andrews	The perfect tribute (Lincoln.)	Scribner.
Abbott	Kit Carson. David Crockett	Dodd.
Brooks	Len, a New England village boy	Scribner.
Whitney	A summer in Leslie Goldthwaite's life	Houghton.
Whitney	We girls. Other girls	Houghton.
Stevenson	Treasure Island. Kidnaped	Rand.
Pyle	Merry adventures of Robin Hood	Scribner.
Pyle	Story of Jack Ballister's fortune	Century.
Smith	Tom Grogan	Houghton.
Seton, Ernest Thompson	Biography of a grizzly	Century.
Twain	Adventures of Tom Sawyer	Harper.
Twain	Huckleberry Finn	Harper.
Stockton	Personally conducted	Scribner.
Verne	Tour of the world in eighty days	Burt.
Garland	Boy's life on the prairie	Macmillan.
Brown	Two college girls	Houghton.
Clark	Will Shakespeare's little lad	Scribner.
Doyle	Micah Clark	Longmans.
Wallace	Ben Hur	Harper.
Jackson	Ramona	Little.
Irving	Rip Van Winkle. Legend of Sleepy Hollow	Macmillan.
Kipling	Captains courageous	Century.
Cooper	Leather stocking tales	Putnam.
Murtfeldt and Weed	Stories of insect life; summer and autumn	Ginn.
Merian	Birds of field and village	Houghton.
Gibson	Sharp eyes. Eye spy	Haerpr.
Wright	Gray lady and the birds	Macmillan.
Miller	In nesting time. Autumn	Houghton.
Burroughs	Birds and bees	Houghton.
Ingersoll	Book of the ocean	Century.
Jewett	Control of mind and body	Ginn.
Gulick	The efficient life	Doubleday.
Hughes	Lakerim athletic club	Century.
Earl	On the school teams	Penn.
Thompson	Boy's book of sports	Century.
Kirkland	Six little cooks	McClurg.
Lane	Triumphs of science	Ginn.
Emery	Every day business	Lee.
St. John	Things a boy should know about electricity	
Munroe	The story of electricity	Appleton.
Lillie	Story of music and musicians	Harper.
Bolton	Famous American authors	Crowell.
Long	American poems. 1776–1900	Am. Book Co.
Bremer	Reader's handbook	Lippincott.
Champlin	Young folks' cyclopedia of common things	Holt.
Champlin	Young folks' cyclopedia of persons and places	Holt.
Champlin	Young folks' cyclopedia of literature and art	Holt.
Bulfinch	Age of fable	Lothrop.
Bulfinch	Age of chivalry	Lothrop.
Henley	Lyra Heroica	Scribner.
Eggleston	American war ballads and lyrics	Putnam.
Repplier	Book of famous verse	Houghton.

Household editions of poetry that the children love should be in every library.

Helps for Teachers of Language and Literature in the Upper Grades

Corson	Aims of literary study	Macmillan.
Corson	Voice and spiritual education	Macmillan.
Clark	Reading aloud	Holt.
Mabie	Books and culture	Dodd.
Legouvé	Reading as a fine art	Penn Pub. Co.
Clark	How to teach reading	Scott-Foresman.
Chubb	Teaching of English	Macmillan.
Warner	Relation of literature to life	Harper.
Burroughs	Literary values	Houghton.
DeVinne	Correct composition	Century.
Stedman	Nature and elements of poetry	Houghton.
McMurry	How to study and teaching how to study	Macmillan.
Earhart	Teaching children how to study	Houghton.
McMurry	Methods in language	Macmillan.
McMurry	Methods in English	Macmillan.
Quinn	The art reader	Elson & Co.
Bates	Talks on the study of literature	Houghton.
Larned	Books, culture and character	Houghton.

GEOGRAPHY forms an important center of knowledge. It has well been styled "a very cornucopia of all the riches of the earth." On the one hand it allies itself with nature, on the other hand it has close bonds with history.

The study of the earth for the sake of knowing its life history and phenomena and the life upon its surface is science, but this science applied to the earth as the home of man is geography. The study of man in his interrelation with his fellowmen is sociology or history, but add to this the study of the earth as the place of activity and we have geography. "Every topic in geography," says Dr. Charles McMurry, "has a double footing in natural science and in history. It has two faces—one toward nature and one toward man."

Home Geography.—Before any formal lessons in geography can be undertaken, or even before the child goes to school, he may be led to observe position and direction; points of the compass; position of the sun, its place of rising and of setting; the winds and their direction; change of seasons; change of day and night; the time for planting and sowing; distinctive occupations; observation of plant and animal life; human life under contrastive conditions, especially stories of child life in various countries and in other climates.

Every neighborhood is rich in unexplored territory. Children love to walk with the teacher, and these excursions into the neighborhood furnish the basis for home geography. That child is most fortunate who has fields and water courses at his command and who, before he enters the third grade, the time for taking up the formal study of geography, has learned to love "the woods and all sweet smelling things."

The work of the third grade in home geography should be very simple and should concern itself with localities, natural products, local industries and the conditions which have given rise to these industries. Excursions should form the subject of class discussion, for the geography work in this year will be chiefly oral.

Commercial Topics Outlined.—The teacher must closely plan her work that nothing shall be left at loose ends, but that there shall be definiteness of purpose and definiteness of results. These school excursions may be profitably introduced into all the grades. For helpful suggestions a few well worked out plans are taken from McMurry's *Type-Studies in Geography.*

The Local Town or Village as a Trade Center.—1. Chief streets and roads leading into the country. 2. Products brought into town by wagon, as grain, hay, meat, wood, stone, live stock. 3. Goods carried into the country from the town, as machinery, dry goods, groceries, lumber, ceal, oil, etc. 4. Goods shipped into or out of the town by railroads or by boat. 5. Number and direction of railroads, rivers, etc. 6. Electric lines reaching into the country. 7. Chief factories that ship goods out of the town. 8. The town as a center for railroads and wagon roads. Map. The beginning of map making may be map of school grounds or schoolhouse, drawn larger upon the schoolhouse floor or traced upon the earth in the school yard.

A Freight Office or Station.—1. Variety of goods stored at a freight station. 2. Freighting by the car load. 3. Expense of freighting by the car load and by the hundred pounds. 4. Goods received for sale in the town. 5. Goods shipped out from the factories of the town. 6. Other modes of sending goods by express and by mail.

A City Market.—1. Special days when the market is open. 2. Different portions of the market for vegetables, fruits, meats, fish, etc. 3. The hours of marketing and the throngs of people. 4. Where the produce comes from.

A Visit to a River Steamer or Ocean Liner.—1. Size and arrangement of the steamer. 2. Passenger deck; staterooms; dining room, etc. 3. The freight room on lower deck; goods shipped by steamboat. 4. The engines and wheels or screw. 5. The towns between which the steamboat plies; expense of freighting compared with that by railroad. 6. Visit to an ocean liner in the same way.

A Canal Boat and Canal Lock.—1. Visit to a canal boat loading; goods freighted in this way. 2. Mode of propelling a canal boat. 3. Size and capacity of a

1, Atoncagua ... S. Am.	8, Tolima. ... S. Am.	15, Cerro de Potosi. . S. Am	22, Pike's Peak . . N. Am.	29, Sierra de Grande S. Do.	36, Black Mts. . . . N. Am.	43, Jefferson . . . . . N. Am.	50, Franklin. . . . N. Am.	57, Saddle Mt . . N. Am	64, Kearsarge . . . N. Am
2, Illimani . . . . S. Am.	9, Popocatepetl ... N. Am	16, Pichincha . . . . . . S. Am	23, Mt. St Elias . . N. Am.	30, Mt. Egmont . . . . N. Zea.	37, Guadarrama . S. Am.	44, Grandfather . N. Am.	51, Lafayette . . . . N. Am.	58, Mt. Hekla . . . Iceland	65, Cape Horn . . . S. Am
3, Huascan . . . . . S. Am.	10, Wrangle . . . N. Am.	17, Hooker . . . . N. Am	24, Mt. Terror S. Victoria	31, Mt. Fairweather N. Am.	38, White Mts. . . N. Am.	45, Marcy . . . . N. Am	52, Moose Hill. ... N. Am.	59, Catskill. . . . . N. Am.	66, Crowsnest . . N. Am
4, Chimborazo . . . S. Am.	11, Mt. Roa . . . . . N. Am	18, Crillon . . . . N. Am	25, Mt. Erebus S. Victoria	32, Duida . . . . . . Colombia	39, Roan Mts . . . . N. Am.	46, Sitting Bull. ... N. Am.	53, Jurullo . . . . . . N. Am.	60, Kellington Pk. N. Am	67, Anthonys Nose N. Am
5, Mt McKinley . . N. Am.	12, Ruiz . . . . S. Am.	19, Fremont . . . . N. Am.	26, James Peak . . N. Am.	33, Bourbon . . . . Colombia	40, Blaarserk Greenland	47, Katahdin . . . N. Am.	54, Pelee . . . . Martinique	61, Gt Monadnock N. Am.	68, Holyoke . . . . . N. Am.
6, Cotopaxi . . . . . S. Am.	13, Yliniza . . . . . S. Am.	20, Mauna Loa . . . . . N. Am.	27, Laramie Peak . N. Am.	34, Blue Mts. . . . Jamaica	41, Werner . . Greenland	48, Mt. Adams . . N. Am.	55, Table Mt . . . . N. Am.	62, Appalachian P N. Am.	
7, Arequipa . . . . . . S. Am.	14, Brown . . . . . N. Am.	21, Long's Peak . . . . N. Am.	28, Sierra de Cobre Cuba.	35, Mt. Washington N. Am.	42, Adams . . . . . . N. Am.	49, Mansfield . . N. Am.	56, Camels Hump. N. Am.	63, Wachusett ... N. Am.	

WESTERN HEMISPHERE

EASTERN HEMISPHERE

canal boat. 4. The lock; its walls and gates. 5. Passing the lock.

Excursions may be made to a dairy, a creamery, or a grain field, a harvest field, a flour mill, a bakery, a stream of water, to lake or ocean if near at hand, to a vineyard or orchard, a brick or a tile manufactory, a lumber yard, a place of house building. It is not necessary to make many excursions, but a few well selected typical ones, and care must be taken that time and attention of the class be well economized both in the excursion and in the recitation.

School Excursions in Europe.—In Germany, France, Holland and other countries of Europe school excursions for the primary purpose of the studying of geography and history are organized on an extensive scale. Nearby excursions are planned for the little ones and long journeys to distant places for the older classes. Very careful preparations are made so that the child shall have both physical and intellectual benefit. Sometimes several vacation weeks are planned out in this way, the aim of which is primarily education and not vacation sports as would be the case probably in America.

The Use of the Text-Book.—The right use of the text-book when first put into the hands of the child is so important that the New York state syllabus gives this advice to the teacher: "The elementary text-book in geography is usually the first book placed in the hands of the children which they are expected to study for the purpose of obtaining information, and for that reason it is extremely important that its use should be carefully taught. This is best done by discussing each day in class the lesson for the next day, and at the close of the oral work assigning the same lesson for study. Later the children should be called upon to recite upon the text. After a little it will be sufficient to point out during the assignment of the lesson the items of greatest importance, adding thereto 'search questions,' the answers to which may be found in the text." It may be added that to teach a child how to study is as important as what to study. There is a deplorable lack of this knowledge even among the men and women in our universities.

By the aid of the text-book and the globe the class should first become acquainted with the relation of the great land masses and the ocean. They should also be given a larger view of the earth as a great ball in space "whose surface is varied by continents and oceans and upon which the sun and moon shine from a distance."

Pictures and Illustrations.—Pictures and illustrative material should in every grade be freely used. Illustrations cut from magazines and other sources should be selected and preserved under suitable covers. The children, if encouraged to do so, will bring from their homes a vast amount of material that will illustrate the subject and make it interesting. The children of the fourth grade in their large general view of other countries may begin books of illustration which will become to them a delight.

Stories form the best illustrations, stories about other people and where they live and how they live. In every grade geography correlates closely with the other work of the grade.

The study of industries furnishes an abundance of material for the best sort of modern arithmetic, and the stories of industry, people and products, when retold by the children, furnish excellent drill in the use of correct English.

Map Making and Map Study.—As the class advances more time should be given to map study and to the studies of the globe. The map is the written language of space relation. Every bit of our geography work is done with reference to location, and the map. It is well to understand the making and reading of the map, and the use of the scale. Make a plan of the schoolroom, taking measurements with the foot rule or yard stick, drawing the plan to scale, using a half inch or quarter inch to the foot. Enter the desk, stove, etc. Next make a map of the school yard, using a measuring tape or a ten-foot pole and practicing the measurement of such distances by "stepping" or "pacing" it off. Plot as before, using a smaller and appropriate scale. Enter the schoolhouse, outbuildings, roadway, trees and other prominent objects. It will be an easy step to the idea of charting a larger area, like the farm; then the teacher in a single lesson or so, may show a map of the township, with the schoolhouses located in it, with other prominent features; then the county map, with the township conspicuous in it; then the state, with the county made prominent; the United States, with the state under observation, and North America, with the United States for observation.

As the child advances in the study of maps they should be made so full of meaning to him that he will take delight in learning from a new map as much as is possible before turning to the text. Throughout the grades considerable use should be made of large wall maps and relief maps as well as of the globe.

The following suggestions for the upper grades follow the course of study marked out in the Illinois syllabus. The work of the fifth year should be first general—the making and reading of a map, and an acquaintance with the globe; then a trip around the earth in a study of the continents, with interest centered in the people and their industries. The second half of the year may be devoted to a study of the home county and state, and the physiographic regions of America (United States).

The work will be done according to a topical outline, which will fix the order of study and recitation. This outline may be placed on the board and left a few days until it is memorized by the class. With the outline any text may be used or several different ones may be in the hands of the pupils at the same time. Then, too, the whole library, and all the outside reading of pupils and teacher may be brought to bear upon the recitation. With the use of this outline should go a considerable drill upon a few place names, say about twenty-five, fixing them firmly in mind by map drill. The pronouncing vocabulary in the text-book should be in constant use.

Continuous map work should be done on maps supplied to the pupils, or on tracings they may make. A regular series of maps may be made for each continent, the pupil showing by tinting with colored pencils the great forests, grassy plains, deserts, races of men, areas of production of the leading commodities, trade routes, largest cities. These maps, finished neatly from day to day and approved by the teacher, will accumulate into a little volume as the pupil's own work.

Geography in the Upper Grades.—Above the fifth grade the point of view and emphasis change to another phase of geography. In the previous grades the work was largely observational and descriptive in character, because the observational and imaginative activity of a child were then dominant. The pupils have been growing older, other mental activities have been coming forward which make it not only possible but necessary that the rational side of the subject shall be introduced more and more as the work progresses. By rational geography is meant the study of the subject matter from the point of view of cause and effect. In the study of the Sahara desert, for example, the arid conditions should not only be described, but they should be traced backward to their causes and forward to their effects on the life, habits, dress, and occupations of the people. The culminating interest in geography centers in the life of man, his occupations, his commerce and manner of living. Almost any one of these topics, if traced backward to its causes and determining conditions, soon ends in certain conditions of his physical environment. It is necessary to understand the physical environment of that life. The attention given to this side of geography in the previous grades has been more to the securing of good, clear mental pictures of physical features and the acquisition of facts than to the explanation of those features and facts. In this second study of physical environment, emphasize the processes concerned and the forces at work introducing that environment.

Geography and History.—Passing from the physical to the human side of geography we find how intimate are its relationships with history. Quoting from Dr. McMurry, "An examination of our whole course of study in geography will show that historical considerations have largely shaped it, first America fully treated, then the movement toward Europe with an elaborate study of its large topics, and later the journey outward from Europe to the rest of the world."

Type Lessons.—The following type lessons are taken from McMurry's *Special Methods in Geography*. They illustrate the intimate relationship that exists between the study of geography and the literature of travel and biography and history, and how the study of geography can be enriched by well selected reading:

"A trip around the world on the parallel of the home. This forms an interesting base-line, on each side of which cities and countries can be ranged and a helpful comparison of diverse countries be made."

"A trip around the world on a meridian. This brings out all the contrasts of climate, the similarity of northern and southern hemispheres and the differences."

"Steamboat voyage around the world. This is a means of discovering the position of different continents and oceans and some of the peculiar things of ocean navigation. These three excursions may serve to give the children a more definite idea of the geography of the world-whole. Pictures should be freely used as well as supplementary reading from books of travel."

Geography Topics Parallel With American History Lessons.—"Journeys across the Rocky Mountains. (Stories of Fremont and Lewis and Clark.) The Canyon of the Colorado River. (Story of Major Powell.) The Plateau of Colorado. The land of Mexico. (Story of Cortes.) Florida and the southern states. (De Soto and La Salle.) The trade route to India.

(Columbus and Da Gama.) The map of the world in Columbus' day. The equatorial current, trade winds, and Gulf stream. (Voyages of early navigators.)"

"Champlain's voyages and explorations with a careful survey of the geography of the whole, the St. Lawrence, Nova Scotia, Lake Champlain, the Ottawa river, the homes of the Iroquois and Hurons, the Atlantic Ocean and France."

"Hudson's voyages and explorations, the Pilgrims and the voyage across the Atlantic, Captain John Smith and his exploring trips, Boone and the passes of the Alleghanies, Raleigh's expeditions, Washington's early life."

Map and blackboard sketches should be freely used. Pictures and sand maps, and all the means of concrete illustration needed to insure clear and correct notions.

BOOKS FOR THE STUDY OF GEOGRAPHY ARRANGED BY GRADES

Reference Books for Teachers, Third Grade.—Long, *Home Geography*, very elementary (American Book Co.); Tarr and McMurry, *Home Geography*, first book, for grades three and four (Macmillan); McMurry, *Lessons in Home Geography*, illustrated lessons and excursions fully described (Macmillan).

Books for the Children's Shelf, Third Grade.—
Docas, the Indian Boy, Snedden (Heath).
Our Own Country, Dunton (Silver-Burdett).
Seven Little Sisters; Each and All (Ginn & Co.).
Around the World, first book, Carroll (Silver).
Geographical Nature Studies, Payne (American Book Co.).
The Snow Baby; Snow Land Folk, Peary (Stokes).
Big People and Little People of Other Lands, Shaw (American Book Co.).
Children of the Palm Land, Allen (Educational Publishing Co.).

References for Teachers, Fourth Grade.—McMurry, *Special Methods in Geography* (Macmillan); McMurry, *Type-Lessons in Geography* (Macmillan); Trotter, *Lessons in the New Geography* (Heath); Frye, *Brooks and Brook Basins* (Ginn); McCormick, *Suggestions on Teaching Geography* (Public School. Publishing Co.); King, *Methods and Aids in Geography* (Lothrop).

Books for the Children's Shelf, Fourth Grade.—
Around the World, second book, Carroll (Silver).
The Stories of My Four Friends, Andrews (Ginn & Co.).
Lodrix, the Little Lake Dweller, Wiley and Edick (Appleton).
Hans Brinker; Life in Holland, Dodge (Scribner).
Heidi, Story of a Little Girl's Life in Switzerland, Spyri (Ginn).
Moni, the Goat-Boy; Boy's Life in Switzerland, Spyri (Ginn).
Four American Explorers, Kingsley (American Book Co.).
Great Navigators, Verne (Scribner).
Explorers of the Nineteenth Century, Verne (Scribner).
Wandering Heroes, Abraham, Isaac, Joseph, Price (Silver).
Little Cousin Series, several volumes, Wade (Page).
Family Flights, several volumes, Gale (Lothrop).
The World and Its People, three volumes, Dunton (Silver).
Story of Little Jan, the Dutch Boy; Konrad, the Swiss Boy; Mitzu, the Japanese Boy, Camphill (Educational Publishing Co.).
Ten Boys on the Road From Long Ago to Now, Andrews (Ginn).
Indians and Pioneers, Hazard and Dutton (Silver).

Reference Books for Teachers, Fifth Grade.—Tarr and McMurry, *North America*, second book (Macmillan); Redway, *The New Basis of Geography* (Macmillan); McMurry, *Type-Studies of North America*, part I. (Macmillan); Russell, *Lakes of North America* (Ginn); Shaler, *Nature and Man in America* (Scribner); Patton, *Natural Resources of the United States*, Science Primer series (American Book Co.).

Books for the Children's Shelf, Fifth Grade.—
Geographical Readers, separate books for each country, Carpenter (American Book Co.).
Picturesque Geographical Readers, six volumes, King (Lothrop). Each grade should be supplied with good wall maps and a globe, on geography; also separate state geographies.
Stories from Life; Stanley and Livingston, Marden (American Book Co.).
Around the World, third book, Carroll (Silver).
Little Journey Series—Switzerland, France, Holland, Italy, Germany, Australia, Japan, China, by different authors (Flanagan).
Around the World in the Sloop Pratt; Far West and Far East, Slocum (Scribner).
Pioneer History Stories; Pioneers of the Mississippi Valley, McMurry (Macmillan).
Pioneers on Land and Sea; Pioneers of the Rocky Mountains and the West, three volumes (Macmillan).
Heroes of the Middle West; The Story of Tonty, two volumes, Catherwood (Ginn).
The Boy Traveler; Travels in Many Lands, given in several volumes, Knox (Harper).
Zigzag Journeys, also an interesting series of journeys in separate volumes, Butterworth (Estes).
Boyhood In Norway, Boyesen (Scribner).
When I Was a Girl in Italy, Ambrosi (Lothrop).
In Eastern Wonderland, Gibson (Little).
Voyage of the Paper Canoe (Quebec to Florida), Bishop (Lothrop).

Reference Books for Teachers and Pupils, Sixth Grade.—Brigham, *Geographic Influences in American History* (Ginn); McMurry, *Type-Studies of the United States and North America*, part II. (Macmillan); McMurry, *Teachers' Manual of Geography* (Macmillan); *General Guide to the United States and Canada*; Tarr, *Economic Geology of the United States* (Macmillan); Houston, *Physical Geography* (Hinds).

Books for the Children's Library, Sixth Grade.—
First Crossing of Greenland, Nansen (Longmans).
The Yellowstone National Park, Chittenden (R. Clarke).
Arctic Alaska and Siberia, or Eight Months With the Arctic Whalemen, Aldrich (Rand).
From Trail to Railway Through the Appalachians, Brigham (Ginn).
The Story of Lewis and Clark, Kingsley (American Book Co.).
A Tramp Across the Continent, Lummis (Scribner).
Captains Courageous, Kipling (Century).
Roundabout Journeys, Warner (Houghton).
Oregon Trail, Parkman [read in part with class (Little).]
Viking Tales, Hall (Rand).
Geographical Readers; How the World Is Fed; How the World Is Clothed, Carpenter (American Book Co.).
Some Strange Corners of Our Country, Lummis (Century).

Reference Books for Teachers and Pupils, Upper Grades.—Tarr, *Economic Geology of the United States* (Macmillan); Redway, *Commercial Geography* (Scribner); Rocheleau, *Geography of Commerce and Industry* (Educational Publishing Co.); Rocheleau, *Great American Industries* (Flanagan); *Government Reports of Great Value*; Wright, *Industrial Evolution of the United States* (Scribner); George, *The Relation of Geography and History* (Oxford University Press); Ritter, *Comparative Geography*; Tarr and McMurry, *Geography*, third book (Macmillan).

Geographic Journals and Atlases, for Use in All the Grades.—
Atlas of Commercial Geography (Cambridge University Press).
New Gazetteer of the World (Lippincott).
New School Atlas, (Longmans).
The Use of Government Maps, Davis and Others (Holt).
The Journal of Geography (Teachers' College, N. Y.)
Bulletin of American Bureau of Geography (Winona, Minn.).
The National Geographic Magazine (Washington).
The World's Work (New York).

Supplementary Reading for the Upper Grades.—
Travels and Essays of Robert Louis Stevenson (Scribner).
Dr. Luke of the Labrador, Duncan (Revell).
West From a Car Window, Davis (Harper).
Great World's Farm, Gaye (Macmillan).
Romance of Industry and Invention, Cochrane (Lippincott).
Java, the Pearl of the East, Higginson (Houghton).
My Arctic Journal, Peary (Contemporary Publishing Co., N. Y.).
In Wildest Africa, MacQueen (Page).
Story of the Philippines, Knapp (Silver).
Two Girls in China, Krout (American Book Co.).
Four Months in a Sneak Box, Ohio and Mississippi Rivers, Bishop (Lothrop).
Man of War Life, Nordhoff (Dodd, Mead & Co.).
Personally Conducted, Stockton (Scribner).
Holland and the Hollanders, Meldrum (Dodd).
The Spanish in the Southwest, Winterburne (American Book Co.).
The Land of the Long Night, Du Chaillu.
Glimpses of Three Coasts, Jackson (Little).

NATURE STUDY.—Pestalozzi said that the child's first tutor is nature, and her tuition begins from the moment that the child's senses are open to the impressions of the surrounding world. Since his time nature study has been defined as "learning those things in nature that are best worth knowing to the end of doing those things which make life most worth living." Its aim is a happy, helpful adjustment. It is to set the child in the midst of nature as a companion worker.

The School Garden.—To this end, "happy, helpful adjustment," the school garden has proved most practical. Froebel recognized this long ago. "It is of the utmost importance," he said, "that every child should acquire the habit of cultivating a plot of ground. Nowhere as in the vegetable world can his action be so clearly traced by him, entering in as a link in the chain of cause and effect."

Value of School Gardens.—What do the children get out of the school garden. The teaching of the school is brought into contact with life, and, best of all, the lives and experiences of the children. The point of contact reaches the home interests just as directly as those of the school. The tiny garden of the school is sure to be duplicated at the home—probably on a larger scale; and this alone is worth the whole effort. The responsibility of the garden develops strength and independence in character. Honest effort wins. Judgment, as well as physical effort and steadfastness of purpose, is demanded.

The first school garden in the United States regularly authorized by a board of education was planted in Boston in 1891, but the value of such school instruction was recognized as early as 1824, when it was argued that "Agriculture and the Gospel are the two great instruments of Divine Providence to check the voluptuousness and exercise the virtues of man." In 1900 vegetables were first planted in this Boston garden. Since that time the development of school gardens and the advancement of agricultural education in the United States have been very great.

How the School Garden May Become a Vital Part of the School Instruction.—A few practical illustrations from two of our own American schools will show how the school garden may become a center of great interest and a vital part of school instruction.

Connected with the school garden is a chicken yard. The children visit it every day and it has been the subject of daily conversation with their teacher. This is the story as they told it to her one day:

We went to see Biddy.
Biddy sat very still.
She looked at us.
We stood near Biddy's nest.
She was not afraid of us.
We would not hurt her.
Biddy had eleven little chicks.
They were white, black, and yellow.
They said, "Peep, peep, peep."

The teacher wrote these stories on the blackboard as the children told them to her and they became their reading lesson. Then she wrote for them this story on the blackboard and they read it to her:

I think that when a little chicken drinks,
he takes the water in his bill.
And then he holds his head up so that the
water can run down hill.

The children copied all these sentences on paper and illustrated them with drawings and free-hand cuttings of their own.

The stories were read and reread—many times, with delight. Later the teacher taught them how to tie the leaves together to make a book and they were taken home as a gift to father and mother. Thus the nature-study became through correlation a conversation lesson, a reading lesson, a writing lesson, an art lesson, a number lesson (counting the chickens), training in manual skill (making the book and working out the illustrations), and, above all, an ethical lesson in the noble art of giving.

Another day the children came in with their hands full of flowers. The teacher read them these words and taught them the song: "Consider the lilies of the field, how they grow; they toil not, neither do they spin: And yet I say unto you, that even Solomon in all his glory was not arrayed like one of these. Wherefore, if God so clothe the grass of the field, which to-day is, and to-morrow is cast into the oven, shall he not much more clothe you, O ye of little faith?"

I heard the robin singing
His happy morning song,
I saw his help-mate bringing
Their breakfast to the young;
And to me came a whisper
In words that softly fanned the trees:
"If God for these so careth,
Will He not care for thee?"

I saw the roses growing
In beauty day by day;
No queen in all her glory
So lovely in array.
And on the leaves were written
Sweet words of love and trust for me:
"If God so clothed the roses,
Will He not care for thee?"

ARITHMETIC.—First Steps in Number Training.—Arithmetic in the first three grades is called "number work." It expresses in the simplest way the numbering sense or the counting instinct by which the child first gets hold of quantitive values in his environment. First year number work to the child is largely incidental, though the teacher must have definite aims and purposes. The simplest way to get number ideas is to count small groups of similar objects and find "how many" in a group. The mere rhythm of counting is pleasing to children, counting by 1's to 100; by 10's and 5's to 100; by 2's to 12 or 20; by 3's to 12 or 15; count backward by 1's and 10's. Children will have practical use for this knowledge in connection with games, songs, stories, manual work, and in the daily business of the schoolroom and the home. Through rhymes and jingles as in this *Ten Little Indians* song they have the concrete lesson, the physical exercise and the merry game all in a delightful combination.

One little, two little, three little
Indians.
Four little, five little, six little
Indians.
Seven little, eight little, nine little
Indians.
Ten little Indian boys.

Ten little, nine little, eight little
Indians.
Seven little, six little, five little
Indians.
Four little, three little, two little
Indians.
One little Indian boy.

Games in great varieties may be arranged that will bring into exercise this number sense and the delight of dramatization.

Reading and writing numbers may be taught the first year to one hundred and the second year to one thousand. Make practical use of numbers taught, as finding pages of books, numbers of houses, etc. The teacher must always study her class and suit her pace to theirs.

Teach various forms expressing number relations, as: Three and three are six. Six divided into twos are three twos. Three twos are six. Six less three are three. Two threes are six. One-third of six is two. Six divided into threes are two threes. Two-thirds of six are four.

With the operation teach also the appropriate sign as +, —, =, ×, ÷.

Appropriate combinations for drill should be presented after the child has formed a concrete image of the number relation. He should see one-half and be able to think one-half before he is asked to repeat the statement that one-half of six is three.

Developing the Idea of Fractions.—Children easily grasp the idea of fractional parts, but the teacher should keep in mind the completeness of the fractional idea, as Professor David Eugene Smith in his monograph on the teaching of arithmetic has pointed out in the following illustration: "We should remember that a fraction, say ½, is commonly used in three distinct ways, and that it is our duty to see that little by little all these become familiar to the child. These ways are as follows: 1. ½ of a single object, the most natural idea of all, the breaking of an object into 2 equal parts. 2. ½ as large, as where a six-inch stick is ½ as long as a foot rule, not half of it, but half as long as it is. This is essentially the ratio notion, and it is necessary to the child's stock of knowledge, but it is not necessary to make it hard by talking about ratios at this time. 3. ½ of a group of objects, as in case of ½ of 10 children."

New Facts and Processes.—Whenever new facts and processes have to be learned they should be learned in comparison with known facts. The child should handle and measure and by the aid of drawing get graphic representations of mathematical relationships. Use different magnitudes. Do not neglect to follow up with abstract drill work. Drill, fix, learn. Abstract drill work may be made as interesting as concrete, for all the joy of the game element in education may be made to enter into it.

Seat Occupation for Number Work in Primary Grades.—Devices for making number work practical have been worked out in great abundance. Every resourceful teacher has devices of her own. A few have been gathered here as suggestions.

Make pasteboard rulers 4 inches long, a foot long. Mark off into inches. Later mark off into fractions of an inch. Use these rules in measuring many things. Compare lines, surfaces and solids, with similar lines, surfaces and solids, as: This line is three times as long as that line. This line is one-fourth as long as that line. This rectangle is one-half that rectangle. Find lines and surfaces in the room, and compare. Teach the child to see many things through the one. Unless that which he sees aids him in interpreting something else his observation is of no use to him. Cut, fold, paste paper furniture according to directions. Paint flags or cut badges of paper for holidays.

Rule lines, squares, oblongs to dictation and scale, sheets for weather record, record sheets, score cards for games. In all construction children should make the necessary computation to get total lengths and breadths and effect of any allowances, *e. g.*, laps in making boxes, for cover of a box compared with the box itself.

Have children measure each other, measure the growth of twigs, make comparisons in weights and measures. Arithmetic of a very practical kind is found in nature study, manual training, and in sewing and cooking. Boys and girls in industrial courses must measure and weigh with accuracy and skill.

Construction work when properly taught affords the finest mental discipline. Let children work out their own knowledge and make them personally responsible for their own results. Encourage them to tell what they know in free conversation. Such free work is far more valuable than formal recitation.

Text-Book.—A text-book is usually placed in the hands of pupils as early as the second half of the third year. From this time on the teacher follows the outlined course of study. Each year she must see to it the class thoroughly reviews the essential features of the preceding year's work and that such forward steps as are marked out for her grade be intelligently taken. Each year the work involves more difficult combinations and more complicated processes. The exact groundwork to be covered grade by grade differs in different schools according to the course of study outlined by different boards of education, but everywhere the essentials of class work are the same.

Class Work.—Cultivate the habit of first grasping the conditions of a problem, what is given, what is required, the relations between the two, the solution. Dictate original problems. Call for restatement of facts and conditions. Let pupil state process without solving. Dictate work slowly and distinctly without repeating. Demand close and lively attention. Call for original problems to illustrate principles. Secure familiarity with arithmetical facts and accuracy and ease of language. Typical problems, from Professor Smith's *Monograph*, to which this article is already under great obligations, have been borrowed here to show the nature of original work that may be done in different grades.

Two Groups of Problems Given to a Third-Year Class.—

Oral Exercise (without pencil and paper).—

1. The coffee for our breakfast cost 6c, the potatoes 4c, the meat 32c, and the bread 4c. How much did the bread and meat cost? How much did the food cost?

2. The oatmeal for a breakfast cost 8c, the milk 4c, the fruit 10c, the rolls and butter 5c, and the eggs 8c. How much did this food cost?

3. For a dinner the meat cost 30c, the vegetables 20c, the dessert 20c, the coffee 15c, and the other food 15c. Find the total cost.

4. The meals for a small family cost $1.70 on one day and $2.20 on another day. How much did they cost for these two days?

Written Exercise.—The toad is one of man's best friends. One toad will keep a garden of 800 sq. ft. free from harmful insects.

1. At this rate, how many toads would protect from insects a garden 80 ft. wide and 100 ft. long?

2. The eggs of four toads were counted and found to be 7,547, 11,540, 7,927, and 9,536. How many were there in all?

3. If one out of 50 hatched, how many hatched? (Divide all by 50.) If 715 of these were destroyed by other animals, how many survived?

4. If each of these survivors destroys insects that would cause $10 worth of damage, how much are they all worth to a village?

Typical Problems for the Fourth or Fifth Grades.—1. Sarah's mother bought 4⅙ yds. of cloth for a coat, at $1.25 a yd. What did she pay for it?

2. She also bought 3½ yds. of lining at 50c a yd. and 4¼ yds. of braid at 20c a yd. How much did these cost?

3. She also bought 6 pearl buttons at $1.50 a dozen, and 2 spools of silk at 8c a spool. How much did these cost?

4. A dressmaker charged $5 for making the coat. What did the materials and making cost?

Typical Problems for the Sixth or Seventh Grades.—1. The following is, by weight, a good mixture of seed for a pasture: Kentucky blue grass 25%, white clover 12½%, perennial rye 28⅛%, red fescue ⅜%, redtop 25%. At 32 lbs. to the acre, how many pounds of each are used?

2. A farmer puts 5 acres into celery, setting out 20,000 to the acre. The yield being 1,500 doz. heads to the acre, what is the ratio of the plants matured to the others?

3. He pays $95 an acre for seed, fertilizer, labor, and other expenses, and sells the crop at 15c a dozen heads. What is his profit on the 5 acres?

An outline of the course in arithmetic in the eighth school year in Munich will show how the German schools are working out some practical ideas for girls who are soon to be the home makers. It is more complete than anything we have yet worked out in America.

The work for the year is as follows: 1. Simple domestic bookkeeping. 2. Calculation of the prices of foods, bought in large or in small quantities, together with the question of discounts. 3. Cost of meals for the home. 4. Daily, monthly, and yearly supplies for the kitchen.

Too much importance cannot be placed upon the nature of the original problems. They enliven class interest and give ample opportunity for correlation with other school subjects and with the livelier interests of the social environment. They should strain the powers of the child to think and compute, but they should not be too hard for him to master them independently. In every way problems should help the teacher to make school work practical.

Summary of Suggestions for the Teacher of Arithmetic.—1. There are a few things primarily essential in arithmetic that should be learned by every child. He should think in numbers as readily as he thinks in other subjects. He should be ready to execute his thought with quickness and precision.

2. Drill and repetition for accuracy and speed should be given day after day that the child may early master the mechanical difficulties of the subject, but drill should not become a lifeless mechanical repetition; it should be so varied as to produce thought and animation.

3. Such processes as addition, subtraction, multiplication, and division should be mastered early. Often much time is wasted in the upper grades learning facts and processes that should have been mastered in the lower grades when the child is passing through the stage in which this work can be done most easily.

4. The introduction of too many topics at a time should be avoided. The pupil should be required to meet but one difficulty at a time.

5. Begin with the concrete, then drill on number facts and processes. In the primary grades teach number facts for the most part in connection with the study of other subjects. Use material drawn from the number side of school experience and the simpler and more evident relation of home life. The continued use of any particular set of objects is tiresome and narrowing.

6. It is important to use objects freely whenever they assist in understanding number relations, but care should be taken not to fetter the mind with objects when it is ready for the abstract. Pass from observation to reasoning, from concrete to abstract, from facts to principles, from particular to general, and, very slowly, from the simple to the complex. The child passes through the stage of objects to that of representation of objects, to that of symbols. Noticeable progress begins when he can think of things not present to his senses.

7. In the intermediate grades emphasis should be laid upon the scientific aspects of the work, that is, rules and principles, in order to secure mastery of fundamental operations of numbers.

8. In the grammar grades considerable attention should be paid to the use of numbers in connection with the commercial and industrial activities of the community. Practical problems for all grades should be taken from industrial life.

9. In the working out of problems the child should be taught from the beginning to determine for himself the approximateness of results, appeal being made to the common sense check "Is this result reasonable?" "Does it agree with the conditions?"

10. Problems of graded difficulty should be given in all classes in order that even the weakest pupil may find enough that he can do to keep him trying. The exercise should bring in all the primary combinations of numbers and all the fundamental processes. The tendency to overuse a few combinations at the expense of others must be guarded against.

11. The teacher must exercise judgment as to the amount of written work. Oral expression should always precede written. In primary grades number work is largely given orally—good, clear, well worded expression. A little work well done is much better than a large amount of work over-hurried.

12. Insist upon neatness and a proper statement of steps taken.

13. Accuracy, facility, orderly arrangement, self-reliance, are cardinal virtues in number work.

14. In the assignment of work, assign some purely for drill and some purely to train the reasoning powers. If reasoning is difficult, mechanical processes should be simple.

15. Aim to obtain efficiency through the discipline of numbers. "The prime desideratum," it has been said, "is the ability to work accurately, with reasonable rapidity and with interest, and to know how to apply numbers to the ordinary affairs of life." There is moral value in the integrity of numbers that "cannot lie."

PRACTICAL HELPS IN ARITHMETIC

ADDITION AND SUBTRACTION

The following plan is suggested in teaching the combinations in addition and subtraction:—

1. Add **1** to every number up to **10**; later to **20**.
2. Subtract **1** from every number up to **10**; later to **20**.
3. Add 2 3 4 5 6 7 8 9 10
   +2 +3 +4 +5 +6 +7 +8 +9 +10

Here the addends are equal and easily added. The figures should be placed as above and not 2+2, 3+3, etc., because the vertical form is the natural one which the child will use all through life. It does not look so formal and represents better what he really does with the objects.

4. Add 1 2 3 4 5 6 7 8 9
   +2 +3 +4 +5 +6 +7 +8 +9 +10

Here one addend exceeds the other by **1**.

5. Subtract 2 3 4 5 6 7 8 9 10
   −1 −2 −3 −4 −5 −6 −7 −8 −9

Here the minuend is **1** greater in each case.

6. Teach the parts of **10**.
   5 2 3 4 9
   +5 +8 +7 +6 +1
7. In adding **9** to numbers have the child think of **9** as **10**
   9 10 9 10
   thus +6 = +5 and +8 = +7
8. Teach the corresponding subtractions.
9. Add **8** to each number up to **10**.
10. Teach the corresponding subtractions.
11. Add **7**, **6**, and **5** to each number up to **10**.
12. Teach the corresponding subtractions.
13. Review and give combinations not taught above.

Note.—Objects should be grouped by tens and units, in showing numbers above **10**. The numbers written should represent objects counted.

The Forty-Five Facts of Addition

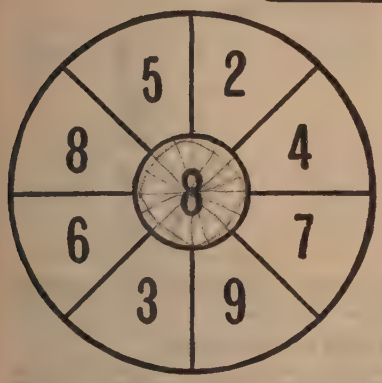
1	2	2	3	3	4	3	4	5
1	1	2	1	2	1	3	2	1
2	3	4	4	5	5	6	6	6
4	5	6	4	5	6	7	5	6
3	2	1	4	3	2	1	4	3
7	7	7	8	8	8	8	9	9
7	8	5	6	7	8	9	6	7
2	1	5	4	3	2	1	5	4
9	9	10	10	10	10	10	11	11
8	9	6	7	8	9	7	8	9
3	2	6	5	4	3	6	5	4
11	11	12	12	12	12	13	13	13
7	8	9	8	9	8	9	9	9
7	6	5	7	6	8	7	8	9
14	14	14	15	15	16	16	17	18

Note.—Be sure that the nine facts underscored are thoroughly learned. They give most trouble.

Drills in Addition

Draw on a sheet of paper a large square and a circle. Divide them like these. Put, say the figure 8, in the center with the other numbers around it.

Write any figure in the center where the 8 is. Then drill, by pointing to the figures around it, while the child names at once the sum of the center figure and the one pointed at.



Use exercises like this frequently, and give many problems, using the combinations with which you find the child has difficulty.

Exercises in which the child counts by 2's, by 3's, etc., to 100 are valuable.

Proving Addition

You may early teach how to prove an addition. There are a number of ways of doing this. Use the way the child's teacher uses. It is a good way.

One Way

Add the columns down. If the result is the same as when the columns were added up, the result is correct.

Second Way

Write the numbers in two groups. Find the sum of each group. Add the sums of the two groups. If the result is the same as when the numbers were added in one group, the result is correct.

Illustration of second way:—

```
273 }  ——  273
456 }      456
           ———
           729      729
629 }  ——  629
384 }      384
           ———
1742       1013     1013
                    ————
                     1742
```

The Accountant's Proof

This is a modification of the plan called *casting out the nines.*

Illustration

```
7926—24—6 }
4356—18—9 }
1824—15—6 + } 31—4
9263—20—2 }
7856—26—8 }
————————————
31225—13—4
```

Explanation

First add the columns in the regular way. Add each column horizontally, left to right. The results are 24, 18, 15, etc. Add these horizontally and you have 6, 9, 6, etc.

You have now reduced all to one column. Take the sum of this column. It is 31. This added horizontally is 4.

Add the sum 31225 horizontally until you have but one figure in it and you also have 4. This proves your answer correct.

Another Illustration

This illustrates where it is necessary to carry the horizontal additions a step further:—

```
986745—39—12—3 }
726324—24— 6—6 + } 16—7
916348—31— 4—4 }
992973—39—12—3 }
————————————————
3622390—25— 7—7
```

Note.—With some practice it will be necessary to write the last line of figures only.

Rapid Adding Exercises

When pupils have learned to add they quickly acquire skill by an occasional rapid adding exercise. A few minutes serves the purpose.

It may be made competitive by each pupil writing the numbers and at a given signal beginning the addition.

Slow and correct work is preferable to rapid work that is incorrect. Incorrect work is of no value here.

Civil Service Method of Adding

Employees under the civil service bureau, bank clerks, and others who perform additions while surrounded by people engaged in conversation, use the following method in their additions.

This method is safe because one can detect and change an error very quickly.

```
$5280          16
9760.50        21
 349           19
4006.75        23
6522.89        18
 132.12        24
————————————————————
               $26,051.26
```

The Banker's Method of Adding

This method is the same as that used by the civil service employees, with one change. In adding the columns the number carried is "added in" to each partial sum.

```
$5280          16
9760.50        22
 349           21
4006.75        25
6522.89        20
 132.12        26
————————————————————
               $26,051.26
```

The banker's method is an improvement on the civil service method as it does not require a second addition. The number to be carried is always in sight in the banker's method, being the tens figure of the last partial sum written. The sum can be written at once.

SUBTRACTION

The differences of all these combinations should be learned so thoroughly that the pupil will be able to name difference of any combination *on sight.* This will take time, but it is time well spent.

Use devices similar to those used in the drills on the addition table.

Give many problems for oral work. Let the pupil make many problems and give the difference in each case.

Combinations in Subtraction

1	2	3	4	5	6	7	8	9	10
—1	—1	—1	—1	—1	—1	—1	—1	—1	—1
—	—	—	—	—	—	—	—	—	—
2	3	4	5	6	7	8	9	10	11
—2	—2	—2	—2	—2	—2	—2	—2	—2	—2
—	—	—	—	—	—	—	—	—	—
3	4	5	6	7	8	9	10	11	12
—3	—3	—3	—3	—3	—3	—3	—3	—3	—3
—	—	—	—	—	—	—	—	—	—
4	5	6	7	8	9	10	11	12	13
—4	—4	—4	—4	—4	—4	—4	—4	—4	—4
—	—	—	—	—	—	—	—	—	—
5	6	7	8	9	10	11	12	13	14
—5	—5	—5	—5	—5	—5	—5	—5	—5	—5
—	—	—	—	—	—	—	—	—	—
6	7	8	9	10	11	12	13	14	15
—6	—6	—6	—6	—6	—6	—6	—6	—6	—6
—	—	—	—	—	—	—	—	—	—
7	8	9	10	11	12	13	14	15	16
—7	—7	—7	—7	—7	—7	—7	—7	—7	—7
—	—	—	—	—	—	—	—	—	—
8	9	10	11	12	13	14	15	16	17
—8	—8	—8	—8	—8	—8	—8	—8	—8	—8
—	—	—	—	—	—	—	—	—	—
9	10	11	12	13	14	15	16	17	18
—9	—9	—9	—9	—9	—9	—9	—9	—9	—9
—	—	—	—	—	—	—	—	—	—
10	11	12	13	14	15	16	17	18	19	20
—10	—10	—10	—10	—10	—10	—10	—10	—10	—10	—10
—	—	—	—	—	—	—	—	—	—	—

The Computer's Method

In making change, the method below is nearly always used. Computers find it the more practical way. It gives greater rapidity and accuracy than the other method.

Many of the best teachers use it alone in teaching subtraction.

This plan is called the Austrian method by some.

Example

Find the difference between 725 and 432.

Work:

```
725
———
432
293
```

Explanation

Let the pupil imagine he is adding with the sum written above. He inserts the missing figures to form the sum as he works, 3, 9, 2. He thinks of 2 and 3 as 5; 3 and 9 as 12; 5 and 2 as 7. He may talk it this way: 3 and 2, 5; 9 and 3, 12; 3 and 4, 7.

Use that method with these examples:—

42,936	2034	7825	6243
—17,245	—1456	—1504	—1428
25,691	578	6321	4815

Note.—With practice the pupil will come to prefer this method and should be helped in its use. It is practical since conducive to both *rapidity* and *accuracy.*

Proofs of Subtraction

To **prove a subtraction** *add the subtrahend to the remainder.* The result will be the *minuend* if the work is correct.

Example	*Proof*
425 *minuend*	173
—173 *subtrahend*	252
252 *remainder*	425

425 is the same as the minuend, hence the work is correct.

Another Proof

Take the remainder from the *minuend.* If the work is correct the subtrahend will be left.

If in the last example given we write

425
—252

we get 173, which is the subtrahend used above, hence the work is correct.

Note.—Either proof may be used. Show the child why these two proofs are true. Use small numbers to do this like 7—2. Later use larger ones.

NUMBER STORIES IN MULTIPLICATION

Example

3×4 = —

Facts Given by Child

3×4 means 3 4's.
I count my blocks by fours—I take 1 four, another, another.
I find that 3 4's are 12.
3×4 =12.

To the Teacher

Now the child is ready to give a number story about 3×4.

Note.—If the pupil is in doubt about any part of the work in number stories, he should use objects, and then practice much without them.

Drills in Multiplication

The drill opposite is very good and effective, if a rapid answering exercise is made of it. Products should be given at once.

To vary it use squares.

Draw a diagram like this one and let the pupil fill in the squares with the proper products. Fix a time limit. Have results put in quickly.

1	2	3	4	5	6	7	8	9
2								
3								
4						28		
5								
6								
7					42			
8								
9								
10								

4 X 1 = 4
4 X 2 = 8
4 X 3 = 12

Make diagrams like these, and let the pupils fill them in.

In this work it is not intended that the pupil should at first learn "his tables" in order, the 2's first, then the 3's, then the 4's, etc. He remembers many of the facts of multiplication from his primary work in numbers. These drills are to complete and fix firmly in the pupil's mind the completed multiplication tables.

7 X 1 = 7
7 X 2 = 14
7 X 3 = 21

Proofs in Multiplication

The Multiplication	*The Proof*
42	25
×25	×42
210	50
84	100
1050	1050
123	475
×475	×123
615	1425
861	950
492	475
58,425	58,425

The proof consists merely in reversing the positions of the multiplicand and multiplier, and performing the multiplication in the usual way. If the product is the same in both cases the work is correct.

PRIMARY IDEAS OF DIVISION

In teaching the two ideas of division—division by measurement (division proper) and the fractional idea of division (partition)—proceed very slowly and see that each step is thoroughly understood.

The following suggestions may be useful:—

Division by Measurement

Use colored blocks or any other counters in illustrating the process.

Example

4)12

The teacher should ask the child, "How would you count this story?"

Facts Given by Child.

12 =whole number of blocks.
4 =number in each part.
We want to know the number of parts.
We place the blocks so, 4 in each part:—

There are 3 parts.

Division by Partition

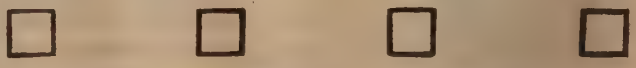
Make use of colored blocks or substitutes to show the process here.

Example

¼ of 12 =3
The teacher should ask the child, "How would you count this story?"

Facts Given by Child

12 =whole number of blocks.
4 =number of parts.
We want to know the number in each part.
We place the blocks so, as we know there are 4 parts:—



We have put one in each part.
Now we will put one in each part until the 12 blocks are gone:—

There are 3 in each part.

The Three Uses of Division

First Use Explained (Partition)

What is ¼ of 24 cents?

Here 24 cents is the sum of money to be divided. It is to be divided by 4. The result shows the size of each part.

Number of equal parts 4) 24c money to be divided.

6c size of each part.

Second Use Explained (Division by Measurement)

How many times is 8 cents contained in 32 cents?

Here 32 cents is the sum of money to be divided. The size of each part is 8 cents, and the result gives the number of equal parts.

Size of each part 8c) 32c money to be divided.

4 number of equal parts.

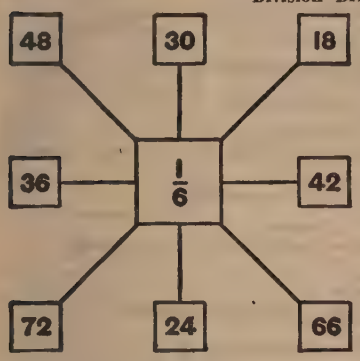
Third Use Explained (Ratio Idea)

There are 36 acres in one lot and 9 acres in another. The first lot is how many times as large as the second?

From division we know that 36 acres contains 9 acres 4 times. Then 36 acres is 4 times as large as 9 acres; or, 36 acres is to 9 acres as 4 acres is to 1 acre.

Note.—This on the ratio idea leaves the impression that the other work does not embrace the ratio principle. Any comparison of numbers embraces the ratio idea.

Division Drills



It is well to use drills of different kinds to help fix the facts of the division table in mind. At no time, at this stage, are you sure that the pupil remembers from one day to the next.

Diagram drills are given here as suggestive of what may be made use of. Use other numbers in order to get drill on the whole division table.

Be sure to make the drill work brisk and of short duration.

The Drill

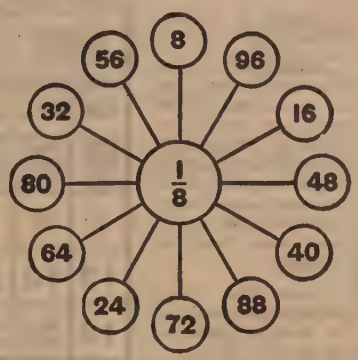
The teacher points to any of the numbers in the small squares and the child answers simply the quotient number. Skip about rapidly. Draw the same diagram on the blackboard and frequently change the fraction in the center square.

The Drill

Allow no "thinking out" of results. The child should have the table at his tongue's end.

Change center fraction repeatedly.

The supreme test of his mental activity is to think quickly and tell correctly.



Proofs in Division

The best way to prove work in division is to multiply the quotient by the divisor and add the remainder, if there is one.

The result will equal the dividend if the work is correct.

Example

Divide 600,181 by 937.

Work	*Proof*
640 501/937	640
937)600181	937
5622	4480
3798	1920
3748	5760
501	599680
	501
	600181

READING NUMBERS

When we spell a word, that is, when we read the letters in the word, we read from *left to right.*

To read a number we do the same thing for we read the figures from left to right.

325 is read "three hundred twenty-five."

The number is read differently if we wish to tell the *place* and *value* of a certain figure, for then we read the figures themselves from *right to left.* thus—

325 means 5 units, 2 tens, 3 hundreds.

Never use "AND" in reading whole numbers.

325 should never be read "three hundred and twenty-five," but "three hundred twenty-five."

Numbers between 100 and 1000 are read by naming the hundreds, tens, and units in succession. Thus—

192—one hundred ninety-two.
652—six hundred fifty-two.
207—two hundred seven.

Above 1000

Read 1,892,632.

Here the 2 represents 1's, or units of the *first order.*
the 3 represents 10's, or units of the *second order.*
the 6 represents 100's, or units of the *third order.*
the 2 represents 1000's, or units of the *fourth order.*
the 8 represents 100000's, or units of the *sixth order*, etc., etc.

The order of any figure is the number of its place, starting from the right.

In reading large numbers we arrange the orders into groups of three figures each.

We call each group a *period.* Commas are used to keep the periods separate.

Names of the Periods

units,	**billions,**	**quintillions,**	**octillions,**
thousands,	**trillions,**	**sextillions,**	**nonillions,**
millions,	**quadrillions,**	**septillions,**	**decillions.**

trillions	billions	millions	thousands	units
225,	**902,**	**302,**	**472,**	**399.**

FACTS ABOUT ROMAN NUMERALS

The following facts about the origin and development of Roman notation can be made very interesting, and will tend to fix the characters in one's mind—

At first one	**was written**	**I,**
two	**was written**	**II,**
three	**was written**	**III,**
four	**was written**	**IIII,**
five	**was written**	**IIIII,**
six	**was written**	**IIIIII,**
seven	**was written**	**IIIIIII,**
eight	**was written**	**IIIIIIII,**
nine	**was written**	**IIIIIIIII.**

It took too long to make ten marks, and too long to count them after they were made, so one mark with another across it was used to denote 10, thus **X.** The upper or first half of the **X,** or **V,** was used to show 5.

At first twenty	**was written**	**XX,**
thirty	**was written**	**XXX,**
forty	**was written**	**XXXX,**
ninety	**was written**	**XXXXXXXXX.**

It took too long to make the crosses and too long to count them in reading, so **E** was used to show 100. Half of the **E** or **L** was used to show 50. The **E** gradually became **C** in trying to make the **E** rapidly.

Write these where the child can see them plainly

I = 1	**XX = 20**	**XXXIX = 39**
II = 2	**XXI = 21**	**XL = 40**
III = 3	**XXII = 22**	**XLI = 41**
IV = 4	**XXIII = 23**	**XLII = 42**
V = 5	**XXIV = 24**	**XLIII = 43**
VI = 6	**XXV = 25**	**XLIV = 44**
VII = 7	**XXVI = 26**	**XLV = 45**
VIII = 8	**XXVII = 27**	**XLVI = 46**
IX = 9	**XXVIII = 28**	**XLVII = 47**
X = 10	**XXIX = 29**	**XLVIII = 48**
XI = 11	**XXX = 30**	**XLIX = 49**
XII = 12	**XXXI = 31**	**L = 50**
XIII = 13	**XXXII = 32**	**LX = 60**
XIV = 14	**XXXIII = 33**	**LXX = 70**
XV = 15	**XXXIV = 34**	**LXXX = 80**
XVI = 16	**XXXV = 35**	**XC = 90**
XVII = 17	**XXXVI = 36**	**C = 100**
XVIII = 18	**XXXVII = 37**	
XIX = 19	**XXXVIII = 38**	

PRIME NUMBERS

Some numbers, like 3, 5, 11, etc., can only be divided by themselves and unity. As they cannot otherwise be factored, we call them *prime numbers.*

Prime Numbers from 1 to 1000

(*Use This Table for Reference*)

1	59	139	233	337	439	557	653	769	883
2	61	149	239	347	443	563	659	773	887
3	67	151	241	349	449	569	661	787	907
5	71	157	251	353	457	571	673	797	911
7	73	163	257	359	461	577	677	809	919
11	79	167	263	367	463	587	683	811	929
13	83	173	269	373	467	593	691	821	937
17	89	179	271	379	479	599	701	823	941
19	97	181	277	383	487	601	709	827	947
23	101	191	281	389	491	607	719	829	953
29	103	193	283	397	499	613	727	839	967
31	107	197	293	401	503	617	733	853	971
37	109	199	307	409	509	619	739	857	977
41	113	211	311	419	521	631	743	859	983
43	127	223	313	421	523	641	751	863	991
47	131	227	317	431	541	643	757	877	997
53	137	229	331	433	547	647	761	881	

SIMPLE MEASURES—For the Child to Learn Objectively

2 pints make 1 quart.
8 quarts make 1 peck.
4 pecks make 1 bushel.
7 days make 1 week.*
16 ounces make 1 pound.
12 inches make 1 foot.
3 feet make 1 yard.
12 things make 1 dozen.
5 cents make 1 nickel.
10 cents make 1 dime.

LONG MEASURE

Teach the child to estimate distances and then to verify every estimate by actual measurement.

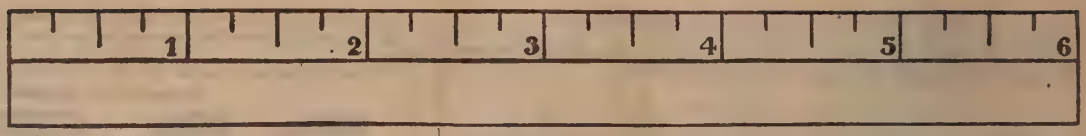
Teach half inches as well as inches.

For the Child to Do

1. Cut a strip of paper 12 inches long and 1 inch wide.
2. Mark the inches on it.
3. How many inches long is it?
4. What do you call a measure 12 inches long?
5. Draw a line 2 inches long, as near as you can, without using a rule.
6. Measure it with a ruler. Did you guess nearly right? Try again.
7. Measure this page. How long is it? How wide?
8. Draw a line on the ground 1 yard long.
9. ½ of a foot is how many inches?
10. 1 yard is how many inches? What is measured by the yard?

*Objectively so far as pointing it out on a calendar.

11. Ask your mother how many yards of cloth she needs for a dress.
12. What is measured by the foot?
13. How tall are you?



PRIMARY IDEAS OF TIME

Turn to the paragraph on Roman numerals and note the facts about them.
60 minutes make 1 hour.
12 hours make 1 half day.
24 hours make 1 day.

A new day begins at midnight and lasts until next midnight.

One hour after midnight is 1 o'clock, 2 hours after midnight is 2 o'clock, and so on, until 12 o'clock at noon.

At noon one-half the day has gone and we begin the afternoon, which is the last half of the day.
One hour after noon is 1 o'clock, 2 hours after is 2 o'clock, etc.

If a person says he was at a certain place at 2 o'clock, he must say forenoon or afternoon, so we will know which half of the day he means. If it was 2 o'clock in the morning he would write 2 a. m., and if 2 o'clock in the afternoon, 2 p. m.

How to Teach a Child to Tell Time

First—Teach him to tell the hour hand from the minute hand.
Next—Teach him when he first looks at the dial, to find the hour hand and then notice which Roman numeral it is nearest. *This will tell about what time it is.*

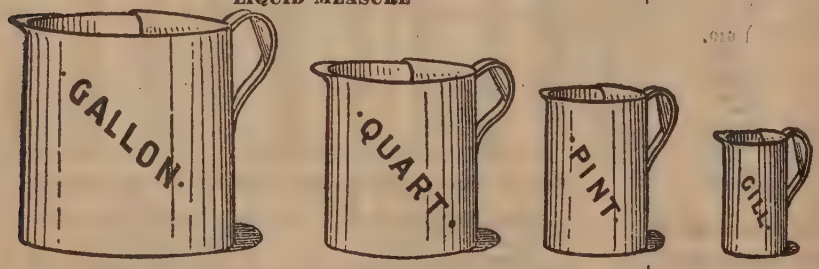
Then—Find the minute hand. *The minute hand will tell exactly what time it is.*

To Illustrate

Take this clock. The hour hand is near the Roman numeral II, which stands for 2. Tell the child it is somewhere near two o'clock.
The minute hand will tell *how near.*

It must always point to the XII before it is exactly the hour. If it is one numeral away from the XII, toward the left, it is 5 minutes of two. If it is two numerals away to the left, it is 10 minutes of two, etc. If it is one numeral away to the right, it is 5 minutes after two, etc. Proceed in this way and keep at it.

LIQUID MEASURE



If you have quart and pint measures allow the child to empty water from one to the other.
On teaching the table of liquid measure proceed in this manner—
Here is a gill cup. I am going to fill it to see how many gills make a pint. Now I have poured one gill; now two; now three; now four. Is the pint cup full? How many gills in a pint?
Let us prove what you say by pouring the water back. One gill; two gills; three; four. Were we right then?
Let us write what we have just said and proved—
4 gills = 1 pint.
Proceed in this way with the other measures, only let the child do more of the work for himself.

MONEY

Use actual coins in teaching money. Lessons on money should be given frequently after the first year of school life.
Begin by teaching the value of the cent and the nickel, then the dime, then the quarter, then the half-dollar, and then the dollar.
Make problems involving change. Develop the ability to make change rapidly. The child may have some money of his own and he should be taught the comparative values of the coins. The correct method of making change follows.

10 cents make 1 dime.
2 five-cent pieces make 1 dime.
100 cents make 1 dollar.
A quarter of a dollar = 25 cents.
A half-dollar = 50 cents.
$ means dollars and *c* means cents.
A 5-cent piece is called a nickel because it is made of nickel.
A cent piece is made of copper.
The other coins named are made of silver.

HOW TO MAKE CHANGE

First—Name the cost of goods.
Then—Add enough money to make even money.
Last—Add the large coin.

To Illustrate

I bought some cloth for 35c and gave the clerk 50c. Count my change.
How to count it—
35c for cloth
And 5c makes 40c (to make even money)
And 10c makes 50c.

To Illustrate

I buy suspenders for 32c and give the clerk $1. Count my change.
How to count it—
32c for suspenders
And 3c makes 35c
And 5c makes 40c
And 10c makes 50c
And 50c makes $1
(to make even money)
Note.—Think of it in this way—32c, 35c, 40c, 50c, $1.

THE CALENDAR

Procure a calendar for the child to own.

A good way to make him familiar with the use of the days of the week and month, as found on a calendar, is to ask him to look up and tell on what day of the week the next Fourth of July will fall; Christmas; New Year; his birthday.

Have him distinguish between the day of the week and the day of the month.

1903		July				1903
Sun.	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.
First Quar. 1st 30th	Full Moon 9th	Last Quar. 17th	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	New Moon 23d

7 days make 1 week.
30 days make 1 month.

Days of the Week	*Months of the Year*
Sunday	January
Monday	February
Tuesday	March
Wednesday	April
Thursday	May
Friday	June
Saturday	July
	August
	September
	October
	November
	December

SQUARE MEASURE

How long is each side of the figure opposite?

How many squares in the figure?

Because each square is one inch on each side, we call it a square inch.

How many square inches in the whole figure?

The number of squares is called the *area.*

4 square inches is the *area* of this figure.

Show by a drawing how many square inches in a figure 3 in. wide and 9 in. long.

Its area is 27 square inches.

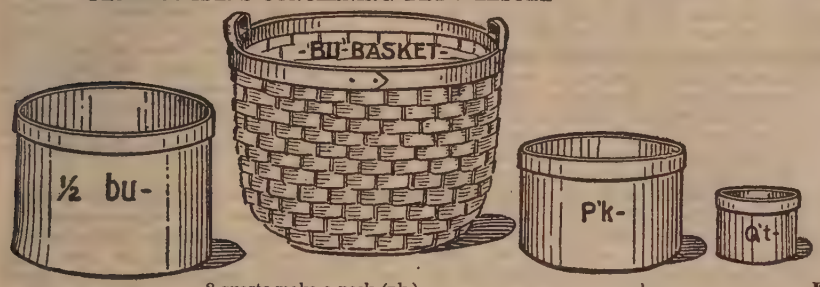
We need not always draw a figure to get the area.

You will notice that the *length times the width will give the number of squares in the figure.*

Find the area of a figure 9 in. long and 5 in. wide, without a drawing. What did you do? *Make a rule.*

Cut out a piece of paper 1 in. wide and 4 in. long. Cut it into square inches. Place the cut squares so as to form a large square. How long is it now? How wide? (*See section on weights and measures for advanced tables.*)

PRIMARY IDEAS CONCERNING DRY MEASURE



8 quarts make a peck (pk.).
4 pecks make a bushel (bu.).

Dry measure is sometimes used to measure dry articles. Formerly grains, vegetables, and fruits of all kinds were bought and sold by dry measure.

Don't teach the child, as most arithmetics say, that grains, fruits, and vegetables are bought and sold by the measured bushel. They are not.

The weight bushel, the case, and the box have come into common use for these articles.

Teach the names of the measures before you attempt to teach the number of one measure in another, etc.

SIMPLE FRACTIONS

A very good method of teaching the combinations in small fractions is by the use of paper or cardboard disks. (Children may call them circles.)

Cut out a large number of them, and, in order to avoid trouble later on, it might be better to have the disks all of one size—about 4 inches in diameter.

Teaching the Fraction $\frac{1}{2}$ with Disks

Say to the child:

I am going to cut this circle into two equal parts. What is this part called? What is this other part called? How many halves in the whole circle? One-half and one-half are what? One-half taken away from one leaves what? If I take a half *two times*, what do I get? How many halves in a whole?

Now I will write these—

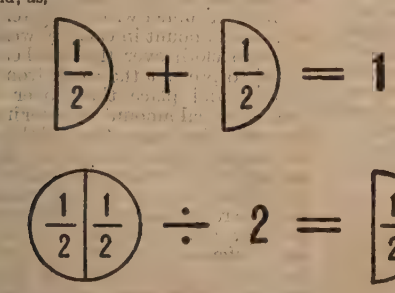
$\frac{1}{2} + \frac{1}{2} =$ 1 divided by $\frac{1}{2} =$

1 less $\frac{1}{2} =$ $1 \div 2 =$

$2 \times \frac{1}{2} =$ $1 - \frac{1}{2} =$

Give me the answers and I will write them.

Drawings showing the "placing" of disks for number stories can be made by the child; as,



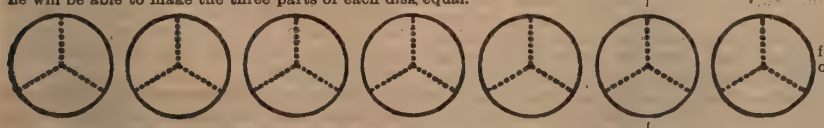
Ask the child to make similar drawings to tell about halves.

Proceed like this— How many halves in a pie? If a pie cost 10 cents, what will half a pie cost? Who can tell other stories about halves? etc.

Teach fourths along with halves.

Teaching the Fraction $\frac{1}{3}$ with Disks

Cut several disks into thirds. Have the child practice on cutting, so that he will be able to make the three parts of each disk equal.



Then proceed like this—What do you call each of these parts? Why are they called *thirds*? How many thirds in a circle? I am going to take a circle and cut it any way, so as to make three parts; do I call these unequal parts thirds? Why not? Let me write one-third on a piece of paper for you. (Write, ⅓.) Draw a circle for me. Instead of cutting it, draw lines where you would cut it to make thirds. Write one-third (⅓) on each third of a circle. I write this (⅓ + ⅓). Who can tell me what the answer is? Are two-thirds and two-thirds more than one? How much more? I have two-thirds of an apple and give Mary one-third, how much have I left? Who can give other story problems about thirds? Everybody try, etc.

Teach sixths along with thirds. Use disks, dots, marks, sticks, and inches to illustrate.

Remember that no advance should be made until each little part is understood.

Teaching the Fraction $\frac{1}{5}$ with Disks

Have fifths compared with fourths, thirds, and halves.

Be sure that the child sees that the number below the line shows the size of each part and the number above how many parts are taken.

Have the child illustrate every step with drawings. If at any time he cannot answer results at sight, let him show the work with disks.

Say to the child:

I am going to cut this circle into five equal parts. What is each part called? How many fifths in the whole circle? How many fifths here? (Show two-fifths.) One-fifth and one-fifth are how many fifths? One less two-fifths is what? If I take three-fifths, how many times one-fifth do I take? How many times one-fifth are left? Are two-fifths greater than one-third?

Give and ask for story problems and number stories telling about fifths.

Teach tenths along with fifths.

When twelfths are taught, show the relations between twelfths and sixths, fourths, thirds, and halves.

Equal Fractions in Different Forms

Have the child see how fractions may differ in form but still remain the same in value.

Begin with his knowledge of smaller fractions, as

$\frac{1}{2}, \frac{2}{4}, \frac{3}{6}, \frac{4}{8}$, and $\frac{5}{10}$ of an apple

Let him show by the use of drawings that fractions may have large or small terms but be equal in value.

Things for the Child to Do

Fill out the numerators in the following fractions and prove each by a drawing:—

1. $\frac{1}{4} = \frac{2}{8} = \frac{4}{16} = \frac{8}{32} = \frac{16}{64}$
2. $\frac{1}{5} = \frac{?}{10} = \frac{?}{15} = \frac{?}{20} = \frac{?}{30}$
3. $\frac{1}{8} = \frac{?}{16} = \frac{?}{24} = \frac{?}{32} = \frac{?}{40}$
4. $\frac{3}{4} = \frac{?}{8} = \frac{?}{12} = \frac{?}{16} = \frac{?}{24}$
5. $\frac{2}{5} = \frac{?}{10} = \frac{?}{15} = \frac{?}{20} = \frac{?}{40}$

PRINCIPLES OF FRACTIONS

1. A fraction's value is the quotient obtained by dividing the numerator by the denominator.

$\frac{6}{2} = 3$ 3 is the value of $\frac{6}{2}$

$\frac{2}{3} = \frac{2}{3}$ $\frac{2}{3}$ is the value of $\frac{2}{3}$

2. Multiplying the denominator of a fraction divides the fraction by that number.

$\frac{1}{2 \times 4} = \frac{1}{8}$ $\frac{3}{7 \times 3} = \frac{3}{21}$ $\frac{2}{3 \times 9} = \frac{2}{27}$

3. Dividing the denominator of a fraction multiplies the fraction by that number.

$\frac{3}{8 \div 4} = \frac{3}{2}$ $\frac{10}{9 \div 3} = \frac{10}{3}$ $\frac{3}{10 \div 5} = \frac{3}{2}$

4. Multiplying the numerator of a fraction multiplies the fraction by that number.

$\frac{2 \times 2}{3} = \frac{4}{3}$ $\frac{1 \times 8}{9} = \frac{8}{9}$ $\frac{5 \times 3}{8} = \frac{15}{8}$

5. Dividing the numerator of a fraction divides the fraction by that number.

$\frac{4 \div 2}{7} = \frac{2}{7}$ $\frac{12 \div 12}{16} = \frac{1}{16}$ $\frac{3 \div 3}{7} = \frac{1}{7}$

6. Multiplying both numerator and denominator of a fraction by the same number does not change the value of the fraction.

$\frac{1 \times 3}{3 \times 3} = \frac{3}{9} = \frac{1}{3}$ $\frac{6 \times 2}{7 \times 2} = \frac{12}{14} = \frac{6}{7}$

7. Dividing both numerator and denominator of a fraction by the same number does not change the value of the fraction.

$\frac{12 \div 3}{15 \div 3} = \frac{4}{5} = \frac{12}{15}$ $\frac{18 \div 9}{27 \div 9} = \frac{2}{3} = \frac{18}{27}$

NATURE STUDY AND ELEMENTARY AGRICULTURE.—Elementary agriculture in the country schools should include the fundamental principles of agricultural practice, illustrated in large measure by such laboratory and field work as will be directly and immediately helpful and practical on the farms in the midst of which the school is located. Through the teaching of elementary agriculture in the country schools, the introduction of such needed reforms as seed improvement, improved culture of soils, and the checking of waste, is entirely practicable and possible. Since the country school term does not extend throughout the whole year, the work in agriculture cannot be very satisfactorily unified upon the basis of farm operations in season, yet there are certain topics best studied at each season of the year when first-hand contact with materials is possible. The following topics as outlined in Nolan's *One Hundred Lessons in Elementary Agriculture* suggest a course for a year's work.

Topics for Autumn Months.—1. Composition of soils. 2. Relation of soils to water. 3. Fertilizers. 4. Seeds and their germination. 5. Selecting and storing seed corn. 6. Tree planting. 7. Weeds. 8. Insects. 9. Fruits. 10. Pastures. 11. Agricultural clubs. 12. Storing fruits and grains for winter.

Topics for Winter Months.—1. Judging seed corn. 2. Elements of forestry. 3. The horse and its care. 4. The cow. 5. Milk and butter. 6. Sheep, hogs, poultry, etc. 7. Feeding and care of farm animals. 8. Comparative studies of agricultural products of various states. 9. Crop records and farm bookkeeping. 10. Roads, rural mail, parcels post, etc. 11. Farm machinery, fences, etc. 12. Farm buildings.

Topics for Spring Months.—1. Testing seed corn. 2. Hot-beds. 3. Gardening. 4. Cultural requirements for vegetables. 5. Beautifying home grounds. 6. Pruning. 7. Budding, grafting, etc. 8. Spraying for scale and codling moth. 9. Plowing, harrowing, and cultivating. 10. The potato crop. 11. Transplanting. 12. Valuable birds to agriculture. 13. Sowing farm crops.

In teaching the topics suggested above the aim should be to bring out the essential principles involved in the practice, and to lead the pupils to first-hand contact with the material in as many ways as possible. The country school-teacher should strive in each case to have the lesson tried out on the pupil's home farm. The aim of each lesson should be definite, to bring out and apply one single principle relating to the topic in hand.

An excellent method to unify and organize the work of elementary agriculture in the country schools is for the pupils and teacher to imagine that they have just purchased an unimproved forty acres of land, or perhaps better still, select a forty-acre field near the school grounds, and in theory manage it for one year. Require each pupil to provide a good permanent notebook and keep a record of every detail of procedure as the farm is selected, laid out, equipped with buildings, planted, cultivated, and managed throughout an imaginary year. The practices that would properly come next in point of time in the actual management of such a farm would furnish order and sequence for the topics of study and practical exercises throughout the school course. In this method the pupil should be required to read all the farm papers, bulletins and books available, and keep a diary record of an imaginary year of actual farming.

Such a course in elementary agriculture could be well adapted to the seventh and eighth grades. Three recitations a week would be sufficient for introducing the subject, giving the last half hour of the school program to this subject.

Suggested Lessons for School and Farm.—The most helpful method of conducting experiments and developing the outlines that follow is to assign to a certain pupil or group of pupils the responsibility of the experiments or particular tests that are to be made. From parents, and from books and bulletins with which the school library is supplied, the children gather any and all information possible bearing upon the subjects under study. After free class discussion and much questioning of the pupils, the class and teacher should together work out a simple outline according to which the children will write the results of their study and observations in composition form. Some of these productions should be read in class; all errors both in fact and in English should be noted, but the compositions need not be rewritten. The sheets as first written can be put together in booklets with original designed covers. This disposition of the compositions furnishes excellent motive for careful and correct composition work and a basis for prize and competitive contests.

Alertness on the part of the teacher for the practical and everyday problems that are constantly presenting themselves to the intelligent farmer will keep an industrious teacher busy finding room for the discussion and solution of the problems in the time usually allotted to such subjects in the school program. It is well to carry with the course and experiments practical mathematical problems such as construction and capacity of cribs and silos; amount of rainfall; estimating quantity of seeds needed per acre for planting; judging corn; value of fertilizers needed for land; shrinking of corn in cribs; profit per acre on the different crops; return from one bushel of seeds, and many others that will suggest themselves to the teacher. (For problems in agricultural arithmetic write for extension bulletins published by Ohio State University Agricultural College, Columbus.)

There are the best of reasons why teachers, especially in the rural districts, should be interested in these agricultural problems as school exercises. First, the spread of the knowledge and practice of scientific agriculture has vast economical value in improving the products of American agriculture; second, the teaching of it in the rural schools exerts a strong influence toward interesting the parents in the permanent worth and importance of the school. The teacher who enters intellectually into the simple and practical exercises in agricultural nature study here suggested will not be long left in doubt as to the community's responsive interest in the school and its estimate of its practical importance to the community. Children love to do things, especially things that are obviously useful; they need only judicial direction in order to turn their instincts into the various forms of self-education, which is the only kind of education that "sticks."

Special interest and profit result from investigating the literature and different writings in which allusions are made to corn and wheat and relative subjects. Splendid use can be made of that part of Longfellow's *Hiawatha* referring to Mondamin, with whom Hiawatha wrestled after the feast. To have a number of the pupils read a collection of such selections to the school and visitors Saturday afternoons makes a most interesting hour's exercise. Topics and practical tests can be made from the following outlines suited to the various grades. Perhaps the pupils of the first four or five grades may be too young to be taught the science of agriculture, but they are not too young to gain an abundance of knowledge along the line of nature study.

Exercises on Soil.—How Soil Is Formed.—When the earth cooled it was composed of solid rock, upon which the water acted, changing or breaking it up into small particles. This was caused by the force of falling rain and hail and the expansion, by freezing, of the water in the small crevices of the rock.

Lichens then grew on the rocks and sand, obtaining their food from the air, and in their death and decay bacteria acted upon them, forming humus. Plants then grew on the sandy loam formed, and the roots, reaching down into the rocky crevices, split the rocks.

The soil and remaining rocks were then acted upon by oxidation, gravitation, wind, tides, animals, glaciers and earthquakes. All of these tended to break up and loosen the soil and prepare it for the action of water and carbonic acid, which dissolves the rock.

There are three distinct classes of soil—the alluvial, which has been brought from other places by streams; the sedimentary, which is the soil which was originally formed there; and the glacial, which was carried there by glaciers.

I. **To Show Retention of Water on Soil.**—Materials — Samples of clay, gravel, sand-loam, leaf mold; five glass bottles or fruit jars and five funnels.

Fill each funnel with a different kind of soil, same amount in each by weight. Tie a muslin cloth over the small end of each funnel to prevent the earth from washing through and place them over the jars. Pour an equal amount of water into each at the same time, note the soil that permits the water to pass through the fastest and the soil that retains the water the longest. Find how each soil ranks in its power to retain moisture. After two or three pourings weigh each funnel, and note the slight difference in weight; which soil retains the most water; which soil dries off the soonest after a heavy rain; which will be ready to plant first in spring; which soil will stand a very dry summer best.

II. **To Show Effect of Air on Soil.**—Materials—Two chalk boxes.

Fill one with loam, loosely packed. Fill the other box with clay or leaf mold, tightly packed. Plant the same kind of seed in each one and give both the same attention. In which does the plant seem to grow better?

III. **To Show the Advantage of Soil Foods or Fertilizers.**—Materials — Four chalk boxes or boxes slightly larger.

Fill each box with the same kind of soil. In No. 1 place a small quantity of stable fertilizer. In No. 2 a small quantity of high-grade commercial fertilizer. In No. 3 same quantity of cheap commercial fertilizer. In No. 4 omit fertilizer. Plant

same kind of seed in each box; cultivate all plants in each box by the same method. Notice the difference between the plants that receive the fertilizers and those that do not.

Outline *for the Further Study of Soil, With Test Questions and Sources.*—

(a) Origin and tillage of soil.
(b) Moisture and drainage of soil.
(c) Fertilization and improvement of soil.
(d) Adaptation to vegetation.
(e) Effect of wind upon soil.
(f) Study of properties of soil.
(g) Renovation of worn-out soil.
(h) Alkali lands.

Questions.—1. What is soil?
2. What is subsoil?
3. How is soil formed?
4. What is humus?
5. How does the earthworm influence soil?
6. Why should soil be plowed before corn is planted?
7. Why should crops be well cultivated?
8. Name three plants that improve soil. How?
9. What is meant by rotation of crops?
10. How are the following produced? Sinking coasts, rising coasts, earthquakes, volcanoes, natural bridges, lakes, cataracts, oxbow loops, deltas, glaciers, coral reefs, coal gas, oil, deserts, tundras, and estuaries. (See U. S. bulletin No. 257.)

Sources and Summary *of Bulletins Needed.*—U. S. farmers' bulletins Nos. 77, 245, 257, 262. (See list.)

Exercises on Plants.—It is assumed that the pupils who are to take up elementary agriculture have had some nature study work, and in this way have learned something of the structure of common plants—that is, they know the names and understand to some extent the functions of their essential parts: roots and stems, leaves and flowers, including the reproductive organs, stamens, pistils. When the pupils do not have such knowledge some time should be spent on these simple exercises in the study of plant anatomy.

I. To Learn and to Find the Parts of the Flowers.—Gather flowers that have all the parts, and with a sharp knife take each out and name. Cut a cross section of the cherry blossom and name the parts present.

II. To Find Stamens and Pistils and to Compare Perfect and Imperfect Flowers.—Perfect flowers have both stamens and pistils present. From a strawberry blossom point out these organs. Flowers having pistils only are imperfect flowers. Find such a blossom and compare it with a perfect flower. Will an imperfect flower produce fruit? What kind of a flower is found on Indian corn plant? Where are the stamens on the corn plant? The pistils?

III. Roots and How They Get Their Food From the Soil.—Materials—(1) A large mouthed bottle, a glass tube, an egg, some sealing wax and water. (2) Sawdust and a marble slab.

Plant food must be in liquid condition before it can be absorbed by the plant. The root structure of the plant is very intricate. There are little roots attached to the rootlets that are so small the naked eye cannot discern them. These are called root hairs and through them the plant receives its food. They are composed of a single cell filled with an albuminous substance, called protoplasm, which is similar to the white of an egg.

As the covering of the cell is not porous in the ordinary sense of the word, the question arises as to how the liquid food enters the cell. This is accomplished by the principle of osmosis. It has been proved by scientists that if a dense liquid is separated from a less dense one by a thin membrane, they will flow together, the less dense fluid flowing into the more dense one in greater proportion than *vice versa*. This can be proved in the schoolroom with an egg, a glass tube, a large mouthed bottle, some water and some sealing wax.

The glass tube is inserted into the small end of the egg and sealed in place with the sealing wax. The shell of the large end of the egg is then broken off to expose the membrane, and the large end put into the water. The water and the white of the egg will, in the course of a few hours, flow up the tube.

After the liquid enters the root hair cell, it is carried up to the plant by means of capillary attraction, which is a power which tends to raise the water.

The root hairs of a root system can collect nourishment from the undissolved plant food by tending to dissolve it with an acid secreted in the membrane of the root hair. To prove this, cover a polished piece of marble with wet sawdust and plant a few seeds in it. The root hairs will sprout, and, when removed, the marble will be rough.

IV. To Show That Plants Give Off Moisture and the Rise of Water in Plants.—Materials—Crock or pot of earth containing a plant, a piece of cardboard, glass tumbler, and a piece of wax or tallow.

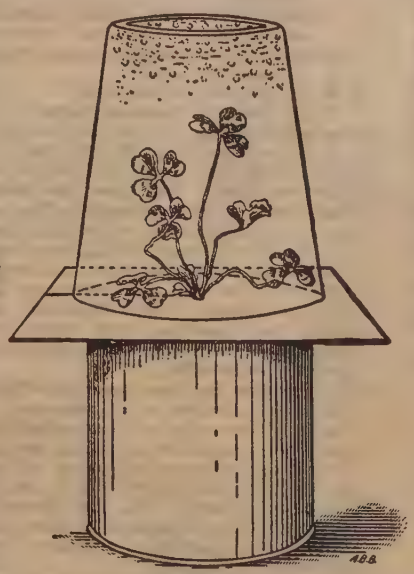


Figure to show that plants give off part of the moisture absorbed from the soil

Take a plant that is well started. Cut a slit in the cardboard and draw it around the plant. Seal the slit with wax or tallow so that no moisture can come up through it from below; cover the plant with the glass and set in a warm, sunny place. Moisture will condense on the inner surface of the glass. Where did the moisture come from? Does this experiment prove that water rises in plants? Why? Cut a stalk of green corn or the stem of a geranium three or four inches above the ground. Observe the moisture that gathers on the point where the stalk was cut. Where did this moisture come from?

V. To Show Root Development on Cuttings.—Materials—Branches ten to twelve inches long taken from a willow tree; a glass jar.

Place these cuttings in a glass jar partly filled with water. Place the jar in a warm place and in about twenty or thirty days you will observe the roots formed on many different parts, especially house pot flowers.

VI. To Prepare Soft Cuttings.—Soft cuttings are sometimes made from leaves, but often from the stem. Insert the edge or a piece of a leaf in moist, warm sand; or lay the leaf, top side up, on the surface of the sand and fasten it down by running splinters through the veins in different places. Plants may spring up from the edges or at cut places in the leaf. In case of stem cutting secure thirty shoots from any strong herbaceous plant, such as the verbena or geranium, and divide them into cuttings of at least two nodes and several leaves. Break off a part of some of the leaves to check evaporation. Pack the sand firmly around the cuttings and they will soon take root.

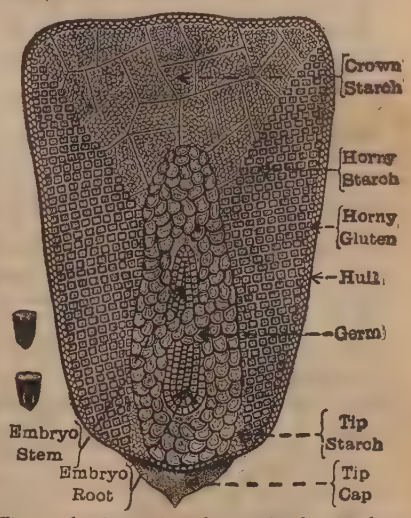


Figure showing parts and contents of grain of corn

VII. To Learn to Test Seed Corn and Garden Seeds for Their Vitality.—Prepare a germinating box about 10x12 inches and 3x5 inches in depth. Fill this box about half full of earth or sawdust. Moisten the earth and place over it a cloth of the same size as the box, first marking the cloth off in squares (checkerboard) of equal size, numbering each square. If there are 25 or 30 squares or sections on the ruled cloth, take as many seed ears as there are sections, numbering each ear to correspond with a section. Take from different parts of the ear, say eight grains. Place these eight grains in the section that corresponds with the number of the ear. After the grains have been properly placed in each section of the cloth, spread a second strip of cloth over the box so as to rest flat on the grains of corn. On the top of this cloth place moist Soil in a sack. Observe the corn from day to day so as to examine the root hairs, as well as the sprouts that come on the

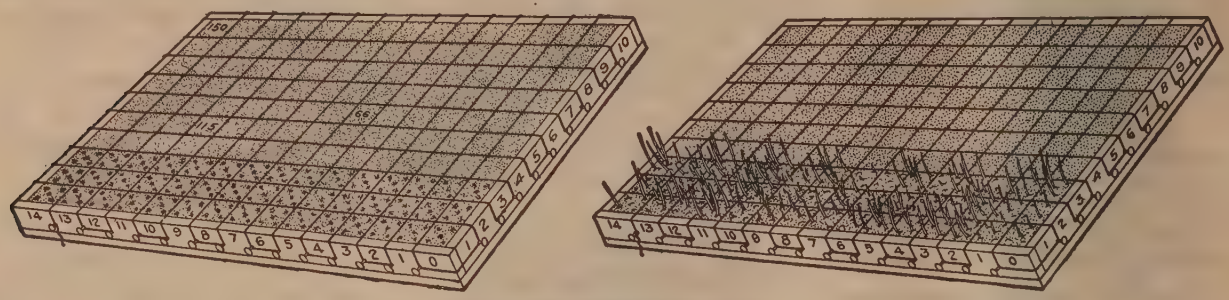
fertile grains. Find the per cent in each section that were fertile. Any ear making 85 or 90 per cent is good enough for seed. Those falling below 60 or 70 per cent should be discarded. This box should be kept in a place having about the same temperature as would naturally be the case out of doors in corn planting season. (See bulletin 409.)

5. What are tubercles? Legumes?
6. What legumes are used for food?
7. Why will corn usually grow well when planted in a clover sod?
8. After learning the food elements needed by each crop, indicate a good system of crop rotation for your vicinity.
9. What purpose do the root hairs serve the plant?

on the other. What caused the decay to appear? Why did the picked apple show no signs of decay? Why will a barrel of apples soon spoil if a few bad ones are in it?

Outline *for the Further Study of Fruit and How to Raise Fruit Trees and Test Questions and Sources.*—

(a) Kinds of fruit.
(b) Best soil for fruit trees.
(c) Planting of fruit trees.



Seed-Testing Boxes

VIII. To Learn How to Gather, Select and Care for Seed Corn.—Have each pupil describe the method of selecting corn that is practiced by his father and neighbors. How do the methods mentioned in bulletin No. 299 compare with those practiced in your community? (See farmers' bulletins 299, 119.)

IX. To Show Corn Mixing or Crossing.—Materials—White corn and yellow corn. Plant a small plot of white corn near a small plot of yellow corn. At husking time observe the kernels. How does corn mix? Explain in full. Plant a plot of sweet corn near some popcorn. Did it mix? Will it pop well? How are new varieties of corn or other plants started?

X. To Learn What Seeds Are Scattered by the Wind.—Have pupils collect and examine such seeds as those produced by the maple, box elder, elm, ash, dandelion, milkweed, thistle, parsnip, etc. Learn to recognize them wherever found.

XI. To Learn What Seeds Are Scattered by Animals.—Have pupils collect seeds or fruits from the Spanish needle plant, the burdock, sandburs, beggar lice, etc. What animals of the field scatter many of these weed seeds? How? Learn to recognize these seeds. In what other way are weed seeds scattered over the land?

Outline *for the Further Study of Plants With Test Questions and Sources.*—

(a) How plants feed—from soil—air.
(b) Root tubercles.
(c) Kinds of roots.
(d) Use of roots for food—for medicine.
(e) Other uses of roots.
(f) Pollination.
(g) Crosses, hybrids—pollination.
(h) Propagation.
(i) Selecting good seeds.
(j) Crop rotation.
(k) Composition of plants.
(l) Effect on climate.
(m) Rank compared with other countries.
(n) Poisonous plants.

Questions.—1. Explain how plants get food from the air—from the soil.
2. Why can an alfalfa plant stand more drought than clover?
3. Define tap, fibrous and fleshy, as applied to roots.
4. Define osmosis and give some of its uses in the plant kingdom.
5. What are tubercles? Legumes?
6. What legumes are used for food?
7. Why will corn usually grow well when planted in a clover sod?
8. After learning the food elements needed by each crop, indicate a good system of crop rotation for your vicinity.
9. What purpose do the root hairs serve the plant?
10. What causes a tree to thicken above a wire that may be tied around it?
11. What is meant by pollination?
12. Would it be profitable for a fruit man to keep bees? Why?
13. What is cross pollination?
14. What is plant propagation?
15. What is the best method of selecting good seed corn? (Farmers' bulletins 199, 229.)
16. Learn to name and recognize about fifty weeds that grow in your neighborhood. (Farmers' bulletin No. 28.)
17. Explain the terms, annual, biennial, and perennial as applied to plants.
18. What is meant by purity and vitality as applied to seeds?
19. What are seed germinators?
20. Name twenty poisonous plants.

Sources and Summary *of Bulletins Needed.*—U. S. farmers' bulletins 339, 278, 188, 212, 240, 157, 199, 299, 28, 111, and 86. (In list.)

Exercise on Fruit and How to Raise Fruit Trees.—**I. To Propagate by Tip Layering.**—Materials—A branch of black raspberry. The tip of a branch of black raspberry is bent over to the ground and covered with earth. It will soon take root and form a new plant. Pupils should try this several times and see how many new plants can be started from one old plant. (See U. S. bulletin No. 157.)

II. To Propagate by Vine Layering.—Materials—A long branch of a grapevine.

Bend it down flat on the ground and place it in a small trench in the ground. Cover it entirely over, and roots will put out at intervals and branches will come up through the ground. You can afterward cut the old vine between each new shoot and thus have several new plants. (See U. S. bulletin No. 157.)

III. To Learn to Do Practical Grafting and Budding.—(See farmers' bulletin No. 157.)

IV. To Show Why Apples to Be Kept Over Winter Should Be Picked.—Materials—Three apples.

Take one that has fallen from the tree and received sufficient injury to break the skin, or break the skin with a stick. Secure another that is slightly bruised and one that is absolutely sound that has been picked. Put the apples away and note what takes place on the bruised part of the one, and where the skin was broken

(d) Care of fruit trees.
(e) Grafting.
(f) Budding.
(g) Pruning.
(h) Layering.
(i) Canning of fruit.

Questions.—1. What is the first step in tree planting?
2. Will the tree coming from the seed be like its parent?
3. What is grafting? Its purpose?
4. What is the scion? The stock?
5. When is the best time to make a graft?
6. Who was Luther Burbank? Learn all you can about this man.
7. Name several varieties of peach, pear, plum and apple trees.
8. What kind of each is usually planted in your community?
9. What fruits are usually raised by budding?
10. Explain the process of budding.
11. When can trees be budded or grafted upon one another?
12. How should a young tree be set in reference to the prevailing wind?
13. What are the principal objects of pruning a fruit tree?
14. When is the best time to prune to favor wood production? To induce fruitage?
15. Give a simple method of treating the stumps when large limbs have been removed by pruning.
16. Will a tree bear both wild and budded or grafted fruit at the same time?
17. What kind of soil is best for fruit?
18. How can a fruit tree be kept from making too rank a growth to produce good fruit?
19. Should orchards be pastured? Why?
20. Should fruit trees be cultivated?
21. Why will properly canned fruit not spoil?
22. What fruit is usually canned in tin? In glass?
23. Name ten varieties of apples and tell in what month they ripen.

Sources and Summary *of Bulletins Needed.*—U. S. farmers' bulletins 203, 198, 161, 154, 134, 113, 181 and 157. (See list.)

Study of Plant Diseases and Their Prevention.—**Outline,** *Test Questions and Sources.*—

(a) Cause and prevention.
(b) Fruit molds.

(c) Peach curl.
(d) Club root.
(e) Potato scab and blight.
(f) Pear and apple fire blight
(g) Smut of wheat and oats.
(h) Black knot.

Sources and Summary *of Bulletins Needed.*—U. S. bulletins Nos. 153, 250, 80, 127, 132, 16 and 259. (See list.)

Farmer's Bulletins.—The following is a list of valuable bulletins on practical subjects that should be a part of every rural school and farmer's library. These are alphabetically arranged for handy reference, and *will be sent free* to any address in the United States on application to any senator, representative or delegate in Congress or the Secretary of Agriculture, Washington D. C. Besides the U. S. bulletins here indicated, each state issues free bulletins on special methods, care and culture of crops peculiar to that state. To secure these, address the state secretary of agriculture at the capital city, or the state agricultural college. In writing for these state bulletins the writer should indicate the particular subject in which he is interested.

No. 339. Alfalfa.
No. 194. Alfalfa Seed.
No. 283. Apple Diseases and Codling Moth in the Ozarks, Spraying for
No. 61. Asparagus Culture.
No. 58. Bean, The Soy, as a Forage Crop.
No. 59. Bee Keeping.
No. 52. Beet, The Sugar
No. 209. Boll Weevil in Cotton Seed and at Ginneries, Controlling of
No. 112. Bread and Bread Making.
No. 241. Butter Making on the Farm.
No. 131. Butter, Household Tests for Detection of Oleomargarine and Renovated
No. 106. Cattle, Breeds of Dairy
No. 152. Cattle, Scabies of
No. 167. Cassava.
No. 235. Concrete, Preparation of Cement
No. 174. Corn, Broom
No. 253. Corn, Germination of Seed
No. 303. Corn Harvesting Machinery.
No. 313. Corn, Harvesting and Storing.
No. 229. Corn, The Production of Good Seed
No. 290. Cotton Bollworm, The
No. 201. Cream Separators on Western Farms.
No. 318. Cowpeas.
No. 231. Cucumber and Melon Diseases, Spraying for
No. 349. Dairy Industry, The
No. 330. Deer Farming in the United States.
No. 345. Disinfectants.
No. 64. Ducks and Geese.
No. 22. Farm Animals, The Feeding of
No. 126. Farm Buildings, Practical Suggestions for
No. 347. Farm Equipment, The Repair of
No. 242. Farming, Example of Model
No. 270. Farm Home, Modern Conveniences for the
No. 325. Farms in the Corn Belt, Small
No. 187. Farm Lands, Drainage of
No. 228. Farm Management, Forest Planting.
No. 62. Farm Products, Marketing
No. 98. Farmers, Suggestions to Southern
No. 274. Flax Culture.
No. 104. Frost, Notes on
No. 161. Fruit Growers, Practical Suggestions for
No. 203. Fruits, Preserves and Jellies, Canned
No. 255. Garden, Home Vegetable
No. 175. Grape Juice, Home Manufacture and Use of Unfermented
No. 284. Grape East of the Rocky Mountains, Insect and Fungous Enemies.
No. 137. Goat, The Angora
No. 185. Grounds, Beautifying the Home
No. 24. Hog Cholera and Swine Plague.
No. 272. Hog Farm and Seed Corn Farm, A Successful
No. 331. Hogs in Kansas, Forage Crop for
No. 100. Hog Raising in the South.
No. 170. Horse Feeding, Principles of
No. 179. Horseshoeing.
No. 236. Incubation and Incubators.
No. 127. Insecticides, Important
No. 263. Irrigation, Practical Information for Beginners.
No. 279. Johnson Grass, Method of Eradicating
No. 192. Manure, Barnyard
No. 66. Meadows and Pastures.
No. 63. Milk, Care of, on the Farm.
No. 206. Milk Fever and Its Treatment.
No. 264. Moth, Browntail, and How to Control It.
No. 204. Mushrooms, The Cultivation of
No. 354. Onion Culture.
No. 224. Peas, Canadian Field
No. 205. Pig Management.
No 140. Pineapple Growing.
No. 86. Plants, Thirty Poisonous
No. 157. Plants, The Propagation of
No. 35. Potato Culture.
No. 324. Potatoes, Sweet
No. 335. Poultry and Dairy Farm, A Successful
No. 182. Poultry as Food.
No. 287. Poultry Management.
No. 181. Pruning.
No. 164. Rape as a Forage Crop.
No. 213. Raspberries.
No. 297. Rats, Method of Destroying
No. 338. Roads, Macadam
No. 311. Roads, Sand Clay and Burnt Clay
No. 321. Roads, The Use of Split-Log Drags on Earth.
No. 49. Sheep Feeding.
No. 96. Sheep Raising for Mutton.
No. 292. Silos, Cost of Filling
No. 32. Silos and Silages.
No. 246. Sorghums, Saccharine for Forage.
No. 245. Soils, Renovation of Worn-Out
No. 177. Squab Raising.
No. 198. Strawberries.
No. 135. Sirup Manufacture, Sorghum
No. 301. Tea, Home-Grown
No. 196. Toad, Usefulness of the American
No. 82. Tobacco, The Culture of
No. 220. Tomatoes.
No. 134. Tree Planting in Rural School Grounds.
No. 351. Tuberculosis, Test of Cattle for
No. 200. Turkeys.
No. 359. Vegetables, Canning in the Home.
No. 156. Vineyard, The Home
No. 28. Weeds, How to Kill
No. 132. Wheat, Insect Enemies of Growing
No. 250. Wheat Smut and Loose Smut of Oats, The Prevention of

SECONDARY EDUCATION

A VIEW OF THE WORK OF HIGH SCHOOLS, ACADEMIES AND PREPARATORY SCHOOLS

SECONDARY SCHOOLS.—The secondary school system of the United States has developed out of the peculiar conditions of American life. It occupies a middle position between the elementary schools on one side and the colleges and higher technical schools on the other. The great majority of secondary schools are public institutions, supported by general taxation. A smaller number are private or endowed schools dependent upon tuition and upon private donations.

In each state the public school system, including the high schools, and in some cases, the state university, is under the control of state law. Our whole system of education is therefore a group of state systems, somewhat widely variant from one another yet containing some of the unifying elements of a general national system. According to the report of the national commissioner of education for 1908–9, 1,034,827 students were scheduled as attending secondary schools. Of this number 863,026 were in public high schools, and 171,801 in private secondary schools. During the nineteen years from 1889–90 to 1908–9, the number of secondary students in public high schools increased from 221,522 to 863,026, while the number of students in private secondary schools increased only from 145,481 to 171,801. Indeed the number of students in private secondary schools has fallen off several thousand in the last four years. During the last twenty years there has been a corresponding improvement in the buildings and equipment of public high schools.

The following is the summary of the report of the commissioner of education for 1908–9 for the United States:

Libraries		Grounds and Buildings		Scientific Apparatus	
Number of schools reporting	Volumes	Number of schools reporting	Value	Number of schools reporting	Value
8,676	5,143,121	8,671	$223,847,479	7,117	$13,777,153

Money Value of Endowment		Expenditure for Sites, Buildings and Improvements	
Number of schools reporting	Value	Number of schools reporting	Value
137	$3,601,359	2,693	$17,270,188

While this latest report is incomplete because some schools failed to report, it is quite sufficient to show that the American people have made a large financial investment in the public secondary schools. It is within the last twenty years that the remarkable expansion of the public secondary schools has taken place. The commissioner of education remarks further in his latest report "The rate of increase in the number of secondary students from year to year is greater than the rate of increase in population. In 1890 the number of secondary students was 367,003, or about 5,900 to the million of population. In 1900 it was 9,500 to the million of population, and in 1909 about 11,700 to the million or over 1 per cent of the population."

A historical examination of the schools of the United States would demonstrate that the public secondary school system, as we now have it, has sprung directly from the will and purpose of the common people. The free public high school is now generally recognized as a strong and important expression of American democracy. It is designed to offer to all children in the United States the full opportunity for higher education. In this respect it differs from other great secondary school systems in Europe.

The free secondary school is just beginning to take on its full importance and next to the elementary school is the most fundamental of American institutions. After the Revolution and until about 1850 the private and endowed academies

were the chief places for secondary schooling in the United States. But since 1850 the free public high school has developed rapidly in importance, till now it largely predominates. The first free secondary schools were established in Boston, Philadelphia, Baltimore and other eastern cities. Massachusetts and New York early established, by state law, systems of secondary schools under state control. Later, western states like Indiana, Minnesota, Michigan, and Wisconsin founded systems of secondary schools, with state universities to complete the comprehensive plan of state education. Such free high schools have been organized under local boards and are supported mainly by local taxation, but in the state systems the school funds of the whole state have been sometimes drawn upon for support of such schools. The free public high schools have had a stronger development in the middle west and in the far western states than in the east. But in recent years large public high schools have been founded in New York City and in other eastern cities where previously private secondary schools prevailed. In the eastern and southern states the private and endowed secondary schools still hold a relatively important place, but in recent years the public high school has developed with such rapid strides that it now leads in affairs of secondary education in all parts of the country.

Originally the high schools were not designed as fitting schools for colleges, but, somewhat in contrast to private schools preparing for college, the high school was to extend and expand the elementary school course for the benefit of the common people. The old private and endowed preparatory schools were somewhat aristocratic, while the high school is strictly a school of the people, and in more recent times it has been frequently called the people's college.

The tendency in the Mississippi valley states and farther west to establish state universities, sustained at public expense, as the completion of a free public school system for the people, made it necessary to establish a close connection between the high schools and the universities. Most of the middle and western states now have a state school system consisting of three closely related parts, the common school, the high school, and the university. All the states are now following more or less closely upon this plan. It was natural also that great public high schools should find it necessary to put themselves into close relation to the colleges and universities, because large numbers of high-school graduates would surely desire to go to college. Our present high schools are the result of a variety of historical forces. They are in the main locally controlled and supported, and stand very close to the common people. In many of the states the legislatures by state law have organized them into state systems. The state universities, also founded and controlled by the states, stand in close organic relation to the high schools. The secondary schools of the United States display wide variations and much lack of uniformity. The national government exercises no direct control over them, not even to the extent of requiring statistical returns. And yet the secondary schools are rapidly growing into uniformity. In spite of very important differences between the north and the south, between the extreme east and west, common influences are at work throughout the whole country which are fixing common standards. Such are the state and national teachers' associations, organizations of secondary teachers and of college teachers, the reports of the national commissioner of education, the appointment of important committees from institutions in all parts of the country to report upon college entrance requirements, courses of study, the elective system, vocational training, and other special topics. Educational journals and literature tend also to propagate and universalize important ideas in secondary education.

The ideal of the high school system is to put within reach of every child secondary training whether he lives in the city or country. High schools vary therefore in size and equipment from a rural school with not more than a dozen children to a city school of four or five thousand students with corresponding equipment.

Our main purpose will be to describe somewhat fully the various courses of study offered in these schools, to outline briefly the content of the various branches, to explain their value for purposes of general culture, and to point out their practical utilities when applied to actual life.

An examination of the course of study in one of our large city high schools shows that it consists of a group of courses serving several different ends. Some large city high schools have as many as twelve separate courses, *e. g.*, the city of Los Angeles. The Hughes high school of Cincinnati has eight distinct courses, four of which are preparatory for colleges and professional schools, and four courses technical and industrial, and leading to vocations.

TYPICAL COURSES AS EXHIBITED BY THE CINCINNATI HIGH SCHOOL

FIRST GROUP—Academic courses for general culture and leading to colleges and professional schools.
SECOND GROUP—Technical and industrial, and leading to vocations.

ACADEMIC COURSES—Elocution 1, Music 1, Gymnasium 2 periods a week, throughout the four years.

First Year

General		Classical		Domestic Science		Manual Training	
English	4	English	4	English	4	English	4
Algebra	4	Algebra	4	Algebra	4	Algebra	4
Latin or	5	Latin	5	Latin or	5	Latin or	5
German (Adv.) or				German (Adv.) or		German (Adv.) or	
German (Beg.)				German (Beg.)		German (Beg.)	
Botany or	5	Botany or	4				
Zoölogy (1 double)		Zoölogy (1 double)		Domestic Science	8	Manual Training	8
Drawing	2	Drawing	2	Applied Art	2	Drawing (Mech.)	2

Second Year

General		Classical		Domestic Science		Manual Training	
English	4	English Composition	1	English	4	English	4
Geometry	5	Geometry	5	Geometry	5	Geometry	5
Latin or	5	Latin	5	Latin or	5	Latin or	5
German (Adv.) or				German (Adv.) or		German (Adv.) or	
German (Beg.)		French	4	German (Beg)		German (Beg)	
History (Ancient)	4	Greek	5	Domestic Science	8	Manual Training	8
Drawing (Opt.)	2	Drawing (Opt.)	2	Drawing & App. Art	2	Drawing (Mech.)	2

French, 4; English composition, 1; an option in the general course for English for those preparing for colleges requiring three years of French.

Third Year

General		Classical		Domestic Science		Manual Training	
English	4	English	4	English	4	English	4
3d Year Latin or	5	Latin	5	One from—		One from—	
1st Year German or				3d Yr. Latin or	5	3d Yr. Latin or	5
German (Adv.) or				1st Yr. German or		1st Yr. German or	
German (Beg.)				German (Adv.) or		German (Adv.) or	
Two from—				German (Beg.)		German (Beg.)	
French or Spanish	4	French	4	French	4	French	4
Algebra, ½ Year	4			Spanish	4	Spanish	4
Trig'try, ½ Year		Algebra, ½ Year	4	History (Ancient)	4	Algebra, ½ Year	4
Physics (1 double)	5					Trig'try, ½ Year	
History (Med.)	4						
History (Mod.)				Chemistry	5	Physics (1 double)	5
				Domestic Science	8	Manual Training	8
Drawing (Opt.)	2	Greek	5	Applied Art	2	Mechanical Drawing	2

Elocution, music and gymnastics optional first half year.

Fourth Year

General		Classical		Domestic Science		Manual Training	
English	4	English	4	English	4	English	4
4th Year Latin or	5	Latin	5	Two from—		One from—	
2d Year German or				4th Year Latin or	5	2d Year German	5
German (Adv.) or				2d Year German or		or 4th Year Latin	
German (Beg.)				German (Adv.) or		German (Adv.)	5
Two from—				German (Beg.)		German (Beg.)	5
French or Spanish	4	French	4	French	4	French	4
Chemistry (1 dbl.)	5			Spanish	4	Spanish	4
Sol. Geom. ½ Year	5			Physics (Double)	5	Chemistry (1 dbl.)	5
Adv. Math. ½ Year				History (Am.)	5	Sol. Geom. ½ Year	5
Astron. ½ Year	4			Civics		Adv. Math. ½ Year	
Geology, ½ Year							
History (Am.)	5	History (Ancient)	4			History (Am.)	5
Civics		Greek	5			Civics	
Drawing (Opt.)	2			Domestic Science	8	Manual Training	8
				Physiol. & Hygiene	4	Mechanical Drawing	2

One year of science required in third or fourth years in general course.
One year of history required in domestic science course.

TECHNICAL COURSES

First Year

Commercial	Boys' Industrial	Girls' Art	Girls' Industrial
English.....5	English.....4	English.....4	English.....5
Arithmetic and Algebra.....5	Arithmetic and Algebra.....4	Algebra.....4	Arithmetic and Algebra.....5
German or Spanish.....5	Industrial Geography.....4	Botany or Zoology.....5	Applied Art.....5
Commercial Geography.....4	Drawing.....4	Art.....10	Cooking.....4
Penmanship and Applied Art.....5	Turning, Pattern and Cabinet Making.....16	Physical Training.....2	Sewing.....8
Physical Training.....2	Phys. Train'g (Opt.).2	Music.....1	Physical Training.....2
Music.....1		Elocution.....1	Music.....1

Second Year

Commercial	Boys' Industrial	Girls' Art	Girls' Industrial
English.....4	English.....4	English.....4	English.....4
Arithmetic and Geometry.....4	App. Mathematics...4	Geometry.....5	Geometry and Arithmetic.....4
German or Spanish....4	Physics.....4	French.....4	Chemistry.....5
Stenography and Typewriting.....10	Drawing.....4	Art.....10	Applied Art.....2
History (Mod.).....4	Foundry, Forge and Machine.....16	History (Ancient)...4	Cooking and Household Arts.....6
Drawing (Opt.).....2	Phys. Train'g (Opt.)..2	Physical Training....2	Millinery and Dressmaking.....8
Physical Training.....2		Music.....1	Physical Training.....2
Music.....1		Elocution.....1	Music.....1

Third Year

Commercial	Boys' Industrial	Girls' Art	Girls' Industrial
English.....4	Chemistry.....10	English.....4	English.....4
German or Spanish Correspondence.....4	English.....2	French.....4	Physiology.....4
Or Physics.....6	Drawing.....10	Art.....10	Applied Art.....5
History (Am.).....4	App. Mathematics, Shop Problems and Practice.....10	History (Med. and Mod).....4	Elect Specialty.....20
Typewriting and Stenography.....10	Coöperative plan; alternate weeks in shop and school.	History of Art.....2	Millinery, etc., Dressmaking, Tailoring and Art Needlework; Home Economics; Office Training; Salesmanship.
Bookkeeping.....5		Physical Training...2	
Physical Training.....2		Music.....1	
Music.....1		Elocution.....1	

Fourth Year

Commercial	Boys' Industrial	Girls' Art	Girls' Industrial
English.....4	History (Industrial of U. S.) & Civics..5	English.....4	American History and Civics.....5
German or Spanish Correspondence.....4	Shop Science and Shop Practice.....10	French.....4	English.....4
Or Chemistry.....6	Drawing.....10	Art.....10	Applied Art.....5
Commercial Law and Economics.....4	App. Mathematics and Shop Problems.....10	History of Art and Art Criticism.....4	Elect Specialty.....20
Civics.....3	Coöperative plan; alternate weeks in shop and school.	Physiol. & Hygiene...4	
Bookkeeping and Accounting.....10			
Typewriting and Stenography.....2			
Drawing (Opt.).....3			
Physical Training.....2			
Music.....1			

Such a program as this is clear proof that our high schools have expanded their curriculums in recent years to take in all the important academic studies and also a good typical representation of the technical and industrial arts. The high schools have shared fully in that expansion of studies which has marked the recent development of all schools from the primary to the university.

The Course of Study in secondary schools has been extensively discussed in recent years by leading educators. Important and far-reaching changes have been made. Instead of one course we have many.

We desire to know the value of different studies and courses for culture, for discipline and for the uses of life. First of all is the great series of humanistic studies, including ancient and modern languages, grammar and rhetoric, literature and history. This group of studies has furnished the main constituent for secondary courses for the last four centuries. It deals primarily with human life as expressed in language and literature.

Language has long been regarded as the most fundamental of studies because it is the medium of thought in all education and because in it are preserved the past experiences of the race. Man distinguishes himself from animals by his powers of speech. Language involves the logic of clear thinking. It has long been supposed to bring a very superior kind of mental discipline.

The Ancient Languages, in particular the Latin and Greek, because of their complete inflections and conjugations, and the fine shades of meaning they can accurately express, were held far superior to modern tongues. The classic literary style of the ancients, as exhibited in the masterpieces of Greek and Latin literature, has been esteemed by scholars much superior to the style of the moderns. From the æsthetic or artistic point of view, therefore, the ancients have long held the moderns in bondage. Great poets and orators in modern times have been confessed imitators of the ancients. At the time of the revival of learning in Europe, nearly all the books and libraries in common use were printed in Latin, and all scholars spoke and wrote Latin. As a consequence, for three hundred years Latin held the supreme position among school studies. But with the rise of modern languages and literatures, with the appearance of such modern masters as Milton and Shakespeare, Schiller and Goethe, Racine and Molière, the ancient tongues began to lose their supreme place. It was not, however, till the latter part of the nineteenth century that modern studies, such as the natural sciences, history, modern languages and mathematics, began to assume an equal place with Latin and Greek in secondary courses of study. This great change has been working itself out in European countries as well as in America, although more slowly and more conservatively.

The great masterpieces of Latin and Greek literature have all been translated into superior English by some of our best writers and poets. It is now claimed that a student can get a better understanding of the content and spirit of Latin and Greek masters during the school period by reading these translations than by the laborious study of the originals. The average student has not time to master the Latin language so as to read Latin authors in the original, much less the Greek. In consequence Greek has almost disappeared from our high-school courses during the last thirty years. The old notion of discipline through the drill in Latin and Greek has lost much of its force in recent years, because it is held that modern studies which are of greater practical service are equally valuable as discipline.

On the other hand Latin is likely to retain its present place and importance in secondary education, because it is a sort of mother tongue to all the western European languages, and serves as a linguistic basis for all study of English, French, German, etc. All of our modern languages are full of Latin. Our literature is permeated with Latin words, thought and spirit.

Latin.—The high-school course of study in Latin usually includes some of the chief writings of Cæsar, Cicero and Vergil. The first year is chiefly preparatory to the study of Latin authors. A series of exercises is provided in the inflections and conjugations of Latin words, with the memorizing of Latin vocabularies and the composing of Latin sentences.

The first book of Cæsar's *Commentaries on the Gallic Wars* is sometimes read during the first year. Three or four books of Cæsar are translated into English, with a constant drill upon the rules of Latin construction.

The third year is usually given to the study and translation of Cicero's *Orations*, especially the four against Catiline, and three or four others. These are the greatest orations in the Latin language, and have been the models for the great orators of modern times.

The fourth year is usually devoted to the study of Vergil's *Aeneid*, the great epic poem of the Latin tongue. From three to six books are read. Other Latin authors are sometimes substituted for the above mentioned, as Eutropius, Sallust, and Livy.

Parallel with the study of Latin writers it is customary to give a course in the history of Rome, to present a fuller biography of the great authors, and to bring out the historical background of their writings.

The Latin course is continued for two or more years in college, for those who wish to specialize in Latin studies. Other great Latin masterpieces are read, as Cicero's essays on friendship and old age (*De Amicitia and de Senectute*), the historical works of Livy and Tacitus, the

comic plays of Terence and Plautus, the poems and odes of Horace, and the works of Seneca, Juvenal and Quintilian. This series of great Latin masters is not very long, but it is upon them chiefly that the fame of the Latin tongue rests.

One of the chief difficulties in the learning of Latin is that there is no easy introductory Latin author suitable for boys and girls. Cæsar's *Gallic Wars* are usually read first, but this is a difficult book for beginners. Various attempts have been made to overcome this difficulty, *e. g.*, by using Æsop's *Fables* in Latin. Other stories have also been written in Latin for the benefit of children. The fact is that none of the great Latin writers ever thought of writing stories for children. They are all for adults.

Excellent translations of all the great Latin writers are now easily obtainable in our libraries, so that English students not versed in Latin may easily make the acquaintance of their works.

Greek.—The study of Greek embraces a similar course in the masterpieces of Greek literature. The high-school course in Greek, formerly required for admission to college, but now pursued by only a few students, consisted of preparatory drills in inflections and grammar, and about two years' work in translating the first books of Xenophon's *Anabasis* (the march of the ten thousand Greeks into Asia), and Homer's *Iliad* (the first four or six books or the *Odyssey*.

This high-school course was followed up in college by the reading of Demosthenes' and Lycias' orations, the histories of Herodotus and Thucydides, the dramatic works of Æschylus, Sophocles and Euripides and the philosophical writings of Plato and Aristotle.

The literature of the Greeks, as revealed in these works, is generally regarded as superior in quality and artistic form to that of the Romans.

The Modern Languages, especially German and French, have become established in our high schools as standard linguistic studies on a par with Latin. The colleges also accept them as full equivalent for admission. The question may be fairly entertained whether it would not be better to begin foreign languages with German in the grammar school and follow later with Latin.

The reason for this rapidly growing prominence of the modern languages is not difficult to explain. They are, first of all, great literatures, enriched with the masterpieces of preëminent philosophers, poets and artists. In richness and variety of content these modern languages far surpass the classical tongues of antiquity. In fiction or novel writing and scientific treatises we have extensive fields of literature for which the ancients have no equivalent. Another advantage of the modern tongues is that they are much more easily and quickly mastered than Latin or Greek. After a year's study of German the student may enter completely into the spirit and meaning of the great German masters, while it requires several years of laborious study to reach the same result in Latin. This is no small advantage, considering the wide range of studies involved in a modern liberal education.

German is also an inflected language and brings to the English student a grammatical training similar to that of the Latin.

The severe mental discipline attributed to Latin may be counterbalanced by the increased interest and literary enjoyment derived from the study of German masterpieces. The higher cultural value of the modern tongues is far more accessible to the student than the old culture.

On the other hand the practical value of German or French for purposes of conversation, for travel, for business, and for immediate use in literary and scientific studies is great. This readily available utility of modern languages gives motive and impetus to study. The scholar in almost any field of research, the diplomatist, the merchant, and the teacher find ready use for German. We meet the German everywhere, in business, in science, in education. He, with his language, is one of the drive wheels of modern civilization.

French, formerly studied more than German, has been somewhat superseded by German in America. Yet the French language, like the German, is of near kin to English, and has the same advantage for us as German, a great modern literature, easily accessible, and wonderfully rich in cultural value.

The broadening effect of a modern tongue, the enlargement of the field of vision, and the wider sympathies for a different race are some of the chief advantages in modern language study.

English.—The study of English has risen into great importance for high schools in the last twenty years. As our respect for ancient literature has dwindled, our appreciation for our mother tongue has increased. Vigorous and continuous efforts have been made of late years in high schools and colleges to put the instruction in English upon a stronger basis. There is indeed good reason for making the study of English more important and thorough than perhaps anything else. First of all, good choice English is necessary in all studies and throughout life. It is the most practical of all studies both for the ends of good scholarship and for strong citizenship and business success.

English Literature, in the richness and variety of its culture materials, is the first of all great studies with which to expand and fortify the mind. The average student, too, has a chance to get at the master minds of English thought directly, without laborious years of study as in Latin. Scott, Byron, Carlyle, Tennyson, Webster, and Emerson may speak directly to all without tedious delay. No other thought material that we can furnish high-school students is so thought provoking and so strong in its educative effects as are the great essays, orations, poems and histories. It is stimulating in a high degree, if we can only find the material suitable to each mind. Literature is also so many-sided and varied that it will adapt itself to the most diverse dispositions.

Composition.—The study of English from the standpoint of composition and rhetoric is more formal and perhaps more tedious, but of great importance as a training in thought organization, in simplicity, force and accuracy of expression. Each person must learn to use English in his own way, and to develop some originality and individual force. But the imitation of good models, criticism of faulty style, drill in outlining, paragraphing, and correct grammatical form are indispensable. Even spelling and punctuation, correct forms in letter writing and composition, are not useless but of direct practical value. In recent years we have had many excellent teachers of English composition in high schools.

Rhetoric is a discussion and study of the essentials of style as it appears in good authors. It brings out and illustrates the various forms of discourse and the peculiarities of each, the figures of speech and their force and value as seen in the best writers. The working out and discussion of themes, short stories, and plans of organization are treated. The student of English will find in Benjamin Franklin's *Autobiography* an interesting account of how he trained and exercised himself with his companions of the Junta in acquiring an acceptable style in writing and speaking English.

The practical value of these various branches of English study is so universally recognized that they have come to be required from all students in the various high-school courses. In scientific and business courses, no less than in the old classical and language courses, a complete training in good English is now laid down as one of the few fundamental demands made of all students alike. Its utility in the daily affairs of life is not less significant than its culture value in broadening and elevating the mind to the level of great thoughts.

English as scheduled in high-school courses is probably the most important study of all. The Committee of Ten allowed this study five hours a week for four years, more time than is granted any other study. High-school catalogues show that this advice has been followed in many schools.

The English course as outlined in one of our average high schools is as follows: The work in English is designed to give the ability to use good English and the power to appreciate good literature, and covers the following points: Drill on the technique, spelling, punctuation, grammar, etc.; practice in the speaking and writing of simple, accurate English, with some training in declamation and debate; the study and discussion of some masterpieces of English literature, with the aim of creating a taste for such reading. The books chosen provide for the study of a masterpiece in each of the forms of literary expression—the novel, the epic, the drama, the essay, etc. An outline of the work is given herewith.

English is given in the first, second, third, and fourth years. In the first and third years, two-fifths of the time is given to composition. There is also outside reading and work in declamation. In the third year a grammar review is given, using Scott & Buck's *Grammar* as a text. In the fourth year the history of English literature is studied, besides a number of classics, while one recitation a week is given to composition. In the second year there is a drill course in business English. This course is given five times a week for one semester and is an elective course. The work covers letter and theme writing, grammar, punctuation, and the reading of some classics. In each year except the second, six classics are studied thoroughly. In the first and third years eight books from a supplementary reading list are read at home and reported on. In the senior year there is a large amount of library reference work based on any good work on English literature. Also one long essay, over 1,800 words in length, upon an approved subject, is required of all senior students.

History as a study has been developing into a greater importance as a high-school branch. It includes American history, European and ancient history. History as now taught and studied is far more valuable than formerly. As a mere enumeration of facts and dates, of court intrigues and wars, history was unprofitable. History is now an effort to grasp great race movements, the development of important institutions, the life history and purposes of influential characters, and the customs, character, and industries of the people as distinguished from princes, rulers, etc. History thus becomes far more interesting and illuminating. We sympathize with the hardships and struggles of past ages and understand at what cost our present comforts and protection are secured. On the one side history has become more biographical, dealing with great representative leaders more fully and dramatically. On the other side it is becoming more social, more democratic, devoted to the interests and welfare of the common people. We may all learn the greatest lessons from history.

By reason of the improvement in methods of teaching, history has become a very interesting and profitable study. Biography lends its charm by detailing the lives of remarkable men and women. In the high schools, as well as in the elementary schools, great biographies are the life of instruction. They are concrete and stimulating to youth. The lives of William Penn, Winthrop, Raleigh, Columbus, Samuel Adams, Paul Jones, Hamilton, Jefferson, Whitney, Morse, Horace Greeley, and others bring the student into the real spirit and conflict of past periods of history. In Europe, Chatham, Burke, William the Silent, Richelieu, Luther, Cromwell, Frederick the Great, Gustavus Adolphus, Bismarck, and Gladstone suggest stirring scenes and great epochs of national life.

A proper treatment of history also reveals the beginnings and progressive development of state and church, of self-governing democracy, of westward expansion over states and territories, of the growth of cities, etc. Important ideas develop through long periods of history. The wonderful scientific inventions of recent years have changed the whole face of society and have caused a vast accumulation of wealth and comfort. At the same time social evils have been multiplied. History has become a broad social study. Public sentiment as developed by the press and educational agencies has become a powerful force in society, and the history of the changes by which these results have been secured is an eye-opener to the great problems of our time.

History thus is the real and effective mode of teaching civics, of training for citizenship, for intelligent coöperation in politics and social reform. The best way to get at our present problems is to trace them up in their origin and growth. Economics is not much taught in our high schools, but in connection with history the more important phases of economic development come out in concrete setting.

History is an important moral force. It teaches by example. It shows good and bad characters objectively in the panorama of national life. We always judge men and women in history from the viewpoint of high standards. Personalities impress us as benefactors of the race or as evil-doers, tyrants and enemies of social good. History well studied gives a peculiarly valuable discipline in the power to judge and weigh social and economic problems. It requires a balanced capacity for mental deliberation, for weighing probabilities, for a fair-minded and unprejudiced estimation of forces. It is a very different kind of reasoning from that of mathematics, and is far more practical for the ordinary uses of life, of politics, etc. Our text-books in history, because of their condensed character and epitomizing tendency, are not so lively and interesting as the larger, fuller histories. The student in order to fully enjoy and appreciate history should read at his leisure such books as John Fiske's *Critical Period of American History* and his other volumes of American history, Parkman's *Old Regime in North America*, D'Aubigne's *History of the Reformation*, Motley's *Dutch Republic*, and Carlyle's *French Revolution*. Such books throw a brilliant light upon important epochs in the life of nations.

Upon high-school students more than upon any other class of people rest later the responsibilities for leadership in political and social reforms, that is, for solving the large problems of democratic society. Historical and literary studies expand and liberalize the mind in such social studies.

Science.—The second important group of secondary studies is that of the sciences. Such are botany, zoölogy, physics, chemistry, physiology, geology, and astronomy. They have grown into large importance in recent years. We have now courses in the high school which are predominantly scientific, and some phase of natural science is required in nearly all curriculums. Fifty years ago the natural sciences had an insignificant place in secondary education. To-day they share the field of education with other great studies on equal terms.

Modern science has revolutionized life outside of the school, and it has gone a long way toward revolutionizing courses of study and methods of teaching in the schools. The first question that naturally arises is, What is the cultural and disciplinary value of the sciences? and second, What is their bearing on the utilities of practical life? We may touch on the answers to these questions as we deal with the separate sciences.

Biological Science as taught in high schools includes botany, zoölogy, and physiology.

Botany deals with the structure, life development and classifications of plants. It comprises the vast variety and profusion of vegetable growths which cover the surface of the earth in all zones and climates.

Zoology performs a like service for the countless forms of animals on land and sea, in the air and soil.

It has been a favorite idea of nature-study enthusiasts that the study of plants and animals sharpens the observing powers, trains the senses to acute perception, and provides the natural and fundamental inductive thought movement. Comparison of specimens, classification, and the discovery of natural laws follow the strictly inductive plan. Certain it is that great scientists have found the freest development of their thinking powers in pursuing these lines of investigation. Darwin and his associates, working upon this plan, developed the doctrine of evolution, which in the last sixty years has wrought a marked change in all branches of study. The doctrine of evolution, developed in purely biological studies, has been applied to human life and history, to sociology, to politics and religion. After such great achievements the biological sciences have gained recognition as liberalizing studies on a par with history and literature.

Zoölogy is studied in high schools, sometimes a half year, sometimes a full year, five hours a week. A series of laboratory studies of typical animals is worked out with dissections and use of the microscope. Sufficient comparisons are made with other species to work out important classes. The following series illustrates the plan:

The common locust.
Butterflies and moths. Other insects.
Spiders and their allies.
The crayfish. The clam.
The earthworm. Vermes.
The fresh-water sponge.
The amœba. Protozoa.
The yellow perch. Other fishes.
The common frog. Amphibia. Reptiles.
The pigeon. Other birds.
The squirrel. Mammals.

Each animal is studied in its native environment, in its adjustment to life conditions, and in its structure. The evolution of animal life in successive forms is traced out, and the laws of development unfolded.

Biology has also been making contributions to the useful arts and to human needs in many ways. In agriculture and gardening, in fruit growing, in the domestication of fruits and animals, in forestry, in bacteriology with relation to disease, in medicine as related to physiology and hygiene, in the great transforming industries of food production, and even in the physiological basis of psychology, biology has made the greatest contributions. Without a knowledge of biological laws as developed in recent years one cannot appreciate discussion about pure foods, about conservation of resources, about tuberculosis and other diseases, about health and dietary, about sanitation at Panama, and about the most important present-day topics in politics, education, and social progress.

Physiology in high schools usually requires a half year. It includes the general structure and relation of bodily organs; the vital organs and their processes and mutual relations; topics in applied physiology, such as health and sanitation; use of narcotics and alcohol; food and dietetics, first care in accidents.

Physical Science (physics, chemistry, geology, and astronomy) constitutes the second great field of science which is studied in high schools. It deals with physical force as manifested in gravitation, in light, heat and electricity, and in chemical affinities. Physics and chemistry have become the important physical sciences for high schools and colleges. Geology and astronomy are usually reserved for colleges.

Physics is usually studied a full year in the third or fourth year of the high school.

There is a tendency to begin with machines and processes in the industries, rather than with purely theoretical work. Physical laws are illustrated by such machines and practical applications. Some of the leading topics are as follows: The conservation of energy; the indestructibility of matter; heat, light, and electricity and their laws; sound and mechanics; the steam engine; the microscope; wireless telegraphy; the dynamo; the electric light; the telephone; the gas engine. Careful notebooks of laboratory work are usually kept.

In the report of the Committee of Ten is offered a series of fifty experiments in laboratory physics.

Chemistry also requires usually a full year's study. Sometimes the chemistry precedes physics. Some of the important topics are as follows: The atomic theory; the important elements, as oxygen, nitrogen, hydrogen, carbon, sulphur, etc., and their reactions; the metals, and their preparation; organic chemistry; the application of chemistry to the industries is made prominent.

The report of the Committee of Ten furnishes a series of 100 experiments in chemistry for secondary schools.

Many of the strongest scientific minds of the last four centuries have devoted themselves to the investigation of physical and chemical problems. Galileo, Newton, Laplace, Franklin, Tyndall, Faraday, Lord Kelvin, and Helmholtz are examples. The body of scientific knowledge that has accumulated is of vast importance to the world, both as a basis for the liberal interpretation of nature and for its utilities to man. The physical sciences illustrate at their best the modern scientific method of investigation, of laboratory experiment, of reasoning by hypothesis and verification. The mental discipline gained by the study of physical science is one of the strong elements of liberal culture.

From the practical, utilitarian point of view, the increase of man's power over nature through the study of physics and chemistry opens one of the important chapters in human history. The microscope and the telescope have disclosed new worlds. Steam and electricity have produced such profound changes in human life that they are almost beyond our capacity to estimate. Commerce, manufactures, and mining are developed and controlled largely by physicists and chemists.

Schools of technology at the universities and elsewhere cultivate especially the physical sciences. The departments of engineering are equipping experts for all the important technical processes in the industries, as in railroading, in smelting and reducing ores, in ship construction and architecture, in navigation, in photography, in electrical machinery, in printing and dyeing, in steel production, in sugar refining, in electroplating, etc. The important inventions and machines of our age are applications of physical principles, as the power loom, the turbine wheel, the linotype, the stereoscope, the electric motor. These important applications of physical science have become so universal that every person of general intelligence needs to have an acquaintance with them.

Mathematics, especially geometry and algebra, stand in very close relation to the physical sciences. These branches of mathematics have been recognized as a very important part of the high-school course, both for their general disciplinary value and because of their fundamental relation to physics, astronomy, and scientific knowledge generally. Geometry in dealing with special dimensions works out a series of closely dependent propositions in strict logical sequence. It demands close logical thinking and demonstration. Algebra develops a more abstract kind of thinking. Many of the more difficult problems of arithmetic can be solved easily by algebraic formulas, and should be postponed to later study in the high school. Algebra and geometry pave the way for physics and chemistry, and for nearly all the technical engineering studies.

In modern times the higher studies in mathematics have acquired an almost supreme importance in the large affairs of the world; *e. g.*, in financial budgets of nations and cities, in the mortuary tables used by insurance companies, in large engineering schemes for canal and railroad building and for irrigation, in banking and the financing of industrial and commercial enterprises, in the statistical tables of the census reports, etc.

Economics.—A group of economic studies has been coming into importance in high schools, such as commercial geography, the history and present status of commerce and the industries, economics and the elements of finance. The latter is usually relegated to college work. These studies are of great importance in explaining present-day conditions in society. They are of much interest to students of the secondary school, who are easily awakened to the current social problems. We are beginning to believe, also, that these studies are of importance for purposes of general culture and intelligence, and that it is the business of high schools to equip students for practical life in society as it is.

Vocational Studies.—Another group of studies of a still more directly practical value now constitutes an important part of high-school courses. These are business arithmetic, bookkeeping, penmanship, typewriting and shorthand. These have for their direct purpose the preparation of young people for business life. In cities and towns such studies are very popular and are usually associated with other studies of a more general cultural value, such as English, history, and mathematics.

The movement toward technical and vocational studies in the shape of manual arts is assuming great importance. This phase of secondary education is treated, however, in a separate article.

Drawing and Design, as taught in the art department of the high school, is the chief avenue for the cultivation of the æsthetic sense as exhibited in the graphic arts. Free-hand drawing and perspective, with a study of models and standard art forms, develop the taste for form and proportion. The elements of design and of ornament are developed in connection with free-hand sketching from nature and from models. Drawing is valuable not only as an introduction to æsthetic culture of many kinds but also as a training in accurate observation and in the power to express beauty. More recently free-hand sketching has been brought into close relation to design in the manual arts. Working drawings must be based upon preliminary free-hand sketching which develops design. Drawing as a general introduction to fine art and as a guide to artistic expression in all the industrial arts is becoming more and more important as a school study.

Music.—A high-school course would not be complete without systematic training in music and in physical culture. Even where there is little power to sing or play, appreciation for songs and musical compositions may be developed. The social life of the school as well as of the home is best expressed by music. Religious and patriotic sentiment, together with all the best phases of emotional life, are tempered and refined by music.

Physical Training, as developed in the more systematic exercises of the gymnasium and by the free athletic open-air sports, has become an essential element in the full growth of young people. It is especially the case in cities, where a positive deficiency of physical training is apt to prevail. Strong, vigorous, athletic discipline, which produces a hardening and toughening of physical fiber on the playground and in the gymnasium, is universally needed. Only, this kind of discipline should be made a common opportunity for the great majority of boys and girls rather than for a small, overtrained minority. Young people of the high-school age should develop a sound, vigorous and healthy physical strength, which, well preserved, will stand them in good stead through fifty or sixty years of stress and strain in the regular exacting activities of mature life.

The Small High School.—There have been springing up in many states of the union a great number of small high schools with but two or three teachers. So great indeed is the number of these schools that more than one-third of the students in all our high schools are found in schools of not more than two teachers. In schools with six teachers or less 58 per cent of all high-school students are found.

These small schools, many of them in small villages and in consolidated rural districts, occupy a most important place in our school system. It is difficult for them to maintain a good high-school course. First, they are not able financially to employ very strong and experienced teachers. Secondly, they are tempted to lay out an elaborate four-year course suitable for larger schools.

Many village communities have been willing to tax themselves heavily for the purpose of supplying good teachers and equipment. In several states, as Wisconsin, Minnesota and Florida, the whole state has applied state revenues to aid in the founding and support of small high schools. For these small schools two important recommendations have been urged. First, that they furnish a good two-year course rather than a poor four-year course. After completing a good two-year course students may be sent to larger nearby schools to complete their high-school studies. Secondly, a very simple course, with as few studies as possible, is recommended, rather than a variety for election. In some cases, to give greater simplicity and fewer studies at a time, the work of two years is alternated.

The consolidation of rural districts, which has been going on in many states, has made it possible to have good high schools within reach of the great body of farm boys and girls. This is a very important movement for the improvement of country life. When this plan is well worked out it will bring to every boy and girl of our country districts the opportunity for a high-school training, and thereby the door is thrown open to the higher schools and opportunities of life. Consolidated rural schools become also important social centers in a still broader sense. Concerts, lectures, and reading rooms, made accessible by good roads, will do much to make such combined schools great factors in rural life.

The ideal set up for our school system as a whole is to furnish every boy or girl, whether in the country or city, an opportunity to secure a complete education, and to bring this opportunity directly to the home door of every child.

Teachers in Secondary Schools.—The efficiency of the secondary schools depends upon the character and qualifications of the teachers.

The greatest question of all is how to secure efficient, broad-minded teachers. The social position and recognition of teachers in the community have much to do with this effort to secure a strong teaching force. High-school teachers, by their character and attainments, should command general respect in the community. It is of great importance that the communities should hold teachers in high esteem for their professional, personal, and superior social qualities. Otherwise the higher standards of culture and discipline such as must prevail in first-class high schools cannot be maintained.

The greatest of all difficulties that our high schools have to deal with is the prevailing low standard of scholarship and of social life.

New Community Ideals Needed.—Our American communities are not yet strong and virile in their educational and social standards. There is a sort of universal carelessness and looseness, a lack of strenuosity in maintaining and pursuing strong ideals. The average family is indifferent to these higher aims. This makes it very difficult in our average community to maintain an energetic scholarly high-school spirit. The positive superiority of the teaching force and the unqualified recognition by the community of their authority and leadership in matters of education are primarily necessary. In Germany this strong spirit prevails very largely. The teachers in the *gymnasia*, or secondary schools, are marked characters, commanding a positive respect in the community. The American people are willing to pay taxes and to support first-class schools, furnishing equal opportunities to all for higher education, but they have not yet learned to back up the teachers and the standards of the school by the firm support of the home and of a strong community spirit.

Strong, well-paid teachers, permanent in their positions and commanding respect for their successful experience and professional attainments, are absolutely necessary to the maintenance of first-class high schools. There is a steady movement toward improvement in these respects. These schools are still new and in the making, but there is good prospect that we shall yet work out the best system of public secondary schools that the world has yet seen. The teachers themselves by setting up good standards, and by progressive efficiency in their work, can do much to improve the character of the schools, but the people themselves in our local communities are the ultimate source of power and influence, and in our democratic institutions progress cannot greatly outstrip the prevailing standards among the people.

For this reason our school system has developed more slowly than secondary schools in France and Germany. The authority of the state, in those countries, has set the standard, and has imposed the conditions of higher education. Educational experts of the best ability have been employed by the state to work out courses of study and to administer the system. In this country, on the contrary, the people in each community, by their own free choice, have established, organized and supported such schools. Our school system is, therefore, a direct expression of the desires and standards of the people, and is broadly founded in popular consent.

Social Life in the high schools has developed in recent years some peculiar difficulties, and, in general, while this social spirit and its forms of manifestation are of the utmost importance, it is as yet difficult to lay down rules for regulating it. There are two important facts peculiar to American high schools. First, they are mainly coeducational; second, they are purely democratic. The social life, therefore, whatever it is, must be laid out on a broad liberal foundation.

The scientific study of adolescence in late years has brought out more clearly the social characteristics of young people at this period of life. The social impulse at this age is strong, spasmodic, tumultuous, freakish, and is especially unstable and unpredictable. Excessive reserve and diffidence under some circumstances are balanced by boisterousness and recklessness in other cases. While they are frank and confidential with one another, they are often reticent and unapproachable toward their elders. But the instinct for personal friendship and social grouping is very strong. They respect able leadership too, among themselves or in their instructors. At no time in their lives do they more need sympathetic but firm control. The presence of boys and girls together in all the classes and social events of the school has both advantage and disadvantage, but so long as this condition must be met it calls for the best skill and wisdom of teachers to create a wholesome and respectful relation between them.

Student Organizations.—The high-school students have combined into a variety of social organizations, some of which, like the debating and literary societies, musical groups and orchestras, art clubs, and athletic teams, are on the whole natural and appropriate expressions of the social instinct. Others, such as the secret fraternities and sororities, and such exclusive groups, that meet secretly in their own clubrooms in the towns, have caused serious evils which have menaced the school.

A committee of the secondary school department of the National Educational Association reported on the subject of high-school fraternities in 1905 as follows:

> *Resolved*, that we condemn these secret organizations, because they are subversive of the principles of democracy which should prevail in the public schools; because they are selfish, and tend to narrow the minds and sympathies of the pupils; because they stir strife and contention; because they are snobbish; because they dissipate energy and proper ambition; because they set wrong standards; because rewards are not based on merit, but on fraternity vows; because they inculcate a feeling of self-sufficiency among the members; because they are expensive and foster habits of extravagance; because they bring politics into the legitimate organizations of the school; because they detract interest from study; and because all legitimate elements for good—social, moral, and intellectual—which these societies claim to possess can be better supplied to the pupils through the school at large in the form of literary societies and clubs under the sanction and supervision of the faculties of the schools.

While the Greek letter fraternities have proved unsatisfactory as a solution of the social problem in high schools, serious efforts are in progress to meet the legitimate demands of social life in other ways.

Legitimate Recreation.—In addition to the literary and debating societies, the athletic and gymnastic events, the groups organized for voluntary readings in literature, science and art, the bands and choral societies, efforts have been made to provide receptions, class parties, excursions, dramatic entertainments, and suitable dancing for high-school students.

The high school itself has been developing into a social center where social functions are frequent, where lectures and concerts are provided, where the parents are invited on special occasions to inspect the products of the school in manual arts, in cookery and dressmaking, in drawing and music. Class plays and dramatic entertainments are not infrequent, especially in commencement week. In communities where the people and the teachers have learned how to make the best use of the school plant, the high school becomes not only the place for the formal education of the boys and girls but also the intellectual and social center of the community. There seems to be no good reason why the use of the school building should be limited to eight hours a day, five days in the week, nine months in the year. On the other hand it may with great profit be used at any time for the social and intellectual improvement of the entire community. Lectures, entertainments, and social gatherings for all, may well be given in the high-school building under the coöperative leadership of teachers and citizens, thereby extending very materially the intellectual, social, and moral influence of the school. The people of communities in which this policy has been tested are very appreciative of the results. (See *The American High School*, Brown.)

In all these social diversions the quiet coöperation and control of various members of the faculty are presupposed. High-school pupils have not yet reached the stage of development where they can be turned over to their own volition in social matters. The natural tendency of our American life may have been to throw young people in the adolescent period prematurely upon their own resources. There has been too much of freedom and indulgence. There is necessity in the home and in the school for a quiet but firm control, a spirit of subordination on the part of children and of wisely exercised authority on the part of parents and teachers. The fate that has overtaken the high-school fraternities and exclusive clubs is a definite proof and warning that children of high-school age have not yet attained to proper judgment and self-control for independence. They are still under the somewhat autocratic authority of the school and the home, and this authority should be definitely and intelligently exercised.

The High School as a Social Center is a favorable place where parents' meetings are held for the discussion of these social and school problems, and where plans can be worked out for a more intelligent coöperation of parents and teachers. One of the serious difficulties for most high schools is the strong tendency toward social dissipation which frequently interferes with school studies and exhausts the physical energy of young people by late hours and social excitement. Parents are often foolish in permitting this mental and physical waste. The high school greatly needs the support of intelligent homes in maintaining the high standards of the school and in discouraging social frivolity. The high school as a social center is a meeting ground where parents and teachers can come to an understanding on these important matters.

We may observe also that the high school is the only institution in most of our communities that has real power to set up and enforce for adolescents high standards of scholarship, vigorous mental discipline, and that steady continuity of effort which achieves important results. The family and the church are not equal to such tasks. The standard which pervades the intellectual and social life of any

community is on a distinctly lower plane. It is the special and almost exclusive function of the high school to tone up and strengthen the intellectual life, also to set up standards and ideals which will appeal to the enthusiasm of youth, and finally to teach youth to undergo the steady, persistent labor which changes these ideals into realities. Looked at from this point of view we can hardly overestimate the importance of a good system of high schools to the nation.

Methods of Instruction.—It has been assumed by most thinkers that the general method of instruction in secondary education is quite essentially different from that of elementary education. The report of the Committee of Fifteen, for which Dr. William T. Harris was chiefly responsible, attempted to explain and demonstrate this difference. According to this view, elementary studies deal with the immediate aspects of the world, with what may be called facts and data. The secondary course deals with the separate, formal and dynamic aspects that lie next in order behind the facts of observation. That is, secondary education is chiefly employed in classifying and isolating knowledge into separate sciences. This principle, properly understood, may show us where to begin the secondary course of study, whether at twelve or fourteen years of age.

The elective system of choosing studies according to the needs or preferences of individual students has been generally introduced into high schools. It began in the colleges and universities about 1878 to 1880, and has gradually spread to the secondary schools. One reason for this is the great enlargement of the general field of study in recent years; that is, the multiplication of new and modern branches, such as natural sciences, economics, history, manual arts, technical and engineering branches, etc. It is totally impossible for a student to compass all these studies, and selection is necessary.

Another reason for elective courses is a closer adjustment to the ability and choice of students. The problem of adjusting studies to individual needs is a complicated one, depending upon our estimate of the disciplinary and culture value of studies, their vocational service, and upon the proper connection and organization of the studies themselves. The old classical course was very narrow, almost purely disciplinary, and was imposed upon all alike, regardless of natural ability or preference. Some high schools have gone to the other extreme of miscellaneous and loosely constructed courses, where the student is allowed to make almost any combination of studies giving a required number of units. The experience of the last thirty years, however, has brought some definite results in the way of well-organized courses, allowing considerable freedom of choice, while securing unity and strength in educational development. First, a number of standard courses have been worked out, each of which gives a connected liberal education, including the essential elements of culture. The student may choose and follow one of these courses best suited to his needs and preferences. Second, a student, in a few high schools, is allowed to choose somewhat freely among all the studies offered but is limited to a proper sequence of studies determined by the dependence of some subjects upon others. Third, certain studies are now regarded as fundamentally important to all courses, such as English, history and mathematics. "At present it may be said that throughout the secondary schools of the United States there are prescribed: A foreign language, algebra and geometry, English, a science, and one year of history. This makes about two thirds of the course, leaving certain possible alternations to be made according as the student aims to enter this or that college, or to go into active life."—(Dutton and Snedden.) A thorough command of spoken and written English as gained through the study of grammar, rhetoric, and composition, and English literature, is now regarded as of fundamental importance to all students, irrespective of their special purposes in life. Fourth, high-school principals and teachers are expected to consult with individual students, and, after due deliberation, advise them as to their choice of studies and of courses, taking into view their preferences, their choice of a vocation, etc.

In small high schools with but two to four teachers the course of study must necessarily be limited to a few studies, and not much choice among electives can be given. As noted earlier, these small schools include more than half of the high-school population of the country.

High schools naturally adjust themselves to the needs of their local communities. In rural consolidated schools agriculture is taught. In commercial centers business arithmetic and bookkeeping are taught. In manufacturing and mining centers studies appropriate to the needs and demands of the people are offered. Our high-school courses present, therefore, a liberal variety of studies and of plans.

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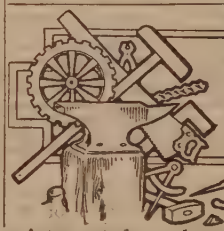


INDUSTRIAL EDUCATION

Industrial Education, as now interpreted, embraces manual training, domestic science and household art, vocational and trade training, and high-grade technical training. It is important that the several parts of this wide range be carefully distinguished.

The History of Manual Training for Boys.—While many thoughtful people had deplored in the city schools the lack of a kind of education which should train boys to be both "able and willing to work"; while Carlyle had already said, that "man is a tool-using animal," and that "without tools, he is nothing; with tools, he is all"; and while experiments of various kinds, at home and abroad, had been made in whittling schools, commercial shops, manual labor schools and in tool laboratories, as adjuncts to art schools, normal schools, and engineering schools, the first regular manual training school in which systematic tool instruction and practice was incorporated with an academic course of study of secondary grade was opened in St. Louis, Mo., in September, 1880.

The school was organized for boys of high-school age and grade as a preparatory department of the engineering school of Washington University. It was not a free school, and it has never been aided by public funds. Two or three years

later it was followed by similar schools in Chicago, Toledo, Baltimore, Philadelphia, and elsewhere in rapid succession, until manual training, closely resembling the original type, has spread over the whole world; sometimes on private foundations, but more often as an integral part of the public school system.

Putting the Whole Boy to School.—Manual training as originally conducted and expounded was essentially a culture study Of course it was and is useful objectively as well as subjectively, as all sound culture is. All true culture is serviceable, and the greater the service the finer the culture; nonserviceable culture is inhuman.

What is now known the world over as a manual training school is organized:

1 To develop the whole boy by exercising every part of his brain.

2 To enable a boy to discover his inborn capacities and aptitudes.

3 To lay a broad foundation for a higher education.

4. To furnish those who look forward to industrial life an opportunity to master a knowledge of tools, materials, drawings and methods of construction, as well as the academic subjects usually taught in a high school.

The Fruit.—Manual training is no longer an experiment. The conspicuous result of thirty years' experience is that the young men thus trained have brought to the ordinary duties and responsibilities of life an intellectual and mental grasp of actual conditions which has at once gained for them a clear advantage. They have shown that some mechanical skill and a great deal of mechanical comprehension and power of mechanical analysis have been valuable assets, and not unfit accompaniments of refined tastes and good manners. The training has opened new roads to modern scholarship, and new avenues of usefulness to many a lad, and has enabled many others to choose their occupations more wisely, either in the direction of the industrial arts or in other fields.

The Method.—The tools studied and used are those requiring delicacy and skill, embodying wealth of thought and experience. They are studied separately, and correct usage is mastered gradually.

Particular care is taken to teach correct theory and the best usage. There is a possible elegance in handling a tool, as there is in handling the painter's brush. The uninstructed "wood-butcher" is obsessed by a desire for originality, and the result is a bad form which perpetually fetters him. The teacher of tool-work must teach the best, and his work, his choice of tools, and his sequence of steps must be of the highest grade. Coarse, heavy work involving nothing but brute strength and repetition is avoided. Woods and metals are the chief materials studied and wrought. The emphasis is put upon processes, upon order, and system.

Where the Value Lies.—The aim is intelligent mastery and the power of mechanical analysis The value of the finished article or exercise lies not in its subsequent use but in its embodiment of ideas of fitness, economy, accuracy, grace and appropriate finish. Every detail of form is first written in the language of drawing, in the making and reading of which the student must be an expert. The materials wrought must be real and suitable. No make-believes, like wooden swords, paper bridges and unscientific designs, are tolerated.

There is no fear of a lack of interest or of failure to develop a love of service. The possessor of cultured mind and a skillful hand finds pleasure in service as naturally as a ripe peach carries pleasant flavor. Parents and casual visitors are apt to overrate the value and significance of show pieces, which invariably represent great misuse of time, loss of breadth and thoroughness, and, too often, borrowed workmanship. It is well to postpone practical jobs till vacation and the spare hours of holidays. Again and again critics who ask about marketable products are told that the only article put on the market is well-trained boys.

Fundamental Rules.—While the mechanic arts may be applied in a hundred different occupations, there are many typical processes which are common to all. The care and proper use of cutting edges; the analysis and command of machine tools and implements; the influence of heat upon both woods and metal; the study of form, and a recognition of the conditions of stability, strength, and stiffness, involving a cultivated sense of proportion—such things are of universal value, and the well-trained boy is quick to see their application in the various occupations of modern industries.

Not a Factory.—A manual training school does not aim to be a factory. As soon as a boy has mastered all the elements of a complex construction, he should then aim to complete it; when he has become able to produce a satisfactory article of domestic or commercial use, he should proceed to learn something else, not stop to produce it. There is no educational fruit in doing again and again what one already knows how to do well. There may, of course, be economic fruit, and therein lurks one of the perils to which manual training is exposed; *viz.*, the thirst and hunger for production, for "making something." With a very little training a boy can make a piece of furniture which is creditable for a boy; but much too often the time is not well spent. Of course occasional synthetic exercises should be introduced to show the relation of parts, the necessity for precise work, and to cultivate the taste and judgment; but uneducational repetitions and premature combinations should be avoided.

Class Instruction.—The skillful teacher teaches the proper care of a tool, its correct usage, and a typical process, to all the members of the class at once, with great fullness of both word and deed. Exact methods are clearly shown; there is no fear of checking the growth of individuality, just as there is none in teaching Latin or orthography, arithmetic or music. Synthetic exercises, or projects, are individual, selected advisedly from local suggestions.

Shop Equipments.—While only the best tools should be used, no attempt should be made to rival commercial shops. Lathes, planers and drills need not be large or very expensive; no school for boys should be able to boast of doing heavy work suited to skilled mechanics; such boasting would be a discredit. All edge-tools in frequent use should be individual, and their condition, as well as the private tool-drawers of class members, should be frequently inspected. In every large shop there should be special provision for the class lecture and demonstration.

The Materials Used.—Woods, hard and soft, fine and coarse, easy and difficult to split; of various colors and shades; green and seasoned; iron, cast and wrought; steel, hard and soft, brittle and malleable; brass and alloys—all are intelligently studied. Much economy is possible by causing the same piece of stock to illustrate a series of processes; for example, a short piece of a steel rod may successfully serve for an exercise in turning a plain smooth cylinder of given dimensions. next, for cutting a screw with a definite thread and pitch; next for turning a taper of given diameters and length; and so on. Just as a chemical reaction or a cooking process may generally be shown in a test tube, so important mechanical details may be illustrated with the use of a small amount of stock.

The Schedule of Hours.—Ten hours per week should be given to shop and drawing combined, and a single exercise should rarely exceed two school periods. When the limit of close attention and lively interest is reached, education stops. The factory boy may work all day, repeating almost automatically a few motions, but his stimulus is the money he is earning, not educational progress through mastering a new tool or process. In short, the commercial shop furnishes no guides for the manual training school. In form, in spirit, and in procedure, it is widely at variance.

Manual Training for Girls.—The immediate success of manual training in promoting mental clearness and practical efficiency in the case of boys, early led to the organization of corresponding courses in domestic science and household art for girls, and to an extension, in elementary forms, of those new features for both boys and girls, downward to more or less of the grammar grades.

In many cities, as for example in St. Louis, manual training or domestic science is required of all pupils of the seventh and eighth grades of the public schools, and both are offered free, in fully developed forms, in all the high schools.

Needlework, carpentry, is chiefly joinery. The carpenter learns how to connect properly and securely one piece of wood with another; so the seamstress learns how joints can be made and how one piece of goods may be fitted to another. The fundamental stitches should be learned, one by one, and then comes the art of cutting to fit and cover. The making of garments should not be introduced too soon but should be constantly held in view.

Instruction Before Construction is as important in needlework as in arithmetic or cabinet work. The nature and uses of different yarns and threads should be made clear, and incidentally every girl should learn how to darn and mend. Propriety and economy should be taught by precept and example. A few handmade garments, selected for the purpose of illustrating the uses of what has already been mastered, may well crown this part of the course, but excessive repetition must always be avoided.

Machine Work should supplement handwork, and pupils should be made to see the strength, beauty, and economy of machine work. The sewing machine itself is a fine object for careful study. Its proper care and various functions form an excellent series of lessons which as a rule should be, not individual, but to all members of the class at once, as detailed for boys under "Method" in the earlier part of this article.

Dressmaking and Millinery.—The elements of both these branches should be covered in a general way, but the emphasis can be put where local interests can be best served. Great importance attaches in every community to a proper knowledge of the nature and uses of woven goods for garments light and heavy, napery, hats, drapery, and carpets.

Economy and Thrift.—No teacher should fail to impress the necessity of economy and thrift in the making, purchase, and care of garments. Cleanliness is a cardinal virtue, but all unreasonable wear and tear in the laundry should be shunned. A few lessons on the nature and influence of soap, and the processes of washing, ironing, starching, etc., are valuable for every girl.

Equipment for the Sewing Room.—The sewing equipment need not be expensive. A few machines of various makes, including a "blind-stitch" of the best design, and some laundry fixtures, are all that are necessary; the main thing is a competent and well-trained teacher—but here is no exception, for such teachers are needed everywhere; all our special instruction would be wasted on ignorant and untrained teachers.

Cooking and Household Arts.—It is safe to introduce one's remarks on cooking with a "don't." *Don't begin with a cook-book*, which is only a collection of recipes, good, bad, and indifferent. Begin with fundamental principles, as is done in every other department of education.

A second *don't* may well be: "Don't take it for granted that the class must begin to cook meals at once. Teach and study processes. Take a simple article of food which requires cooking, like a potato; it may be boiled or steamed, or fried or baked; or two of these treatments may be combined to advantage. Make notes of temperature, moisture, and time. A single potato will suffice for a great deal of instruction and practice. Do not be afraid of test-tubes and Bunsen burners. When a specimen is to be tasted, pay great attention to seasoning and flavors. Good material, well cooked, is often served without seasoning or flavor, and as a consequence it is almost unpalatable. On the other hand poor material, well cooked, seasoned, and flavored, is eaten with a relish. Some chemistry will be introduced by the good teacher, but it should be carefully adapted to the age and attainments of the class. The effect of high temperatures in forming a closed covering or wrapper for meats and pastry; the release of gases whereby bread and pastry in general are rendered porous and light; the proper temperatures for cooking eggs, heating milk, baking bread, and stewing fruit—all such things should be explained, illustrated, and made reasonable. All the while teach the habit of weighing and measuring, when exact weights and measures are required. Many things must be learned by experience and observation. As the artist said that he mixed brains with his paints in order to get the right colors, so the skillful cook must put *judgment* into every dish.

How Not to Do Things.—It is often well to prove that the obvious way is the wrong way, by producing a worthless product. Bad methods of cooking are common, and hence they should be pointed out, and illustrated, so that they may be avoided. Unfortunately "Mother's way" is not always the best way, and the tactful teacher should show where it goes wrong or is lacking, and how it may be improved. It is always best to crown every point achieved by an edible dish, but do not allow unwholesome preparations to be eaten. There is no economy in eating stuff that should at once be thrown to the hogs. On the other hand there is no end of economy in keeping and skillfully serving "left-overs." Some things are better the second day, and many things can be so deftly prepared and combined that they appear to be dainty originals.

Every girl should learn how to set a table, cook and serve a meal, wash and put away the dishes, and keep a kitchen and pantry clean and in perfect order.

After plain, ordinary cooking, should come fancy preparations; food for infants and the sick, preserves, jellies, etc. In a word, the mistress of a house and home should be so trained herself as to be always able to give directions, and if need be to instruct her cook, and to take her place.

Housekeeping.—The above specific lessons to girls, should be supplemented by a few elementary lectures upon housekeeping, house-planning, and decoration, and upon the functions and responsibilities of motherhood.

Culture and Use.—Thus far the aim has been the development of the hand and head of both boys and girls, with study of appliances in processes which are essentially useful, and which may later on be put to practical use. The intelligent, alert mind is held to be first in importance, but the possible practical use of the training has not been ignored. There has been no bias toward particular vocations; all doors are left open and the ambitious youth should make the round faithfully and impartially. Culture and usefulness should characterize the training of every one whose circumstances will admit him to such advantages.

The following paragraph is quoted from one of our most thoughtful educational writers, Mr. James P. Monroe:

"The next genuinely educational business before a community is to prepare the child for that industrial usefulness, to himself and to the community, which is fundamental to good citizenship. He is virtually but half educated so long as he has not acquired such necessary industrial qualifications as manual control and dexterity, coöperation of brain and hand, quickness of adaptation, fertility of resource, concentration, 'gumption,' and has not been given, on top of these, ample opportunity to secure the groundwork of some special trade or industry. Without such essentials he is likely to join that appalling army of 'floaters' who, without a trade or any chance of learning one, wander from one casual occupation to another, depressing wages, inducing enormous industrial waste, and swelling at last the costly ranks of vagrancy."

It is the height of folly to train either a boy or girl without some reference to future needs and responsibilities. As well teach a Choctaw the use of an Australian boomerang, or how to play on a Siamese tom-tom, as to spend his precious youth in learning the rudiments of subjects utterly remote from his life and probable duties. In America, occupations are as a rule not inherited; but circumstances in a great majority of cases plainly indicate not only what is possible but what is probable, and they suggest a wise preparation for future success.

Vocational Training.—The vast majority of boys must start as manual workers, and public education should ever be shaped to meet the needs of the majority. Hence vocations should be kept in view. The resources of soil and mine; the energies of wind and stream; the wealth of inherited skill and cunning inventions; the hundreds of industrial processes in shop and field—all should be conserved and utilized. The judgment of educational leaders to-day is that we should make the courses of study offered in our schools more democratic, that they may meet the conditions of our modern commercial and industrial life.

Undoubtedly the most vital educational and social question of our time is what to do for the multitude of boys who now leave school too early. For every thousand young men who pass through certificated schools and enter colleges of letters and schools of engineering there are four or five thousand others, capable and worthy, who never stand on the threshold of a secondary school, much less knock at the door of a college.

It is an exceedingly important fact that each one of these thousands of boys who do not enter the high school and who, as a rule, go no more to any school, is entitled under the law to an education as well suited to his needs in a career as an industrial worker as is the boy who wins a certificate and who expects to go to college or a school of engineering. Beyond question the welfare of this nation is as much dependent upon the proper training of the former as upon the proper education of the latter. The greatest burden our country is carrying to-day is the tremendous army of untrained, uneducated laborers.

To lighten this burden, and to thereby promote the public welfare, both grammar and high schools should embody industrial features in their curriculums.

In Rural Schools.—Where boys of from 12 to 18 years are in attendance, not only the use of hand-tools for working wood in the construction of joints, frames, and shelters, but the fundamental principles of agriculture, horticulture, the raising of stock and poultry, dairying and the culture of flowers and vegetables, should be taught. Boys from the farm should be taught the uses of farming machinery, and how to properly care for it when not in use. Tools are ruined by rust and exposure more than by proper service. It is no mean art to properly sharpen and preserve edge-tools.

All Wood and Metal Occupations should begin with a careful study of the theory and functions of hand and machine tools, and with systematic instruction regarding processes as outlined above. Thus the doors are opened wide to scores of useful trades where tools and processes are specialized and applied.

With all such work mechanical and free-hand drawing should be learned, so that a boy can readily read and make drawings for shop or home use. Skill in free-hand drawing based on mechanical lines is easily acquired and very useful. Isometric drawing is extremely simple, as is cabinet perspective.

Vocational training has for its chief aim a mastery of the tools, materials and processes of a particular trade or occupation, accompanied by mechanical drawing suited to the occupation; hence vocational training is much less broad, though in some directions much more intense, than

manual training. For advanced pupils it becomes trade training; for boys of from 12 to 16 years it offers a field for developing the strong points of those who are slow and inapt at the ordinary book-work of the grammar schools, and who under present conditions drop behind and so drop out of the schools wholly. The aim of vocational training may be said to be to discover a boy's bent or bias, and then to develop him along that line.

Trade Schools and Trade Training.—This problem has been attacked in various ways and from different sides.

The employers of skilled labor all across the land have learned that the best workmen must be taught both the theory and art of their trades. Railway companies, electric companies, metal-working establishments, and makers of goods of all kinds, train their own foremen and skilled workers in what is, in every case, a trade-school annex for a particular trade. There are hundreds of these annexes, organized in a variety of ways, more or less original, with some ideas borrowed from Europe and many from each other. A characteristic of them all is the employment of teachers who are skilled workmen, and who have had sufficient experience to know what the theory of the work involves, and who are competent to teach the underlying principles fairly well. Another characteristic is that the young apprentices are paid by the hour whether they are in the school annex or in the shop.

The conditions of admission to these apprentice classes vary with the mental and physical demands of the trade or occupation. The minimum age varies from 13 to 17 or 18, and the academic standard varies from the sixth grade to a high-school diploma.

There is very much to be said in favor of this solution of our problem. Many of these schemes reach down low enough to get hold of members of the "neglected half," and to the extent of such employment they are doing great good. Moreover, the benefit to the companies and the community is great, for the result is better workmen, better work, and an undoubtedly greater interest in and loyalty to the company. The only criticism is that the training is narrow and there is in consequence a lack of versatility.

Private Trade Schools.—The second partial solution is that of trade schools on private foundations. Here the great difficulty has been the cost. The expense for buildings, equipment, teachers, etc., is prohibitive except in the case of a rich benefactor like Auchmuty in New York, Williamson in Philadelphia, Carnegie in Pittsburg, Wilmerding in San Francisco, and Rankin in St. Louis. In some such schools tuition is free—in others small fees are required. In some the course of study is very short, say four months, and of course very narrow. In others it is three or four years long, combined with a full academic course, but in every one the technical range is narrow.

But all such schools, excellent as they may be, are but a drop in the bucket. It is reported that the Williamson school of trades in Philadelphia, which reaches down to the level of the class we are now interested in, cannot take in one-fifth of those who apply; and the private trade schools and the corporation-annex schools combined do not cover one-tenth of the ground. There is much left for the public schools to do.

Public Trade Schools.—Public trade schools supported by taxation are rare. The most conspicuous is the Technical high school of Cleveland, Ohio. This would be a regular manual-training high school were it not for the fact that, during the third and fourth years, the work in shop and class is directly aimed at four or five distinct trades, thus making it a public trade school. Incidentally, the school program embodies an innovation which is full of suggestion, *viz.*, the school year consists of four equal terms of twelve weeks each—there being a week's vacation at the end of each term. The immediate popularity of this school should teach boards of education a useful lesson. Though built and equipped for over a thousand pupils two years ago, it is crowded and a second school of the same character is in great demand.

[It is interesting to note the effect of this extraordinary demand for industrial high schools, upon the devotees of the traditional classics. The Cleveland board of education was recently petitioned to authorize the building and organization of a new high school which should be exclusively cultural, *i. e.*, a school "in which nothing useful should be taught."]

The Portland (Ore.) school of trades, with day and evening classes, is a part of the public schools; and the evening trade-training department in the Technical high school of Springfield, Mass., is a part of the public school system. It gives promise of much more along similar lines all over the land. It should be borne in mind, however, that all evening-school training work is given to those who, for better or for worse, have already found employment.

If one were to compare the best trade schools with corporation schools he would say that the former give a broader outlook, owing to their generous academic program, and a greater range of shop processes; but the graduates of the latter excel in skill and finish of their work, and a knowledge of a particular business. This last is a matter which cannot be gained in a schoolroom; business and shop management must be learned outside of school. A few general principles may be taught and illustrated, as may banking and railroad accounting, but the organization and management of a business is largely a personal matter, and the chief clerk and the general manager have generally been trained for their work in the business itself.

Coöperative Schools.—A fourth partial solution of our problems is that in which manufacturing concerns join forces with boards of education for the purpose of training educated workmen who later on may become foremen, superintendents, and general managers. The manufacturers furnish shops and shop instruction; the high school furnishes teachers of drawing and academic studies.

The plan may be best illustrated by an account of what has been done and is now doing in Fitchburg, Mass.

The Fitchburg Scheme.—Fitchburg is an active industrial city of about 30,000 people, with numerous large manufacturing establishments, so that the situation is particularly favorable for an experiment in industrial education. For some years this subject has been under discussion in social and business clubs, and a state commission appointed by the governor visited the city, and plans of an industrial school were proposed, and discussed for some time. Finally the coöperative plan was adopted and put into operation during the summer of 1908.

The plan of organization recites that an employer is bound to furnish systematic instruction in the use of specified tools and processes, such as may be agreed upon when the contract is signed. The tripartite contract, signed by pupil, parent, and manufacturer, lays down the rules and regulations governing the attendance and work of the apprentice pupil. It specifies that the school course shall cover four years, the first year being wholly in the high school; the other three years the student is in school alternate weeks, twenty each year. It specifies further that the other twenty weeks of the school year and ten of the vacation weeks are to be spent by the boy in the shop—thirty weeks of fifty-five hours each, Saturday being a half-holiday. It further specifies that during the first of the shop years the boy shall receive 10 cents per shop hour; during the second year, 11 cents per hour; and during the third year, 12½ cents. The average amount is a little over $180 for each of the three years. It further provides that any time lost during any year is to be made up before the next year can begin, and that no diploma or certificate can be given until all lost time is made up. Finally it specifies that the apprentice boy shall carry on successfully the course of study laid down for school work, and that if any failure exists either in the boy's performances of work in school or in the shop, it will result in his being dropped out of the class; and the vacancy shall be filled, as soon as possible, by another boy.

The scheme has just recently closed its second year of shop work, there being at the present time a first-year class of uncertain membership in the high school itself; a class of twenty spending their second year in the high school and their first year in the shops; and a class of twenty-one spending their third year in the high school and their second year in the shops. Teachers, pupils, and manufacturers agree that the plan works well, and that a lively interest is sustained. There may be similar experiments elsewhere, but there is limited data concerning them.

Advantages and Dangers.—If this scheme stands the test of five years' trial there will be much to commend it.

In the first place, it appeals or may appeal to the neglected or dissatisfied boys who cannot or will not march to the tune of the common curriculum.

In the second place, if the coöperating employers live up to their contract, the shop work is certain to be attractive, the progress made will arouse ambition, and the correlation of mathematics, sciences, and drawing with shop work will prove to be a great stimulus to brain activity.

In the third place, this scheme of coöperation enables the public schools to help do what the schools could not possibly do alone. The cost of shops and shop appliances thus made educative, quickly runs into an impossible figure for a school board in a small manufacturing center.

An acute observer visited the boys at work in the shops in Fitchburg last summer. He saw what they were doing and how they were treated by superintendent and foreman. He sharply questioned the boys as to their school work, and got their grades from the supervising principals. One-half of them had already dropped out of school or would have dropped out had the plan of coöperation not been offered. The boys were assigned

in pairs, and the members of each pair alternated, a week in and a week out, and it was found that partners kept closely in touch as to both shop work and school work. The resulting fellowship of interest seemed to be an admirable feature.

The attitude of the bondsmen and the parent or guardian was favorable—enthusiastically so. The shops paid the boys almost $200 a year, which was nearly enough for food, clothing, and shelter, with a good trade in prospect and a knowledge of a good business besides.

The Fitchburg scheme reminds one of a fine definition of a good bargain—it is one in which all parties gain. The employers get what they want, a better grade of workmen, broad-minded and skillful; and the school authorities get good citizens—thrifty, intelligent men; the boys get what they want, technical skill and a chance for promotion. In short, the scheme promotes industry and the common weal.

A Warning.—There are, however, positive dangers to be guarded against which teachers and parents should keep well in mind. The money earned may have a corrupting influence. If it is foolishly spent, the effect is certainly bad; if it is turned in to help father or mother, and to pay for one's keep, it is fine; if it is saved for future use in college or a professional school, it is well. But in no case should the boy be induced to undervalue studies which fail to yield immediate financial returns. The price of wisdom is above rubies.

The Most Essential Thing. — Industrial work of all grades is too often regarded as handwork and nothing else. But handwork and nothing else has been the fate of four-fifths of the boys and girls in the past. Beyond the "three R's," the boy who felt that he must "work for a living" found little in school books and school teaching calculated to help him on the farm or in the shop. Accordingly both the boy and his parents believed that it was time for him to go to work early in life.

Hence the working man, young and old, was ignorant of the rudiments of science and polite learning, and was utterly lacking in ordinary culture. The academies and high schools were organized and maintained for college boys. They taught Latin and Greek instead of physics, chemistry, mechanic arts, and mechanical drawing.

To-day, things are changed, and the secondary schools are conducted for both the college boy and for the industrial boy—or rather every boy is given a chance to combine the culture of the shop and drawing room with that of the recitation room and of the laboratory, and the stigma of ignorance on the one hand and the charge of practical unhandiness on the other is no longer just.

> Hail to the skillful, cunning hand!
> Hail to the cultured mind!
> Contending for the world's command,
> Here let them be combined.

Such is the doctrine at the present time. The industrial student should see to it that the two are "combined."

All knowledge, science, and art are not written in books, but much of them is. Good books are a mine of wealth, and every aspiring lad should learn to read and study them. Not shallow, silly stories of flashy, sportive boys, and hoydenish, unwomanly girls; but true histories and true biographies of great men and women—inventors, engineers, artists, reformers, statesmen, and authors. Nothing more adorns a good workman than correct speech and graceful composition, just as nothing more quickly condemns a young man as untaught and unworthy than bad English speech and wretched composition. Let pupils and teachers keep these words in mind.

Whims and Fancies Are Dangerous.—Finally it is a sad mistake to take seriously a boy's early whim as to what he shall study and what he may neglect; just as it is wrong for a parent to persist in training his son to a predestined career—without an adequate knowledge of the lad's mind and natural bent. Great engineers, inventors, general managers and teachers, are as truly "born, and not made" as are poets, artists, and orators. It is the function of the school not only to develop the whole boy, but to discover in which direction that development may be most fruitful in character and usefulness.

Technological Training is for young men of strong, clear minds, who have a desire to master and apply mathematics and the principles of science to the practical affairs of modern life. Such men are ambitious to become engineers or architects, to build bridges, to plan and construct public works, and to organize and administer manufacturing plants, which shall embody the latest discoveries of science, the best styles of construction, and the best methods of securing economy and efficiency of operation. The accomplished engineer is well educated; he is no mere engine driver, or ordinary mechanic. He can of course, if there be need, manage an engine, and he can use fairly well every tool in the shop; yet his chief function is to do the head-work involved in preparing plans and specifications, and in directing, supervising, and inspecting the work of construction. Technological training is the logical outcome of manual training, though by no means the only outcome, since all doors are open to the boy who has completed the full manual training course of correlated studies.

To Be an Engineer, a boy should absorb all that the secondary school can give in the way of mathematics, physics, chemistry, English, manual training, and drawing. If history and French can be added, so much the better.

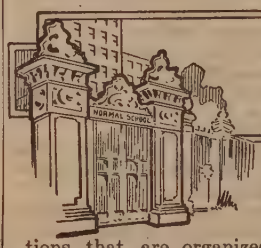
Then he should enter a high-grade technical school with excellent engineering laboratories, in which the constructive properties of engineering materials may be learned from actual tests, and in which typical engineering appliances and operations may be studied and made familiar.

All advanced work begins with a design, and that design is based upon the properties of the materials used, as well as upon the end to be attained. The physical properties must include strength and elasticity as well as beauty and durability; and a scientific designer must be able to calculate the stress in every individual member of a construction, and just the forms needed to have the necessary strength and stability. All these calculations involve the principles of mechanics which are expressed in the language of mathematics far beyond the range of grammar and high schools.

To be a technical man worthy of the name one must master first the so-called higher mathematics, and then he must master applied mechanics, which deal with force; the stability of structures and frames; the motion of heavy bodies; the development, transmission, and utilization of energy—all of which are expressed in mathematical terms.

Technical Terms Must Be Understood.—Nothing is more important than the exact meaning of technical words and the precise meaning of mechanical and engineering units. We are all pretty familiar with such units as a *pound*, *a foot*, a *horsepower*, and a *second*; the engineer must be equally familiar with a *moment*, a *radius of gyration*, a *kilogram*, a *meter*, a *volt*, an *ampere*, a *watt*, etc; and this familiarity can be gained only by study and practical use.

All this cannot be learned and comprehended by merely reading formulas and definitions in books. Moreover these things take time. One is not an accomplished engineer by birth, nor in a single session of a winter school, nor by working in a shop. Such matters help, but they do not suffice. Innate capacity is an essential; a single term under good guidance may open the door and give one a good start; a shop and a field party may be very useful in getting at the full meaning of terms and in learning how things are done. But the language of mathematics and applied science requires time, steady work, and mental growth. Every boy should get seven or eight years of such growth in high school and engineering college, if he aims at superiority.



NORMAL SCHOOLS

In the United States, educational institutions that are organized and conducted for the special purpose of training teachers are called normal schools. Their entire work consists of educating and training men and women for professional careers as teachers in public, parochial and private schools of kindergarten, primary, elementary and secondary grades. The majority of such schools are founded and maintained by the states, and since these are so well supported and so efficiently managed, they determine the standards and the character of work required of all institutions that adopt this name. These schools require of students the study of scholastic and professional branches of knowledge that are essential to the vocation of teaching, and in addition exact specific training of the capability to teach by giving opportunity to put into practice the knowledge and the theories they are taught.

Other Names.—The name "state normal school," is uniformly given this class of educational institution, but in some states other titles are used to designate that they are teachers' training schools, such as "state

normal college," "state teachers' college" and "state normal university." When these latter names are used it is intended to imply that such institutions are of somewhat higher grade or are organized on a more elaborate plan or are assigned a larger province than those designated as state normal schools. While this is the inference, the fact still remains that the extent of the province and the size of the opportunity to be finally assigned these educational institutions have not been absolutely determined, as the years of the movement have not yet been many enough, and public experience has not yet been extended enough, to determine the scope and the province that the governmental need demands.

Organization.—The function of the normal schools has been more largely determined by statute than by custom. Their province has been created to meet a definite, emergent condition found in the development of universal education, and their development has been of a character and of a kind that are much different from those of the college and of the university. They came into existence by the order of legislative assemblies in response to public demand for amelioration of prominent difficulties in the teacher-supply problem, and they were given immediately a support, an authority and an opportunity that no other kind of public educational institution had ever had. They were at once recognized as necessities rather than possibilities, and they opened up a special opportunity to prepare for a vocation that gave promise of permanent occupation and reasonable self-support. These conditions insured an immediate patronage, an unusual popularity and an unprecedented success, since everything contributed to make their work vocational, practical and acceptable.

Board of Management.—They were organized in conformity to custom, the legislatures providing boards of management that were authorized to expend the appropriations for financial support that were granted, and to provide ways and means for the proper conduct of the work desired. These boards had supervisory rather than executive control, and hence provided a faculty of scholarly, skilled teachers to have direct control and management of these institutions.

Faculty. — They appointed a president, determined the departments, employed professors, assistant professors, instructors and assistants, adopted general regulations governing faculties and students, authorized courses of study that gave promise of meeting the requirements of public demand for well-educated and well-trained teachers and provided the conditions that should be enforced in admitting, instructing, training and graduating students. The system of management has been very similar to that instituted in colleges and universities, but yet decidedly different, in that it depended upon a more limited program of studies, avoided the tendency to extreme election of lines of work by the students and emphasized the instruction as being specially given to prepare students for a single vocation.

Function.—These schools have varied much as regards their interpretation of the function assigned, but they have never been permitted to depart from the true purpose that was assigned by legislative act. Their immediate popularity and prominent success were so notable that other institutions that were organized for cultural and disciplinary education, and whose aim was training for life rather than for special vocation, decided to take advantage of the wave of popular favor and secure for themselves a part of the young men and women that were desiring to enter the business of public school teaching.

College Ideals.—To accomplish this, courses of study were planned that were in imitation of those offered by normal schools, but that were less practical and less vocational, in fact, because they depended entirely upon lectures and class instruction and ignored the notion of actual training in teaching through a specially organized training school.

Duplication of Effort.—This duplication of endeavor has founded schools of education, departments of pedagogy, chairs of didactics, and teachers' colleges as parts of courses offered for bachelors' degrees in colleges and universities, and has also led to organizing schools for teacher-training of secondary educational rank that are more local than regular state schools and that are named junior normal schools, county normal schools, city normal schools, city training classes or similar designations that undertake to show that they limit their education and training to elementary teacher preparation of a very moderate quality or grade.

Variations.—Since this class of institutions came into existence by legislation in the several states, since they are all products of an endeavor since 1839, since the different states were themselves in a much different condition of organization, settlement and development at the time of founding such institutions, there would be much need of variation in their plans, their intended scope of endeavor and their claims for recognition.

First Type.—In the older states endowed colleges and universities, independent of state control, were organized and maintained on excellent standards before the normal scho. conception of teacher-training was developed. In such states the normal school became a supplementary institution to do an educational work that was omitted and overlooked by the system in existence.

Second Type.—In the newer states higher education was unsettled and undeveloped because of the rapid settlement and expansion of territory at this time and, hence, such states not only founded normal schools but also state universities and state colleges of agriculture and mechanic arts. Here the normal schools have become institutions in every sense of the word and have gained a rank and a success that is not inferior to that held by the other institutions of higher learning.

The Typical Normal School.—Although the state systems have developed a normal school particularly adapted to the actual need of the individual state, yet there is much in common that differentiates them as a class from all other kinds of higher and secondary education. The typical normal school is both a higher institution and a secondary institution, if by these terms are meant the standard of scholarship possessed by their students on being admitted to begin work, and if certain branches of study commonly taught in high schools are classified as secondary studies. All normal schools have in their courses of instruction branches of study that are commonly found only in colleges and also branches of study that are commonly found only in high schools.

Reason Given.—This is due to the fact that their function is that of preparing teachers for public schools. Hence these normal schools must admit to their courses persons who are now licensed teachers in the states where they are located and that have maturity, experience in teaching and development of personality, and who by such instruction are enabled to be better prepared for the business they are following.

Teachers in Service.—This class of workers is very large in numbers in the majority of the states. Not having had opportunity or financial means to go to either high school or college they have begun teaching as soon as they reached the age limit set by law and were able to pass the scholastic examination that is legally required for a teacher's certificate. This actual state of affairs has made the normal schools conduct their work to comply with a condition rather than to seek to respond to some fine theories regarding what persons ought to be authorized to be teachers. They found the teachers in service needing to be improved, and they have met this demand as fully as time and means and attendance could make it possible.

City Demand.—In addition, there has been a growing sentiment in cities and towns that teachers should be educated and trained before being admitted to the public service. These cities and towns, being independent of state or county control, more or less set their own standards of teacher-education and demanded certain qualifications beyond high-school education of all candidates who sought employment. Many of them said it was necessary for all these teachers to be either normal-school or college graduates.

Expansion of Field.—This standard requirement enabled the normal schools to offer courses of instruction and varieties of work that belong to college student ages and preparation, and in this way young ladies and gentlemen who were inexperienced in teaching and who desired to be specially prepared for such work found a place in this class of institutions. They are taught in separate classes from the practical teachers, they are given scholastic subjects of college-grade rank, they are given different instruction in the science of teaching, and they are given laboratory work in the actual teaching of children that is specially adapted to the specific kind of educational work they have decided to undertake.

The Two Phases of Work.—As a consequence of these conditions normal schools are practically conducted as schools with two distinct divisions of work, from either of which students of right age and development may graduate, each kind being equivalently prepared for the career they desire to follow. The fully mature, experienced, practical men and women can be given an education that fits them at their time of life for the most effective and specific service, without taking the number of years in preparation that a child would necessarily be obliged to take who entered the kindergarten and followed the standard curriculum of the primary, elementary and secondary school to the end, graduating at about seventeen years of age.

The Mature Student.—The individual who desires education after childhood and youth have passed is not adapted mentally to either the methods of instruction, the progress of the work or the details of information that are deemed suitable to those of younger years. For that reason the

normal school provides for such the instruction and the training that are demanded by their age and development. To such students the taking of such branches as algebra, geometry, rhetoric and botany is quite a different task from what it is to the pupils of the secondary school age. To meet this situation the normal school adapts these studies to the educating of the mature mind and the college age development that such students possess, and it has found such instruction to possess the highest value and to be of the largest importance in securing the results sought—a well balanced and a thoroughly trained mind.

The Scholastically Trained.—In like manner with students who have had standard high school preparation and training. They are different in their knowledge, they are keener in their scholarship, they are more accurate in their language, they are more ready in their studentship, and these things require that they be treated as students of full college grade. They are more easily trained for high-school department work, for the kindergarten and for primary grades, they have more breadth of possibility in foreign languages because they began them in youth; they have more versatility of possibility of after occupation, but they are no more likely to become prominent in executive work as educators nor in distinction in success in many fields of teacher business than the first class of students, known as practical teachers. Under the conditions that exist in the teacher-supply situation the normal schools have no choice as public institutions but to do all they can to produce a supply of trained persons to meet the demand that the public service constantly makes.

Conditions of Admission.—The standards of admission that are enforced as specially belonging to a teacher's training school are such characteristics as (1) age, (2) experience in teaching, and (3) scholarship possessed. Of these age is particularly of great importance, since the preparation for such a vocation demands full maturity of mind, a thorough conception of what is being undertaken in getting ready for a career and a serious attitude toward the work that is essential to be done. Experience in giving instruction has large value in increasing the importance of obtaining a full mastery of the subjects of study assigned and of keeping in possession for service the knowledge that is gained. A teacher-student is learning things that he is to use and that he should in no case forget, and hence he realizes the practical nature of the instruction he receives and he gives devoted attention to both the apprehension and the comprehension of the work pursued.

Intention to Teach.—Other conditions of admission are particularly important and are equally essential to the best system of training for the business of teaching. These are such as (1) intention to teach in the schools of the state, (2) intention to complete a course of study in the school, and (3) intention to keep the requirements of the school faithfully and fully. There is a spirit of determination to accomplish something notably good by being somebody exceptionally worthy and capable that has much to do in making the training for the profession all it should be. Many students attend the normal schools for so short a time, they acquire so little of the spirit there infused, they receive such a small amount of education, that such schools are not responsible for their qualifications or for their suitability. It is such persons as these that depreciate the importance and the reality of normal-school training, because they frequently pose to represent what they are not and could not be.

Personal Qualities.—In addition to these enforceable conditions, there are some things that are equally important but not so easily ascertained, yet on them depends after all much that determines the actual quality of a teacher and that makes the training effective. These things are (1) freedom from disease or infirmity that would unfit a person for the office of teacher, (2) a good moral character that establishes the fact that the person will exert a wholesome spiritual influence upon the lives of children, and (3) personal adaptability that must be possessed by nature. The investigation that will determine these things is always uncertain and unreliable, as it depends upon symptoms and sources of information that are often temporary, indeterminate and unreliable.

Form of Admission.—There are three forms of admission that are commonly accepted as sufficient, and all of them are in force. They are (1) holding a teacher's certificate or license to teach or experience in teaching of three years' standing, (2) credentials granted by college-entrance examining boards, by state boards of education or by accredited high-school faculties, (3) proofs of scholarship established by an examination equivalent to the requirements adopted by the literary and scientific bodies empowered to grant credentials of admission. Such formal examinations are given by the normal-school faculties.

Value of Systems.—Of all these methods the first and second are so nearly universal that the third is growing to be less and less a method that is essential to the system. In the certificate and credentials system the student is received on trial and given an opportunity to establish the strength of his preparation before being permanently accepted as a student of the normal school. In case students do not show that their training and scholarship are equivalent to the credentials filed, the secondary school and governing board are notified of the failure to meet the standard expected in order to inform them of the results of such student entrance.

Success of Students.—In like manner success is always reported and complete information is thus given regarding all beginning students to those responsible for recommending them. Since the formation of the college and secondary school associations of the United States, each state has some system of secondary school inspection in which account is taken of equipment, instruction, management and effectiveness, and thus a standard of uniformity of education and equality of instruction has been secured.

Requisites Secured.—There are certain requisites that are fundamental to thorough, efficient, capable teacher training. Among these the more vital to success are the following:

Spirit.—The student must be inspired with the spirit of the true teacher, being endowed with an evangelism which enables him to realize that the work assigned him is of permanent and definite importance. It is absolutely necessary to awaken in him full appreciation of the actual value of the calling to the world. He must feel the claims of service, ardently love his pupils, recognize the mission of uplift and improvement that he undertakes, and labor to secure an inward condition of attitude in his pupils toward the best things in civilization so "that they may have life more abundantly."

Scope of Work.—The student must be carefully and sympathetically led through the educational study of the public school in all its phases, in order that he may acquire the teaching process for these ages and thereby become habituated to a condition of mind in reference to all knowledge such that the teaching process becomes to him a natural outcome producing a personal attitude that is harmonious and helpful. It is thus that the normal school becomes professional in its influence and training, conducting the educational study of subjects from the standpoint of the teaching process, so that there is produced a broader view of the scope and meaning of training a human soul.

Study of Man.—The student must be directed in making a broad, intensive study of what constitutes man, the body, the mind and the soul. This is undertaken to establish clearly the principles of education which underlie all capable and practical instruction. The learning to be a teacher is to acquire a professional attitude and condition, and this training must never degenerate into the qualities of a trade where devices, methods and other mechanical means are considered as training in teaching. The true teacher is a person, not a mechanic; he is an artist, not an artisan; he needs these qualities to work upon the individualities he is aiming to educate, for without them he is incapable for the task imposed.

Child Nature.—The student must be given abundant opportunity to develop his understanding of child activities, child development and child life by a practical study of children. He must master the art of interesting them, of managing them and of inspiring them to noble and grand efforts. He must acquire an intelligent conception of the differences that continually exist in pupils that are taught, while through sympathy, suggestion and benevolent supervision he must develop latent power, unknown capabilities and unappreciated values of personality.

The Relation to the People.—The normal schools are notable for their being in such close sympathy with the masses. This is due to their province, their patronage, their immediate response to public demand and their recognition of the realities and possibilities of public service from an institutional standpoint. They were founded in direct opposition to the commonly accepted theory of higher education and for that reason they did not receive recognition from other higher institutions of learning without long consideration and discussion. They were accused of not valuing collegiate standards and scholastic ideals, and hence a half century had to pass before their graduates were received at colleges and universities as being possessed of knowledge that was equivalent to that offered by the old standard courses. The progress of elective studies in these colleges, as well as the prominence in public appreciation received by the normal-school graduates for capa-

bility of service and independence of thought and action, finally brought about a great change in the sentiment of college faculties, until to-day these graduates are received with notable favor and consideration by the greater universities.

Schools of the Masses.—There is no aristocracy except of character and capability among the student bodies of these normal schools. This is due to the fact that they are largely patronized by the children of the common people. They are obliged to depend upon their own personal endeavors for self-support and they possess a self-reliance and a-self confidence that are of the greatest value. These normal schools are, then, the schools for the masses in general, as they are so organized that any one can enter somewhere in the courses offered for the public service and are diligently trained and thoroughly prepared to do their duty in an admirable and acceptable manner.

Self-Reliance Obtained.—The extreme practical nature of these training schools has developed in them an independent, reliant class of workers that has secured for them a popularity and an acceptance by the public that is very exceptional. The rapid development of this kind of education and training in the different states of the Union has been caused by the people as a whole, in order that they may be able to secure more efficiency in their teachers, since experience has shown that these normal schools were definite, positive and immediate in their actual excellence as fitting schools for a notable occupation.

Popularity of the Work.—As a consequence, the popular will is continually in favor of the expansion of the system of teacher training under public control, and every meeting of every general assembly of every state takes time and opportunity in endeavoring to ascertain in what way the progress of such work can be improved. It is thus that more new institutions are established, that other classes and grades of teacher training are authorized, more variety of work in the older schools is permitted, and the budgets of support are greatly increased, seeking the day when an intelligent, trained, skilled teacher shall be in charge of even the humblest and most remote schools that are found in the rural communities.

The Expanding of Province.—The province of the normal schools has expanded in harmony with the expansion of the course of study offered by the public schools. It has also been compelled to differentiate its courses to suit the differentiation that has occurred in public school teaching. As teachers became in demand for specialization in definite lines of study and training so the normal school offered special teacher training to suit these particular demands. As teachers' certificates were raised in standard in the several states so the normal school branches of study were modified to suit the new conditions.

Special Training.—It is thus that the normal school graduate of to-day is specially prepared to do some specific line of teaching and the general teacher of half a century ago is now not found anywhere except in the ungraded district school, and even there the higher grades of work are rarely found any more, since these schools are now limited to the primary and elementary grades. The consolidation of schools, the introduction of the interurban electric railway, the improvement of transportation and many other causes have contributed to expand the normal school into an institution where teachers are trained for many special fields of professional work. It is for this reason that the preparation and training of general teachers are not now desirable, since progress has compelled the normal school to reorganize its courses of study and adapt them to modern conditions where the special teacher and the expert are required.

Modern Notions.—The normal school of to-day that does not prepare special teachers for the kindergarten, the primary grade, the upper grade work, high school department work, public school music work, manual training, domestic science, physical training, agriculture, domestic art and other particular phases of public education is not a modern school at all and fails to fill the province in teacher training that present-day civilization exacts. Such institutions attempt to follow the law of public demand and do not undertake to decide what should be refused to popular demand and what education is the kind of education that the present civilization needs. They accept the policy that the people of a democracy are capable to decide what they want done and what they are willing to support financially and that it is the chief business of the teacher schools to subordinate themselves to the popular will.

The Larger Service.—The normal school of collegiate grade alone can well afford to limit its field of endeavor to the preparation of the kind of teachers needed in village and city school systems and in addition prepare high-school teachers, critic teachers, supervisors of special work, principals and superintendents, as such classes are in great constant demand, but the normal school of secondary grade just as well serves its day and generation when it meets the demand of the district schools and trains teachers who are able to prepare the industrial classes for earning better incomes and for the ability to more decidedly enjoy simpler life and purer happiness than would otherwise be possible.

Modifications in Type.—The United States covers much latitude and longitude. It possesses great varieties of conditions in public-school requirements and standards. This accounts for the several types of normal schools that have appeared and that are now in existence in the Union. These types may be reduced to five general classes, giving a situation that enables them to be easily understood and comprehended for their individuality. These are the Southern states normal school, the Middle states normal school, the North Central states normal school, the Pacific states normal school, and the New England normal school. Each class of these is unique in certain particulars, as it fits its own environment and fills completely the task assigned.

Vitality.—These all have shown unusual vitality as educational institutions and have had a marked effect in convincing the colleges and universities that the preparation of public school teachers was a large enough educational business for them to accept a part of the task imposed. As a consequence there has been a notable change in the last twenty-five years as to policies and plans in the colleges and universities, so that no notable or prominent institution of such class is now conducted without its department or school of education.

The Courses of Study.—The preparation of a teacher that is thoroughly adapted to his work requires that he have a working knowledge of the several branches of study that civilization has adopted as constants in public school education. The normal school recognizes that this selection is very definitely decided, and hence it sets itself to the task of efficiently meeting this requirement. This knowledge of the school courses is assumed to be fundamental and essential to the common life of the people and from that principle the work of teacher education is carefully planned.

The Way to Teach.—The normal school undertakes the task of determining the right and best way of teaching these subjects with the use of the least time and effort. It accomplishes the instruction of would-be teachers so as to give them a thorough mastery of the content of the adopted branches of study, while the practical use of this knowledge in the conduct of the school work is also fully realized. It is here that model work as an instructor is attempted to be shown, that definite ideals of educational effort are attempted to be established, that the philosophy of success in instruction is developed and that the spirit of interest is aroused, enlarged, individualized and exemplified. With this interpretation of the object to be attained by normal-school instruction and training the following typical courses are given:

MINIMUM COURSE.—Entrance Conditions.—Knowledge of the fundamental branches required by teachers' certificates; arithmetic, English grammar, geography, history of the United States, reading, penmanship, physiology and hygiene, vocal music, orthography, civil government, economics, elementary algebra and elementary physics. These subjects may be certified to by the state examining board or be proven by taking an examination given by the normal school. For students of sufficient age to be teachers these studies are taught as preparatory subjects for the state examination for elementary teachers' certificates but are not a part of the course required for graduation except as they are required for entrance.

Branches Included in the Minimum Course.—Three years of work of nine months each, leading to a diploma and a state teacher's certificate.

MATHEMATICS.—(1) Algebra. (2) Geometry.

LANGUAGE.—(1) Latin or German three years. (2) Rhetoric.

SOCIAL SCIENCE.—(1) American History. (2) General History. (3) Economics. (4) American Government.

LITERATURE.—(1) Folklore and Myth. (2) American Literature. (3) English Literature.

SCIENCE.—(1) Physics. (2) Botany. (3) Sanitation. (4) Zoölogy or Geology.

PHYSICAL EDUCATION.—(1) Physical Training two years. (2) Lectures on Personal Hygiene. (3) Games and Playground Work.

ART.—(1) Elocution. (2) Drawing. (3) Form, Color Work, etc. (4) Vocal Music.

ENGLISH LANGUAGE PRACTICE.—(1) Literary Society Work—two years under supervision and criticism. (2) Oratory and Debating. (3) Dramatic Work.

PROFESSIONAL WORK.—(1) Psychology. (2) School Management. (3) History of Education. (4) Observation of Training-School Work. (5) Teaching in Training School.

MAXIMUM COURSE.—Entrance Conditions.—Graduation from a four year accredited high school, inspected and approved by the state as a suitable preparatory school. Credentials received from these accredited high schools on certificate signed by the principal of the high school.

Branches Included in the Maximum Course.—Four years of work of nine months each, leading to a degree equivalent to the college degree bachelor of arts, and an honorary first-grade state certificate.

Required Work for Completing Course.—1. It is necessary for a student to take as a major study two years of professional instruction in education, which includes psychology, school management, history of education, philosophy of education and American education. This work covers

a complete presentation of the principles, the fundamentals, the history and the philosophy of the American public school system and the necessities to be met in the practice.

2. It is necessary for a student to elect as a second-major, two years of work from one of the following lines of study and investigation: (1) English and Public Speaking. (2) English or Public Speaking. (3) Mathematics. (4) Mathematics and Physics. (5) History and Political Science. (6) History or Political Science. (7) Latin. (8) German. (9) Greek. (10) Physical Science. (11) Natural Science. (12) General Science. (13) Any other arrangement of major studies approved by the faculty.

3. A year's work in English constitutes the third constant.

4. After the selection of the major study here designated then all the rest of the work needed to complete the requirements are elective excepting two years of physical education, four years of literary society work and one year of practice teaching in the training school under efficient supervision and constructive criticism.

5. Such studies as drawing; music, vocal and instrumental; glee club work and choral work; manual training and domestic science; orchestral and band work, and other art courses of any kind are permitted to be taken during the four years of study, but they do not constitute a credit upon the required constants that are demanded for graduation.

Elective Courses That Constitute Major Studies.—To complete a course selections are made from the other branches taught in the school under the advice of the department with which the scholastic major is chosen. Two years of foreign language, either in the secondary or in the normal school, is necessary.

PROFESSIONAL.—(1) Experimental Psychology. (2) School Supervision. (3) Great Educators.

ENGLISH.—(1) Rhetoric. (2) English Literature. (3) Shakespeare. (4) Epic Poetry in English. (5) The English Romantic Movement. (6) The Development of the English Drama. (7) The History of the English Language and Anglo-Saxon. (8) Anglo-Saxon and Middle English. (9) Literary Criticism. (10) The Development of the English Novel. (11) Theme Writing and Story Telling. (12) Teachers' English. (13) American Literature. (14) English of the Nineteenth Century.

PUBLIC SPEAKING.—(1) Elocution. (2) Applied Drama. (3) Repertoire one year. (4) Principles of Expression. (5) Argumentation. (6) Oratory.

LATIN.—(1) Cicero (Cato Major) and Livy. (2) Livy. (3) Horace (Epics and Odes). (4) Roman Life. (5) Teachers' Latin. (6) Elementary Latin for High-School Graduates—special system of instruction. (7) Vergil's Æneid.

GREEK.—(1) Lessons. (2) Anabasis. (3) Plato. (4) Homer.

GERMAN.—(1) Lessons and Grammar. (2) Immensee and Hoeher als die Kirche. (3) Die Journalisten. (4) Wilhelm Tell. (5) German Prose Composition. (6) Emilia Galotti and Lyrics and Ballads. (7) Nathan der Weise. (8) Iphigenie auf Tauris and Die Braut von Messina.

FRENCH.—(1) Lessons—Grammar and Pronunciation. (2) French Readings. (3) L'Abbe Constantin, Le Voyage de Monsieur Perrichon.

MATHEMATICS.—(1) Solid Geometry—if not had in high-school course. (2) Higher Algebra. (3) Trigonometry. (4) Surveying. (5) History and Teaching of Mathematics. (6) Analytical Geometry. (7) Differential Calculus. (8) Integral Calculus.

CHEMISTRY.—(1) General Organic—two years. (2) Qualitative Analysis—two years. (3) Special Methods of Quantitative Analysis. (4) Household Chemistry. (5) Food Analysis.

PHYSICS.—(1) Mechanics of Solids and Fluids. (2) Sound and Light. (3) Heat, Electricity and Magnetism. (4) Teachers' Special Course. (5) Sound.

NATURAL SCIENCE.—(1) Advanced Physiology. (2) Advanced Botany. (3) Hygiene and Sanitation. (4) Zoölogy. (5) Physiography. (6) Geology. (7) Mineralogy. (8) Astronomy. (9) Commercial Geography of North America. (10) Commercial Geography of Europe. (11) Influences of Geography Upon American History.

HISTORY.—(1) American History. (2) English History. (3) Greek History. (4) Roman History. (5) Mediæval History. (6) Modern History. (7) Eighteenth Century History. (8) Nineteenth Century History. (9) Method History.

ECONOMICS.—(1) Theory. (2) Problems. (3) English Industrial History. (4) American Industrial History. (5) Commercial History of Europe. (6) Money and Banking. (7) Labor and Labor Unions.

GOVERNMENT.—(1) American Government. (2) American Constitutional History. (3) English Government. (4) Modern European Governments. (5) International Law. (6) Constitutional Law.

ART.—(1) History of Architecture and Sculpture. (2) History of Painting.

MANUAL ARTS.—(1) Methods. (2) Organization and Economics.

PHYSICAL EDUCATION.—(1) Anatomy.

Professional Course for College Graduates.—This course includes one year's work of nine months. Every subject is required and it is in the departments of professional instruction and of practice in teaching.

Special Teachers' Courses of Instruction.—1. All kinds of special teachers' courses contain instruction in psychology, school management, history of education, practice in teaching, physical training, literary society work, and drawing.

2. As samples of the special instruction that is added to the subjects mentioned in the first paragraph, a few special teachers' courses are outlined.

a. Primary teachers' courses are differentiated as to primary methods of instruction, primary handwork, special observation of primary teaching, primary school singing, natural science and English.

b. Kindergarten teachers' courses specialize as to kindergarten theory and practice, nature study, handwork, and English.

c. Public school music teachers' courses give marked attention to sight singing, elements of harmony, voice training, special methods of instruction, history of music, ear training, piano, physics of sound, elocution, conducting classes, musical appreciation, the child's voice, supervision of music teaching, theory of music and harmony.

d. Drawing teachers' courses particularly emphasize cast drawing, history of Greek art, history of architecture and sculpture, history of painting, still life, perspective, supervision in art, water color, mechanical drawing and design.

e. Domestic science teachers' courses include foods, composition and dietary uses, cookery, serving, inorganic chemistry, sanitation, waitress work, methods in domestic science, household chemistry, household architecture, food analysis.

f. Physical education teachers' courses exact as special instruction gymnastic pedagogy, anatomy, theory and systems of physical education, history of physical training, anthropometry, physical diagnosis, physiology of exercise, genetic psychology, medical gymnastics and massage.

Professional Instruction in Education.—The courses offered in professional instruction are for the special training of the teachers' judgment on causes and results. The work to be done is briefly outlined as follows:

PSYCHOLOGY.—A study of the subject from the standpoint of the normal adult mind, using the student's own conscious life as illustration. Especial attention is given to the development of the mind from infancy to maturity, carefully emphasizing the development found in the child to be taught at the different ages in school. This secures a general knowledge of the laws of mind and the special problems of education.

PRINCIPLES OF EDUCATION.—This study considers the principles derived from the study of mind applied to the three elements—(1) the learner, (2) the teacher, and (3) the subject matter.

SCHOOL MANAGEMENT.—A consideration of the ordinary problems of actual school work and how to solve them properly. In the relation of the teacher and the school the following characteristics of the teacher are considered: (1) preparing, (2) organizing, (3) instructing, (4) training, and (5) managing.

HISTORY OF EDUCATION.—(1) Ideals, ancient and modern, (2) writers and classics, (3) systems of education at home and abroad, (4) education as related to civilization and society, and (5) modern educational solutions of problems.

PHILOSOPHY OF EDUCATION.—An investigation of the fundamental ideas and foundations of education as related to the natural and mental sciences. Basis of this study is on biology, physiology, psychology, history and experience. A conception of the underlying principles that dominate human life when culture and civilization prevail, dealing with religion, law, social organization and all human instrumentalities that make civilization.

AMERICAN EDUCATION.—The characteristics of the people of the United States, social, communal and political, that affect and control the school work, with the necessary ways of adapting the educator's work to the same. The province of school officers, administrators, supervisors and teachers and the relations that must be obtained to keep the situation cordial and helpful.

EXPERIMENTAL PSYCHOLOGY.—Applying modern laboratory methods to the study of the mind. Special problems investigated by research work. Scientific spirit employed with application of all that is done to current educational problems and practice.

SUPERVISION.—Evolution of the graded school system, famous educational national reports and their value, making courses of study, grading and promoting of pupils, school mechanics, uses and abuses, relation of supervision to school board, people, teachers, and pupils. Improvement of teachers in service. Special value of visitation of school at work.

GREAT EDUCATORS.—A critical study of the lives, writings, doctrines and practices of Pestalozzi, Froebel and Herbart, with applications to the present-day school.

Practice Teaching.—Normal schools maintain as a laboratory in which to present model teaching and practice in teaching all the grades of the public school—kindergarten, primary, elementary and secondary. Without all these varieties of work a normal school cannot be classed as conducted on a policy that gives training in all the phases of public school teaching and management. This laboratory school is used for illustrating, testing, establishing and originating theories of education of the public school field. Actual teaching occupies the last year of a student's course and is the most valuable of the work assigned because it develops the occupational adaptability by placing the student in normal relations. The number of pupils that are assigned are not over ten in the beginning and may be increased to double that number after experience has been secured.

Teachers.—The practice school organization consists of: (1) a director; (2) head critic of secondary work, of elementary work, of primary work and of kindergarten; (3) critic teachers assigned work in departments like mathematics, language, etc.; (4) critic-teachers-in-training in charge of the various rooms like regular teachers in public schools. The work of training in teaching is a department by itself and is managed with greatest efficiency when such freedom is granted.

Plan of Teaching.—The student-teachers have entire charge of the work they are doing and are required to make special preparation the same as when reciting in a scholastic subject, submitting to the critic teacher the lesson plan as it should be taught and receiving criticism on the same before putting it into use. Criticism should be chiefly private and personal as such a system of instruction brings the quickest and the best returns when lesson plans or failures in instruction are to be thus corrected. It is more important to do careful teaching under thorough supervision than to do much teaching under limited or indifferent supervision. Observation lessons are worthless if they are not supervised and discussed.

Supervision of Work.—All training work must be given close supervision and inspection to be effective. Observation work is not necessarily the best that is directed to model teaching all the time. Much common work, lacking model qualities, is frequently the most useful. The undertaking to have the classes of students taught in scholastic subjects by the instructors according to the method recommended for use in the training school is not practicable, because the age, development and the knowledge of the students are not similar to that necessary with less mature pupils. The method of teaching in the training school should recognize the value of reaching new knowledge by making use of the old knowledge and experience already possessed. In doing this the learner should be told as little as possible and be allowed to discover all he can for himself, thus obeying the law of self-activity so essential to proper teaching. Live interest in the studies pursued depends upon the right management of the work so as to use all the capabilities and experiences the pupils possess.

HIGHER EDUCATION

Origin and Purpose.—The first colleges founded in America, Harvard in 1636, William and Mary in 1693, and Yale in 1701, and, after the lapse of half a century, Princeton and Dartmouth and Brown, were founded with a practical purpose. They were founded to train ministers for the churches of their ecclesiastical order.

Vocational Training a Constant Purpose.—This vocational aim has continued, with certain changes. These changes have consisted, first, in the change of the vocation itself, and second, in the substitution or addition of the general purpose of culture or of intellectual training. The clerical aim was maintained till the first decades of the nineteenth century. It was supplanted by the professional purpose of training lawyers, although this purpose never became so consciously dominant as it was in the case of the clerical education. The legal purpose continued up to the later decades of the same century, when it was found that an increasing number of graduates, amounting in the case of some conspicuous colleges to a majority, were entering business. The practical and vocational worth of the college education, therefore, has from the beginning been more prominent than is usually thought.

The practical worth is also indicated in the changes which have been wrought in the course of study in the progress of two hundred seventy-five years. That course was originally linguistic and philosophic, consisting largely of Latin, Greek and Hebrew. It was a prolongation of the Oxford and Cambridge tradition. The enchantments of the middle ages, for better or for worse, dominated. The curriculum has, duringal most three centuries by successive enlargements, come to include almost every intellectual interest. In fact, the history of the curriculum is a history of academic enlargement created by the enlargement of man's knowledge. Scientific studies have been introduced by reason of the demand of the community quite as much as by academic necessities. Economic and social studies have been included as the resultant of the deepening concern of society in its own fundamental problems. It is significant that the great growth in the instruction offered in the language and literature of Spain followed immediately upon the conclusion of the war of the United States with that nation.

The chief question, however, to be considered is the elements which constitute the practical worth of a college education.

Develops Power of Thinking.—A college education broadens, deepens, heightens the power of thinking. This worth is fundamental and comprehensive. The higher education does enlarge the knowledge possessed by the student. But this worth is slight in comparison with the value of the increase of the power of thought. In fact, the process of gaining knowledge is, for the student, of higher value than the product of the knowledge gained. The knowledge itself vanishes; but the process of accurate, thorough, comprehensive learning, becoming a part of the student's intellectual equipment, represents a power of thinking of incalculable worth. For the power of thinking stands for reasoning, judgment, the assessment of a fact at a just value, the relation of fact to fact, of truth to truth, and the inferring of new truths and new facts. It stands for the power to unravel a tangled skein of false and true argumentation, the drawing out of the separate threads of a commingled discourse, and the laying of them out in proper order and proportion. It means the appreciation of the great as great, of the small as small, of the lasting as lasting, of the transient as brief, of the limited as narrow, and of the universal as universal. In a word, the power to think means intellectual valuations and appreciation of intellectual relationships.

Now this power has the highest practical worth. It represents the filling of a fundamental need of the American character and of the American community. The new world has, for its dominant characteristic, energy. Its climate or its political conditions or other forces have made the American nation the most energetic nation. But its energy has not been well utilized, its forces have been too largely either wasted or abused. The nation has not been distinguished by its large and sane power of judgment. A proper and practical purpose of the American college should be to make this power of judgment worthy of the new world's energy.

Promotes Self-Knowledge.—A further practical worth of a college education lies in its power of promoting the self-knowledge of the individual student, with a view of the proper choice on his part of a vocation. A large proportion of men think that they have not chosen a proper calling. Such a mistake results in both unhappiness and inefficiency. A college education prompts a man to defer the choice of a calling to a period later than that at which he would choose a life's calling were he living at the age of eighteen outside college walls. Through the acquiring of knowledge, through an increasing acquaintance with his fellows, through enlarged thoughtfulness on his own part, he comes into more complete obedience to the Greek maxim of knowing himself. Said the graduate of a technical school on the day of his graduation, "I now know that I do not want to be a mechanical engineer. I know I want to be a lawyer." If, however, he had given himself the advantage of a liberal education before taking up the study of a professional education, he would probably have been saved from this waste of time, force, and money. In fact, the higher education gives a man the opportunity of making mistakes which every young man must make in a small area and with slight consequent harm, which otherwise he might make in a large domain and with dire results.

Promotes Friendship.—A highly practical value of a college education is also found in its power for making friendships. The power of friendship, as a joy and a personal satisfaction, has been written about since the time of Cicero and before; but the worth of friendship as a practical concern does represent a great collegiate asset. A man makes more friends and more lasting ones in college than during all his subsequent life. Youth is the time for making friendships—the college age is the age of youth.

Friendship stands for personal intimacy in both process and result—the college place and time are the time and place of intimacy. "In Memoriam" is based upon a college friendship. Lowell's greatest ode gets at least a part of its immortality from the inspiration of college friendships. Now, such friendships promote the forming of relationships of all kinds. Nations trade with nations that are friendly. Individuals do business with individuals that are friends. Men are recommended by and are selected by other men for great places because they are known through friendship. It has been said it is worth while to go to college simply to make friends. In this remark lies a commercial and an industrial value.

Gives Facility.—A college education also promotes facility in the individual student. It enlarges his power of doing, and of doing with ease what belongs to him to do. It saves him from the rule of thumb. It delivers him unto the rule of a general principle. It helps him to see what needs to be done in any given case, it helps him to find the force necessary for the doing, it helps him to protect his cause and himself from the necessary perils of his doing, and also helps him to relate properly the consequences of his doing to other forces and conditions. In a very practical way it may at once be said that the higher education increases the earning capacity of each graduate. Given the case of two men—the one entering business immediately on the completion of his high-school course, the other entering business at the completion of his college course. In point of time the high school boy has the start by four years of the college man. The college man begins his life work at practically the very same point where the high school boy began his four years before. But experience proves that when the college man has been at work for two years he will have come up to the high school boy, and in the course of the third year of his apprenticeship he will have passed the high school boy. When once he has passed him, competition has ceased. The college man goes into relationships and developments of his business into which the high school boy cannot, and knows he cannot, enter. One of the greatest retail houses in this country, composed largely of members of the same family, recently entered into an agreement with its own partners that sons and nephews who gave themselves the advantage of a liberal education should receive special advantages and have open to them special opportunities for advancement. Great business men there are who are not college graduates, of course. Nature endowed them with larger powers even without the gift of a liberal education than most men possess. But it is significant that these same men are sending their sons to college and are doing more to send the sons of other men to college than anybody else in the community.

Lifts Level of Self-Development.—Carrying out this same principle of facility it should also be said that education gives a man a higher limit of individual development. It lays the foundation of

his life and character wider and deeper, and it permits a higher and broader superstructure. It is recognized by ethnologists that certain races or tribes more speedily reach the limit of their normal growth than others. The white race prides itself upon its belief that its limit of development is more remote than the limit of other peoples. Education removes limitations. It helps the individual to do more things and each of these things better. It increases general power and thus reenforces special aptitudes. As the physicist often finds he can pursue no further certain researches without greater mathematical knowledge, so the lawyer or the doctor finds that he cannot become a better practitioner without a richer and more amply endowed character. This general endowment enlarges his professional field of service.

Promotes Higher Service.—A further element of the practical worth of the higher education, and not entirely unlike that just considered, may be said to lie in the capacity of being inspired to do something worth while. If this capacity exist at all in a man, it is necessary that it should be called out. If it is not called out, it becomes paralyzed or dead. The college is the force and condition best fitted to evoke it into being. College acquaints a man with the great historic movements, political, ecclesiastical, literary. It demands a knowledge of the best books. It might be said that a college is a collection of the best books about the most important subjects. A college represents, too, great teachers and great scholars. In the body of students, moreover, of the college are found souls who, though young in years, are great in radiant hope and promise. Through such forces and conditions the student is inspired to do something worth while, if that capacity exist at all in him. What the greatest have thought of and aspired after, he may think of and aspire after. What the strongest have achieved may be made the not unworthy object of his ambition. Such a coming to one's self is of the highest practical worth. It represents the dawn of a new world.

Promotes Professional Interests.—In quite an opposite respect, and one somewhat narrow, college education has special value for the proper entrance upon a profession. Entrance to the clerical profession has usually been conditioned upon being a college graduate. Entrance upon the legal or medical profession has been exceedingly loose. State boards have in most cases admitted candidates to the practice of law or of medicine upon the presentation of an easily obtained certificate of good moral character and upon passing simplest examinations. Law schools and medical schools have required for entrance in most cases knowledge not exceeding that represented in a high-school diploma. But a great change is now occurring. Several medical schools and law schools are requiring at least two years of college work for admission, and three of each type require the B. A., or B. S., degree. The simple fact is that a student cannot enter the best professional schools unless he be a graduate. It is not unfitting to add that such a requirement represents the increased respect which a community is coming to hold for its members, and also represents the largeness of the power of the community to give a proper pecuniary compensation to those who protect its hygienic and legal rights.

Develops the Gentleman.—A further practical advantage of a college education lies in its development of the gentleman. There are graduates who are not gentlemen and there are many men who are gentlemen who have never passed within college gateways. But a normal result of residence for four years within these gateways is the making of a gentleman. The gentleman represents self-respect without bumptiousness, an intellectual and ethical interpretation of a social condition, a discernment of the duty of putting others before himself, and finding pleasure in such self-negation, and the use of the happy art of giving pleasure to others, whoever, whatever, and wherever they may be. The gentleman represents the man of good manners. Good manners are of a greater consequence in one's career than is usually believed. With them and with other qualities in even a moderate degree one can be assured of a certain kind of success in a career. Without them great qualities and elements of character are vitiated.

Now the college trains the gentleman. The attrition of intimate and long-continued association rubs down the angles of individual idiosyncrasies. The necessity of obedience to formal rules disciplines humility. The presence of worthy examples of gentle manliness among students and teachers and associates prompts the formation of the same great qualities in one's self.

Trains for Leadership.—The ninth and last practical advantage of which I shall write lies in a somewhat different field from the advantages already noted. These advantages already noted have largely concerned the individual. The present advantage has special concern for the whole community. I refer to the need of the community of great leadership. Democracies tend to approach to and to rest upon the level of the commonplace. They have to do with the well-being of the great body of the people. They find it difficult to create, to develop, and to train the unusual man.

It is the unusual man, what the naturalists call a "sport," whom a democratic community most urgently needs. It needs sane, large, inspiring leaderships. Such leaderships the college should train. Such leadership means the having of a well-trained brain, of a sympathetic heart, appreciative, firm, loving; of a will, strong, great, guided by a proper intelligence; of a conscience which incarnates righteousness. The college is established to train the brain, to enlarge the heart, to strengthen the will, and to purify the conscience in righteousness. Such leadership the American community has received from college graduates since the foundation of the first college; and to the training of men who embody qualities of such leadership the college is devoting itself with increasing energy and wisdom.

The means which the college uses in securing these great practical results may be summed up in three phrases: truth, men, undergraduate activities.

In this development truth is fundamental. *Veritas* is found upon the shield of the oldest American college; and this word, together with *Lux*, is the word most commonly found upon the shield of American colleges. The book and the rising sun are the usual symbols. Truth in literature, truth in science (natural, physical, social), truth in history, in mathematics, and in language, form the study of the college. Truth is the food of the mind. By it mind is fed, grows, develops. It is the fundamental cause or condition of the practical worth of the higher education.

Uses Truth and Men.—With truth is to be united personality. Man makes man. The teacher enlarges, inspires the student more than the text-book. The influence of the teacher over student within and without the classroom is one of the mightiest forces in the American college. There is some reason to believe that it has been a mightier force than it now is. The enlargement of the vast field of truth and the claims of this field upon the student have seemed to limit or to lessen the personal power of the teacher. But it is still recognized that herein lies a rich opportunity for the college professor, if he wishes to avail himself of it. If the student is to get the best results from his college, he should find quickening influences in the person of his intellectual superior.

Undergraduate Activities.—A third force which the college uses in securing great practical worth for its education lies in the activities of the undergraduates themselves. These activities have in the last decades become numerous, diverse, and absorbing. In certain larger colleges these activities are represented in no less than a hundred organizations, societies, or clubs. They are social and fraternal, such as the Greek letter societies; they are athletic, such as football clubs, baseball clubs, tennis clubs, shooting clubs; they are musical, such as singing, mandolin, and banjo clubs; they are literary, such as debating and reading clubs. The religious work of the undergraduate represents one of the most important forms of this development.

The Young Men's Christian Association has supplanted the old society of religious inquiry, and undertakes to do manifold works for and through its members. These works include, not only welcoming new students, seeking to adjust them to an unknown environment, and trying to aid them in getting the best results out of college life, but also carrying on missions in jails, teaching English to newly arrived foreigners, and even bearing an important part in the manifold and diverse work of a college settlement. In fact, the activities of undergraduates have become so numerous and so compelling that there is some reason to believe that the term student applied to them is a misnomer. But it is certainly true that these activities give an excellent training for a subsequent life of large practical usefulness. The mercantile or industrial record, for instance, made by many men who played ball in college or who were managers of their teams, gives evidence of the worth of this type of undergraduate training.

Pecuniary Relations.—The pecuniary condition attending the college giving and the student receiving such an education is important. The higher education is everywhere a charity or gratuity. No student pays for his education. The tuition fee, seldom exceeding $150 a year, seldom falling below $50 a year except in the case of some state universities, represents only a share of the entire cost of the education of the individual student. The proportion runs from perhaps one-half to one-quarter. The balance is paid for out of the interest of endowment funds which have usually been the result of either a gift or bequest. In the state universities the balance of cost not paid by the students is met out

of appropriations made by the legislature of the state, which appropriations are usually the result of general taxation. The American community has, either in its organized or in its unorganized capacity, found it advantageous not to charge the whole amount of the cost of higher education to the individuals actually receiving it. It has come to the conclusion, perhaps more unconsciously than consciously, that it will get its pay back in service from the men whom it thus freely educates.

Promotes Research.—The practical advantages which have so far been considered as the result of the higher education have related to the training of men. But there are advantages which lie in another plane. These advantages are summed up in the word research. The college and university have become in no small sense great research laboratories. These laboratories have devoted themselves to practical concerns. Professor Bell, the inventor of the telephone, said to Helmholtz on the occasion of his visit to America in 1893 that it was the laws which the great German discovered in sound which led to his invention of the telephone. Scientific research in Germany and America has usually been conducted in college laboratories. Scientific research in England has commonly been carried on in private laboratories. Darwin is the striking example, although Kelvin is an example to the contrary. The discovery of the worth of by-products in manufacturing processes is the result, directly or indirectly, of academic research. The value of slag, the worth of certain products formerly wasted in refining oil, in making wood-pulp, in making cottonseed oil, has become greater than the original value of the primary products themselves. Mr. Andrew Carnegie has said that his firm was the first to employ a scientific chemist in the manufacture of iron and steel. He thus learned the value of slag. Once visiting an iron mill in Cleveland he saw a workman dumping slag upon the waste heap. On inquiry he found that he could buy this slag for a few cents a ton. In Pittsburg he knew this waste was worth $10 a ton. The freight and the original cost did not exceed $2. He said that he was able to carry on this profitable business for a time, but presently the Cleveland manufacturer also became knowing, and then kept the profits to himself. Such gains have resulted not only in the building up of great individual fortunes, but also in the enlargement of wealth of the whole community. The investigations carried on in college and state university laboratories of the west and the dissemination of the knowledge of these results among the farmers of Iowa and Illinois are adding each year millions of dollars to the wealth of these and of other states.

Choice of a College.—One of the more serious practical questions regarding the college relates to the reasons which should control in the choice of a particular college for the individual student. It is to be said, first, that colleges are so unlike that the selection should be made with discrimination. A college fitted for one may be unfit for another; one boy should go to an urban, another to a rural, one to a small, another to a large college. Among the considerations to be weighed in the choice of a place for one's education are:

First, the quality of the instruction. Is the teaching exact, comprehensive, scholarly, inspiring? or is it slovenly, loose, narrow, deadening? Akin to this element, and some would say more important, is the character of the teacher. Is he a large gentleman, noble in manhood, as well as dignified and gracious? Is he a man of the world in the proper sense? Does he take interest in the individual student? does he seek to use the truth and the forces of his teaching in building up the character of each man whom he teaches?

A third consideration in the choice of a college relates to the amount of the instruction provided and to the equipment of laboratories and libraries. Certain colleges are obliged to be content with offering only a few courses of instruction. They are not able, by reason of poverty, to provide more than the primary or introductory courses on the great subjects of knowledge. They are not at all qualified to train scholars. The equipment, also, is to be valued. Are there properly furnished laboratories in chemistry, physics, biology and geology? Is that laboratory of laboratories, the library, well endowed? and is its administration effective? Such matters are tests of the worth of a college to the individual student.

The college as a teaching institution is one thing; the college as an institution of research is another; but a college whose teachers are devoted to research should be the best instrument of teaching. A college whose teachers will not enlarge the bounds of truth is not usually the most efficient force for the formation of character. Therefore the scholastic side of the institution, as manifested in its power for research, is to be included in the estimate.

It is also to be said that the spirit of the college helps to declare its value. A spirit of superciliousness, of supercriticalness, of human remoteness, of indifference to the cardinal virtues and graces in a college—if such an one can be found—should turn the seeking student away from its portals. A spirit of enthusiasm for life, of love for the college, of respect for the highest and the best, of loyalty to the church and its institutions, should attract the student.

In respect to the size of a college, the chief thing to be said is that the large college trains the student more through personality, especially the personality of students themselves. The attrition of living mind on living mind is a mighty force for making character. The small college trains men more through truth, although the characters of the teachers may, in certain instances, become more impressive upon the mind of the student. On this ground, therefore, to some men the large college is of higher worth, and to others the small. In this, as in every other respect, that college is to be selected which will best fit into the needs and hopes of the individual collegian.

These Advantages Are Common to All Countries.—It is the purpose of this article to indicate some of the more important practical results of the higher education as it is conducted in America. Similar results in kind are found in other countries. But the practical side of these results is inevitably greater in America than in other countries, although in some older countries like India, these results are of considerable worth. They are probably also of more worth, especially as the results of research, in Germany than in England. But everywhere, in countries both old and new, these results are of much value in the proper training of individuals for great human service and in the discovery of truth which must immediately or ultimately make for the betterment of men.

DICTIONARY OF EDUCATION AND EDUCATIONAL ETHICS

Abstract and Concrete.—These terms have a very important application in many departments of practical education. *Abstract* has reference to general ideas, or the ideas of qualities considered apart from the things to which they belong; *concrete*, to those which are only conceived as belonging to particular objects or substances. Thus, if we speak of a man, a horse, a tree, etc., we use abstract or general ideas; for we are not thinking of any particular object of the class, but only of the assemblage of qualities or characteristics that especially belong to all the members of the class. But when we mention such names as Cicero, Washington, John Smith, etc., we have in our mind a conception of the characteristics that served to distinguish those persons from all other men. Thus, the expression *five pounds* represents a concrete idea; the word *five*, an abstract one.

The immature minds of young children employ to a great extent concrete ideas, and hence the instruction addressed especially to them should deal principally with these. As the mind advances, it becomes more and more occupied with abstract conceptions, which constitute the material for all the higher forms of thought.

Academy was originally the name of a pleasure ground near Athens, and was said to be so called after Academus, a local hero at the time of the Trojan war. Its shady walks became a favorite resort for Plato; and as he was accustomed to lecture here to his pupils and friends, the school of philosophers which was founded by him was called the *Academic school*, or merely the *Academy*.

Among the Romans, Cicero, who regarded himself as an adherent of the Academic philosophy, gave the name of Academy to the gymnasium at his villa near Tusculum, as well as to one of his villas in Campania, where he wrote his *Academicae Quaestiones*. During the middle ages, the term was but little used for learned institutions; but, after the revival of classical studies in the fifteenth century, it again became frequent. In a wider sense, it was sometimes applied to higher institutions of learning in general. Gradually, however, its use was, in most countries, restricted to special schools, as academies of mining, of commerce, of forestry, of fine arts, and, especially, of music. In England and the United States, the national high schools for the education of military and naval officers are called academies. Thus, England has the Naval academy at Portsmouth, and the Royal Military academy at Woolwich; and the United States, the Military academy at West Point, and the Naval academy at Annapolis. In the United States, the name has also been assumed by a large number of secondary schools, which are designed to prepare their pupils for college, or to impart a general knowledge of the common and higher branches of education.

The name *academy* is also employed to designate associations of learned men for the advancement of science and art. Some of these associations are of an entirely private character, others have been founded by the state. The first academy of this kind was the Museum of Alexandria, in Egypt, which was founded by Ptolemy Soter. After its model, the Jews, toward the close of the first century of the Christian era, began to establish academies for the development of Talmudic science. Later, the Arabian caliphs established acad-

emies at their places of residence, to show their interest in the promotion of science.

Efforts to establish Christian academies of this kind were made by Gregory the Great and Charlemagne, but both failed. In the middle of the fifteenth century, associations of this kind were formed in Italy for the purpose of fostering the free development of science and art, in opposition to the rigid conservatism of the monastic and ecclesiastical schools. They gave special attention to the cultivation of the Italian language and literature. It was especially the *Accademia della Crusca*, founded at Florence by the poet Grazzini, to which the Italian language is indebted for its purification and development. From Italy, these institutions spread to the other countries of Europe; and, as they became the centers of literary activity, they exercised everywhere a prominent influence upon the intellectual progress of the several countries, and especially upon the improvement and regulation of the native tongue. Prominent among these academies was the *Académie Française*, or French Academy, instituted in 1635 by Cardinal Richelieu.

The French Academy is one of five academies, and the most eminent, constituting the Institute of France. It is composed of 40 members, elected for life, after personal application and the submission of the nomination to the head of the state. It meets twice weekly; at the Palace Mazarin, Paris, and is "the highest authority on everything appertaining to the niceties of the French language, to grammar, rhetoric, and poetry, and the publication of the French classics." A chair in the Academy is the highest ambition of most literary Frenchmen.

The other academies of the Institute of France are: The Academy of Inscriptions and Belles-Lettres, with 40 members; Academy of Sciences, with 68 members; Academy of Fine Arts, with 40 members (as follows: Painting, 14; sculpture, 8; architecture, 8; engraving, 4; musical composition, 6); and Academy of Moral and Political Science, with 40 members. All members are elected for life.

Like the French Institute, the academies in the capitals of Spain, Portugal, Sweden, Russia, and other countries, have gradually become great national centers for the promotion of science and art; but no such centralization has been effected in Italy, Germany, England, or the United States. In England, the learned corporations corresponding to the continental academies of science have generally the name society or association.

The Forty Immortals of the French Academy

	Year Elected	Name	Born	Predecessor
1	1870	Emile Ollivier	Marseilles, 1825	De Lamartine
2	1874	Alfred Jean Francois Mézières	Paris, 1826	St. Marc-Girardin.
3	1886	Othénin P. de Cléron Comte d'Haussonville	Gurcy, 1843	Caro.
4	1888	Jules Arnaud Arsène Claretie	Limoges, 1840	Cuvillier-Fleury.
5	1890	Charles Louis de Saules de Freycinet	Foix, 1828	Emile Augier.
6	1891	Louis Marie Julien Viaud (Pierre Loti)	Rochefort, 1850	Octave Feuillet.
7	1892	Ernest Lavisse	Nouvion, 1842	Jurien de la Gravière.
8	1893	Paul Louis Thureau-Dangin	Paris, 1837	Rousset.
9	1894	Paul Bourget	Amiens, 1852	Maxime du Camp.
10	1895	Jules Lemaitre	Orleans, 1853	Jean Victor Duruy.
11	1896	Jacques Anatole Thibault (Anatole France)	Paris, 1844	Comte de Lesseps.
12	1897	Albert Comte de Mun	Lumigny, 1841	Jules Simon.
13	1897	Gabriel Hanotaux	Beaurevoir, 1853	Challemel-Lacour.
14	1899	Henri Léon Emile Lavedan	Orleans, 1859	Henri Meilhac.
15	1899	Paul Deschanel	Brussels, 1856	Hervé.
16	1900	Paul Hervieu	Neuilly, 1857	Pailleron.
17	1900	Auguste Emile Faguet	La Roche, 1847	Cherbuliez.
18	1901	Charles Jean Melchior, Marquis de Vogue	Paris, 1829	Duc de Broglie.
19	1901	Edmond Rostand	Marseilles, 1868	Bornier.
20	1903	Frédéric Masson	Paris, 1847	Gaston Paris.
21	1903	René Bazin	Angers, 1853	Legouve.
22	1905	Etienne Lamy	Cize, 1845	Gerárd.
23	1906	Alexandre Félix Joseph Ribot	St. Omer, 1842	D'Andiffret Pasquier.
24	1906	Maurice Barrès	Charmes, 1862	De Hérédia.
25	1907	Marquis de Ségur	Paris, 1853	Rousse.
26	1907	Maurice Donnay	Paris, 1860	Sorel.
27	1909	Raymond Poincaré	Bar-le-Duc, 1860	Gebhardt.
28	1909	Eugene Brieux	Paris, 1858	Halévy.
29	1909	Jean Aicard	Toulon, 1848	Coppée.
30	1909	René Doumic	Paris, 1860	Boissier.
31	1909	Marcel Prévost	Paris, 1862	Sardou.
32	1910	Monseigneur Duchesne	Saint-Servan, 1843	Mathieu.
33	1911	Henri de Régnier	Honfleur, 1864	Melchior de Vogué.
34	1911	Henry Roujon	.....	Barboux.
35	1911	Denys Cochin	Paris, 1851	Comte Vandal.
36	1912	Louis Lyantey	.....	Jules Henri Poincaré.
37	1912	Emile Boutroux	.....	Hippolyte Langlois.
38	....	Vacant	.....	
39	....	Vacant	.....	
40	....	Vacant	.....	

British Learned and Scientific Societies

Name and Address	Founded	Object
Aëronautical Society of Great Britain, 53 Victoria Street, S. W., London. M. Aër. S.	1866	The study and promotion of aëronautics.
Association of Economic Biologists, University, Birmingham.	1904	The promotion of economic biology.
British Archæological Association, 32 Sackville Street, W., London.	1843	Archæology.
British Association for the Advancement of Science, Burlington House, W., London.	1831	The promotion of scientific inquiry and research.
British Astronomical Association, 136 Rodenhurst Road, Clapham Park, S. W., London.	1890	Astronomical observation and encouragement of a popular interest in astronomy.
British Ornithologists' Union, 3 Hanover Square, W., London. M. B. O. U.	1858	The advancement of the science of ornithology.
Chemical Society of London, Burlington House, W., London. F. C. S.	1841	Advancement of chemical science.
Civil and Mechanical Engineers' Society, 25 Victoria Street, S. W.	1859	The advancement of engineering.
Entomological Society of London, 11 Chandos St., W., London.	1833	The study of entomology.
Folk-Lore Society, 11 Old Sq., Lincoln's Inn, W. C., London.	1878	The collecting and preservation of relics of folk-lore.
Geological Society of Edinburgh, 1 India Buildings, George IV. Bridge, Edinburgh.	1834	The advancement of geology.
Geological Society of London, Burlington House, Piccadilly, W., London. F. G. S.	1807	The advancement of geology.
Geologists' Association, University College, W. C., London.	1858	To facilitate the study of geology and its allied sciences.
Institute of Chemistry of Great Britain and Ireland, 30 Bloomsbury Square, W. C., London. F. I. C.	1877 Charter 1885	1. To promote education of persons desirous of becoming professional consulting and analytical chemists, etc. 2. To examine candidates and grant certificates. 3. To elevate the profession of chemistry.
Institution of Civil Engineers, Great George Street, Westminster, S. W., London M. I. C. E.	1818	The general advancement of mechanical science.
Institution of Electrical Engineers, 92 Victoria Street, Westminster, S. W., London. M. I. E. E.	1871	Telegraphy and electrical science.
Institution of Mechanical Engineers, Storey's Gate, St. James' Park, S. W., London. M. I. Mech. E.	1847	To promote the science and practice of mechanical engineering.
Institution of Mining Engineers, 39 Victoria Street, S. W., London.	1889	The advancement and encouragement of the science of mining, metallurgy, engineering, and their allied industries, etc.
Institution of Naval Architects, 5 Adelphi Terrace, W. C., London.	1860	To promote the improvement of ships, and all that specially appertains to them.
Iron and Steel Institute, 28 Victoria Street, S. W., London.	1869	The promotion of the iron and steel trades in their practical and scientific aspects.
Linnæan Society of London, Burlington House, Piccadilly, W., London. F. L. S.	1788	The study of botany and zoölogy.
Marine Biological Association of the United Kingdom, The Laboratory, Citadel Hill, Plymouth, and Marine Biological Laboratory, Lowestoft.	1884	The advancement of British sea fisheries and of marine zoölogy.
Medical Society of London, 11 Chandos Street, W., London.	1773	Medical studies.
Mineralogical Society, Care of Geological Society, Burlington House, Piccadilly, W., London.	1876	Mineralogy and crystallography.
Pharmaceutical Society of Great Britain, 17 Bloomsbury Square, W. C., London.	1841	The advancement of pharmacy and allied sciences.

British Learned and Scientific Societies—Continued

Name and Address	Founded	Object
Philological Society, University College, Gower Street, W. C., London.	1842	Philological studies.
Philosophical Society, Cambridge, New Museums, Cambridge.	1819	Scientific inquiry in philosophy and natural history.
Physical Society of London, Royal College of Science, South Kensington, S.W., London.	1874	The advancement of physical science.
Psychical Research, Incorporated Society for, 20 Hanover Square, W., London.	1882	Investigation of psychical phenomena, telepathy, etc.
Royal Agricultural Society of England, 16 Bedford Square, W. C., London.	1838	The practical and scientific advancement of agriculture.
Royal Anthropological Institute of Great Britain and Ireland, 3 Hanover Square, W., London.	1871	Anthropology.
Royal Archæological Institute of Great Britain and Ireland, 20 Hanover Square, W., London.	1835	Study of archæology.
Royal Asiatic Society, 22 Albemarle Street, W., London. R. A. S.	1823	Oriental research.
Royal Astronomical Society, Burlington House, W., London. F. R. A. S.	1820	Advancement of astronomy.
Royal Botanic Society, Inner Circle, Regent's Park, N. W., London.	1839	Furtherance of plant study in its scientific and practical aspects, by means of a botanic garden, floral exhibitions, etc.
Royal Geographical Society, 1 Saville Row, W., London. F. R. G. S.	1830	Advancement of geographical science.
Royal Historical Society, 7 South Square, Gray's Inn, W. C., London. F. R. Hist. S.	1868	Historical inquiry.
Royal Horticultural Society, Vincent Square, Westminster, S. W., London. F. R. H. S.	1804	The advancement of horticulture.
Royal Institute of British Architects, 9 Conduit Street, W., London. F. R. I. B. A	1834	The advancement of architectural science.
Royal Institute of Public Health, 37 Russell Square, W. C., London.	1886	The advancement of preventive medicine, the study of the public health and the foundation of laboratories for chemical, bacteriological and parasitological work and research.
Royal Institution of Great Britain, 21 Albemarle Street, W., London.	1799	The promotion of scientific and literary research, and of experimental science.
Royal Meteorological Society, 70 Victoria Street, Westminster, S. W., London. F. R. Met. Soc.	1850	The study of meteorology and climatology, and the promotion of observational work.
Royal Microscopical Society, 20 Hanover Square, W., London. F. R. M. S.	1839	The promotion of microscopical and biological science.
Royal Philosophical Society of Glasgow, 207 Bath Street, Glasgow.	1802	To aid the study of the physical, natural, mental, and moral sciences.
Royal Society of Arts, John Street, Adelphi, W. C., London.	1754	The encouragement of arts, manufactures, and commerce.
Royal Society, Burlington House, W., London.	1662	The promotion of natural knowledge.
Royal Society of Edinburgh, Princes Street, Edinburgh. F. R. S. E.	1783	Science and polite literature.
Society of Antiquaries of London, Burlington House, W., London. F. S. A.	c. 1572 Incor. 1751	Antiquarian study.
Society of Engineers, 17 Victoria Street, S. W., London.	1854	The advancement of the science and practice of engineering.
Victoria Institute, 8 Adelphi Terrace, W. C., London.	1865	The study of philosophy and science, and their bearing upon the teachings of Holy Writ.
Zoölogical Society of London, 3 Hanover Square, W.	1826	The promotion of zoölogy and animal physiology.

Canadian Societies

Name and Address	Founded	Object
Canadian Institute, 58 Richmond Street, Toronto.	1849	Scientific research.
Chemical Society, McGill University, Montreal.	1902	Discussion of contemporary chemical work.
Entomological Society of Ontario, Guelph, Ontario. Branches of society in Montreal, Quebec, Toronto, and British Columbia.	1863	To assist and encourage the study of entomology.
Royal Astronomical Society of Canada, 198 College Street, Toronto.	1890	Astronomy, etc.
Royal Society of Canada, Ottawa.	1882	The encouragement of literature and science.

American Societies

Name and Address	Founded	Object
Academy of Natural Sciences, of Philadelphia.	1812	Cultivation of natural sciences.
American Academy of Medicine, 52 N. 4th Street, Easton, Pa.	1876	To encourage the proper educational preparation of physicians. Study of problems of "social medicine."
American Academy of Political and Social Science, University of Pennsylvania, Philadelphia, Pa.	1889	To promote scientific study and investigation of the social sciences.
American Antiquarian Society.	1812	Collecting and preserving antiquities.
American Association for the Advancement of Science, Washington, D.C.	1847	
American Chemical Society.	1876	Advancement of chemistry and promotion of chemical research.
American Entomological Society, Philadelphia.	1859	The study of insects.
American Forestry Association, Washington, D. C.	1882	To encourage protection and proper use of forests.
American Geographical Society, 15 West 81st Street, New York City.	1852	To encourage geographical exploration, and to aid in spreading geographical knowledge.
American Institute of Electrical Engineers, 33 West 39th Street, New York.	1884	Advancement of electrical engineering.
American Library Association, 34 Newbury Street, Boston, Mass.		The promotion of library interests, the interchange of experience and opinion, the advancement of the profession of librarianship in America.
American Mathematical Society, 501 West 116th Street, New York City.	1888	To encourage and maintain an active interest in mathematical science.
American Microscopical Society.		To encourage microscopical research.
American Oriental Society, New Haven, Conn.	1842	To promote Oriental scholarship.
American Philosophical Society, Hall, No. 104 South 5th Street, Philadelphia.	1743	
American Psychological Association, Smith College, Northampton, Mass.	1892	To advance the interests of psychology as a science.
American Public Health Association.	1872	To advance public hygiene.
American Society of Civil Engineers, 220 West 57th Street, New York.	1852	The advancement of engineering knowledge, and the maintenance of a high professional standard.

American Societies—Continued

Name and Address	Founded	Object
American Society of Naturalists, Baltimore.	1883	For the exchange of ideas regarding problems of evolution and natural history.
Archæological Institute of America, Washington, D. C.	1879	To promote and direct archæological investigation and research.
Association of Economic Entomologists, Iowa.	1889	To consider work and results pertaining to economic entomology.
Geological Society of America, Museum of Natural History, New York.	1888	For the promotion of geological science.
National Academy of Sciences, Washington.	1863	Two meetings a year, April and November.
National Educational Association, Winona, Minn.		To elevate the character and advance the interests of the profession of teaching, and to promote the cause of public education in the United States.
National Geographic Society, Hubbard Memorial Hall, Washington, D. C.	1888	The increase and diffusion of geographic knowledge.
Naval Architects and Marine Engineers.	1893	To promote practical scientific knowledge in the art of shipbuilding and marine engineering, etc.
Scientific Alliance of New York, New York City.	1891	To promote the interests of the allied scientific societies which compose it.
Society for the Promotion of Agricultural Science, Urbana, Ill.	1880	To promote the sciences applied in agriculture.

In the United States of America there are also a number of learned societies to which the name *academy*, in the sense used on the continent of Europe, has been applied.

Alexandrian Library, the largest collection of books of the ancient world, founded by Ptolemy Soter in the city of Alexandria toward the beginning of the third century B. C. At one time it is said to have contained 700,000 manuscripts, embracing the collected literature of Rome, Greece, India, and Egypt. It was partly destroyed by fire by a mob of fanatic Christians in A. D. 391, and was finally dispersed or destroyed during the siege of Alexandria by the Arabs under Amru, A. D. 638.

Alexandrian School, a name variously applied, but chiefly designating (1) a school of philosophers at Alexandria in Egypt which is chiefly noted for the development of neoplatonism, and its efforts to harmonize oriental theology with Greek dialects; (2) a school of Christian theologians in the same city which aimed at harmonizing pagan philosophy with Christian theology. The city of Alexandria became, soon after the death of Alexander the Great, by whom it had been founded, a chief seat of science and literature. The time during which the teachers and schools of Alexandria enjoyed a world-wide reputation is called the *Alexandrian age*, and is divided into two periods, the former embracing the time of the Ptolemies, and extending from 323 to 30 B. C., and the second embracing the time of the Romans, extending from 30 B. C. to 640 A. D. Grammar, poetry, mathematics, and the natural sciences were all taught in the Alexandrian school; and among the most illustrious teachers were Ammonius, Plotinus, Hierocles, Proclus, Apollonius (poet), Galen (physician), Euclid (mathematician), Eratosthenes (astronomer), Ptolemy (geographer). When Christianity began to gain a firm footing, it was found necessary to devote special care to the instruction of the catechumens in order to fortify them against the attacks upon Christianity by the pagan philosophers. The catechists not only gave to the candidates for admission into the Christian church elementary instruction, but also delivered learned lectures on Christianity, and combined with it instruction in philosophy. Though, from its original character, the school continued to be called the catechetical school of Alexandria, it was in its subsequent development something very different from a catechetical school, and may rather be regarded as the first theological faculty, or school of scientific theology, in the Christian church. In opposition to the pagan philosophers, the teachers of the Christian schools chiefly undertook to show that Christianity is the only true philosophy, and alone can lead to the true *gnosis*, or knowledge. As the first teacher of the Christian theological school Pantaenus (about 180) is mentioned, who was followed by Clement, Origen, Heracles, Dionysius, Pierius, Theognostes, Serapion, Peter Martyr. The last famous teacher of the school was Didymus the Blind, 335 to 395.

Alphabet.—The alphabet of any language is the series of letters, arranged in the customary order, which form the elements of the language when written. The name is derived from the first two letters in the Greek alphabet, which are named *alpha, beta*. The letters in the English alphabet have the same forms as those of the Latin language, which were borrowed from the Greek. The Latin alphabet, however, did not contain all the Greek letters. The letters of the Greek alphabet were borrowed from the Phenician, which was that used by many of the old Semitic nations, and is of unknown origin. It consisted of twenty-two signs, representing consonantal sounds. Into this alphabet the Greeks introduced many modifications, and the changes made by the Romans were also considerable. Its use in English presents many variations from its final condition in the Latin language. Thus, I and J, and U and V, instead of being merely graphic variations, were changed so as to represent different sounds, during the sixteenth and seventeenth centuries. W was added previously, in the middle ages. The twenty-six letters of our alphabet have been thus classified with regard to their history: (1) B, D, H, K, L, M, N, P, Q, R, S, T, letters from the Phenician; (2) A, E, I, O, Z, originally Phenician, but changed by the Greeks; (3) U (same as V), X, invented by the Greeks; (4) C, F, Phenician letters with changed value; (5) G, of Latin invention; (6) Y, introduced into Latin from the Greek, with changed form; (7) J, V, graphic Latin forms raised to independent letters; (8) W, a recent addition, formed by doubling U (or V), whence its name.

The imperfections of the English alphabet are manifold: (1) Different consonants are used to represent the same sound; as *c* (soft) and *s*, *g* (soft) and *j*, *c* (hard) and *k*, *q* and *k*, *x* and *ks*. (2) Different sounds are expressed by the same letter; as *c* in *cat* and *cell*, *g* in *get* and *gin*, *s* in *sit* and *as*, *f* in *if* and *of*, etc. (3) The vowels are constantly interchanged, as is illustrated in the subjoined table of the vowel elements of the language and their literal representations.

From this table it will be seen that the letter *a* is used to represent *seven* different sounds; *e*, *five* sounds; *o*, *six* sounds, etc. The names given to the letters are not in conformity with a uniform principle of designation. Thus, the names of *b, c, d, g, p, t, v*, and *z* are *be, ce, de, ge*, etc.; while the names of *f, l, m, n, s*, and *x* are *ef, el, em, en*, etc.; and the names of *j, k*, are *ja, ka*.

The heterogeneity of these names and of their construction will be obvious. It is important that the teacher should take cognizance of these incongruities in giving elementary instruction, as they dictate special methods of presentation.

Short.	*Long.*
ĕ as in end	*ā e* as in ape, they
ă as in hat	*ē ē* as in care, ere
ä as in ask	*ä* as in art
ą ŏ as in what, not	*ō ō* as in all, orb
ĭ as in sit	*ē ī* as in eve, pique
ọ u ŏŏ as in wolf, put, book	*ē ī ȳ* as in her, sir, myrrh
ŭ as in love, luck	*ō* as in old
	ọ u ōō as in do, rule, too
	ū as in urn
	ū as in use
	ī ȳ as in ice, my
	oi oy as in oil, boy
	ou ow as in out, owl

Analytic Method of Teaching.—This is the method used by the teacher when he presents to his pupils composite truths or facts, and by means of analysis shows the principles involved, or leads the mind of the pupil to an analysis of them for himself. In this way he teaches principles which the pupil is to apply to the elucidation of many diverse problems. In the synthetic method, the teacher begins with principles, explains their meaning, and shows how they are to be applied.

Thus, suppose the pupil is to be taught how to add and subtract fractions. According to the analytic method, the fractions to be operated upon are presented to the pupil's mind, and he is shown, first, the difficulty involved, and secondly, how to surmount this difficulty, by (1) finding a common denominator, and (2) by changing the numerators so that the fractions with the common denominator may have the same value as the given fractions. Then the method of addition or subtraction becomes obvious. In this way, learning the principle himself by analysis, the pupil is enabled to construct a general rule, and apply it to any given case. In the synthetic method, the pupil would be taught, in the first place, the nature and use of a common denominator, then the method of reducing fractions to a common denominator, and then to add or subtract fractions by finding a common denominator. If the object of the instruction given were, exclusively, to make the pupil expert in adding and subtracting fractions, the synthetic method would perhaps have some advantage over the analytic; but, since an important part of this object is to train the mind, the analytic method is greatly to be preferred; for (1) it stimulates the mind to greater activity, (2) it teaches it how to investigate for itself, and to discover truth, and (3) it gives it a much clearer knowledge of the fundamental principles involved in the subject taught.

Whether the analytic method should be employed, and to what extent, is to be determined by a consideration of the nature of the subject taught, and the degree of advancement of the student. In the higher stages of education, much time would be lost by rigorously following this method; and if, in the more elementary stages, the pupil's mind has been thoroughly trained in this way, it will not be necessary to adhere to it when he comes to study the higher branches. At every stage, and in every branch of instruction, however, there will be occasion for the use of both analysis and synthesis; and the skill and judgment of the teacher must be exercised at every step, to determine which is the appropriate method to be employed.

Arts, Liberal.—The term *arts*, or *liberal arts*, was, during the middle ages, applied to certain studies which constituted an essential part of a learned education. The full course of study, at that period, embraced "the seven liberal arts," three of which—grammar, logic and rhetoric—composed what was called the *trivium* (the triple way to eloquence); and the remaining four—music, arithmetic, geometry, and astronomy—constituted the *quadrivium* (the quadruple way). The term *faculty of arts* denoted, in the universities, those who devoted themselves to philosophy and science

in contradistinction to the faculty of theology, of medicine, or of law. *Master* (Lat. *magister*) was used to designate one who taught the liberal arts; and *doctor*, one who taught or practiced divinity, law or medicine. The first degree (*gradus*) of proficiency in the arts, instituted, as it is said, by Gregory IX. about the middle of the thirteenth century, was that of *bachelor* (Lat. *baccalaureus*); and the second that of *master*, which originally conferred the right, and indeed imposed the duty, of teaching one or more of the liberal arts. This title, in many colleges and universities of the United States, England, and France, is now merely honorary.

Attention (from the Latin *tendere*, to strain, implying a strained effort of the mind) is perhaps the most important of the mind's activities, since the quality and duration of the intellectual impressions depend upon the degree of attention with which the faculties have been exerted in acquiring them. There is no point of difference between the trained and the untrained intellect so striking as the voluntary power of fixing the mind for a continuous period of time upon any given subject. Hence, to discipline this power becomes, in an especial manner, the office and duty of the educator.

Commencing with the most rudimental exercise of the observing faculties, he passes on, step by step, to the process by which, through the entire and determined giving up, as it were, of the whole mind to the contemplation and study of any given class of facts or ideas, the student learns to evolve new truths, or analytically to explain the intricacies of abstruse problems. When the attention has become obedient to the will, this branch of mental training is complete; and, therefore, the aim of the educator should be to instil habits of controlling the attention, and rigidly preventing those of desultory, wayward application, or listlessness.

This power of continuous attention is, without doubt, the most valuable result of intellectual training. To produce this result it is of the first importance to interest the pupils, especially in the earlier stages of instruction. Young minds have an intense desire to know—not words merely, but things. They have a strong craving for new ideas, and take the deepest enjoyment in the exercise of the perceptive and conceptive faculties. Hence the importance of object-teaching. The perceptive faculties are exercised in the observation of the sensible qualities of all the different things with which the child is surrounded, or which may be presented to its view by the teacher, for the purpose of attracting its attention; and these objects should be diversified as much as possible, so as to appeal to the child's love of novelty.

The attention should not be exercised for long periods of time. When the teacher perceives that it is flagging, it is best to stop the exercise; for all that is done while the child's attention is relaxed is worse than fruitless. It is from inattention to this truth that children are often made incurably listless in school. They are set at exercises which awaken no interest in their minds, and, consequently, acquire ineradicable habits of superficial, careless attention. In all the subsequent studies of the pupil it is essential that his interest be awakened as much as possible; but it will be found there is a reciprocal action of interest and attention. The pupil having acquired in the first stages, in some degree, the habit of voluntary attention, will, as a matter of duty, apply his mind to the studies prescribed for him; and this very application, if earnest and diligent, will soon excite the deepest interest in the subjects of study.

Attention requires a vigorous exercise of the brain, and, therefore, is more or less dependent upon the physical condition. When this has been exhausted by labor, either bodily or mental, or weakened by disease, attention is scarcely possible; and the effort to give it is injurious, because it induces still further nervous prostration. Neither should deep attention be exerted or attempted immediately after a hearty meal. The nervous energy is then directed to the digestive functions, which active cerebration will greatly disturb. Hence the diet of a student should be light but nutritious. The brain should also be supplied with thoroughly oxygenated blood. No one can think well in an impure atmosphere, especially if it is contaminated by the breathing of many persons.

Authority is the right to command, or the persons or body by whom the right is exercised; sometimes, also, in matters pertaining to the intellect, the power to influence or exact belief. In education, the term has especially this twofold application: (1) to the discipline or management of children; (2) to their instruction. The primary authority, both in respect to time and importance, to which the child is subjected is that of the parent. The right exercise of parental authority is, therefore, one of the most important elements in the education of the child.

If the child from its earliest years has been accustomed to recognize and submit to the authority of its parents, firmly but judiciously exercised, there will be, ordinarily, but little difficulty, on the part of the teacher, in making his authority effective. The child, on entering the school, feels for the first time that it is under an authority different from that of its parents, to which it has previously learned to submit with unquestioning obedience. Its first impulse is, perhaps, to refuse submission to this new authority; and the influence of the teacher over the child will greatly depend upon the manner in which obedience is enforced. In the authority of the teacher, as well as in that of the parents, two elements are combined—one that attracts and encourages, and one that curbs and subdues. Without the former, authority is arbitrary and violent; without the latter, it is feeble and often powerless.

It is a matter of the utmost importance that all persons concerned in the education of the child should coöperate harmoniously; since nothing tends so much to weaken the force of authority in the mind of the child as to notice a conflict among those under whose control it is placed. Father and mother, parent and teacher, teacher and school board, should, at any rate as far as the child is aware, agree absolutely; since the less children know of any difference of opinion between their custodians, the more cheerfully will they respect and submit to the principle of authority in general.

Bachelor (Lat. *Baccalaureus*), a term applied to one who has reached a certain grade in a college or university education; as, *Bachelor of Arts* (A. B., or B. A.), *Bachelor of Civil Law* (B. C. L.), *Bachelor of Divinity* (B. D.), etc. The word as thus used is of uncertain etymology. It was introduced into the University of Paris by Pope Gregory IX. in the thirteenth century, and applied as a title to those students who had passed certain preliminary examinations, but were not prepared for admission into the rank of master, teacher, or doctor. Afterward, it was adopted by other European universities, to indicate the lowest academical honor, as it is now used both in this country and in Europe.

Belles-Lettres is a French expression for *polite literature, i. e.*, books and language in so far as they are shaped by the idea of beauty. It has been used in English to designate a somewhat vague class of studies connected, more or less nearly, with the mastery of literature on its æsthetic side. Some of the colleges in the United States have a professor of *belles-lettres*. He teaches rhetoric and elocution mainly; but poetry, drama, prose fiction, criticism, classical philology, the humanities in general, are all in his province.

Benedictines, Schools of the.—The monastic order founded by St. Benedict of Nursia, at the beginning of the sixth century, occupies a prominent place in the early history of education in Christian Europe. The education offered by the Benedictine order was, at first, intended only for boys who were to enter upon a monastic life.

According to the fundamental rule of the order, the separation of the monk from the world should begin as early as possible. Boys called *pueri oblati*, were admitted when only five years of age. The discipline was strict. The rod was used to punish offenses against punctuality and order, and deficiencies in recitations; more serious offenses were sometimes punished by the scourge. Latin was a prominent part of the instruction, and almost exclusively the language of conversation. Reading, writing, and the singing of psalms were the prominent subjects of instruction; but the course also included rhetoric, dialectics, arithmetic, astronomy, geography, natural science, and medicine. Special attention was given to history.

Brain, the principal organ of the nervous system, and the fountain of nervous energy to the whole body. It is the seat of consciousness, feeling, and intellect, and also the recipient of all impressions made on any part of the nervous system. The brain being the organ especially concerned in education, its hygiene is an important subject for the attention of the teacher.

Exercise is the natural instrument by which all the bodily organs are brought to a maturity of growth and strength, and by which they are kept in condition of health. In applying this principle, the teacher should see that the exercise be proper (1) as to its kind, (2) as to its degree, (3) as to its direction; and, in all these respects, that it is adapted to the age and peculiar physical condition of the child to be educated. The same process will not answer for all. The teacher who wishes to do good, whose aim is really to educate, will study the external indications of temperament, of bodily health and disease, and also of cerebral structure; and will, as far as possible, regulate his operations accordingly. The brain is exercised both by thought and feeling; being the seat of various faculties, both mental and moral, its activities are aroused by whatever is addressed to the intellect, the conscience, the emotions, or the propensities. "The first step" toward establishing the regular exercise of the brain is to educate and train the mental faculties in youth; and the second is to place the individual habitually in circumstances demanding the discharge of useful and important duties.

The healthy development of the brain may be prevented (1) by wrong exercise, (2) by being overtasked, (3) by bad physical conditions. Overstraining, or too long continued attention; excessive tasks from books, committed to memory under the pressure of fear; long confinement in close rooms, and hence the want of properly oxygenated air, will impair the functions of the brain, and lay the foundation not only of future disease but perhaps of future imbecility. So, too, when subjected to harsh discipline, to unkind treatment, to a moral atmosphere vitiated by the irritability, ill-humor, and moroseness of the parent or teacher, the brain of the child loses even its natural or normal physical condition; and its growth is necessarily morbid.

Business Colleges, as now existing in the United States, are the product of individual effort directed to the supplying of a public want. As distinct institutions, they are the outgrowth of the past half century, although schools and private classes for instruction in the commercial branches—particularly bookkeeping and penmanship—have been in vogue for a much longer time. Starting with bookkeeping, penmanship, and arithmetic, the course of study is now materially enlarged and intensified, and other not less important branches have been added, the purpose and effect of this being to give form and symmetry to the training, and to meet the increased demand for broadly educated accountants and clerks. Among the branches which have been added are political economy, including civil government; commercial law; correspondence, embracing the elements of English composition and practical grammar; stenography, typewriting, and modern languages, particularly German, French, and Spanish. Some institutions have also made a prominent feature of telegraphy.

But the feature which attracts most attention, both from its novelty and its usefulness, pertains to the practical methods of applying instruction under the guise of real business operations. This plan embraces the organizing of the advanced students into business communities, so adjusted in their workings as to represent the varied interests and intercourse which exist in the outside world. Thus, certain members are established as merchants, others as agents or brokers,

others as manufacturers, others as importers and jobbers, others as bankers, etc.; each in his turn serving in these several relations, and all together performing the functions of a working community.

Not only is this method carried on in the separate schools, but some of the most pro -inent among them in the larger cities have established a system of intercommunication by which the work is widely extended through postal correspondence. Thus representative merchandise is really shipped by the members of one school to those of another, drafts are drawn, remittances made, extended business settlements effected, and, in fact, all the minute details of a varied business are carried on. As will be seen, this extended correspondence and coöperation give the best opportunity for effective criticism and discipline, and may be made as completely the rehearsal of the future business man for his life work as is the clinical practice of the medical college or the moot-court of the law school.

Calisthenics, a system of physical exercises designed to promote strength and gracefulness of movement; or, by assisting the natural and harmonious development of the muscular system, to improve the health, and add to the beauty of personal appearance. Calisthenic and gymnastic exercises are based on the same principle—that exercise is essential to the proper development of the physical as well as mental faculties, and to the maintenance of their healthy condition; and that, in education, it is requisite that suitable exercises should be systematically employed. The only difference between calisthenics and gymnastics consists in the adaptation of the former to the physical education of girls; and, of course, the exercises employed require a less violent muscular action.

Carnegie Institution of Washington.—A body founded by Andrew Carnegie in 1902 with a gift of $10,000,000, to which he added $2,000,000 in 1907, organized under the laws of the District of Columbia, and newly incorporated by Congress in 1904. Its purpose is in the broadest possible manner to encourage investigation, research, and discovery, and to show the application of knowledge to the improvement of mankind. It is managed by a board of twenty-four trustees who meet annually, its affairs being conducted by an executive committee who act through the president of the institution. The objects of the institution are carried out through grants of money in large and small amounts to persons engaged in special investigations. The president prepares plans and suggestions for the work of the institution and recommends all grants to applicants. The recipients of the funds are required to report the results of their work annually, and these detailed reports, with a general report by the president, are published in the yearbook of the institution. The work falls under four heads: 1. Large projects requiring continuous research during a series of years. 2. Small projects to the number of about 300 now in progress. 3. Tentative investigations carried on by young men and women desiring to pursue special problems for one or two years. 4. Publication of meritorious works in various fields which would not otherwise be readily printed, and of reports. Of these about forty volumes have been issued.

Chautauqua Institution.—A system of popular education inaugurated in 1874 by Lewis Miller and Rev. John H. Vincent as the Sunday-School Assembly. The place chosen was on the shores of Chautauqua lake, in western New York. The first meeting, lasting two weeks, was well attended, and comprised courses of biblical study, a normal department, lectures, and recreation. A novel feature was a relief map of Palestine, 300 feet in length, laid out by the lake. In the following years the development was rapid, sessions were lengthened to two months and courses of study were provided in a large variety of subjects.

As now organized, the institution has schools of English, modern languages, classics, mathematics and science, social sciences, pedagogy, religious teaching, library training, music, fine arts, expression, physical education, domestic science, practical arts, and arts and crafts. Over 200 instructors and lecturers are occupied in the work, which yearly attracts a large body of teachers and adult students. The buildings include residence cottages, gymnasium, and concert and lecture halls of large capacity. The cost of the courses is low and the various forms of entertainment are free to all in attendance, who pay a fee on entering the community.

The class work of the summer sessions is supplemented by the Chautauqua Literary and Scientific Circle, a system which consists of the enrollment of readers for a four years' course of home study controlled by a committee of the institution. The course includes reading in specified fields in which books, in part prepared for this special purpose, are recommended, and the preparation of written analyses of the work done. Guidance is afforded in the monthly *Chautauquan.* The membership fee is $5 a year. Since its organization in 1878 about 300,000 persons have pursued the courses in whole or in part. Nearly 200 assemblies, modeled on Chautauqua, exist in various parts of the United States.

Coeducation of the sexes denotes the system of educating males and females together, that is, in the same institution, school, or class, pupils of each sex receiving, by means of the same studies and methods, the same school training and culture. This system, in the lower grades of schools, has been always prevalent in the United States as being the most convenient and economical for small communities.

The alleged benefits arising from it are chiefly the following: (1) Improvement in discipline, the self-will, violence, and rudeness of the boys being restrained by the presence of the girls; while the girls' manners are rendered more easy and self-possessed by daily school association with the other sex; (2) improvement in instruction and study, the diversities of the sexes preventing extreme methods, and exclusive, one-sided training and study. Thus, it is said, that the tastes of the boys for severer studies, such as mathematics, are corrected by the inclination of the girls for the lighter and more sentimental studies, general literature, poetry, etc.; (3) a more sound and healthy development of both sexes; in support of which it is asserted that schools kept exclusively for girls or boys require a much more strict surveillance on the part of the teachers. The girls, confined by themselves, develop the sexual tension much earlier, their imagination being the reigning faculty, and not being bridled by intercourse with society in its normal form. So it is with the boys, on the other hand. Daily association in the classroom prevents this tension, and supplies its place by indifference. Each sex, testing its strength with the other, on an intellectual plane, in the presence of the teacher—each one seeing the weakness and strength of the other, learns to esteem what is essential at its true value.

Those who oppose coeducation allege as reasons for their views: (1) That there is need of a better adaptation of instruction and discipline to the peculiarities of the sexes than is possible in mixed schools; (2) that the manners of the girls are unfavorably affected by the constant example of the rougher, coarser conduct of the boys, the latter receiving but little or no benefit from the presence of the girls; and (3) that the moral character of each is liable to be impaired by a premature development of the sexual instincts, caused by the constant presence of the other sex. With but few exceptions, these arguments are advanced by those who have only theoretically considered the subject, or by those whose practical experience has been in connection with mixed schools of which the discipline and management were imperfect, thus leading to abuses which, under proper and normal circumstances, would have been eliminated. On the other hand, where there has been a thorough and proper trial of the coeducation of boys and girls, the testimony seems to be strongly, and almost exclusively, favorable to that system.

College (Latin *collegium*, originally meaning any kind of association) is a name given to large classes of educational institutions, especially in the United States, England, and France. The academic use of the word *college* began about the beginning of the thirteenth century, and originated in the following manner. The students who flocked to the university towns often came into collision with the citizens, and frequent brawls resulted. In order to protect the public peace, as well as to watch over the students, lodging-houses were provided in which the students were under the charge of a superior. These houses were called *colleges;* and this name was afterward applied to any academic institution of a certain grade, whether connected with a university or not. Colleges appear to have first been established in Paris; and soon afterward in Oxford and Cambridge, in Bologna and Padua, and in Prague and Vienna. They were richly endowed by popes and other dignitaries of the church, princes, and powerful families; and, in some of the university towns just named, they became so numerous in the fifteenth century that almost every student of the university, was a member of some one of the colleges.

The American colleges grant degrees in the arts, and give the ordinary course of undergraduate instruction. Many of the older colleges add instruction in theology, law, and medicine, and thus approach to the rank of universities in the European sense of the word. Most of the so-called universities, however, furnish only collegiate instruction; and there is, as yet, no well recognized distinction between the terms *college* and *university* in the United States. About 1900, however, an effort was made toward the standardization of American colleges and universities, which has resulted in placing the following institutions in the ranking group: California, Catholic of America, Chicago, Clark, Columbia, Cornell, Harvard, Illinois, Indiana, Iowa, Johns Hopkins, Kansas, Leland Stanford, Jr., Michigan, Minnesota, Missouri, Nebraska, Pennsylvania, Princeton, Virginia, Wisconsin, and Yale.

Institutions of this kind, even, considerably differ in their mode of organization. On the one hand, are those which, adhering to the old system, have fixed standards of admission and a curriculum strictly prescribed; on the other, those which have practically no prescribed curriculum, their course of studies being arranged in schools, among which the student may select at will. Of the former Princeton may be taken as a representative; of the latter, the University of Virginia. Between these two extremes, are those that allow a greater or less freedom of choice to the student. Some, like Harvard and Yale, have distinct scientific departments; others, like Cornell University, have parallel courses, in which greater attention may be paid to science or to modern languages than to the classical course.

Of about 500 institutions in the United States, styled colleges or universities, and possessing the right to confer degrees, a large majority have preparatory, and some, inferior departments, which often comprise the greater part of the students. Most of the leading universities have postgraduate courses of study.

The principal degrees conferred are as follows: undergraduate—Bachelor of Arts, of Science, of Philosophy, of Literature, of Letters. The term of study for this degree is, in almost every institution, four years; the method of instruction is ordinarily a combination of lectures, recitations, and written examinations.

The postgraduate degrees are Master of Arts, Doctor of Philosophy, Doctor of Letters, Doctor of Science; professional, Civil Engineer, Mining Engineer, Electrical Engineer, Bachelor of Laws, Master of Laws, Doctor of Laws, Doctor of Civil Law, Bachelor of Divinity, Doctor of Medicine; honorary, Doctor of Divinity, Doctor of Laws. The degree of Master of Arts is frequently conferred, *in course,* upon Bachelors of Arts of three years standing; but, in some institutions, it implies a course of postgraduate study, and it is often honorary.

COLLEGES AND UNIVERSITIES OF THE UNITED STATES

(From Latest United States Reports)

TABLE I. Universities and Colleges for Men and for Both Sexes—Division A.
(Institutions constituting the Association of American Universities)
TABLE II. Universities and Colleges for Men and for Both Sexes—Division B.
TABLE III. Agricultural and Technological Schools.
TABLE IV. Colleges for Women—Division A.
TABLE V. Colleges for Women—Division B.

TABLE I. UNIVERSITIES AND COLLEGES FOR MEN AND FOR BOTH SEXES—DIVISION A

Founded	Name of Institution	Location	President or Dean	Denominational Control	Colors	Cost of Tuition	Value of Property (Including Endowment)	Number of Instructors	Number of Students	Volumes in Library
1889	**Catholic Univ. of Amer.**	Washington, D. C.	Rev. Thos. J. Shahan, D.D.	R. Catholic	Gold and White	$100	$2,250,000	54	400	70,000
1889	**Clark University**	Worcester, Mass.	G. Stanley Hall, LL. D.	Non-sect.		100	4,900,000	25	116	60,000
1754	**Columbia University**	New York City, N.Y.	Nicholas M. Butler, LL. D.	Non-sect.	Light Blue and White	150–250	38,000,000	657	9,086	450,000
1853	**Cornell University**	Ithaca, N. Y.	Jacob G. Schurman, LL. D.	Non-sect.	Cornelian and White	150	15,500,000	652	5,624	396,000
1636	**Harvard University**	Cambridge, Mass.	A. L. Lowell, LL. D.	Non-sect.	Crimson	150	30,000,000	639	5,045	883,000
1820	**Indiana University**	Bloomington, Ind.	W. L. Bryan, LL. D.	State	Crimson and Cream	None	2,000,000	80	2,431	84,000
1876	**Johns Hopkins Univ.**	Baltimore, Md.	Frank J. Goodnow, LL. D.	Non-sect.	Black and Old Gold	150–200	6,900,000	200	775	156,000
1891	**Leland Stanford Jr. University**	Stanford Univ., Cal.	John C. Branner, LL. D.	Non-sect.	Cardinal	None	33,000,000	146	1,770	163,000
1746	**Princeton University**	Princeton, N. J.	John G. Hibben, LL. D.	Non-sect.	Orange and Black	160	15,000,000	174	1,521	283,000
1860	**Univ. of California**	Berkeley, Cal.	B. I. Wheeler, LL. D.	State	Blue and Gold	None	15,000,000	386	3,450	240,000
1890	**Univ. of Chicago**	Chicago, Ill.	H. P. Judson, LL. D.	Non-sect.	Maroon	180–250	32,000,000	354	6,466	360,000
1867	**Univ. of Illinois**	Urbana, Ill.	E. J. James, LL. D.	State	Orange and Blue	None	3,500,000	550	5,207	188,000
1847	**Univ. of Iowa**	Iowa City, Ia.	Thomas MacBride, LL.D.	State	Old Gold	20–50	3,500,000	166	2,090	90,000
1864	**Univ. of Kansas**	Lawrence, Kan.	Frank Strong, LL. D.	State	Crimson and Dark Blue	10–50	1,750,000	172	2,500	80,000
1837	**Univ. of Michigan**	Ann Arbor, Mich.	H. B. Hutchins, LL. D.	State	Yellow and Blue	60	4,200,000	320	5,381	271,000
1868	**Univ. of Minnesota**	Minneapolis, Minn.	George E. Vincent, LL. D.	State	Old Gold and Maroon	35–200	7,900,000	296	6,024	150,000
1839	**Univ. of Missouri**	Columbia, Mo.	Albert R. Hill, LL. D.	State	Black and Old Gold	20	3,600,000	213	3,141	116,000
1869	**Univ. of Nebraska**	Lincoln, Neb.	Samuel Avery, LL. D.	State	Scarlet and Cream	None	3,100,000	333	4,624	150,000
1740	**Univ. of Pennsylvania**	Philadelphia, Pa.	Edgar F. Smith, LL. D.	Non-sect.	Red and Blue	100–200	12,000,000	540	5,200	335,000
1819	**Univ. of Virginia**	Charlottesville, Va.	E. A. Alderman, D. C. L.	State	Orange and Dark Blue	None	4,600,000	74	725	75,000
1848	**Univ. of Wisconsin**	Madison, Wis.	C. R. Van Hise, LL. D.	State	Cardinal	70	6,400,000	516	5,539	170,000
1701	**Yale University**	New Haven, Conn.	Arthur T. Hadley, LL. D.	Non-sect.	Blue	155 up	20,000,000	410	3,282	600,000

TABLE II. UNIVERSITIES AND COLLEGES FOR MEN AND FOR BOTH SEXES—DIVISION B

1896	**Adelphi College**	Brooklyn, N. Y.	S. Parkes Cadman, D. D.	Non-sect.	Brown and Gold	180	750,000	30	458	14,000
1859	**Adrian College**	Adrian, Mich.	B. W. Anthony, LL. D.	Meth.-Prot.	Canary and Black	42	250,000	25	220	10,000
1886	**Albany College**	Albany, Ore.	H. M. Crooks, M. A.	Presbyterian		50	80,000	15	185	3,600
1861	**Albion College**	Albion, Mich.	Samuel Dickie, LL. D.	Methodist		60	537,000	26	501	22,000
1881	**Albright College**	Myerstown, Pa.	John F. Dunlap, M. A.	Un. Evang.		75	200,000	20	214	7,000
1836	**Alfred University**	Alfred, N. Y.	Boothe C. Davis, Ph. D.	Non-sect.	Royal Purple and Old Gold	50	550,000	34	400	25,000
1815	**Allegheny College**	Meadville, Pa.	W. H. Crawford, LL. D.	Methodist		90	1,500,000	20	364	30,000
1880	**Allen University**	Columbia, S. C.	W. W. Beckett, D. D.	Afr. Meth.		64	200,000	19	684	
1886	**Alma College**	Alma, Mich.	T. G. Blaisdell, Ph. D.	Presbyterian		50	600,000	29	302	24,100
1885	**American Int'l College**	Springfield, Mass.	R. DeWitt Mallory, D. D.	Non-sect.		40	150,000	15	100	2,500
1891	**American University**	Washington, D. C.	Frank Hamilton, Ph. D.	Methodist			3,000,000			20,000
1821	**Amherst College**	Amherst, Mass.	Alex. Meiklejohn, LL. D.	Non-sect.	Purple and White	140	3,500,000	47	480	100,000
1855	**Amity College**	College Springs, Ia.	R. A. McConaha, M. A.	Non-sect.		27	70,000	10	135	1,600
1850	**Antioch College**	Yellow Springs, Ohio	S. D. Fess, LL. D.	Non-sect.		42	300,000	16	264	12,000
1872	**Arkansas College**	Batesville, Ark.	F. R. Graves, M. A.	Presbyterian		45	100,000	10	140	5,600
1892	**Ark. Cumberland Col.**	Clarksville, Ark.	E. E. Morris, M. A.	Cumb. Pres.			100,000	9	218	4,000
1876	**Ashland College**	Ashland, Ohio	W. D. Furry, Ph. D.	Dunkard		50	200,000	12	225	
1867	**Atlanta Baptist College**	Atlanta, Ga.	John Hope, M. A.	Baptist		12	160,000	18	265	
1869	**Atlanta University**	Atlanta, Ga.	Edward F. Ware, M. A.	Non-sect.	Steel Gray and Crimson	25–30	361,000	23	394	14,000
1869	**Augsburg Seminary**	Minneapolis, Minn.	Rev. George Sverdrup, Jr.	Lutheran		30	150,000	14	150	6,000
1860	**Augustana College**	Rock Island, Ill.	G. A. Andreen, Ph. D.	Lutheran		36	750,000	40	555	27,250
1849	**Austin College**	Sherman, Tex.	Rev. T. S. Clyce, D. D.	Presbyterian		76	500,000	12	216	5,000
1880	**Bacone College**	Bacone, Okla.	E. N. Collette, M. A.	Baptist		30	100,000	16	149	3,000
1858	**Baker University**	Baldwin, Kan.	Wilbur N. Mason, D. D.	Methodist	Burnt Orange	70	560,000	35	750	30,000
1846	**Baldwin-Wallace Col.**	Berea, Ohio	A. L. Breslich, Ph. D.	Methodist	Old Gold and Steel Brown		375,000	18	370	12,000
1863	**Bates College**	Lewiston, Me.	Rev. G. C. Chase, D. D.	Non-sect.	Garnet	90	1,000,000	24	485	38,000
1845	**Baylor University**	Waco, Tex.	S. P. Brooks, LL. D.	Baptist	Green and Gold	60	690,000	90	1,434	24,000
1853	**Beaver College**	Beaver, Pa.	Le Roy Weller, M. A.	Methodist			150,000	17	200	3,000
1880	**Bellevue College**	Bellevue, Neb.	Stephen W. Stookey, LL.D.	Presbyterian		50	200,000	20	170	6,200
1846	**Beloit College**	Beloit, Wis.	Edward D. Eaton, LL. D.	Non-sect.	Gold	80	1,730,000	31	391	47,600
	Benedict College	Columbia, S. C.	B. W. Valentine, M. A.	Baptist		12	500,000	31	657	11,000
1855	**Berea College**	Berea, Ky.	William G. Frost, D. D.	Non-sect.	Blue and White	30	1,500,000	70	1,426	26,000
1840	**Bethany College**	Bethany, W. Va.	T. E. Cramblet, LL. D.	Christian	White and Green	40	555,000	23	350	10,000
1881	**Bethany College**	Lindsborg, Kan.	Ernest F. Pihlblad, M. A.	Lutheran		50–140	268,000	48	886	8,500
1845	**Bethel College**	McKenzie, Tenn.	N. J. Finney, M. A.	Baptist			72,000	9	162	
1854	**Bethel College**	Russellville, Ky.	H. G. Brownell, M. A.	Baptist		50	200,000	10	135	7,000
1867	**Biddle University**	Charlotte, N. C.	H. L. McCrorey, M. A.	Presbyterian			300,000	15	212	6,000
1859	**Blackburn College**	Carlinville, Ill.	W. M. Hudson, D. D.	Presbyterian		60–75	210,000	12	150	4,000
1863	**Boston College**	Boston, Mass.	T. I. Gasson, S. J., Ph. D.	R. Catholic			1,250,000	30	865	42,000
1869	**Boston University**	Boston, Mass.	Lemuel H. Murlin, LL. D.	Methodist	Scarlet and White	130	3,700,000	161	1,274	37,000
1794	**Bowdoin College**	Brunswick, Me.	Rev. W. D. Hyde, LL. D.	Non-sect.	White	75	3,250,000	64	398	192,000

TABLE II. COLLEGES AND UNIVERSITIES OF THE UNITED STATES—DIVISION B.—Continued

Founded	Name of Institution	Location	President or Dean	Denominational Control	Colors	Cost of Tuition	Value of Property Including Endowment)	Number of Instructors	Number of Students	Volumes in Library
1857	**Bowdon College**	Bowdon, Ga.	Vachel D. Whatley, M. A.	Non-sect.	Red, White and Blue	$ 50	$ 40,000	10	205	5,000
1880	**Bridgewater College**	Bridgewater, Va.	John S. Flory, Ph. D.	Ger. Baptist	.....	.....	1,250,000	19	200	11,000
1887	**Brigham Young College**	Logan, Utah	James H. Linford, B. Sc.	L.DaySaints	Crimson	25	200,000	29	600	6,000
1764	**Brown University**	Providence, R. I.	Rev. W. H. P. Faunce, D.D.	Non-sect.	Brown and White	150	5,000,000	85	931	170,000
1870	**Buchtel College**	Akron, Ohio	A. B. Church, LL. D.	Universalist.	.....	50	380,000	17	282	9,000
1846	**Bucknell University**	Lewisburg, Penn.	J. H. Harris, LL. D.	Baptist	Orange and Blue	50	1,100,000	45	686	30,000
1891	**Buena Vista College**	Storm Lake, Ia.	Rev. J. P. Linn, D. D.	Presbyterian	.....	50	165,000	18	200	7,000
1895	**Burleson College**	Greenville, Tex.	Oscar C. Payne, M. A.	.....	.....	.....	35,000	13	248	9,000
1848	**Burritt College**	Spencer, Tenn.	W. S. Graves, M. A.	Non-sect.	.....	.....	40,000	7	227	.....
1850	**Butler College**	Indianapolis, Ind.	Thomas C. Howe, Ph. D.	Non-sect.	Blue and White	75	700,000	24	540	17,500
1876	**California College**	Oakland, Cal.	Arthur Macurda	Baptist	.....	.....	125,000	12	88	7,000
1903	**Campbell College**	Holton, Kan.	W. D. Marburger, D. D.	Un.Brethren	.....	.....	250,000	16	406	3,500
1870	**Canisius College**	Buffalo, N. Y.	Rev. George J. Krim, S. J.	R. Catholic.	.....	50	600,000	24	502	26,700
1830	**Capital University**	Columbus, Ohio	Otto Mees, M. A.	Lutheran	.....	40	225,000	11	124	7,000
1866	**Carleton College**	Northfield, Minn.	D. J. Cowling, Ph. D.	Non-sect.	Maize and Yale Blue	50	950,000	29	460	23,000
1854	**Carleton College**	Farmington, Mo.	C. Z. Gilliland, M. A.	Methodist	.....	40	50,000	10	326	.....
1846	**Carroll College**	Waukesha, Wis.	W. O. Carrier, D. D.	Presbyterian	.....	65	525,000	18	140	6,000
1851	**Carson and Newman C.**	Jefferson City, Tenn.	Jesse M. Burnett, D. D.	Baptist	.....	.....	200,000	23	164	2,800
1870	**Carthage College**	Carthage, Ill.	H. D. Hoover, Ph. D.	Lutheran	.....	40	340,000	18	163	8,000
1851	**Catawba College**	Newton, N. C.	J. D. Andrew, M. A.	Ref. Ch. in U. S.	.....	45	100,000	11	125	3,500
1894	**Cedarville College**	Cedarville, Ohio	Rev. D. McKinney, D. D.	Ref. Presb.	.....	26	125,000	12	103	3,500
1825	**Centenary Coll. of La.**	Shreveport, La.	Felix R. Hill, D. D.	Meth. So.	.....	50	150,000	7	125	4,000
1857	**Central College**	Fayette, Mo.	Paul H. Linn, D. D.	Meth. So.	.....	50	450,000	12	209	11,000
1889	**Central H. S. of Phila.**	Philadelphia, Pa.	R. E. Thompson, LL. D.	City	.....	.....	1,750,000	85	982	34,000
1905	**Central Holiness Univ.**	University Park, Ia.	G. A. McLaughlin, D. D.	.....	.....	36	300,000	25	400	.....
1853	**Central Univ. of Iowa**	Pella, Iowa	John Beyl, Ph. D.	Baptist	Red and White	40–45	300,000	19	250	8,000
1819	**Central Univ. of Ky.**	Danville, Ky.	F. W. Hinitt, Ph. D.	Presbyterian	Cardinal and Blue	50–100	800,000	50	400	22,000
1864	**Central Wesleyan Col.**	Warrenton, Mo.	Otto E. Kriege, D. D.	Methodist	.....	60	250,000	21	306	10,000
1891	**Charles City College**	Charles City, Iowa	W. F. Finke, Litt. D.	Ger. Meth.	.....	50	240,000	17	238	7,500
1867	**Chattanooga University**	Chattanooga, Tenn.	Rev. J. H. Race, D. D.	Methodist	.....	60	750,000	28	408	11,400
1851	**Christian Brothers Col.**	St. Louis, Mo.	Brother Lawrence Sixtus	R. Catholic.	Purple and Old Gold	75	500,000	43	586	10,000
1871	**Christian Brothers Col.**	Memphis, Tenn.	Rev. Brother Edward	R. Catholic.	.....	.....	125,000	20	310	5,000
1861	**Christian College**	Columbia, Mo.	Mrs. L. W. St. Clair-Moss.	Non-sect.	Gold-Yale Blue	350	350,000	27	263	1,800
1858	**Christian University**	Canton, Mo.	Carl Johann, LL. D.	Christian	.....	40	175,000	14	175	5,000
1869	**Claflin University**	Orangeburg, S. C.	L. M. Dunton, D. D.	Methodist	.....	20	300,000	40	700	5,000
1902	**Clark College**	Worcester, Mass.	E. C. Sanford, Ph. D.	Non-sect.	.....	60	See Clark U.	24	204	60,000
1870	**Clark University**	S. Atlanta, Ga.	W. W. Foster, D. D.	Methodist	.....	16	500,000	30	405	20,000
1876	**Clarksburg College**	Clarksburg, Mo.	B. M. Shacklette, M. A.	Baptist	.....	32	.....	6	75	.....
1881	**Coe College**	Cedar Rapids, Iowa	J. A. Marquis, LL. D.	Non-sect.	.....	60	1,000,000	31	462	12,000
1813	**Colby College**	Waterville, Me.	Arthur J. Roberts, M. A.	Baptist	.....	90	750,000	25	400	50,000
1819	**Colgate University**	Hamilton, N. Y.	Elmer B. Bryan, LL. D.	Non-sect.	Maroon	100	2,800,000	43	450	60,000
1785	**College of Charleston**	Charleston, S. C.	Harrison Randolph, LL. D.	Non-sect.	.....	40	460,000	10	75	19,000
1847	**Coll. City of New York**	New York City, N.Y.	.....	City	Lavender and Black	None	7,000,000	120	1,862	43,000
1883	**College of Emporia**	Emporia, Kan.	H. C. Culbertson, D. D.	Presbyterian	.....	50	325,000	21	246	12,000
....	**College of Hawaii**	Honolulu, H. I.	J. S. Donaghho, M. A.	Non-sect.	.....	.....	150,000	17	145	8,700
1891	**College of Idaho**	Caldwell, Idaho	Rev. W. J. Boone, D. D.	Presbyterian	.....	.....	200,000	12	170	.....
1851	**College of the Pacific**	San Jose, Cal.	B. J. Morris, M. A.	Methodist	.....	.....	225,000	...	...	10,000
1874	**Colorado College**	Colo. Springs, Colo.	W. F. Slocum, LL. D.	Non-sect.	Black and Old Gold	65	1,825,000	56	676	57,000
1901	**Columbia University**	Portland, Ore.	Rev. J. Gallagher, C. S. C.	R. Catholic.	.....	.....	350,000	22	220	4,000
1833	**Conception College**	Conception, Mo.	Frowin Conrad, D. D.	R. Catholic.	.....	200	400,000	17	100	.....
1839	**Concordia College**	Fort Wayne, Ind.	Rev. Martin Luecke	Lutheran	.....	.....	200,000	12	253	10,000
1881	**Concordia College**	Milwaukee, Wis.	Max J. F. Albrecht	Lutheran	.....	40	125,000	8	200	5,000
1887	**Cooper College**	Sterling, Kan.	Rev. R. T. Campbell, D. D.	Un. Presb.	.....	38	100,000	15	189	3,500
1853	**Cornell College**	Mount Vernon, Ia.	Jas. E. Harlan, LL. D.	Methodist	Royal Purple and White	50	975,000	42	741	36,000
1889	**Cotner University**	Bethany, Neb.	William Oeschger, LL. D.	Christian	.....	40	180,000	61	341	5,000
1879	**Creighton University**	Omaha, Neb.	Rev. E. A. Magevney, S. J.	R. Catholic.	Blue and White	.....	5,000,000	120	950	40,000
1842	**Cumberland University**	Lebanon, Tenn.	W. P. Bone, D. D.	Presbyterian	.....	75–100	350,000	22	350	16,000
1885	**Dakota Wesleyan Univ.**	Mitchell, S. D.	W. G. Seaman, Ph. D.	Methodist	Royal Blue and White	50	550,000	28	713	10,000
1900	**Dallas College**	Dallas, Ore.	Rev. A. A. Winter	Unit. Evang.	.....	.....	80,000	10	125	2,000
1889	**Daniel Baker College**	Brownwood, Texas.	T. P. Junkin, LL. D.	Presbyterian	.....	.....	.....	19	220	1,000
1769	**Dartmouth College**	Hanover, N. H.	E. F. Nichols, D. Sc. LL.D.	Non-sect.	Green	150	5,100,000	122	1,300	120,000
1837	**Davidson College**	Davidson, N. C.	W. J. Martin, Ph. D.	Presbyterian	.....	70	425,000	24	345	22,000
1903	**Davis and Elkins College**	Elkins, W. Va.	James E. Allen, M. A.	Presbyterian	.....	40	160,000	6	50	2,000
1885	**Defiance College**	Defiance, Ohio	P. W. McReynolds, M. A.	Christian	.....	55	300,000	25	408	5,000
1833	**Delaware College**	Newark, Del.	G. A. Harter, Ph. D.	State	.....	100	500,000	25	408	5,000
1831	**Denison University**	Granville, Ohio	C. W. Chamberlain, Ph. D.	Baptist	Crimson	110	1,300,000	45	650	30,000
1897	**De Paul University**	Chicago, Ill.	F. X. McCabe, C. M.	Cong. of Miss.	.....	.....	.....	33	250	.....
1837	**De Pauw University**	Greencastle, Ind.	George R. Grose, D. D.	Methodist	Old Gold	75	1,200,000	59	1,053	37,000
1865	**Des Moines College**	Des Moines, Iowa	John A. Earle, D. D.	Baptist	.....	40	250,000	21	298	5,000
1877	**Detroit University**	Detroit, Mich.	Rev. W. F. Dooley, S. J.	R. Catholic.	.....	60	400,000	50	400	.....
1783	**Dickinson College**	Carlisle, Pa.	E. A. Noble, L. H. D.	Methodist	Red and White	150	1,225,000	38	552	43,000
1872	**Doane College**	Crete, Neb.	.....	Congregat'l.	.....	60	450,000	24	238	12,000
1881	**Drake University**	Des Moines, Iowa	Hill M. Bell, LL. D.	Non-sect.	Yale Blue and White	90 up	1,750,000	168	1,827	24,000
1907	**Dropsie College**	Philadelphia, Pa.	Cyrus Adler, Ph. D.	Hebrew	.....	.....	.....	...	...	.....
1873	**Drury College**	Springfield, Mo.	J. G. McMurry, Ph. D.	Non-sect.	Scarlet-Gray	60	900,000	33	506	33,000
1859	**Earlham College**	Richmond, Ind.	Robert L. Kelly, LL. D.	Friends	Yellow and Cream	100	750,000	30	642	18,000
1899	**Eastern College**	Manassas, Va.	Herven U. Roop, LL. D.	Non-sect.	.....	70	120,000	24	200	5,000
1889	**Elon Cottage**	Elon College, N. C.	W. A. Harper, M. A.	Christian	.....	60	150,000	16	250	12,000
1836	**Emory College**	Oxford, Ga.	James E. Dicky, D. D.	Methodist	.....	60	500,000	17	297	35,000
1837	**Emory and Henry Col.**	Emory, Va.	C. C. Weaver, D. D.	Methodist	.....	50	150,000	13	226	11,000
1882	**Emporia College**	Emporia, Kan.	H. C. Culbertson, B. D.	Presbyterian	.....	50	325,000	21	246	12,000
1892	**Epworth University**	Moved to Guthrie, Okla. and name chgd. to University of Oklahoma.		Methodist	.....	50	200,000	9	150	10,000
1839	**Erskine College**	Due West, S. C.	Rev. J. S. Moffat, D. D.	A.R.Presb.	.....	27–50	275,000	18	225	10,000
1885	**Eureka College**	Eureka, Ill.	H. O. Pritchard, M. A.	Christian	.....	.....	250,000	23	200	10,000
1871	**Evang. Proseminar Col.**	Elmhurst, Ill.	Rev. D. Irion, D. D.	Ger. Evang.	.....	30	100,000	15	241	18,000
1867	**Ewing College**	Ewing, Ill.	E. L. Carr, D. D.	Baptist	.....	65	300,000	20	341	32,000
1895	**Fairmount College**	Wichita, Kan.	Henry E. Thayer, D. D.	Congregat'l.	.....	32	350,000	28	401	6,000
1887	**Fargo College**	Fargo, N. D.	C. C. Creegan, M. A.	Congregat'l.	.....	50	300,000	17	300	2,500
1882	**Findlay College**	Findlay, Ohio	W. H. Guyer, M. A.	Ch. of God.	.....	27	425,000	38	538	10,000
1866	**Fisk University**	Nashville, Tenn.	.....	Congregat'l.	.....					

TABLE II. COLLEGES AND UNIVERSITIES OF THE UNITED STATES—DIVISION B.—Continued

Founded	Name of Institution	Location	President or Dean	Denominational Control	Colors	Cost of Tuition	Value of Property (Including Endowment)	Number of Instructors	Number of Students	Volumes in Library
1841	**Fordham University**	Fordham, N. Y.	T. J. McCluskey, S. J.	R. Catholic.	Maroon	$100	$1,200,000	117	1,062	75,000
1881	**Fort Worth University**	Fort Worth, Tex.	Rev. W. Fielder, D. D.	Methodist	.....	50	.....	62	1,190	3,350
1825	**Franklin College**	New Athens, Ohio	E. M. Baxter, M. A.	Non-sect.	.....	55	40,000	9	100	3,000
1834	**Franklin College**	Franklin, Ind.	E. A. Hanley, D. D.	Baptist	.....	75	450,000	14	201	18,000
1787	**Franklin & Marshall**	Lancaster, Pa.	Rev. Henry H. Appel, D.D.	Reformed	Blue and White	None	1,000,000	26	527	48,000
1892	**Fredericksburg College**	Fredericksburg, Va.	J. N. Barney, M. A.	.....	.....	.....	160,000	11	160	.....
1898	**Friends University**	Wichita, Kan.	Edmund Stanley, M. A.	Friends	.....	42	500,000	18	400	9,000
1851	**Furman University**	Greenville, S. C.	Edwin M. Poteat, D. D.	Baptist	.....	65	450,000	16	275	6,000
1854	**Gale College**	Galesville, Wis.	Lars M. Gimmestad	Lutheran	.....	.....	30,000	6	75	3,000
1864	**Gallaudet College**	Kendall Green, D.C.	Percival Hall, Ph. D.	Non-sect.	.....	.....	725,000	19	80	5,000
1849	**Geneva College**	Beaver Falls, Pa.	Rev. W. H. George	Ref. Presb.	.....	70	375,000	17	333	4,200
1829	**Georgetown College**	Georgetown Ky.	M. B. Adams, D. D.	Baptist	.....	67	550,000	19	256	12,000
1789	**Georgetown University**	Washington, D. C.	Rev. A. S. Donlin, S. J.	R. Catholic.	Blue and Gray	170	2,000,000	145	1,165	110,000
1821	**Geo. Washington Univ.**	Washington, D. C.	Charles H. Stockton, LL.D.	Non-sect.	Buff and Blue	150	1,200,000	176	1,277	44,000
1873	**German College**	Mount Pleasant, Ia.	Rev. H. G. Leist	Methodist	.....	.....	.....	...	....	.....
1863	**German Wallace College**	Berea, Ohio	A. L. Breslich, Ph. D.	Methodist	.....	39	475,000	25	300	.....
1821	**Gonzaga College**	Washington, D. C.	Rev. E. H. Fink, S. J.	R. Catholic.	.....	.....	600,000	12	156	20,000
1887	**Gonzaga College**	Spokane, Wash.	J. M. Brogan, S. J.	R. Catholic.	.....	.....	500,000	28	490	20,000
1895	**Graceland College**	Lamoni, Iowa	S. A. Burgess, M. A.	Non-sect.	.....	.....	60,000	14	182	7,500
1892	**Grand Island College**	Grand Island, Neb.	J. W. Bailey, D. D.	Baptist	.....	55	150,000	20	340	7,000
1892	**Greenville College**	Greenville, Ill.	E. G. Burritt, M. A.	Free Meth.	.....	.....	125,000	21	350	6,000
1847	**Grinnell College**	Grinnell, Iowa	J. H. T. Main, LL. D.	Non-sect.	Scarlet and Black	70	1,600,000	44	607	45,000
1876	**Grove City College**	Grove City, Pa.	A. T. Ormond, LL. D.	Non-sect.	.....	90	400,000	30	744	12,000
1837	**Guilford College**	Guilford Col., N. C.	Lewis L. Hobbs, LL. D.	Friends	.....	70	300,000	13	254	4,000
1862	**Gustavus Adolphus Col.**	St. Peter, Minn.	O. J. Johnson, D. D.	Lutheran	.....	45	275,000	20	333	11,000
1812	**Hamilton College**	Clinton, N. Y.	Rev. W. M. Stryker, LL.D	Non-sect.	.....	90	1,400,000	20	190	52,000
1854	**Hamline University**	St. Paul, Minn.	Samuel F. Kerfoot, D. D.	Methodist	Red and Gray	40	750,000	15	237	10,000
1783	**Hampden-Sidney Col.**	Hampden-Sidney, Va.	Henry T. Graham, D. D.	Presbyterian	.....	60	425,000	9	113	18,000
1828	**Hanover College**	Hanover, Ind.	Wm. A. Millis, LL. D.	Presbyterian	.....	None	400,000	21	260	21,000
1882	**Hastings College**	Hastings, Neb.	R. B. Crone, M. A.	Presbyterian	.....	62	225,000	15	200	5,000
1833	**Haverford College**	Haverford, Pa.	Isaac Sharpless, LL. D.	Friends	.....	170	2,500,000	21	160	60,000
1856	**Hedding College**	Abingdon, Ill.	W. D. Agnew, M. A.	Methodist	.....	36	200,000	13	150	5,000
1850	**Heidelberg University**	Tiffin, Ohio	Charles E. Miller, D. D.	Reformed	Black, Orange and Red	30	600,000	30	392	15,000
1889	**Henderson College**	Arkadelphia, Ark.	G. H. Crowell, M. A.	Meth. So.	.....	.....	125,000	17	300	2,000
1884	**Hendrix College**	Conway, Ark.	John H. Reynolds, LL. D.	Meth. So.	.....	75	300,000	12	205	12,500
1849	**Henry Kendall College**	Tulsa, Okla.	F. W. Hawley, D. D.	Presbyterian	.....	40	200,000	12	225	3,500
1853	**Highland University**	Highland, Kan.	W. C. T. Adams, Ph. D.	Presbyterian	.....	36–50	125,000	16	155	5,500
1855	**Hillsdale College**	Hillsdale, Mich.	J. W. Mauck, LL. D.	Free Baptist	Ultramarine, (Blue)	27–50	500,000	24	478	18,500
1850	**Hiram College**	Hiram, Ohio	Miner Lee Bates, M. A.	Non-sect.	.....	60–75	325,000	25	345	12,500
1825	**Hobart College**	Geneva N. Y.	Lyman P. Powell, M. A.	Non-sect.	Orange and Purple	100–120	1,230,000	27	103	49,000
1843	**Holy Cross College**	Worcester, Mass.	Rev. J. N. Dinard, S. J.	R. Catholic.	.....	60	640,000	34	559	36,000
1878	**Holy Ghost, Col. of the**	Pittsburg, Pa.	Rev. M. A. Hehir, LL. D.	R. Catholic.	.....	.....	450,000	29	390	3,500
1866	**Hope College**	Holland, Mich.	Aml Vennema, D. D.	Reformed	.....	50	500,000	25	400	16,000
1843	**Howard College**	Birmingham, Ala.	J. M. Shelburne, D. D.	Baptist	.....	70	225,000	9	175	2,000
1867	**Howard University**	Washington, D. C.	S. M. Newman, D. D.	National	Dark Blue and White	.....	1,660,000	114	1,382	25,000
1889	**Howard Payne College**	Brownwood, Tex.	J. M. Carroll, D. D.	Baptist	.....	75	125,000	16	375	2,000
1883	**Huron College**	Huron, S. D.	Harry M. Gage, M. A.	Presbyterian	.....	75	310,000	24	488	7,000
1829	**Illinois College**	Jacksonville, Ill.	C. H. Rammelkamp, Ph. D.	Presbyterian	.....	60	700,000	23	295	17,000
1850	**Illinois Wesleyan Univ.**	Bloomington, Ill.	Rev. Theodore Kemp, D. D.	Methodist	Green and White	57	575,000	48	740	10,000
1876	Iowa State Teachers' College	Cedar Falls, Iowa	H. H. Seerley, LL. D.	State	.....	.....	1,200,000	107	1,860	40,000
1844	**Iowa Wesleyan Univ.**	Mt. Pleasant, Iowa	Edwin A. Schell, D. D.	Methodist	White and Purple	55	425,000	28	370	12,250
1901	**James Millikin Univ.**	Decatur, Ill.	George E. Fellows, LL. D.	Presbyterian	.....	60	625,000	76	1,144	6,500
1883	**Jamestown College**	Jamestown, N. D.	Barend H. Kroeze, D. D.	Presbyterian	.....	40	300,000	17	160	1,200
1831	**Jefferson College**	Convent, La.	Rev. R. H. Smith, M. Sc.	R. Catholic.	.....	.....	175,000	20	176	9,500
1887	**John B. Stetson Univ.**	De Land, Fla.	Lincoln Hulley, Ph. D.	Non-sect.	Green and White	60–72	700,000	49	500	15,000
1876	**Juniata College**	Huntingdon, Pa.	I. H. Brumbaugh, M. A.	Ger. Baptist	.....	45–75	350,000	22	402	28,000
1855	**Kalamazoo College**	Kalamazoo, Mich.	H. L. Stetson, D.D., LL.D.	Baptist	Orange and Black	30	625,000	12	187	14,500
1882	**Kansas Christian Col.**	Lincoln, Kan.	C. G. Nelson, M. A.	Christian	.....	.....	30,000	5	120	3,000
1895	**Kansas City University**	Kansas City, Kan.	Rev. D. S. Stephens, D. D.	Methodist	Purple and Orange	.....	500,000	76	348	3,000
1886	**Kansas Wesleyan Univ.**	Salina, Kan.	Rev. Robert P. Smith	Methodist	Purple and Gold	40	250,000	41	1,272	11,000
1799	**Kentucky University**	Lexington, Ky.	H. S. Barker, LL. D.	State	.....	30	1,000,000	65	1,107	15,000
1868	**Kentucky Wes. Univ.**	Winchester, Ky.	Rev. J. L. Clark	Methodist	.....	75	200,000	9	175	3,000
1824	**Kenyon College**	Gambier, Ohio	W. F. Pierce, M.A., L.H.D.	Episcopal	.....	75–100	525,000	20	125	36,000
1890	**Keuka College**	Keuka Park, N. Y.	Rev. J. A. Serena	Christian	.....	50	160,000	12	106	10,000
1869	**King College**	Bristol, Tenn.	Tilden Scherer, M. A.	Presbyterian	.....	40	70,000	5	60	.....
1894	**Kingfisher College**	Kingfisher, Okla.	Rev. C. B. Moody, D. D.	Congregat'l.	.....	30	200,000	12	86	.....
1837	**Knox College**	Galesburg, Ill.	Thomas McClelland, D. D.	Non-sect.	.....	60	875,000	31	616	12,000
1875	**Knoxville College**	Knoxville, Tenn.	R. W. McGranahan, D. D.	Un. Presb.	.....	12	185,000	32	468	3,000
1832	**Lafayette College**	Easton, Pa.	Rev. E. D. Warfield, LL.D.	Presbyterian	Maroon and White	138	1,800,000	52	550	35,000
1883	**La Fayette College**	La Fayette, Ala.	John P. Neff, M. A.	Non-sect.	.....	.....	50,000	10	225	2,200
1858	**La Grange College**	La Grange, Mo.	Ranson Harvey, D. D.	Baptist	.....	.....	40,000	12	168	5,000
1857	**Lake Forest College**	Lake Forest, Ill.	John S. Nollen, Ph. D.	Presbyterian	Ruby Red and Black	80	1,175,000	18	202	24,000
1866	**La Salle College**	Philadelphia, Pa.	Rev. Brother Edward	R. Catholic.	.....	.....	150,000	13	157	22,000
1847	**Lawrence College**	Appleton, Wis.	Rev. S. Plantz, LL. D.	Non-sect.	White and Yale Blue	46	1,175,000	43	643	29,000
1856	**Leander Clark College**	Toledo, Iowa	Marion R. Drury, M. A.	Un.Brethren	.....	55	500,000	19	350	7,000
1855	**Lebanon University**	Lebanon, Ohio	Arthur James, M. A.	.....	.....	.....	.....	15	200	5,000
1866	**Lebanon Valley College**	Annville, Pa.	G. D. Gossard, D. D.	Un.Brethren	Blue and White	50	360,000	23	232	6,000
1866	**Lehigh University**	So. Bethlehem, Pa.	Henry S. Drinker, LL. D.	Non-sect.	.....	200	3,000,000	67	655	125,000
1869	**Leland University**	New Orleans, La.	Alfred A. Earle, M. A.	Non-sect.	.....	.....	425,000	56	1,715	4,000
1881	**Lenoir College**	Hickory, N. C.	Rev. R. L. Fritz, M. A.	Non-sect.	.....	.....	100,000	14	215	3,500
1856	**Lenox College**	Hopkinton, Iowa	Rev. E. E. Reed, D. D.	Lutheran	.....	50–60	190,000	13	441	10,000
1893	**Lima College**	Lima, Ohio	Charles Christian Miller	Presbyterian	.....	.....	.....	...	....	.....
1865	**Lincoln College**	Lincoln, Ill.	James H. McMurray, Ph.D.	.....	.....	36	220,000	16	305	4,000
1870	**Lincoln Memorial Univ.**	Cumberland Gap, Tenn.	G. A. Hubbell, Ph. D.	.....	Blue and Gray	.....	280,000	48	546	5,000
1854	**Lincoln University**	Lincoln Univ., Pa.	John B. Rendall, D. D.	Presbyterian	.....	40	950,000	14	183	18,000
1880	**Livingstone College**	Salisbury, N. C.	William H. Goler, LL. D.	Presb.(cbl'd)	.....	.....	160,000	17	350	7,000
1851	**Lombard College**	Galesburg, Ill.	Huber W. Hurt, LL. D.	Universalist.	.....	60	450,000	14	126	8,000

TABLE II. COLLEGES AND UNIVERSITIES OF THE UNITED STATES—DIVISION B.—Continued

Founded	Name of Institution	Location	President or Dean	Denominational Control	Colors	Cost of Tuition	Value of Property (Including Endowment)	Number of Instructors	Number of Students	Volumes in Library
1860	**Louisiana State College**	Baton Rouge, La...	T. D. Boyd, LL. D.....	Non-sect....	Old Gold and Purple.....	$ 70	$1,200,000	70	1,241	33,000
1852	**Loyola College**.....	Baltimore, Md.....	William J. Ennis, S. J....	R. Catholic.	.....	.....	325,000	25	303	41,000
1909	**Loyola College**.....	Chicago, Ill.....	J. L. Mathery, S. J.....	R. Catholic.	.....	.....	725,000	178	1,180	47,000
....	**Luther College**.....	Decorah, Iowa.....	Rev. C. K. Preus.....	Lutheran...	.....	.....	.....	...	....	.....
1884	**Macalester College**.....	St. Paul, Minn.....	T. Morey Hodgman, LL. D.	Presbyterian	.....	52	675,000	27	310	12,000
1863	**Manhattan College**....	New York City....	Rev. Brother Edward.....	R. Catholic.	Green and White.....	125	825,000	27	297	15,500
1835	**Marietta College**.....	Marietta, Ohio.....	G. W. Hinman, Ph. D....	Non-sect...	Navy Blue and White.....	90	750,000	29	460	60,000
1881	**Marquette University**..	Milwaukee, Wis....	J. G. Grimmelsman, S. J..	R. Catholic.	.....	75	700,000	193	1,550	28,000
1879	**Maryville College**.....	Maryville, Tenn....	Rev. S. T. Wilson, D. D.	Presbyterian	Orange and Garnet.....	18	775,000	39	658	15,000
1828	**McKendree College**....	Lebanon, Ill.....	John F. Harmon, D. D....	Methodist..	.....	60	325,000	17	300	14,000
1857	**McMinnville College**...	McMinnville, Ore...	Leonard W. Riley, D. D...	Baptist.....	.....	66	150,000	16	241	5,000
1888	**McPherson College**.....	McPherson, Kan....	J. A. Clement, Ph. D.....	Ger. Baptist	.....	43	200,000	30	400	.....
1838	**Mercer University**.....	Macon, Ga.....	J. T. Sellers, M. A.....	Baptist.....	.....	.....	800,000	26	390	20,000
1901	**Meridian College**.....	Meridian, Miss.....	J. W. Beeson, LL. D.....	Non-sect....	.....	.....	100,000	17	215	.....
	Meth. Univ. of Okla..	Guthrie, Okla.....	William Fielder, D. D....	Methodist..	Orange and White.....	60	260,000	11	265	2,500
1809	**Miami University**.....	Oxford, Ohio.....	R. M. Hughes, M. Sc.....	Non-sect....	Scarlet and White.....	30	775,000	50	500	38,000
1807	**Middlebury College**....	Middlebury, Vt.....	John M. Thomas, D. D...	Non-sect....	.....	80	850,000	25	307	30,000
1887	**Midland College**.....	Atchinson, Kan.....	Rufus D. Peery, D. D.....	Lutheran...	.....	40	150,000	14	185	10,000
1882	**Milligan College**.....	Milligan, Tenn.....	E. W. McDiarmid, M. A...	Disciples...	.....	40	75,000	16	275	6,000
1892	**Millsaps College**.....	Jackson, Miss.....	A. F. Watkins, D. D.....	Methodist..	.....	50	500,000	14	265	10,000
1867	**Milton College**.....	Milton, Wis.....	Rev. Wm. C. Daland, D. D.	7th Day Bap.	.....	40–45	225,000	14	447	9,700
1859	**Mission House of the Reformed Church**....	Franklin, Wis.....	H. A. Meier, D. D.....	Reformed...	.....	.....	100,000	18	112	10,000
1826	**Mississippi College**.....	Clinton, Miss.....	John W. Provine, Ph. D.	Baptist.....	.....	50	300,000	13	398	3,000
1880	**Missouri Valley College**	Marshall, Mo.....	W. H. Black, D. D.....	Presbyterian	.....	60	425,000	14	240	14,500
1887	**Missouri Wesleyan Col.**	Cameron, Mo.....	H. R. DeBra, D. D.....	Methodist..	.....	.....	150,000	18	275	3,000
1858	**Monmouth College**....	Monmouth, Ill.....	T. H. McMichael, D. D...	Unit. Pres...	Red and White	70	500,000	26	451	6,000
1854	**Moores Hill College**....	Moores Hill, Ind....	Harry A. King, M.A., S.T.B.	Methodist..	.....	50	150,000	15	300	6,500
1807	**Moravian College**.....	Bethlehem, Pa.....	Augustus Schultze, L. H. D.	Moravian...	.....	.....	200,000	6	67	9,800
1867	**Morgan College**.....	Baltimore, Md.....	John O. Spencer, Ph. D..	Methodist..	.....	.....	130,000	32	302	5,000
1894	**Morningside College**...	Sioux City, Iowa...	Rev. Alfred E. Craig.....	Methodist..	.....	60	650,000	33	735	9,000
1882	**Morris Brown College**..	Atlanta, Ga.....	W. A. Fountain, D. D....	African M.E.	.....	.....	100,000	26	625	3,000
1888	**Morris Harvey College**..	Barboursville, W. Va.	D. W. Shaw, M. A.....	Methodist..	.....	.....	115,000	12	206	.....
....	**Mount Angel College**...	Mount Angel, Ore..	Rev. Abbot Feurst, O. S. B.	R. Catholic.	.....	.....	.....	25	150	20,000
1876	**Mount St. Joseph's Col.**	Baltimore, Md.....	Rev. Brother Norbert.....	R. Catholic.	.....	.....	200,000	16	160	6,000
1808	**Mount St. Mary's Col**...	Emmitsburg, Md...	Rev. B. J. Bradley.....	R. Catholic.	.....	.....	300,000	45	351	12,000
1858	**Mount Union College**..	Alliance, Ohio.....	Rev. W. H. McMaster, D.D.	Methodist..	Royal Purple..	54	500,000	30	484	12,000
1867	**Muhlenberg College**....	Allentown, Pa.....	Rev. J. A. W. Haas, D. D.	Lutheran...	.....	85–95	625,000	13	136	19,000
1837	**Muskingum College**....	New Concord, Ohio.	Rev. J.K. Montgomery, D.D.	Un. Presb...	.....	55–60	425,000	30	610	6,500
....	**Neb. Christian Univ**....	Bethany, Neb.....	W. P. Aylesworth, LL. D.	Disciples....	.....	.....	200,000	50	385	.....
1888	**Neb. Wesleyan College**.	University Pl., Neb.	Clark A. Fulmer, M. A...	Methodist..	Yellow and Brown.....	50	450,000	43	937	8,000
1856	**Newberry College**.....	Newberry, S. C.....	Rev. J. H. Harms, D. D...	Lutheran...	.....	50	250,000	15	249	11,000
1874	**New Orleans University**	New Orleans, La....	Rev. C. M. Melden, D. D.	Methodist..	.....	12	200,000	40	700	4,000
1843	**New Windsor College**...	New Windsor, Md..	Rev. J. Fraser, Ph.D., LL.D.	Presbyterian	.....	45	60,000	7	50	4,000
1830	**New York University**...	New York, N. Y....	Elmer E. Brown, LL. D...	Non-sect...	Violet.....	100–200	7,000,000	369	4,175	100,000
1856	**Niagara University**.....	Niagara Falls, N. Y.	Rev. M. R. Drennan.....	R. Catholic.	Purple and White.....	110	650,000	30	340	30,000
1860	**Northern Illinois Col**...	Fulton, Ill.....	J. E. Bittinger, M. A.....	Non-sect...	.....	.....	70,000	6	180	8,500
1861	**Northwestern College**..	Naperville, Ill.....	L. H. Seager, D. D.....	Evang. Ass'n	.....	60	460,000	22	382	11,000
1851	**Northwestern Univ**.....	Evanston, Ill.....	Abram W. Harris, LL. D..	Methodist..	Royal Purple..	100–175	9,000,000	435	4,753	153,000
1865	**Northwestern Univ**.....	Watertown, Wis...	August F. Ernst, D. D....	Lutheran...	.....	40	250,000	14	225	9,100
1892	**Northwest Mo. College**.	Albany, Mo.....	Rev. James Ralph Clay...	Methodist..	.....	.....	.....	8	151	1,400
1819	**Norwich University**....	Northfield, Vt.....	C. H. Spooner, LL. D.....	Non-sect...	.....	118	300,000	14	179	14,100
1891	**Oakland City College**...	Oakland City, Ind..	W. P. Dearing, M. A.....	Baptist.....	.....	.....	100,000	14	280	.....
1833	**Oberlin College**.....	Oberlin, Ohio.....	Rev. H.C. King, D.D., LL.D.	Non-sect...	.....	100	3,525,000	144	2,043	102,500
1888	**Occidental College**....	Los Angeles, Cal....	John W. Baer, LL. D.....	Presbyterian	.....	75	500,000	24	325	8,000
1877	**Ogden College**.....	Bowling Green, Ky.	W. M. Pearce, M. A.....	Non-sect...	.....	.....	175,000	5	70	1,000
1871	**Ohio Northern Univ**...	Ada, Ohio.....	Rev. A. E. Smith, D. D...	Methodist..	.....	45	175,000	37	1,768	15,000
1870	**Ohio State University**..	Columbus, Ohio....	W. O. Thompson, LL. D..	State.....	Scarlet and Gray.....	20–60	5,000,000	267	3,439	108,500
1804	**Ohio University**.....	Athens, Ohio.....	Alston Ellis, LL. D.....	State.....	Orange, Green and White..	None	1,225,000	70	1,687	16,000
1844	**Ohio Wesleyan Univ**....	Delaware, Ohio.....	Herbert Welch, LL. D....	Methodist..	.....	68	1,800,000	65	1,345	62,000
1844	**Olivet College**.....	Olivet, Mich.....	E. G. Lancaster, Ph. D....	Non-sect...	.....	75 up	500,000	28	265	33,500
1903	**Oriental University**....	Washington, D. C...	H. P. Holler, Ph. D., LL.D.	Non-sect...	.....	.....	.....	48	120	5,000
1856	**Oskaloosa College**.....	Oskaloosa, Iowa....	Edward D. Kisler, D. D...	.....	.....	36	140,000	14	170	3,000
1865	**Ottawa University**.....	Ottawa, Kan.....	Silas Eber Price, D. D....	Non-sect...	.....	60	400,000	20	343	6,200
1847	**Otterbein University**...	Westerville, Ohio...	W. G. Clippinger, B. D....	Un. Brethern	Cardinal and Tan.....	85	425,000	30	486	14,000
1886	**Ouachita College**.....	Arkadelphia, Ark...	S. Y. Jameson, LL. D....	Baptist.....	.....	75	250,000	30	400	15,000
1891	**Pacific College**.....	Newberg, Ore.....	L. T. Pennington, M. A...	Friends.....	.....	84	75,000	10	125	2,000
1849	**Pacific University**.....	Forest Grove, Ore..	C. J. Bushnell, Ph. D.....	Congregat'l.	.....	50	450,000	26	239	17,700
1889	**Palmer College**.....	Albany, Mo.	A. M. Watkins, D. D.....	Christian...	.....	30	100,000	5	75	.....
1875	**Park College**.....	Parkville, Mo.....	Arthur L. Wolfe, Ph. D...	Non-sect...	.....	25	850,000	24	348	24,000
1887	**Parker College**.....	Winnebago City, Minn.....	E. W. Van Aken, D. D....	Free Baptist	.....	30	95,000	8	60	5,000
1875	**Parsons**.....	Fairfield, Iowa.....	Lowell M. McAfee, LL. D.	Presbyterian	.....	70	425,000	21	217	6,500
1881	**Paul Quinn College**....	Waco, Texas.....	F. M. Burgan.....	A. M. E....	.....	.....	125,000	15	315	500
1973	**Penn College**.....	Oskaloosa, Iowa....	D. M. Edwards, Ph. D....	Friends.....	.....	70	350,000	28	387	9,000
1832	**Pennsylvania College**...	Gettysburg, Pa.....	W. A. Granville, D. D....	Lutheran...	.....	60	660,000	25	323	31,700
1862	**Pennsylvania Military**..	Chester, Pa.....	Charles E. Hyatt, C. E....	Non-sect...	.....	.....	.....	16	120	2,200
1855	**Pennsylvania State**....	State College, Pa...	Edwin E. Sparks, Ph.D., LL.D	State.....	Navy Blue and White.....	None	2,400,000	190	2,006	44,000
1877	**Philander Smith Col**...	Little Rock, Ark....	Rev. J. M. Cox, D. D.....	Methodist..	.....	25	70,000	24	473	3,600
1865	**Philomath College**.....	Philomath, Ore.....	M. R. Drury, M. A.....	Un. Brethern	.....	34	45,000	10	106	5,000
1897	**Piedmont College**.....	Demorest, Ga.....	F. E. Jenkins, M. A.....	Non-sect...	.....	18	175,000	27	480	6,000
1881	**Pike College**.....	Bowling Green, Mo.	L. M. Collmis, M. A.....	Non-sect...	.....	40	20,000	6	120	1,000
1888	**Pomona College**.....	Claremont, Cal.....	James A. Blaisdell, D. D..	Non-sect...	.....	90	900,000	38	441	16,200
1904	**Potomac University**....	Washington, D. C...	Ernest W. Porter, Ph. D..	Non-sect...	.....	.....	.....	18	250	1,500
1880	**Presbyterian College**...	Clinton, S. C.....	Rev. D. M. Douglas, D. D.	Presbyterian	.....	40	165,000	8	105	2,500
1868	**Pritchett College**.....	Glasgow, Mo.....	Uriel S. Hall, M. A.....	Non-sect...	.....	45	120,000	10	110	3,500
....	**Racine College**.....	Racine, Wis.....	Rev. W. F. Shero, Ph. D.	Episcopal..	Royal Purple.	.....	500,000	12	120	10,000
1830	**Randolph-Macon Col**...	Ashland, Va.....	R. E. Blackwell, LL. D...	Methodist..	.....	100	450,000	18	154	12,000
1887	**Redfield College**.....	Redfield, S. D.....	N. C. Hirschy, Ph. D.....	Congregat'l.	.....	40	100,000	14	168	10,000
....	**Redlands University**...	Redlands, Cal.....	Jasper N. Field, M. A....	.....	.....	.....	360,000	16	415	.....
1910	**Reed College**.....	Portland, Ore.....	W. T. Foster, M. A.....	Non-sect...	.....	.....	2,000,000	...	....	.....

TABLE II. COLLEGES AND UNIVERSITIES OF THE UNITED STATES—DIVISION B.—Continued

Founded	Name of Institution	Location	President or Dean	Denominational Control	Colors	Cost of Tuition	Value of Property (Including Endowment)	Number of Instructors	Number of Students	Volumes in Library
1835	**Richmond College**	Richmond, Ohio	George W. Macmillan, Ph.D.	Non-sect.	.....	.....	$ 40,000	6	100	3,000
1832	**Richmond College**	Richmond, Va.	F. W. Boatwright, LL.D.	Baptist	.....	$100	1,500,000	24	340	16,000
1876	**Rio Grande College**	Rio Grande, Ohio	Simeon H. Bing, M. A.	Free Baptist	.....	38	100,000	8	159	3,800
1851	**Ripon College**	Ripon, Wis.	Silas Evans, D. D.	Non-sect.	.....	100	625,000	25	267	20,500
1853	**Roanoke College**	Salem, Va.	Rev. J. A. Morehead, D. D.	Lutheran	.....	60	140,000	19	206	25,000
1856	**Rock Hill College**	Ellicott City, Md.	Rev. Bro. Dorotheus	R. Catholic	.....	60	200,000	18	168	10,500
1885	**Rollins College**	Winter Park, Fla.	W. F. Blackman, Ph. D.	Non-sect.	.....	40–60	350,000	18	175	10,000
1867	**Rust University**	Holly Springs, Miss.	Rev. J. T. Docking, D. D.	Methodist	.....	.....	125,000	30	448	3,500
1766	**Rutgers College**	New Brunswick, N.J.	Rev. W. H. S. Demarest, D.D.	Non-sect.	Scarlet	160	2,000,000	65	450	65,000
1888	**Sacred Heart College**	Denver, Col.	John J. Brown, S. J.	R. Catholic	.....	.....	250,000	16	170	10,000
1880	**Sacred Heart College**	Prairie du Chien, Wis.	Rev. George R. Kister. S.J.	R. Catholic	.....	.....	.....	25	275	13,500
1893	**St. Anselm's College**	Manchester, N. H.	Rev. Ernest Helmstetter	R. Catholic	.....	60	150,000	20	145	7,000
1891	**St. Bede's College**	Peru, Ill.	Rev. Vincent Huber, D. D.	R. Catholic	.....	200	200,000	12	150	8,000
1858	**St. Benedict's College**	Atchison, Kan.	Rt. Rev. Innocent Wolf, O. S. B., D. D.	R. Catholic	.....	60	250,000	22	250	27,400
1868	**St. Benedict's College**	Newark, N. J.	Rev. V. Amberg, O. S. B.	R. Catholic	.....	30	100,000	10	150	9,500
1892	**St. Bernard College**	St. Bernard, Ala.	Rt. Rev. B. Menges, O.S.B.	R. Catholic	.....	40	130,000	24	175	6,000
1859	**St. Bonaventure's Col.**	St. Bonaventure, N.Y.	Rev. F. J. Reynolds, O.F.M.	R. Catholic	.....	200	500,000	22	264	20,000
1848	**St. Charles College**	Ellicott City, Md.	Rev. F. X. McKenny, M. A.	R. Catholic	.....	.....	150,000	18	210	15,000
1885	**St. Edward's College**	Austin, Texas	Rev. J. T. Boland, C. S. C.	R. Catholic	.....	.....	250,000	15	175	.....
1859	**St. Francis College**	Brooklyn, N. Y.	Brother David, O. S. F.	R. Catholic	.....	60	260,000	16	405	.....
1860	**St. Francis Solanus**	Quincy, Ill.	Fortunatus Hausser, O.F.M	R. Catholic	.....	....	250,000	16	235	8,000
1847	**St. Francis Xavier**	New York, N. Y.	Rev. T. J. McCluskey, S. J.	R. Catholic	Maroon and Blue	100	1,625,000	30	565	125,000
1886	**St. Ignatius College**	Cleveland, Ohio	Rev. John B. Furay, S. J.	R. Catholic	.....	100	250,000	26	356	14,500
1784	**St. John's College**	Annapolis, Md.	Thomas Fell, LL. D.	Non-sect.	.....	75	225,000	14	200	10,000
1866	**St. John's College**	Washington, D. C.	Rev. Bro. Flamian, F. S. C.	R. Catholic	.....	80	150,000	14	225	5,800
1841	**St. John's College**	New York, N. Y.	Rev. J. J. Collins, S. J.	R. Catholic	.....	.....	1,000,000	37	440	38,000
1868	**St. John's College**	Brooklyn, N. Y.	Very Rev. J. W. Moore, C.M.	R. Catholic	.....	.....	1,000,000	33	700	12,000
1893	**St. John's Lutheran**	Winfield, Kan.	Adolphus W. Meyer, D. D.	Lutheran	.....	40	55,000	9	90	2,500
1867	**St. John's University**	Collegeville, Minn.	Rt. Rev. P. Engel, Ph. D.	R. Catholic	.....	50	300,000	40	387	30,000
....	**St. John's University**	Toledo, Ohio	John A. Weiand, S. J.	R. Catholic	.....	.....	200,000	50	300	.....
1872	**St. Joseph's College**	Dubuque, Iowa	Very Rev. D. M. Gorman.	R. Catholic	.....	85	625,000	22	330	9,200
1891	**St. Joseph's College**	Collegeville, Ind.	Rev. H. W. Lear	R. Catholic	.....	50	500,000	21	315	8,000
1856	**St. Lawrence University**	Canton, N. Y.	A. Gunnison, LL. D.	Universalist	Scarlet and Brown	60	900,000	37	650	30,000
1889	**St. Leo College**	St. Leo, Fla.	Rt. Rev. C.H. Mohr, O.S.B.	R. Catholic	.....	.....	75,000	7	65	7,000
1893	**St. Louis College**	San Antonio, Texas.	Rev. L. A. Tragesser, S. M.	R. Catholic	.....	.....	250,000	15	120	.....
1829	**St. Louis University**	St. Louis, Mo.	Bernard J. Otting, S. J.	R. Catholic	Blue and White	60–120	1,600,000	218	1,395	75,000
1821	**St. Mary's College**	St. Mary, Ky.	Rev. M. Jaglowicz, C. R.	R. Catholic	.....	50	100,000	12	130	5,000
1878	**St. Mary's College**	Belmont, N. C.	Rt. Rev. L. Haid, O. S. B.	R. Catholic	.....	.....	.....	22	130	8,000
1848	**St. Mary's College**	St. Mary's, Kan.	Rev. A. A. Breen, S. J.	R. Catholic	.....	.....	350,000	51	418	25,000
1852	**St. Mary's Institute**	Dayton, Ohio	B. P. O'Reilly, S. M.	R. Catholic	.....	50	525,000	12	200	7,200
1854	**St. Mary's University**	Galveston, Texas	Rev. A. E. Otis, S. J.	R. Catholic	.....	50	140,000	10	125	5,500
1857	**St. Meinrad College**	St. Meinrad, Ind.	Rt. Rev. A. Schmitt, O.S.B.	R. Catholic	.....	30	400,000	22	250	22,000
1874	**St. Olaf College**	Northfield, Minn.	Rev. John N. Kildahl	Lutheran	.....	25	250,000	32	500	8,700
1878	**St. Peter's College**	Jersey City, N. J.	Rev. Joseph Mulry, S. J.	R. Catholic	.....	60	200,000	18	342	10,000
....	**St. Stanislaus College**	Chicago, Ill.	Rev. L. J. Zapala, M. A.	R. Catholic	.....	40	200,000	22	186	6,000
1860	**St. Stephen's College**	Annandale, N. Y.	Rev. W. C. Rodgers, D. D.	Episcopal	.....	250–300	350,000	10	65	20,000
....	**St. Viateur's College**	Bourbonnais, Ill.	J. P. O'Mahoney, C. S. V.	R. Catholic	.....	40	800,000	45	352	10,000
1846	**St. Vincent's College**	Beatty, Penn.	Rev. Leander Schnerr, O.S.B.	R. Catholic	.....	.....	.....	42	390	55,000
1865	**St. Vincent's College**	Los Angeles, Cal.	Very Rev. J. S. Glass, D.D.	R. Catholic	.....	.....	1,000,000	27	350	10,000
1831	**St. Xavier College**	Cincinnati, Ohio	Francis Heiermann, S. J.	R. Catholic	.....	.....	425,000	28	470	28,000
1851	**Santa Clara College**	Santa Clara, Cal.	Walter Thornton, S. J.	R. Catholic	.....	.....	800,000	41	274	28,000
1878	**Scarritt-Morrisville Col.**	Morrisville, Mo.	Rev. Louis C. Perry, M. A.	.....	.....	50	150,000	18	200	5,000
1856	**Seton Hall College**	South Orange, N. J.	Very Rev. J. F. Mooney. D.D.	R. Catholic	.....	.....	500,000	24	210	10,000
1865	**Shaw University**	Raleigh, N. C.	Rev. C. F. Meserve, LL. D.	Baptist	Blue	12	250,000	36	450	6,000
1873	**Shorter College**	Rome, Ga.	A. W. Van Hoose, D. D.	Baptist	.....	.....	.....	24	261	1,000
1827	**Shurtleff College**	Upper Alton, Ill.	George M. Potter, M. A.	Baptist	.....	75	250,000	17	164	15,000
1892	**Simmons College**	Abilene, Tex.	J. D. Sandefer, M. A.	Baptist	.....	60	350,000	15	558	7,000
1868	**Simpson College**	Indianola, Iowa	F. L. Strickland, Ph. D.	Methodist	.....	75	325,000	31	466	6,000
1842	**South Carolina Military**	Charleston, S. C.	Col. O. J. Bond, M. A.	State	.....	.....	125,000	13	231	6,000
1856	**Southern University**	Greensboro, Ala.	Andrew Sledd, LL. D.	Methodist	.....	80	250,000	7	125	5,000
1885	**Southwestern Kansas C.**	Winfield, Kan.	F. E. Mossman, D. D.	Methodist	.....	33–108	300,000	35	461	3,000
1873	**Southwestern Univ.**	Georgetown, Tex.	Charles M. Bishop, D. D.	Methodist	.....	85	650,000	63	1,222	16,000
1875	**Southw'n Presb. Univ.**	Clarksville, Tenn.	Wm. Dinwiddie, D. D.	Presbyterian	.....	50	400,000	11	95	13,500
1830	**Spring Hill College**	Mobile, Ala.	Rev. F. X. Twellmeyer, S.J.	R. Catholic	.....	.....	200,000	25	220	6,000
1907	**Stanford Graded Col.**	Stanford Ky.	J. W. Ireland, M. A.	Non-sect.	.....	.....	50,000	14	350	1,000
1891	**State Col. for Col'd Stu.**	Dover, Del.	William C. Jason, M. A.	State	.....	.....	40,000	10	150	1,000
1856	**Stephens College**	Columbia, Missouri.	James M. Wood, M. A.	Baptist	Varies	.....	225,000	20	173	.....
1869	**Straight University**	New Orleans, La.	Elbert M. Stevens, M. A.	Congregat'l.	.....	.....	200,000	34	595	5,000
1858	**Susquehanna Univ.**	Selinsgrove, Pa.	Rev. C. T. Aikens, D. D.	Lutheran	.....	75	250,000	22	297	14,000
1869	**Swarthmore College**	Swarthmore, Pa.	Joseph Swain, LL. D.	Friends	Garnet	150	2,200,000	46	395	40,000
1851	**Syracuse University**	Syracuse, N. Y.	J. R. Day, LL. D., D. C. L.	Non-sect.	Orange	75–125	5,000,000	250	3,300	85,000
1857	**Tabor College**	Tabor, Iowa	George E. Wood, D. D.	Congregat'l.	.....	65	250,000	16	225	17,000
1883	**Tarkio College**	Tarkio, Mo.	Rev. J. A. Thompson, D. D.	Un. Presb.	.....	30	230,000	26	330	3,500
1890	**Taylor University**	Upland, Ind.	Rev. M. Vayhinger, D. D.	Methodist	.....	55	60,000	24	264	6,000
1888	**Teacher's College**	New York City	James E. Russell, LL. D.	Non-sect.	.....	150	.....	121	1,948	64,000
1884	**Temple University**	Philadelphia, Pa.	Russell H. Conwell, LL. D.	Non-sect.	Cherry and White	5–150	575,000	240	3,153	8,500
1873	**Texas Christian Univ.**	Ft. Worth, Tex.	Rev. F. D. Kershner, M. A.	Disciples	Purple and White	60	375,000	30	450	4,000
1870	**Thiel College**	Greenville, Pa.	Franklin B. Sawvel, Ph. D.	Lutheran	.....	50	150,000	11	118	9,000
1872	**Toledo University**	Toledo, Ohio	C. A. Cockayne, Ph. D.	City	.....	.....	.....	57	760	2,000
1798	**Transylvania University**	Lexington, Ky.	R. H. Crossfield, Ph. D.	Non-sect.	.....	36	750,000	34	264	20,000
1823	**Trinity College**	Hartford, Conn.	F. S. Luther, LL. D.	Non-sect.	.....	100	2,400,000	21	240	64,000
1852	**Trinity College**	Durham, N. C.	Wm. P. Few, Ph. D.	Methodist So	Navy Blue	50	1,500,000	50	675	43,000
1869	**Trinity University**	Waxahachie, Tex.	S. L. Hornbeak, LL. D.	Presbyterian	.....	88	250,000	22	306	5,000
1852	**Tufts College**	Medford, Mass.	W. L. Hooper, Ph. D.	Universalist	Brown and Blue	125–150	2,700,000	258	1,142	67,000
1834	**Tulane University**	New Orleans, La.	Robert Sharp, Ph. D.	State	.....	70–75	8,000,000	240	2,700	60,000
1887	**Union College**	Barbourville, Ky.	James Warren Easley	Methodist	.....	40	350,000	12	306	1,500
1891	**Union College**	College View, Neb.	Frederick Griggs, M. A.	Seven D. Ad.	.....	60	200,000	25	395	3,500
1859	**Union Christian College**	Merom, Ind.	Daniel A. Long, LL. D.	Christian	.....	33	200,000	16	190	3,000
1848	**Union University**	Jackson, Tenn.	Richard M. Inlow, D. D.	Baptist	.....	.....	.....	16	243	9,000
1795	**Union University**	Schenectady, N. Y.	Rev. C. A. Richmond, D. D.	Non-sect.	Red and Black	100–200	2,000,000	30	338	42,000
1831	**Univ. of Alabama**	University, Ala.	George H. Denny, LL. D.	State	Crimson and White	.....	1,500,000	64	817	20,000
1891	**Univ. of Arizona**	Tucson, Ariz.	Arthur H. Wilde, Ph. D.	State	Blue and Red.	25	400,000	31	275	17,000
1871	**Univ. of Arkansas**	Fayetteville, Ark.	J. C. Futrall, M. A.	State	Cardinal	None	1,000,000	135	1,540	20,000
1846	**Univ. of Buffalo**	Buffalo, N. Y.	Matthew D. Mann, M. D., LL. D.	Non-sect.	.....	.....	250,000	82	231	9,000
1819	**Univ. of Cincinnati**	Cincinnati, Ohio	C. W. Dabney, LL. D.	City	Red and Black	75	2,750,000	199	1,316	70,000

TABLE II. COLLEGES AND UNIVERSITIES OF THE UNITED STATES—DIVISION B.—Continued

Founded	Name of Institution	Location	President or Dean	Denominational Control	Colors	Cost of Tuition	Value of Property (Including Endowment)	Number of Instructors	Number of Students	Volumes in Library
1876	**Univ. of Colorado**	Boulder, Col.	Livingston Farrand, Ph. D.	State	Silver and Gold	$15–25	$1,200,000	187	1,300	58,000
1864	**Univ. of Denver**	Denver, Col.	Rev. H. A. Buchtel, LL. D.	Methodist	Crimson and Gold	50–150	1,200,000	104	1,020	25,000
1884	**Univ. of Florida**	Gainesville, Fla.	A. A. Murphree, LL. D.	State	.....	20	450,000	46	300	12,000
1785	**Univ. of Georgia**	Athens, Ga.	D. C. Barrow, LL. D.	State	Red and Black	None	1,500,000	52	1,020	38,000
1889	**Univ. of Idaho**	Moscow, Idaho	W. L. Carlyle, M. Sc.	State	Silver and Gold	None	1,450,000	51	527	25,000
1907	**Univ. of Louisville**	Louisville, Ky.	John Patterson, LL. D.	Non-sect.	Scarlet and Black	125	250,000	114	700	7,000
1865	**Univ. of Maine**	Orono, Me.	Robert J. Aley, LL. D.	State	Light Blue	75–115	750,000	106	858	45,000
1848	**Univ. of Mississippi**	University, Miss.	A. A. Kincannon, LL. D.	State	Red and Blue	50–75	1,300,000	36	416	28,000
1895	**Univ. of Montana**	Missoula, Mont.	E. B. Craighead, D. C. L.	Non-sect.	Copper, Gold and Silver	None	1,250,000	33	220	18,000
1874	**Univ. of Nevada**	Reno, Nev.	J. E. Stubbs, LL. D.	State	Royal Blue and Silver	35	950,000	48	312	22,000
1889	**Univ. of New Mexico**	Albuquerque, N. M.	David R. Boyd, Ph. D.	State	.....	.....	200,000	22	150	12,000
1889	**Univ. of North Carolina**	Chapel Hill, N. C.	F. P. Venable, LL. D.	State	White and Blue	60	1,600,000	84	820	60,000
1883	**Univ. of North Dakota**	Grand Forks, N. D.	Frank L. McVey, Ph. D.	State	Pink and Green	40	2,600,000	85	989	45,000
1842	**Univ. of Notre Dame**	Notre Dame, Ind.	Very Rev. J. Cavanaugh, C. S. C.	R. Catholic	Old Gold and Marine Blue	100	2,500,000	87	1,008	62,000
1892	**Univ. of Oklahoma**	Norman, Okla.	Stratton D. Brooks, M. A.	State	Crimson and Cream	None	3,700,000	91	793	24,000
1872	**Univ. of Oregon**	Eugene, Ore.	Prince L. Campbell, M. A.	State	Green and Yellow	None	900,000	113	1,484	38,000
1887	**Univ. of Pittsburgh**	Pittsburgh, Pa.	S. B. McCormick, LL. D.	Non-sect.	Blue and Gold	105–220	2,125,000	225	1,699	15,000
1903	**Univ. of Porto Rico**	Rio Piedras, P. R.	E. M. Bainter, B. Sc.	State	.....	None	150,000	39	991	4,000
1903	**Univ. of Puget Sound**	Tacoma, Wash.	Julius C. Zeller, D. C. L.	Methodist	.....	55	160,000	25	498	5,000
1850	**Univ. of Rochester**	Rochester, N. Y.	Rush Rhees, LL. D.	Non-sect.	Dandelion Yellow	120	1,800,000	32	450	57,000
1880	**Univ. of S. California**	Los Angeles, Cal.	G. F. Bovard, LL. D.	Meth. Epis.	Gold	90	650,000	196	1,802	18,000
1801	**Univ. of South Carolina**	Columbia, S. C.	Andrew C. Moore, M. A.	State	Garnet and Black	48	1,100,000	31	417	44,000
1882	**Univ. of South Dakota**	Vermillion, S. D.	Franklin B. Gault, Ph. D.	State	Vermilion	25	500,000	50	425	16,000
1794	**Univ. of Tennessee**	Knoxville, Tenn.	Brown Ayres, Ph.D., LL.D.	State	Orange and White	80	1,300,000	157	1,681	30,000
1883	**Univ. of Texas**	Austin, Tex.	S. E. Mezes, Ph. D.	State	Orange and White	None	4,000,000	107	2,758	80,000
1851	**Univ. of the Pacific**	San Jose, Cal.	B. J. Morris, M. A.	Methodist	.....	30	350,000	32	401	10,000
1868	**Univ. of the South**	Sewanee, Tenn.	William B. Hall, M. A.	Prot. Epis.	Purple and Old Gold	100	800,000	27	205	32,000
1850	**Univ. of Utah**	Salt Lake City, Utah	Joseph T. Kingsbury, Ph.D.	State	Crimson and Silver	25	600,000	61	1,845	34,000
1791	**Univ. of Vermont**	Burlington, Vt.	Guy P. Benton, LL. D.	State	Green and Gold	125	1,115,000	93	575	83,000
1861	**Univ. of Washington**	Seattle, Wash.	.....	State	Purple and Gold	None	5,150,000	128	2,427	44,000
1868	**Univ. of Wooster**	Wooster, Ohio	L. E. Holden, LL. D.	Presbyterian	Black and Old Gold	60	2,000,000	37	898	34,000
1886	**Univ. of Wyoming**	Laramie, Wyo.	C. A. Duniway, Ph. D.	State	Brown and Gold	None	700,000	45	350	28,000
1857	**Upper Iowa University**	Fayette, Iowa	Richard W. Cooper, Litt.D.	Methodist	Peacock Blue and White	50	450,000	24	364	15,000
1893	**Upsala College**	Kenilworth, N. J.	Peter Froeberg, D. D.	Lutheran	.....	36	70,000	15	163	2,500
1850	**Urbana University**	Urbana, Ohio	P. H. Seymour, Dean	New Church	.....	55	150,000	5	20	6,000
1869	**Ursinus College**	Collegeville, Pa.	G. L. Omwake, Ph. D.	Reformed	.....	50	410,000	16	193	14,500
1873	**Valparaiso University**	Valparaiso, Ind.	H. B. Brown, M. A.	Non-sect.	Old Gold and Bright Brown	72	1,000,000	191	5,523	15,000
1887	**Van Buren College**	Van Buren, Me.	Rev. M. Thouvenin, S. M.	R. Catholic	.....	50	75,000	10	125	1,000
1872	**Vanderbilt University**	Nashville Tenn.	J. H. Kirkland, LL.D., D.C.L.	Meth. So.	Black and Gold	150	3,000,000	120	990	40,000
1842	**Villanova College**	Villanova, Pa.	Rev. E. G. Dohan, D. D.	R. Catholic	.....	.....	1,500,000	35	360	12,000
1806	**Vincennes University**	Vincennes, Ind.	Horace Ellis, Ph. D.	Non-sect.	.....	100	500,000	14	412	14,500
1903	**Virginia Christian Col.**	Lynchburg, Va.	G. O. Davis, M. A.	Disciples	.....	60	250,000	23	201	2,000
1839	**Virginia Military Inst.**	Lexington, Va.	Edward W. Nichols, LL. D.	State	.....	.....	500,000	22	356	16,000
....	**Volant College**	Volant, Pa.	Charles F. Ball, M. A.	.....	.....	.....	350,000	16	230	.....
1832	**Wabash College**	Crawsfordsville, Ind.	Geo. L. Mackintosh, D. D.	Presbyterian	.....	60	1,200,000	24	348	46,500
1888	**Wake Forest College**	Wake Forest, N. C.	William L. Poteat, LL. D.	Baptist	Old Gold and Black	60	600,000	37	405	20,000
1866	**Walden University**	Nashville, Tenn.	.....	Meth. So.	Black and Red	19–75	200,000	70	801	6,000
1868	**Wartburg College**	Clinton, Iowa	John Fritscheil, M. A.	Lutheran	.....	40	100,000	7	85	4,400
1865	**Washburn College**	Topeka, Kan.	Rev. F. K. Sanders, Ph. D.	Congreg'at'l.	Yale Blue	90	500,000	113	842	20,000
	Washington Christian College	Washington, D. C.	Daniel E. Motley, Ph. D.	Disciples	.....	.....	55,000	9	40	.....
1782	**Washington College**	Chestertown, Md.	James W. Cain, LL. D.	Non-sect.	.....	60	125,000	10	123	4,000
1795	**Washington College**	Wash'gt'nCol., Tenn.	James T. Cootes, D. D.	Presbyterian	.....	.....	250,000	8	130	4,700
1802	**Wash't'n and Jefferson**	Washington, Pa.	Rev. J. D. Moffat, LL. D.	Presbyterian	Red and Black	60	1,130,000	26	365	19,500
1749	**Washington and Lee U.**	Lexington, Va.	Henry L. Smith, LL. D.	Non-sect.	Blue and White	100	1,400,000	42	625	52,000
1794	**Wash't'n and Tusculum**	Greenville, Tenn.	Charles O. Gray, D. D.	Non-sect.	.....	.....	240,000	18	264	9,000
1853	**Washington University**	St. Louis, Mo.	Frederic A. Hall, LL. D.	Non-sect.	Myrtle and Maroon	75–170	11,500,000	196	1,173	118,000
1852	**Waynesburg College**	Waynesburg, Pa.	.....	Presbyterian	.....	60	300,000	13	310	5,000
1891	**Wesley College**	Grand Forks, N. D.	E. P. Robertson, D. D.	Methodist	.....	.....	250,000	12	250	.....
1831	**Wesleyan University**	Middletown, Conn.	Wm. A. Shanklin, LL. D.	Methodist	Cardinal and Black	90	2,725,000	37	395	88,000
1867	**Western Maryland Col.**	Westminster, Md.	T. H. Lewis, D. D., LL. D.	Methodist	.....	45	400,000	21	242	8,000
1826	**Western Reserve Univ.**	Cleveland, Ohio	Charles F. Thwing, LL. D.	Non-sect.	Crimson and White	100	4,300,000	278	1,302	91,000
1865	**Westfield College**	Westfield, Ill.	B. F. Daugherty, D. D.	Un. Brethern	.....	32	85,000	11	140	3,200
1900	**West Lafayette College**	W. Layfayette, Ohio.	Aubrey F. Hess, D. D.	Methodist	.....	36	40,000	10	200	2,000
1853	**Westminster College**	Fulton, Mo.	Rev. C. D. Boving, D. D.	Presbyterian	Yale Blue	65	450,000	13	125	4,000
1852	**Westminster College**	No. Wilmington, Pa.	R. M. Russell, D. D., LL.D.	Unit. Pres.	.....	60	450,000	26	274	10,000
1896	**Westminster College**	Tehuacana, Tex.	J. C. Williams, D. D.	Methodist	.....	42	85,000	12	90	1,200
2907	**Westminster Univ.**	Westminster Colo.	S. G. Pattison, M. A.	Presbyterian	.....	50	250,000	10	60	2,000
1867	**West Virginia Univ.**	Morgantown, W.Va.	Thomas E. Hodges, Ph. D.	State	Old Gold and Blue	50	1,025,000	96	1,426	33,000
1890	**W. Va. Wesleyan**	Buckhannon, W. Va.	Carl G. Doney, D.D., Ph.D.	Meth. So.	.....	50	325,000	28	475	7,000
1860	**Wheaton College**	Wheaton, Ill.	C. A. Blanchard, D. D.	Non-sect.	.....	50	350,000	20	255	6,000
1859	**Whitman College**	Walla Walla, Wash.	S. B. L. Penrose, D. D.	Non-sect.	Cobalt Blue and Maize	125	1,150,000	42	450	20,000
1901	**Whittier College**	Whittier, Cal.	Thomas Newlin, M. A.	Friends	.....	75	.....	14	115	3,500
1890	**Whitworth College**	Tacoma, Wash.	Donald D. McKay, D. D.	State	.....	60	300,000	18	250	7,000

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Founded	Name of Institution	Location	President or Dean	Denominational Control	Colors	Cost of Tuition	Value of Property (Including Endowment)	Number of Instructors	Number of Students	Volumes in Library
1856	**Wilberforce University.**	Wilberforce, Ohio...	W. S. Scarborough, LL. D.	African M.E.	Green and Old Gold.....	$ 30	$ 250,000	32	400	7,000
1873	**Wiley University.....**	Marshall, Tex.....	M. W. Dogan, Ph. D.....	Methodist..	.....	12	260,000	32	610	7,000
1844	**Willamette University..**	Salem, Ore.....	Fletcher Homan, D. D.....	Methodist..	Cardinal and Old Gold...	60	450,000	50	450	9,000
1693	**William and Mary Col.**	Williamsburg, Va...	L. G. Tyler, LL. D.....	State.....	.....	55	400,000	21	241	20,000
	William and Vashti Col.	Aledo, Ill.....	Frank C. English, D. D...	Non-sect....	.....	75	.....	14	229	9,000
1849	**William Jewel College..**	Liberty, Mo.....	J. P. Greene, LL. D.....	Baptist.....	.....	60	1,000,000	36	553	24,000
1793	**Williams College.....**	Williamstown, Mass.	H. A. Garfield, LL. D.....	Non-sect...	Royal Purple..	140	3,100,000	57	534	70,000
1875	**Wilmington College....**	Wilmington, Ohio...	Samuel H. Hodgin, M. A..	Friends.....	.....	65	275,000	13	125	5,000
1845	**Wittenberg College.....**	Springfield, Ohio....	Charles G. Heckert, D. D..	Lutheran...	.....	75	800,000	37	760	18,000
1854	**Wofford College.....**	Spartanburg, S. C...	Henry M. Snyder, M. A..	Meth. So....	.....	75	450,000	19	425	25,000
1882	**Yankton College.....**	Yankton, S. D.....	Henry K. Warren, LL. D..	Congregat'l.	Yellow and White.....	40	400,000	20	292	8,000
1890	**York College.....**	York, Neb.....	L. L. Epley, M. A.....	Un. Breth...	.....	34–50	750,000	18	438	2,500
1885	**Young Harris College..**	Young Harris, Ga...	Joseph A. Shory, D. D....	Methodist..	.....	8	50,000	10	400	1,000

TABLE III. AGRICULTURAL, TECHNOLOGICAL AND VOCATIONAL SCHOOLS

1872	**Alabama Polytechnic Institution.....**	Auburn, Ala.....	C. C. Thatch, LL. D.....	State.....	Orange and Gold.....	$ 20	$ 800,000	72	790	25,000
....	**Ala. Girls Indus. Sch...**	Montevallo, Ala....	Thomas W. Palmer.....	Non-sect...	.....	.....	1,000,000	32	448	2,500
1871	**Alcorn Agr. and Mech..**	Rodney, Miss.....	J. A. Martin, M. Sc.....	State.....	.....	15	200,000	21	600	3,000
1892	**Armour Institute.....**	Chicago, Ill.....	F. W. Gunsaulus, LL. D..	Non-sect....	Yellow and Black.....	150	5,000,000	98	1,610	25,000
....	**Arts and Mech. Inst....**	Rochester, N. Y...	Charles B. Gibson.....	Non-sect...	.....	.....	.....	59	2,665	4,000
....	**Bradley Polytech. Inst.**	Peoria, Ill.....	Theodore C. Burgess.....	Non-sect...	.....	.....	2,700,000	40	936	16,000
1854	**Brooklyn Polytech. Inst.**	Brooklyn, N. Y.....	F. W. Atkinson, Ph. D....	Non-sect...	.....	125–200	1,000,000	45	620	9,000
1900	**Carnegie Technical Sch.**	Pittsburg, Pa.....	A. A. Hammerschlag, Ph.D.	Non-sect...	Scotch Plaid	5–20	10,000,000	161	2,226	275,000
1881	**Case School of Ap. Sci.**	Cleveland, Ohio....	Charles S. Howe, Ph. D...	Non-sect...	Brown and White.....	120–140	3,500,000	40	522	9,000
1896	**Clarkson Sch. of Tech..**	Potsdam, N. Y.....	John P. Brooks, M. E.....	Non-sect...	.....	100	550,000	9	70	5,000
1889	**Clemson Agricultural..**	Clemson Col., S. C..	Walter M. Riggs, M. E...	State.....	Purple and Orange.....	60	1,025,000	75	750	18,000
....	**Cogswell Polytech. Col.**	San Francisco, Cal..	George B. Miller.....	Non-sect...	.....	.....	1,425,000	12	317	1,000
1879	**Colorado Agricultural..**	Fort Collins, Col....	Charles A. Lory, LL. D...	State.....	.....	None	1,015,000	57	1,050	40,000
1874	**Colorado Sch. of Mines**	Golden, Col.....	W. G. Haldane, Ph. D.....	State.....	.....	170	750,000	20	256	12,000
1881	**Connecticut Agri. Col.**	Storrs, Conn.....	C. H. Beach, M. Sc.....	State.....	.....	60	600,000	30	220	12,000
....	**Drexel Institute.....**	Philadelphia, Pa....	.....	Non-sect...	.....	.....	2,850,000	90	2,486	36,000
1888	**Georgia Sch. of Tech...**	Atlanta, Ga.....	K. G. Matheson, LL. D...	State.....	.....	30–130	750,000	63	818	10,000
....	**Girard College.....**	Philadelphia, Pa....	C. A. Herrick, Ph. D.....	Non-sect...	.....	.....	24,500,000	67	1,562	20,000
1868	**Hampton Institute....**	Hampton, Va.....	H. B. Frissell, D. D.....	Non-sect...	.....	100	3,500,000	119	1,400	29,000
1869	**Iowa S. of Agr. and M. A.**	Ames, Iowa.....	R. A. Pearson, LL. D.....	State.....	.....	50	3,030,000	200	2,000	35,000
1863	**Kansas State Agr. Col.**	Manhattan, Kan...	Henry J. Waters, LL. D...	State.....	.....	19–39	2,400,000	167	2,498	40,000
1862	**Kentucky Agr. and M..**	Lexington, Ky.....	J. K. Patterson, LL. D....	State.....	.....	.....	500,000	60	681	8,000
....	**Lewis Institute.....**	Chicago, Ill.....	George N. Carman, M. A.	Non-sect...	.....	60	2,000,000	100	3,000	25,000
....	**Lowell Textile School..**	Lowell, Mass.....	Charles H. Eames.....	Non-sect...	.....	.....	575,000	28	669	1,200
1856	**Maryland Agricultural.**	College Park, Md...	H. J. Patterson, D. Sc.....	State.....	.....	50	350,000	32	210	7,500
1863	**Massachachusetts Agr..**	Amherst, Mass.....	K. L. Butterfield, M. A...	State.....	.....	120	850,000	60	514	33,000
1861	**Mass. Inst. of Tech.....**	Boston, Mass.....	R. C. Maclaurin, LL. D...	Non-sect...	Cardinal Red and Silver Gray.....	250	7,600,000	260	1,575	90,000
....	**McDonogh Ind. School.**	McDonogh, Md.....	Sidney T. Moreland.....	Non-sect...	.....	.....	1,225,000	....	.....	5,000
....	**Mech. Arts. High Sch..**	Boston, Mass.....	C. W. Parmenter, Ph. D..	Non-sect...	.....	.....	950,000	43	1,433	500
....	**Mechanics Institute...**	Cincinnati, Ohio....	John L. Shearer, M. A....	Non-sect...	.....	.....	1,675,000	25	1,214	7,200
1885	**Michigan Col. of Mines**	Houghton, Mich....	Fred W. McNair, D. Sc...	State.....	.....	25–150	700,000	26	266	25,000
1857	**Michigan State Agr....**	Lansing, Mich.....	J. L. Snyder, Ph. D.....	State.....	Green.....	15	450,000	135	1,500	35,000
....	**Miller Manual College.**	Crozet, Va.....	R. B. Fulton, LL. D.....	State.....	.....	.....	1,850,000	26	250	5,000
1880	**Miss. Agr. and Mech...**	Starksville, Miss....	J. C. Hardy, LL. D.....	City.....	Maroon and White.....	30	1,000,000	65	1,120	26,000
1893	**Montana Agricultural..**	Bozeman, Mont....	J. M. Hamilton, M. Sc....	State.....	.....	30–50	925,000	51	500	14,000
1900	**Montana Sch. of Mines.**	Butte, Mont.....	Chas. H. Bowman, M. Sc..	State.....	.....	.....	250,000	8	80	.....
1885	**Newark Tech. School...**	Newark, N. J.....	C. A. Colton, D. Sc.....	.....	.....	.....	200,000	21	400	4,000
1893	**N. H. Col. of Agr. and Mech. Arts.....**	Durham, N. H.....	E. T. Fairchild, LL. D....	State.....	.....	60	1,300,000	42	310	25,000
1889	**N. M. Col. of Agr. and Mech. Arts.....**	State College, N. M.	George E. Ladd, Ph. D....	State.....	.....	.....	300,000	42	300	13,000
1893	**N. M. School of Mines**	Socorro, N. M.....	Fayette A. Jones, Ph. D...	State.....	.....	20–50	100,000	8	60	3,000
1889	**N. C. Sch. of Agr. and Mech. Arts.....**	West Raleigh, N. C.	D. H. Hill, LL. D.....	State.....	.....	45	825,000	53	630	7,000
1892	**North Carolina Normal and Industrial College**	Greensboro, N. C...	Julius J. Faust, LL. D....	State.....	.....	.....	.....	64	570	8,000
1890	**North Dakota Agricu'l.**	Fargo, N. D.....	J. H. Worst, LL. D.....	State.....	.....	36	1,500,000	81	1,200	23,000
1873	**North Georgia Agr. and Mech.....**	Dahlonega, Ga.....	G. R. Glenn, LL. D.....	State.....	.....	.....	100,000	14	288	5,000
1891	**Okla. Agr. and Mech...**	Stillwater, Okla....	J. H. Connell, M. Sc.....	State.....	.....	.....	1,650,000	70	1,818	15,000
1868	**Oregon Agr. Col.....**	Corvallis, Ore.....	W. J. Kerr, D. Sc.....	State.....	Orange.....	25–55	1,250,000	140	1,728	18,000
....	**Penn'a Sch. of Indus. Art**	Philadelphia, Pa....	Leslie W. Miller.....	Non-sect...	.....	.....	2,250,000	40	1,067	11,600
1890	**Polytechnic College....**	Fort Worth, Tex....	H. A. Boaz, D. D.....	Methodist..	.....	60	350,000	35	737	.....
....	**Polytech. High Sch.....**	Los Angeles, Cal....	J. H. Francis.....	Non-sect...	.....	.....	500,000	82	2,010	4,600
....	**Pratt Institute.....**	Brooklyn, N. Y.....	Charles M. Pratt, M. A...	Non-sect...	.....	.....	6,350,000	153	3,782	100,000
1874	**Purdue University.....**	Lafayette, Ind.....	W. E. Stone, Ph.D., LL.D.	State.....	Old Gold and Black.....	25	1,925,000	162	1,885	32,000
....	**Rankin Sch. of Mech...**	St. Louis, Mo.....	Lewis Gustafson	Non-sect...	.....	.....	3,400,000	7	224	.....
1824	**Rensselaer Poly. Inst...**	Troy, N. Y.....	P. C. Ricketts, C. E.....	Non-sect...	Cherry and White.....	200	2,675,000	60	615	10,000
1890	**R. I. Sch. of Agr. and Mech. A.....**	Kingston, R. I.....	Howard Edwards, LL. D..	State.....	.....	.....	400,000	28	192	22,000
1874	**Rose Polytechnic Inst..**	Terre Haute, Ind...	C. Leo Mees, Ph. D.....	Non-sect...	.....	110	1,500,000	25	200	17,000
1881	**South Dakota Agr.....**	Brookings, S. D....	R. L. Slagle, Ph. D.....	State.....	.....	.....	2,500,000	54	604	11,000
1885	**S. D. Sch. of Mines.....**	Rapid City, S. D....	C. C. O'Harra, Ph. D....	State.....	.....	.....	500,000	11	66	4,000
1871	**Stevens Inst. of Tech...**	Hoboken, N. J.....	A. C. Humphreys, LL. D..	Non-sect...	Silver Gray and Cardinal	225	1,800,000	35	361	10,000
1876	**Texas Agr. and Mech...**	College Station, Tex.	.....	State.....	.....	.....	1,400,000	75	1,114	8,000
1891	**Throop Polytech. Inst..**	Pasadena, Cal.....	J. A. B. Scherer, LL. D...	Non-sect...	Orange and White.....	150	1,000,000	14	40	4,500
1881	**Tuskegee Institute.....**	Tuskegee, Ala.....	B. T. Washington, LL. D..	Non-sect...	.....	.....	3,360,000	183	1,702	19,000
1802	**U. S. Military Acad.....**	West Point, N. Y...	Col. C. P. Townsley, U. S. A., Superintendent.	National...	Black, Gold and Gray...	.....	34,000,000	120	566	80,000
1845	**U. S. Naval Academy...**	Annapolis, Md.....	Capt. J. H. Gibbons, U. S. N. Superintendent.	National...	Navy Blue and Gold...	.....	12,000,000	125	732	55,000

TABLE III. AGRICULTURAL, TECHNOLOGICAL AND VOCATIONAL SCHOOLS—Continued

Founded	Name of Institution	Location	President or Dean	Denominational Control	Colors	Cost of Tuition	Value of Property (Including Endowment)	Number of Instructors	Number of Students	Volumes in Library
1890	**Utah Agr. College**	Logan, Utah	J. A. Widtsoe, Ph. D.	State	White and Blue	$ 15	$ 500,000	70	1,069	20,000
1873	**Virginia Polytechnic**	Blacksburg, Va.	J. D. Eggleston, M. A.	State	Orange and Maroon	50	1,000,000	64	502	12,500
1892	**Washington Agr. Col.**	Pullman, Wash.	E. A. Bryan, LL. D.	State	CrimsonGray		6,200,000	120	1,463	30,000
....	**Williamson School of Mechanics**	Philadelphia, Pa.	John M. Shrigley	Non-sect.			2,450,000	14	285	2,500
....	**Winona Tech. Inst.**	Indianapolis, Ind.	W. C. Smith	Non-sect.			1,150,000	12	213	1,000
1805	**Worcester Polytechnic Institute**	Worcester, Mass.	Ira N. Hollis, L. H. D.	Non-sect.	Crimson and Steel Gray	170	1,000,000	50	521	14,000

TABLE IV. COLLEGES FOR WOMEN—DIVISION A

1889	**Barnard College**	New York, N. Y.	Virginia Gildersleeve, Ph.D.	Non-sect.	Light Blue and White	$ 175	$3,000,000	71	742	10,000
1880	**Bryn Mawr College**	Bryn Mawr, Pa.	M. Cary Thomas, LL. D.	Non-sect.	Yellow and White	200	3,450,000	60	438	60,000
1855	**Elmira College**	Elmira, N. Y.	A. C. Mackenzie, D. D.	Presbyterian		150	400,000	16	210	9,000
1888	**Goucher College**	Baltimore, Md.	William W. Guth, Ph. D.	Methodist		150	1,250,000	30	386	12,000
1871	**Mills College**	Mills College, Cal.	Luella C. Carson, LL. D.	Non-sect.		165	900,000	40	120	12,000
1837	**Mount Holyoke College**	South Hadley, Mass.	Mary E. Woolley, L. H. D.	Non-sect.	Blue	150	1,925,000	90	754	46,500
1887	**Newcomb College**	New Orleans, La.	B. V. B. Dixon, LL. D.	Non-sect.		90	4,000,000	55	481	10,000
1879	**Radcliffe College**	Cambridge, Mass.	L. B. R. Briggs, LL. D.	Non-sect.	Crimson and White	150	1,600,000	127	546	27,500
1893	**Randolph-Macon Col.**	Lynchburg, Va.	William A. Webb, Litt. D.	Non-sect.		100	650,000	36	565	12,000
1849	**Rockford College**	Rockford, Ill.	Julia H. Gulliver, Ph. D.	Non-sect.		100	385,000	28	300	6,000
1899	**Simmons College**	Boston, Mass.	Henry Lefavour, LL. D.	Non-sect.	Blue and Gold	100–125	2,925,000	91	833	15,000
1875	**Smith College**	Northampton, Mass.	Rev. M. L. Burton, Ph. D.	Non-sect.	White	150	3,175,000	138	1,511	38,000
1897	**Trinity College**	Washington, D. C.	Sister Catherine Aloysina.	R. Catholic		100	950,000	26	212	16,000
1861	**Vassar College**	Poughkeepsie, N.Y.	Herbert Mills, Ph. D.	Non-sect.	Rose and Gray	150	4,225,000	112	1,054	73,000
1875	**Wellesley College**	Wellesley, Mass.	Ellen F. Pendleton, Litt. D.	Non-sect.	Deep Blue	175	3,400,000	120	1,418	70,000
1868	**Wells College**	Aurora, N. Y.	Kerr D. Macmillan, D. D.	Non-sect.		160	800,000	32	211	20,000

TABLE V. COLLEGES AND SEMINARIES FOR WOMEN—DIVISION B

....	**Agnes Scott College**	Decatur, Ga.	F. H. Gaines, M. A.			$	$ 600,000	20	173	.....
1854	**AlabamaBrenauCollege**	Eufaula, Ala.	T. G. Wilkinson, M. A.	Non-sect.		50	50,000	12	110	500
1854	**Alabama Conf. Fem.**	Tuskegee, Ala.	John Massay, LL. D.	Methodist		50	360,000	17	146	4,000
1903	**Alabama Synod Col.**	Talladega, Ala.	Rev. T. P. Walton	Presbyterian			25,000	9	90	.....
1882	**Albert Lea College**	Albert Lea, Minn.	John T. Bergen, D. D.	Presbyterian		36	230,000	14	100	3,500
1867	**Allentown College**	Allentown, Pa.	Rev. W. F. Curtis	Reformed		75	40,000	17	156	1,500
1854	**Andrew College**	Cuthbert, Ga.	Rev. J. W. Malone, D. D.	Methodist		40	100,000	13	150	2,500
1908	**Asgard College**	South Houston, Tex.	J. L. Dickens, M. A.			18–36	75,000	6	50	400
1843	**Athens College**	Athens, Ala.	Mary N. Moore, M. A.	Methodist		40	160,000	19	202	2,500
1845	**Baylor Female College**	Belton, Tex.	John C. Hardy, LL. D.	Baptist	Green and Gold	60	300,000	39	508	6,000
1841	**Beaumont College**	Harrodsburg, Ky.	Thomas Smith, M. A.	Non-sect.		30–60	30,000	14	80	4,000
1853	**Beaver College**	Beaver, Pa.	Le Roy Weller, M. A.	Methodist		75	150,000	15	180	3,000
1894	**Belhaven College**	Jackson, Miss.	R. W. Lancaster, M. A.	Non-sect.		60	65,000	14	131	2,200
1890	**Belmont College**	Nashville, Tenn.	Ira Landreth, LL. D.	Non-sect.			350,000	47	450	4,000
1907	**Bessie Tift College**	Forsyth, Ga.	C. H. S. Jackson, LL. D.	Baptist			290,000	36	350	3,500
1854	**Bethel Female College**	Hopkinsville, Ky.	H. G. Brownell, B. Sc.	Baptist		50	50,000	9	75	500
1841	**Blairsville College**	Blairsville, Pa.	Magnus C. Ihlseng, Ph. D.				75,000	10	75	2,000
1873	**Blue Mountain College**	BlueMountain, Miss.	W. J. Lowrey, LL. D.	Non-sect.			150,000	29	410	4,400
1890	**Boscabel College**	Nashville, Tenn.	Mrs. N. J. Ellis, M. A.	Non-sect.			100,000	14	125	3,500
1878	**Brenau College**	Gainesville, Ga.	H. J. Pearce, Ph. D.	Non-sect.		60	300,000	45	485	7,000
1854	**Caldwell College**	Danville, Ky.	John C. Acheson, M. A.	Presbyterian			120,000	23	200	.....
1892	**Central Baptist College**	Conway, Ark.	John W. Conger, M. A.	Baptist		50	75,000	15	200	.....
1869	**Central College**	Lexington, Mo.	Z. M. Williams, M. A.	Methodist			200,000	19	150	7,000
1893	**Chicora College**	Greenville, S. C.	S. C. Byrd, D. D.	Presbyterian		40	150,000	30	222	1,000
....	**Coker College**	Hartsville, S. C.	Arthur J. Hall, M. A.				270,000	15	134	.....
1890	**College for Women**	Columbia, S. C.	Euphemia McClintock, M.A.	Non-sect.		100	125,000	26	280	3,000
1904	**New Rochelle of Col.**	New Rochelle, N. Y.	M. C. O'Farrell, Ph. D.	R. Catholic		120	350,000	27	225	3,700
1909	**Colorado Woman's Col.**	Montclair, Col.	J. P. Treat, M. A.	Baptist			125,000	8	75	500
1854	**Columbia College**	Columbia, S. C.	W. W. Daniel, D. D.	Methodist			250,000	23	295	.....
1890	**Converse College**	Spartansburg, S. C.	Robert P. Pell, Litt. D.	Non-sect.		75	450,000	22	310	4,000
1884	**Cottey College**	Nevada, Mo.	Mrs. V. A. C. Stockard	Non-sect.		50	125,000	22	246	1,500
1843	**Cox College**	College Park, Ga.	W. S. Cox, M. A.	Non-sect.			200,000	27	200	5,000
1859	**Due West College**	Due West, S. C.	Rev. R. L. Robinson	A. R. Presb.		37	75,000	16	175	1,200
1897	**Elizabeth College**	Charlotte, N. C.	Rev. C. B. King, D. D.	Non-sect.		70	260,000	21	206	1,400
1905	**Florida State College for Women**	Tallahassee, Fla.	Edward Conradl, Ph. D.				225,000	25	300	8,000
1879	**Gaston College**	Dallas, N. C.	S. A. Wolff, M. A.	Lutheran			15,000	7	149	1,400
1854	**Glendale College**	Glendale, Ohio	Miss R. J. De Vore, M. A.	Non-sect.			60,000	15	65	3,000
1838	**Greensboro Female Col.**	Greensboro, N. C.	S. B. Turrentine, D. D.	Methodist		70	300,000	15	228	2,000
....	**Greenville College**	Greenville, Ill.	E. G. Burritt, M. A.				100,000	21	351	6,000
1869	**Hamilton College**	Lexington, Ky.	H. G. Shearin, M. A.	Non-sect.		65	250,000	29	302	10,000
1873	**Hardin College**	Mexico, Mo.	J. W. Million, M. A.	M.E.South.		60	225,000	22	234	2,500
1852	**Hillman College**	Clinton, Miss.	W. T. Lowrey, D. D.	Baptist			35,000	12	110	1,200
1842	**Hollins Institute**	Hollins, Va.	Miss Matty L. Cocke	Non-sect.		100	250,000	35	250	5,000
1856	**Howard Female College**	Gallatin, Tenn.	W. H. Buck, M. A.	Non-sect.			40,000	10	110	1,000
1859	**Howard-Payne College**	Fayette, Mo.	Rev. H. E. Stout	M.E.South.		50	150,000	17	170	2,000
1847	**Illinois Woman's Col.**	Jacksonville, Ill.	Rev. J. R. Harker, Ph. D.	Methodist		75	460,000	33	357	3,500
1856	**Irving College**	Mechanicsburg, Pa.	E. E. Campbell, Ph. D.	Lutheran			100,000	18	140	1,500
1852	**Isbell College**	Talladega, Ala.	Frank B. Webb, D. D.	Presbyterian			10,000	8	90	300
1854	**Jessamine Institute**	Nicholasville, Ky.	Mrs. J. B. Stears	Non-sect.			75,000	7	75	2,500
1841	**Judson College**	Marion, Ala.	Paul V. Bomar, M. A.	Baptist		75	350,000	38	250	10,000
1852	**Kee Mar College**	Hagerstown, Md.	Rev. S. M. Newman	Lutheran			100,000	15	100	1,200
1846	**La Grange Female Col.**	La Grange, Ga.	R. W. Smith, M. A.	M.E.South.		50	190,000	22	200	3,400
1859	**Lake Erie College**	Painesville, Ohio	Vivian Blanche Small, M.A.	Non-sect.		100	500,000	25	170	11,000
1872	**Lander College**	Greenwood, S. C.	Rev. J. O. Wilson, D. D.	M.E.South.		38	125,000	20	238	5,500
1851	**Lasell Seminary**	Auburndale, Mass.	G. M. Winslow, Ph. D.	Non-sect.			225,000	33	190	3,000
1855	**Lexington College**	Lexington, Mo.	C. Lewis Fowler, M. A.	Methodist			125,000	20	104	1,000
1875	**Liberty College**	Glasgow, Ky.	M. W. Hatton, Ph. D.	Baptist		50	75,000	20	200	3,000
1845	**Limestone College**	Gaffney, S. C.	L. D. Lodge, Ph. D.	Baptist			150,000	15	207	3,000
1831	**Lindenwood College**	St. Charles, Mo.	Rev. G. F. Ayers, Ph. D.	Presbyterian		60	200,000	14	132	2,000
1858	**Logan Female College**	Russellville, Ky.	J. W. Repass, D. D.	Methodist			60,000	10	100	2,000
1857	**Louisburg College**	Louisburg, N. C.	Mary D. Allen	Methodist		30	25,000	13	103	1,500
1856	**Louisiana College**	Keatchie, La.	Oscar J. Peterson, M. A.	Baptist			20,000	4	40	1,000
1858	**Lucy Cobb Institute**	Athens, Ga.	Susan G. Gerdine, M. A.	Non-sect.				23	200	1,000
1826	**Maine Wesleyan**	Kent's Hill, Me.	Rev. W. F. Berry, D. D.	Methodist			350,000	14	200	9,500
1854	**Mansfield College**	Mansfield, La.	R. E. Bobbitt, B. Sc.	Methodist			75,000	10	150	2,500

TABLE V. COLLEGES AND SEMINARIES FOR WOMEN—DIVISION B—Continued

Founded	Name of Institution	Location	President or Dean	Denominational Control	Colors	Cost of Tuition	Value of Property (Including Endowment)	Number of Instructors	Number of Students	Volumes in Library
1902	**Margaret College**	Versailles, Ky.	James M. Maxon, M. A.	Episcopal		$ 65	$ 80,000	12	83	1,000
1836	**Marion College**	Marion, Ala.	Junius M. Batte, M. A.	Non-sect.		60	40,000	7	85	800
1874	**Marion College**	Marion, Va.	J. P. Miller, D. D.	Lutheran		40	45,000	12	100	1,000
1853	**Martha Washington**	Abingdon, Va.	Rev. S. D. Long, D. D.	Methodist		50	115,000	18	170	2,000
1870	**Martin College**	Pulaski, Tenn.	W. T. Wynn, M. A.	Methodist		63	90,000	15	190	800
1853	**Maryland for Women**	Lutherville, Md.	C. W. Gallagher, D. D.	Non-sect.			150,000	18	120	6,000
1842	**Memphis Con. F. Inst.**	Jackson, Tenn.	Henry G. Hawkins, M. A.	Methodist		25–60	50,000	17	210	8,500
1903	**Meridian College**	Meridian, Miss.	J. W. Beeson, M. A.	Non-sect.		50	200,000	35	500	4,200
1891	**Meredith College**	Raleigh, N. C.	Richard T. Vann, M. A.	Baptist		60	340,000	30	403	2,700
1850	**Millersburg Female Col.**	Millersburg, Ky.	Rev. C. C. Fisher, M. A.	Methodist		25–60	60,000	14	175	800
1851	**Milwaukee-Downer Col.**	Milwaukee, Wis.	Miss E. C. Sabin, M. A.	Non-sect.		100	625,000	48	498	9,000
1884	**Miss. Ind. Inst. & Col.**	Columbus, Miss.	Henry L. Whitfield, LL. D.	State			1,275,000	82	850	10,000
1749	**Moravian Seminary**	Bethlehem, Pa.	J. H. Clewell, D. D.	Movarian			200,000	20	180	2,500
1877	**No. Texas Female Col.**	Sherman, Texas	Lucy A. Kidd-Key	Methodist		50	175,000	40	473	1,200
1851	**Notre Dame College**	San Jose, Cal.	Sister Mary Bernardine	R. Catholic			250,000	30	150	8,000
1850	**Ogontz School for Girls**	Ogontz, Pa.	Miss S. J. Eastman	Non-sect.				29	142	12,000
1891	**Owensboro Female Col.**	Owensboro, Ky.	J. Byron La Rue	Non-sect.			40,000	14	300	2,100
1849	**Oxford College**	Oxford, Ohio	Jane Sherzer, Ph. D.	Non-sect.		100	160,000	19	186	4,500
....	**Oxford College**	Oxford, N. C.	F. P. Hobgood, M. A.				45,000	11	145	
1853	**Packer Coll. Institute**	Brooklyn, N. Y.	E. J. Goodwin, L. H. D.	Non-sect.			400,000	57	675	9,000
1869	**Penn'a Col. for Women**	Pittsburg, Pa.	Henry D. Lindsay, D. D.	Non-sect.		125	650,000	24	247	3,500
1839	**Port Gibson College**	Port Gibson, Miss.	C. M. Chapman, M. A.	Methodist		40	45,000	11	150	1,500
1899	**Powhatan College**	Charlestown, W. Va.	S. P. Hatton, L. L. D.	Non-sect.		60	100,000	14	116	1,500
1859	**Roanoke College**	Danville, Va.	J. B. Brewer, Ph. D.	Baptist		50	25,000	11	100	2,500
1849	**Rogersville College**	Rogersville, Tenn.	Lawrence Rolfe, M. A.	Presbyterian		37	20,000	8	119	500
....	**St. Anne's College**	Charlottesville, Va.	Mary Hyde Duval				25,000	10	105	
1859	**St. Elizabeth College**	Convent Station, N.J.	Sister Mary Pauline	R. Catholic			1,000,000	40	400	22,000
1868	**St. Mary's School**	Knoxville, Ill.	Rev. C.W. Leffingwell, D.D.	Episcopal			200,000	25	100	10,000
....	**St. Mary's College**	Notre Dame, Ind.	Mother Mary Pauline	R. Catholic			175,000	40	325	3,000
1802	**Salem College**	Winston-Salem, N.C.	H. F. Rondthaler, M. A.	Movarian			500,000	49	549	6,000
1894	**San Antonio Female Col.**	San Antonio, Tex.	Rev. J. E. Harrison	Methodist		65	150,000	18	200	2,500
1845	**Sayre Female Institute**	Lexington, Ky.	J. Morton Spencer, D. D.	Presbyterian		65	200,000	19	150	3,000
1877	**Shorter College**	Rome, Ga.	A. W. Van Hoose	Baptist		70	300,000	26	250	6,000
1852	**Silliman College Inst.**	Clinton, La.	H. H. Brownlee	Presbyterian		50	100,000	9	75	1,000
1860	**Sisters of Bethany Col.**	Topeka, Kan.	Rt. Rev. F. R. Millspaugh	Episcopal			340,000	15	142	2,000
1852	**Soule College**	Murfreesboro, Tenn.	Martha A. Hopkins	Non-sect.			25,000	14	150	1,500
....	**Southern Female Col.**	La Grange, Ga.	J. E. Ricketson, B. Sc.				50,000	22	175	
....	**Southern Presby. Col.**	Red Springs, N. C.	Charles G. Vardell, M. A.	Presbyterian			175,000	31	321	
1857	**Statesville College**	Statesville, N. C.	John A. Scott, M. A.	Presbyterian		40	75,000	12	130	500
1894	**Stanton College**	Natchez, Miss.	Hiram P. Todd, M. A.	Non-sect.			15,000	16	149	
1856	**Stephens College**	Columbia, Mo.	James M. Wood, M. A.	Baptist		60	500,000	24	241	
1868	**Stonewall Jackson Col.**	Abingdon, Va.	Rev. Dabney R. Carson	Presbyterian			60,000	16	124	1,000
1843	**Stuart Hall College**	Staunton, Va.	Maria P. Duvall, M. A.	Episcopal			75,000	23	125	1,800
1870	**Sullins College**	Bristol, Va.	W. S. Neighbors, M. A.	Methodist			125,000	26	257	2,200
....	**Sweet Briar College**	Sweet Briar, Va.	Mary K. Benedict, Ph. D.							
1871	**Synodical Female Col.**	Fulton, Mo.	L. F. MacQueen, M. A.	Presbyterian		50	75,000	12	110	800
1903	**Tennessee College**	Murfreesboro, Tenn.	G. J. Burnett, M. A.	Baptist		60	125,000	25	267	2,000
1856	**Tennessee Female Col.**	Franklin, Tenn.	T. E. Allen, M. A.	Non-sect.			25,000	14	160	
1858	**Tuscaloosa College**	Tuscaloosa, Ala.	Barney Thompson, M. A.	Non-sect.			20,000	15	135	1,000
....	**Va. Intermount Col.**	Bristol, Va.	J. T. Henderson, M. A.	Baptist		50	150,000	18	170	3,000
....	**Ward Seminary**	Nashville, Tenn.	J. D. Blanton, LL. D.	Non-sect.			250,000	35	475	4,500
1836	**Wesleyan Female Col.**	Macon, Ga.	C. R. Jenkins, D. D.	Methodist	Cardinal and Black	70	500,000	40	410	3,500
1831	**Westbrook Seminary**	Portland, Me.	Arthur C. Yeaton, M. A.	Universalist			250,000	9	100	3,500
1855	**Western for Women**	Oxford, Ohio	Mary A. Sawyer, M. A.	Non-sect.		100	700,000	30	239	16,000
1859	**Whitworth Female Col.**	Brookhaven, Miss.	Rev. I. W. Cooper, D. D.	Methodist		54	125,000	15	230	2,000
1908	**William Smith College**	Geneva, N. Y.	L. C. Stewardson, LL. D.	Non-sect.				24		47,000
....	**William Woods College**	Fulton, Mo.	Jos. L. Garvin	Christian	White	275	200,000	20	125	2,000
1870	**Wilson College**	Chambersburg, Pa.	Anna J. McKeag, Ph. D.	Presbyterian		60	425,000	32	365	8,000
1893	**Woman's College**	Frederick, Md.	Joseph H. Apple, M. A.	Lutheran		60	150,000	18	225	5,000
....	**Woman's Col. of Ala.**	Montgomery, Ala.	W. E. Martin, Ph. D.							
1869	**Young Female College**	Thomasville, Ga.	J. E. Fogartie, Ph. D.				80,000	27	70	

FOREIGN COLLEGES AND UNIVERSITIES

F'nd'd	Location	Name of University	Students	Volumes in Library	Prevailing Language	Under What Control
1494	Aberdeen, Scotland	**University of Aberdeen**	1,100	180,000	English.	
1632	Amsterdam, Netherlands	**Universtiteit van Amsterdam**	1,051	500,000	Dutch.	
1836	Athens, Greece	**National University**	2,536	270,000	Greek.	State.
1450	Barcelona, Spain	**University de Barcelona**	1,900	160,000	Spanish.	
1460	Basel, Switzerland	**Universität**	669	252,000	German.	State.
1809	Berlin, Germany	**Friedrich-Wilhelms Universität**	18,484	431,900	German.	
1834	Berne, Switzerland	**Universität Kantonah**	2,184	200,000	German.	State.
1875	Birmingham, England	**University of Birmingham**	1,000		English.	
1119	Bologna, Italy	**Regia Università degli Studi**	2,000	300,000	Italian.	
1818	Bonn, Prussia	**Friedrich-Wilhelms Universität**	3,652	355,000	German.	
1441	Bordeaux, France	**Université de Bordeaux**	2,496	95,000	French.	
1506	Breslau, Germany	**Universität**	2,405	350,000	German.	
1864	Bucharest, Roumania	**Universitatea din Bucuresti**	3,422	181,925	Roumanian.	
1776	Budapest, Hungary	**University of Budapest**	6,835	300,000	Hungarian.	State.
1821	Buenos Aires, Argentina	**Universidad Nacional**	4,364	150,000	Spanish.	State.
972	Cairo, Egypt	**Azhar University**	9,940		Arabic-Coptic	Moslem.
1857	Calcutta, India	**University of Calcutta**	2,308		Hindu.	
1257	Cambridge, England	**University of Cambridge**	3,207	550,000	English.	
1811	Christiania, Norway	**Kongelige Frederiks Universitet**	1,584	420,000	Norwegian.	
1479	Copenhagen, Denmark	**University of Copenhagen**	2,000	475,000	Danish.	State.
1364	Cracow, Austria	**University of Cracow**	3,211	395,000	Polish	State.
1591	Dublin, Ireland	**University of Dublin**	1,109	297,009	English.	
1583	Edinburgh, Scotland	**University of Edinburgh**	3,326	237,000	English.	
1743	Erlangen, Germany	**Friederichs-Alexanders Universität**	1,084	237,973	German.	
1457	Freiburg, Germany	**Badische Albert-Ludwigs Universität**	2,578	270,000	German.	
1816	Ghent, Belgium	**Université de l'Etat de Grand**	967	352,000	French.	State.
1607	Giessen, Germany	**Ludwigs Universität**	1,261	309,770	German.	
1451	Glasgow, Scotland	**University of Glasgow**	2,696	200,000	English.	
1737	Göttingen, Germany	**Georg-Augusto Universität**	2,230	536,000	German.	
1586	Gratz, Austria	**Karl-Franzens Universität**	2,060	230,000	German.	State.
1456	Greifswald, Germany	**Universität**	1,038	189,630	German.	
1339	Grenoble, France	**Université de Grenoble**	1,196	106,000	French.	
1502 / 1694	Halle, Germany	**Friedrichs Universität Halle Wittenberg**	2,393	228,000	German.	
1728	Havana, Cuba	**Universidad de la Habana**	600	20,000	Spanish.	State.
1386	Heidelberg, Germany	**Ruprecht-Karls Universität**	2,089	600,000	German.	

FOREIGN COLLEGES AND UNIVERSITIES—Continued

F'ND'D	LOCATION	NAME OF UNIVERSITY	STUDENTS	VOLUMES IN LIBRARY	PREVAILING LANGUAGE	UNDER WHAT CONTROL
1640	Helsingfors, Russia	**Kejserliga Alexanders Universitet**	2,087	200,000	Russian.	
1673	Innsbruck, Austria	**Leopold-Franzens Universität**	1,227	215,000	German.	State.
1558	Jena, Germany	**Sächsische Gesamt-Universität**	1,496	370,000	German.	
1632	Jurjew, formerly Dorpat, Russia	**Imperial University of Jurjew**	2,100	230,000	Russian.	
1804	Kazan, Russia	**Imperatorskij Kasanskij Universitet**	2,821	247,046	Russian.	
1804	Kharkof, Russia	**Imperatorskij, Charkovskij Universitet**	3,450	187,000	Russian.	
1665	Kiel, Germany	**Christian-Albrechts Universität**	1,353	263,000	German.	
1832	Kiev, Russia	**Imperatorskij Universitet Sv. Vladimi**	4,001	120,000	Russian.	
1872	Klausenburg, Hungary	**University of Klausenburg**	2,218	70,000	Hungarian.	
1544	Königsberg, Germany	**Albertus Universität**	1,367	478,700	German.	
1537	Lausanne, Switzerland	**Université de Lausanne**	1,372	280,000	French.	State.
1575	Leiden, Netherlands	**Rijks-Universiteit**	1,435	200,000	Dutch.	
1409	Leipzig, Germany	**Universität**	4,916	550,000	German.	
1784	Lemberg, Austria	**University of Francis I.**	4,704	192,000	Polish.	State.
1817	Liege, Belgium	**Université de Liége**	2,388	.....	French	State.
1808	Lille, France	**Université de Lille**	1,560	186,500	French.	
1836	London, England	**University of London**	6,341	.....	English.	
1808	Lyons, France	**Université de Lyon**	2,783	200,000	French.	
1508	Madrid, Spain	**Universidad Central de España**	5,258	204,000	Spanish.	
1851	Manchester, England	**Victoria University of Manchester**	1,738	233,000	English.	
1605	Manila, P. I.	**Universidad de Santo Tomás**	1,200	370,000	Spanish-Cath.	
1527	Marburg, Germany	**Universität**	1,954	416,000	German.	
1755	Moscow, Russia	**Imperatorskij Moskovskij**	8,083	431,000	Russian.	State.
1472	Munich, Germany	**Ludwig-Maximilians**	6,337	500,000	German.	State.
1771	Münster, Germany	**Universität**	1,906	290,000	German.	State.
1572	Nancy, France	**Université de Nancy**	1,841	138,000	French.	State.
1224	Naples, Italy	**Regia Università degli Studi**	6,348	282,653	Italian.	State.
1865	Odessa, Russia	**Imperatorskij Novorossijskij**	2,854	250,000	Russian.	State.
1200	Oxford, England	**University of Oxford**	3,663	600,000	English.	
1222	Padua, Italy	**Regia Università degli Studi**	1,538	200,000	Italian.	
1200	Paris, France	**Université de Paris**	15,789	800,000	French.	
1348	Prague, Austria	**Karl-Ferdinand Universität**	6,097	341,000	Ger.-Boh.	
1303	Rome, Italy	**Regia Università degli Studi**	3,316	204,885	Italian.	
1819	St. Petersburg, Russia	**Imperatorskij, St. Petersburg**	8,090	366,800	Russian.	
1879	Sheffield, England	**University of Sheffield**	2,138	155,000	English.	
1567	Strassburg, Germany	**Kaiser Wilhelms Universität**	1,995	898,000	German.	
1868	Tokyo, Japan	**Teikoku Daigaku Imperial University**	5,411	358,895	Japanese.	
1233	Toulouse, France	**Université de Toulouse**	2,975	232,000	French.	
1477	Tübingen, Germany	**Eberhard-Karls Universität**	1,760	475,000	German.	
1412	Turin, Italy	**Regia Università degli Studi**	2,700	.....	Italian.	
1477	Upsala, Sweden	**Kungl-Universitetet i Upsala**	1,974	327,000	Swedish.	
1365	Vienna, Austria	**Royal University**	9,483	710,000	German.	State.
1869	Warsaw, Russia	**Imperatorskij Varsavskij Universitet**	1,400	545,205	Polish.	
1402	Würzburg, Germany	**Julius Maximilians Universität**	1,467	370,000	German.	
1832	Zurich, Switzerland	**Universität**	1,474	100,000	German.	State.

College Fraternities.—The college fraternities antedate all secret societies in America except Freemasonry. They reach back to Phi Beta Kappa, founded as a secret literary society at William and Mary College, Williamsburg, Va., Dec. 5, 1776. It was a radical departure from the open or public Latin-named literary or debating clubs which formed so marked a part of American college life late in the eighteenth century and during much of the nineteenth century. Its inspiration has never been satisfactorily explained, but with three Greek letters for a name (*Philosophia Biou Kybernetes*) and a secret sign and grip, it became the parent of this type of American fraternity life in the colleges. In 1831, in response to the anti-Masonry agitation, Phi Beta Kappa abandoned its secret character, and has since then spread to a large number of American collegiate institutions, where membership in it for many years has been merely an indication of high scholarship attained.

Rituals of college fraternities did not amount to much prior to 1831, when the anti-Masonic agitation had had time to exploit the subject. Beginning with the revival in general secret-society life, which came as the reverse movement of that pendulum, the Greek-letter fraternities absorbed into the fabrics of their ceremonials much that is Masonic, the David and Jonathan, and Robin Hood, and Druidic and chivalric legends, in some instances with a skill which not infrequently betrayed the work of a master hand.

It should be noted that among the larger universities Princeton is the only one at which there are no Greek-letter fraternities. At Yale the secret-society system differs from that at almost every other like institution, with local fraternities of its own for sophomores and for seniors (the latter Skull and Bones, Scroll and Key, Wolf's Head, and the new Elihu Club), and the three historic Greek-letter societies, Alpa Delta Phi, Psi Upsilon, and Delta Kappa Epsilon, as the junior year stepping-stones to "Bones," "Keys," Wolf's Head, and Elihu.

A reference to catalogues of these associations reveals the names of nearly 140,000 members, living and dead.

Emulation, imitation, and a natural rivalry led to the formation of succeeding Greek-letter fraternities, the better known in the general list being given in the appended table:

General Fraternities

FRATERNITY	MEMBERSHIP	ACTIVE CHAPTERS	INACTIVE CHAPTERS	NO. HOUSES	WHERE AND WHEN FOUNDED
Alpha Chi Rho	916	12	0	10	Trnity, 1895.
Alpha Delta Phi	11,700	24	7	18	Hamilton, 1832.
Alpha Sigma Phi	1,577	14	0	14	Yale, 1845.
Alpha Tau Omega	12,000	63	34	55	Virginia Military Institute, 1865.
Beta Theta Pi	18,982	74	22	70	Miami, 1839.
Chi Phi	6,420	21	19	21	Princeton, 1824.
Chi Psi	5,324	18	12	12	Union, 1841.
Delta Chi	3,547	23	6	22	Yale, 1844.
Delta Kappa Epsilon	17,500	43	12	43	Union, 1827.
Delta Phi	3,834	12	5	11	Columbia, 1847.
Delta Psi	3,975	7	..	7	College, City of New York, 1901.
Delta Sigma Phi	730	11	2	8	Bethany, 1859.
Delta Tau Delta	10,464	52	26	48	Williams, 1834.
Delta Upsilon	12,102	41	4	40	Union, 1825.
Kappa Alpha (North)	1,300	8	2	8	Washington and Lee, 1865.
Kappa Alpha (South)	9,572	51	10	30	University of Virginia, 1869.
Kappa Sigma	12,000	79	17	64	Boston University, 1911.
Lambda Chi Alpha	500	12	0	9	University of Michigan, 1883.
*Phi Delta Chi	2,500	14	3	10	Miami, 1848.
Phi Delta Theta	19,250	77	27	50	Washington and Jefferson, 1848.
Phi Gamma Delta	14,100	59	25	54	Washington and Jefferson, 1852.
Phi Kappa Psi	13,164	44	24	40	University of Pennsylvania, 1850.
Phi Kappa Sigma	5,000	27	17	27	Massachusetts Agricultural College, 1873.
Phi Sigma Kappa	3,500	26	1	6	University of Virginia, 1868.
Pi Kappa Alpha	4,500	37	11	22	Charleston College, 1904.
Pi Kappa Phi	297	8	1	2	Union, 1833.
Psi Upsilon	12,516	24	1	23	University of Alabama, 1856.
Sigma Alpha Epsilom	14,335	75	..	39	Miami, 1855.
Sigmi Chi	12,060	65	21	65	Virginia Military Institute, 1869.
Sigma Nu	10,000	70	10	68	Union, 1827.
Sigma Phi	2,800	10	2	10	Richmond College, 1910.
Sigma Phi Epsilon	2,500	34	11	1	Vincennes University, 1897.
Sigma Pi	1,135	10	1	9	Norwich University, 1856.
Theta Chi	1,205	14	6	12	Union, 1848.
Theta Delta Chi	6,800	28	14	26	Rensselaer Polytechnic Institute, 1864.
Theta Xi (Eng., Scien.)	1,800	17	0	2	C. C. New York, 1898.
Zeta Beta Tau	2,600	22	1	19	New York University, 1874.
Zeta Psi	7,676	24	10	22	

Women's Fraternities

FRATERNITY	MEMBERSHIP	ACTIVE CHAPTERS	INACTIVE CHAPTERS	NO. HOUSES	WHERE AND WHEN FOUNDED
Alpha Chi Omega	2,400	19	1	13	De Pauw University, 1885.
Alpha Gamma Delta	750	17	1	7	Syracuse University, 1904.
Alpha Omicron Pi	1,150	15	..	7	Barnard College, 1897.
Alpha Phi	2,200	17	0	12	Syracuse University, 1872.
Alpha Xi Delta	1,299	18	0	11	Lombard College, 1893.
Beta Sigma Omicron	1,500	19	8	..	Missouri State University, 1888.
Chi Omega	2,200	27	2	12	University of Arkansas, 1895.
Delta Delta Delta	4,000	44	3	..	Boston University, 1888.
Delta Gamma	3,480	24	9	4	University of Mississippi, 1874.
Gamma Phi Beta	2,196	15	0	5	Syracuse University, 1874.

Women's Fraternities—Continued

Fraternity	Membership	Active Chapters	Inactive Chapters	No. Houses	Where and When Founded
Kappa Alpha Theta	6,000	33	10	18	De Pauw University, 1870.
Kappa Delta	850	14	2	..	Virginia State Normal, 1897.
Kappa Kappa Gamma	6,500	37	10	21	Monmouth College, 1870.
Phi Mu	3,000	17	6	6	Wesleyan College, 1852.
Pi Beta Phi	7,000	45	9	23	Monmouth College, 1867.
Sigma Kappa	1,200	12	1	7	Colby College, 1874.
Sigma Sigma Sigma	700	7	5	..	Virginia State Normal, 1898.
Zeta Tau Alpha	951	15	5	3	Virginia State Normal, 1898.

Medical Fraternities

Alpha Kappa Kappa	5,200	39	2	21	Dartmouth, 1888.
Alpha Mu Pi Omega	555	7	1	0	University of Pennsylvania, 1891.
Alpha Sigma	1,050	10	3	4	New York Homeopathic Medical College, 1893.
Chi Zeta Chi	1,250	20	5	4	University of Georgia, 1903.
Kappa Psi	4,000	27	9	10	Cheshire Military Academy, 1879.
Nu Sigma Nu	4,902	31	1	..	University of Michigan, 1882.
Omega Epsilon Phi	2,384	8	4	14	University of Buffalo, 1895.
Phi Alpha Gamma	1,900	17	0	5	New York Homeopathic Medical College, 1894.
Phi Alpha Sigma	500	6	1	2	Bellevue Medical College, 1886.
Phi Beta Pi	4,771	36	4	6	University of Pittsburgh, 1891.
Phi Chi	6,414	35	14	24	Louisville Medical School, 1894.
Phi Delta	1,200	14	3	3	Long Island College Hospital, 1901.
Phi Delta Epsilon	1,000	10	0	5	Cornell University Medical College, 1904.
Phi Rho Sigma	3,000	26	1	..	Northwestern University Medical School, 1890.
Phi Theta Chi	375	35	..	1	Tufts College Medical School, 1902.
Pi Mu	950	10	0	3	University of Virginia, 1892.
Zeta Beta Tau	400	11	3	4	College, City of New York, 1898.
Zeta Omicron	83	1	0	1	University of California, 1896.

Legal Fraternities

Fraternity	Membership	Active Chapters	Inactive Chapters	No. Houses	Where and When Founded
Delta Phi Delta	942	9	0	7	University of Michigan, 1869.
*Delta Theta Phi	3,000	32	0	7	Cleveland Law School, 1900.
Gamma Eta Gamma	1,000	8	..	6	University of Maine Law School, 1901.
Phi Alpha Delta	2,200	29	9	..	Northwestern University Law School, 1898.
Total	7,442	78	9	22	

*Alpha Kappa Phi, Delta Phi Delta and Theta Lambda Phi were consolidated in 1913, under the name Delta Theta Phi.

Commencement denotes, in the United States, the occasion on which degrees are conferred by colleges and universities upon their graduates. This takes place in June or July, and closes the scholastic year, so that the name in this respect appears to be a misnomer. The exercises connected with the commencement sometimes begin on Sunday with a commencement sermon to the graduating class. On the two or three following days, the literary societies among the students hold their annual meetings, and orations are delivered before the societies and before the *alumni* association. A general reunion of the *alumni* of previous years is held, and, frequently, also the graduates of a particular class hold, by appointment, a special reunion. The board of trustees also holds its annual meeting, receives the report of the president of the institution for the past year, and makes the necessary regulations for the year ensuing. All these transactions precede "commencement day," on which the president of the institution, in the presence of the board of trustees, the faculties, and as many friends and visitors as the occasion may bring together, confers upon the graduates the degrees for which their special studies and examinations have prepared them. The conferring of the degrees is preceded by orations delivered by the members of the graduating class, the "valedictory" and "salutatory" addresses being assigned to the scholars holding the highest rank in the class. The Latin language is frequently used by the "salutatory" speaker, as well as by the president in conferring the degrees.

Convent Schools.—Convent school education is based on the principle that religion should have a predominating influence in the education of the child, and that a complete retirement from the world is conducive to the formation of a Christian character. The features which distinguish them as a class from other schools consist chiefly in the peculiar methods of their management and administration.

The course of instruction presents no marked points of difference from that pursued in other schools of the same grade, comprising, in England and the United States, as the prospectus of these institutions generally informs the public, "all the usual branches of a sound English education," with French, to which a greater prominence is given than in the majority of other schools. Instrumental and vocal music, and drawing are carefully attended to as necessary accomplishments; and, in many institutions, the pupils have also the "advantage of the best masters for dancing."

The superior of each of these schools is expected to exercise special care in the supervision of the deportment of the pupils, and the greatest possible attention is given to their religious and moral training. The religious atmosphere in which the students live, and the frequency of the devotional exercises, interwoven with the studies, are calculated to produce profound and lasting impressions.

Cooper Union, or Cooper Institute.—An institute founded in New York City in 1857, by Peter Cooper. Its object is to provide free schools of art and science, and free reading rooms and library for the working classes. There are lecture courses, a museum, an art gallery, and a library of 31,000 volumes, with a reading room containing current numbers of nearly 500 magazines and newspapers. The institute was built at a cost of $630,000 and was endowed by Mr. Cooper with $300,000. It has received additional gifts from time to time from Edward Cooper and Abram S. Hewitt, and in 1899 Andrew Carnegie gave it $300,000 for the founding of a mechanical day art school.

Corporal Punishment, or the infliction of physical pain as a means of discipline in the education of children, has the sanction of high authority and time-honored example, but in recent times has fallen considerably into disrepute and disuse. Its necessity and propriety have been much discussed; and there are, probably, but few subjects in connection with practical education upon which more diverse opinions are entertained. Some contend that a resort to corporal punishment, in families and schools, is legitimate and necessary, others, that it is a "relic of barbarism," and should never be employed, but that children can be, and always should be, governed by the use of "moral suasion," an appeal to their reason, their sensibilities, and their sense of right. Anciently, the propriety of this mode of educational coercion seems to have been scarcely questioned.

In judging of its necessity, we are to consider (1) the nature of the child to be governed, (2) the circumstances under which school or family discipline is to be carried on, and (3) the agents by whom the child is to be instructed and controlled. All sentimentalism is, of course, to be eliminated, and the facts of experience alone are to be appealed to. We must take human nature as it is, and not as we would wish it to be. We must consider the selfishness, willfulness, idleness, and spirit of mischief that must be controlled or exorcised before instruction can accomplish its purpose; and before concluding that corporal punishment is never necessary, we must be prepared to say that, under all circumstances, and with all available instrumentalities, this control can be effected without any appeal to physical coercion.

As to the offenses for which corporal punishment should be inflicted, and the proper mode of inflicting it, the following suggestions (of a practical teacher) would probably meet with universal approval from those who claim that this mode of discipline is, in certain cases, indispensable: (1) It should be reserved for the baser faults. A child should never be struck for inadvertencies, for faults of forgetfulness, for irritability and carelessness, or for petty irregularities. It is a coarse remedy, and should be employed upon the coarse sins of our animal nature. (2) When employed at all, it should be administered in strong doses. The whole system of slaps, pinches, snappings, and irritating blows, is to be condemned. These petty disciplines tend to stir up anger, and rather encourage evil in the child than subdue it. (3) In administering physical punishment to a child, the head should be left sacred from all violence. Pulling the hair or the ears, rapping the head with a thimble or with the knuckles, boxing the ears, slapping the cheeks or the mouth, are all brutal expedients. These irritating and annoying practices are far more likely to arouse malignant passions than to alleviate them. (4) The temper with which you administer punishment will, generally, excite in the child a corresponding feeling. If you bring anger, anger will be excited; if you bring affection and sorrow, you will find the child responding in sorrowful feelings; if you bring moral feelings, the child's conscience will be excited. Anger and severity destroy all the benefit of punishment; love and firmness will, if anything can, work penitence and a change of conduct.

Correspondence Schools.—The system of institutions by correspondence is a noteworthy feature of modern education. It originated at Newnham College, Cambridge, England, and, in the United States, was

inaugurated through the Chautauqua Literary and Scientific Circle in 1878.

The method which has brought the system to its present state of perfection is this: When once the subjects of work are selected by the student a number of questions are sent out bearing upon his present efficiency and future needs; generally what is called a "test-paper" is sent to sound his educational standard, and a number of directions as to the precise line of work he is to follow. A series of questions and answers covering the course of study are sent and received periodically by instructor and pupil, the answers being duly commented upon, corrected, and returned, together with numerous hints and notes. The student is further advised as to the best books, as to special points of weakness in his work; and he learns to condense his thoughts *by continually writing out his answers*, and this latter is the keystone of all correspondence institutions. Not infrequently books are loaned, and the instructor, being generally fully acquainted with the newest and best methods of educational work, is able to afford valuable assistance to isolated students. Further, sympathy is afforded, which is a strong incentive to the solitary worker, and a ready referee is always at hand to solve difficulties and give encouragement in those times of depression too well known to solitary students.

In many correspondence classes excellent lectures are from time to time circulated, also annotated books of reference, notes on syntax, grammar, and construction, quotations, problems fully worked out, which serve as examples; and students thus benefit by the research of men and women who have access to fuller sources of information than they themselves possess.

The success of the Chautauqua system led to the establishment of similar courses in various parts of the country as adjuncts to regular residence courses, and eventually to the founding of correspondence schools devoted exclusively to this form of education, either on general or specific lines. The most important development of the principle is, however, as an element in university extension. Correspondence classes now form a regular part of the course in a number of American institutions, as the University of Chicago, Armour institute, and others. Formal courses are designed to be equivalent to corresponding residence courses and are counted in whole or part toward the degree. One of the chief institutions of the kind is the University Correspondence College, of London, England, which prepares specially for London University degrees. There are many privately conducted correspondence schools of varying degrees of merit.

Cramming, a term used in regard to education, to denote the fault of filling the mind with facts, without allowing it sufficient time to arrange and generalize them, to compare them with its previous acquisitions, or to determine their real significance as related to general principles. It is thus a kind of mental stuffing, and, consequently, is opposed to the true object of education, which, as the word etymologically considered implies, is not to pour something into the mind, but to bring out, by appropriate exercise, its latent faculties. In college phrase, students are said to *cram* for an examination, when they make preparation with undue haste, impressing upon their memory, by repetition, a mass of things about which they expect to be questioned, but which, when the examination is over, they immediately forget. Such a process is exceedingly injurious to the mind, since it is a misdirection of its powers, wasting them at a time when they should be all steadily employed in the formation of those habits of acquisition and thought which constitute the basis of a sound intellectual character.

In elementary education, cramming is, therefore, especially pernicious; and it is at this stage that it is the most likely to occur. It may assume various forms, but chiefly the following: (1) Crowding the memory with verbal *formulae*—definitions, rules, statements of facts, names in geography, dates in history, etc.; (2) overtasking the powers of the mind with a multiplicity of studies, or with such as are not adapted to its immature condition, and, therefore, cannot be comprehended; (3) undue haste in instruction, so that the pupils are compelled to commit to memory what they have had no time properly to digest in their minds.

Cramming may be the result either of the ignorance of the teacher, or of circumstances which compel him to violate the correct principles of education for some special end, as the preparation of pupils for a public exhibition in which they may make an imposing display of their superficial acquirements. Such a sad perversion of the teacher's work as this implies is of too frequent occurrence; for parents and patrons are too fond of witnessing such displays, and there are teachers whose eagerness for praise or patronage is sufficient to overcome their sense of the true object of their vocation. They seem to work more for their own petty ambition or pecuniary gain than for the true welfare of their pupils. The evil of this is not alone with the pupil, but is shared by the teacher himself; for by merely cramming the minds which it is his duty to educate, he fails to realize in himself the best results of giving instruction; since, while "he may have the exquisite pleasure of seeing the growth of his pupils' minds, he may also have the higher satisfaction of feeling the growth of his own."

Deaf Mutes.—The first regular instructor of the deaf and dumb was Pedro Ponce de Leon (1520-84), a Spaniard, who taught several deaf-mutes to speak, read, write, and cipher. The first extant work on the education of the deaf was written by Juan Pablo Bonet, and published in 1620.

In the instruction of the deaf and dumb there are three principal methods—the oral, the sign and manual, and the combined method.

With the oral method the deaf are instructed by and through speech. All signs except purely natural signs are discarded. The pupils are taught to pronounce the elemental sounds of the language, singly and in combination, and to recognize their forms on the lips; to write, and to associate with these sounds and lip-movements the characters which represent them. As soon as he can pronounce a word correctly, the scholar is taught the meaning of it. When he can say *ball*, a ball is shown to him, the connection being thus established in his mind.

To learn to articulate the sounds and combinations of the English language is a matter of some difficulty for the deaf child; to master the grammatical intricacies of our language is much more difficult. Though a bright child will learn to read and pronounce easy words in from six to twelve months, it takes eight or ten years to bring him a knowledge of the language equal to that which the average hearing child of seven or eight possesses.

Many teachers prefer the sign and manual method. Deaf-mutes are natural mimics, and, when thrown into one another's society, there grows up among them a language of signs—at first purely mimetic, but gradually becoming conventionalized, and therefore capable of expressing abstract thought. This language of signs, being their natural language, is often called by the deaf their mother-tongue, and most of them prefer it to acquired speech or writing as a medium for the expression of their ideas. It must not be supposed that writing or grammar is neglected by teachers who follow this method. The language in its written form is taught from the first; finger-spelling, which is simply writing in the air, is used to save time; signs are used to explain matters which as yet cannot be explained to the pupil in words.

In schools where the combined method is adopted, speech, lip-reading, writing, finger-spelling, and signs are used in varying proportions, according to the judgment and discretion of the teacher. In 1848 A. Melville Bell, professor of vocal physiology in Edinburgh, introduced the method of teaching articulation by *visible speech*. The schools of Great Britain began to use it in 1869, and in 1872 it was introduced into the celebrated Clarke school at Northampton, Mass., by A. Graham Bell, son of the inventor. This system comprises a series of phonetic characters based on the position of the vocal organs when in action. The characters suggest to the eye the mechanism of speech in the formation of every possible sound that can be uttered.

Debating is often employed as an exercise in schools for young men (and sometimes in those for the other sex), in order to afford a means for practice in extemporaneous speaking, and an incentive to the study and investigation of subjects of scholastic or general interest. When so used, it should be carefully regulated, both as to the questions selected for discussion and the manner in which the debates are conducted. The usual rules of debate should be strictly enforced, and the participants confined to the exact subject considered, and required to use language of undoubted propriety. The rules of parliamentary debate may be made a subject of formal study auxiliary to the practice of debating, and, in this way, the students partly prepared for public life. The *debating societies* connected with colleges have usually been considered a very important source of practical culture.

Declamation, or the formal delivery of set speeches or of memorized pieces of oratory, is of considerable importance, when conducted in a proper manner and with a due regard to its special uses and limitations. The objects chiefly to be gained by exercises of this kind are the following: (1) The training and culture of the voice; (2) practice in elocution; (3) the habit of speaking in public with confidence, ease, and grace; (4) the cultivation of a taste for public speaking; (5) an improvement of the pupil's style of composition. In the education of boys and young men particularly, these are all points of great importance, inasmuch as the ability to speak effectively in public is of great value.

The following points should be carefully attended to in giving elementary instruction in declamation: (1) The piece to be declaimed should be well studied, not only in its language, but in regard to the thoughts, emotions, reasoning, etc., which it may involve, and the circumstances under which it was originally spoken, as well as the character of the speaker; (2) minute rudimentary criticism should be rendered unnecessary by sufficient preliminary training in enunciation and other departments of elocution, as well as in the use of gesticulation; (3) the various kinds of gestures having been taught, the pupil should be allowed great freedom in respect to their use; (4) the spirit, and not simply the form, should be the object aimed at in the instruction; and no pièce should be assigned to a pupil to speak which is beyond his capacity to understand and appreciate.

Even the pupils of elementary schools may be benefited by appropriate exercises in recitation and declamation; thus, the speaking of easy and interesting dialogues by two or more children will be found one of the best methods to impart to young pupils a practical knowledge of the elementary rules of declamation, besides cultivating a natural style of speaking.

Dictation, a school exercise in which the teacher reads or speaks (dictates) to the pupils what is to be written by the latter for practice in writing, spelling, etc. Such exercises are very useful, not only to give accuracy and expertness in writing words and sentences, but to train the ear to the ready apprehension of spoken language. In this respect, it supplements *copying*, which exclusively disciplines the eye.

Didactics, the theory of instruction, as distinguished from that of education in its narrower sense, implying simply moral education. It is commonly treated under two heads: 1. *General didactics*, which exhibits the philosophical principles of teaching, and the conditions of its success; and (2) *special didactics*, or *methodics*, which applies the general truths to the several branches of instruction, the different ages to be instructed, and the various individual characters and their treatment. The distinction between didactics and

pedagogy in the narrower sense is made only for the sake of separate scientific treatment, as it is universally conceded that all instruction can be rendered a means of moral education, and that no instruction deserves the name, or can be truly successful, without a corresponding development of moral power. In any branch of instruction; the very first beginning presupposes *attention* on the part of the pupil, while the progress made will depend on his *self-activity*, and his ultimate mastership on his full appropriation of all the *moral power* inherent in the branch of art or science concerned. On the part of the teacher, moral power, engendered by such mastership, must be presupposed, if he is to impart to his pupil attention, self-activity, and love for the subject.

In regard to the age of the pupil, instruction and moral education bear to each other a changing proportion. During the first age, from earliest infancy up to the eighth or tenth year, the so-called *formal purpose* of education prevails in importance; the several functions of the youthful mind must be made self-active, and the *material purpose* of didactics, the acquisition of knowledge or positive learning, must be made a mere means to the former, so that no more of each concentric circle of facts be given to appropriate than can be digested for the benefit of each function. The second age, which extends to the beginning of sexual maturity, is the one during which instruction and education should be, as it were, in equipoise; while, in the period after sexual maturity, the material purpose, that of the acquisition of knowledge and skill, may preponderate.

Discipline in its wider sense means the whole system of instruction to which the learner or *disciple* is subjected, and is thus almost interchangeable with the terms "training" and "education." In its narrower sense discipline refers to the maintenance of authority. The system of school government, with its definite rules, its punishments, and its rewards, is a condition of systematic teaching, and so may be viewed as subserving the end of intellectual instruction. At the same time it is evident that authority and command work through the agency of the child's will. In this way discipline comes to have a special connection with the exercise and formation of the will—in other words, with what we mark off as moral education.

The imposition of commands, by exercising the child in self-restraint and by inducing a habit of obedience, is the great means by which the early training of the will is effected, and the foundations of moral habit and good character established. The merits of any system of discipline must be tested by the measure in which it attains its ends, intellectual and moral.

The general conditions of an effective discipline are such as follow: (1) The rules laid down to be intelligible and to be uniformly enforced; (2) the rules to be as few as possible compatible with the securing of the necessary objects; (3) the avoidance of everything like capriciousness and unfairness in the application of the rules to individual cases; (4) the recommendation of the rules laid down by first calling forth the child's feelings of respect for and confidence in his ruler, and afterward, as he advances in years, gradually enlisting his intelligent approval and support. An important part of the theory of discipline concerns itself with the subject of punishments and rewards.

Drill, a term used to denote the strict routine of exercises required either to train pupils to the ready performance of mental or physical processes, or to impress upon their memory those arbitrary associa ions of facts or words which are required in many subjects of study. Thus, a certain amount of drill is required in teaching the arithmetical tables, the paradigms and rules of grammar, the spelling of words, and those facts of geography that pertain to the location of places (memorizing maps). Drill requires definite exercises and regular practice in them, continued a sufficient length of time, in order to impart a kind of automatic force to the recollection. Both mind and body, by repetition, acquire fixed habitudes, by means of which thought and muscular action may be accommodated to the performance of acts which at first might have seemed impossible. This is the foundation principle of drill.

Duty is that which we *ought*, or are under a moral obligation, to do. The term duty thus presupposes a moral law which demands our obedience. With this abstract conception of duty ethical writers give us a scheme of particular duties, as (1) duties to others, (2) to ourselves, (3) to God. It is evident that the child can only reach so abstract a conception as that of duty slowly, and as the result of experience and reflection. The first crude idea of duty or obligation is acquired by help of positive commands laid down and enforced by the parent or other person in authority. *Oughtness* at first means what some one in authority bids me do. As with a community so with a child, the sphere of duty is largely determined by custom. What the child is accustomed to do and to see others do, that tends to become a matter of duty or obligation.

Education is the science and art of human development, and deals with the training of the bodily organs, the senses, and the intellectual and emotional powers, with a view to securing the happiness of the individual, and the well-being of the society or the state of which he is a unit.

Education may be divided into several departments, according to the class of faculties to the development and improvement of which it is directed, including (1) *physical education*, or the education of the bodily powers; (2) *intellectual education*, that of the mind or intellect; (3) *moral education*, of the propensities, sentiments, will, and conscience; (4) *aesthetic education*, of the taste, musical, artistic, or literary, that is, comprehending the sphere of the imagination; and (5) *religious* or *spiritual education*, of the religious sentiments, the spiritual instincts, that is, those which concern only the soul as a spiritual and immortal essence, and its relations to the Creator, the Infinite Spirit.

Education is also distinguished into *home* or *domestic education*, and *public* or *common-school education*, or, considered as a means for the general enlightenment of the people, *popular education*; also into *private education*, that is, supported by private funds, and *national education*, provided for by the state.

Education must be distinguished from *instruction*, which is simply the communication of knowledge for a specific purpose. Education is subjective, instruction objective, but the aims of both may be identical, as when the communication of knowledge involves the development of faculty. In the limitation of its meaning to the work of the schools education is synonymous with pedagogy.

School education, generally called *instruction*, on account of the more limited character of its scope and the sphere of its operations, is distinguished, according to its grade, into (1) *primary instruction*, that is, the instruction given in elementary schools (such as the common schools, the primary schools of cities representing only a lower subdivision of primary instruction); (2) *secondary instruction*, as given in academies, high schools (middle schools); (3) *higher instruction*, as given in colleges and universities; (4) *special instruction*, as of the blind, the deaf and dumb, and the imbecile; (5) *professional and technical instruction*, as in art schools, law schools, medical schools, military, naval or nautical schools, theological seminaries, schools of architecture, etc., for information in regard to which see the respective titles.

The following outline indicates the chief branches of education and their principal subdivisions:

FINE ARTS: Architecture; Drawing; Music; Painting; Sculpture.
HISTORY.
LANGUAGE: Grammar; Orthography; Philology; Rhetoric; Writing.
LAW.
LITERATURE.
MATHEMATICS: Algebra; Arithmetic; Bookkeeping; Calculus; Geometry; Navigation; Quaternions; Surveying; Trigonometry.
MEDICINE: Anatomy; Dentistry; Dermatology; Etiology; Gynæcology; Hygiene; Laryngology; Materia Medica; Neurology; Obstetrics; Ophthalmology; Orthopedics; Otology; Pathology; Pediatrics; Psychiatry; Surgery; Therapeutics.
PHILOSOPHY: Æsthetics; Cosmology; Ethics; Logic; Metaphysics; Pedagogy; Psychology.
POLITICS: Diplomacy; Finance; Government; Political Economy; Sociology; Statistics.
PHYSICAL SCIENCE: Archæology; Astronomy; Chemistry; Geography; Geology; Mechanics; Metallurgy; Meteorology; Mineralogy; Physics; Physiography.
BIOLOGICAL SCIENCE: Anthropology; Bacteriology; Biology; Botany; Embryology; Entomology; Ethnology; Histology; Ichthyology; Physiology; Zoölogy.
TECHNOLOGY.
THEOLOGY.

Elocution, the utterance or expression of thought in reading and speaking, is an important part of a scholastic education, because of the constant need of such vocal utterance in the ordinary circumstances of both private and public life. The departments into which this subject naturally divides itself are the following: (1) Articulation, or the proper and distinct enunciation of the elementary sounds as usually combined in words; (2) pronunciation, as dependent upon a knowledge of the various sounds represented by letters and their diverse combinations in words, and upon accentuation; (3) emphasis, or the placing of a stress of the voice upon a particular word or words of a sentence, so as to bring out the meaning fully, and to give life and spirit to the delivery; (4) voice inflections—upward, downward, or waved—also as a means of giving a particular significance to words or sentences, and as auxiliary to emphasis; (5) tones, or those variations of the voice in pitch, force, and quality, by which it is modulated to the expression of particular sentiments and emotions.

Emotions are those conditions of the mind in which the sensibility is excited, so as to act upon the will, and with the tendency to outward manifestation in bodily acts. The difference between emotions and passions is rather quantitative than qualitative; the former, while characterized by an intensity of feeling, still leave a considerable scope for the exercise of reason and judgment; the latter, for the time being, disturb the equilibrium of self-consciousness, and produce a condition in which the mind is overmastered and controlled by the particular feeling, and is borne along by its force, helpless and suffering. Of this, we have illustrations in the effects of extreme anger, love, hatred, and revenge.

Emotions are also to be distinguished from *sentiments*, the latter being to a greater extent based on mental discriminations, and being more steady and durable in their nature. Thus, he who has cultivated the sentiment of patriotism, cannot but feel an emotion of joy at a victory gained by his country over her enemies.

Emotions are likewise to be distinguished from *feelings*, or the immediate sensations of the physical organism, giving rise to mental perceptions, or to bodily pleasure or pain.

The nature of children is more emotional than that of grown persons, because the restraining principle of the mind is less active, and the sensibility more fresh and more acute. This is particularly true of certain kinds of temperament and mental constitution. The office of education is to recognize every principle of the human being, and to employ it or appeal to it in the educative processes. An emotional nature should be cherished; inasmuch as one who is deficient in this respect is apt to be cold, selfish, and unsocial. The emotions are not only compatible with, but necessary to, the best elements of man's moral nature; and the educator should strive to connect them with moral motives. Habit has much to do in laying the foundation of a rich emotional nature in the mind of a child; but example, and the natural sympathy with the mind of an educator thus cultivated and enriched, has very much more.

Emulation, the desire to excel, is a principle of action which has had a very general application in practical education, being one of the most common incentives brought to bear upon children and youths to induce exertion in study. The various systems of merit marks, prizes, etc., are based upon this principle, in-

asmuch as they definitely recognize and reward superiority or excellence.

Naturally, children are but little prone to study, their fondness being rather for active sports and amusements; and, hence, the awakening of an interest in the studies themselves, while an important object of the teacher's efforts, cannot be depended upon to incite the pupil to continuous industry. While there are some minds and temperaments that feel an almost innate desire for the acquisition of knowledge, and hence a love of study, on the other hand, the great majority of children have no such desire until it is engendered by the force of secondary motives, that is, by holding out inducements to study based upon the attainment of things in which they do take an interest.

All children are, more or less, prone to emulation; they love to excel others, particularly in things that bring commendation and honor, in this respect resembling those of maturer years; for this principle of action has been recognized as leading to eminence in every department of human effort. Hence, in schools and colleges, emulation is an important and valuable incentive which the educator may, by no means, cast aside. Of course, it is not to be allowed to degenerate into personal strife, animosity, or jealousy; nor is it to be indulged in such a manner as to obliterate the pupil's real interest in the study pursued. It is always to be impressed upon the student's mind that he is working in a good cause, and that he should strive to attain to the highest possible degree of excellence in it—higher, if he can, than that which he sees has been attained by any of his fellow students. Thus what others achieve becomes the measure of what can be done by him if he exerts himself to the utmost, and also the standard beyond which he is to go in order to obtain the prize of excellence.

Encouragement, as an educational incentive, is of indispensable importance in dealing with a certain class of minds, particularly with those characterized by an excess of caution, timidity, and diffidence. Many teachers repress the exertions of their pupils by failing to discern their true character, so as to be able to ascertain the amount of effort they may have put forth in order to accomplish an assigned task, or to avoid a temptation to do wrong. Adopting an arbitrary standard, they sometimes condemn alike all who fail to attain it, making no allowance for diversity of talent, opportunity, or the power of will; whereas the true test of a pupil's merit is not the accomplishment of the task, but the exertion put forth and the self-control exercised in the endeavor to comply with the teacher's precepts or directions.

Encouragement consists in adjusting the standard of success to the peculiar circumstances and traits of the pupil. If the latter is dull, indolent, self-indulgent, feeble in will, and yielding easily to temptation, the educator who recognizes these traits, accepts with satisfaction the feeblest efforts at amendment which he sees have been put forth, and by judicious commendation induces stronger and more persistent ones, until the foundation of moral or intellectual strength has been safely laid. Timid children must be encouraged to lay aside their fears by being shown that they are groundless. They must not be repressed by harsh words of censure, or by those forms of punishment which should be the exclusive penalty of willful wrongdoing. On the contrary, they should be made to feel that, even if they have failed, they have won their teacher's approving smiles by their honest efforts.

Some minds, on the other hand, need urging rather than gentle encouragement; and the latter, in the form of excessive praise to talented pupils, is often a means of flattering their vanity, and thus operates as a kind of moral poison, destroying the force of every true stimulus to activity. The following are the suggestions of practical educators: Encouragement inspires confidence, and children, more than others, need it. Let it be given in all cases where this can be honestly done. To a want of this in the discipline of classes are to be ascribed the timidity and reserve so often manifested among pupils by a hesitating manner, a low voice, and a tone of inquiry in response, especially to strangers. A proper degree of encouragement renders them confident and spirited, eager to tell what they know, and in an audible tone of voice. Encouragement has a peculiar influence in promoting both mental and moral improvement.

Enthusiasm is an emotion of so strong a kind as to beget self-forgetfulness, and to awaken the most powerful energies of the mind. When made to rest upon an admiration of the good, the true, and the beautiful, it becomes an educational stimulus of a very useful and effective character; it must not, however, be permitted to supersede the exercise of conscience, or the sense of what is right, and thus degenerate into moral weakness. Earnestness, rather than enthusiasm, should be the quality inspired by the educator; and this is to be effected through the force of example, because the sympathetic influence of the true teacher upon the mind of his pupil is almost without limit. Especially should that spurious kind of enthusiasm be repressed which is characterized by a habitual excitement about everything that is new, and which tends to destroy everything that is rational and stable in the character. Enthusiasm is an exceedingly important quality in the teacher as well as in the pupil; indeed, a teacher can scarcely meet with any true success in his profession who is not enthusiastic in his devotion to it.

Evening Schools, or Night Schools, have been established in many countries, generally in large cities, as a part of the public-school system, for two purposes—(1) to give to those of the school population who cannot avail themselves of the advantages of the day school an opportunity to obtain an elementary education; and, (2) to enable adults who have finished the course of instruction in the public day school to acquire additional knowledge, especially on subjects relating to their particular occupations or professions. In England, France, Italy, and Germany, there are elementary evening schools for children employed in factories; in the United States, a large portion of the pupils of evening schools consists of persons who have passed the school age. In most cases, the school regulations exclude all children below a certain age, and also provide that no pupils shall be admitted who are not engaged in a useful occupation during the day.

Evening high schools, which offer instruction in the higher branches of study, or afford technical instruction to artisans and others, like the Cooper Union of New York, the Maryland Institute in Baltimore, and the Polytechnic Institute of St. Louis, are powerful agencies for good. In some of the large cities of the United States, foreigners derive very great benefit from the evening schools, in the instruction afforded in the English language by teachers who speak the language of the students. Free evening drawing schools are quite numerous in many parts of the United States as well as in some of the countries of Europe.

There can be no doubt that such schools constitute an essential part of every common-school system, particularly in large communities, in which many children are obliged to leave the day school before they have acquired even the rudiments of an education. The office of technical schools, while different, is no less important, since an increase of skilled labor in any community is one of the most valuable elements of its wealth and prosperity.

Faculty, a term originally applied to a body of men to whom any particular privilege or right is granted; hence, in a college or university, the *faculty* consists of those upon whom has been conferred the right of teaching as professors of specific subjects. The faculties of a university are subordinate corporations, each consisting of a body of teachers, or professors, in some particular department of knowledge. At first the European university (that of Paris) comprised but two faculties—that of arts and that of theology, to which, in the thirteenth century, those of canon and civil law and of medicine were added. The division into four faculties was transferred from the University of Paris to the German universities; the faculty of arts was afterward named the philosophical faculty. Many changes have been introduced in this part of university organization since that time. In American universities and colleges, the faculty consists of the body of professors, with the president at its head, and has the power of conferring degrees.

Fellow.—This term signifies membership in a learned society or of a college. At Oxford and Cambridge it is applied to a member of a college who participates in its revenue and government. Fellows are usually elected from the bachelors who have taken the highest degrees, but in some cases there is an examination for the fellowships. At different colleges, both at Oxford and Cambridge, the fellowships are held under varying conditions. As a rule, they are worth from $1,000 to $1,250 a year, with rooms and commons, and are tenable for about seven years. In American colleges or universities fellowships are merely benefactions to worthy students.

Genetic Method, in instruction, is but another name for what is more frequently called the *developing method.* The term *genetic* implies that the mind of the pupil is to be guided by the teacher in such a way that it will be able to perceive the *genesis* of the truths communicated, that is, their development from fundamental principles; or that it will be led to construct for itself general principles from observed facts as antecedents. This method recognizes the need of a *genesis,* or development, of actual conceptions in the mind of the pupil, as the basis for every other educational process.

Grammar Schools, so-called, not because they gave instruction in English grammar, but from the fact of their making the teaching of Latin and Greek—particularly, and sometimes exclusively, the former—their especial aim, existed in England from the earliest times. In England, the endowed grammar schools are very numerous and many of quite ancient foundations. They are the same as what have been called *classical schools,* belonging to the class of *middle schools* and representing *secondary instruction.* They correspond to the *gymnasia* of Germany and the *lycées* of France; in the latter, however, there is a course of instruction in modern languages, running parallel with the ancient course, for all pupils beyond a certain age.

Grammar schools, in the United States, were originally of the same character as in England, but the gradual development of the common-school system in the United States, joined with the partial decline of Latin and Greek as instruments of education, and the demand for studies of a more practical character for the ordinary duties of life, have led to a different application of the term *grammar schools.* The study of English grammar having taken the place of Latin grammar in schools of an elementary grade, such schools came to be designated *grammar schools,* and the former grammar or classical schools received the name of *high schools* or *academies.* In most of the public-school systems of the cities of the Union, grammar schools are schools of a grade between the primary schools in which the first rudiments of instruction are imparted, and the high schools. Some of the grammar schools, so called, have a primary, an intermediate, and a grammar department.

Gymnasium, a term applied, in ancient Greece and Rome, to schools for physical education, but in modern Germany and some other countries of continental Europe, to a class of secondary schools which hold a middle place between elementary schools and the universities. In England and the United States, in which the colleges correspond to the German gymnasia, the term gymnasium is limited to places for physical exercises.

Habit is the name of the principle or law according to which every action becomes easier by repetition. The result of such repetition or practice, when the process is complete, is called a habit. Habits are thus acquired possessions, and so distinguished from original or instinctive endowments. The principle of habits operates throughout the whole of development, bodily as well as mental. Thus all muscular actions

become perfected by repetition and habit, requiring less and less coöperation of the conscious mind. We thus see that habit, like memory, to which indeed it is so closely allied, has its basis in certain properties of the physical organism.

In the region of mental activity we observe the effect of habit in the way in which thoughts become firmly associated one with another in definite groups or series, as the consequence of repetition or custom, and also in the way in which the thinking processes gain in facility and exactness through practice. The emotional sensibilities again are under influence of the same law, though in a less obvious manner. The operation of the principle here is seen in the building up of firm attachments and permanent affections toward the objects and persons in the child's environment, with their correlative sense of want and craving when these are absent. Finally, habit rules in the domain of voluntary action. All the higher exercises of will in checking impulse and controlling the thoughts and feelings become perfected by customary performance, and in this way the so-called *moral habits*, as temperance, truth, etc., are built up. Habits have been divided into *intellectual* and *moral*, and also into *active* and *passive* habits.

From this short account of the nature and scope of habit we may easily see that it is the great guiding principle of education. According to Locke, it is the secret of instruction in all arts, and, indeed, in conduct too, to get what we would teach settled in the pupil by *practice* till it becomes a *habit*. Good habits should be formed at as early a period as possible; because experience shows that, when thoroughly established in childhood or youth, they generally continue, with more or less strength, through life. Hence the importance of making those qualities and observances habitual which constitute the elements of practical success in every walk of life; such as punctuality, order, regularity, and perseverance; to which may be added neatness, courtesy, attention to the wants of others, forbearance, and self-control.

For the same reason, bad habits should be eradicated before they have reached that mature state, after which they scarcely ever entirely disappear. It is, indeed, rarely the case that thoroughly fixed habits are wholly removed; hence the teacher should strive to counteract their evil influence, or neutralize their activity, by implanting those of a contrary nature. In dealing with the bad habits of children, the teacher should appreciate, and make due allowance for, the force of habit.

Humanities (Lat. *humaniora* or *literae humaniores*), those branches of education, or study, which are included in what is called polite or elegant learning, as languages, grammar, rhetoric, philology, and poetry, with all that pertains to what is called polite literature, including the ancient classics. The name implies that the study of these branches, in opposition to the physical sciences, which especially develop the intellectual faculties, has a tendency to *humanize* man—to cultivate particularly those faculties which distinguish him *as man*, in all his relations, social and moral; that is, which make him a truly cultured man. In the older systems of education, the humanities took the lead; in the new, they have been, to a considerable extent, superseded by studies deemed more *practical*, from a utilitarian point of view. The contest between the humanities and the so-called practical studies, as branches of higher education, is still rife. The humanities are, at present, more commonly designated *belles-lettres*.

Illiteracy is a term used at present to denote the inability to read and write. The mere fact as to how many persons in any community are unable to read and write is not, in itself, of very great value; but, in its relation to ignorance and knowledge, it is highly important, as marking the dividing line, on one side of which may be placed all those who are hopelessly consigned to a total ignorance of books, and are, therefore, deprived of all the advantages to be derived from their study or perusal; and, on the other, all who, by means of such knowledge and such sources of information, have been placed on the high-road to thrift, skill, intelligence, culture, virtue, and every other element of the highest civilization.

To the individual, illiteracy is a most deplorable misfortune; to the community, in proportion to its extent, it is an acknowledged bane. The principle of free schools is derived from a consideration of the numerous evils which popular ignorance entails upon a community; and of this ignorance illiteracy is the exponent. On the same principle is based all legislation for compulsory attendance at schools. These principles have, however, been called in question; but very rarely. Parents, it has been said, cannot justly be forced to give their children a certain amount of education, unless it is assumed that this education is as necessary for the mind as food and clothing are for the body; but, of course, this is an assumption that cannot be maintained.

National systems of education have regard to the good of the community, not merely, or chiefly, to that of the individual. The want of literary education is the source of numerous ills to the body politic, which legislation should strive to remove. The statistics of illiteracy are thus of the greatest value, as indicating the progress or retrogression of a nation in the most important elements of well being.

The following percentages indicate the relative illiteracy of the chief nations of the world. In Roumania, 88.4 per cent of the population can neither read nor write; in Servia, 79.3 per cent; in Portugal, 79.2; in Spain, 68.1 per cent; in Russia, 61.7 per cent; in Hungary, 47.8 per cent; in Austria, 35.6 per cent; in Italy, 32.9 per cent; in Greece, 30 per cent; in Belgium, 10 per cent; in Ireland, 7.9 per cent; in France, 4.7 per cent; in England, 3 per cent; in Scotland, 2.5 per cent; in The Netherlands, 2.3 per cent; in Finland, 0.5 per cent; in Denmark, 0.2 per cent; in Switzerland, 0.13 per cent; in Sweden and Norway, 0.08 per cent; in the German Empire, 0.05 per cent; and in Saxony, Bavaria, Würtemberg and some other German states only rarely a person can be found who cannot read and write. In the United States the ratio of illiteracy among the whites is 6.2 per cent.

Illustration in its most comprehensive meaning is the rendering of an idea or truth clear to another mind. This is effected by setting what is presented in a relation of likeness to some known thing, and so promoting the process of mental assimilation. Hence all illustration proceeds by connecting by some link of similarity, affinity, or analogy, what is new and obscure with what is old and familiar. Illustration may be employed in the description of some concrete object, as in the use of illustrative analogies in setting forth geographical or historical facts. It is chiefly required, however, in expounding all abstract ideas and principles. Here intelligibility depends upon a selection of suitable examples or instances which may serve to exhibit the abstract idea in a living, concrete form. Illustration, though it commonly refers to bringing out points of similarity, includes the setting forth of contrast as well.

Imagination may be popularly defined as the power of mentally picturing things. If this picturing means the recalling to mind of something which we have actually seen, it is known as *reproductive imagination*, whereas if it means the formation of a new mental image it is known as *constructive imagination*. The imagination is exercised not merely about the fictitious creations of poetry and art, but about common realities.

The cultivation of the imagination thus subserves two, main ends—knowledge and æsthetic delight. The first is illustrated in the teaching of concrete subjects, as geography and history, where the pupil is required to reproduce the impressions of his past experience, with a view to constructing images of the new objects, scenes, and events, described by the teacher. It is further illustrated, though in a less obvious way, in science-teaching, the abstract principles of which can only be reached by preliminary processes of imagination.

The cultivation of the imagination for æsthetic purposes is carried on in close connection with the development of the feelings and the taste. Here the object of the educator should be to render the child's mind sensitive and responsive to what is beautiful, pathetic, or sublime in the poet's creations, so that his imagination may be stimulated to a vivid realization of the same. The imagination is commonly included among the faculties which are strong or highly developed in the child; yet it is important to distinguish between the random, unguided movements of childish fancy and the orderly progress of a trained imagination.

Individuality may be defined as the sum of mental and moral qualities which characterize a particular person, distinguishing him from other persons. Such individual peculiarities have their conditions in the physical organism, a fact clearly recognized in the doctrine of *temperament*.

According to the universal biological law, that all living forms tend to differ one from another (within certain limits), every child's brain, together with its constitution as a whole, has its own peculiar stamp from the first. And these physical peculiarities serve to determine the special mental traits, intellectual and moral. Within the limits of the typical human development every child is impelled to follow a line of development of its own. This impulse is much more marked in some children than in others. A strong individuality is an integral element in that later moral product which we call *character*.

The educator is perhaps naturally inclined to regard individuality as an obstacle and a limitation, since in extreme cases it implies resistance to his molding influences. Here, however, we must distinguish between individuality which involves no deviation from the normal type, and eccentricity, which implies such deviation. Rightly considered, individuality is not something wrong which the educator has to correct, but one chief aim of the work of education itself.

The object of the teacher should be to make a careful study of every child's intellectual and moral peculiarities, with a view to develop all that is valuable in these, and so produce a fine individual. This furtherance of individuality has to be harmonized with the development of a typically complete human being. Thus, in intellectual education we should aim at securing a certain general culture of the faculties by a common plan of study, and, at the same time, a special training of individual aptitudes by selected or optional studies.

Inductive Method is but another name for the *developing method*. It is so-called because it is based upon the principle of logical induction, or the process of deriving general principles from an observation and comparison of individual facts. Instead of teaching definitions, principles, and rules arbitrarily, and illustrating them by facts, the teacher who uses the inductive method, calls the attention of the pupil to a sufficient number of the facts to enable him to find the principle or rule for himself. The learning of the definition, which, in the deductive method, is the first thing to be done, in the inductive method, is the last step in the process. Most text-books follow the deductive method; but the most effective elementary instruction is inductive.

Instruction means the informing of the mind by a communication of knowledge. It is commonly distinguished from *education*, which aims not so much at the distribution of knowledge as at the development of faculty or power. Instruction or teaching is correlated with learning, or the acquisition of knowledge, and its methods must be determined by the surrounding conditions.

Interest describes the effect of feeling, and more particularly pleasurable feeling, in rousing and sustaining the attention. The feeling may be the immediate result of the action of an object on the mind, as when a child is attracted by a pretty picture; or may be due to process of association and suggestion, as when

a child is interested in watching the preparation of its food. Interest is closely connected with curiosity. A child desires to know what can be known about objects that are interesting to him, such as his pet animals, his toys, etc. From this it is apparent that the mother or teacher has at the outset to seek to awaken in the child's mind a feeling of interest in the subject presented to it. This she will do partly by bringing out all that is striking, pretty, etc., in the subject, and partly by connecting it with known sources of interest in the child's surroundings. One chief aim of the instructor should be to develop new interests, answering to the different domains of knowledge to be dealt with, as history and natural science. It is evident that in order to awaken such a feeling of interest and study attention must be paid to individual differences of sensibility.

Intuition, Intuitive Method.—In its original and proper sense intuition is the apprehension of an object by one of the senses, and more particularly the sense of sight—in other words, the act of *perception*. In a secondary manner it has come to mean the grasp or understanding of an idea in so far as this approximates in character to a perception of the senses. Thus the distinct imaginative picturing or realization of any object, as a volcano, is a mode of intuition. We may thus be said to have an *intuitive knowledge* of any object or idea that we can distinctly perceive or imagine. Such intuitive knowledge is marked off from *symbolic knowledge*—*e. g.*, that of large numbers, which does not admit of being reduced to a sensible or picturable form. It will be evident, therefore, that *intuitive method* in teaching consists in reducing abstract ideas as far as possible to sensible concretes, in setting out in the exposition of any abstract notion, such as an angle, a verb, justice, with concrete illustrations addressed to the senses or to the pictorial imagination. It thus corresponds pretty closely with the *inductive method*.

Judgment, Training of.—This department of intellectual culture needs no special attention, if the whole educational system, in other respects, is judicious and rational; *i. e.*, adapted to the individual both as to age (degree of maturity) and peculiarities of character or endowment. Where this is not the case, an efficient corrective may be applied by bringing into exercise the pupil's mental faculties in various ways and in connection with various subjects. The departure must be taken from the sphere of the pupil's experience; he must be led (1) to an accurate observation of particulars—minute details; (2) to their collation, as preliminary to generalization; and (3) to their classification under appropriate heads. When general principles or rules have been established in the pupil's mind in this way, his judgment will be brought into play in the application of the principle or rule to particular objects or facts.

Thus, in natural history, after the pupil has learned the characteristics of genera and species by a minute and accurate observation of individual specimens, he cannot, without an exercise of judgment, determine whether any particular specimen, previously unobserved, belongs to one or the other genus or species. He must have a clear conception of the distinguishing qualities, both of the individual and of the class, in order to determine whether the correspondence exists or not. As regards concrete objects, the judgment is exercised at a very early age, and is constantly trained more or less by every legitimate process of intellectual education; but as regards abstract truths, this faculty is one of the last to attain a full or mature development.

Accuracy in judging depends very much on the mental habits formed during the period of early education. Habits of attention, careful observation, dispassionate, conscientious reasoning, and a profound and earnest love of truth, will qualify any person for the exercise of a sound judgment in regard to any subject of study or investigation. A mental character based upon such habits will be free from prejudice, and will readily learn to eliminate all passion from its intellectual processes; and hence its judgments, being solely based upon the facts acquired, will be correct or the contrary, in proportion to the accuracy and extent of the information possessed.

Lectures, or **Lecture System,** a method of giving instruction by formal expositions, generally written out and read to the learners. Lectures are, however, quite often extemporaneous, or delivered without previous preparation of the language. The lecture differs from the lesson chiefly in dispensing with the ordinary processes of the recitation room—question and answer, repetition, etc. The learners simply listen, or take notes, while the lecturer reads or speaks, with or without illustrations by means of the blackboard, maps, pictures, apparatus, etc.

Lectures, as a system of instruction, are chiefly depended on in higher education—in colleges and universities, also in technical, scientific, and professional schools, because the students are supposed to have acquired a considerable maturity of intellect, enabling them not only to receive knowledge without exercises specially designed to awaken attention or stimulate the understanding, but to exercise their own faculties in arranging it in their minds for use—in other words, coördinating it with their previously acquired knowledge.

Liberal Education.—This term is frequently used synonymously with collegiate or university education, but there is no good reason for thus restricting its meaning. It signifies generally an education which embraces a fair knowledge of literature, science, and art, acquired for its own sake rather than for an objective purpose. It is difficult, however, to define the term accurately. According to Lord Brougham, the liberally educated man is he who has learned "something of everything and everything of something," and according to Professor Huxley, he "who has learned to love all beauty and his neighbor as himself."

Libraries constitute one of the most important instrumentalities for stimulating the intellectual improvement of the people, as well as for the mental and moral training of pupils in schools. This has been recognized in the legislation of many of the states of the American Union, by making provision for supplying the schools and school-districts with libraries of interesting and useful books.

The value of a school library will depend upon the character of the books of which it is composed, and the uses to which it is applied. A large and expensive collection of books is not needed; but the books should be instructive and interesting to children, so that through their perusal they may not only obtain useful information, but imbibe a taste for reading. By this means, an antidote may, in part at least, be applied to the influence of the trashy, exciting, and sensational literature, which so greatly abounds at the present time, and which is so apt to corrupt both the minds and morals of the young.

The spread of education has called into existence innumerable smaller libraries, ready of access, and providing such literature as the special classes of readers demand. This public library system has naturally been most developed in highly educated countries, such as Germany, France, Great Britain, and the United States.

Public Libraries existed in ancient Egypt and Assyria, and Pisistratus is credited with the honor of introducing a public library at Athens about B. C. 337. Cicero and various wealthy Romans made collections of books, and several Roman emperors established libraries, partly with books obtained as spoils of war. By far the most celebrated library of antiquity was the Alexandrian.

In the West, libraries of any note were founded in the second half of the eighth century by the encouragement of Charlemagne. In France one of the most celebrated was that in the Abbey of St. Germain des Près, near Paris. In Germany the libraries of Fulda, Corvey, and in the eleventh century that of Hirschau, were valuable. In Spain, in the twelfth century, the Moors had seventy public libraries, of which that of Cordova contained 250,000 volumes. In Britain and Italy libraries were also founded with great zeal. The Vatican library, Rome, and the Bodleian, Oxford, are particularly valuable in rare books and manuscripts.

Chief Foreign Libraries

When Founded	City and Country	Library	Volumes	Dominant Language	When Founded	City and Country	Library	Volumes	Dominant Language
1902	Aarhuus, Denmark	City	200,000	Danish	1682	Edinburgh, Scotland	Advocates	527,000	English
1754	Amsterdam, Netherlands	University	500,000	Dutch	1583	Edinburgh, Scotland	University	237,000	English
1837	Athens, Greece	University	290,000	Greek	1743	Erlangen, Bavaria	Royal University	237,973	German
1537	Augsburg, Bavaria	City	200,000	German	1671	Fermo, Italy	Public	212,397	Italian
1611	Bamberg, Bavaria	Royal Public	300,000	German	1714	Florence, Italy	Royal Central Nat'l.	544,021	Italian
1460	Basel, Switzerland	Public	250,000	German	1484	Frankfort, Prussia	City	322,901	German
1661	Berlin, Prussia	Royal	1,230,000	German	1457	Freiburg, Baden	Grand Ducal Baden University	270,000	German
1861	Birmingham, England	Birmingham Free	312,870	English					
1712	Bologna, Italy	Royal University	300,000	Italian	1816	Ghent, Belgium	University	352,000	French
1818	Bonn, Prussia	University	355,000	German	1450	Glasgow, Scotland	University	200,000	English
1738	Bordeaux, France	Public	200,000	French	1737	Göttingen, Prussia	University	536,000	German
1702	Breslau Prussia	Royal University	350,000	German	1798	Hague, The Netherlands	Royal	500,000	Dutch
1837	Brussels, Belgium	Royal	600,000	German	1696	Halle, Prussia	University	228,000	German
1802	Budapest, Hungary	Magyar Nemzeti Museum	400,000	Hungarian	1529	Hamburg, Germany	City	359,000	German
					1650	Hanover, Prussia	Royal	200,000	German
1635	Budapest, Hungary	University	300,000	Hungarian	1386	Heidelberg, Baden	Grand Ducal Univ.	600,000	German
1229	Cambridge, England	Cambridge Univer.	550,000	English	1558	Jena, Saxe-Weimar	Grand Ducal Univ.	370,000	German
1811	Christiania, Norway	Royal University	420,000	Norwegian	1804	Kasan, Russia	Imperial University	247,046	Russian
1055	Copenhagen, Denmark	Royal	720,000	Danish	1665	Kiel, Prussia	Royal University	263,000	German
1482	Copenhagen, Denmark	University	475,000	Danish	1534	Königsberg, Prussia	Royal University	478,700	German
1364	Cracow, Galicia	University	395,000	Polish	1536	Lausanne, Switzerland	Cantonale	280,000	French
1817	Darmstadt, Hesse	Royal Grand Ducal	490,032	German	1870	Leeds, England	Central Public Free	286,624	English
1802	Dorpat, Russia	Imperial University	228,922	Russian	1409	Leipzig, Saxony	University	550,000	German
1580	Dresden, Saxony	Royal Public	490,000	German	1796	Lisbon, Portugal	National	400,000	Portuguese
1601	Dublin, Ireland	Trinity College	297,009	English	1850	Liverpool, England	Public	271,721	English

Chief Foreign Libraries—Continued

When Founded	City and Country	Library	Volumes	Dominant Language	When Founded	City and Country	Library	Volumes	Dominant Language
1753	London, England	British Museum	2,000,000	English	1419	Rostock, Mecklenburg	University	340,000	German
1711	Madrid, Spain	National	600,000	Spanish	1714	St. Petersburg, Russia	Imperial Public	1,594,240	Russia
1804	Mainz, Hesse	City	200,000	German	1728	St. Petersburg, Russia	Imperial Academy	400,000	Russia
1852	Manchester, England	Public Free	369,833	English	1819	St. Petersburg, Russia	Imperial University	366,800	Russian
1770	Milan, Italy	National	238,271	Italian	1773	St. Petersburg, Russia	Gornyj Institute	250,000	Russian
1828	Moscow, Russia	Public	800,000	Russian	1585	Stockholm, Sweden	Royal	314,902	Swedish
1756	Moscow, Russia	Imperial University	431,000	Russian	1870	Strassburg, Alsace	University	898,000	German
1550	Munich, Bavaria	Royal	1,100,000	German	1765	Stuttgart, Würtemberg	Royal	531,000	German
1472	Munich, Bavaria	University	500,000	German	1872	Tokio, Japan	Imperial University	358,895	Japanese
1734	Naples, Italy	Royal National	385,670	Italian	1868	Tokio, Japan	Imperial	220,000	Japanese
1865	Odessa, Russia	Imperial Univ	250,000	Russian	1880	Tomsk, Siberia	University	200,000	Russian
1815	Ottawa, Canada	Parliament	300,000	English	1477	Tübingen, Würtemberg	Royal University	475,000	German
1602	Oxford, England	Bodleian	600,000	English	1720	Turin, Italy	National	350,000	Italian
1367	Paris, France	National	3,000,000	French	1620	Upsala, Sweden	Royal University	327,000	Swedish
1762	Paris, France	University	800,000	French	1582	Utrecht, Netherlands	Rijks University	250,000	Dutch
1781	Paris, France	Arsenal	454,000	French	1468	Venice, Italy	National Marciana	415,752	Italian
1624	Paris, France	St. Genevieve	340,000	French	1440	Vienna, Austria	Imperial	900,000	German
1643	Paris, France	Mazarin	250,000	French	1775	Vienna, Austria	University	710,000	German
1769	Parma, Italy	Royal	303,836	Italian	1817	Warsaw, Russia	Imperial University	545,205	Polish
1348	Prague, Bohemia	Royal University	341,000	German	1650	Weimar, Saxe-Weimar	Grand Ducal	270,000	German
1807	Rio de Janeiro, Brazil	National	275,766	Spanish	1568	Wolfenbüttel, Brunswick	Ducal	300,000	German
1875	Rome, Italy	National Central	400,000	Italian	1402	Würzburg, Bavaria	Royal University	370,000	German
1450	Rome, Italy	Vatican Apostolic	250,000	Italian					

Public Libraries of the United States Above 50,000 Volumes

When Founded	City	Library	Number of Volumes	When Founded	City	Library	Number of Volumes
1818	Albany, N. Y.	New York State Library	430,831	1896	New Orleans, La.	Public Library	70,000
1886	Allegheny, Pa.	Carnegie Free Library	57,340	1820	New York City	Free Library	115,700
1826	Annapolis, Md.	Maryland State Library	80,000	1828	New York City	Library of the New York Law Inst'e	65,777
1820	Augusta, Me	Maine State Library	97,000	1820	New York City	Mercantile Library	235,947
1882	Baltimore, Md.	Enoch Pratt Free Library	244,345	1754	New York City	N. Y. Society Library	100,000
1857	Baltimore, Md.	Library of the Peabody Institute	160,626	1895	New York City	Public Library	1,267,154
1887	Baltimore, Md.	New Mercantile Library	81,000	1852	New York City	Y. M. C. A. Library	55,454
1883	Bangor, Me.	Public Library	61,746	1894	Northampton, Mass.	Forbes Library	110,000
1807	Boston, Mass.	Boston Athenæum	220,000	1872	Notre Dame, Ind.	Lemonnier Library	65,000
1853	Boston, Mass.	Congregational Library	54,977	1872	Omaha, Neb.	Public Library	71,563
1852	Boston, Mass.	Public Library	903,349	1888	Peoria, Ill.	Public Library	99,000
1826	Boston, Mass.	State Library of Massachusetts	138,825	1894	Philadelphia, Pa.	Free Library	310,630
1857	Brookline, Mass.	Public Library	64,803	1731	Philadelphia, Pa.	Library Company	231,184
1887	Brooklyn, N. Y.	Free Library of Pratt Institute	92,000	1895	Pittsburg, Pa.	Carnegie Library	290,000
1896	Brooklyn, N. Y.	Public Library	510,514	1821	Philadelphia, Pa.	Mercantile Library	200,000
1836	Buffalo, N. Y.	Public Library	235,530	1867	Portland, Me.	Public Library	64,000
1857	Cambridge, Mass.	Cambridge Public Library	73,393	1864	Portland, Ore.	Library Association of Portland	60,645
1894	Chicago, Ill.	The John Crerar Library	225,000	1753	Providence, R. I.	Library of the Providence Athenæum	68,363
1887	Chicago, Ill.	Newberry Library	283,458	1874	Providence, R. I.	Public Library	123,895
1872	Chicago, Ill.	Public Library	339,282	1823	Richmond, Va.	Virginia State Library	160,000
1855	Cincinnati, Ohio	Public Library	377, 813	1884	Rochester, N. Y.	Reynolds Library	60,000
1835	Cincinnati, Ohio	Young Men's Mercantile Library	77,000	1850	Sacramento, Cal.	California State Library	138,136
1869	Cleveland, Ohio	Public Library	291,882	.....	St. Louis, Mo.	Public Library	223,000
1817	Columbus, Ohio	Ohio State Library	102,374	1865	St. Louis, Mo.	St. Louis Mercantile Library Asso.	132,000
1820	Concord, N. H.	New Hampshire State Library	123,915	1846	St. Louis, Mo.	Washington Univ. Library	60,000
1860	Dayton, Ohio	Dayton Public Library and Museum	70,000	1853	Salem, Mass.	Essex Institute Library	95,378
				1848	San Francisco, Cal.	Sutro Library	200,000
1886	Denver, Colo.	Public Library of the City of Denver	98,040	1879	Seattle, Wash	Public Library	80,000
1838	Des Moines, Iowa	Iowa State Library	89,902	1818	Springfield, Ill.	Illinois State Library	50,000
1865	Detroit, Mich.	Public Library	330,000	1857	Springfield, Mass.	City Library Association	152,345
1861	Fall River, Mass.	Public Library	78,000	.....	Syracuse, N. Y	Public Library	70,000
1821	Frankfort, Ky	State Library of Kentucky	100,000	.....	Toledo, Ohio	Public Library	80,000
1790	Harrisburg, Pa.	State Library of Pennsylvania	134,000	.....	Topeka, Kan.	Public Library	55,000
1834	Hartford, Conn.	Case Memorial Library	87,492	1796	Trenton, N. J.	New Jersey State Library	73,558
1839	Hartford, Conn.	Public Library	92,000	1800	Washington, D. C.	Library of Congress	2,000,000
1858	Hartford, Conn.	Watkinson Library of Reference	70,542	1789	Washington, D. C.	Library of the Department of State	65,000
1873	Indianapolis, Ind.	Public Library	121,629	1789	Washington, D. C.	Library of House of Representatives	125,000
1838	Jackson, Miss.	Mississippi State Library	89,000	1865	Washington, D. C.	Library of the Surgeon-General's Office	162,295
1889	Jersey City, N. J.	Free Public Library	101,852				
.....	Kansas City, Mo	Public Library	68,000	1898	Washington, D. C.	Public Library of the District of Columbia	120,000
1828	Lansing, Mich.	Michigan State Library	160,000				
1846	Little Rock, Ark.	Arkansas State Library	51,000	1789	Washington, D. C.	Riggs Memorial Library	91,129
1872	Los Angeles, Cal.	Public Library	112,000	1836	Washington, D C.	Scientific Library of Patent Office	84,386
.....	Louisville, Ky	Public Library	80,000	1846	Washington, D. C.	Smithsonian Institute Library	180,000
1844	Lowell, Mass	City Library	71,355	1868	Washington, D. C.	U. S. Bureau of Education Library	82,000
1862	Lynn, Mass.	Free Public Library	74,049	1882	Washington, D. C.	U. S. Geological Survey Library	65,000
1878	Milwaukee, Wis.	Public Library	172,865	1869	Washington, D. C.	U. S. Senate Library	190,000
1889	Minneapolis, Minn.	Public Library	160,000	1870	Waterbury, Conn.	Silas Bronson Library	69,664
1888	Newark, N. J.	Free Public Library	111,916	1802	West Point, N. Y	Library U. S. Military Academy	70,000
1852	New Bedford, Mass.	Free Public Library	96,000	1894	Wilmington, Del.	Wilmington Institute Free Library	59,096
.....	New Haven, Conn.	Public Library	85,000	1812	Worcester, Mass.	American Antiquarian Society Lib'y	130,000
1889	New Orleans, La.	Howard Memorial Library	52,000	1859	Worcester, Mass.	Free Public Library	160,000

Library of Congress.—The Library of Congress was established in 1800, destroyed in 1814 by the burning of the capitol, afterward replenished by the purchase by Congress of the library of ex-President Jefferson, 6,760 volumes, in 1851, 35,000 volumes destroyed by fire; in 1852, partially replenished by an appropriation of $75,000; increased (1) by regular appropriations by Congress; (2) by deposits under the copyright law; (3) by gifts and exchanges; (4) by the exchanges of the Smithsonian Institution, the library of which, consisting of 40,000 volumes, was, in 1866, deposited in the Library of Congress with the stipulation that future accessions should follow it. Other special accessions (7) have been; the Peter Force collection of 22,529 volumes, 37,000 pamphlets, purchased 1867; the Count de Rochambeau collection of manuscript, purchased 1883; the Toner collection of 24,484 volumes, gift in 1882 of Dr. Joseph M. Toner; the Hubbard collection of engravings, gift in 1898 of Mrs. Gardiner G. Hubbard.

The collection is now the largest in the western hemisphere, and third in the world. It comprises about 1,750,000 printed books and pamphlets (including the law library, which, while a division of the Library of Congress, still remains at the capitol), manuscripts, maps and charts, pieces of music, and photographs, prints, engravings, and lithographs. Of the printed books, probably one-sixth are duplicates not in use.

The collection is rich in history, political science, in official documents, National, state, and foreign, and in Americana, including important files of American newspapers and original manuscripts. Many of the rare books and manuscripts belonging to the library are exhibited in show cases on the second floor.

Manners, the genuine or simulated manifestations of disposition toward each other, which occur in the intercourse of human beings. The ordinary use of the word *manners* restricts it to those personal and visible peculiarities of deportment which characterize the intercourse

mentioned. The agents commonly employed for this purpose are the eye, the voice, language, and gestures.

When persons are brought together without previous knowledge of each other, or with no common ground of taste or experience between them, custom has prescribed a conventional code of formal manners, characterized as etiquette, which serves to relieve the awkwardness of the situation. That this, however, is temporary in character, and not intended to survive its original uses, is evident from the fact that after it has, in great measure, been laid aside, any attempt to revive it, as the exclusive medium of kindly expression, is regarded as just cause for resentment. The fugitive character of mere etiquette can never constitute it an equivalent for that abiding kindliness of disposition which finds expression in genuine politeness.

Manners, therefore, are more decidedly moral in their nature than a superficial observation would lead us to suspect; hence the usual association of "morals and manners."

The basis of agreeable manners is that humanity, or feeling of brotherhood, which, in a greater or less degree, pervades the human race, and which every century, by its multiplied means of communication, is tending to extend and strengthen. It is, therefore, essentially Christian; and pleasant manners may be regarded, not as an accomplishment merely, but as one of the legitimate ends of a thorough education. In social intercourse, agreeable manners are far more powerful than intellectual accomplishments; while the displeasure produced by rude manners often neutralizes moral worth, and renders mental acquisitions, however great, comparatively useless. Momentous issues—even the destiny of a lifetime—may hang upon the apparently unimportant question of manners. To educate thoroughly, and neglect the means by which that education is to be made effective, is self-evident folly.

Beyond the ordinary rules of etiquette, no set rules can be given for the production of good manners; since, in addition to the moral basis above referred to, they are largely dependent upon temperament; but no precept is half so powerful in furtherance of this end as the daily example of the teacher, the parents, or other persons with whom the pupil is brought into daily contact. The indirect though constant insistence upon the claims of every individual to respect and kindly attention, which results in a practical recognition of this by the pupil, together with the daily example referred to, constitute, perhaps, the most effective method for the grafting of agreeable manners on the conduct of the pupil.

Memory indicates the mind's power of retaining impressions so as to be able to recall them for after use. The fundamental property of memory, called by psychologists retentiveness, underlies all acquisition, whether of knowledge or of moral habit. In its highest development as the faculty of memory this power of retention lies at the base of all learning. It is governed by its own laws, chief among which are the laws of interest and attention, and those of association. It is one of the first powers to be developed, and as such claims the teacher's attention at the outset. Although in general strong in children, it presents itself with well marked individual differences in respect both of the general or average power of retaining, and of the retention of special varieties of impressions and knowledge.

The importance of the faculty as preëminently the organ of learning, has led educators to give it much attention.

What are the means of strengthening it in the minds of children? (1) It is plain that impressions will be reproducible in proportion to the strength and vivacity with which they are first made. This strength depends partly on the natural capacity of the child, partly on whether the stimulus in the object is such as to produce a strong impression. Thus it follows that wherever a real object can be presented to a child, it should be used in preference to any picture of it, and that a picture of it is better than a mere verbal description. Moreover, if more than one sense can be employed, so much the better. If any object is to be remembered, the child will remember more easily, if he can touch, smell, and taste it, as well as see it. This arises partly from the fact that these direct sensations produce strong impressions, but partly also from what we call our second principle of memory.

(2) Every means should be used to concentrate the attention on the object. If we wish to make a child remember an object, the object must be allowed to lie before the child's eye or mind for some time.

(3) There must be frequent repetition. An object or thought is reproducible easily when it has been made to occupy a large space in the mind. The power of reproduction is limited by time, and the mind can only reproduce within certain limits in this respect. If, therefore, an object is to be reproduced, the faded impression must be renewed; and the renewal of the impression strengthens its hold. It is thus that a fact may become indelibly imprinted on the memory. The value of the repetition cannot be overestimated, but great care must be taken not to make it wearisome.

(4) The power of reproduction greatly depends on the state of the health. That there is a very close connection between this power and the body, is proved most conclusively by the numerous instances in which abnormal states of the brain were accompanied by abnormal developments of memory. When, therefore, a child forgets, it must not be always attributed to carelessness. A child learns a word on Monday, and knows it with perfect accuracy; but when he comes, on Tuesday morning, to repeat it, he finds he cannot. In all probability, the impression was too weak to last a whole day, and to resist the many and more interesting ideas which have intervened; but the lesson is not lost. The original impression is there.

Various devices, called mnemonics, have been proposed in ancient and modern times for facilitating the retention and reproduction of what is learned. These refer to verbal retention, as in memorizing a speech, a series of names, etc. The underlying principle of the classical mnemonic system was the association of the consecutive heads of a verbal composition with the divisions of an extended surface or inclosed space, as the compartments of a building, so that when the eye or the imagination ran over these, the order of their arrangement in space would at once suggest the order in time of the words.

It is now commonly recognized that these devices can have but a very limited value, and are likely to be a hindrance rather than a help in certain cases. In modern educational systems verse-form, rhyme, and alliteration, together with the investing of disconnected matter—*e. g.*, list of exceptions to a grammatical rule, with the semblance of a connected meaning—have commonly been resorted to for the purpose of aiding the memory. The utility of presenting verbal material, such as the chief events of a reign, in a visible form by means of a diagram, is well known to every teacher. All such contrivances depend for efficiency on the working of the laws of *association, contiguity, and similarity*, apart or in combination.

It is indisputable that we all instinctively tend to shorten the process of memorizing by a number of such ingenious devices, and these may properly be made use of by the teacher. At the same time, great care must be taken lest, by an excessive use of these, the learner lapse into a mechanical way of learning. It is a far better exercise for the mind, and for the memory too, to associate things to be learned by their natural ties, rather than by artificial ones. And a truly scientific management and control of memory will consist in forming a habit of concentrating the mind on the subject matter to be learned, of judiciously selecting important points, and arranging the whole with reference to these, and finally of making the fullest use of the laws of association in linking part with part, and the whole with what is already known.

Mischievousness, as applied to the disposition of a child, or school pupil, is the occasional transgression of an established rule in a playful spirit, but without a malicious intention. This disposition is usually the result of the union of humor, or love of fun, with sound bodily health. The exuberance of spirits thus produced generally finds vent in actions which are denominated mischievous.

This spirit is so widely different from the willful breaking of rules with an evil intent that the easy suppression of a continued exhibition of it rests entirely with the teacher; the good nature with which the mischievous act is accompanied generally causing the perpetrator to desist on a slight warning. To bring the mischievous spirit under speedy control, two qualities only are necessary in the teacher—quick discernment of its real nature, and tact in correcting it. The want of these sometimes leads to needless irritation on both sides, and may end disastrously to the teacher's influence, and through that, to the discipline of the school.

If, on the other hand, the good humor of the transgressor is met by a similar feeling on the part of the teacher, the task of correction is usually easy, and causes no offense; while in the end, it secures a respectful obedience on the part of the pupil. If the mischievous disposition is not corrected in this way, it may lead to vicious habits, which will tend to undermine or permanently deprave the moral character.

Moral Education has for its sphere of operation the culture of those principles which influence or control the voluntary action of human beings. The elements of self-control exist, in a greater or less degree, in every mind, as a part of its original constitution. They are distinct from its intellectual faculties, and need a special education, which is far more important than intellectual education, because it contributes in a much higher degree to the good both of the individual and of society.

The subject of moral education is *duty*, and its office is both speculative and active; that is, (1) to implant correct principles of rectitude in the pupil's mind—to teach what duty is—and (2) to cultivate a desire to do what is right for its own sake—to respect duty, or moral obligation; in other words, to feel a sense of right—to listen to the voice of conscience; to which may be added, as an important additional object, to implant in the youthful mind such *motives* as will aid the moral sense, and enable it to triumph over the natural propensities and desires, when the latter are in conflict with it.

The means employed in moral education are the following: (1) *Precepts*, addressed both to the understanding and to the conscience, the object being to enlighten the latter, which of itself does not recognize specific right or wrong; (2) *example*, appealing to imitation as well as to conscience, and enforced by the love and respect felt by the child toward its educator, leading the former to feel that whatever is done by the latter is right, and hence should be imitated; (3) *habit*, inducing, by means of repetition, an inclination to act in the same way under the same circumstances; (4) *exercise*, for the purpose both of strengthening the moral feelings brought into play, and of forming habits. Exercise, in moral education, is just as important as in physical or intellectual education; indeed, there can be no training or culture without it; and, in carrying this on, the teacher must avail himself of every possible circumstance that arises in connection with his intercourse with the pupils, or their intercourse with each other, to give occasion for this exercise, and thus form a basis for the desired culture of the moral faculties.

This culture or training must have a twofold object—(1) to cultivate virtues, and (2) to correct vices. Among the former, as especially necessary, may be enumerated truthfulness, honesty, justice, candor and modesty, kindness or benevolence, diligence, obedience to proper authority, gratitude, fidelity to every promise or trust, and patriotism; and among the latter, the opposites of these, as lying and deceit, a disposition to steal, cruelty

to animals, unkindness and injustice to playmates, violence and combativeness, ill temper, anger and irritability, obstinacy, laziness, irresolution, leading to procrastination, excessive self-esteem, leading to arrogance and self-conceit, etc.

These are specific qualities of character which need a particular recognition and treatment on the part of the educator; but when the moral sense has been thoroughly developed, the Christian moral principle *to do unto others as we would that they should do unto us* will comprehend, in approbation or condemnation, every class of actions, and give the means of a just discrimination as to what is virtuous and what is vicious.

But the conscience is not developed in children; and very often, not even in adults. Hence the need of moral discipline, in order to afford to the educator the means of bringing to bear upon his pupils external restraint, as preliminary to self-restraint; for it must be borne in mind that any government that does not contemplate the cultivation of the elements of self-control can scarcely be considered as forming a part of moral education. The three elements of sensibility usually appealed to in connection with moral discipline or restraint, are *fear*, *love* and *hope*.

Children should be made to *fear* to do wrong; and this should be brought about as much as possible by what Herbert Spencer calls the *method of nature*, that is, by making punishment the necessary consequence of the wrongful act, on the principle involved in the maxim "The burnt child dreads the fire." This eliminates the personal element in the fear implanted in the mind of the child. He does not fear the teacher, but he fears to offend—to do wrong. The same consideration excludes from discipline all threatening, scolding, and harsh words, for the purpose of engendering fear, and especially excludes anger in punishment. The fear to be excited in the mind of the child should not be an apprehension of personal safety, leading to meanness, cunning, and deception as a means of self-protection, but should be akin to that feeling which the psalmist referred to when he said, "The fear of the Lord is the beginning of wisdom." This is not inconsistent with a constant appeal to the higher motives and finer feelings of human nature, but may be made a means of their development, which is the true end of all moral education.

The first thing, therefore, which the instructor should strive to do is to win the *affection* of his pupils; if that is accomplished, everything else will be done without difficulty. It is of little use to address merely the intellect of children. Their curiosity, it is true, can be excited, their attention aroused, and the faculties of their minds, to a certain extent, be developed and sharpened; but the real elements of character are behind all this; and these cannot be affected in any important degree by mere intellectual training.

The *heart*—the sensibilities and the will—must be reached; and the key to success in this, the greatest office of the educator, is love. When *love* for the teacher reigns in the bosom of his pupil, there is entire confidence in him, a desire to obey him, to please him, to listen to his precepts, to imitate his example, both in words and in acts; indeed, by an inexplicable psychologic law, the pupil seems to be bound to the teacher by a kind of magnetic chain, and is subject in everything to his will.

Children naturally recognize authority, however much they strive to evade or defy it; and its just and rightful exercise does not interfere with their warmest affections toward parents and teachers. Hence love is not to be inspired by making improper concessions to children, for these they construe into weakness, which they despise. Minute directions may be given for the winning of the pupil's affection; but these would be either unnecessary or futile. Love on the part of the teacher can alone produce love in the hearts of the pupils; he cannot put on a semblance of affectionate regard for his pupils; he must feel it.

Children have naturally deep intuitions into character, and detect hypocrisy almost instantly; hence they at once discern whether there is any real affection in the mind of the teacher toward themselves, or only a mere pretense. Love will show itself in his appearance, his words, his manners; every tone of his voice will indicate it if it exist, and the pleasant smile beaming habitually from his countenance will, while making his own labors pleasant and easy, make light the hardest tasks of his pupils, by exciting their ambition and determination to accomplish them.

The conscience being very imperfectly developed in childhood, secondary motives, such as the love of approbation, the *hope* of reward, the desire to excel, may properly be appealed to, in order to promote well-doing on the part of the pupil, and thus lead to the formation of good habits. Caution should be exercised, however, in employing such incentives; and the educator should always keep in view the just limits of their use, the injurious consequences of depending too exclusively upon them, and the importance of so employing them that they may lead on to the primary motive—the desire to do right for its own sake.

The practical application of the system here briefly outlined is attended with very great difficulty, and requires peculiar intelligence and skill on the part of the instructor; and not alone this, but moral culture, involving self-control, patience, and a delicate appreciation of moral distinctions, as well as a full sympathy with the general peculiarities and wants of childhood. To this may be added, with emphasis, the ability to discern the peculiarities of individual character, as dependent on both mental and physical constitution; for the processes of moral education cannot, like many of those employed in intellectual training, be applied to children in large masses. Suitable modifications must be made in the application of general principles and rules, or much injury may be done.

Newspapers and Periodicals.—The objection is frequently made to the character of the instruction ordinarily imparted at school, that it has little relation to the concerns of daily life. This want of relation sprung originally from the fact that the literary class, in earlier times, was a class apart, having only slight connection with the mass of people who, possessing few political rights, were unworthy of consideration. The instruction given, therefore, was purposely of a kind to emphasize the exclusiveness of the educated class. Under the changed political conditions of our day, however, the tendency has steadily been to equalize the two classes in intelligence—to lift up the masses to the level of the educated, on the one hand, and, on the other, to bring the studies of the school and college more into accordance with the daily life of the majority.

Traces of the original exclusiveness still remain, however, in the antiquated and unpractical character of the instruction, as mentioned above. Almost every youth, on entering upon the business of life, becomes conscious of this with chagrin. The arithmetic that he studied, for instance, seems to have little application to the concerns of daily life; the bookkeeping which he mastered with so much difficulty, seems now, at this later date, to have been filled with theoretical cases which have no parallels in actual experience; even the geography, in which he attained such proficiency, has little place in his daily routine; while algebra, geometry, and many other studies, have none at all.

The result is a feeling of inferiority when he is brought into contact with others of his age whose training has been entirely that of practical life, which leads him to suspect that his time has been wasted. Not till long afterward, perhaps, does he recognize the fact that the principles on which both theoretical and practical knowledge are based are the same, and that the ability to apply these principles was his chief want. The feeling of disappointment referred to might have been entirely removed, if, in his instruction, the teacher had kept constantly in mind, not the mental discipline alone, but the *mental discipline* and the *adaptability to the affairs of life* of the knowledge used in acquiring that discipline.

One of the most useful instruments for accomplishing this double purpose is the newspaper.

The *arithmetic* which is often taught by the use of unusual and improbable examples could be made a living and interesting thing by the use of problems to be found in its pages which introduce the actual prices of articles in daily use. Interest, discount, exchange, the price of bonds and stocks, could be made so familiar to the pupil in this way that the change from school to counting-house, which is now attended with such a want of ease and so much disappointment, would seem but the continuation of study in another class.

Reading, also, if taught from the newspaper, would familiarize the pupil with the terms used in the daily conversation of professional and business men; and, through the reports of proceedings in every field of human activity, fresh interest could be aroused in studies already taken up, while attention could profitably be called to those which are ordinarily pursued in more advanced courses; and a partial preparation for them could thus unconsciously be made. *Geography and history* would receive increased attention, if they could be connected with the reports of the interesting events from all parts of the world which are daily chronicled, by inquiring into the position on the map, population, form of government, etc., of the different countries referred to. By following, in this way, the records of campaigns and battles, a knowledge of the topography of the country could be obtained almost without effort, which would be easily retained in the memory of the most apathetic scholar; while opportunity could, at the same time, be taken for digressions into its history.

Through its reports of strikes, labor troubles and coöperative associations, the newspaper and periodical could also be made the medium for inculcating, in a familiar and practical way, the rudiments of political economy, usually so dry and uninteresting; while the accounts of great engineering feats, astronomical discoveries, exploring expeditions, and voyages of discovery, would be more eagerly listened to, if the pupil were made to understand that the algebra, geometry, or geography which he daily studies have an intimate and fundamental relation to them all. The thought, also, that he might one day take part in similar work, would act as a spur to renewed exertion.

Any means within the teacher's reach of divesting the studies pursued of their dry, text-book character should be taken advantage of; and this cannot be done in any way so easily as by investing them with a human interest by showing that men and women similar to those with whom he daily associates are the actors in all these stirring events.

For this purpose hardly any medium is superior to that of the daily paper. The objections formerly made to its use that some of the facts were unfit for youthful minds to know, and that the hasty manner in which they were reported rendered their accounts not only worthless as models but injurious, are no longer valid. To the first, it may be said that newspapers are now so universally read that pupils can hardly fail to see them or hear their contents discussed; and to the second, that active competition having brought into the employ of the newspaper so large a share of the best talent, specimens of composition may now be found in any influential paper, not only unexceptionally able in matter, but worthy of imitation for lucid statement and grace of expression.

The ability, independence, and rapidly increasing circulation of the daily press are fast constituting it a powerful educator; and, in countries where the necessities of daily life leave little time for that higher education which demands leisure and a competency for its accomplishment, a double purpose would be served by using it as a means of instruction, as not only giving to the minds of the pupils practical culture, but

also habituating them to the constant use of the newspaper as, perhaps, their chief source of intelligence.

Object Teaching, or the Pestalozzian Method, a method of instruction in which objects are employed by means of which to call into systematic exercise the observing faculties of young pupils, with the threefold object, (1) to cultivate the senses, (2) to train the perceptive faculty, so that the mind may be stored with clear and vivid ideas, and (3), simultaneously with these, to cultivate the power of expression by associating with the ideas thus formed appropriate language.

The merit of introducing object teaching as a special method of elementary instruction, is usually attributed to Pestalozzi; but Comenius, Locke, Rousseau, Basedow, Rochow, and others based their systems of education, more or less, upon the same principle; that is, they recognized the necessity of communicating ideas, or of affording to the mind the means to grasp ideas from objects, by actual perception, before attempting to teach the verbal expression of those ideas, and that, without such ideas, mere "book-learning" is useless.

Pestalozzi appears, however, to have had only a slight knowledge of the works of those educationists. Inspired by the reading of Rousseau's *Emile* to study the phases of mental growth, he arrived at the conclusion that the teaching of his day was fundamentally wrong, from its violation of, or inattention to, the laws of mental development. These laws he believed to be, (1) that the knowledge of things should precede that of words; (2) that, for the acquisition of this knowledge, the only effective agents, in the first stages of mental growth, are the senses, chief of which is the eye; (3) that the first objects to be studied by the child are those immediately surrounding it, and these only, in their simplest forms and relations; and (4) that from these objects as a center, the sphere of knowledge should be widened by a gradual extension of the powers of observation to more distant objects.

The first instruction, therefore, according to this plan, should consist in concentrating the attention upon concrete things, in such a way as to result in a thorough training of the observing faculties, so that the conceptions with which the mind is stored may be as well defined, and as true to nature, as possible. So impressed was Pestalozzi with the correctness, and the supreme importance, of this method, that he declares that the sum of his achievements in education is the establishment of the truth that "the culture of the outer and inner senses is the absolute foundation of all knowledge—the first and highest principle of instruction."

Object teaching should be begun as early as possible, and in the manner of the kindergarten, and should be followed by objective and conceptive teaching, which should be carried through every branch of learning. The mental growth of pupils, however, should not be retarded by a superfluous use of this method. A safe criterion, by which the teacher may know, at any moment, whether he has made a proper use of the object method, may be found in the self-activity of his pupils, their ability to grasp, in their answers to his questions, the general fact, proposition, or law.

This method is justly called the *development method*, the pupils' minds being made to develop themselves, the teacher only suggesting what they are to discover. Every pupil is, as it were, to rediscover every science in the genetic method, a difficult task for the teacher, and apparently a circuitous way for the pupil. But because of its thoroughness, it is the most rapid way of learning; and its results are indelibly fixed in the mind. This method, also, if early begun, and consistently carried out, is successful with every child, and saves precious time, which, later in life, may be devoted to those higher branches that lie beyond the common-school course, but which are every year becoming, in many cases, highly desirable, and, in some, indispensable.

Order, in school management, implies (1) the existence of a judicious system of regulations, and (2) a uniform and habitual observance of them by the pupils. It is one of the most important elements of a good school, since it enables the teacher to concentrate all its educative agencies without embarrassment or interruption.

The characteristics of good order are (1) attention on the part of the pupils to the legitimate work of the school, (2) obedience and respect to teachers, (3) decorous deportment—the absence of tumult, rudeness, frivolity, and frolicsome actions, calculated to disturb the school, and (4) propriety and exactness in the school evolutions and drill.

Order is the result of skill and tact on the part of the teacher; but it cannot be fully maintained unless he is vested with suitable authority, so as to be able to correct disorder as soon as it manifests itself. General disorder in a school can result only from bad management, indicating incompetency on the part of the teacher.

Patience is the calm endurance of necessary toil or suffering. This quality, though similar to *perseverance* in the prolonged effort which its exercise presupposes, differs from it chiefly in the equable temper with which that effort is made. A patient spirit is one of the most important elements in the character of a successful educator. Many occasions, indeed, will occur, when patience will be the only virtue which will command success. Its cultivation, therefore, is desirable both on this account, and because of its value in mental discipline. Its possession, moreover, is necessary both to the teacher and to the pupil. To the former, it is of special use in his treatment of the varying dispositions with which he has to deal.

The provocations to impatience and ill-temper are so many and so constant, that, without patience, the teacher's life will be a continued series of annoyances. Impatience in children is the result either of temperament or hereditary predisposition; and, in dealing with it, the teacher should remember that nothing so tends to develop and foster it in his pupils as a constant practical exhibition of it in his daily intercourse with them.

As nothing is so infectious as ill-temper, so nothing tends so rapidly to curb ill-temper as that quiet forbearance which a patient spirit diffuses around it like an atmosphere. The mental powers, also, act with much greater effect when the calmness of the judgment is undisturbed by ill-temper or impatience. Perseverance may, indeed, exist without patience, and to a certain extent may accomplish its objects; but it is safe to say that more than half the good results which perseverance aided by patience might accomplish are thrown away if patience does not accompany it.

Peabody Education Fund.—A fund established by George Peabody in 1867 and 1869 for the purpose of fostering education in needy communities in the Southern states. Of the $3,500,000 thus contributed, state bonds of Mississippi and Florida to the amount of $1,380,000 were afterward repudiated. The fund was placed in the charge of a board of fifteen members, and the trust was to terminate at the discretion of the trustees in thirty years. The chief beneficiaries were elementary schools, preferably those already established, to which grants were made proportional to the number of students. It soon became evident that the chief need was for trained teachers, and Peabody normal school, later Peabody College, was established in 1875 at Nashville, Tenn. The amounts thus distributed have averaged $75,000 annually. By a vote of the board in 1905 the trust is to be dissolved as soon as its affairs can be wound up, a large sum going to the new George Peabody College for Teachers.

Pedagogy, or **Pedagogics,** the science and art of giving instruction to children, particularly in school, or as by a school-teacher. This term is more generally used in Germany than in the United States or Great Britain, in which the theory and art of the teacher or educator are designated as *instruction* or *education*; indeed, the word *pedagogue* is, in these countries, used as a term of reproach.

Perception, Observation.—By the act of perception is meant the work of the mind in unifying the impressions received through the senses into a knowledge of objects. Perception is the first stage in that intellectual elaboration of sense-materials which culminates in abstract thought. To perceive, *i. e.*, distinguish and recognize objects, implies normal and trained senses. When sense-impressions are indistinct the knowledge of things will be inexact. But it implies more than this, *viz.*, the interpretation of the impressions received at the moment by the aid of past experiences. Thus a child that sees its ball as a real object is translating visual impressions into imagined tactile experiences (feeling, lifting, rolling the ball). Hence perception is acquired. An infant does not see things as things, and cannot distinguish by the eye a flat drawing from a solid body.

The ordinary circumstances and needs of life compel every child to connect and interpret its impressions up to a certain point. But such spontaneous acts of perception are apt to be rough and defective. The ends of exact knowledge require a more careful and systematic inspection of objects. This is marked off as *observation*, and the branch of intellectual discipline that aims at securing it is known as the training of the *observing faculty*. To observe any common object, as a flint or a tree-trunk, so as to note all its peculiarities of form, color, etc., implies a strong, wide interest in objects. This the child has in a measure, and when the observing faculty has been drawn out from the first, the pleasure springing from the use of the organs of sense and from the gaining of new knowledge may be counted on as a sufficient motive.

A habit of observation presupposes both presence and openness of mind; in other words, freedom from mental preoccupation and reverie, and a willingness to see things just as they are, and not as we fancy them or would like them to be. The highest kind of observation combines exactness or minuteness, comprehensiveness, and rapidity. The close connection between exact observation and scientific induction renders it important to exercise the observing faculty by object-lessons as a preparation for science-teaching. Observation forms, however, the necessary preliminary to all studies; *e. g.*, geography, mathematics, language.

Perseverance.—This is that quality of will by which an end is steadfastly pursued to the disregard of all extraneous solicitations. It is closely connected with mental concentration on a subject of thought; and it may be said indeed to be a firm concentration of the mind on an object of desire. The moral value of this quality as one of the highest manifestations of will, and its great practical utility in life, render it incumbent on the moral educator to develop it to the utmost. It is, moreover, a moral quality which the discipline of school is peculiarly well fitted to foster and strengthen. The learner should be led to see how success in study depends on perseverance, and how often, as the fable of the hare and the tortoise tells us, patient and unremitting effort defeats mere superiority of natural talent.

Phonic Method, a term applied to a method of teaching reading, in accordance with which pupils are taught, in pronouncing words, to use the sounds of the letters, instead of their names, so that they may at once perceive the result of the combination, and thus without difficulty give the correct pronunciation. For example, when the pupil is required to pronounce the word *dog*, he does not say *de-o-ge*, *dog*, but gives to each letter the proper sound, phonetically, and thus at once pronounces the word *dog* as the necessary product of the elements thus combined. This method is considered by teachers to possess many advantages over the old-fashioned way of compelling the pupils to learn the names of the letters of the alphabet, and then teaching them to read by spelling exercises.

Physical Education is that systematic training of the bodily powers which tends to render them, in the highest possible degree, efficient in their several functions. The necessity for this training is generally acknowledged, as a basis for the higher departments of education. Among the ancients—the Persians, the Greeks, and the Romans, especially, the highest respect was accorded to physical culture; and the means employed were generally well adapted to the purpose, although merely empirical; but, at the present time, the researches of science supply a far better and more accurate basis for an effective system of bodily training.

Physical education looks to two objects—(1) to encourage a normal development of bodily powers; and (2) to check morbid growth. Incidentally to these, of course, the preservation of health—that is, protection against disease—is an important object; since a condition of health is the foundation upon which all physical culture must rest; indeed, if children are successfully protected from morbid influences and disturbances, normal development must result.

(1) The application of appropriate means to stimulate or guide the development of the bodily powers constitutes what is called *physical training*. This training may be (*a*) general, or (*b*) special. Up to a certain age, all physical exercise must have for its object general development; beyond that, the special purpose of the training must dictate the nature of the exercise to be employed. Military drill, it is true, is often employed in schools to promote general development, but there is very much required in military discipline that is quite unnecessary for ordinary physical culture.

Such exercise, however, must not look exclusively to muscular development, but to the prompt use of muscular power in obedience to the dictates of mind. Such power systematically exercised in any given direction becomes almost automatic, as is seen in the case of the skillful oarsman, rider, or swordsman; or in adepts in athletic games, such as those of ball and cricket. All such means of physical culture become of special value, as bringing the powers of the body under the immediate control of the will; and, hence, under the name *athletics* they have been generally encouraged by those who have the direction of superior education. In the same category are to be placed the exercises which regard the development of other physical powers, as the senses, the vocal organs, the lungs, and, in a closer relation to intellectual education, the brain.

(2) To check morbid growth or to prevent disease, careful attention must be given to the surroundings of the child, particularly in school; as there he is subjected to constant restraint, and hence cannot exercise his natural instincts which would prompt him to escape from such surroundings. The preservation of children from morbid influences in school depends upon a great variety of circumstances.

The practical aim of physical education, under the influence of modern life, is almost always intellectual. Gymnastics and calisthenics, however, indirectly exert a moral influence which, of itself, makes their practice desirable. This is that magnanimity which is produced in generous minds by the consciousness of bodily health and power, and a disposition to use that power worthily. A feeling of inferiority has always associated with it an element of immorality, which leads its possessor to acts of duplicity and meanness to preserve his equality.

There is still another phase of physical education to be considered—that which relates to the joint action of the mind and body through the medium of the senses. The minute subdivision of labor characteristic of the age in which we live, by giving a utilitarian value to the cultivation of the senses, is rapidly constituting this an element of increasing importance. Already, the success of numerous trades and employments is dependent upon a nicety of discrimination by means of the eye, the ear, the taste, or the touch; and the number of these is steadily increasing. The cultivation of the senses, therefore, is desirable from a merely utilitarian point of view; while for general culture, such as is required in many of the arts, its absolute necessity is manifest. Many considerations and interests, therefore, conspire to make the subject of physical education one of constantly increasing importance.

Pictures.—There are two main uses for pictures in schools—one to exercise and develop the æsthetic sentiment, or the feeling for beauty; the other to convey information to the mind, to fix it there, and to exercise the faculty of constructive imagination.

With regard to the latter use it may be pointed out that it has long been accepted as an axiom that the best explanation of a thing is the sight and study of the thing itself; and the next best is a photograph or exact unembellished picture of the thing. This mode of explaining and conveying information has been largely used from quite early times, but is still capable of considerably greater development—especially in the departments of geography and history.

But besides conveying information, pictures may be used, and indeed are almost indispensable, for the cultivation of one of the most valuable of the intellectual faculties—the constructive imagination; both when the mental images constructed are exact or nearly exact copies of some original which exists or has existed (as in geography and history), and when the constructions are new combinations of material already acquired (as in science and in art, both literary and pictorial); in which latter case—when the combinations are new—pictures serve the purpose of suggestive models.

The use of pictures as aids to the *memory* is too widely recognized to need more than mention. There is one *misuse* of them, however, which cannot be too often protested against; and that is in lessons of *observation*. In such cases pictures can never be properly used except when the pictures themselves are the things to be observed. To study a picture instead of the thing itself differs hardly at all from studying a written account of the thing.

Play.—Play is activity carried on for the sake of the pleasure which attends it, and not of any ulterior object. As a variety of action, play is marked off from work and all serious occupation by its spontaneity, its freedom, and its want of the serious attitude which accompanies the latter. Play includes the exercise of limb and of mental faculty, so far as this is spontaneous, and not consciously subordinated to the ends of efficiency and growth.

It has been pointed out by Herbert Spencer that much of children's play is imitative of the actions of adults, and may be viewed as an anticipation of the functions of mature life. The region of play is an important field of observation for one who wishes to study the characteristics of childhood. It has, moreover, its educational uses. This applies to all games that exercise the muscular organs and the senses, and those that call into action the mental faculties. The well-known class of social games, again, which involve a measure of organization and a common submission to rules, are of undoubted value as an aid to moral education.

The educator has something to do both in the way of restraining and in guiding the play-impulses of children. An absorbing passion for games and any degree of interest in them incompatible with necessary work must be strenuously opposed. On the other hand, the play-impulse may be directed into new and healthier channels, and so its value as a source of pleasure increased. Any such control, since it tends to destroy the spontaneity which is of the essence of play, should be attempted with much caution and judgment. The question how far it is possible to regulate the play-impulse for educational purposes has been discussed in connection with the kindergarten system.

Praise and Blame.—These constitute one of the most natural and proper means of influencing children's actions, and molding their moral character. The child is in general very sensitive to the good opinion of others. An infant shows the germ of this love of approbation when it turns to its mother for an approving recognition of some little feat. On the other hand, the withholding of such approval, or the manifestation of disfavor, is a source of pain.

The instructor has to make frequent use of this desire for others' commendation, especially in the early stages of education. Before the child can itself judge what is right, and before the love of goodness is sufficiently strong, praise and blame are a valuable means of prompting and guiding its actions. Care must, however, be taken not to resort to either in excess. Lavish praise bestowed on actions which have little moral value is injurious. Commendation of what is meritorious and in excess of bare duty must be distinguished from the colder approval which is proper to the fulfillment of this last. On the other hand, too frequent censure is apt either to lose its sting by familiarity or to discourage and embitter the child.

Finally, it should be remembered that praise and blame have only a subordinate and temporary function in moral education. It is not well that the child lean too much on others' favorable opinion. It should be the object of the educator to exercise the child in the discrimination of valuable from valueless commendation, and gradually to lead off its thoughts from the approbation itself to the moral standard which determines it. The child should be led to do what is right for its own sake, and to find its highest satisfaction in an enlightened self-approval.

Precocity.—By a precocious child we understand one whose mental powers are developed in advance of his age. Precocity is thus tantamount to rapid development. It may show itself in some special direction, as in the case of the born musician, artist, or poet, or as exceptional advancement in intellectual power as a whole, as in more than one instance of famous juvenile scholarship. A large proportion of famous men were remarkable in youth, if not in childhood. At the same time precocity is no guaranty of lasting intellectual power. A rapid development seems to mean in many cases a quickly arrested development. Hence the low opinion held of precocity by classical as well as by modern writers. Enough has been said to show the special educational difficulties in dealing with the precocious child. As something exceptional, he cannot easily be fitted into rules and methods intended for the average mind.

The educator must recognize intellectual forwardness, and not attempt to force superior abilities into a too narrow and cramping mold. At the same time he must be alive to the dangers of a rapid mental and cerebral development, and distinctly discourage a clever boy or girl from such a rate of advance beyond the standard of his or her years as would be detrimental to the proper growth of the physical powers, and so to a healthy and prolonged process of mental improvement.

Psychology.—Mental science, or psychology, is the science which has for its special subject-matter the various activities which make up our mental life. As dealing with the phenomena of the inner world of mind or "consciousness," it stands in contrast to the physical sciences, which have to do with those of the external, material world. At the same time, psychology holds a close connection with one branch of physical science; *viz.*, *physiology*.

We have to study mental phenomena not only in themselves as we observe them directly in our own minds, or indirectly by means of their outward manifestations in the minds of others, but also in connection with their physiological accompaniments and conditions, that is to say, the activities of the brain and nervous system as a whole. It thus will be seen that psychology is the chief source of the principles or laws which make up the science or theory of education.

Since the educator has to work on mind as his material, he requires to understand its inherent properties and the laws by which it is governed. The successful training and de-

veloping of the mind in any direction depends on our satisfying the necessary conditions of mental growth. The exercise and improvement of a child's memory can only take place by a fulfillment of the natural laws of memory (interest and association). Hence a knowledge of these laws is indispensable to one who would carry on the work of training minds intelligently, and with the assurance of following a right method.

The science of psychology deals with mind in each of its three principal phases, *knowing* or *intellect*, *feeling* or *emotion*, and *activity* or *will*. And the special laws of each of these great departments of mental life furnish the basis of a corresponding branch of education; *viz.*, (1) intellectual education, (2) the culture of the feelings, or æsthetic education: and (3) the development of the will and character, or moral education.

Recitation, in American colleges and schools, denotes the rehearsal of a lesson by pupils before their instructor, or the repetition of something committed to memory.

The manner in which the teacher should conduct the daily recitations of his class is a matter of very great importance, since apparently perfect recitations may be gone through with which not only have little educative value, but may even be productive of positive harm to the mind of the pupil. The surest guide, in this respect, is that which is derived from a consideration of the essential meaning of the word education, no method of recitation having any value which does not keep constantly in view the development of the pupil's mental powers. It should always be remembered by the teacher that the supreme object of the recitation is to accustom the pupil, by daily practice, to use the faculties of which he is possessed.

Many a so-called recitation results, by too much explanation on the part of the teacher, in a reversal of the functions of the teacher and his class—the former reciting to the latter, instead of the latter to the former. The passive attitude of mind in which pupils listen to a long explanation is the very attitude from which they need to be roused.

There are two stages in the development of a mental power as produced by the exercises of the classroom—(1) the knowing what to say, and (2) the saying of it. The first stage the pupil is supposed to have reached by the study of the lesson; the second, and most important one, is not passed through by the pupil in the case above supposed.

Of far greater service is it, therefore, to the pupil, to be allowed to state the result of his study in his own language, halting and imperfect though it be, than to compel him to listen to an exposition by the teacher. Under the first condition, it will be apparent, at every step, whether he really understands his lesson; and, if he does, every day will add to the copiousness of his vocabulary, and his ease of mental action, and give to his recitation its highest educative result; while, under the second—the condition of a "passive recipient"—there will always be apparent to every discerning person an inexact apprehension of the thought presented, a certain degree of insincerity, strengthened into a mental habit through fear of ridicule, and mental powers "rusting in disuse."

The first requisite for skillfully conducting a recitation is a thorough preparation by the teacher for the particular lesson he is to hear, so that he may be able to follow each step taken by the pupil, and may stand ready, at any moment, to supply the needed word in which the pupil is striving to embody his thought. Another point to be remembered is the *order in which the different parts of a subject are presented.* Where these parts depend upon each other by a natural progression, as they frequently do, a skillful teacher will so order the recitations of a class that those parts of the subject which are the natural stepping-stones to other parts, shall be presented first, such an arrangement conducing powerfully to a correct comprehension of the subject as a whole.

In some studies—in the natural and exact sciences almost always—this method is absolutely necessary; but, while in other branches its value is not so apparent, the advantage to be derived from its adoption is generally considerable.

A thorough comprehension by the pupils of the subject under consideration will insure the maintenance of three other conditions necessary to success in teaching, and usually quite strenuously insisted on by writers on the subject; namely, *animation*, *attention*, and *a natural tone*. When pupils understand what they are reciting, their attention and animation are, by that fact, made certain; and a natural tone is instinctively adopted. In youth, the appetite for new truths is so eager, the exultant feeling which accompanies the conquest of difficulties is so keen, that the reflection of this in the voice and manner of the pupil is a matter of certainty.

Religious Education is that which has for its special object the cultivation of that faculty of the human soul by means of which it is enabled to realize the existence and constant presence of the Deity, to know Him, and to commune with Him in worship and prayer. Some have designated this the *religious sentiment*; but strong exception has been taken to that term, as belittling the basis of religion in the human soul.

An experience of human nature, in its various degrees of culture, shows that there are what may be called religious institutions, common to all minds of whatever grade of development; but that while these may prompt to worship, yet, without religious instruction, they can lead only to superstitious and debasing practices.

The religious or spiritual instinct does not necessarily involve any act of the intellect; for those whose intellectual education and endowments are quite inferior often show a surprising degree of spiritual insight and religious fervor. This fact, however, does not supersede the necessity of appealing to the understanding in imparting a knowledge of those religious truths which have been communicated by divine revelation; but, in receiving these truths, the intellect assumes the attitude of faith rather than of inquiry; that is to say, having become satisfied of the authenticity, or the authority, of the source whence these truths, or dogmatic teachings, emanate, it does not exercise its powers to establish their validity, but only to conceive them in their true import and relations. Hence the intellect is not to be cultivated by means of religious instruction, although its exercise cannot wholly be dispensed with.

The specific office of religious education is thus twofold—(1) to cultivate the religious instincts, and (2) to impart religious truth. The one is accomplished by means of devotional exercises; the other by dogmatic teachings.

In the first stages of religious education, appropriate exercises constitute almost the only agency needed, nothing but the simplest religious truths being requisite (such as are usually contained in the catechism); but, in the more advanced period of culture, the importance of dogmatic instruction increases. Simple prayers and hymns, with just enough teaching to enable the child to realize their full significance, are the usual and the most effective means of exercising the religious faculty.

It must, however, be borne in mind that the mere saying of a prayer, or the singing of a hymn, will not necessarily give this exercise, any more than merely committing to memory a definition or a rule will exercise the intellect. The mechanical repetition of prayers, in religious education, is just as useless as rote-teaching in intellectual education. By an inattention to this principle on the part of parents and religious teachers, no doubt, many children become disgusted with religious devotion, while others imbibe the notion that religion is only a matter of forms and ceremonies, or the repeating of the catechism. In either case, the religious instinct becomes dormant for the want of due exercise.

The relation of moral and religious education should be carefully studied. In brief, it may be said that the former deals with the relations which mankind sustain to each other; and the latter, with those which man as a spiritual being sustains to the Infinite Spirit, the creator and preserver of all things. In the one, the principle addressed is that of conscience, the sense of right; in the other, it is the religious principle, the spiritual instinct, by which man is brought into communion with his Creator.

In a certain sense, these two departments of education are independent; for conscience operates independently of religion; but a religious sanction is the strongest foundation for moral precepts. For this, the Christian revelation affords the fullest authority, the "first and great commandment" being to love God; and the second, "to love thy neighbor as thyself." The several departments of education are not to be divorced from one another, but all are to be carried on together, so as to produce a harmonious development of character.

In imparting religious instruction, the same principles are to be applied as in intellectual education, as far as language is the vehicle of the instruction. Very much of the religious teaching given in the Sunday-school is of no value, because of the neglect to observe these principles. Committing to memory formulated dogmas, verses from the Bible, doctrinal lessons, etc., without any proper appreciation of their significance, can be of little service, and in some cases may do positive harm. Oral instruction plays a most important part in this kind of teaching; and Bible expositions, when clear, definite, and illustrative, always prove the most effective as well as the most attractive means of instruction.

Rhodes Scholarship, The—Cecil Rhodes, British statesman, who died at Cape Town, South Africa, March 26, 1902, directed in his will dated July 1, 1899, that a part of his fortune, estimated at $10,000,000, should be applied to the creation of a fund, for the support of a certain number of scholarships covering a three-years course at the University of Oxford. He directed that the selection of the recipients of this gift should be made two from each state and territory of the United States, or one hundred in all, fifteen from Germany, and from one to nine from each of the British colonies.

In most of the states the selection is made by a committee appointed by representatives of the colleges; in some the appointments are made in rotation by the leading colleges.

The conditions regulating the award of scholarships in the United States provide that the candidates shall have satisfactorily completed the work of at least two years in some college of liberal arts and sciences. Except under extraordinary circumstances the maximum age limit must be twenty-four years at the time of entering upon the scholarship at Oxford. To be eligible the candidate must be a citizen of the United States, or the son of a citizen, and must be unmarried. Each student receives an allowance of $1,500, payable in quarterly installments, which is just enough to enable him to pay his college fees and necessary expenses.

At the beginning of Michaelmas term, October, 1904, there entered Oxford seventy-two Rhodes scholars; forty-three were Americans, twenty-four colonials and five Germans. In 1906, the full number, 190 in all, were in residence, and thereafter this number will be maintained, the vacancies being filled as men complete their three-years course. The last examination in the United States took place in January, 1911. There will be examinations also in 1913, 1914, and so on, omitting every third year. The examinations are not competitive, but qualifying.

Scholasticism, a name generally applied to the Christian philosophy of the middle ages, though there is no agreement among scholars as to its exact definition. In its first period, which extends from the ninth to the eleventh century, philosophical speculations were limited to theological problems. Among the greatest representatives of scholasticism are Scotus Erigena, Gerbert (Pope Sylvester II.), and Anselm of Canterbury. About the middle of the twelfth century, the controversy between the *Realists* and

Nominalists led to the full development of scholasticism, which denied to philosophy any right to extend its speculations beyond the tenets of the church, but assigned to it the task of systematizing the doctrines of the church, and of defending them. Thus, the scholastics were led to cultivate chiefly logic and dialectics.

Among the greatest scholastics during the classic period of the system were Alexander de Hales, Albertus Magnus, Thomas Aquinas, and Duns Scotus. In the fifteenth century, scholasticism began to decline; and, though subsequently the Jesuits tried to revive it, and have partly retained its method of teaching to the present day, it has never been able to recover anywhere its mediæval supremacy. Its importance in the history of education depends chiefly on the influence which it exerted, during the middle ages, upon all schools, but more especially upon the cathedral and convent schools.

School Management is a department of the teacher's profession which includes (I.) the organization of the school, and (II.) its conduct. Under the former, must be considered (1) the *classification*, (2) the *distribution*, as to order and time, of the branches to be taught (course of instruction and program), and (3) the proper *assignment of the work* of instruction (in a graded school) to several teachers, either in accordance with the class system or with the departmental system.

The conduct of the school has reference (1) to *instruction*, and (2) to *discipline*. Great care should be taken, by means of a carefully constructed program, or daily order of exercises, to secure to each subject its proper amount of time, according to its place in the course of instruction, as well as to insure an equable advancement on the part of the pupils in each subject of the grade, as preliminary to *promotion*.

The promotion of pupils is a matter of great practical importance in the management of a school. One of the most serious errors made by teachers is the too rapid advancement of their pupils. Promotion should always be based upon a careful examination; and, in a graded school, care should be taken that every grade is passed through in a legitimate manner—that is, without hurry or cramming. When the school is ungraded, the advancement of individual pupils is to be considered; but there is the same need of avoiding haste so as to secure thorough proficiency as the basis of promotion.

Government is, also, an important department of school management; since, without efficient government, all attempts at effective school instruction must be fruitless.

Self-Command, Self-Control.—These terms refer to the higher exercise of the will in restraining and controlling the natural impulses and propensities. Thus, when a child makes an effort to abstain from a forbidden action, or to master a feeling of anger, it is exercising self-control. This self-regulation shows itself in three directions, answering to the three domains of the mental life; *viz.*, the control of the thoughts, of the feelings, and of the actions.

The perfect control of the whole mind by a good and rational will is the highest result of mental development, and should be the end of education. Such complete self-mastery involves a firmly fixed habit, the establishment of which is a long and difficult process, especially in the case of impulsive and passionate children. The educator must early begin to exercise the child's will in an effort at self-command. Thus intellectual instruction requires an effort of attention, a restraint of the impulses to bodily movement and wandering thoughts.

Again, the moral educator has from the first to encourage the child to restrain its feelings, and more especially to govern its temper. The moral educator is further concerned with the development of that species of self-control which consists in denying ourselves the satisfaction of our own desires, an exercise in which the principle of all virtue and excellency lies.

Self-Education is that part of the work of mental development which the individual carries out for himself. It is a necessary supplement to the early school education, in which the learner is surrounded by external incentives and aids.

While, however, it is customary to divide the process of education into these two stages, it must not be forgotten that the underlying motives of self-education—the desire to gain knowledge and to improve character—must be appealed to as soon as the child's intelligence and will are sufficiently developed to enable it to appreciate and coöperate with the teacher's aims. The teacher's efforts too often fail to be followed up in later years by the independent exertions of the pupil, just because the desires and aspirations which prompt to and sustain self-education have not been developed. Thus the methods of intellectual instruction adopted have not succeeded in kindling a love of knowledge which would burn on when the years of school were over.

In a certain sense *all* education is self-education. The acquirement of knowledge is made, the power to use knowledge—to think, to feel, and to will—is developed by, and in proportion to, the activity of one's self. The term, however, is generally applied, in a somewhat different sense, to the efforts of a person who, having passed the usual school age, finds himself without the means of external help and guidance, and seeks by his own unaided or but slightly aided exertions to continue or to commence his education.

Now, what is the service which a skillful teacher renders to a learner? He selects the subjects to be studied, and the parts of each subject; and he decides how part shall follow part, and subject subject. He chooses the method or manner of study—so that the right faculties shall be exercised—and by his wide knowledge and constant suggestiveness he exhibits and maintains a living connectedness not only between the parts of each subject, but also between the subjects themselves. He guides and stimulates the learner to make use of, and to test by use, the knowledge acquired; and is ever on the watch to regulate and direct exertion, to supply explanations where needed, and to recall the learner's attention to any knowledge which seems likely to slip away.

This service of the skilled teacher is of vital importance to the younger beginner; but, except in suggesting connectedness and in general guidance and stimulation, it tends to grow of less and less importance as the learner himself grows in knowledge and in development of power to use knowledge. To one who has been properly educated during the school period it would seem sufficient to give advice, following as nearly as may be the practice of the teacher.

(1) Do not choose too many subjects.

(2) Select in preference *first* subjects of which you already know something and which have a bearing of some kind on the work of your everyday life, and *then* those which grow out of these.

(3) Having ascertained from some competent authority the best text-books, seek to master the main points first, and fill in the lesser matters later.

(4) Constantly test your knowledge by employing it in every available way—not only knowledge newly acquired, but also old knowledge with it—and, when the chance offers itself, at times test its amount and readiness also by entering some good public competition.

(5) By every means in your power maintain a connectedness in *all* that you learn, do not let old knowledge slip away, and always endeavor to gain knowledge by personal experience rather than at second-hand; always try to see how the new knowledge just gained affects what you already know.

(6) Ally yourself with other students when you can, although their subjects may not be yours. What they learn and care about will often prove unexpectedly suggestive with regard to your own knowledge; and community in study is always stimulative and refreshing.

(7) Lastly, remember that the best education is one which enables you to live out your life effectively in many directions, and does not consist in the mere accumulation of facts; it is the *result* of well mingled knowledge which you know how to employ, and is not the knowledge itself.

A person who has had no school education is now so rare a being that it seems hardly necessary to offer him advice. This, however, may be said: Choose some subject of observation such as you have the best means of studying practically; and work from it as a center gradually outward in different directions, never losing the connection with your central subject; observe, classify, experiment, reason, and then again observe.

Your best central subject will be one of the following: botany, natural history, physiography, or perhaps geology. Do not, at any rate for some considerable time, attempt to make any but your central subject a special study; and follow up your other subjects which branch from it simply for the sake of that central subject.

Selfishness, Self-Love.—By self-love or self-regard moralists indicate that instinctive concern for one's own safety and happiness which is common to all men. This feeling has its roots in the impulse of self-preservation which is necessary to the conservation of individual life, and which, in an articulate or an inarticulate form, is an endowment of all sentient creatures. When this feeling exists in moderation, and does not render the subject of it callous to the interests and needs of others, it is spoken of as rational self-love. When, however, it is excessive, leading to an habitual preoccupation of the thoughts and desires about personal interests and to the disregard of others' happiness, it becomes what we all know as selfishness.

Selfishness is commonly said to be a characteristic of childhood. Children are apt to be greedy, insatiable in their demands, jealous of other children, indifferent to the trouble they cause their parents, and so forth. Such childish selfishness is to be explained by the circumstance that social feelings are later in development than the egoistic. The appearance of selfishness in young children that arises from heedlessness and weakness of the sympathetic feelings must be distinguished from that more baneful form of egoism which is apt to show itself in certain children later on, and which involves a cool preference of self to others. In dealing with the child's egoistic feelings the educator must not seek to uproot them, but, recognizing the valuable and necessary element in them, aim at making this the basis of a reasonable regard for self and a sense of personal worth. The tendency to selfishness must be early corrected, before it hardens into a habit, by drawing out and educating the love and sympathy of the children. If children are selfish they are mostly disposed to be affectionate if only the educator can discover the way of touching and drawing forth their love.

Slater Fund.—In 1882 Mr. John F. Slater of Connecticut placed in the hands of trustees the sum of $1,000,000, for the purpose of "uplifting the lately emancipated population of the Southern states and their posterity." For this patriotic and munificent gift the thanks of Congress were voted, and a medal was presented. Education in industries and the preparation of teachers are promoted in institutions believed to be on a permanent basis. Schools established by states, denominations, and individuals are helped by annual donations. Among the more prominent are the Hampton normal and industrial, Spelman seminary, Claflin University, Fisk University, Tuskegee institute, and schools at Tougaloo, Miss.; Raleigh, N. C.; New Orleans, etc.

Smithsonian Institution, a learned institution in Washington, D. C., established in 1846, "for the increase and diffusion of knowledge among men," by James Smithson, a natural son of Hugh Smithson, first duke of Northumberland, through a bequest of $515,169, subsequently increased by a residuary legacy to $541,379.63. This legacy, having been bequeathed to the United States.

was formally accepted by Congress, and the institution established by an act approved August 10, 1846.

The government of the institution is intrusted to an establishment consisting of the President of the United States, the Vice-President, the members of the Cabinet, and the Chief Justice, in addition to which there is a Board of Regents composed of the President of the United States, the Chief Justice, three members of the Senate, three of the House of Representatives, and six citizens selected by Congress. The executive officer is the secretary of the institution, who is elected by the regents.

The objects of the institution, as defined in the original plan by the first secretary, are, first, to increase knowledge by original investigation and study in either science or literature; and, second, to diffuse knowledge not only through the United States but everywhere, especially by promoting an interchange of thought among persons prominent in learning in all nations. This general proposition was more specifically defined as follows: "To assist men of science in making original researches, to publish them in a series of volumes, and to give a copy of them to every first-class library on the face of the earth." Scientific investigators in the United States, as well as those abroad, have been aided by the institution. Books, apparatus, and laboratory accommodation have been supplied to thousands, and a number of money grants have been made. Personal encouragement has been afforded, advice given, and thousands of letters written in response to inquiries.

The publications are numerous and include memoirs on archæology, astronomy, ethnology, botany, zoölogy, geology, palæontology, meteorology, physics, physiology, and philology, and many other branches of investigation.

In 1891 the funds of the institution were increased by a bequest of nearly $250,000 from Thomas G. Hodgkins, and, with other additions, the total permanent fund amounts to $937,000 deposited in the treasury of the United States, and bears interest at 6 per cent under special congressional provisions. The institution has its home in a building of Seneca brownstone in the Norman style of architecture, erected on the Mall in 1847-55.

Under the fostering influences of the Smithsonian Institution a number of dependencies have grown up, which are supported by appropriations by Congress, the secretary being the *ex-officio* chief of each. These are:

(1) The *Bureau of Exchanges*, begun in 1850, which has for its object the free interchange of scientific material between scientific institutions, the correspondents of which number upward of 48,000.

(2) The *National Museum*, the depository of the national collections. It is especially rich in the natural history, geology, palæontology, archæology and ethnology of America, and has unique collections of American history, as well as many series relating to fine arts and the industrial arts. It is both an educational and a research museum, and issues numerous technical and popular scientific publications. The National Gallery of Art consists largely of the collections of etchings and engravings of George P. Marsh; the collections of Charles L. Freer, containing numerous paintings and etchings by Whistler, and examples of Chinese and Japanese art; the Harriet Lane Johnston collection, including a number of the greatest English portrait painters; and the collection of William T. Evans, of one hundred paintings representing some of the best work of American artists. A new building, for which $3,500,000 has been appropriated, is in course of construction.

(3) The *Bureau of American Ethnology* is an outgrowth of researches beginning early in the history of the institution, which has from the outset devoted much attention to the native American tribes. It began its formal existence in 1879, under the directorship of John W. Powell, who was succeeded in 1902 by William H. Holmes.

(4) The *National Zoölogical Park* was established in 1890 for the purpose of securing the preservation of such American animals as are upon the verge of extinction. It occupies 167 acres north of the center of the city of Washington.

(5) The *Astrophysical Observatory* was established in 1890 for the purpose of carrying on investigations in astrophysics, especially with regard to the invisible portions of the solar spectrum.

Sympathy is a feeling with, or a sharing in the feelings of, others. Sympathy is a representative feeling, that is, a feeling which depends on the imaginative representation of a state of mind not actually experienced at the moment. As such, it presupposes a certain amount of personal experience of pleasure and pain.

The want of sympathy which is so often ascribed to children is explained by the limitation of their experience, their inability to realize states of feeling different from their own, and their preoccupation with personal interests and pursuits. At the same time, the germ of sympathy, *viz.*, the tendency to reflect others' feelings, is plainly seen in the readiness with which they are excited to laughter, fear, etc., by example and contagion.

This tendency has a high educational importance. It is by the contagious propagation of feeling that the teacher's cheerful manner induces a willingness to learn in the pupil. The advantage of teaching children in numbers rather than alone depends on the sympathy of numbers, which is merely another name for the disposition of the young to take on the mental attitude of those by whom they are surrounded.

The higher kind of sympathy or fellow-feeling has to be cultivated by the educator, both as an aid in intellectual education and as one chief element in moral development. Where there is affection between teacher and pupil, and the disposition to sympathize which this implies, not only is the child's happiness promoted, but a powerful motive is supplied to effort and industry. The sympathetic child finds it a pleasure to do what it knows the teacher likes and wishes it to do. Hence the importance of the teacher's drawing out the affectionate impulses of the child, by manifesting on his side a loving, sympathetic interest in the latter's welfare and happiness.

The impulse of sympathy is, further, that on which the moral educator must ultimately rely for the correction of the selfish propensities of children, as shown in greediness, envy, cruelty, and the bitter feeling of rivalry. Since it is agreed that duty consists essentially in a recognition of the interests and claims of others, it is evident that virtue, or the fixed disposition to the right, must have its chief root in a wide and impartial sympathy. Hence the moral importance of cultivating the sympathetic feelings of children, first of all in relation to their immediate associates, human and animal, and then in relation to wider and wider circles, those of other social grades, other races, and so forth.

Teachers' Institute, the name given, in the United States, to an assemblage of teachers of elementary or district schools, called together temporarily for the purpose of receiving professional instruction. Such meetings are held under the direction of the school authorities, usually the state, county, or town superintendent; and quite often there is a provision of law requiring the teachers employed in the common schools to attend, and permitting a continuance of their salaries during such attendance.

A teachers' institute is usually conducted by an experienced teacher having special skill for the work. This requires a good knowledge of the practice and theory of teaching, especially as applied to the ordinary branches of common-school education; it also needs ability as a lecturer. Teachers' institutes are designed to serve as a substitute for, or as complementary to, normal instruction; and as such they constitute a valuable agency in connection with a system of common-school instruction.

Temper.—This term, which originally meant a due mixing of elements, refers to the constitution and habitual disposition of the mind on its emotional side, or to its emotional complexion. Thus we speak of a violent, an irritable, a calm or equable, and a good or cheerful temper.

The differences of temper which characterize individuals are in part due to physical and constitutional causes. A strong and healthy physique is the foundation of a good temper. Disturbances of health affect the temper in all cases, and lasting physical suffering may sour it for life. On the other hand, temper is to a large extent a subject of control by the will. This control consists in governing our moods by suppressing feelings of annoyance and anger, and also in cultivating a cheerful and hopeful frame of mind.

The educator is concerned with the management of temper both in himself and in his pupils. The art of ruling others presupposes self-government as one of its prime conditions. Anything in the shape of violence or morbid irritability of temper is fatal to the discharge of the teacher's function; for though it is well for the educator on occasion to be angry, and to manifest his anger, he must never be carried away by his passion.

The exercise of the child in the government of its temper forms one important part of its early moral education. Since the child is as a rule liable to be overcome by strong passion, and since its will is at first weak in resisting and overcoming this, the parent and the teacher should do their utmost to stimulate it to make an effort to govern its passions, Locke and Rousseau contend passionate crying should be cured by firmly refusing to gratify the child's wishes under these circumstances. As the child grows older appeal must be made to its intelligence and its better feelings, in order to induce it to control its feelings of discontent and anger.

Temperament.—By the temperament of a person we understand his natural complexion or bent of mind as fixed by his physical organization. The common division of temperaments is a fourfold:

(1) The sanguine (full-blooded), warm, impressionable, and changeable in its moods.

(2) Phlegmatic (with abundance of phlegm), calm, deliberate, and persistent.

(3) Choleric (with abundance of bile), energetic, with prevailing objective attitude.

(4) Melancholic (with black bile), sentimental, with tendency to subjectivity.

This fourfold division has been handed down from ancient times, and, as its terminology suggests, is based on a crude and obsolete notion of the physical basis of mental dispositions. Nevertheless, it has been used as the starting point in recent attempts to classify the leading facts of temperament.

It is now recognized that the manifold individual differences of mental constitution are very incompletely described by this scheme. Ingenious attempts have been made by recent writers to group these by combining the four leading types in various ways. A truly scientific classification of mental peculiarities must set out the radical psychological distinctions. Thus we have a well marked contrast of temperament in the emotional or sensitive and the active constitution.

With respect to the precise physiological basis of these differences science is as yet able to tell us very little. We know that intellectual differences, *e.g.*, in respect of fineness of discrimination, or of vividness and revivability of impressions, are connected with peculiarities of the brain and sense organs. We know, too, that the active, energetic temperament is correlated with special vigor of the muscular system and the motor side of the nervous system as a whole. A thoroughly scientific classification of the leading types of natural disposition, with their physical counterparts, is greatly needed by the educator as an aid to an intelligent classification of children.

Truthfulness, Untruthfulness.—Truthfulness or veracity has been regarded by moralists generally as one of the cardinal virtues. A scrupulous truthfulness, including the abhorrence of a lie, is one of the highest

results of moral education. Lying is a common vice among children, as it is among backward races of mankind. It is very doubtful, however, whether it is a natural propensity which tends to display itself in all cases independently of circumstances.

Much of childish inaccuracy of statement is not, strictly speaking, untruthfulness—that is, conscious or intentional misstatement—but is explained as the result of imperfect knowledge of words, and of a vivid imagination which momentarily confuses fiction and reality. A child properly brought up seems rather to show an instinctive shrinking from falsehood, and only lies as the result of an effort.

The habit of untruthfulness may be induced not only by the bad example of untruthful companions, but by errors on the part of the parent or preceptor. Thus, want of strict accuracy from a polite wish to please others may first suggest untruth to the child's mind. Again, a child may be wrongly and foolishly accused of lying, and so the idea of falsehood be forced on its attention. For the rest, the educator should be careful not to force and hurry a child into a lie when the temptation is great and likely to be overpowering, and especially not to terrify a child into untruth, but to encourage it to be perfectly open, even when it has something wrong to confess. When a lie has been clearly detected, it is a proper subject for punishment, and care must be taken to make this adequate, so as to correct the weakening effect of the first lie on a habit of truthfulness. Here, however, care is necessary.

Lies differ greatly in turpitude according to their motive, and the lie that springs from fear of punishment ought not to be visited as heavily as one arising from a desire to gain an advantage over another, to involve another in trouble, and so forth. Much care should be taken by the mother not only in her own use of words, but in the choice of servants and companions, so as to accustom the little one at the outset to the habit of truth, as something normal and admitting of no exception; and as the child grows, the influence of the the home, the school, and of the playground should combine to develop a feeling of hatred and contempt for falsehood as something essentially mean and cowardly.

University, a corporate body or corporation established for the purposes of instruction in all or some of the most important branches of literature and science, and having the power of conferring certain honorary dignities, termed *degrees*, in several faculties, as arts, medicine, law, and theology. In most cases the corporations constituting universities include a body of teachers or professors for giving instruction to students; but this is not absolutely essential to a university, and London University, for instance, was long merely an examining body.

In the middle ages, when the term began to be used in reference to seminaries of learning, it denoted either the whole body of teachers and learners, or the whole body of learners, with corporate rights and under by-laws of their own, divided either according to the faculty to which they were attached, or according to the country to which they belonged.

At a later period the expression *universitas literarum* (the whole of literature or learning) was used to indicate that all the most important branches of knowledge were to be taught in these establishments. Some, forming their notion of a university from the universities of Oxford and Cambridge, suppose that it necessarily means a collection and union of colleges, that it is a great corporation embodying in one certain smaller and subordinate collegiate bodies; but this is not correct, for many universities exist in which there are no colleges. This is the case with most of the German universities, and in the Scottish universities there are no foundations which bear any resemblance to the English colleges.

Oxford and Cambridge differ from most universities also in the fact that, though they possess a body of professors, little of the teaching falls to be done by these. The oldest of the European universities were those of Bologna and Paris, and these formed the models on which most of the other early universities were established, a papal bull being generally regarded as necessary to this.

The United States possesses the largest number of institutions bearing the name of universities, but a large proportion are sectarian, and many represent only a single faculty.

University Extension is the offering of a systematic scheme of instruction by an institution of higher learning through its professors to audience and classes beyond the local bounds of the university itself. This idea of popular instruction through the agency of university professors using university methods seems first to have taken root on English soil in the University of Cambridge in 1872.

The plan, however, did not spring from the university, but was rather originated by certain mechanics, institutes in the manufacturing towns of Leeds, Birmingham, and Nottingham, which presented memorials to Cambridge, requesting that university to offer instruction in those towns for the benefit of working men. In accordance with this request, the University of Cambridge offered courses of lectures in three different centers in the following year, 1873. The plan was popular in England from the first, and the work has constantly grown in importance ever since.

Though the work was begun in a somewhat haphazard way, the experience of the first few years shaped a well established university extension method, which has continued with slight modification even to the present day. This method involved:

(1) An extension center, under local management, whose function it was to secure a local body of students, provide suitable rooms, guarantee expenses, etc.

(2) A course of lectures by a university instructor, the standard being a course of either six or twelve lectures, according to circumstances. The instructor provided printed syllabi of his lectures for the use of his students.

(3) Libraries embracing the necessary books for the use of students in the class were provided either by the local center or by the university.

(4) A public session, in which the lecture was delivered to the general audience, immediately followed by a session for the benefit of those who were pursuing the course more intensively, at which opportunity for questions and discussion of the lecture was given.

(5) Theses, weekly or at some other stated interval, written by the class upon topics proposed by the instructor, and corrected by him.

(6) A written examination, participated in by those who desired to obtain a certificate of credit for the successful completion of the course.

The extension of popular education through systematic lecture courses was not inaugurated in the United States by any college or university. Its first public advocacy seems to have been made by the late Professor Herbert B. Adams, of Johns Hopkins University, before the American Library Association in 1887. Three years later, in the fall of 1890, the first organized movement toward the realization of these plans was made by the organization in Philadelphia of the American Society for the Extension of University Teaching.

In 1892, with the opening of the University of Chicago, a University Extension Department was established as an integral part of the university, with an office secretary and a select staff of lecturers whose entire time was devoted to the work of lecturing. Here was the first university extension, in the strict sense, in the United States, corresponding to the type developed in Cambridge and Oxford—that is, a university officially undertaking to extend its instruction beyond its own walls.

The example of Chicago has been followed by other universities in the United States, notably by Columbia University, Cornell University, Pennsylvania State College, and the University of Wisconsin.

Vanity, Pride, Self-Esteem.—These terms refer to varieties of feeling which have a common root in self-love and self-regard. The child instinctively attaches a value to all that concerns itself, and when a distinct consciousness of self is developed this instinctive disposition passes into a feeling of self-liking or self-attachment, which is analogous to its love for others. At first, owing to the weakness of their judgment, children are disposed to estimate themselves and their actions by the opinion of others. Self-gratulation is at this period largely the reflection of others' complacency.

The most general name for this dependence on others' approval is the love of approbation. It is at once the source of one of the most valuable motives of childhood and of one of its greatest weaknesses. Kept within proper bounds, and rendered intelligent and discriminating, this regard for others' opinion is one of the educator's principal aids. On the other hand, when unchecked and undiscriminating, it grows into a foolish and hurtful vanity, or love of admiration. Vanity means an excessive self-consciousness, an over estimate of some personal quality, as good looks, and a too eager desire for others' admiration. This last fault is still more conspicuous in ambition and thirst for glory, though here another impulse, *viz.*, emulation, coöperates.

A child must be cured of vanity by withdrawing all inordinate praise; by associating it with other children, so that it may learn its defects and points of inferiority; by cultivating its affections and its intelligence, and so developing a certain selectiveness in the enjoyment of praise, and a power of discriminating empty flattery from just recognition of worth; and, finally, by exercising and strengthening it in self-judgment and self-esteem.

As the child grows to the age of independence it must learn to rely less on others' good opinion and more on its own. This self-esteem is necessary to the higher development of moral character. A good will, that chooses right independently of the value set on it by others, implies that the subject finds an adequate reward in the feeling of self-approval. A proper feeling of self-respect, or pride, which leads a boy to despise what is small, mean, and tricky as unworthy of him, or beneath his dignity, is one of the most valuable of moral safeguards. In encouraging this self-esteem and this sense of personal dignity the educator must be careful not to foster an excessive and cynical disregard for others' approval, which is a blemish in all cases, and in the case of the young is particularly baneful.

Voice, the name given to the result of the production of sound in nearly all higher vertebrate animals, Speech is a modification of "voice."

In the man the voice is produced by the *inferior laryngeal ligaments*, or *true vocal cords*, as they are termed. The vocal cords consist of two elastic folds of mucous membrane, so attached to the cartilages of the larynx and to muscles, that they may be stretched or relaxed and otherwise altered so as to modify the sounds produced by the vibration, The higher the note produced the greater is the tension of the cords; and the range of voice therefore depends upon the amount of tension which the cords can undergo.

From the age of six until nearing the period of puberty the larynx is approximately similar in size in both sexes; but in adults the larynx is about a third larger in males than it is in females, and the male voice is generally an octave lower in pitch than the female.

Regarding the compass and application of the voice in speaking and singing, physiologists have noted three kinds of sequence. In ordinary speaking a monotonous sequence is observed, the notes having nearly all the same pitch, and the variety of the sounds being due rather to articulation in the mouth than to definite movements of the glottis and vocal cords.

A passage from high to low notes, without intervals, forms the second kind of sequence; or the same sequence is observed in the passage from low to high notes. Such a sequence is exemplified in crying and howling both in man and in lower animals.

The true *musical* sequence forms the third, in which the successive sounds have vibrations corresponding in relative proportions to the notes of the musical scale.

All cultivated speakers and singers are conscious of a thorough employment of the abdominal muscles, and of those of the diaphragm, in order to secure complete control of the breath. *Inhaling*, however, may be carried to excess, a fact well known to professional dramatic vocalists, who often protect themselves against rupture by wearing shoulder braces, trusses, and abdominal supporters. *Exhaling* involves that careful use of the diaphragm, which keeps the intercostal nerves and muscles in a state of tension, in order that the lungs may have their fullest play.

To know when and where to inhale and to exhale, is as necessary to the speaker, in his written or extemporaneously delivered sentences, as it is to the singer, in the enunciation of his musical phrases; and, in such case, it assumes the dignity of consummate art. Without ease, sustained repose, and a method made effective through long habit, in the management of the breath, all subsequent attention to details in the art of speaking or singing is measurably lost.

Demosthenes, with pebbles in his mouth, declaiming to the winds and waves on the seashore, and Braham, lifting up his voice amid the hills and forests of Northumberland, may profitably be remembered and imitated by all students who desire to remedy defects, and to acquire new breathing power.

A graceful attitude, and thorough skill in the proper use of the breath being gained, the close sympathy always existing between the bronchial tubes and the stomach next demands attention. A rapid and complete digestion is esteemed by all intelligent persons the greatest of physical blessings; and to no one is it a more necessary condition of success than to the public speaker or singer. So important is this to the professional vocalist, that those times, in the daily routine of duty, which find the lungs and bronchial tubes freest from the oppression arising from sympathy with the stomach, in its process of digestion, should be selected for practice.

Proceeding upward toward the organs of articulation, we arrive at the trachea, or windpipe, the larynx, and the pharynx. It is a prolific subject of discussion among speakers and singers, whether the character of the tone depends as much upon the size of the lungs, the bronchial tubes, the windpipe, the larynx, and the pharynx, as it does upon the condition of the muscles and nerves, and, more remotely still, upon the general organization, temperament, will, and endurance of the speaker or singer.

Six species of singing voice are now recognized; *viz.*, bass, barytone, tenor (male); contralto, mezzo-soprano, and soprano (female). The classification of voices is determined by the nature of their timbre, and not by their extent of compass. In each species the average compass ranges from a little under to a little over two octaves, a compass of three octaves being exceptional. The lowest musical sound that the human voice is known to be capable of producing is the note G below the bass stave; the highest is B an octave above the treble (B, in *alt.*).

A series of notes of approximately similar quality is termed a "*register*." At the junction of certain registers a certain number of notes may be produced either as higher notes of the lower or as lower notes of the higher register, and the change of register should always be made upon one of these "*optional*" tones. When the change is only barely perceptible, the registers are said to be perfectly *united* or *blended*. The familiar terms *chest-voice* and *head-voice* date from the period when it was not known that all voice originates in the larynx.

The voice is said to be correctly *placed* when it is directed toward the frontal portion of the roof of the mouth, and a sense of strong vibration is felt in the bridge of the nose. Each tone, whether loud or soft, must be *attacked* with decision, but not in an *explosive* manner, and any tendency to *scoop* up to the notes must be instantly checked.

A clear knowledge of the organs which are employed in producing a vocal tone, and of the proper combination of the registers to secure power, purity, and equality throughout the entire vocal compass being gained, the organs of articulation present themselves for particular consideration; and this leads directly to the subject of musical elocution. System and facility in breathing, the employment of all the proper organs, in their healthy condition, for the production of a pure tone, expertness in reading music, and the minutest attention to attitude and gesture, will all fail to produce an impression worth remembering, unless a true conception of the meaning of the words and music, a bold enunciation, a distinct articulation, a well-rounded phrasing, and an accurate intonation be added to the acquirements of the finished vocalist.

Conception relates to both words and music. If it be necessary for the speaker to study well the signification of words, in order to get at the true meaning of the poet, it is even more necessary for the singer to do so, since the effect of melody and harmony upon all persons, is such as to deprive them, measurably, of the power, for the time being, of judging of the signification of words. The singer who rests upon the simple effect of his melody, is certainly as weak as the speaker who relies upon his manner of uttering fine language, rather than upon the strength of the ideas involved. A true conception, it is hardly necessary to add, is the rarest of possessions among modern vocalists.

Pronunciation, in its musical connection, not only implies that enunciation, or careful throwing out of each syllable and word, which good speech and declamation require, but also that which not particularly recognizing the inflections, of reading or declamation, is entirely absorbed in the far more permeating channel of sound, a melody or recitative song according to a given key or scale. Slowness and quickness of utterance are also controlled, to so great a degree, in music, by the relations of the notes, the bar, the fractional measure marks, and words indicating varieties of movement, that there is left less liberty to the singer than to the speaker, in many respects.

For the correction of marked inelegancies of pronunciation, whether of foreign or native growth, no means are so effective as the careful study of the classic languages, together with the study of the principal modern languages taught by native professors. Of these latter, the Italian is most musical in itself, and, therefore, is most useful to the musical student, whose pronunciation of his native language, particularly if he be English or German, will be vastly improved by often reading and singing in the most euphonious of modern languages.

Articulation.—It may in general be said that the vowels only are sung, while the consonants are articulated; in other words, that the vowels are *sung*, and the consonants are *spoken*. In vocalizing alone, the larynx, obedient to the mind and will, performs unassisted, save by the lungs, trachea, pharynx, and diaphragm, all those changes which promote power, purity, sweetness, and flexibility of tone. Some slight changes in the position of the jaws, tongue, and lips are necessary in vocalizing with *ah*, *ee*, *oh*, and *oo*; but only the consonants, as initial, intermediate, or final letters, require a constant and vigorous use of the tongue, teeth and lips, which are the chief agents in acquiring an effective articulation. Full respirations should be the rule, and partial respirations the exception. In plain music, where one or two notes are appropriated to a syllable, the article should not be separated from the noun or qualifying adjective, nor the adjective from the noun, by a separate breathing; nor should the syllables of a word be separated. *Phrasing* implies good singing; such a knowledge of the composer's idea on the part of the singer, as shall not mar, to say the least, either the poetic or musical symmetry of what is sung. The singer should be able to analyze the phrases he sings, in order that in melodic and harmonic construction, he may discover where they begin, how they progress, and where they end. But, if he cannot do this, he should be able, intuitively to grasp a musical passage to the fullest extent of its melodic proportions, and spontaneously to present it with such accessories as shall make it appear his own. All the bright coloring which may be imparted by a vivid conception, a good pronunciation and articulation, will be seriously dimmed by defective phrasing.

Intonation.—Last, but by no means least, there must be the accurate *intonation* which is the result of a correct ear. Some persons do not hear correctly, concords becoming to them discords. Whether it be a local difficulty of the tympanum, or, as is more probable, a rigidity of the entire organization and sluggishness of temperament, the fact is obvious that defective ears are by no means uncommon; and, of course, to imitate musical sounds with the voice, in such cases, is an impossibility. The commonness of the defect increases as we proceed low in the scale of social being, particularly where, in addition to poverty and moral degradation, there is superadded the prolific cause—absence of youthful opportunities of hearing music well sung or played. Could all classes, without exception, be gladdened, when young, by hearing music correctly sung and played, the number of those who pass through life unmoved "by the concord of sweet sounds," would be much diminished. It is important, also, that the sounds heard by children be correct both as to melody and rhythm, if it be expected that such children, when grown, shall have a so-called good ear for music.

Will, Self-Will.—The term *will* is used in psychology to mark off the active tendencies and impulses of the mind, as distinguished from the intellectual capacities and the emotional sensibilities. The will exists in the child in a rudimentary form only. He has the instinctive disposition to activity, but cannot yet choose his ends and so regulate his actions. He shows his crudeness of will in his inability to realize and work for distant results, and the infirmity of purpose which follows from this; in his inability to deliberate and choose; in his want of self-control, and generally in the subjection of his desires to the external circumstances and solicitations of the moment.

The growth of a rational and free will out of this inchoate childish will presupposes the development of the intelligence and of the feelings. Like the intellectual faculties, the will grows by successive exercises. The first and most important of these consists in self-submission to others, or obedience. Such obedience has, however, only a temporary function in furthering the growth of the will. Its higher developments presuppose liberty to reflect and choose for one's self. Hence the importance of restricting the area of authority in early life, and of gradually encouraging the child to think and act for himself.

The instinctive bent to this free determination of action is seen in *self-will*, or *willfulness*, which is so well marked a characteristic of all children that have a strong natural character and energetic impulses. Such self-will is not harmful in itself, but rather the expression of a strong and healthy individuality. It becomes bad, however, when it hardens into rebelliousness, refractoriness, or obstinacy—that is, a fixed disposition to defy authority as such, and to refuse to be led by others' superior wisdom. While in the case of the willful and obstinate the educator has to impose restraint, in the case of those wanting in desires and energy of purpose he needs rather to rouse the will to activity.

Since will is the source of all effort, intellectual and moral alike, it is evident that education, which proceeds by exciting the mind to activity, is concerned to a very large extent with prompting and directing the young will.

ARTS AND SCIENCES

HISTORY. Universal history is usually treated in three principal divisions:

I. Ancient History, which begins with the earliest written records and terminates A. D. 476, with the destruction of the Roman empire.

II. The Middle Ages, which extend from the fall of Rome, A. D. 476, to the discovery of America, A. D. 1492.

III. Modern History, which commences at the latter epoch, and continues to the present time.

The events which mark the separation between the *first* and *second* periods, are the irruption of the Teutonic tribes, the consequent fall of the western Roman empire, and the foundation of the modern European states; between the *second* and *third*, are the extension of learning by the invention of printing, the taking of Constantinople, the maritime discoveries of Spain, Portugal, and other European countries, with the more extensive use of firearms.

I. Ancient History may be subdivided into six periods:

1. The nebulous period, comprising the fragmentary accounts of the early Assyrians, Babylonians, Egyptians and Hebrews, down to 2000 B. C.

2. The Mosaic period, from the time of Abraham to 1200 B. C., during which Moses promulgated his great code of moral and political laws.

3. The Assyrian-Babylonian period, which witnessed a long series of Assyrian conquests, the zenith of Babylonia, the rise of Greece and Rome, and the foundation of the Persian empire,—1200 to 529 B. C.

4. The Persian-Macedonian period, from 529 to 323 B. C., during which both the Persians and the Greeks reached their greatest achievements.

5. The Greek-Roman period, from 323 B. C. to the Christian era, saw the decline of the Greeks and the coming universal power of the Romans.

6. The period of the Roman empire, from the time of Christ to 476 A. D., was notable for the foundation of Christianity, Christian persecutions, the division of the empire, Roman luxury and corruptions, and the incursion of the Teutonic hordes.

II. The Middle Ages may be treated in the following six periods:

1. *First*, the foundation of the modern states of western Europe, A. D. 476–622, when the Saxons invaded Britain, A. D. 449; the Visigoths settled in Spain, A. D. 507; the Ostrogoths in Italy, A. D. 489; and the Franks began the formation of the French monarchy, A. D. 481.

2. The *second* comprehends the age of Mohammed, with the propagation of his creed, and the establishment of the states which embraced his religion, to the treaty of Verdun, A. D. 622–843.

3. The *third* embraces the period from the treaty of Verdun, when the empire of the West was divided, to the Dark Ages, 843-936.

4. The *fourth* is the interesting period of the Dark Ages, A. D. 936-1096, during which the monarchy of Charlemagne fell to ruin, the Capetian dynasty began to reign in France, Italy was parceled out among a number of petty princes, while in Germany, Otho commenced the long-continued struggle against feudalism.

5. The *fifth* is the romantic or heroic period of the Crusades, A. D. 1096-1273, in which the Roman legal code, the foundation of modern jurisprudence, began to be studied.

6. The *sixth*, from 1273 to 1492, beheld the revival of the fine arts in Italy, the taking of Constantinople and diffusion of its learned men, the revival of letters, the discovery of America, A. D. 1492.

III. Modern History falls conveniently into five periods:

1. The period of the Reformation, including its commencement by Luther, A. D. 1517, till the termination of the long series of religious wars, by the treaty of Westphalia in 1648. This period produced many important changes in Europe.

2. The period from 1648 to the death of Louis XIV., in 1715, during which Russia entered European politics, and Great Britain began to assume large influence on the Continent.

3. The period from the death of Louis XIV. to the Congress of Vienna, 1815, which marked the fall of Napoleon. In this period was established the independence of the United States, Prussia advanced to the front rank of European powers, the French Revolution occurred, and the world witnessed the rise and fall of Napoleon.

4. From the Congress of Vienna, 1815, to the American Civil war, the most momentous period in American history.

5. From the close of the American Civil war to the present time, a period of unprecedented development and expansion.

PARALLEL OUTLINES OF UNIVERSAL HISTORY

FROM THE DAWN OF HISTORY TO THE TIME OF ABRAHAM, B. C. X-2000 (?)

Characteristics of the Centuries	Babylonia—Assyria	Egypt	Arts and Sciences	Literature
B. C. 5000—4000	5000 (?) Kengi, or Sumerians, seem to be the advance guard of Babylonian civilization.	5000 (?) Tombs of pre-dynastic Kings at Abydos reveal an advanced state of civilization.	5000 (?) At this date many of the industrial arts had made considerable advancement both in Babylonia and Egypt.	
Modern research shows the existence of flourishing city states in the Mesopotamian region, whose origin and growth far antedate this period. Early Babylonian and Egyptian civilization.	4500 (?) Struggles for mastery among petty Babylonian Kings. Kingdom of Shirpurla dominates, with Sungir (Shinar) as its capital.	4400 (?) Menes founds the old Egyptian empire, Memphis, the capital. Animal worship becomes prominent in Egyptian life.		
	4100 (?) Dynasty of Erech begins about this time.		4100 (?) Architecture in stone begun in Egypt; copper tools introduced, and artisanship fostered.	
B. C. 4000—3000	4000 (?) Nippur becomes the religious center.	4000 (?) Athothis, King.		
Period of the pyramid builders. The Accadians flourish in the Euphrates valley.	3900 (?) Agade becomes the chief center of Northern Babylonia. 3800 (?) Sargon I., of Accad, reached the Mediterranean, and conquered Elam, a kingdom east of Babylonia. 3700 (?) Babylon made capital.	3733 (?) Khufu (Cheops) builder of the great pyramid, reigns.	3900 (?) Great Pyramid at Gizeh The Sphinx carved. 3750 (?) Temples to the gods built by Sargon I. at Nippur and Agade.	"Moral Precepts" of Ptah-hotep.
		3666 (?) Khafra (Chefren), pyramid builder, reigns. 3633 (?) Menkaura (Mykerinos), pyramid builder, reigns. (Egyptian history almost a blank until the 11th dynasty.)		
	3200 (?) End of the dynasty of Sargon.		3300 (?) Canals and irrigation in Egypt begun.	

FROM THE DAWN OF HISTORY TO THE TIME OF ABRAHAM, B. C. X-2000 (?)—Continued

Characteristics of the Centuries	Babylonia—Assyria	Egypt	Arts and Sciences	Literature
B. C. 3000—2000 Invasions of Accad and Babylonia by the Kings of Ur and the Elamites, respectively. Babylonian dominions extended. First migrations from the Aryan center; Celts move westward; Indo-Persic tribes, south. Chinese civilization evident. Flood narratives accepted, and Sabbath observed among Semites.	3000 (?) Accad under Kings of Ur. 2500 (?) Isin takes high rank among Babylonian cities, and a dynasty is founded there. 2450 (?) Arabians and Elamites irrupt into Babylonia. 2400 (?) City of Babylon first rises into prominence. 2300 (?) Elam supreme in Babylonia. 2300-2250 (?) Hammurabi unites Babylonia.	3000 (?) Herakleopolis becomes the seat of government. 2800 (?) Amenemhat I., first of the 12th dynasty. 2650 (?) Usertesen III., King, conducts expedition against Ethiopia. 2400 (?) Government moved to Thebes. 2100. Egypt conquered by the Hyksos, or Shepherd Kings.	3000 (?) Era of palace and temple building renewed in Babylonia; statues of Gudea. 2750 (?) Temple at Heliopolis built; also temple of Osiris at Abydos. 2371-25. Egyptian obelisks erected. 2300 (?) Amenemhat III. constructs Lake Mœris, and the labyrinth near it. 2200. Astronomy known in Chaldea.	Inscription of Una, found at Abydos. Egyptian *Book of the Dead.* *Code of Hammurabi.*

FROM ABRAHAM TO THE PERIOD OF ASSYRIAN ASCENDENCY, B. C. 2000–1200.

Characteristics of the Centuries	Hebrews	Babylonia-Assyria	Egypt	Europe	Arts and Sciences	Literature
B. C. 2000—1200 Egyptian revolt from the Shepherd Kings. New Egyptian empire. Rise of Assyria—originally settled by emigrants from Babylonia. Wars with Babylonia. Sidon, a Phenician city, at its zenith. Phenician colonies established round the Mediterranean. Advanced civilization in Crete. Exodus of the Hebrews from Egypt under Moses. Hittites rise to great power, contending equally with Egypt and Assyria.	2000(?). Abraham, Hebrew patriarch. 1728 (?). Joseph. Migration of the Hebrews into Egypt. 1491 (?). Moses; Exodus from Egypt. 1451 (?) Hebrews conquer the promised land, Canaan. Hebrew theocracy established.	2000 (?). Kassites (Arabians) conquer Babylonia. 1900. Assyria settled by Babylonian emigrants, Nineveh made the capital. 1700. Phenicia conquered by Egypt. 1500. Long series of wars begun between Babylonia and Assyria. 1310. Tiglath-Adar I. conquers Babylonia. 1300 (?). Shalmaneser I. rules in Assyria. 1220. Assyria again independent.	(Period of great obscurity.) 1800 (?). Revolt of Thebes against the Hyksos. 1670. New Empire expands under Thothmes III.; Palestine, Phenicia and part of Asia Minor conquered. 1524-1488. Expeditions against Syrians and Ethiopians, under Seti I. 1500. Egyptus reigns, and gives his name to the country. 1333. Rameses II. wages war against the Hittites; oppresses the Hebrews. 1322. Menephthah, the supposed Pharoah of the Exodus. 1269. Rameses III. 1244-1091. Decay of the Empire under the Rameses Pharaohs.	2000. Celts reached western Europe. Principal settlements made in central France. 1700. Arcadians migrate to Italy. 1582. Earliest date in the Parian chronicles of Greece, preserved in the Arundelian marbles. 1504. Areopagus established. 1457. Kingdom of Mycenæ founded. 1453. First Olympic games at Elis. 1400. Minos reigns in Crete. 1384. Founding of Corinth. 1356. Eleusinian mysteries instituted by Eumolpus. 1266. Œdipus, King of Thebes. 1263. Argonautic expedition of Jason. 1239. Latinus reigns in Italy. 1235. Theseus reigns in Athens for 30 years. 1233. Carthage founded by the Tyrians. 1225. First Theban war. 1220. Priam, King of Troy. 1216. Second Theban war. 1213. Helen (later of Troy), carried off by Theseus, afterward marries Menelaus.	2000. Babylonian industry flourishes under the Kassite kings. Phenicians skilled artisans. 1650. Library founded at Thebes; manuscripts transcribed. 1524-1488. Magnificent palaces and temples erected at Thebes. 1400. Babylonian language in commercial use among eastern Mediterranean countries. 1388-1322. Rameses II. builds many palaces and temples in Egypt. 1370. Bucklers used in single combat. Music and poetry cultivated in Greece. 1263. Temple of Apollo at Delphi built. Jason leads first naval expedition on record. 1240. The ax, wedge, wimble, and lever, also masts and sails for ships, invented by Dædalus of Athens. 1224. Game of backgammon invented by Palamedes, of Greece.	*Pentaur*, a descriptive poem, in epic form. Thothmes III. causes chronology of Egyptian kings to be made. *Papyrus Ebers.* The *Vedas* of India. The *Amarna Letters.* Chinese *Book of Changes.*

THE ASSYRIAN-BABYLONIAN PERIOD, B. C. 1200-529

Characteristics of the Centuries	The Hebrews		Asia and Africa	Europe	Arts and Sciences	Literature
B. C. 1200—1000			1194. Trojan war. 1184. Troy taken.			
Heroic age of Greece; Hebrews reach their highest point of national power. Beginning of the Medo-Persian nations. Celts disperse over western Europe and into British Isles.	1161. Israel enslaved by the Philistines. Samson born. 1136. Samson slays 1,000 Philistines. 1116. Samuel, last Judge of Israel. 1095. Saul becomes King of Israel. 1085. David born. 1055. Death of Saul; accession of David. 1048. David, King of all Israel. 1042. The Ark removed to Jerusalem. 1036. Revolt of Absalom. 1033. Solomon born. 1016. Death of David. 1015. Solomon anointed King. 1012. Solomon begins the Temple. 1004. Dedication of Temple.		1140. Tiglath-Pileser real founder of the Assyrian empire. 1123. Chow dynasty begins in China. 1044. Ionian emigrants settle in Asia Minor.	1152. Alba Longa built by Ascanius. 1124. Æolian migration. Thebes, capital of Bœotia, founded. 1104. Return of the Heraclidæ. End of the Kingdom of Mycenæ. 1070. Heremon, of Galicia, conquers Ireland. 1060. Athens governed by Archons.	1115. Mariner's compass known in China. 1015. Minos gives Crete his code of laws.	Dictionary of Chinese completed by Pa-out-she.
B. C. 1000—900	975. Death of Solomon. Revolt of the Ten Tribes. Two kingdoms formed.		1000. Solomon and Hiram, King of Tyre, form an alliance; also Solomon and Pharaoh. 986. Utica built. Samos built.	976. Capys reigns in Alba Longa.	1000. Solomon extends his commerce to India; builds Palmyra, Baalbec, and other cities.	The *Avesta* of Zoroaster.
Homeric age. Celts already in Britain, with bronze in use. Phenician trade extended from Senegal to India. Temporary decline of Assyria.		**Judah** / **Israel**				
	971. Shishak, King of Egypt, takes Jerusalem.	975. Jeroboam establishes idolatry.	971. Shishak, of Egypt, plunders Jerusalem.			Homer, Greek poet.
B. C. 900—800		918. Ahab and Jezebel. 901. The Syrians besiege Samaria. 896. Elijah translated to heaven.		935. Bacchus, King of Corinth.	916. The Rhodians begin navigation laws.	
Accurate Assyrian chronology begins. Decline of Phenician cities.	888. Philistines plunder Jerusalem. 884. Usurpation and death of Athaliah.	884. Jehu, King. 840. Jehoash defeats King Benhadad of Syria.	825. Dynasty of the Tanites in Egypt. 820. Arbaces, King of Assyria. 797. Ardyssus, first King of Lydia.	895. Tiberinus, King of Alba, drowned in the river Albula, which is thenceforward called the Tiber. 864. Romulus, King of Alba Longa.	884. Lycurgus reforms the constitution of Sparta. 869. Gold and silver coined by Phidon, ruler of Argos.	Homer's poems brought into Greece.
B. C. 800—700				814. The Kingdom of Macedon founded by Caranus.	786. Corinthians employ triremes, or vessels with three banks of oars.	Hindu "Bramanas."
Ethiopian supremacy in Egypt. Assyrian conquests continue; Tiglath-Pileser III.; Sargon; Babylonia rises to height of its power.	741. Pekah, King of Israel, besieges Jerusalem; 120,000 of his men slain. 726. Hezekiah abolishes idolatry.	770. Pul invades Israel, and is bribed to depart. 721. Samaria taken by the Assyrians; Ten Tribes carried into captivity.	767. Sardanapalus, King of Assyria. Media subjected to Assyria. 747. Era of Tiglath-Pileser III.; old Assyrian dynasty destroyed. 736. Tiglath-Pileser III. conquers Syria and part of Israel. 721. Shalmaneser, King of Assyria, takes Samaria; Sargon II. carries the Ten Tribes into captivity.	769. Syracuse founded by Archias of Corinth. 753. Building of Rome. 750. Sabine war. 747. Union of Romans and Sabines. 743. First Messinian war.	772. Sculpture first mentioned among the Egyptian arts. 721. First eclipse of the moon observed by the Chaldeans at Babylon. Religion of Buddha introduced in India.	
	Hebrews					
	717. Hezekiah, King. 712. Sennacherib invades Judah. 711. His army (185,000) destroyed by pestilence. 696. Manasseh, King.	717. Sennacherib, King of Assyria. 710. Media becomes a kingdom.		716. Romulus reputed murdered.	710. Roman calendar reformed; year divided into 12 months instead of 10, as before.	Greek lyric poetry flourishes.

THE ASSYRIAN-BABYLONIAN PERIOD, B. C. 1200-529—Continued

Characteristics of the Centuries	Hebrews	Babylonia	Egypt	Europe	Arts, Sciences, Etc.	Literature
B. C. 700—600				685. Second Messinian War.		Iambic verse introduced.
Zenith and fall of Nineveh, and Assyrian empire.	677. Manasseh, carried to Babylon, is afterward restored.	680. Babylon and Nineveh are united under Esarhaddon.		678. Argæus, first King of Macedon. 672. Tullius Hostilius, King of Rome. 664. First sea-fight on record—between the Corinthians and Corcyreans.	680. Chess invented.	
Media rises to power. Perhaps last migrations from the Aryan center—Teutonic and Slav races.		660. Assyria at height of power.	660. Psammetichus, King of Egypt. Memphis becomes the capital.	658. Byzantium founded.		Attempt to discover the primitive language of mankind.
		648. Saracus, King of Babylon and Nineveh.		640. Latins conquered by the Romans. Philip I., King of Macedon.	640. Spherical form of the earth and true cause of lunar eclipses taught by Thales. 621. Draconian code formulated.	
		612. Nineveh a second time destroyed.		616. Tarquinius Priscus, King of Rome.		
	606. Conquest of Jerusalem by Nebuchadnezzar.	606. Nebuchadnezzar defeats Necho of Egypt, invades Judea and takes Jerusalem.	610. Pharaoh-Necho, King of Egypt.		610. Pharaoh-Necho begins a canal between the Mediterranean and Red Sea. Many lives lost in the attempt. He also sent out a Phenician fleet which circumnavigated Africa.	Alcæus and Sappho, Greek poets.
B. C. 600—500		604. Nebuchadnezzar, King of Babylon.	600. Psammis, King of Egypt.	602. Illyria conquered by Macedon.		
Zenith and fall of Babylon. Long reign of Nebuchadnezzar; he ravages Egypt.		599. Birth of Cyrus.	594. Pharaoh-Hophra (Apries), King of Egypt.	594. Solon, Archon of Athens.	594. Solon's code supersedes that of Draco in Athens.	
The seventy years' captivity of Judah. Rise of Persia.	591. Ezekiel prophesies in Chaldea. 586. Captivity of Judah completed, Jerusalem destroyed, Temple burnt. 579. Jews carried to Babylon.	589. Invades Phenicia.	581. Egypt invaded by Nebuchadnezzar.			
		572. Takes Tyre.	569. Amasis, King of Egypt, makes alliance with Greece.	578. Servius Tullius, King of Rome. 567. Conquest of Etrurians by Rome.	578. Money coined at Rome by Servius Tullius.	
	Persia					
	560. Cyrus, King of Persia. 548. Cyrus conquers Lydia.	562. Crœsus, King of Lydia, subjects Asia Minor.		565. First census of Rome; 84,700 citizens.		
	538. Takes Babylon.	538. Babylon taken by Cyrus the Persian.		539. The Phenicians emigrate to Gaul and build Massilia (now Marseilles).		
	536. Persian empire founded by Cyrus, composed of Assyria, Media, and Persia. Captivity of the Jews ended. 535. Temple rebuilt at Jerusalem. 529. Death of Cyrus; Cambyses, King of Persia.		536. Pythagoras visits Egypt. 535. Made tributary by Cyrus.			
				528. Thrace comes into view.		Poems of Anacreon.

THE PERSIAN-MACEDONIAN PERIOD, B. C. 529-323

Characteristics of the Centuries	Persia	Greece	Macedonia	Rome, Etc.	Arts, Sciences, Etc.	Literature
B. C. 600—500 Continued		527. Pisistratus dies, after seizing Athens.		530. Cadiz built by the Carthaginians.	First public library founded at Athens.	
	525. Cambyses conquers Egypt and makes it a Persian province. Psammenitus, last King of Egypt. 521. Darius I., King of Persia.					
	508. Darius extends his rule to the Indus.	510. Followers of Pisistratus expelled; Democracy established at Athens.		509. The Tarquins expelled from Rome. Brutus and Collatinus first Consuls. 507. The Capitol finished.	Abolition of regal government at Rome, and establishment of a republic.	Confucius, the Chinese philosopher.
B. C. 500—400	500. The Ionians revolt and burn Sardis.		497. Alexander I., King.	494. Tribunes of the people chosen.	Phenician letters carried to Ireland from Spain. The Temple of Minerva built.	Pindar, the greatest of the Greek lyric poets.
Zenith of Persia; and the glorious century of Greece.	490. Darius sends an army of 500,000 into Greece.	490. Battle of Marathon.		491. Coriolanus banished.		
Struggles of Patricians and Plebeians at Rome.	487. Egypt revolts, and is subdued by Xerxes. 485. Xerxes, King of Persia.	483. Aristides banished.			Etrurians excel in music, drama, and architecture.	Æschylus, Sophocles.

THE PERSIAN-MACEDONIAN PERIOD—Continued

Characteristics of the Centuries	Persia, Etc.	Greece	Macedonia	Rome, Etc.	Arts, Sciences, Etc.	Literature
B. C. 500—400 Continued	481. Expedition of Xerxes into Greece; destroys Athens.	480. Battle of Thermopylæ. Battle of Salamis and defeat of Persians.		480. Carthaginians defeated. Hamilcar killed in battle.		
	479. Returns defeated.	479. Battle of Platæa; Persian fleet destroyed at Mycale.				
		476. Themistocles rebuilds Athens.				Euripides, writer of tragedies.
		465. Third Messinian War.				
	465. Xerxes assassinated. Artaxerxes I., King.	461. Pericles impresses himself upon Grecian affairs.		460. Cincinnatus, Consul.	Voyage of the Carthaginians to Britain for tin.	
		457. Long walls of Athens begun.				
				456. Cincinnatus, Dictator.		Aristophanes, the ablest writer of Greek comedy.
	456. Esther.			451. Laws of the 12 tables.		
	449. Persians defeated at Salamis.					
	445. Jerusalem rebuilt by Nehemiah.				441. The battering ram invented.	
	440. Siege of Samos by Pericles					
		431. Peloponnesian War.				
		429. Death of Pericles, having governed Athens 40 years.				
						Plato, the greatest of the Athenian philosophers.
		416. War with Sicily.				
			413. Archelaus, "Patron of Learning," seizes the throne.	413. Egypt regains independence.		
		411. Athens governed by the "400." Alliance of Sparta with Persia.		411. Roman famine.		
		408. Capture of Byzantium.				
				407. Carthaginians war on Sicily.		
	401. Cyrus the Younger defeated. Retreat of the 10,000 under Xenophon.					
B. C. 400—300						
Decline and fall of Persia before Alexander the Great; Greek language and Greek civilization extended all through the Levant. Roman wars with the Samnites. Internal quarrels of the Romans diminish.	400. Delhi founded.	400. Return of the 10,000.	399. Archelaus murdered.		399. Catapults invented by Dionysius.	
			392. The Illyrians invade Macedonia, and possess the throne.			
	387. Greek cities of Asia made tributary to Persia.			390. Rome destroyed by the Gauls.		
				376. War between patricians and plebeians. Lucius Sextus, first plebeian Consul.	380. Treatise on conic sections by Aristæus.	Aristotle, the founder of the Peripatetic school of philosophy.
				371. Curule magistrates appointed.		
		370. Predominance of Thebes.		369. Military tribunes abolished.		
					368. A celestial globe brought into Greece from Egypt.	
		360. War of the Allies against Athens. Decline of Grecian republics.	360. Philip II., King; institutes the Macedonian phalanx; defeats Athenians.		360. Philippics of Demosthenes delivered.	Xenophon, an Athenian historian.
		356. Second Sacred War.	356. Philip II. conquers Thrace and Illyria. Birth of Alexander the Great.			
		344. Philip subdues Sparta. Aristotle visits Mitylene.		343. Samnian war, continued 53 years.		Orations of Demosthenes and Æschines delivered.
			341. War against the Athenians. Siege of Byzantium.	340. War with the Latins.		
		339. War with Macedonia.				
	338. Royal family destroyed with poison.		338. Athenians and Thebans defeated at Chæronea. Philip master of Greece.	337. First plebeian Prætor.		Aristotle begins his philosophical works.
	336. Darius III., King.		336. Philip assassinated by Pausanias; Alexander III., surnamed the Great, succeeds to the throne.		336. Eclipses calculated by Calippus the Athenian.	
		335. Greeks conquered by Alexander the Great. Thebes destroyed.	335. Enters Greece, conquers Greeks, and succeeds to head of army against Persians.		335. Caustic art invented.	
	334. Alexander the Great invades Persia. (See under Macedonia.)		334. Invades Persia. Defeats Persians at the Granicus.			
			333. Battle of Issus.			
		332. Egypt conquered by Alexander, and Alexandria built.				
		330. Æschines, the orator, banished.				
	331. Battle of Arbela. Darius III. murdered. Alexander founds the Grecian or Macedonian monarchy.			332. Caledonian monarchy (Scotland) founded by Fergus I. Roman treaty with Alexander the Great.	328. Voyage of Nearchus from the Indus to the Euphrates.	
		327. Alexander invades India.		327. Second Samnite war.		
		325. Demosthenes banished.				
		323. Ptolemy I. restores the independence of Egypt.				

Alexander the Great dies in Babylonia. The Grecian cities revolt from Macedonia, and in 321 Antipater becomes Regent of Greece. Persia was reconquered from the Greeks, and remained tributary to Parthia till about A. D. 250.

THE GREEK-ROMAN PERIOD, B. C. 323-1 A. D.

Characteristics of the Centuries	Rome, Etc.	Macedonia	Greece	Syria, Judea	Egypt, Carthage	Arts, Sciences, Etc.	Literature
B. C. 400—300 Continued	321. Roman army surrenders to the Samnites.						
	320. Samnites defeated at Luceria.				320. Ptolemy I. (Soter) carries 100,000 Jews into Egypt.		
			319. Polysperchon succeeds Antipater, and proclaims liberty to the Grecian cities.				First work on mechanics written by Aristotle.
	317. Syracuse and Sicily usurped by Agathocles.	317. Cassander assumes the throne of Macedon.	317. Demetrius Phalerius governs Athens.			317. Commerce of Macedon with India through Egypt.	
			315. Cassander rebuilds Thebes.				
	312 War with the Etruscans.		312. Pyrrhus II. greatest hero of his time.	312. Seleucus I. retakes Babylon.		312. The Appian Way constructed.	
			306. Democracy established at Athens by Demetrius.			310. Aqueducts and baths in Rome.	
B. C. 300—200				301. Battle of Issus. Alexander's empire divided anew, into four parts: Syria, Macedon, Greece, Egypt.	301. Phenicia united to Egypt.		
Semi-Greek kingdoms built on the ruins of the Persian empire; in Egypt the Ptolemies; in Syria, the Antiochi.		296. Philip IV.			300. Golden Age of the Ptolemies.		Euclid, the celebrated mathematician.
			294. Demetrius murders Alexander, and seizes throne of Macedon.			293. Sun-dial erected at Rome, and time divided into hours.	
				291. Seleucus founds Antioch, Edessa, and Laodicea.		290. Fabius introduces painting at Rome. The Colossus of Rhodes built by Chares.	
Many Jews at Alexandria.	286. Law of Hortensius, by which the decrees of the people had force of those of the senate.	286. Lysimachus, King of Thrace, subjects Macedonia.					
Rome mistress of Italy; then, victorious over Carthage, extends her influence to Greece and Spain. Peasant proprietors replaced by slaves in Italy.				285. The Scythians invade Bosporus.		285. Dionysius founds the solar year, to consist of 365 days 5 hours 49 minutes.	
			284. Achæan republic.				The Septuagint begun at Alexandria.
					283. Death of Ptolemy Soter. Ptolemy Philadelphus, King of Egypt.	283. The Pharos built at Alexandria, first lighthouse on record.	
	281. The Tarentine war.	279. Irruption of the Gauls.		281. Antiochus Soter succeeds Seleucus.			
		277. Reign of Antigonus.					
		272. Antigonus restored.					
		268. Second incursion of the Gauls.	268. Athens taken by Antigonus.		269. Egypt first sends ambassadors to Rome.	267. Ptolemy makes a canal from the Nile to Red Sea.	Persian Chronicle written.
	266. Rome mistress of all Italy.					266. Silver money first coined.	Berosus, Babylonian historian.
	264. First Punic war.			262. Invasion of the Gauls.			
		250. Parthia revolts from Macedon.	255. Athens joins the Achæan League.	246. Antiochus II. poisoned by his wife.	246. Ptolemy Euergetes subdues Syria.		
	241. End of first Punic war.			226. Seleucus III., King of Syria.			
	225. The Gauls repulsed in Italy.				221. Ptolemy Philopator, King.	224. Archimedes makes known his discoveries in mechanics.	
		220. Philip assists the Achæans.	220. The Social war begins.				
	219. Hannibal takes Saguntum, and crosses the Alps.			219. War with Ptolemy.		219. Art of surgery introduced.	Plautus, Latin poet.
	218. Second Punic war. Hannibal defeats the Romans at Ticinus and Trebia.						
	216. Varro at Cannæ totally defeated by Hannibal.	211. Alliance of Philip and Hannibal.		211. Antiochus the Great, King of Syria.			
	206. Carthaginians driven out of Spain.		206. Spartans defeated at Mantinea.		205. Ptolemy Epiphanes, King.	206. Gold coined at Rome.	
	204. Scipio carries the war into Africa.			203. Judea conquered by Antiochus.	204. Roman general Scipio defeats Asdrubal and Syphax, an ally of Carthage.		Ennius, Roman poet.
	202. Hannibal defeated at battle of Zama. End of war.				202. End of second Punic war.	202. Art of printing known in China.	Moschus, bucolic poet.

THE GREEK-ROMAN PERIOD—Continued

Characteristics of the Centuries	Rome, Etc.	Macedonia	Greece	Syria, Judea	Egypt Carthage	Arts, Sciences, Etc.	Literature
B. C. 200—100	200. Second Macedonian war.	199. Second war with Rome.	198. Achæans and Spartans join the Romans against Macedon.	198. Jews assist Antiochus in expelling the Egyptian troops from Jerusalem.	198. Egypt loses her Syrian possessions.	198. Books, with leaves of vellum, introduced by Attalus, King of Pergamus.	Polybius, one of the most important Greek historians.
Greece, Macedonia, Carthage, and Spain under Roman rule; decline of the Roman oligarchy; the Gracchi begin the democratic revolution which ends in the empire. Eastern luxury introduced among the Romans.	188. Syria is made a Roman province.			196. Hannibal joins Antiochus. 190. Scipio Asiaticus defeats Antiochus at Magnesia. 188. Antiochus killed. Syria becomes temporarily a Roman province.			Plautus, *Comedies: Aulularia, Captivi, Pseudolus*, etc.
	181. Plague at Rome.	179. Reign of Perseus.		185. Seleucus I V., King.	180. Ptolemy Philometer, King. 174. Cato's embassy to Carthage.		
		171. Third War with Rome.		172. Antiochus IV., King. Greatly hated by the Jews.			
	170. Tiberius and Caius Gracchus. 167. Census of Rome, 327,000 citizens.	168. Macedon becomes a Roman province.	165. Romans enter Achaia.	170. Jerusalem plundered by Antiochus Epiphanes. 165. Judas Maccabeus expels the Syrians. 161. Treaty with the Romans.		170. Paper invented in China. 162. Hipparchus fixes the first degree of longitude and latitude; founds trigonometry.	First library opened in Rome.
	155 Romans unsuccessful in Spain.				152. Masinissa defeats the Carthaginians.	159. Clepsydra invented by Scipio Nascia.	Terence, *Comedies: Andria, Phormio*, etc.
	149. Third Punic war. Conquest of Carthage and of Corinth. Greece annexed to the Roman empire.		146. Corinth destroyed by the Romans. Greece becomes a Roman province under the name Achaia.	142. Antiochus VI., King. 134. Invasion of Judea.	151. Joint reign of Philometer and Physcon in Egypt. 146. Carthage taken and destroyed by the Romans. 145. Ptolemy Physcon becomes sole King of Egypt.	146. Alexandria the center of commerce. 140. Clock wheels invented by Ctesibius.	Aristarchus, greatest of Greek scholars.
	133. Spain becomes a Roman province.			130. John Hyrcanus delivers Judea from Syria. 130. Conquered by Parthia.	129. Physcon driven from his throne for cruelty. 128. Pestilence in Egypt.	133. Equestrian order a distinct class. 130. Revival of learning in China.	Lucilius, first Roman satirist.
	123. Caius Gracchus, Tribune.				123. Carthage rebuilt. 116. Ptolemy Lathyrus, King of Egypt. 107. Alexander I., King of Egypt.	120. Theory of eclipses known to Chinese. 110. First sumptuary law at Rome.	
	113. First great migration of the German nations.			105. War with Egypt.			
	104. Teutoni defeat 80,000 Romans on banks of the Rhone. 99. Birth of Julius Cæsar.						
B. C. 100—1 A. D.				97. Alexandra, Queen of Janneus, governs Judea. Mithridates conquers Cappadocia.		98. Roman schools of oratory on Greek models instituted.	
The Romans govern all the countries around the Mediterranean. Corrupt rule of the Roman oligarchy is followed by civil wars, and establishment of the empire.	91. Social war in Italy. 88. War with Pontus.			86. Takes Bithynia.			
	82. Sylla defeats Marius, and is created perpetual dictator. Plunder of the temple of Delphi.				82. Revolt in Upper Egypt. Thebes destroyed. 81. Alexander II., King of Egypt.		Libraries of Athens sent to Rome by Sylla.
	75. Bithynia a Roman province.					79. Posidonius calculates the height of the atmosphere. 74. The Romans possess gold mines in Asia Minor, Macedonia, Sardinia and Gaul; and silver mines in Spain.	
	65. Syria becomes a Roman province.			66. Defeated by Pompey, Syria passes under Rome. 63. Judea a Roman province.	65. Ptolemy Auletes, King.		Cæsar, Julius, *Commentaries*.
	63. Catiline's conspiracy detected and suppressed by Cicero. 60. First triumvirate—Pompey, Crassus, and Cæsar.						

THE GREEK-ROMAN PERIOD—Continued

Characteristics of the Centuries	The Roman Empire	Egypt, Carthage	Arts, Sciences, Etc.	Literature
B. C. 100—1 A. D. Continued			62. Magnificent houses for Roman nobles erected. Also marble theater of Scaurus to hold 30,000 spectators.	Cicero, *Orations, Essays, Letters.*
	55. Cæsar passes the Rhine, defeats the Germans and Gauls, and invades Britain. 53. Crassus defeated and killed in Parthia. 51. Cæsar completes conquest of Gaul, which becomes a Roman province.	55. Auletes restored.	55. Iron chain cables used by the Venetians.	
	49. Civil war between Cæsar and Pompey. Pompey defeated; Cæsar, Dictator. 48. Battle of Pharsalia—Pompey defeated by Cæsar. Death of Pompey in Egypt. 47. Cæsar takes Alexandria, and conquers Egypt.	46. The African war.	50. A water mill erected on the Tiber at Rome.	Sallust, *Histories: Catiline's Conspiracy, War with Jugurtha, Memoirs.*
	44. Cæsar assassinated in Roman Senate. Antony master of Rome.	45. Cæsar rebuilds Carthage.	45. Cæsar reforms the calendar by introducing the solar for the lunar year.	The Alexandrian library burnt—400,000 volumes.
	43. Second triumvirate—Octavius Cæsar, Marc Antony, and Lepidus. 42. Battle of Philippi; defeat and death of Brutus and Cassius.	43. Cleopatra poisons her brother, and rules alone. 36. Cleopatra obtains from Antony a grant of Phenicia, Cyrene, and Cyprus.		Vergil, *Georgics, Æneid.*
	32-31. War between Antony and Octavius. By the battle of Actium (31), Octavius acquires the empire.	31. Defeat at Actium		
	30. Republic of Rome becomes a monarchy. Population of Rome 4,100,000 citizens.	30. Suicide of Antony and Cleopatra; Egypt passes to Rome.	30. Direct trade of Rome with India. Silk and linen factories in the empire.	Horace, *Odes, Satires, Letters.*
	27. Titles of Augustus and Emperor conferred on Octavius for ten years.		27. Treasures of Egyptian art brought to Rome. The Pantheon built.	
	23. Agrippa subdues all Spain.			
	21. Athens finally subjected to Rome.		22. Pantomimic dances introduced on the Roman stage.	Golden age of Roman literature begins.
	19. Death of Vergil. 18. Parthians defeated. 15. Cantabria, Austria, and other territory conquered by Drusus, is added to the empire. 13. Augustus assumes the title of Pontifex Maximus.		19. Aqueducts constructed by Agrippa.	
	11. Germany subdued by Germanicus. 10. Egyptian religion displaces national religion.		12. Roman legions distributed over the provinces in fixed camps, which soon grew into cities—among them were Bonn and Mayence.	Livy, *History of Rome.*
	5. Varrus appointed Governor of Syria, and Cyrenius Governor of Judea. 4. Cymbeline, King of Britain. Advent of Christ, four years before the so-called Christian era. 3. Death of Herod. 2. Cæsar confirms the will of Herod.		8. Calendar corrected by Augustus.	

PERIOD OF THE ROMAN EMPIRE, A. D. 1-476

Characteristics of the Centuries	Development of Christianity	The Roman Empire	Arts, Sciences, Etc.	Literature
1—100 A. D. Christianity founded amid persecutions.		1. Caius Cæsar makes peace with the Parthians. Tiberius returns to Rome. 6. Varrus, encamped on the Weser, governs lower Germany like a Roman province.		Ovid *Metamorphoses, Heroides,* etc.
	8. Jesus reasons with the doctors.	14. Augustus dies at Nola; is succeeded by Tiberius as Emperor.	9. Celsus advances the science of medicine.	Appion of Alexandria writes on grammar.
	25. Pontius Pilate, Governor of Judea. 26. John the Baptist begins his ministry. 27. Jesus baptized by John. 29. Twelve Apostles sent abroad.	19. The Jews are banished from Rome. 26. Thrace becomes a Roman province.	26. The Druids in Germany.	
	30. Crucifixion of the Saviour, Friday, April 3, at 3 p. m. 34. St. Paul converted to Christianity.	30. Agrippina banished. 37. Tiberius succeeded by Caligula, noted for his profligacy.		
	40. Disciples first called Christians at Antioch. 41. Herod's persecutions.	48. Census of the city, 6,900,000.		
	50. Paul preaches at Athens.	54. Nero, Emperor; a profligate and tyrant.	50. Columella, born in Spain, writes on husbandry.	Plutarch *Lives, Morals, Table Talk.*
	59. Paul appeals to Cæsar. 60. Paul imprisoned in Rome.	61. Revolt of the Britons under Queen Boadicea.		

PERIOD OF THE ROMAN EMPIRE—Continued

Characteristics of the Centuries	Development of Christianity	The Roman Empire	Arts, Sciences, Etc.	Literature
1—100 A. D. Continued	64. First persecution of Christians by Nero. Paul visits Jerusalem. 66. Jews at war with Romans; Paul beheaded. 70. Destruction of Jerusalem, by Titus.	64. Nero sets fire to Rome; accuses Christians. 77. A great plague at Rome, 10,000 dying in one day. 79. Pompeii and Herculaneum destroyed by Vesuvius.	64. Nero's golden palace built—of great extent. 78. The Capitol at Rome rebuilt. Circumnavigation of Scotland.	Epictetus *Discourses.* Tacitus *Germania, History, Annals,* etc.
	95. Second persecution of the Christians by Domitian.	80. Agricola governs Britain, reduces Wales and enters Caledonia.	80. Paintings executed for the baths of Titus; the group of the Laocoon.	
100—200 A. D. Zenith of Roman empire. The good emperors. Persecutions of the Christians continued.	107. Third persecution by Trajan. 118. Fourth persecution by Adrian.	98. Trajan, Emperor; Roman empire at its greatest extent. 100. The Huns migrate westward. 117. Hadrian, Emperor; makes a journey through the provinces; visits Britain, and builds there a wall from the Tyne to Solway Firth; builds a wall from the Rhine to the Danube.	98. The Ulpian library. Jurisprudence flourishes. Forum built. Pillar of Trajan, and Baths. Bridge built over the Danube. 120. Great buildings of Palmyra. The Roman mosaics.	Quintilian *Rhetoric and Criticism.* Galen, a celebrated physician and prolific writer.
	134. Heresy of Marcion. 150. Canon of Scriptures fixed about this time.	138. Antoninus, Emperor; 145-152 defeats the Moors, Germans, and Dacians; stops the persecution of the Christians. 161. Marcus Aurelius, Emperor; 169, war with Marcomanni. 189. The Capitol at Rome destroyed by lightning. The Saracens defeat the Romans. 193. Septimus Severus, Emperor. A vigorous ruler. 194. Besieges Byzantium.	132. Ptolemy, celebrated Egyptian astronomer and geographer. 180. Equestrian statue of Marcus Aurelius.	Kalidasa (In.) *Dramas.*
200—300 A. D. Emperors chosen by the army. Frontier tribes troublesome. Persecutions continue.	202. Fifth persecution under Severus. 235. Sixth persecution under Maximinus. 250. Seventh persecution of the Christians. 262. Paul, bishop of Samosatia, denies the divinity of Jesus Christ. 272. Persecution of Christians under Aurelian. 283. The Jewish Talmud composed. Religious ceremonies multiplied. Pagan rites imitated by the Christians.	202. Persecutes the Christians; builds the wall of Severus in Britain. 211. Dies at York, in Britain. 223. Artaxerxes begins the new kingdom of Persia. 232. Persian war. 241. The Franks first mentioned in history. 251. Confederacy of the Franks established between the Rhine and Elbe. The Persians victorious in Asia Minor. 256–69. Goths conduct expeditions into Asia Minor and Greece. 261. Sapor, the Persian, takes Antioch, Tarsus, and Cæsarea. 264. Alliance with Odenatus, King of Palmyra, who is succeeded by his wife Zenobia, who reigns with the titles of "Augusta" and "Queen of the East." 268. Claudius II. defeats an army of 320,000 Goths. 270. Aurelian, a great warrior, becomes Emperor; 271, defeats the Goths and Alemanni; 273, reduces Palmyra, and takes Queen Zenobia prisoner; 274, Franks, Spain, and Britain reduced to obedience; 275, Aurelian killed near Byzantium. 277. Probus, Emperor; 280, defeats the Persians. 284. Diocletian, Emperor.	215. Caracalla grants right of Roman citizenship to all the provinces. 235. Alexandrian School of Philosophy founded. 274. Rome surrounded with a wall. 284. Diocletian's Oriental form of government. Diocletian's Baths. 290. The Gregorian Code.	Tertullian *Apology, Tracts.* Origen, theologian.
300—400 A. D. Constantine moves the capital of the empire to Constantinople, and professes Christianity. Rise of Christian Monasticism. Great church disputes and growing corruptions. Increasing frontier troubles.	296. Monks in Spain and Egypt. 303. Persecution under Diocletian. 306. Persecution of Christians stopped by Constantius. 325. Council of Nice. 337. Eleventh persecution. 373. Bible translated into the Gothic language. Death of Athanasius. 379. Prerogatives of the Roman See much enlarged. 381. Second General Council of Constantinople. 384. Symmachus pleads in the Roman Senate for Paganism against St. Ambrose.	291. The Franks master Batavia and Flanders. 296. Diocletian sends ambassadors to China. 304. Diocletian and Maximian resign the empire to Constantius and Galerius. 306. Constantine the Great, first Christian Emperor, defeats the Franks. 331. Constantine orders that all the heathen temples be destroyed. 337. Death of Constantine, and the accession of his three sons to the empire. 364. Death of Jovian, and the accession of Valentinian and Valens, under whom the empire is divided. **Western Empire**: 364. Valentinian, Emperor. 368. The Saxons invade Britain, but are defeated by Theodosius. 375. Valentinian gains victory over the Germans; succeeds to the Eastern Empire on the death of Valens. 379. The Lombards first leave Scandinavia, and defeat the Vandals. **Eastern Empire**: 364. Valens, Emperor. 376. Hungary (ancient Pannonia) invaded by the Huns, from whom it is named. 379. Theodosius the Great becomes a zealous supporter of Christianity. 388. Theodosius defeats Maximus, Tyrant of the Western empire.	323. Church of St. Sophia erected at Constantinople. 330. Constantinople seat of art and literature. 366. Forts built on the Rhine.	Gothic Bible of Ulfilas. Latin Bible of Jerome.

THE GREEK-ROMAN PERIOD—Continued

Characteristics of the Centuries	Development of Christianity	Western Empire	Eastern Empire	Arts, Sciences, Etc.	Literature
400—500 A. D. Continued	392. St. Chrysostom, Patriarch of Constantinople.	392. Theodosius becomes sole Emperor of the East and West. Complete downfall of Paganism.		392. Impulse given to the development of mathematics at Alexandria.	Chrysostom, *Homilies, Commentaries, Epistles.*
		394. Final division of empire between the sons of Theodosius.			
		401. Europe overrun by the Visigoths.			
		406. Vandals allowed to settle in Spain and Gaul.	408. Theodosius II., a child, Emperor.		
		410. The Goths under Alaric sack and burn Rome.			
		412. Rise of the Vandal power in Spain.			
		413. Burgundian kingdom begun in Alsace.	414. Regency of the emperor's sister, Pulcheria.		
	416. The Pelagian heresy condemned.				
		420. The Franks form a kingdom, under Pharamond, on the lower Rhine.	420. Persian war.		
		424. Valentinian III., Emperor.			
		426. Britain evacuated by the Romans.		425. Theodosius establishes public schools and attempts the restoration of learning.	
	431. Third General Council at Ephesus.	428. Romans defeated by the Franks and Goths. Franks, under Clodion, extend their conquests.	431. Armenia divided by the Persians and Romans.		
	432. St. Patrick preaches the gospel in Ireland.	433. Attila forms an immense empire from China to the Atlantic.	433. A great part of Constantinople destroyed by fire.		
	435. Nestorianism prevails in the East.		437. Pannonia, Dalmatia, and Noricum gained from the Western empire.	435. Theodosian Code published.	Epic of Musæus, *Hero and Leander.*
		439. The Vandals, under Genseric, form Kingdom of Africa, take Carthage and plunder Italy.			
		441. Roman territories invaded by the Huns, Persians, and Saxons.			
	443. The Manichæan books burned in Rome.				
		445. Famous embassy from Britain soliciting aid against the Picts.			
	447. Eutyches asserts the existence of only one nature in Jesus Christ.	448. Merovaeus I., first King of the Merovingians.			
	451. Fourth General Council at Chalcedon.	451. Arrival of Saxons in Britain under Hengist and Horsa.	450. Marcian, Emperor, refuses to pay tribute to the Huns.		
		452. City of Venice founded.			
		458. Franks, under Childeric I., conquer as far as the Loire and take Paris.	457. War with the Goths.		
			461. Peace with the Goths.		
	465-476. Oligarchy of the bishops of Rome, Constantinople, Alexandria, Antioch, and Jerusalem. The church now begins to assume a political aspect.	468. The Visigoths under Eric establish their kingdom in Spain.	474. Zeno, Emperor; a turbulent reign marked by debauchery and conspiracies.	468. The principle of law established that the accused shall be tried by his peers, or equals.	
			475. Theodoric becomes chief of the Ostrogoths and invades the empire.		
		476. Odoacer, King of the Herulii, takes Rome, and the Western empire ends 1228 years after the founding of the city. Commencement of the Kingdom of Italy under Odoacer.		476. Odoacer's sack of Rome changed the course of events in Europe. The form of the old Roman government remained, but Italy, ravaged by a succession of wars, plagues, famines, and every form of public tyranny, was almost a desert.	

FROM THE FALL OF ROME TO THE AGE OF MOHAMMED, A. D. 476-622

Characteristics of the Centuries	The Eastern Empire	Great Britain and Ireland	Italy and the Church	France	Arts, Sciences, Etc.	Literature
400—500 A. D. Continued	480. An earthquake destroys greater part of Constantinople.		484. Christians persecuted by the Vandals.	481. Clovis I., founder of the French monarchy.		
		487. The Saxons defeated by Prince Arthur.		485. Battle of Soissons gained by Clovis.	486. Rise of the feudal system in France under Clovis.	
		490. Sussex becomes a kingdom.				
	491. The Green and Blue factions.		493. Italy conquered by Theodoric. Odoacer put to death.	491. Clovis subdues Thuringia.	493. Theodoric introduces Greek architecture into Italy.	Boethius' *Consolation of Philosophy.*
500—600 A. D. Great disorders in the West. Beginnings of Feudalism; power of the clergy increases. In the East, the great reign of Justinian.			494. The Roman Pontiff asserts his supremacy.			
			496. Christianity introduced into France.			
	502. Invasions by the Persians.			510. Clovis makes Paris his capital.		
	511. Great insurrection in Constantinople.				511. The Salic law in France.	

FROM THE FALL OF ROME TO THE AGE OF MOHAMMED, A. D. 476-622—Continued

Characteristics of the Centuries	The Eastern Empire	Great Britain and Ireland	Italy and the Church	France	Arts, Sciences, Etc.	Literature
500—600 A. D. Continued	514. Constantinople besieged by Vitalianus, whose fleet is consumed by the burning glass of Proclus. 518. Justinian I. begins a brilliant reign over the Eastern or Byzantine empire. 527. Celebrated Justinian code of laws.	519. Prince Arthur defeated by Cedric, who begins the third Saxon Kingdom of Wessex.			514. Use of the burning glass in warfare. 516. The Christian era proposed and introduced by Dionysius, a monk.	
	529. Belisarius, the famous general, defeats the Persians. 534. Defeats the Vandals in Africa. 535. Subdues Italy. 536. Takes Naples. 537. Takes Rome.	530. Kingdom of Essex.	529. Order of the Benedictine Monks instituted at Monte Cassino, near Naples. 537. Italy conquered by Belisarius, for Justinian.	532. Burgundy conquered by Childebert. 536. Ostrogoths surrender their possessions in Gaul to the French king.	529. The schools of Athens suppressed.	Writings of Gregory the Great.
	540. North Africa, Corsica, and Sardinia annexed to the Eastern empire. 548. The Turkish monarchy founded in Asia. 554. Italy governed by Greek exarchs.	542. Prince Arthur murdered in Cornwall.	539. War, famine, and pestilence. Milan ravaged by the Goths.	557. Church of St. Germain de Pres built at Paris.	551. Manufacture of silk introduced from China into Europe by monks.	
	558. A plague extends over Europe and Asia and lasts about 50 years.	559. Saxon heptarchy begins.		558. Clotaire I., King.	559. The Saxon laws promulgated. The king's authority limited by the Witten agemot. Three orders: the noble, the free, and the servile.	*Beowulf*, epic poem.
	569. The Turks first mentioned in history. They send an embassy to Justin II., and form an alliance.	575. East Anglia formed into a kingdom, whence the origin of the name England.	568. Italy conquered by the Lombards. 575. First monastery built in Bavaria.		568. The feudal system established in Italy by the Lombards. Written laws compiled by the Visigoths in Spain. The aristocracy acquire great power in France. Rites and superstitions increase all over Europe.	
600—700 A. D. Rise and wonderful spread of Mohammedanism from Arabia to Siude on the east, and Carthage on the west. Christianizing of Germany.	600. Eastern empire spread over Hungary, Poland, and Prussia, under Tiberius II. 602. Invasion of the Persians.	604. St. Paul's church founded by Ethelbert of Kent.	598. St. Augustine, first archbishop of Canterbury, introduces Christianity into Britain.			
	610. Heraclius takes Constantinople, kills Phocas, the emperor, and makes himself ruler. 612. Mohammed publishes the Koran. Syria ravaged by the Arabs. 614. Jerusalem taken by the Persians.	607. Supremacy of the pope acknowledged. 617. St. Peter's (now Westminster Abbey) founded by Sabert, King of Kent.	607. The Pantheon of Rome dedicated to Christianity.		617. Ethelbert publishes the first code of laws in England.	The *Koran*.

THE AGE OF MOHAMMED TO THE TREATY OF VERDUN, A. D. 622-843

Characteristics of the Centuries	The Eastern Empire	Great Britain and Ireland	Italy and the Church	France	Arts, Sciences, Etc.	Literature
600—700 A. D. Continued	622. The Hegira, or Mohammed's flight from Mecca to Medina. 632. Death of Mohammed. 633. Omar, Caliph, takes Jerusalem, which is held by the Saracens 463 years. 673. Siege of Constantinople by the Saracens, whose fleet is destroyed by the Greek fire of Callinicus. 680. Kingdom of Bulgaria founded.	633. Bretwold V. embraces Christianity. 690. The name England first used.	625-640. Churches of Jerusalem, Antioch and Alexandria lost to the Christian world by the sweep of Mohammedanism. 680. The Sixth General Council called at Constantinople.	628. Dagobert I. builds the Church of St. Denis, the sepulture of the French kings. 638. Kingdom divided by Clovis II. and Sigebert, the latter King of Austrasia. 690. Pepin d'Heristal, King.	632. Islamism and the power of the caliphs established in the East. In the caliphs were united the highest spiritual and regal authority. 674. Stone buildings and glass come into use in England. The Anglo-Saxons advance in civilization and power by the introduction of Christianity.	Cædmon's *Paraphrase of Scripture*.

THE AGE OF MOHAMMED TO THE TREATY OF VERDUN—Continued

Characteristics of the Centuries	The Eastern Empire	Great Britain and Ireland	Italy and the Church	France	Arts, Sciences, Etc.	Literature
700-800 A. D. Christianizing of Germany continues. Hostile caliphates of Bagdad and Cordova. Mohammedan advance in the West checked by Charlemagne, who nominally restores the Western Roman empire. Norse ravages begin.	698. Carthage destroyed by the Saracens, and the north coast of Africa subjugated. 709. All Africa subdued by the Saracens. 716. Leo III., Emperor. The Saracens invest Constantinople, by land and sea. City saved by Greek fire. 746. Saracens defeated by Constantine V. 762. Caliph Almanzor builds Bagdad and makes it his capital. 766. Asia Minor ravaged by the Turks. 785. Empire invaded by Haroun-al-Raschid, caliph of Bagdad.	700. Anglo-Saxon octarchy. 705. Alfred the Wise in Northumbria. 727. Ina, King of Wessex, begins collection of Peter's pence to support a college at Rome. 735. Death of the Venerable Bede. 787. First recorded invasion of the Danes, the sea kings and vikings.	698. Picts adopt Christianity. 704. The first province given to the pope, John VI. 726. The Emperor Leo forbids image worship. 752. The pope dethrones Childeric, King of France, by a papal decree. 755. Beginning of the pope's temporal power. 787. Seventh General Council of Nice.	700. Aquitaine, Burgundy, and Provence become separate dukedoms. 714. Charles Martel, duke of Austrasia. 725. Charles Martel subdues Bavaria. 732. Defeats the Saracens at Tours. 752. End of Merovingian line of French kings. Pepin the Short, first of the Carlovingian line. 764. Extirpates the Huns. 791-6. Establishes the margravate of Austria.	698. Christianity greatly extended among the German nations in the north of Europe, but almost exterminated in Africa by the progress of Mohammedanism. 716. The art of making paper introduced by the Arabs. 740. Saracens encourage learning. Ignorance, profligacy, and misery characterized the age preceding Charlemagne. 785. Golden period of learning in Arabia under the Caliph Haroun-al-Raschid. 788. Pleadings in courts of justice first practiced. 793. Foundation of schools in monasteries and cathedrals by Charlemagne.	Golden age of Saracen literature begins. *Romance of Antar.* Alcuin's letters and biographies.
800-900 A. D. Norse ravages continue. Private wars. Charlemagne's empire falls to pieces.	803. The Saracens ravage Asia Minor. 822. Constantinople besieged by the Saracens. The Bulgarians raise the siege. 829. Theophilus, Emperor.	813. Egbert, King of Wessex, defeats the Britons. 827. The seven kingdoms of heptarchy united by Egbert under the name of England, or the land of the Angles. Invasion of the Danes. 838. Ethelwolf, King. Kenneth, King of the Scots, defeats and extirpates the Picts, and becomes sole monarch of Scotland.	800. The pope separates from the Eastern empire and becomes supreme bishop of the Western. Charlemagne reforms the church. Many bishoprics founded. 817. College of Cardinals founded. 824. Christianity carried to Denmark and Sweden.	800. Charlemagne founds the new Western empire and is crowned at Rome. 802. Receives an embassy from Haroun-al-Raschid. 806. Charlemagne divides the empire among his sons, only one of whom survived him—Louis I. 817. Louis I. divides the empire. 841. Another division of the empire. Charles I., King of France; Louis I., King of Germany; Lothaire, King of Italy.	800. Agriculture and horticulture encouraged by Charlemagne; both flourish in Spain under the caliphs. 802. Arabian horses introduced into Spain. 813. Transient revival of learning under Charlemagne. The reign of Caliph Mamun the golden epoch of Arabian literature. 828. St. Mark's church at Venice built. 840. Feudal system in its power.	Beginning of the Icelandic skalds. Arabian histories of Mecca and Medina.

FROM THE TREATY OF VERDUN TO THE DARK AGES, 843-936 A. D.

Characteristics of the Centuries	Eastern Empire	The British Isles	Italy and the Church	France and Germany	Spain, Russia and Lesser Countries	Arts, Sciences, Etc.	Literature
800-900 A. D. Continued	844. Decline of the caliphate begins. Frequent wars between the Greeks and the Saracens.	849. Alfred the Great born.	844. Ignatius, patriarch of Constantinople. Persecution of the Christians in Spain. 846. The Saracens destroy the Venetian fleet and besiege Rome.	841. Louis I., King of Germany. 843. Treaty of Verdun, Charles I. (the Bald), King of France.	843. Ramiro I. elected king of Oviedo. 846. The Saracens destroy the Venetian fleet and besiege Rome.	841. Hereditary nobility and the clergy dominant in matters of state. 850. Roman and common law introduced.	Orfrid's *Gospel Book.*

FROM THE TREATY OF VERDUN TO THE DARK AGES—Continued

Characteristics of the Centuries	Eastern Empire	The British Isles	Italy and the Church	France and Germany	Spain, Russia and Lesser Countries	Arts, Sciences, Etc.	Literature
			856. Louis II. establishes his court at Pavia, and rules Italy. 860. Schism of the Greeks begins. 864. Bible translated into Slavonian.	858. Invasion of France by Louis the German who is defeated.	857. Garcia Ximines founds the kingdom of Navarre. 860. Gorm unites Jutland and the Danish isles. 862. Ruric the Norman, grand duke of Novgorod.		
	867. Basil inaugurates the Macedonian dynasty.	867. The Danes conquer Northumberland. 872. Alfred the Great defeats the Danes.	867. Eighth Council at Constantinople.	868. Lorraine annexed to France.	873. Sancho Inigo, count of Navarre. 875. Harold, first king of Norway.	872. Clocks exported from Venice.	*Translations* of Alfred the Great.
900-1000 A. D. Norse ravages and conquests continue; also private wars. The people in terrible suffering.	886. Leo VI., Emperor.			879. Louis III. and Carloman reign jointly. 885. Paris besieged by the Normans. 887. Arnold, Emperor.			
	890. Southern Italy subject to the Greek empire.	891. Renewed invasion of the Danes.		890. Arnold takes Rome. 898. Charles III., King. 899. Invasion of the Hungarians.	889. Arpad lays the foundation of Hungary.	890. Oxford University founded by Alfred the Great. Trial by jury; fairs and markets in England. 900. England divided into counties, hundreds, and tithings.	
	904. Russian expedition against Constantinople.	901. Edward the Elder the first to take the title of "Rex Anglorum."	912. The Normans in France embrace Christianity.	912. Conrad I., Emperor.	901. Republics of Venice and Genoa founded. 914. Beginning of the heroic age in Spain.	915. University of Cambridge founded.	The *Elder Edda.*

PERIOD OF THE DARK AGES, 936-1096 A. D.

Characteristics of the Centuries	Eastern Empire	The British Isles	Italy and the Church	France and Germany	Spain, Russia and Lesser Countries	Arts, Sciences, Etc.	Literature
900-1000 A. D. Continued	937. Romanus gains a naval victory over the Russians.			936. Louis IV., King. Otho the Great, Emperor.		939. Cordova, in Spain, becomes famous as a center of science, learning, industry, and commerce.	
					940. Ramiro, King of Leon, defeats the Moors at Simancus.	940. Mints established in England. 941. The figures of arithmetic brought into Europe by the Saracens. Linens and woolens manufactured in Flanders.	
	945. The Empress Helen usurps the throne.	952. Malcolm I., King of Scotland. 955. Dunstan, abbot of Glastonbury, rises to great power.	955. Baptism of Olga, and conversion of Russia to Christianity.	950. Bohemia annexed. 954. Lothaire I. confers the dukedoms of Burgundy and Aquitaine on Hugh the Great.	945. Swatoslav, King of Russia. 955. Sancho I., King of Leon.		
	959. Emperor Romanus II.		959. St. Dunstan archbishop of Canterbury, attempts to reform the church.	960. Hugh Capet, duke of France. 964. Italy united to the empire of Germany. Tuscany becomes a dukedom.	973. St. Stephen, first hereditary king of Hungary. Gives it written laws.		
					981. Vladimir the Great, the first Christian ruler of Russia.	982. Dublin a trade center.	
		985. Danish invasion under Sweyn.		986. Louis V., last of the Carlovingians. 988. Hugh Capet, King, and founder of the Capetian line of French kings.	985. Sweyn I. of Denmark invades England.		Firdusi's *Book of Kings.*
1000-1100 A. D. Increasing and beneficent power of the church exerted in the direction of order. Normans in Italy and Sicily. The Norman conquest of England; which as regards good government far surpasses all other countries. Quarrels between popes and emperors begin.			989. Greek Christianity propagated in Russia by Vladimir. 999. Hungary becomes a fief of the church.		1015. Russia divided among the 12 sons of Vladimir.	997. Venice and Genoa rise to great importance in commerce.	
	1018. Bulgaria again reduced to a Grecian province.	1016. Edmund II. fights six battles with Canute, King of the Danes, with whom he divides the kingdom. 1031. Canute subdues Scotland.	1024. John XIX., Pope.	1024. Conrad II., first of the Franconian line. 1031. Henry I., King.	1016. Canute II., King of Denmark. 1019. Norway conquered by Canute. Danish ascendancy.	1024. Musical scale of six notes invented by Guido Aretius.	Avicenna's writings on philosophy and science.

PERIOD OF THE DARK

Characteristics of the Centuries	Italy and the Church	Eastern Empire	The British Isles	France
1000—1100 A. D. Continued				
		1042. First invasion of the Seljuk Turks.	1042. The Saxon line restored under Edward the Confessor.	
		1043. The Russians invade Thrace with 100,000 men and are repulsed by the Greeks.		
	1048. Leo IX. the first Pope to keep an army.		1051. William, Duke of Normandy, visits England.	1046. Dispute between William the Conqueror and William of Arques for the duchy of Normandy.
	1054. Excommunication of the Patriarch of Constantinople and the Greeks.	1054. Theodora, last of the Macedonian dynasty.		
	1059. Quarrel between the popes and the German emperors.			
	1066. Pope Alexander II. deposes Harold, and gives England to William the Conqueror. The papacy at the height of its power.	1067. Emperor Romanus III. defeated and taken prisoner by the Turks.	1066. Harold II., King, killed at the battle of Hastings William the Conqueror, King. End of the Anglo-Saxon line.	1066. William, Duke of Normandy, claims the crown of England and wars on Harold to obtain it.
	1070. Lanfranc, Archbishop of Canterbury.		1070. Feudal system introduced.	1070. Rise of the troubadours in Provence.
	1073. Quarrel of Pope Gregory VII. (Hildebrand) with the Emperor Henry IV.	1074. Syria and Palestine subdued by Melek Shah.		
	1075. The Pope sends legates to the various courts of Europe.			
	1076. Submission of Henry IV. to the Pope.		1076. Rebellion in Normandy.	
				1079. Birth of Abelard.
	1084. Triumph of Henry IV. over Gregory. The order of the Carthusians instituted by Bruno.	1081. Alexius I. (Comnenus), Emperor. Robert Guiscard invades the empire and defeats Alexius.		
			1087. William invades France and is killed at Nantes.	1087. War with England. Robert, Duke of Normandy, opposes William Rufus.
			1093. Malcolm III., of Scotland, invades England, and is slain near Alnwick castle.	
	1095. Peter the Hermit preaches against the Turks.			

PERIOD OF THE CRUSADES,

Characteristics of the Centuries	Italy and the Church	Eastern Empire	The British Isles	France
	1096. The First Crusade.			1096. Many French noblemen take part in the First Crusade.
1100—1200 A. D.	1100. Study of theology receives new impulse.	1099. Invasion by the Crusaders.		
Quarrels between popes and emperors continue; zenith of papal power; Frederick Barbarossa. Criticism revived.		1104. Battle of Acre.	1100. Henry I., King of England, unites the Normans and Saxons.	
Private wars lessen; advance in power of kings and of towns at expense of the feudal baronage.		1109. Tripolis taken by Crusaders.	1107. Henry quarrels with Anselm.	1108. Abbe Suger, minister to Louis VII. of France.
The Crusaders.		1118. John I. reforms the manners of his people. Tyre taken by Crusaders.		
Improved judicial arrangements in England.	1123. First Lateran, or Ninth General Council.		1124. David I. promotes civilization in Scotland.	1120. Rivalry between England and France begins.
	1127. Pope Honorius II. makes war against Roger, King of Sicily.			
	1139. Second Lateran, or Tenth General Council.			
	1147. The Second Crusade.	1143. Manuel Comnenus, Emperor.		1147. Louis VII. joins the Second Crusade.
	1154. Pope Adrian IV., an Englishman.	1156. Manuel forms the design of conquering Italy and the West but fails.	1154. Henry II., King of England.	
			1158-1164. Ascendancy of Thomas à Becket, Archbishop of Canterbury.	1159. War with the English.
	1160. Albigenses begin to appear.			
	1167. Rome taken by Frederick Barbarossa.			1170. Rise of the Waldenses.
			1172. Henry conquers Ireland.	

AGES, 936-1096—Continued

Germany	Spain	Russia	Lesser Countries	Arts, Sciences, Etc.	Literature
1039. Henry III. defeats the Bohemians and Hungarians.	1035. Ramiro I., King of Aragon.	1036. Russia reunited by Jaroslav.			
1053. Henry causes his son, Henry, to be proclaimed King of the Romans. This title was applied for several centuries to the emperor's eldest son.		1054. Russia divided a second time Civil wars and great distress.	1055. The Turks reduce Bagdad and overturn the empire of the caliphs.	1055. First age of scholastic philosophy.	Runic inscriptions.
			1059. Ingo I., first Christian King of Sweden.		
			1060. Robert Guiscard, Duke of Apulia.		
	1065. Alphonzo, King of Castile and Leon.		1065. Jerusalem taken by the Saracens.	1062. Surnames first used among the English nobility.	
			1067. Polish conquests in Russia.		
	1068. Flight of Alphonzo to Toledo.		1068. Olaf III., King of Norway.	1068. Shoeing horses introduced into England.	
1072. Henry IV. summoned before the Pope for selling the investiture of bishops; treats the mandate with contempt.			1070. Bergen, Norway, built.		
1073. Summoned again.				1073. Booksellers first heard of.	
1076. Henry sends an ambassador to depose the Pope, and is excommunicated. Undergoes penance and submission.	1076. Time of the Cid.				
1080. Henry degrades the Pope and triumphs.					
	1085. Toledo taken from the Moors by the Cid.		1084. Bohemia made a kingdom by Henry IV. of Germany.	1084. Rigid police system established in England.	
	1086. Battle of Zalacca.				*Song of Roland.*
1093. The Popes continue their struggle against the empire.	1094. Pedro I., King of Navarre and Aragon.		1090. Sicily taken from the Saracens by Roger the Norman.	1090. Fortresses at Newcastle and Carlisle built.	

A. D. 1096-1273

Germany	Spain	Russia	Lesser Countries	Arts, Sciences, Etc.	Literature
					William of Poitou, first troubadour of note.
	1104. Alphonzo I., King of Navarre and Aragon.		1105. War between Norway and the Wends.		
1109. Henry V. enters Italy, takes the Pope prisoner, and compels him to crown him.					
1114. Henry V. marries Matilda, of England.	1118. Alphonzo captures Saragossa.			1118. Knights Templar instituted.	
			1119. War between Pisa and Genoa.		Scholastic philosophy reaches a high point under Abelard. Aristotle's logic comes into repute.
1125. Lothaire II. opposed by Frederick, and Conrad, Duke of Suabia.		1128. Riga on the Baltic founded.			
	1139. Portugal becomes a kingdom under Henry of Besancon.			1140. Gratian collects the canon law.	
1141. Dissensions of the Guelphs and Ghibelines.		1147. Moscow founded.			*Nibelungenlied.*
1152. Frederick I., Emperor of Germany and Italy.			1150. Eric X., King of Sweden.	1150. Magnetic needle known in Italy.	
	1157. Castile and Leon divided.				
1158. The Emperor Frederick receives the title of King of Bohemia.			1158. Venice a great maritime power.	1158. Bank of Venice established. Colleges of theology, philosophy, and law at Paris.	
1167. Rome taken by Frederick.			1167. League of the Italian cities.	1168. Colleges of law, philosophy, and theology at Paris.	
			1171. Saladin, Sultan of Egypt, extends his dominions. Conquers Syria, Assyria and Arabia.		

PERIOD OF THE

Characteristics of the Centuries	Italy and the Church	Eastern Empire	The British Isles	France
				1183. The peace of Constance reëstablishes the independence of the Italian republics.
	1190. Third Crusade.	1190. Iconium taken by Frederick Barbarossa but afterward restored.	1189. Richard I. engages in the Third Crusade.	1190. Philip Augustus one of the leaders of the Third Crusade.
1200—1300 A. D.	1198. Power of the Pope supreme over temporal matters.		1193. John attempts to seize the crown in the absence of Richard.	
Rise of Universities, and of Mendicant Friars.	1202. The Fourth Crusade. Constantinople taken.	1204. The Crusaders plunder Constantinople.	1200. John, King of England.	1204. Normandy reunited to France.
Quarrels between popes and emperors still continue; Frederick II. of Germany.	1215. Fourth Lateran Council, against the Albigenses.		1215. Magna Charta signed at Runnymede.	
Last Crusades.	1217. Fifth Crusade.		1216. Henry III., King.	
English liberties recognized by the crown.				1223. Louis VIII. conducts crusade against the Albigenses.
Hanse League established.				1226. Louis IX., King.
Great conquests of Tartars in Asia; they overrun Russia and establish a dynasty at Moscow.	1243. Struggle of Pope Innocent IV. with the Emperor Frederick.		1246. Henry marries Eleanor of Provence.	1248. Louis IX. leads the Seventh Crusade.
			1258. Famous parliament at Oxford.	
		1260. Emperor Michael Palaeologus recovers Constantinople.		
	1265. Dominion of Italy passes to the Pope.		1265. First regular parliament. Civil war.	
		1268. The Mongols invade Asia Minor and take Antioch.		1267. Burgundy falls to the crown.
				1270. Louis IX. sets out on the last Crusade.

PERIOD OF THE RENAISSANCE,

Characteristics of the Centuries	Italy and the Church	Eastern Empire	The British Isles	France
	1274. Fourteenth General Council at Lyons.		1276. War between England and Wales.	1276. France at war with Castile.
		1281. Othman establishes an independent rule in the north of Asia Minor.	1283. England and Wales united. Robert Bruce and John Balliol contend for the crown of Scotland.	
	1296. Struggle of the church with France.		1296. Scotland submits to England.	
			1297. Scotland rebels. War between England and Scotland follows.	1297. Invasion of Flanders.
		1299. Othman invades Nicomedia, and establishes the Ottoman empire.	1300. Silverplate used in England.	
1300—1400 A. D.				
Growth of cities and trade—especially in Italy, where also literature and art, inspired by Dante and Giotto, make progress.				1302. First convocation of the states-general in France.
	1303. Papal power declines.	1303. Genoese control trade of Black Sea.		1304. War with Flanders.
Popes at Avignon; papacy now terribly corrupt.			1306. Robert Bruce proclaimed King of Scotland. War with England continued.	
	1309. Seat of the popes transferred to Avignon.			
Era of Wyclif: his teaching spreads in Bohemia.	1311. General Council at Vienna.			
Invention of gunpowder.				1316. Philip V. succeeds by virtue of the Salic law, now first established.
Mariner's compass comes into use in the West.				
		1320. Civil war in the eastern empire between the emperor and his son.		
		1326. Orkhan, Sultan of the Turks, makes Prusa his capital.		
			1327. Peace. Independence of Scotland.	1332. Revolt of the Flemings.
			1338. Struggle for the French crown begins; lasts 120 years.	1338. War with England.
	1339. Struggle in Rome between the Colonna and the Ursini.		1346. Battle of Cressy.	1346. Normandy overrun by Edward of England.
	1347. Democracy in Rome under Rienzi, last of the Tribunes.			

CRUSADES—Continued

Germany	Spain	Russia	Lesser Countries	Arts, Sciences, Etc.	Literature
1183. Italy independent by treaty of Constance.		1186. Incursion of Huns and Poles into Russia.	1186. Saladin directs all his efforts against the Crusaders.		
	1188. Alphonso IX., King of Leon.				
1190. Henry VI., Emperor and King of Italy.			1193. Battle of Ascalon. Saladin defeated. Death of Saladin.	1190. The Jews become the principal bankers of the world.	*Arabian Nights.*
				1200. University of Bologna has 10,000 students.	Prose *Edda.*
1212. Frederick II., Emperor.	1212. The Christians gain the Battle of Navas de Tolosa.	1213. Jurje II.			Period of the troubadours in France; the minstrels in England; minnesingers in Germany.
	1217. Ferdinand, King of Castile.		1216. Tartary overrun by Genghis Khan.		Poem of *The Cid.*
		1224. Mongolian invasion known as the "Golden Horde."	1222. Hungarian liberty assured by Charter of Andrew II.	1222. University of Padua founded.	
	1230. Castile and Leon united by Ferdinand III., who takes large territory from the Moors.	1236. Second Mongolian invasion. Moscow burned.	1236. Mongolian invasion of Europe under Batu Khan.		
1243. The Hanseatic League.		1238. Russian independence overthrown by the Tartars. Khan of Kiptchak, Grand Duke.			Sadi, the Persian poet.
				1247. First war fleet in Spain.	
1250. Conrad IV., Emperor.	1253. The Alhambra founded.				Roger Bacon writes on natural science.
			1259. Kubla Khan builds Pekin and makes it his capital.	1261. Parliament in England.	
	1266. Henry of Castile a Roman senator.				

—A. D. 1273-1492

Germany	Spain	Russia	Lesser Countries	Arts, Sciences, Etc.	Literature
1273. Rudolf, Emperor, founds House of Hapsburg.	1274. Crown of Navarre passes to France.			1273. First patent of nobility granted in France.	Literature and science flourish in Spain under Alphonso the Learned.
	1291. James II., King of Aragon.	1290. Khan of Kiptchak wields strong rule in Russia.	1290. Wenceslas, King of Bohemia, takes Cracow.	1285. Institution of the three great courts of law in England. Cimabue, the first of modern painters at Florence.	Master Eckart, mystic.
1298. Adolphus, Emperor, deposed, and Albert I. enthroned.	1300. Dissensions in the Moorish state.	1300. Moscow made the capital.	1299. Foundation of the Ottoman Empire.	1300. Rapid advances in civilization—revival of ancient learning—improvements in the arts and sciences—and general expansion of liberty. 1302. Mariners' compass invented at Naples. 1303. University Avignon.	*Romance of the Rose.*
1304. Rise of the Swiss towns. 1306. Rudolf of Austria, Emperor.				1305. University Orleans.	
1308. Henry of Luxemburg, Emperor. General insurrection in Switzerland.			1307. Swiss Republic founded.	1307. University Perugia. 1308. University Coimbra.	Tauler's *Sermons.*
1314. Louis of Bavaria and Frederick of Austria contend for the crown.	1312. Alphonso XI., King of Castile and Leon.			1311. Governmental reforms extorted from Edward II. in England.	
		1318. Finland invaded by Russians.	1319. The Oligarchy of Venice established.		
1322. Frederick of Austria defeated.					
	1327. Arrival of 200,000 Moors to assist Granada.		1326. Tamerlane born at Kesh, Tartary.	1326. Clocks constructed on mathematical principles.	Wyclif's *Translation of the Bible.*
	1340. Moors defeated at Tarifa.			1340. Gunpowder used at battle of Cressy. 1347. Manufactures and commerce improve in England.	
			1353. Establishment of the Ottomans in Europe.		

PERIOD OF

Characteristics of the Centuries	Italy and the Church	Eastern Empire	The British Isles	France
	1354. Rienzi killed; papal dominion restored.	1355. John Palæologus, emperor.	1356. Edward, the Black Prince, wins the battle of Poitiers.	1356. King John defeated and taken prisoner at Poitiers. Charles the Dauphin, Regent.
	1378. Schism of the west; Pope Urban VI. acknowledged in England; Clement VII. in France, Spain and Scotland.	1373. Treaty with Murad, the Ottoman emperor.	1376. Death of the Black Prince.	1380. Charles VI., King. Defeat of the Flemings at Rosbecq.
			1384. The Scots, assisted by France, invade England.	1386. Fruitless attempt to invade England.
1400—1500 A. D.		1389. Bajazet, Sultan of the Turks.	1399. Henry IV., King. House of Lancaster begins.	
Failure of the Council of Constance to reform the Church.		1402. Bajazet defeated and made prisoner by Tamerlane, at the battle of Angora.		
Turks take Constantinople.		1403. Solyman I., Sultan of the Turks.	1406. James I., King of Scotland.	
Revival of learning and advance of art in the west—especially in Italy.	1409. The Council of Pisa.			1410. Civil war between Orleans and Burgundy.
Consolidation of France and Spain.	1414. Council of Constance.		1414. Henry V. claims the French crown.	
End of Tartar rule in Russia.	1416. Huss and Jerome burned for heresy.		1415. Gains the battle of Agincourt.	1415. Defeat by the English at Agincourt.
Invention of printing.		1425. Emperor John VII. visits Italy to obtain help against the Turks.	1422. Death of Henry V. Ascension of Henry VI. War with France.	1422. Henry VI. proclaimed at Paris King of France and England.
Gunpowder begins to be of great importance.	1429. Schism of the west ended.			1427. Orleans besieged by the English. 1429. Saved by Joan of Arc. Charles VII. crowned at Rheims.
Formation of modern "middle classes."				1431. Joan of Arc burned.
Maritime discoveries: The cape route to India; The "New World."		1444. Vladislas, King of Poland, defeated and killed by the Turks.	1444. Truce with France. Marriage of Henry to Margaret of Anjou.	
End of the Middle Ages.	1448. Concordat of Aschaffenburg, by which the liberties of the German church are compromised.	1448. Constantine XII., last of the Greek emperors.	1450. Insurrection of Jack Cade. Wars of the Roses. Richard, Duke of York, claims the throne.	1453. End of the French and English wars.
		1453. Siege and capture of Constantinople by the Turks, ending the Eastern Empire.		
	1454. Struggle between Cosmo de'Medici and the aristocracy.	**Ottoman Empire**	1455. Wars of the Roses begin.	
	1458. The French rule in Genoa.	1458. Greece subjected to the Turks.	1460. James III., King of Scotland. 1461. Edward IV., King. House of York.	1461. Louis XI., King.
	1463. War of Venice with the Turks.	1464. War with Hungary.		
	1469. Lorenzo de' Medici succeeds Piero at Florence. 1471. Increase of the power of the Medici. Rise of learning. Sixtus IV., Pope.		1470. Henry VI restored by [Warwick. 1471. Return of Edward IV. Deaths of Warwick and Henry VI.	
			1475. Edward IV. invades France.	1475. War between France and Burgundy. 1477. Artois and Burgundy united to France.
		1480. Otranto taken. 1481. Bajazet II., Sultan.	1480. War between England and Scotland.	
				1491. Bretagne united to the crown.

PERIOD OF THE REFORMATION AND

Characteristics of the Centuries	Italy and the Church	Great Britain	Germany	Spain and Portugal	France
1500—1600 A. D.	1492. Alexander VI., Pope.	1492. Henry VII. invades France.	1493. Maximilian I., Emperor.	1492. Conquest of Granada. Discovery of America by Columbus. 1498. Vasco da Gama reaches India via Cape of Good Hope.	1499. Conquest of Milan.
	1500. Partition of Naples between France and Spain.				

RENAISSANCE—Continued

Germany	Spain	Russia	Lesser Countries	Arts, Sciences, Etc.	Literature
1355. Promulgation of the Golden Bull.					Froissart's *Chronicles.*
			1359. Hungarian conquests on the Danube. 1369. Tamerlane makes Samarcand the capital of his new empire.		
1378. Wenceslas (King of Bohemia), Emperor.		1380. Tartar war. Dimitri Ivanovitch checks them at the Don. 1382. Moscow burned.			
			1385. War between Austria and Switzerland.	1386. Jan Van Eyck invented oil painting.	
1394. The Emperor imprisoned at Prague.		1395. Tamerlane invades Russia. Russia under the Mongol Tartars until 1462.			
1400. Robert, Count of Palatine, Emperor.			1399. Invasion of India by Tamerlane.		
	1407. John II., King of Castile.			1409. University of Leipsic founded.	Villena's *Labors of Hercules.*
1411. Sigismund (King of Hungary), Emperor.					
	1416. Alphonso V., King of Aragon and Sicily.		1419. The Hussite war in Bohemia.	1425. Arts promoted in Italy.	
	1430. War between Castile and Granada.				
			1437-1438. Rise of Portugal.	1434. Invention of printing at Mayence.	
1438. House of Austria established. Albert II. (King of Bohemia and Hungary), Emperor. 1446. War with Hungary.		1441. Kiptchak Mongols divided.			
				1447. Library of the Vatican founded.	
			1450. Kingdom of Delhi enlarged.	1450. Flourishing period of trade in western Europe, particularly in Flanders, New Netherlands, Belgium, and a portion of France.	Malory's *Morte d'Arthur*
1453. Austria made an hereditary duchy by emperor Frederick III.	1452. Civil war in Navarre, in which Castile and Aragon join. 1454. Henry IV. of Castile, King of Spain.		1453. Poland's independence confirmed by diet of Petrekin. 1454. Poland at war with the Teutonic order.		
			1458. Hungary vigorous under Matthias Corvin.	1460. Wood engraving invented.	
1462. The Emperor besieged in court at Vienna.		1462. Ivan the Great takes the title of Czar.			
			1466. Prussia a fief of Poland. 1468. Uzun Hassan, master of Persia.	1464. Post-offices in France and England.	
1469. Invasion of the Turks.	1469. Marriage of Ferdinand of Aragon with Isabella of Castile.		1470. Sten Sture, Regent of Sweden.	1470. Beerhard invents the pedal to the organ.	
		1472. Ivan marries Sophia, niece of the Greek emperor.		1473. Printed musical notes. Large library founded at Ofen.	
1477. Marriage of Maximilian and Maria of Burgundy.	1479. Union of Castile and Aragon.	1479. Great invasion of the Tartars. 1481. Power of the Tartars annihilated.	1481. John, King of Denmark, partially acknowledged in Sweden. 1485. Matthias of Hungary takes Vienna.	1477. Watches made at Nuremberg.	Machiavelli's *Prince.*

RELIGIOUS WARS, A. D. 1492-1648

Russia	Scandinavia	Ottoman Empire	Lesser Countries	Arts, Sciences, Etc.	Literature
		1493. War with Egypt, Hungary and Venice.	1492. America discovered by Columbus.	1493. Printing press at Copenhagen. Era of discovery in the New World begins.	More's *Utopia.*
			1499. Voyage of Amerigo Vespucci. 1502. Sufi sole Sovereign of Persia.	1502. St. Peter's and other great churches built.	Luther's *Bible.*

Characteristics of the Centuries	Italy and the Church	Great Britain	Germany	Spain and Portugal	France
1500-1600 A. D.	1503. Naples annexed to the Spanish crown. Julius II., Pope.				
The Reformation. Immense development of new life in Europe.		1509. Henry VIII., King.		1506. Columbus dies at Valladolid.	1510. Council of Tours.
Power of Spain, and her conquests in America.	1511. Council of Pisa.	1512. War with France.	1512. Maximilian divides the empire into 10 circles.		
The monarchy strong in England.	1513. Pope Leo X. patron of literature and the arts.	1513. Battle of Flodden; James IV. killed. 1515. Wolsey, chancellor and cardinal.			1515. Francis I. invades Italy.
			1517. Beginning of the Reformation.	1516. Charles, King of all Spain and the Netherlands.	
			1519. Charles V., King of Spain.	1519. Conquest of Mexico by Cortez.	
			1521. Diet of Worms.		1521. First war with Charles.
	1525. Spanish ascendency by the victory of Pavia.				1525. Francis defeated and taken prisoner at Pavia. 1527. Second war with Charles V.
			1529. Turks invade Germany.		
		1532. The King marries Anne Boleyn. 1535. Henry excommunicated by the Pope.			1532-1544. Struggle for possession of Italy.
	1540. Order of Jesuits founded by Loyola. 1545. Council of Trent.	1543. Invasion of France.	1543. Alliance with England against France.	1540. Lisbon the market of the world.	
		1547. Formal establishment of Protestantism. Edward VI., King.			1547. Henry II., King; Catherine de' Medici, Queen.
	1550. Julius III., Pope.				
			1551. Treaty of Passau secures religious liberty to the Protestants.		1552. Fifth war with Charles V.
		1553. Mary, Queen of England. 1554. Lady Jane Grey executed. 1555. Persecution of the Protestants.			
	1559. Termination of French wars in Italy.	1558. Elizabeth, Queen. Rise of the Puritans.	1556. Charles V. abdicates.		
					1562. Religious liberty granted to the Huguenots. Huguenot wars.
			1564. Maximilian II., Emperor.	1564. Acquisition of the Philippines. 1567. Duke of Alva, Governor of the Netherlands.	
	1569. Florence a grand duchy.	1568. Mary, Queen of Scots takes refuge in England.			
				1571. Battle of Lepanto.	1572. Massacre of St. Bartholomew. 1576. The Catholic league. 1577. Sixth religious war.
			1576. Rudolph II., (King of Bohemia and Hungary), Emperor.		
		1584. Raleigh's colony in Virginia.		1580. Portugal passes under Spanish dominion.	
	1585. Pope Sixtus V. restores the Vatican library.	1585. War with Spain.			
		1588. Spanish Armada destroyed.		1588. Defeat of the Spanish Armada.	1588. Revolt of Paris. 1589. House of Bourbon begins with Henry IV. 1590. Siege of Paris raised by the Spaniards.
	1592. The Rialto and Piazza di San Marco built at Venice.		1594. Union of Protestants at Heilbronn.		
1600-1700 A. D.		1599. Troubles with Ireland.			1598. Edict of Nantes—toleration granted to the Protestants.
The Thirty Years' war, at first a life struggle of Roman Catholics and Protestants, results in downfall of Spain, and the ascendency of France, which reached its zenith under Louis XIV.		1603. Union of England and Scotland.			
		1607. English settlement at Jamestown.	1608. Protestant union under Frederick the Elector.		
	1609. Leghorn becomes the emporium of the Levant trade.			1609. Expulsion of the Moors.	1610. Assassination of Henry IV.
					1614. Last assembly of the states-general.
The battle of civil and religious liberty fought out in England under the Stuarts.		1617. Sir Francis Bacon, lord chancellor.	1618. Thirty Years' war begins.		
	1618. Conspiracy of De Bedmar to subject Venice to Spain.	1620. Pilgrims sail in Mayflower.	1620. Massacre of Prague.	1621. Dutch war.	
Rise of modern science and philosophy.					

AND RELIGIOUS WARS—Continued

Russia	Scandinavia	Ottoman Empire	Lesser Countries	Arts, Sciences, Etc.	Literature
		1505. War with Persia.			*Poems* of Vittoria Colonna.
			1506. Poland under Sigismund the Great.		
1510. Renewed Tartar invasions.			1511. Cuba conquered.		
		1512. Selim I. dethrones and puts to death his father.	1512. Florida discovered.		
	1513. Christian II., King of Norway and Denmark.	1514. Persians defeated; Kurdistan added to the empire.	1513. Discoveries of Balboa.		
		1516. Cairo taken.	1517. First patent granted by Spain for the importation of negroes into America.	1517. Luther and the Protestant Reformation.	Hans-Sachs founds the German drama.
	1520. Christian, King of Sweden.	1520. Soliman the Magnificent, Sultan.	1519. Spaniards, under Cortez, conquer Mexico.		
	1521. Gustavus Vasa throws off the Danish yoke.	1521. Belgrade taken.		1522. Circumnavigation of the globe by Magellan. Xavier plants Christianity in India.	
	1523. Gustavus Vasa, King of Sweden. Union of Calmar dissolved.	1526. Invasion of Hungary.			
		1529. Invasion of Germany. Siege of Vienna.		1530. Jorgens invents the spinning wheel for flax.	
1533. Ivan the Terrible, Czar.	1532. Union of Norway and Denmark.	1535. Barbarossa seizes Tunis.	1533. Pizarro conquers Peru.		Calvin's *Institutes of Religion.*
	1543. First standing army in Sweden.	1547. Turks invade Persia.	1545. Mines at Potosi discovered.	1545. Vesalius makes important contributions to the study of anatomy.	
		1551. Tripoli taken.		1548. Orange trees introduced into Europe.	Vasari's *Lives*
		1552. Invasion of Hungary.			
1554. Siberia discovered.					Camöens' *Lusiad.*
			1556. Akbar raises the Indian empire to its greatest splendor.		
		1559. Military power of the Turks at its greatest height under Soliman.		1559. Carriages introduced into Paris.	Fox's *Book of Martyrs.*
	1560. Eric XIV., King of Sweden.			1560. Knives first made in England.	
	War between Sweden and Denmark.		1564. Coligny sends a colony of Huguenots to Florida.		Tasso's *Jerusalem Delivered.*
	1570. Peace of Stettin.	1570. War with Venice.			Ronsard's *Poems.*
1571. Russia devastated by the Tartars, and Moscow burned.		1571. Battle of Lepanto.		1573. Titian, colorist painter, at height of fame.	
1578. Alliance of Sweden and Poland against Russia.	1578. Alliance with Poland.		1579. Beginning of the Republic of Holland.		Spenser's *Faërie Queene.*
			1585. Persia acquires great power under Abbas the Great.	1586. Tobacco introduced into Europe.	
	1588. Christian IV., King of Denmark.	1589. Revolt of the Janizaries.		1588. First newspaper in England.	Montaigne's *Essays.*
				1590. Telescopes invented by Jansen, a German. Napier invents logarithms.	
1598. Boris Godunow begins a new dynasty.		1595. Power in Hungary declines; revolt of Wallachia.			Shakespeare's *Dramas.*
				1602. English East India Company founded.	Bacon's *Essays.*
	1604. Charles IX., King of Sweden.	1605. Revolt in Syria.	1605. Jehân Geer, Mogul emperor of India.		
		1606. Commercial treaty with France and Holland.		1606. Gilbert's electrical discoveries.	
	1609. Gustavus Adolphus, King of Sweden.		1609. First English envoy of the East India Company sent to India.		
1613. Michael Fedorovitz, Czar, founds the house of Romanoff.	1611. War between Sweden and Denmark.				
				1615. Coffee in Venice.	Lope de Vega's *Dramas.*
1617. Finland ceded to Sweden.	1616. Sweden dominates the North.				
		1618. Great Persian victory at Shibi.		1618. Harvey discovers the circulation of the blood.	
		1620. War with Poland.		1620. Thermometers said to have been invented by Van Drebbel. Negro slavery begins in Virginia.	

PERIOD OF THE REFORMATION

Characteristics of the Centuries	Italy and the Church	Great Britain	Germany	Spain and Portugal	France
1600—1700 A. D. Continued	1626. St. Peter's dedicated. 1628. War following death of the Duke of Mantua. 1631. Influence of France increases.	1625. Charles I., King. 1627. war with France.	1628. Victories of Wallenstein. 1630. Gustavus Adolphus lands in Germany. 1632. Battle of Lutzen.	1625. Naval war with England.	1624. Ministry of Cardinal Richelieu. 1627. War with England over the Huguenots.
				1639. Loss of the Japanese trade.	1638. Invasion of Spain.
		1642. Civil war and revolution.	1640. Frederick William of Prussia.	1640. Portugal regains independence.	1640. Turin taken by the French. 1643. Louis XIV., King.
	1646. Revolt of Naples under Masaniello.		1648. Treaty of Westphalia.		1648. Wars of the Fronde.

FROM THE PEACE OF WESTPHALIA TO

Characteristics of the Centuries	Italy and the Church	Great Britain	Germany	Spain and Portugal	France
1600—1700 A. D. Continued		1649. Commonwealth under Cromwell. 1652. War with Holland. 1653. Cromwell, Lord Protector.		1654. Brazil recovered from the Dutch. 1655. War with England.	1649. Siege of Paris. 1653. Mazarin enters Paris in triumph.
			1657. Leopold I., emperor.		1659. Peace of the Pyrenees.
		1660. Charles II., King. Stuarts restored.		1661. Invasion of Portugal.	
		1666. Great fire in London.	1665. Tyrol united to Austria.		
	1669. Candia taken from Venice. 1670. War between Genoa and Savoy.	1668. Triple alliance of England, Sweden and Holland against France.			1667. War with Spain.
			1673. War of Austria and France. 1676. General revolt of the Hungarians.	1673. War with France to protect Holland.	1672. War with Holland.
	1676. Messina blockaded by the Dutch and Spanish fleets.	1679. Habeas Corpus act passed.	1680. Greater part of Alsace seized by France. 1683. Siege of Vienna by the Turks.		1678. Peace with Holland and Spain restores tranquillity to Europe. 1680. France the most formidable power in Europe.
		1685. James II., King. Rise of the Whigs and Tories.	1686. Buda taken after being held by the Turks 145 years. 1687. Joseph I., King of Hungary.		1685. Revocation of the edict of Nantes.
1700-1800 A. D. Astounding growth of the British empire. Government in England now and henceforth carried on by a Cabinet Ministry more or less representing the will of the people. Development of manufactures in England. Inventions and discoveries. Immense advance in arts and sciences. Independence of the United States. Gross misgovernment of Roman Catholic Ireland by an English Protestant minority. The French revolution which powerfully influences social, political, and intellectual progress for the next hundred years.	1689. Alexander VIII., Pope.	1688. Revolution. 1689. William III., King, and Mary II., Queen. War with France. 1690. Battle of the Boyne. James defeated, returns to France.	1690. Joseph I., elected King of the Romans.	1689. Revolt in Catalonia in favor of France.	1688. War of the allies against France.
	1693. Battle of Marsaglia.			1691. Incursion of the French into Aragon.	
		1697. General peace.	1697. Victories of Prince Eugene over the Sultan Mustapha at Zenta.		1697. General peace of Ryswick between France and the allies.
		1701. War of the Spanish succession.	1701. Hague alliance.	1701. Philip V., King.	
	1702. French victory at Luzzara over the Imperialists.	1702. Queen Anne war against France and Spain. 1704. Gibraltar taken by English.			1702. Invasion of Holland. Revolt of the Huguenots. 1704. Defeat at Blenheim.
	1706. French driven from Italy by Prince Eugene. 1707. All Spanish possessions in Italy abandoned.	1707. Act of union of England and Scotland. First united parliament of Great Britain meets.		1705. Barcelona taken by the Allies.	
		1713. Peace of Utrecht. England acquires large American possessions.	1711. Charles VI., emperor.		1713. Peace of Utrecht—perpetual separation of the crown of France and Spain.
	1715. Siege of Corfu raised.				1715. Death of Louis XIV.; Louis XV., King.

AND RELIGIOUS WARS—Continued

Russia	Scandinavia	Ottoman Empire	Lesser Countries	Arts, Sciences, Etc.	Literature
				1626. Kepler's laws discovered.	Grotius' treatises on law.
				1630. Gazettes first published in Venice.	
1632. War with Poland. Poles advance to Moscow.	1632. Christina, Queen of Sweden; Oxenstiern, Regent.	1634. Murad invades Persia.			
		1637. Troubles on the Tartar frontier. Bagdad taken by the Turks.	1639. Great naval victory of Van Tromp, of Holland, over the Spanish fleet at the Downs.	1639. Printing in America.	
			1640. Madras, India, founded.	1640. Manufacturing in Sweden.	
	1645. Peace between Sweden and Denmark.	1645. War with Venice.		1643. Conde and Turenne the greatest generals of the time.	

THE DEATH OF LOUIS XIV. A. D. 1648-1715

Russia	Scandinavian	Ottoman Empire	Lesser Countries	Arts, Sciences, Etc.	Literature
			1653. John de Witt, Grand Pensionary of Holland.		Corneille's *Tragedies.*
1654. Russian victories in Poland.				1654. Air pumps invented.	
	1657. War between Denmark and Sweden.	1657. Alliance with Sweden against Poland.			Milton's *Poems.*
	1660. Arts and sciences flourish.		1660. Sobieski, Polish general, wins great victory over the Tartars.		
		1661. War with Austria. 1662. Invasion of Hungary.			
				1666. Canal of Languedoc built. 1667. Gobelin tapestry manufactured in Paris.	Molière's *Dramas.*
1671. The Cossacks subjugated.				1671. Foundation of the Academy of Architecture at Paris.	Bunyan's *Pilgrim's Progress.*
		1672. Invasion of Poland.	1674. Sobieski, King of Poland.		
		1678. First war with Russia.			Locke's *Essays.*
	1680. Diet of Stockholm.				Bossuet's *Sermons.*
1682. Ivan and Peter, Czars.		1682. War with Austria. 1683. Defeat at Vienna.		1681. Museum of Natural History founded in London. Jardin des Plantes founded at Paris.	Racine's *Tragedies.*
		1686. Russia declares war.	1686. Dekkan, India, conquered.		
		1687. Revolution in Constantinople, Solyman II., Sultan.		1687. Telegraph invented.	
1689. Peter the Great.					
		1690. Recovery of Belgrade from the Austrians.		1690. White paper first made in England.	
1692. First trade with China.	1693. The King of Sweden declared absolute.		1692. Mogul power at its height in India. Jesuits gain large influence in China.	1692. First opera in London. 1693. Bank of England founded.	
			1695. Brussels bombarded by the French.		
	1699. Charles XII. begins to reign. Denmark, Poland, and Russia form an alliance against Sweden.	1699. Peace of Carlowitz. The Ottoman power broken.			
					Newton's *Principia.*
1700. Peter the Great wars with the Northern Powers.	1700. Defeat of the Allies at Narva.				
	1702-1706. Charles XII. sweeps Poland and Russia.				
1703. St. Petersburg founded.		1703. Mustapha II. deposed by the Janizaries.	1704. Stanislaus I., King of Poland.	1703. Russian newspaper established at St. Petersburg. Flourishing period of French literature.	
1707. Revolt of the Cossack Mazeppa. 1708. Charles XII. of Sweden invades Russia.					Flourishing period of French literature.
1709. Is defeated at Pultowa.				1709. Prussic acid discovered.	
1714. Finland conquered.				1714. Rise of commerce in Austria.	
	1715. Charles returns to Sweden.		1715. Treaty of Antwerp with Austria.		

FROM THE DEATH OF LOUIS XIV. TO

Characteristics of the Centuries	Italy and the Church	Great Britain	Germany	Spain and Portugal	France
1700-1800 A. D. Continued					
	1719. Sicily invaded by the Spanish.	1718. War with Spain.	1718. Quadruple alliance against Spain.		1718. The Quadruple alliance against Spain.
		1727. George II., King of England.			
	1730. Clement XII., Pope.		1733. War of the Polish succession.	1734. Conquest of Sicily and Naples by Don Carlos.	1733. The Polish succession involves France in war.
		1739. War with Spain.	1740. War of the Austrian succession. Maria Theresa succeeds to the hereditary states.		1740. The Austrian succession.
	1744. Italy invaded by the French and Spaniards.				1744. War with England and Austria.
	1746. French and Spaniards driven from Lombardy.	1745. Troubles in Scotland.	1745. Francis I., husband of Maria Theresa, Emperor.	1746. Ferdinand VI., King.	1747. War with Holland.
		1756. Alliance with Prussia.	1756. Seven years' war—Austria and Prussia.		1760. Loss of all Canada.
		1762. War with Spain. 1763. Peace of Paris.			
				1767. Jesuits expelled from Spain.	
			1772. Dismemberment of Poland.		1770. Marriage of the dauphin to Marie Antoinette.
	1773. Jesuits expelled from Rome.				1774. Louis XVI., King.
		1775. War with the American Colonies.			
		1776. British army takes possession of New York. Hessians hired for service in America.			1776. Franklin in Paris.
			1778. War of the Bavarian succession. Bavaria seized by Germany.		1778. Alliance with America.
	1782. Pontine marshes drained.	1781. Surrender of Cornwallis at Yorktown.			1780. Rochambeau sent to aid the Americans.
		1783. Treaty of Versailles. Independence of the United States acknowledged.			
			1788. The emperor tries to control the universities.	1788. Charles IV., King.	1789. French revolution begins. Lafayette commander of the national guards.
			1792. War with France.		1792. War with Germany. France declared a republic.
		1793. First coalition against France directed by England.	1793. First coalition against France.		1793. King and Queen beheaded. Reign of Terror.
					1795. Napoleon Bonaparte commands the army.
	1796-1797. Napoleon's Italian campaign.				1796. War in Italy.
		1797. Nelson destroys French fleet near Alexandria.	1797. Napoleon's Austrian campaign.		1797. Napoleon in Austria.
	1798. Roman republic proclaimed by the French.	1798. Second coalition against France.			1798. Expedition to Egypt.
1800-1900 A. D.		1800. Union of England and Ireland.			1799. Swiss campaign. 1800. Battle of Marengo.
Napoleon's colossal power and downfall.	1802. Napoleon, President of the Italian Republic.	1803. Successful war in India.			1802. Napoleon, President of the Italian republic. War with England.
Fall of despotisms; great political advance of European people.			1804. The emperor of Germany assumes the title of emperor of Austria. Battle of Austerlitz. Confederation of the Rhine.		1804. Napoleon I., Emperor of the French.
	1805. Napoleon crowned King of Italy.	1805. Napoleon defeated at Trafalgar.		1805. Battle of Trafalgar.	1805. Battle of Austerlitz.
Continued rapid advancement of science, inventions and discoveries.		1806. Fourth coalition against France.			1807. War with Russia. Invasion of Portugal.
	1808. Rome annexed by Napoleon to the kingdom of Italy.			1808. Madrid taken by the French. Joseph Bonaparte, King.	
			1809. Peace of Vienna.		1809. Battle of Wagram. 1810. Continental peace except with Spain.
Increased philanthropic effort and intellectual enlightenment.		1812. War with the United States.	1812. Austria in alliance with France against Russia.	1812. Battle of Salamanca.	1812. Russian campaign.
			1813. War of German independence.		
	1814. Fall of Napoleon. Kingdom ceases.			1814. Ferdinand VII. restored.	1814. Allies enter Paris. House of Bourbon restored.
		1815. British defeated at New Orleans. Wellington victorious at Waterloo. The Allies enter Paris, and Napoleon is banished to St. Helena.	1815. German League. Congress of Vienna.		1815. Napoleon returns from Elba. Hundred days' war. Battle of Waterloo, and defeat of Napoleon. Abdication of Napoleon.

THE FALL OF NAPOLEON, A. D. 1715-1815

Russia	Scandinavia	Ottoman Empire	Lesser Countries	Arts, Sciences, Etc.	Literature
	1718. Charles XII invades Norway and is killed at the siege of Frederickshall. 1720. Peace of Stockholm.	1717. Turks lose Belgrade.			Pope's *Poems.*
1721. Peter assumes the title "Emperor of all the Russias."		1723. Turks and Russians attempt to dismember Persia.	1723. Christians expelled from China.	1721. Inoculation for small-pox introduced.	
1727. Treaty with China.					
1730. Peter II., last of the Romanoffs.	1730. Christian VI., King of Denmark.	1734. Turks driven from Persia by Nâdir Shah.	1733. Frederick Augustus II., King of Poland. 1739. India invaded by Nadir Shah, who takes Delhi.	1728. Behring Strait discovered.	
	1741. Swedes driven out of Finland.	1740. Renewed invasion of Turkey.	1744. Hostilities between the French and English in India.	1740. Irish linen manufactories and English steel and cutlery factories flourish.	
		1745. Defeat of Turks at Kars.			Hume's *History.*
			1756. Calcutta taken by the Nabob of Bengal.	1750. Franklin's discoveries in electricity.	Voltaire's writings.
1762. Catherine II. reigns.				1761. Potatoes first planted in France.	Franklin's *Poor Richard's Almanac.*
			1765. Establishment of the English in India. 1766. Power of the Mamelukes revived in Egypt under Rodyan and Ali Bey.	1767. First spinning machine in England.	Lessing, Burke, Blackstone, Goldsmith, and Adam Smith.
1768. War with the Ottoman Empire.					
	1772. Despotism re-established in Sweden by Gustavus III.				
1774. Revolt of the Cossacks.			1774. Warren Hastings first governor-general of India.	1774. Spinning-jenny invented by Arkwright. Steam engines improved by Watt and Bolton.	
			1776. Lord Pigot governor-general of the East Indies.		Kant's critical philosophy.
					Gibbon's *History.*
1787. War with the Turks.		1787. Disastrous war with Austria and Russia.			
					Burns' *Poems.*
	1792. Gustavus III. assassinated. Gustavus IV., King.				
			1794. Polish revolt at Cracow.		
1796. Unsuccessful war with Persia.			1797. Swiss revolution. Helvetian republic declared.		Schiller's works.
		1798. War with the French in Egypt.			
1801. Alexander, Czar.	1801. Denmark and Sweden accede to the alliance between England and Russia.			1801. Iron railways in England.	Goethe's *Dramas* and *Poems.*
1804. War with Persia.		1803. Insurrection of Mamelukes at Cairo.			
1805. Russia joins the coalition against France.					
1807. Treaty of Tilsit.		1807. War against Russia and England.	1806. Louis Napoleon, King of Holland.	1807. Fulton invents the steamboat. 1808. Lithography invented.	Cuvier's *Natural History.*
	1808. Finland invaded by the Russians. 1809. Charles XIII., King of Sweden.	1809. Russians defeated at Silistria.		1810. First steamboat built in Europe.	
1812. Invasion of Napoleon. Moscow burned.			1812. The Poles declared a nation by Napoleon. Diet of Warsaw. American war with England.		
		1813. Servia invaded by Turkish army. 1814. Malta falls to England.			
	1814. Union of Sweden and Norway as two kingdoms under one monarch.			1814. Steam carriages in England. Gas used for lighting the streets in London.	
1815. The Holy Alliance formed.			1815. William I., King of the Netherlands.	1815. Safety lamp invented by Davy.	Wordsworth's *Poems.*

FROM THE FALL OF NAPOLEON TO THE END

Characteristics of the Centuries	United States	Great Britain	Prussia	Austria	France
1800-1900 A. D. Continued	1816. U. S. Bank incorporated. 1817. James Monroe, President.	1816. Bombardment of Algiers. The Bey compelled to abolish slavery.		1817. Population, 28,000,000.	
			1818. The Zollverein formed. 1819. Death of Marshal Blucher.	1818. Napoleon's son made Duke of Reichstadt.	1818. France joins in Holy Alliance.
	1821. Monroe reëlected. Missouri compromise bill passed.		1821. Congress of monarchs at Laybach. Insurrection in Moldavia and Wallachia.		1821. Death of Napoleon at St. Helena.
	1824. Visit of Lafayette.	1823. The Canning ministry. The Ashantees in Africa defeated.			1824. Charles X., King.
	1825. Erie Canal opened. Protective tariff enacted. J. Q. Adams, President.				
	1829. Andrew Jackson, President.	1828. Wellington ministry. Irish disturbances. 1830. William IV., King. Difficulties with China.			1830. Algiers taken by the French. Revolution and abdication of Charles X. Louis Philippe, King.
	1831. Northeastern boundary between the U. S. and British provinces established. 1833. President Jackson reëlected. Bank deposits removed from the U. S. Bank.			1831. Austria interferes in Italian affairs.	1831. Abolition of hereditary peerage in France.
				1836. Visit of the Emperor of Russia. Ferdinand I., Emperor.	1836. Insurrection attempted by Louis Napoleon at Strasburg.
	1837. Independence of Texas acknowledged. Martin Van Buren, President.	1837. Victoria, Queen.		1838. Commercial treaty with England.	1838. Death of Talleyrand.
		1840. War with China over the opium trade. War in Syria; Great Britain an ally of Austria and Turkey.	1840. Frederick William, King.		
	1841. W. H. Harrison, President. Death of Harrison, and succession of John Tyler.	1841. Chinese war ended.			
	1845. Texas annexed to the U. S. Treaty with China. James K. Polk, President.	1844. Daniel O'Connell's trial. Sentence reversed by the House of Lords.			1844. War with Morocco.
	1846. War with Mexico. The Oregon treaty with Great Britain, settling the northwestern boundary of the U. S.	1846. Repeal of the English corn-laws. 1847. Severe famine in Ireland.		1847. Austria takes possession of Cracow.	
	1848. Treaty of Guadalupe Hidalgo, ends Mexican war. Gold discovered in California. 300,000 emigrants arrive this year.	1848. Civil war in Ireland. Habeas Corpus Act suspended.	1848. Insurrection in Berlin.	1848. Revolution in Hungary. Francis Joseph, Emperor. Kossuth withdraws his army from Vienna.	1848. Abdication of Louis Philippe, and a republic proclaimed. Louis Napoleon, President. Bloody insurrection in Paris.
	1849. Zachary Taylor, President. Railroad from Boston to New York.	1849. Mooltan in India taken.	1849. The King declines the Imperial crown. Armistice between Prussia and Denmark.	1849. New Constitution promulgated.	
	1850. Attempted invasion of Cuba by filibusters. Death of President Taylor; Millard Fillmore, President. Texas boundary settled. Fugitive Slave Law passed.	1850. The war in Lahore ended. The Punjaub annexed to the British Crown. Death of Sir Robert Peel. English forces defeated in South Africa by the Kafirs.	1850. Hanover withdraws from the Prussian alliance. Hesse-Darmstadt withdraws. Treaty of peace with Denmark. New constitution for Prussia.		1850. Jerome Bonaparte, Field-Marshal.
	1851. Erie railway opened. Charleston Convention. Vigilance committee organized in California. Kossuth arrives in New York.	1851. Continuance of the Kafir war. Kossuth visits England.		1851. Louis Kossuth sentenced to death at Pesth.	
				1852. Emperor of Austria visits Emperor of Prussia.	1852. Louis Napoleon declared Emperor.
	1853. Franklin Pierce, President. Gadsden Purchase.	1853. Kafir war ended. Queen Victoria visits Ireland.	1853. Plot to overthrow the government.		
	1854. Treaty with Japan. Kansas-Nebraska bill passed. Ostend Manifesto issued.	1854. Crimean war. Treaty of alliance with France.	1854. Treaty with Austria offensive and defensive.	1854. Alliance with England and France.	1854. War declared against Russia.

OF THE AMERICAN CIVIL WAR, A. D. 1815-1865

Spain and Portugal	Italy and Greece	Russia	Lesser Countries	Arts, Sciences, Etc.	Literature
1815. Union of Portugal and Brazil under John VI. 1817. Slave trade abolished.	1815. Kingdom of Two Sicilies restored.	1815. Poland united to Russia.	1816. Lord Amherst's unsuccessful mission to China. 1817. The Mahratta power completely overthrown in India by the British.	1815. The abolition of the slave trade by the Congress of Vienna. 1817. Public schools established in Russia.	Scott's *Novels.* Byron and Shelley. Fouque's *Tales.*
	1821. Austrian invasion of Italy. 1822. Greek revolution. Declaration of Independence.	1819. Establishment of military colonies. Liberty of the press in Poland nullified.	1819. Bolivar, President of Colombia, South America. Peru and Guatemala independent. Brazil independent. 1822. Iturbide, Emperor of Mexico.	1819. The steamship "Savannah" makes the first trip across the Atlantic. 1824. Inland navigation stimulated in the United States.	Tegnèr's writings. Hieroglyphics deciphered by Champolion.
	1825. Death of Ferdinand, after reign of sixty-six years. 1827. Treaty between Russia and Turkey respecting Greece.	1826. Nicholas I. crowned at Moscow. War against Persia.	1826. Missolonghi taken by the Turks.	1825. Steam navigation on the Rhine.	Vast increase in periodical literature in England, France, Germany, United States, etc.
1830. Salic law abolished.		1830. War against Poland.	1829. Venezuela independent. 1830. Polish struggles for nationality.		Balzac's *Novels.*
	1832. Kingdom of Greece founded.	1832. Poland made part of empire.	1831. Leopold I., King of the Belgians.	1832. Trades unions in Europe.	Poe's *Poems and Tales.* Hawthorne's writings.
1833. Isabella II., Queen of Spain. Don Carlos claims the throne. Portugal a constitutional monarchy.			1833. Santa Anna, President of Mexico.		
			1836. Decree to expel all British and other foreigners from China.	1836. Founding of the Smithsonian Institution. Luxor obelisk erected, Paris.	Emerson's *Essays.*
1837. The monasteries in Spain dissolved.		1838. Smuggling carried on extensively.	1839. Turkey at war with Egypt. 1840. William I. abdicates as King of Holland.	1837. Morse patents the telegraph invented by him in 1832. 1840. Wheatstone's telegraph patented in England.	
1842. Insurrection in Barcelona.	1843. King Otho of Greece compelled to accept a constitution.	1845. Emperor visits England.	1842. Insurrection in India.	1845. Lord Rosse's telescope completed. Gutta percha used.	Victor Hugo's works.
1846. Marriage of Isabella to the Duke of Cadiz. Civil war in Portugal.			1847. Soulouque, President of Hayti	1847. Great canal from the Durance to Marseilles completed. Railroad building in Germany. Sewing machine invented and patented.	Longfellow's *Poems.*
	1848. Rising of the great Italian cities in revolution. Italian revolution. Roman republic overthrown.		1848. Holland receives a constitution. Insurrection in Ceylon. Hungary declared independent.	1848. Girard College opened.	
	1849. Catania, Syracuse, and Palermo taken by assault. Mazzini's proclamation of provisional government. Victor Emanuel, King. Rome surrenders to the French; Garibaldi leaves city. Bourbon rule begins.	1849. Aids Austria in subduing Hungary. 1850. Harbor of Sebastopol completed.	1850. Death of Emperor Tau-Kwang of China. Battle of Idstedt, Prussia.	1849. Tubular bridge at Anglesea, England. Magnetic clock invented by Dr. Locke of Cincinnati. 1850. Great agitation on slavery in United States. The Pekin Monitor a new paper, printed in China. Woman's Rights convention at Worcester, Mass.	Darwin, Tennyson, Dickens, and Browning.
1851. Death of Godoy, "Prince of Peace."			1851. Discovery of gold in Australia. Disturbances in south of China.	1851. Daguerre makes important contributions to photography. Railway between Moscow and St. Petersburg opened.	George Eliot, Lowell, and Ruskin.
			1852. Buenos Ayres taken by the liberating army. War between the Turks and Montenegro.	1852. Telegraphs across the English channel.	
		1853. War declared against Turkey.	1853. Turkish-Russian War.	1853. First Norwegian railway opened. Perry's expedition to Japan.	
1854. Military insurrection under O'Donnell.		1854. War with France and England. Siege of Sebastopol. Battle of Balak-lava.		1854. Commercial treaty between United States and Japan. First railway in Brazil.	

FROM THE FALL OF NAPOLEON TO THE END

Characteristics of the Centuries	United States	Great Britain	Prussia	Austria	France
1800-1900 A. D. Continued	1855. Panama Railroad completed. Troubles in Kansas.	1855. British fleet bombards and partially destroys Canton, China.			
				1856. Hungarians granted amnesty.	1856. Peace with Russia.
	1857. Dred Scott decision. JamesBuchanan,President. Great financial panic.	1857. Rebellion in India begins. King of Delhi proclaimed Sovereign of India. 1858. Completion of the Atlantic telegraph cable.			
	1859. John Brown captures Harpers Ferry. 1860. South Carolina passes ordinance of secession.	1860. Rebellion in India subdued. Neutrality proclaimed during the American Civil war.		1859. War with France and Sardinia. Austrians defeated at Montebello. Peace after Battle of Solferino. Death of Prince Metternich.	1859. War with Austria. 1860. Commercial treaty with England.
	1861. Secession of Southern States, and establishment of the Confederate States under Jefferson Davis. Opening of the Civil war, 1861-1865. Abraham Lincoln, President.		1861. William I., King.	1861. New constitution for the Austrian monarchy. Civil and political rights granted Protestants.	
			1862. Bismarck, Premier.	1862. Amnesty to political offenders in Hungary.	1862. Great distress caused by American Civil war.
			1863. King resolves to govern without parliament.		1863. The French occupy Mexico.
			1864. War with Denmark.	1864. Alliance with Prussia against Denmark.	1864. Maximilian accepts Mexican crown.
	1865. Assassination of President Lincoln; Andrew Johnson, President.	1865. Fenian outbreaks in Ireland.			1865. Death of Proudhon.

FROM THE END OF THE AMERICAN CIVIL

Characteristics of the Centuries	United States	Great Britain	Prussia	Austria	France
1800-1900 A. D. Continued	1866. Civil rights bill passed. Atlantic telegraph completed.	1865. British and French governments rescind their recognition of the Confederate States of America.	1866. Prussia prepares for war with Austria. Battle of Sadowa. Hanover annexed. First parliament of the German Confederation.	1866. War with Prussia and Italy.	
	1867. General amnesty proclamation.		1867. North German Constitution accepted.	1867. Autonomy for Hungary announced. Emperor crowned King of Hungary.	1867. Great exposition in Paris.
	1868. Burlingame treaty with China. 1869. U. S. Grant, President. Union Pacific railway opened for traffic.				1869. New constitution promulgated.
		1870. Irish Land Act passed.	1870. War with France. Battle of Sedan.	1870. Concordat with Rome suspended.	1870. War declared against Prussia. Battle of Sedan. Surrender of Metz.
			1871. King of Prussia proclaimed Emperor of Germany.	1871. New German empire recognized.	1871. Capitulation of Paris. Peace ratified.
			Germany		
		1873. Payment of Alabama claims to the United States.	1871. William I., Emperor.		1873. Marshal MacMahon, President. 1874. Death of Guizot.
		1876. Queen Victoria proclaimed Empress of India.			
	1877. R.B.Hayes, President.		1877. Attempted assassination of emperor.	1878. Occupation of Bosnia.	1879. Jules Grevy, President.
	1881. James A. Garfield, President. President Garfield assassinated, July 2d; Chester A. Arthur, President. 1885. Grover Cleveland, President. Apache Indian War.	1882. Attempt on life of Queen Victoria.		1882. 600th anniversary of the House of Habsburg.	
		1887. Queen's Jubilee.		1886. Army put on war footing of 1,500,000 men.	1887. Sadi-Carnot President.
	1889. Benjamin Harrison, President. Johnstown flood.	1889. Great labor strikes.	1888. Accession and death of Frederick III. William II., Emperor.		

OF THE AMERICAN CIVIL WAR—Continued

Spain and Portugal	Italy and Greece	Russia	Lesser Countries	Arts, Sciences, Etc.	Literature
	1855. Important concordat between Italy and Austria.	1855. Death of Nicholas I. Alexander II., Emperor.	1855. Santa Ana abdicates the presidency of Mexico.	1855. Panama Railroad completed. Bessemer's steel process patented.	Spencer's *Philosophy.*
		1856. Destruction of Sebastopol docks. Evacuation of Crimea.		1856. Submarine telegraph laid from Cape Breton to Newfoundland.	
		1858. Partial emancipation of the serfs.	1858. Massacre of Christians in Turkey. Suez Railroad completed.	1858. Great Eastern launched at London. Laying of the Atlantic cable. Boston Public Library opened.	
1859. War with Morocco. 1860. Defeat of the Moors.	1859. War with Austria. 1860. Garibaldi lands in Sicily, and assumes dictatorship. Sicily and Naples liberated.			1859. Telegraphic communication between India and England.	Huxley, Renan, and Dumas.
1861. Annexation of Santo Domingo. Intervention in Mexico.	1861. Victor Emmanuel II., King of Sardinia, first King of Italy.		1861. Canton restored to the Chinese by the French and English.	1861. International exhibition at London.	
	1862. Garibaldi establishes a provisional government. Insurrection in Greece.	1862. Nesselrode Chancellor.			
		1863. Termination of serfdom.		1863. Abolition of slavery in the United States.	Blackmore's *Lorna Doone.*
1864. Rupture with Peru.	1864. Florence made the capital of Italy.	1864. Emigration of Caucasian tribes into Turkey.	1864. Nankin, China, taken by Gordon for the Imperialists.	1864. Convention between France, Brazil, Italy, Portugal, and Spain for telegraph to America.	
1865. Dispute with Chile.	1865. Ionian Isles made over to Greece.		Valparaiso bombarded by Spanish fleet.		

WAR TO THE PRESENT TIME—A. D. 1865-

Spain and Portugal	Italy and Greece	Russia	Lesser Countries	Arts, Sciences, Etc.	Literature
1866. Military insurrection headed by General Prim.	1866. Austrian war. Venetia proclaimed a part of Italy.	1866. Inauguration of trial by jury. War with Bokhara.		1866. Atlantic telegraph successfully completed.	Meredith, Taine, Arnold, Wallace.
1867. Death of Marshal O'Dónnell.	1867. Garibaldi and the Papal states.	1867. Russian America sold to the United States.	1867. City of Mexico evacuated by French troops. Egypt declared by the Sultan to be a separate sovereignty. Execution of Maximilian in Mexico.	1867. Great exposition at Paris.	
1868. Queen deposed.				1868. Suez canal formally opened.	
	1869. Vatican Council opened at Rome.			1869. French Atlantic telegraph completed.	
1870. Isabella II., abdicates; Amadeus, King.	1870. Rome is annexed to Italy. Declared the capital of Italy.		1870. Fenian raid in Canada.	1870. Railway from Calcutta to Bombay. Mont Cenis tunnel completed.	
1871. Sagasta, Prime Minister.		1871. Electric telegraph between Russia and Japan.	1871. Military revolt in City of Mexico suppressed. 1872. Attempt to assassinate the Mikado of Japan.		
		1873. Khiva captured.		1873. European calendar introduced into Japan.	
1874. Alfonso XII., King. 1875. Civil war.			1874. Insurrection at Nagasaki, Japan.		
				1876. Railway open between Quebec and Halifax. Centennial Exposition at Philadelphia.	
		1877. War against Turkey.		1877. Telephone invented by Bell.	
	1878. Death of Victor Emmanuel II. Humbert, King. Death of Pius IX. Leo XIII., Pope.	1878. Spread of Nihilism in the empire. 1880. Many Nihilists imprisoned and executed. 1881. Alexander II. assassinated. Alexander III., Emperor.	1878. Montenegro, Servia and Roumania independent.		Ibsen, Tolstoi, Björnson.
1883. Sagasta again Minister.	1882. Death of Garibaldi.		1883. Opening of the St. Gothard Railway from Milan to Lucerne.	1883. First electric street railway in United States at Baltimore.	
	1885. War with Abyssinia.	1885. Ship canal from St. Petersburg to Cronstadt opened. Trouble with the Afghans.		1885. Revised version of Old Testament published.	
	1887. Alliance of Italy with Austrio-Hungary and Germany signed. Crispi, Prime Minister.	1886. Russia interferes in Bulgaria.	1886. Upper Burmah annexed to British India.	1887. Great railway bridge at Lachine, Canada, completed.	
1889. Trial by jury first put in force.		1888. Central Asian railway opened.	1889. New constitution promulgated in Japan.	1888. Typesetting machines perfected. Pasteur discovers cure for hydrophobia.	

FROM THE END OF THE AMERICAN CIVIL

Characteristics of the Centuries	United States	Great Britain	Germany	Austria	France
1800-1900 A. D. Continued	1890. McKinley tariff bill passed.	1890. Stanley returns from Africa.	1890. Resignation of Bismarck as chancellor. 1891. Triple Alliance renewed.	1891. Renewal of Triple Alliance.	1890. War with Dahomey. 1892. Panama scandals.
	1893. Grover Cleveland, President. Chinese exclusion bill approved. World's Columbian exposition at Chicago.	1893. Behring Sea arbitration. 1894. Manchester ship canal opened.	1893. Anti-Jesuit law repealed. 1894. Commercial treaty with Russia. New parliament house opened.	1894. Commercial treaty with Russia ratified.	1894. President Carnot assassinated at Lyons. M. Casimir-Perier, President. Captain Dreyfus tried and imprisoned.
			1895. North Sea and Baltic canal opened. Restrictions imposed on American insurance companies.	1895. Anti-Semitic agitation.	1895. President Casimir-Perier resigns. M. Felix Faure, President. Death of Pasteur.
	1897. William McKinley, President.	1897. Blackwell tunnel opened. The Queen's Diamond Jubilee celebrated.	1896. New civil code for the empire completed.	1896. Archduke Karl Ludwig, heir to the throne, dies. Millennial exposition at Budapest.	1897. Ten-hour law for railway employes passed.
	1898. Destruction of the *Maine* at Havana. War with Spain. Hawaii annexed.	1898. Death of Gladstone. Irish local government bill passed. Imperial penny-postage goes into effect.	1898. Death of Bismarck. Emperor visits Constantinople and Jerusalem.	1898. Assassination of the Empress by an anarchist at Geneva.	1898. Review of Dreyfus case granted.
	1899. Cuba is relinquished by Spain. Philippines and Porto Rico acquired.	1899. The Boer war in South Africa.			
1900-1913 A. D.	1900. Civil government established in the Philippines. Chinese troubles.	1900. Field-Marshal Roberts takes command in South Africa.	1900. Abolition of the Roman law throughout Germany.	1900. Marriage of the heir apparent, Francis Ferdinand.	
Japan becomes a world power. Constitutional and representative government is extended in many parts of the world — notably in Russia, Persia, Turkey, China and Portugal. Renewed impulse given to international peace and arbitration. Great commercial expansion in Germany, France, Japan, Great Britain and the United States. Unprecedented power of the public press. Era of educational and social philanthropies. Decline in creative literature. Development of African resources.	1901. Assassination of President McKinley by the anarchist Czolgosz. Capture of Aguinaldo. Death of Ex-President Harrison.	1901. Census of the Indian empire taken. Death of Queen Victoria and accession of Edward VII.	1901. Bicentenary of the coronation of the first king of Prussia.		1901. Diplomatic relations with Turkey suspended.
	1902. Cuban independence under Platt amendment. President Roosevelt recommends the purchase of the Panama Canal company.	1902. The British-Japanese alliance signed. Boer war ended. Marquis of Salisbury resigns as premier.	1902. Prince Henry of Prussia visits the United States. England and Germany press their Venezuelan claims.	1902. Triple Alliance renewed. The language question between Germany and Czechs.	1902. M. Combes forms a new French ministry.
	1903. Panama canal treaty signed with Colombia. Commercial treaty with China signed. Independence of Panama recognized.	1903. King Edward visits the King of Italy. Irish land bill passed the House of Parliament.		1903. New tariff bill. Visit of the Czar of Russia.	1903. Dreyfus case reopened. President Loubet visits King Edward.
	1904. Great Baltimore fire. U. S. Senator Burton convicted of malfeasance in office. St. Louis exposition opened.	1904. Col. Younghusband enters Tibet.	1904. German troops defeated in Africa.	1904. Ultimatum to the Sultan issued. Great railway strike.	1904. Arbitration treaties with Holland, Spain, Sweden, Norway, and the United States. Bill for separation of church and state introduced.
	1905. Protocol with Santo Domingo.	1905. Resignation of Lord Curzon as viceroy of India.	1905. Intervention of Germany in Moroccan affairs. The new commercial treaties. Marriage of the crown prince.	1905. Treaty with Germany ratified. Universal suffrage on an educational basis advocated.	1905. The Moroccan situation grows in complexity.
	1906. Riot at Brownsville, Texas. The President visited Panama. Great earthquake at San Francisco.	1906. King Edward visits Paris.	1906. Propaganda against Socialism.	1906. Prince Schillingfurst succeeds Baron Gautch.	1906. M. Falliéres, President. The church controversy. The Pope's encyclical. M. Sarcien, Premier.
	1907. Philippine assembly opened. 1908. Voyage of the Pacific fleet to Asiatic waters. 1909. Tariff revised. 1910. Elections result in great Democratic gains.	1907. King Edward and Emperor Francis Joseph meet at Ischl. 1910. Death of King Edward VII. Accession of George V.	1907. German emperor visited London. 1910. Emperor William received Ex-President Roosevelt.	1907. Universal suffrage bill passed. 1909. Bosnia and Herzegovina acquired.	1907. Wine growers, agitation. French occupation of Morocco. 1910. Briand cabinet resigned.
	1911. Extra session of Congress called by President Taft. Canadian reciprocity bill passed. 1912. Tariff revision begun by Congress.	1911. King George formally opens the British Parliament. 1912. King George returns from Durbar in India. Steamship "Titanic" sinks with appalling loss of life.	1911. The Emperor urged a policy of reclamation. 1912. Large Socialist gains in German Diet.	1911. Austria strengthens her army and navy. 1912. Death of Premier Aerenthal.	1911. New ministry formed by Premier.

WAR TO THE PRESENT TIME—Continued

Spain and Portugal	Italy and Greece	Russia	Lesser Countries	Arts, Sciences, Etc.	Literature
1890. Castillo, Premier.		1890-1892. Famine through the empire.	1890. First Japanese Parliament opened.	1890. Polygamy abolished in Utah.	Hardy's *Novels.*
	1891. Treaty of Italy with Great Britain relative to East Africa. Triple Alliance renewed.			1891. Canadian Pacific railway completed.	
1893. War with Morocco.	1893. Pope's Jubilee at Rome.	1894. Death of Alexander III. Nicholas II., Czar.	1893. Krüger, President of the Transvaal. 1894. War between China and Japan.	1893. World's parliament of religions at Chicago. Electrical measurements established.	Brandes' *Essays.*
		1895. Diplomatic relations with Abyssinia. Persecution of the Jews.	1895. Cecil Rhodes a power in South Africa. Federation of Australia approved. Kongo State annexed to Belgium.	1895. Great refracting telescope made by Clark for Lick observatory. Discovery of Roentgen rays.	
1897. Assassination of Premier Canovas del Castillo. Scheme of Cuban autonomy approved. 1898. Spanish-American war. Treaty of Paris.	1896. (Italy) Peace with Abyssinia. 1898. Pope offers to mediate in the Cuban question.	1896. First official census of the empire. 1897. Judicial reform in Siberia. 1898. Port Arthur leased from China.	1896. Jameson raid in South Africa. 1897. Turko-Grecian war. 1898. Hawaii annexed to the United States. Switzerland votes to take over railroads within her borders. Wilhelmina, Queen of Holland.	1897. Universal postal congress at Washington. 1898. Reform edict issued in China.	Mitchell's *Novels* and *Poems.* James' *Novels.*
1899. Death of Premier Canovas of Spain.	1900. Assassination of King Humbert of Italy, Victor Emmanuel III., King.	1899. Czar proposes universal peace. 1901. Count Tolstoi excommunicated.	1899. Venezuela-Guiana boundary line established. 1900. Outbreak of the Boxers in China. 1901. Submission of China to the allied powers. Inauguration of the federal government of the Commonwealth of Australia.	1899. The "open-door" policy for China agreed to. Jubilee of the year 1900 proclaimed by the Pope. 1900. Opening of the Elbe and Trave canal, Germany.	Howell's *Novels.* Kipling's *Stories* and *Poems.*
1902. Alfonso XIII., King.	1903. Death of Pope Leo XIII. Pope Pius X.		1903. Peter I., King of Servia.	1902. Marconi wireless system established on Italian warships. 1903. Completion of the Pacific cable. Message sent around the world in twelve minutes.	Lagerlöf's *Novels.*
1904. Death of Ex-Queen Isabella at Paris.	1904. King and Queen of Italy visit England.	1904. War with Japan over Manchuria begun.	1904. President Diaz of Mexico reelected. Death of Paul Krüger, in Switzerland.	1904. New York subway opened.	Zangwill's *Novels.*
1905. Attempted assassination of the King in Paris.	1905. The railway bills passed in Italy.	1905. Fall of Port Arthur, and end of war. Great railway strike at St. Petersburg, Warsaw, and Moscow. Constitution granted by Czar, and the Duma authorized.		1905. Gigantic power plants erected at Niagara falls.	Sienkiewicz's *Novels.*
1906. King Alfonso married to Princess Victoria of England.	1906. Sonnino, Premier. International exhibition at Milan.	1906. The Czar opened the first Russian Duma.	1906. Death of King Christian of Denmark. Norway and Sweden independent kingdoms.	1906. The Simplon tunnel opened. Pan-American conference meets at Rio de Janeiro. Wireless telegraphy conference at Berlin.	Phillips' *Poems.*
1907. King and Queen visit England.	1907. Italy signs arbitration treaty with Argentina.	1907. Third Russian Duma convened.	1907. Abdication of Korean emperor. Death of Oscar II. of Sweden.	1907. The *Lusitania* makes her first voyage. 1909. Great progress in aëronautics.	
1910. Spain recalled its envoy to the vatican. Portugal becomes a republic. 1911. Further creation of religious orders prohibited.	1910. Decree issued by the King of Greece for a revision of the constitution. 1911. Second parliament assembles. 1911-12. War with Turkey over Tripoli.	1910. Death of Count Tolstoi. 1911. Russian army mobilized on Chinese frontier. Premier Stolypin assassinated.	1910. Montenegro became a kingdom with Nicholas as king. Revolutionary outbreaks in Mexico. Japan annexed Korea. 1911. Insurrections in Mexico. President Diaz forced to resign. Madero elected President. 1912. China a republic; Yuan, president. Death of Mutsuhito; Yoshihito becomes Mikado of Japan.	1911. Andrew Carnegie gives funds for the construction of the most powerful telescope in the world.	LemAitre's *Essays.*

FROM THE END OF THE AMERICAN CIVIL

Characteristics of the Centuries	United States	Great Britain	Germany	Austria	France
	1913. Democratic Party comes into power. Parcels Post System inaugurated. Woodrow Wilson inaugurated President. Underwood Tariff bill becomes law. Currency bill passed.	1913. Colonies aid policy of Naval Expansion.	1913. Declares support of Triple Alliance.	1913. Mobilize Army on Servian Frontier to conserve interests of Empire pending Balkan war.	1913. Raymond Poincaré inaugurated President.
Greatest European war in history rages with England, France, Russia, Belgium, Servia and Portugal on one side and Germany, Austria-Hungary and Turkey on the other.	1914. Anti-trust legislation begun in Congress. Declares neutrality in the European War. New regional banking system goes into operation.	1914. King George urges mutual concessions in Irish Home Rule controversy. Wages war on the Teutonic Alliance as a member of Triple Entente.	1914. Germany's new fiscal policy lays a tax on royalty. Declares war on the Triple Entente.	1914. Austria adopts a strong policy against Balkan expansion. Joins Germany in a declaration of war on the Triple Entente.	1914. A new political party is formed to be known as the Briandist. Joins Great Britain and Russia in war upon Teutonic Alliance.

PARALLEL OUTLINES OF AMERICAN HISTORY

Historical events owe much of their importance to their relations with one another. The use of parallel outlines often enables the reader to see these relationships at a glance. It is recommended that when using these Parallel Outlines of American History the reader turn frequently to the preceding Parallels of Universal History for the same periods and turn also to the brief articles in the following pages on the History of Important Nations and their Dependencies as well as to the Dictionary of Biography in the latter part of the volume.

I. PERIOD OF DISCOVERY AND EXPLORATION, 1492-1607

Rulers	Spanish Explorers
1474-1516. Ferdinand and Isabella.	1492. Columbus sails from Palos, Friday, Aug. 3, on his first expedition. He discovers a small island of the Bahama group, Oct. 12, Cuba, Oct. 28, and Hispaniola (now Hayti), Dec. 6. He returns to Spain the next year. 1493-1496. Columbus makes his second expedition, discovers Jamaica, May 3, 1494, and explores various islands. 1498-1500. Columbus sails on his third expedition, discovers various islands, lands on the mainland without knowing it to be a new continent, but is sent back to Spain in irons, where he is received with honor and the charges against him dismissed. 1499-1507. Amerigo Vespucci on the coast of South America. He writes letters describing his explorations and an Alsatian geographer suggests that the land be named for him. 1502-1504. Columbus makes his fourth and last voyage to America, discovers more islands, and explores the coast of the Isthmus. 1510. Alonso de Ojeda founds San Sebastian, the first colony in South America. 1513. Ponce de Leon discovers Florida, and takes possession in the name of Spain.
1516-1556. Charles I.	Balboa crosses the Isthmus and discovers the Pacific. 1519. Francis de Garay discovers mouth of Mississippi. Cortes overthrows Aztec power in Mexico. 1519-1521. Magellan's circumnavigation of the globe. 1520-1527. Exploration of Atlantic coast of North America by Spanish explorers. 1528. Explorations of Narvaez from Florida westward. 1539-1542. De Soto penetrates the Mississippi Valley region as far northward as the later state of Arkansas. 1540-1542. Coronado's expedition northward from Mexico to the present site of Santa Fé, and to Quivera (Kansas).
1556-1598. Philip II.	1565. Pedro Menendez de Aviles discovers and names the harbor of St. Augustine, takes possession of the land in the name of the king of Spain, and destroys the Huguenot settlements.

Rulers	Portugese Explorers
1495-1521. Emanuel the Great. (Golden age of Portugal).	1498. Vasco da Gama reaches India by sailing around Africa. 1500. Cabral discovers the coast of Brazil. Gaspar Cortereal, in the service of Portugal, discovers Labrador.

Rulers	French Explorers
1515-1547. Francis I.	1524. Giovanni da Verrazano in the service of the King of France coasts between the 28th and 50th degrees of north latitude, and discovers New York harbor. 1534-1535. Discovery and exploration of St. Lawrence Bay and River by Jaques Cartier.
1547-1559. Henry II.	1562. Jean Ribault establishes a Huguenot settlement at Port Royal.
1559-1560. Francis II.	1563. Laudonnière establishes a Huguenot settlement at the mouth of St. John's river, naming it Fort Caroline.
1560-1574. Charles IX.	1565. The Huguenot settlement destroyed by Menendez. 1567. De Gourgues avenges the destruction of the Huguenots by destroying the Spanish forts in Florida.
1574-1589. Henry III.	1603. Samuel de Champlain explores the St. Lawrence.
1589-1610. Henry IV.	1604. Champlain founds a settlement on St. Croix island. 1605-1606. Champlain explores the coast of New England.

Rulers	English Explorers
1485-1509. Henry VII.	1497. John Cabot discovers the North American continent. 1527. Captain John Rut explores the coast of North America.
1509-1547. Henry VIII.	1565. John Hawkins passes along the coast of Florida. 1566. Charter is granted to Sir Humphrey Gilbert to open a northwest passage.
1547-1553. Edward VI.	1576-1578. Voyages of Sir Martin Frobisher to discover a northwest passage.
1553-1558. Mary.	1577-1580. Circumnavigation of the globe by Sir Francis Drake. He takes possession of New Albion (California) in 1579 in the name of Queen Elizabeth.
1558-1603. Elizabeth.	1578. Attempt of Sir Humphrey Gilbert to plant a colony in Newfoundland. 1584. Raleigh's expedition, under command of Amadas and Barlowe, takes possession of coast of Virginia in the name of Queen Elizabeth. 1585. Raleigh's second expedition leaves 107 men on Roanoke Island. They are afterward rescued by Sir Francis Drake. 1587. Raleigh's third expedition, under John White, lands 120 people. The colony disappears entirely. 1602. Gosnold's exploration along the coast of New England.
1603-1625. James I.	1603. Martin Pring enters the present harbor of Plymouth. 1606. Charter for colonization granted to the London and Plymouth Companies. The former promptly sends an expedition which founds the colony of Virginia by planting a settlement at Jamestown, May 13, 1607.

II. THE COLONIAL PERIOD, 1607-1775

The Southern Colonies	The Middle Colonies	New England Colonies	English Rulers and Events
1607. The first permanent English settlement at Jamestown.	1609. Henry Hudson on the Hudson River.		1603-1625. James I. develops the Divine Right of Kings theory. Development of Puritanism.
1612-1616. Introduction of tobacco culture into Virginia.	1614. Beginnings of settlement on Manhattan Island.	1608-1620. The "Pilgrim Fathers" in Holland.	
1619. Meeting of the House of Burgesses in Virginia, the first representative body in America.	1617-1623. Beginnings of the settlement of New Jersey by the Dutch. 1621. The Dutch West India Company chartered.	1620. Landing of the Pilgrims at Plymouth, Dec. 21.	

WAR TO THE PRESENT TIME—A. D. 1865-

Spain and Portugal	Italy and Greece	Russia	Lesser Countries	Arts, Sciences, Etc.	Literature
1913. Continued Strife between Royalists and Republicans. Attempted assassination of King Alfonso.	1912. Greece joins Balkan Allies in war against Turkey. 1913. Assassination of King George of Greece.	1913. Serfdom obliterated from entire empire.	1912. Balkan States (Bulgaria, Servia, Montenegro) join Greece in war with Turkey. 1913. Armistice declared and representatives of warring states meet in London. Balkans capture Adrianople and Turkey sues for peace. Montenegrins capture Scutari. Peace treaty signed.	1912. New chemical element—*Niton*—added to the list of chemical elements. 1913. Wireless message sent directly across the Atlantic without relaying.	
1914. Portuguese cabinet resigns, Bernardino Machado Premier. Portugal supports the Triple Entente.	1914. Greece retains the Aegean islands wrested from Turkey. Italy refuses to declare war on Triple Entente, and, together with Greece, declares neutrality in European war.	1914. Russian Premier Kokovtsov resigns. As a member of the Triple Entente joins in war on the Teutonic alliance.	1914. Confucianism becomes state religion in China.	1914. Direct wireless established between Germany and United States.	

PARALLEL OUTLINES OF AMERICAN HISTORY—Continued

II. THE COLONIAL PERIOD, 1607-1775—Continued

The Southern Colonies	The Middle Colonies	New England Colonies	English Rulers and Events
1619. Negro slaves first imported into Virginia. Coming of the "ninety maidens" to Virginia, resulting in the introduction of family life. 1622. Indian massacre in Virginia. 1624. Virginia becomes a royal province.	1626. Founding of New Amsterdam (later New York City).	1622. First settlement in New Hampshire at Piscataqua.	1625-1649. Charles I. 1628. Petition of Right.
	1629. Establishment of the patroon system to encourage settlement in New Netherland.	1629. Charter granted to the Massachusetts Bay Company. 1629-1640. The "Great Migration" of Puritans to Massachusetts. 1633-1636. Colonization of Connecticut River valley.	
1634. Maryland founded by Lord Baltimore.	1638. Swedish settlement on the Delaware River.	1636. First college in America founded by Massachusetts. Two years later it is named Harvard in honor of John Harvard. Roger Williams settles Rhode Island. 1639. The "Fundamental Orders" of Connecticut. First press in America set up at Cambridge.	1640. Meeting of the Long Parliament. 1642. Civil War begins.
1642-1652. Governor William Berkeley's first administration of Virginia.			
1649. The Maryland Toleration Act.	1647-1664. Peter Stuyvesant governor of New Netherland. 1655. The Swedish settlements on the Delaware conquered by the Dutch.	1643. Organization of the New England Confederation.	1649. Execution of Charles I. 1649-1660. The Commonwealth. 1660. Restoration of the Stuarts.
1658-1677. Governor Berkeley's second administration in Virginia.			
1663. Carolina granted to eight proprietors.	1664. New Netherland, conquered by the English, becomes New York. 1664. New Jersey granted to Berkeley and Carteret.	1662. Charter granted to Connecticut. 1663. Charter granted to Rhode Island.	1660-1685. Charles II. The Navigation Acts (1651, 1660. 1663, 1672, 1696.)
1669. Locke's Fundamental Constitutions for the Carolinas drawn up. 1670. Charleston, S. C., founded.			
1676-1677. Bacon's Rebellion in Virginia.		1675-1676. King Phillip's war in New England.	
	1681. Grant of Pennsylvania to William Penn. 1682. Philadelphia laid out by Penn. 1683. First Assembly in New York under English rule.	1684. Massachusetts becomes a royal colony. 1686-1689. Andros, governor of New England.	1685-1689. James II. 1688-1689. The "Glorious Revolution."
	1689-1690. Leisler's rebellion in New York.	1691. Incorporation of Plymouth and Maine with Massachusetts. 1691-1693. Salem witchcraft episode. 1700. Yale College founded.	1689-1702. William III and Mary.
1692. William and Mary College founded.			
	1702. New Jersey becomes a royal province.	1704. Appearance of "The Boston News Letter," the first newspaper in America.	1702-1714. Queen Anne. 1714-1727. George I. 1727-1760. George II.
1721-1729. The Carolinas become royal colonies. 1732. Organization of the Georgia Trustees to assist poor debtors and to form a military outpost against Spain. 1733. Savannah founded. 1736. Appearance of "The Virginia Gazette," first newspaper in the South.	1732. Zenger's trial and acquital in New York, establishes freedom of the press.		1733. Molasses Act.
	1752. Franklin experiments with electricity. 1765. First medical school in America at the University of Pennsylvania.		

II. THE COLONIAL PERIOD, 1607-1775—Continued

French Rulers	French Colonies	Spanish Rulers	Spanish Colonies
1589-1610. Henry IV.	1608. Champlain founds Quebec.	1598-1621. Philip III.	1610. Leon, Central America, is founded.
1610-1643. Louis XIII.	1611. French Jesuits settle at Port Royal.		1611. Talamanca Indians of Central America massacred by the Spanish.
	1615. Champlain explores Lake Huron, and establishes Indian missions.		1617. Separation of Rio de la Plata (modern Argentina) from Paraguay.
	1620-1635. Champlain governor of (New France) Canada.	1621-1665. Philip IV.	1630. Alvarado subdues Central American Indians.
	1629-1632. English capture and restore the French settlements in New France.		Hayti seized by French buccaneers.
	1634. Jean Nicolet explores Lake Michigan.		1630-1644. The Dutch get control of Brazil.
1643-1715. Louis XIV.	1641. Montreal founded.		1638. Discovery of the use of quinine in Peru.
	1659. French fur traders explore Lake Superior.		1644-1655. Portuguese expel the Dutch from Brazil.
	1668. Marquette establishes mission at Sault Ste. Marie.	1665-1700. Charles II.	1665. St. Augustine pillaged by English buccaneers.
	1669. La Salle explores the Ohio River.		1671. The Danes occupy St. Thomas.
	1671. The French take formal possession of the Northwest.		1685. Dampier, an English buccaneer, sacks Leon.
	1673. Marquette and Joliet discover the Upper Mississippi.		1693. Gold mining begins in Brazil.
	1681-1682. La Salle descends the Mississippi to its mouth.		1695. Capture of Cartagena by the French.
	1685-1687. La Salle attempts to colonize the lower Mississippi, fails to find its mouth, plants a short-lived settlement at Matagorda Bay, Texas, and is killed by his own men while journeying overland to Canada.	1700-1746. Philip V.	1698. The Darien scheme; 1,200 Scotchmen attempt to settle on the Isthmus but fail.
	1699. Biloxi founded by Iberville and Bienville.		1711. French capture Rio de Janeiro, but restore it.
	1702. Settlement in Alabama on the Mobile river.		1713. By the Treaty of Utrecht, England gains right of supplying Spanish colonies with African slaves.
	1710. Port Royal captured by an English fleet.		1726. Founding of Montevideo.
1715-1774. Louis XV.	1718. New Orleans founded.		1740. Oglethorpe attacks St. Augustine, Florida, but is repulsed.
	1729. Massacre of French at Natchez by Indians.		1742. The Spanish invade Georgia unsuccessfully.
	1749. French take possession of Ohio Valley. Fort Rouille (Toronto) built.	1746-1759. Ferdinand VI.	1746. Lima destroyed by an earthquake.
			1759. Expulsion of Jesuits from Brazil.

STRUGGLE OF FRANCE AND ENGLAND FOR NORTH AMERICA: THE INTERCOLONIAL WARS.

Causes	Events	Results
General: Historical rivalry between the French and English nations. Opposite tendencies and characteristics of their colonists. Simply the American phase of European wars.	**1689-1697. King William's war.** 1690. Destruction of Schenectady and other towns by the French and Indians. Seizure of Port Royal by the English.	1697. Peace of Ryswick. Restoration of conquests by both nations.
Special: Conflicting claims regarding Acadia and New France. Conflicting claims for the Ohio Valley. Disputes over boundaries. Clashes between the frontiersmen of the two nations. The Indian policies of the two nations, resulting in incessant Indian troubles.	**1702-1713. Queen Anne's war.** 1704. Deerfield destroyed by French and Indians. 1706. Invasion of Carolina by French and Spanish. Their repulse by William Rhett. 1710. Capture of Port Royal, Acadia, by an English fleet, and change of name to Annapolis.	1713. Treaty of Utrecht. France ceded to England the Hudson Bay region, Nova Scotia (Acadia), Newfoundland, and St. Christopher island (in the West Indies).
	1744-1748. King George's war. 1745. Siege and capture of Louisburg, Cape Breton Island, by colonial troops.	1748. Treaty of Aix-la-Chapelle. Mutual restoration of conquered territory.
	1754-1763. Old French and Indian war. 1754. Congress of Albany. The Albany Plan of Union. 1755. Banishment of Acadians (French) from Nova Scotia. 1755. Braddock's defeat. 1757. Capture of Fort William Henry by the French. 1758. Capture by the English of Louisburg, and of Fort du Quesne. The latter place is renamed Fort Pitt (Pittsburg). 1759. Capture of Quebec by General Wolf, Sept. 13. 1760. Capture of Montreal by the English. 1761. Capture of Havana by the English.	1763. Treaty of Paris. France ceded to England all Canada (except two unfortified islands in the Gulf of St. Lawrence), and all her territory east of the Mississippi except New Orleans; and to Spain all her territory west of the Mississippi, and New Orleans. Spain ceded to England Florida in exchange for Havana. The war created a bond of union among the colonists and gave the colonists some experience in warfare.

III. PERIOD OF UNION AND INDEPENDENCE, 1761-1783

Spanish Colonies	Causes of the Revolution	British Colonies
	Increasing divergence of English and American institutions.	1761. James Otis argues against the legality of the issuance of Writs of Assistance.
	The colonial policy of England (the "mercantile system"), by which the colonies were arbitrarily governed.	1763. Patrick Henry, in the "Parson's Cause," attacks the king's veto power.
	Restrictions on external and internal trade through the Navigation acts.	1765. Passage of the Stamp act by the English Parliament. The Stamp Act Congress, representing nine colonies, meets in New York, October 7, to protest against the Stamp act.
	Restrictions on manufactures.	Adoption of resolutions by the Virginia House of Burgesses, proposed by Patrick Henry, against the exercise of the taxing power by England.
	Arbitrary methods of enforcing the trade laws.	Organization of the Sons of Liberty.
	Insistence of the colonists upon their rights as Englishmen.	1766. The Stamp act is repealed, but the Declaratory act passed by the English Parliament.
	Contests between the royal governors and the popular assemblies.	1767. Passage of the Townshend acts, levying new duties, providing for the reorganization of the Colonial Customs Service, and providing for the coercion of the New York Assembly.
1765-1778. Abrogation of restrictions upon Spanish colonial trade.	Fear that the crown would appoint a bishop to control the colonial church.	1768. The circular letter of Massachusetts sent to the other colonies. Troops sent to Boston.
	Taxation of the colonists without representation.	1769. The second set of Virginia resolutions adopted.
	Maintenance of a standing army in the colonies.	1770. The "Boston Massacre," March 5. Repeal of duties, except on tea.
1768. Unsuccessful revolt of the French against Spanish rule in Louisiana; severely punished.	(See the Declaration of Independence for an American statement of the causes of the war.)	1772. Organization of local Committees of Correspondence.
		1773. Organization of colonial Committees of Correspondence. The Boston Tea Party. Daniel Boone in Kentucky.
1773-1774. Earthquakes and volcanic eruptions in Central America destroy Santiago and Old Guatemala.	**Results of the Revolution**	1774. Passage of the "Intolerable Acts" by Parliament to punish Massachusetts. Meeting of the First Continental Congress at Philadelphia, September 5.
1776. Creation of the viceroyalty of Buenos Ayres, including also Uruguay, Paraguay, and Bolivia.	By Treaty of Paris: England acknowledges the independence of the United States. The boundaries of the United States are fixed. Free navigation of the Mississippi and the Great Lakes is given the United States. Certain rights in the fisheries are given the United States. England cedes Florida to Spain.	1775. Passage of the New England Restraining Act by Parliament. The beginning of war between England and her colonies at Lexington, April 19. Meeting of the Second Continental Congress, May 10.
		1776. Appointment of committees in Congress to draft a form of confederation for the colonies, to draft a Declaration of Independence, and to form foreign alliances.

PRINCIPAL CAMPAIGNS AND BATTLES OF THE AMERICAN REVOLUTION.

The leading battles are indicated in **bold-face**; successful commanders in *italics*

Date	Names and Places of Battles	Commanders: American	Commanders: British	Engaged: Amer.	Engaged: British	THE UNITED STATES
1775-1776	**Campaign in New England.**					
April 19, 1775	**Lexington, Concord**	Barret and Butterick.	*Smith* and *Lord Percy*	.....	1700	
May 10, 1775	Ticonderoga	Ethan Allen and *Eaton.*	Delaplace.	83	48	
June 17, 1775	**Bunker Hill**	Warren, Prescott and Putnam.	*Howe* and *Pigot.*	3000	4500	
Dec. 6-31, 1775	Quebec	Schuyler, Montgomery and Arnold	*M'Lean* and *Carleton*	900	1200	
Dec. 9, 1775	Norfolk, Va.	Woodford	Lord Dunmore.	.....	.....	
Mar. 17, 1776	Boston	The British evacuate the city and harbor.				1776. Adoption of the Declaration of Independence, July 4. It is signed August 2. Delaware forbids the further importation of slaves.
June 28, 1776	Charleston (Ft. Moultrie).	*Moultrie, Lee* and Armstrong.	Clinton.	400	4000	
1776-1778.	**Campaign in Middle States.**					
Aug. 26, 1776	Brooklyn, L. I.	Green and Sullivan.	*Howe, Clinton* and *Cornwallis.*	10000	20000	
Sept. 16, 1776	Harlem Plains, N. Y.	Washington.		.....	.....	
Oct. 28, 1776	**White Plains, N. Y.**	Washington.	*Howe.*	1600	2000	
Nov. 16, 1776	Fort Washington, N. Y.	Magaw.	*Howe.*	3000	5000	
Dec. 26, 1776	**Trenton, N. J.**	*Washington.*	Lord Cornwallis and Rahl.	2400	1000	
Jan. 3, 1777	**Princeton, N. J.**	*Washington.*	Mawhood.	3000	1800	1777. The Articles of Confederation are sent to the states for ratification.
Aug. 15, 16, 1777	**Bennington, Vt.**	*Stark* and *Warner.*	Baum and Beyman.	.....	1200	
Sept. 11, 1777	Brandywine, Pa.	Washington.	*Howe.*	11000	18000	
Sept. 19, 1777	**Bemis Heights, N. Y.**	*Gates.*	Burgoyne.	2500	3000	
Oct. 4, 1777	Germantown, Pa.	Washington	*Howe.*	11000	15000	
Oct. 7, 1777	**Stillwater** (Saratoga).	*Gates.*	Burgoyne.	8000	6000	
June 28, 1778	**Monmouth, N. J.**	*Washington.*	Sir Henry Clinton.	12000	11000	1778. An offensive and defensive alliance is concluded with France (the first and only such alliance concluded in the history of the United States). A commercial treaty is also signed with France.
1778-1781.	**Campaign in the South.**					
Dec. 29, 1778	Savannah, Ga.	Robert Howe.	*Campbell.*	900	2000	
Mar 3, 1779	Brier Creek, Ga.	Ashe.	*Prevost.*	1200	1800	1779. Sept. 23. Victory of the *Bon Homme Richard*, John Paul Jones, commander, over the *Serapis*, Captain Pearson, commander. The most daring naval exploit of the war.
July 16, 1779	Stony Point, N. Y.	*Wayne.*	Clinton.	1200	600	
Aug. 29, 1779	Chemung, N. Y.	*Sullivan.*	Brant.	4000	1500	
Oct. 9, 1779	Savannah, Ga.	Lincoln.	*Prevost.*	4500	2900	
May 12, 1780	Charleston, S. C.	Lincoln.	*Clinton.*	3700	9000	1780. Massachusetts adopts a state constitution containing a clause in the bill of rights which in 1784 was interpreted to prohibit slavery.
Aug 15, 1780	Camden S. C. (Sanders Creek).	Gates.	*Cornwallis.*	3000	2200	
Oct. 7, 1780	**King's Mountain, N. C.**	*Campbell.*	Ferguson.	900	1100	
Jan. 17, 1781	**Cowpens, S. C.**	*Morgan.*	Cornwallis and Tarleton.	900	1100	Pennsylvania provides for gradual emancipation.
Mar. 15, 1781	Guilford C. H., N. C.	Greene.	*Cornwallis.*	4400	2400	The treason of Benedict Arnold at West Point and the capture and execution of Major André.
April 25, 1781	Hobkirk's Hill, S. C.	Greene.	*Rawdon.*	1200	900	
Sept. 6, 1781	New London, Conn., Fort Griswold.	Ledyard.	*Benedict Arnold* and *Eyre.*	150	800	
Sept. 8, 1781	**Eutaw Springs, S. C.**	*Greene.*	Lord Rawdon.	2000	2800	
Oct. 17-19, 1781	**Yorktown, Va.**	*Washington.*	Cornwallis.	16000	7500	1781. Articles of Confederation go into effect.

IV. PERIOD OF THE CONFEDERATION, 1781-1788

THE UNITED STATES: Foreign and Commercial Affairs	THE UNITED STATES: Domestic Affairs	British North America	Latin America and the West Indies
	1781. The "Five per cent. Amendment" to the Articles of Confederation is proposed but is later defeated by Rhode Island. 1781-1802. Cession to Congress of the claims of various states to western lands.		1780. Peruvian insurrection led by Amaru.
1782. Holland recognizes the independence of the United States. 1783. Denmark, Sweden, Spain and Russia recognize American independence. Peace signed with Great Britain, Sept. 3.	1783. The revenue amendment is proposed. Is defeated later by New York. Washington resigns his command December 23.	1783. Treaty of Paris leaves Canadian boundaries and fishing rights ambiguous.	
1784. Congress adopts the decimal system of coinage.	1784. Congress passes the Jefferson ordinance for the government of the West. Dispute between Connecticut and Pennsylvania over the Wyoming Valley. Organization of the Methodist Episcopal church in America.	1784. About 40,000 Loyalists from U. S. settle in Nova Scotia and Upper Canada (west of Ottawa river). Province of New Brunswick, with Loyalist population, separated from Nova Scotia.	
1785. Benjamin Franklin returns from his post in France, and is succeeded by Thomas Jefferson. John Adams is appointed minister to England. 1785-1787. Commercial disputes between various ones of the States.	1785. Passage of the ordinance for the survey and administration of the Western territory. Disestablishment of the Anglican Church in Virginia by the passage of the Religious Freedom Act.	1785. Lieut.-Gov. Hope reports dissensions regarding laws, land tenure, religion and education between French Canadians, (200,000) on lower St. Lawrence river, and "United Empire Loyalists" (some 10,000) settled between Montreal and Kingston.	
1786. A convention at Annapolis to adjust the commercial difficulties between the states leads to the call for the Philadelphia Convention of 1787. Commercial treaty is concluded with Prussia.	1786. Shays's rebellion in Massachusetts. The craze for paper money results in its issue in seven states. Culture of sea-island cotton introduced into Georgia and South Carolina. 1787. The "Ordinance of 1787" guarantees to the Northwest religious freedom, freedom from slavery, encouragement of education, civil liberty, and the admission into the Union of new states from that section. The Philadelphia Convention, in session from May 25 to Sept. 17, formulates a new Constitution and sends it to the states for ratification. 1788. The new Constitution is ratified by a sufficient number of states to put it into force.	1786. Sir Guy Carleton, soon afterward made Lord Dorchester, appointed Gov.-Gen. over whole of British North America. 1788. Lord Dorchester, in spite of racial disputes, advises against dividing province of Canada into two. But British government, in response to popular demand, prepares to divide the province and provide for representative government.	1786. Pacification of the negroes and Indian tribes in Dutch Guiana.

V. FROM THE ADOPTION OF THE CONSTITUTION TO THE CIVIL WAR, 1789-1861

THE UNITED STATES			BRITISH NORTH AMERICA	LATIN AMERICA AND THE WEST INDIES
POLITICAL EVENTS	PRESIDENTS AND CABINET OFFICIALS	SOCIAL AND INDUSTRIAL PROGRESS		
1789. Organization of the executive, legislative, and judicial departments of the new government. The first Congress meets in New York. 1790. First decennial census is taken. Congress decides to locate the national capital on the banks of the Potomac. Assumption of the public debts previously contracted by the several states. Passage of the first excise law. 1790-1795. War with the Indians north of the Ohio. 1791. Organization of the First National Bank. Ratification of the first ten amendments to the Constitution. Admission of Vermont into the Union.	**George Washington,** *President.* John Adams, *Vice-President.* Thomas Jefferson, *Secretary of State.* Alexander Hamilton, *Secretary of Treasury.* Henry Knox, *Secretary of War.* Edmund Randolph, *Attorney-General.*	1789. Control over foreign commerce passes from the states to the federal government. North Carolina establishes the first of the state universities. 1790. Samuel Slater sets up first complete cotton machinery at Pawtucket, Rhode Island. First patent law is passed. Organization of the "Pennsylvania penal system." 1790-1799. Rapidly increasing demand for cotton. 1791. Alexander Hamilton's Report on Manufactures. Formation of the New York Society for promoting Agriculture.	1789 and 1793. Sir Alexander Mackenzie explores the Athabasca region. 1790. British Parliament appropriates £3,110,000 to reimburse the Loyalists for their losses in the American Revolution. 1791. "Constitutional Act" passed by British Parliament separating Canada into Upper and Lower provinces, with Ottawa river as boundary. Each province was granted a legislature comprising an appointed upper house and an elected lower house. Accordingly French law was continued in Lower while English law was established in Upper Canada. Protests came only from the small British element in Lower Canada.	1791. Beginning of the negro insurrection in Hayti, prompted by French revolutionary doctrines.
1792. Admission of Kentucky. Formation of the first political parties under the Constitution.		1792. Founding of Williams College. Formation of the Massachusetts Society for promoting Agriculture.	1792. 1200 negroes previously carried from U. S. by Loyalists and emancipated, deported from Nova Scotia to Sierra Leone in West Africa as colonists.	
1793. The first proclamation of neutrality as to the war in Europe issued, April 22. First fugitive slave act passed. Cornerstone of national capitol laid by Washington. Case of Chisholm *vs.* Georgia decided. Genet's meteoric career as minister from France.	**George Washington,** *Reëlected President.* John Adams, *Reëlected Vice-Pres.* Thomas Jefferson, E. Randolph, T. Pickering, *Secretaries of State.* Alexander Hamilton, O. Wolcott, *Secretaries of Treasury.* Henry Knox, T. Pickering, J. McHenry, *Secretaries of War.* E. Randolph, W. Bradford, C. Lee, *Attorney-Generals.*	1793. Whitney invents the cotton gin; cotton production greatly stimulated. Establishment of a mint at Philadelphia. Appearance at Cincinnati of the first newspaper north of the Ohio, *The Sentinel of the Northwestern Territory.* Rapid expansion of American carrying-trade, resulting from American neutrality.	1793. Legislature of Upper Canada provides for gradual abolition of slavery.	
1794. Whisky insurrection in Western Pennsylvania. Jay treaty concluded with England. Ratified the next year. Wayne defeats the Indians at Maumee Rapids.		1794. Mail boats and passenger boats are established on the Ohio from Wheeling to Limestone (Maysville). Founding of Bowdoin College.	1794. Toronto, previously called York, made capital of Upper Canada. Jay Treaty affects Canadian Commerce.	1794. Toussaint L'Ouverture becomes leader of the Haytian revolt.
1795. Treaty of the Escurial with Spain. Treaty at Greenville with the Indians north of the Ohio. 1796. Admission of Tennessee. Washington issues his farewell address, September 17. The French Directory issues a decree against American commerce.		1795. Jacob Perkins patents a machine for cutting and heading nails. 1796. The first permanent type-foundry is established at Philadelphia. The New York Insurance company is incorporated.	1794-1795. Political disputes in Lower Canada over liquor licenses and fees. 1796. Resignation of Lord Dorchester after a decade of splendid service as Governor-General. Surrender by Great Britain of military posts in United States Northwest Territory.	1795. Subjugation and deportation of Jamaican Maroons (descendants of runaway slaves dwelling in mountain fastnesses). Etienue Boré founds the sugar industry in Louisiana.
1797. Special session of Congress to consider relations with France. The X. Y. Z. overtures. 1798. Adoption of the Eleventh amendment. Passage of the Alien and Sedition laws. The Virginia and Kentucky Resolutions. The navy department is established. Naval quasi-war with France. 1799. Second set of Kentucky Resolutions. Death of Washington. 1800. The capital is removed from Philadelphia to Washington. Treaty with France abrogates the treaty of alliance of 1778.	**John Adams,** *President.* Thomas Jefferson, *Vice-President.* T. Pickering, John Marshall, *Secretaries of State.* O. Wolcott, Samuel Dexter, *Secretaries of Treasury.* J. McHenry, Samuel Dexter, R. Griswold, *Secretaries of War.* Chas. Lee, *Attorney-General.* Benjamin Stoddert, *Secretary of Navy.*	1797. The first patent for a cast-iron plow is granted Charles Newbold of New Jersey. A financial panic. 1798. "Hail Columbia" is composed by Joseph Hopkinson. First salt manufactory established in Ohio. Merino sheep are introduced from Spain. 1799-1800. The "Great Revival" of evangelical religion. 1800. An act passed to permit the sale of small tracts of public land on credit. India rubber is first imported into the United States. 1800-1825. Beginning of labor organizations.	1797. Beginning of construction of Sault Ste. Marie Canal. 1800-1812. Many Americans and Scotch immigrate into Upper Canada.	1800. Transfer of Louisiana from Spain to France.
1801. John Marshall is appointed Chief Justice. The "party revolution" by which the Republicans displace the Federalists. 1801-1805. War with Tripoli. 1802. Spain withdraws the right of deposit at New Orleans.	**Thomas Jefferson,** *President.* Aaron Burr, *Vice-President.* James Madison, *Secretary of State.* Samuel Dexter, Albert Gallatin, *Secretaries of Treasury.* Henry Dearborn, *Secretary of War.* Levi Lincoln, *Attorney-General.*	1801. New York *Evening Post* is founded by Alexander Hamilton. Beginning of sheet-copper manufacturing at Canton, Mass. 1802. The Du Pont powder works established.		1801. Toussaint L'Ouverture declares Haytian independence and is made president of the "Black Republic" for life. 1802. Toussaint, after capitulation to a French Army, is imprisoned in France, where he dies in 1803. 1802. Dutch recapture British Guiana.

V. FROM THE ADOPTION OF THE CONSTITUTION TO THE CIVIL WAR—Continued

THE UNITED STATES

Political Events	Presidents and Cabinet Officials	Social and Industrial Progress	British North America	Latin America and the West Indies
1803. Louisiana is purchased from France for $15,000,000. Admission of Ohio. Case of Marbury vs. Madison is decided. 1804. Adoption of the twelfth amendment. Hamilton killed in a duel by Aaron Burr. 1804-1806. Lewis and Clark expedition.	Benjamin Stoddert, Robert Smith, *Secretaries of Navy.*	1803. Tobacco is exceeded by cotton as an export crop. South Carolina opens her ports to the foreign slave trade. First shipment of anthracite coal from Lehigh to Philadelphia. Grain-cradle is patented.	1803. Slavery made illegal in Lower Canada.	1803. Great Britain reacquires British Guiana by treaty. France abandons effort to subjugate Hayti. 1804-1806. Dessalines Emperor of Hayti; Massacre of White population.
1805. Failure of the Chase impeachment. 1805-1807. Conspiracy of Aaron Burr. 1806-1808. The European "Continental System" brings distress on American shippers.	**Thomas Jefferson,** *Reëlected President.* George Clinton, *Vice-President.* James Madison, *Secretary of State.* Albert Gallatin, *Secretary of Treasury.* Henry Dearborn, *Secretary of War.*	1805. Robert Fulton originates the marine torpedo. 1806. Passage of a bill for the construction of the Cumberland Road. Gas for lighting is first used by David Melville, Newport, R. I.	1806. Quarrels in Lower Canada between French and English over taxation system. First French-Canadian newspaper, *La Canadian*, established to lead crusade against English element as alien intruders.	1806. British Parliament prohibits slave-trading in British ships and the importation of slaves into British colonies.
1807. The Embargo act passed. Chesapeake-Leopard affair. Congress prohibits foreign slave-trade after January 1, 1808.	Levi Lincoln, Robert Smith, J Breckenridge, C. A. Rodney, *Attorney-Generals.* Robert Smith, J. Crowninshield, *Secretaries of Navy.*	1807. Gallatin's famous report on Roads, Canals, Harbors, and Rivers. Successful trip of Fulton's steamboat, the *Clermont*, from New York to Albany. 1808. American Fur Company founded by J. J. Astor.	1807. Governor Sir James Craig suppresses *Le Canadian* temporarily. 1807-1812. Struggle between Craig, supported by an English clique, and the French majority in the assembly.	1806-1811. Christopher President (King 1811-1820) of Hayti. 1808. Royal family of Portugal emigrates to Brazil.
1809. The Embargo act is repealed and a non-importation act passed. 1810-1814. The United States takes possession of West Florida. 1811. Battle of Tippecanoe with the Indians. Henry Clay and John C. Calhoun first appear in the House of Representatives. 1812. War declared against Great Britain. Admission of Louisiana.	**James Madison,** *President.* George Clinton, *Reëlected Vice-Pres.* Robert Smith, James Monroe, *Secretaries of State.* Albert Gallatin, *Secretary of Treasury.* William Eustis, J. Armstrong, *Secretaries of War.* C. A. Rodney, Wm. Pinkney, *Attorney-Generals.* Paul Hamilton, William Jones, *Secretaries of Navy.*	1810. Exhibition at Pittsfield, Massachusetts, of Merino sheep; is called the first county fair. Metallic pens first made by Peregrine Williamson of Baltimore. 1811. The first steamboat leaves Pittsburgh for New Orleans via the Ohio and Mississippi Rivers. Wooden shoe pegs invented. Beginning of an era of state banking activity. 1812. First metallic pen factory is established in New York. Invention of stoves built with grates to secure draft.	1812-1814. War between United States and Great Britain evokes Canadian loyalty to British Empire. American attempts to invade Canada repulsed.	1810. Revolutionary movements begin in Argentina and Chile. 1810-1815. Revolt led by Hidalgo in Mexico unsuccessful. 1811. Paraguay declares independence. Revolution begins in Columbia and Venezuela. 1811-1812. Francisco Miranda, Dictator of Venezuela.

THE WAR OF 1812, 1812-1815

Causes	Results	New England Opposition
Violation of the American flag on the high seas. The blockade of American ports. Impressment of American seamen. The destruction of American commerce by the Orders in Council. Aid given by the British traders to the Indians of the Northwest, thus inciting them to war. The desire on the part of the westerners to get possession of Canada.	Treaty of Ghent, Dec. 24, 1814, provided: For the cessation of hostilities. For the appointment of commissioners to settle boundaries. Restoration of conquests. The war developed a consciousness of nationality. It gained fame for Jackson and Harrison, thus affecting our later political history. It promoted the growth of American manufactures.	Caused by the destruction of New England commerce through the commercial policy of the "Virginia dynasty," the declaration of war being regarded as the culmination of this policy. The Opposition was shown: By the vote of New England Congressmen against the war. By the refusal of New England states to furnish their military quota. By the refusal of their financiers to make loans to the government. By the sale of provisions to the English armies. By the Hartford Convention.

PRINCIPAL LAND BATTLES

1812. Aug. 15, Surrender of Hull to Brock at Detroit.
Oct. 13, defeat of Van Rensselaer by Brock at Queenstown.

1813. April 27, York is taken by Gen. Dearborn and the Parliament House burned.
Oct. 5. Harrison defeats Proctor at Thames, Canada.
Nov. 11, at Chrysler's Farm, near Montreal, the Americans are defeated and driven from Canada.
1814. July 25, Battle of Lundy's Lane, claimed by both sides as a victory.
Aug. 24, capture of Washington and burning of public buildings.
1815. Jan. 8, Battle of New Orleans.

PRINCIPAL NAVAL BATTLES

1812. Aug. 19, The *Constitution* destroys the *Guerriere*.
Oct. 18, the *Wasp* captures the *Frolic*. Both are afterwards captured by the British frigate *Poictiers*.
Oct. 25, the *United States* captures the *Macedonia*.
Dec. 29, the *Constitution* captures the *Java*.
1813. Feb. 24, the *Hornet* captures the *Peacock*.
June 1, the *Chesapeake* is captured by the *Shannon*.
Sept. 10, Commodore Perry with a fleet of nine vessels destroys the British squadron of six vessels on Lake Erie.
1814. Sept. 3, naval attack on Fort McHenry by the British fails.
Sept. 11, Captain Macdonough destroys a British fleet on Lake Champlain, resulting in retreat of British from the U. S.

THE UNITED STATES

Political Events	Presidents and Cabinet Officials	Social and Industrial Progress	British North America	Latin America and the West Indies
1812-1815. Algerine War. 1813-1814. War with the Creeks. 1814. The Hartford Convention proposes seven amendments to the Constitution.	**James Madison,** *Reëlected President.* Elbridge Gerry, *Vice-President.* James Monroe, *Secretary of State.* Albert Gallatin, G. W. Campbell,	1814. "First complete factory in the world" established at Waltham, Massachusetts, by Francis Cabot Lowell. Francis Scott Key composes "Star Spangled Banner."	1813. Lord Selkirk plants an agricultural colony on Red River, which survives in spite of litigation and violence by the North-West Company and suffering from cold, hunger and poverty.	1814. Simon Bolivar made revolutionary dictator of Venezuela, but is driven out by royalist army.

V. FROM THE ADOPTION OF THE CONSTITUTION TO THE CIVIL WAR—Continued

THE UNITED STATES			BRITISH NORTH AMERICA	LATIN AMERICA AND THE WEST INDIES
POLITICAL EVENTS	PRESIDENTS AND CABINET OFFICIALS	SOCIAL AND INDUSTRIAL PROGRESS		
1815. Captain Decatur forces Dey of Algiers to renounce tribute. Treaty of peace with England ratified.	A. J. Dallas, W. H. Crawford, *Secretaries of Treasury.* J. Armstrong, James Monroe (*Acting*)	1815. First ocean steam-boat trip, New York to Norfolk. North American Review begins publication.		1815-1821. Guerrilla warfare in Mexico. 1815. Congress of Vienna unites European powers in prohibition of African slave-trade.
1816. Second Bank of the United States is chartered. Admission of Indiana. American Colonization Society formed. It founds Liberia. Increased agitation for internal improvements. First tariff primarily for protection is passed.	A. J. Dallas, W. H. Crawford, *Secretaries of War.* William Pinkney, Richard Rush, *Attorney-Generals.* William Jones, B. W. Crowninshield, *Secretaries of Navy.*	1816. Inception of the "Auburn penal system." Church of the Desciples is formed. The first steamer on Lake Ontario appears. The first savings bank in America is opened at Philadelphia.		
1817. Admission of Mississippi. Congress prohibits foreign vessels engaging in the United States coasting trade. 1817-1818. Seminole war.	**James Monroe,** *President.* D. D. Thompkins, *Vice-President.* John Q. Adams, *Secretary of State.*	1817. Ground broken for the construction of the Erie Canal. First instruction of deaf mutes in America by T. H. Gallaudet, at Hartford, Connecticut.		1817-1823. Bernardo O'Higgins, Director of the Chilian state.
1818. Fisheries and boundary convention with Great Britain. Admission of Illinois.	W. H. Crawford, *Secretary of Treasury.* Isaac Shelby, Geo. Graham,	1818. First steamer on Lake Erie, the "Walk-in-the-Water." Congress grants increased protection to the iron industry.	1818. Agitation in Upper Canada, led by Gourlay, against the reserves of public land for support of Anglican clergy.	1818. Bolivar renews war for Venezuela and Colombian independence.
1819. Admission of Alabama. Florida purchased by the United States. Financial panic. Maine separated from Massachusetts. Dartmouth College case, and case of McCulloch *vs.* Maryland decided by Supreme Court.	John C. Calhoun, *Secretaries of War.* William Wirt, *Attorney-General.* B. W. Crowninshield, S. Thompson, *Secretaries of Navy.*	1819. Combination sail and steamship *Savannah* made trans-atlantic trip.	1819. In Lower Canada a long deadlock begins between governor and assembly upon financial questions.	1819-1830. Civil war and confusion in Argentina. 1819. Republic of Colombia founded, comprising New Granada, Venezuela and Ecuador.
1820. African slave-trade made piracy. Admission of Maine. Tenure of Office Act passed. The Missouri Compromise adopted.			1820. Gourlay is crushed, but the agitation in Upper Canada is continued by the Bidwells, father and son. Dalhousie College founded at Halifax.	
1821. Case of Cohens *vs.* Virginia decided. The second Missouri Compromise and the admission of Missouri.	**James Monroe,** *Reëlected President.* D. D. Tompkins, *Reëlected Vice-Pres.* John Q. Adams, *Secretary of State.* W. H. Crawford, *Secretary of Treasury.* J. C. Calhoun, *Secretary of War.* William Wirt, *Attorney-General.*	1821. Credit sales of public lands stopped. Statistics of immigration first kept. Daily meeting with regular call of stocks begun on "Change" in New York. First public high school in United States opened in Boston. Publication of Edward Livingston's reformed code of laws for New York.		1821. Independence proclaimed in Peru, Nicaragua, Salvador and Costa Rica. John VI. returns from Brazil to Portugal, leaving his eldest son, Dom Pedro as regent. Iturbide revolution in Mexico. 1821-1830 Bolivar president and dictator of Colombia.
1822. The independence of South American republics recognized. Reciprocity treaty with France concluded.	S. Thompson, J. E. Rogers, S L. Southard, *Secretaries of Navy.*	1822. Gaslight introduced into Boston.	1822. Proposal is made in British House of Commons for a reunion of Upper and Lower Canada. In response to protest from French Canadians the bill is withdrawn.	1822. Brazil declares independence and makes Dom Pedro its Emperor. 1822. Iturbide declared Emperor of Mexico. 1822-1843. Boyer, President of Hayti.
1823. President Monroe states the "Monroe Doctrine" in his annual message to Congress.		1823. Champlain canal, connecting the Hudson at Albany with Lake Champlain, opened.		1823. Revolt led by Santa Anna overthrows Iturbide, who is executed, 1824.
1824. Protective policy greatly extended by an act of Congress. Case of Gibbons *vs.* Ogden decided. Visit of La Fayette to the United States.		1824. Glazed-ground wall-papers are first made. Hemlock tanning factory established in Green County, New York.	1824. Founding of the Canada Co. to promote colonization in the district about Lake Huron. W. L. McKenzie founds the *Colonial Advocate* to attack the administration in Upper Canada. A mob wrecks the printing office, but this increases the influence of the paper. McKenzie is repeatedly expelled from the legislature.	1824. Mexico adopts federal republican constitution. Bolivar establishes Peruvian independence and is made dictator. 1824-1839. Federal republic of Central America. Chronic disorder.
1825. Presidential election is thrown into the House of Representatives and results in the choice of Adams. Treaty of 1824 with Russia regulating navigation and fisheries in the Pacific is ratified. 1825-1831. Dispute with Georgia over Indian land cessions.	**John Q. Adams,** *President.* J. C. Calhoun, *Vice-President.* Henry Clay, *Secretary of State.* Richard Rush, *Secretary of Treasury.* James Barbour, P. B. Porter, *Secretaries of War.* William Wirt, *Attorney-General.*	1825. Erie canal is completed. Appearance of *The Workingman's Advocate*, the first representative of the labor press in the U. S. Isaac Babbitt of Taunton, Mass. invents babbitt metal.		1825. Portugal recognizes Brazilian independence. Uruguay revolts from Brazil, achieving independence in 1828. Upper Peru separates from Peru, taking name of Bolivia and adopting curious constitution framed by Bolivar.
1826. Death of Thomas Jefferson and John Adams, July 4th.	S. L. Southard, *Secretary of Navy.*	1826. The Quincy tramway, sometimes wrongly called the first railroad in the U. S., is built from Quincy to tidewater, three miles away.		1826. Panama Congress called by Bolivar, with a view to general Latin-American federation. Various treaties are arranged; but the main purpose is defeated by non-participation of Chile and Argentina.
1827. Convention between U. S. and Great Britain to settle northeastern boundary. Anti-Masonry has its rise.		1827. Baltimore and Ohio railroad is chartered. First rail laid July 4, 1828.	1827. French malcontent majority in Lower Canada assembly elect the agitator, Papineau, as speaker. Gov. Lord Dalhousie refuses his sanction on ground of Papineau's unfitness.	

V. FROM THE ADOPTION OF THE CONSTITUTION TO THE CIVIL WAR—Continued

THE UNITED STATES			BRITISH NORTH AMERICA	LATIN AMERICA AND THE WEST INDIES
POLITICAL EVENTS	PRESIDENTS AND CABINET OFFICIALS	SOCIAL AND INDUSTRIAL PROGRESS		
1828. Tariff of Abominations passed. Publication of Calhoun's "Exposition" in protest.			1828. British Parliament appoints committee of investigation, but its report offers no solution of the Lower Canadian problem. Beginning of demand for responsible government in Upper Canada.	1828. Mexican presidential election produces civil war.
1829. The Postmaster General made a member of the President's Cabinet. Sweeping changes in the civil service.	**Andrew Jackson,** *President.* John C. Calhoun, *Reëlected Vice-Pres.* M. Van Buren, Edw. Livingston, *Secretaries of State.*	1829. The steam locomotive is first successfully used. Process of manufacturing galvanized iron is perfected.	1829. Opening of Welland Canal. 1829-1830. Quarrel in Nova Scotia over quit-rents, and popular discontent at the domination of an oligarchy. Discontent also in New Brunswick, Prince Edward's Island and Cape Breton.	1829. Venezuela withdraws from Republic of Colombia. Slavery abolished in Mexico. 1829-1833. Santa Anna dictator in Mexico.
1830. First general pre-emption law passes. West Indian trade is opened to American vessels. The famous Webster-Hayne debate in the U. S. Senate.	S. D. Ingham, Louis McLane, *Secretaries of Treasury.* J. H. Eaton, Lewis Cass, *Secretaries of War.* J. McP. Berrien, R. B. Taney, *Attorney-Generals.* John Branch, Levi Woodbury, *Secretaries of Navy.* W. T. Barry, *Postmaster-General.*	1830. Organization of the Church of Latter Day Saints (Mormons). Baldwin Locomotive works established in Philadelphia. Chloroform discovered by Samuel Guthrie.	1830-1831. Efforts at conciliation in Lower Canada thwarted by Papineau.	1830. Ecuador separates herself from Colombia.
1831. The Anti-Masonic party holds the first national nominating convention. Rise of the Abolitionists. Garrison publishes the *Liberator*. Treaty with France for the payment of claims.		1831. Wm. Manning patents the first mowing machine. Opening of the first school for the blind. McCormick invents (but does not patent) the first successful reaper.		1831. Upon abdication of Dom Pedro I., his son, Dom Pedro II, becomes Emperor of Brazil.
1832. National Republican party frames the first party platform with Henry Clay as its presidential candidate. Black Hawk War. New tariff law enacted. Nullification in South Carolina. Jackson vetoes the U. S. Bank bill.		1832. The Ohio river joined to Lake Erie by the Ohio canal. First street railway in the U. S. commences running in New York. Pork packing industry begins in Chicago.	832. Opening of Rideau canal.	1832. Residue of Republic of Colombia adopts name of New Granada, with new constitution. Santa Anna elected President of Mexico. Continues, with occasional vicissitudes, to be virtual dictator during remainder of his long life. 1832-1836. Santander, President of New Granada. Interlude of peace.
1833. U. S. bank deposits removed from the National Bank and placed in "pet" banks. Compromise tariff is passed, providing a gradual reduction of duties.	**Andrew Jackson,** *Reëlected President.* Martin VanBuren *Vice-Pres.* Edw. Livingston, Louis McLane, John Forsyth, *Secretaries of State* Louis McLane, Wm. J. Duane, Roger B. Taney, Levi Woodbury, *Secretaries of Treasury* Lewis Cass, B. F. Butler, *Secretaries of War* Roger B. Taney, B. F. Butler, *Attorney-Generals*	1833. Railroad from Charleston, S. C., to Augusta, Ga., completed. The first patent for a successful reaper is granted Obed. Hussey of Ohio. Ross Winans builds the first typical American passenger cars.		1833. British Parliament enacts law for emancipation of all slaves in British colonies, to be completed in 4 to 6 years; appropriates £20,000,000 in compensation to owners.
1834. Congress creates the Indian Territory. Resolution of Censure of Jackson passes the Senate. National debt is extinguished. Whig party first takes its name.	Levi Woodbury, M. Dickerson, *Secretaries of Navy* Wm. T. Barry, Amos Kendall, *Postmaster-Generals*	1834. McCormick patents an improved reaper. 1834 and 1837. Congressional acts change ratio of gold and silver from 15 to 1 to 16 to 1.	1834. The Ninety-two Resolutions, a French Canadian declaration of rights, claiming exaggerated powers for the provincial legislature.	1834-1839. Confederation of Peru and Bolivia.
1835-1836. Controversy over the dissemination of abolition literature through the U. S. mails. 1835-1842. Second Seminole War.		1835. Morse invents magnetic telegraph. Steam first applied to printing press. J. G. Bennett begins publication of New York *Herald*.	1835. A royal commission investigates but fails to relieve the deadlock by which the governor and assembly of Lower Canada keep each other impotent.	1835. Anglo-American settlers in Texas declare Texas independent of Mexico. 1835-1852. Rosas dictator in Argentina.
1836. Admission of Arkansas. Bill passes Congress for the distribution of the surplus revenue among the states. Jackson issues the "Specie Circular." 1836. Roger B. Taney is made Chief Justice. 1836-1844. J. Q. Adams fights the "gag resolution" excluding anti-slavery petitions from Congress.		1836. Friction match is patented. First American patent for a typewriting machine. Over 20,000,000 acres of public land sold in one year. 1836-1838. Invention of the screw propeller.		1836. Massacre of captives by Mexican troops at Alamo, Texas. Samuel Houston, President of Texan Republic, defeats Mexican army at San Jacinto, and captures Santa Anna.
1837. Admission of Michigan. Formation of the Liberty party. The Caroline Affair. Passage of the "expunging resolution." Great financial panic.	**Martin Van Buren,** *President.* R. M. Johnson, *Vice-President.* John Forsyth, *Secretary of State.* Levi Woodbury, *Secretary of Treasury* J. R. Poinsett, *Secretary of War.*	1837. Massachusetts State Board of Education is organized with Horace Mann as its first secretary. Invention of the hot-air blast in iron smelting.	1837. French and British factions in Lower Canada take arms. Clash at Montreal, November 6. Insurrection by French on Richelieu river quickly crushed by British army. Insurrection of radicals in Upper Canada, led by McKenzie and M. S. Bidwell, promptly put down by Lieut.-Gov. Head.	1836-1848. The New Granada "twelve years" of clerical and oligarchial oppression.

V. FROM THE ADOPTION OF THE CONSTITUTION TO THE CIVIL WAR—Continued

THE UNITED STATES			BRITISH NORTH AMERICA	LATIN AMERICA AND THE WEST INDIES
POLITICAL EVENTS	PRESIDENT AND CABINET OFFICIALS	SOCIAL AND INDUSTRIAL PROGRESS		
1838. "Underground railroad" begins aiding fugitive slaves to escape from the South. 1838-1839. "Aroostook War" between Maine and New Brunswick.	B. F. Butler, Felix Grundy, Henry D. Gilpin, *Attorney-Generals.* M. Dickerson, J. K. Paulding, *Secretaries of Navy.* Amos Kendall, John M. Niles, *Postmaster-Generals.*	1838. First shipment of grain from Chicago. *Great Western* and *Sirius* cross the Atlantic.	1838, May. Earl of Durham, a liberal imperialist, appointed governor. Proclaims amnesty and investigates conditions in both Canadas. Resigns in November to present his views in the British Parliament.	1838. Revolt of Carrera in Guatemala overthrows Central American Union. Emancipation of slaves completed in British colonies, Jamaica, Barbadoes, Bahama, Bermuda, Guiana, etc. 1838-1841. Mirabeau B. Lamar, President of Texas.
1839-1847. "Anti-Rent" agitation in New York.		1839. Vulcanized rubber patented by Goodyear. J. W. Draper takes the first photograph from life.	1839. Lord Durham's famous report, advising reunion of two Canadas into single province to overcome French majority in Lower Canada and advocating responsible government. With consent of legislatures of both Canadas, Parliament passes Union Act on the Durham plan. Upper and Lower Canada, in spite of latter's much larger population, given equal representation in Union Legislature.	1839-1841. War between Peru and Chile.
1840. Passage of Sub-Treasury bill.		1840. Van Buren introduces the ten-hour system into the public establishments. Adams Express Company begins operation between New York and Boston.	1840-1847. In Nova Scotia agitation, led by Joseph Howe, for responsible government. Similar movement in New Brunswick.	
1841. The Sub-Treasury act repealed. Death of President Harrison, April 4. 1841-1842. Quarrel between President Tyler and the Whigs. Friction with England over the McLeod Affair. 1842. Decision in case of Prigg *vs.* Pennsylvania renders ineffective the old fugitive slave law. A new tariff act raises the existing rates. Webster-Ashburton treaty with England. Dorr's rebellion in Rhode Island. 1842-1848. Fremont's explorations of the West.	**Wm. H. Harrison,** *President.* John Tyler, *Vice-President.* (Harrison dies April 4, 1841, and is succeeded by **Tyler**). Daniel Webster, H. S. Legaré, A. P. Upshur, J. C. Calhoun, *Secretaries of State.* Thos. Ewing, Walter Forward, J. C. Spencer, Geo. M. Bibb, *Secretaries of Treasury.* John Bell, John McLean, John C. Spencer, Jas. M. Porter, Wm. Wilkins, *Secretaries of War.* J. J. Crittenden, H. S. Legaré, John Nelson, *Attorney-Generals.* Geo. E. Badger, A. P. Upshur, David Henshaw, T. W. Gilmer, John Y. Mason, *Secretaries of Navy.* Francis Granger, C. A. Wickliffe, *Postmaster-Generals.*	1841. Dorothy Dix begins her forty years' crusade for the better treatment of the insane. Horace Greeley establishes the New York *Tribune*. First steam fire-engine built and used in New York. 1842. Buffalo connected with the East by railway. Nasmyth steam-hammer invented. First factory for pocket knives established in Connecticut. First use of anaesthesia in a surgical operation by Dr. Crawford W. Long, of Athens, Ga., who failed to announce his discovery.	1841. First parliament of the United Canadas opens, June 14. 1842. Webster-Ashburton treaty adjusts boundary between Maine and New Brunswick.	1841-1845. Samuel Houston again President of Texas. 1842. Second federation of Central America established; had little success.
1843. Bunker Hill monument dedicated. 1844. First treaty with China secures commercial rights for U. S. Treaty for the annexation of Texas rejected by the Senate.		1843. The manufacture of manila paper is begun in Boston. 1844. Manufacture of iron rails in this country begins. First successful use of the telegraph. Independent discoveries of anaesthesia claimed to have been made by W. T. G. Norton, C. T. Jackson and Horace Wells, New England dentists.	1843. Opening of McGill University (chartered 1821) at Montreal. Opening of King's College at Toronto; renamed the University of Toronto, 1850. 1843-1845. Quarrel between Gov. Metcalf and Canadian Ministry, controlled by the French, over governor's prerogative.	1843. Eastern (Spanish) part of Island of Hayti, taking name Dominican Republic, separates from Haytian Republic; former dominated by negroes, latter by mulattoes.
1845. Admission of Florida. Annexation of Texas by joint resolution and admission of Texas as a state. 1845-1846. The Slidell mission to Mexico. U. S. Naval Academy established at Annapolis. 1846. Oregon Treaty with Great Britain. Admission of Iowa. The Walker tariff reduces rates. Independent treasury reëstablished. 1846-1848. War between Mexico and the U. S.	**Jas. K. Polk,** *President.* Geo. M. Dallas, *Vice-President.* Jas. Buchanan, *Secretary of State.* R. J. Walker, *Secretary of Treasury.* Wm. L. Marcy, *Secretary of War.* John Y. Mason, Nathan Clifford, Isaac Toucey, *Attorney-Generals.* Geo. Bancroft, J. Y. Mason, *Secretaries of Navy.* Cave Johnson, *Postmaster-General.*	1845 Petroleum discovered near Pittsburg. Separation of Southern from Northern Methodist and Baptist churches, resulting from quarrels over slavery. Invention of a leather rolling machine used in shoe-making. 1846. The sewing machine is invented by Elias Howe. Anaesthesia begins to enter general use. First slate quarry in Vermont is opened. 1846-1848. Great wave of immigration from Ireland.		1846. Treaty between New Granada and U. S., giving U. S. right of way across Isthmus of Panama.

V. FROM THE ADOPTION OF THE CONSTITUTION TO THE CIVIL WAR—Continued

THE MEXICAN WAR

PRINCIPAL BATTLES

The Americans were victorious in every conflict.

Place of Battle	Dates	Commanders: American	Commanders: Mexican	Engaged: Amer.	Engaged: Mexican
Bracite.	Dec. 25, 1846	Doniphan.	Ponce de Leon.	500	1200
Buena Vista.	Feb. 23, 1847	Taylor.	Santa Anna.	4700	17000
Cerro Gordo.	April 18, 1847	Scott.	Santa Anna.	8500	12000
Chapultepec.	Sept. 13, 1847	Scott.	Santa Anna.	7200	25000
Contreras.	Aug. 20, 1847	Scott.	Valencia.	4000	7000
Churubusco.	Aug. 20, 1847	Scott.	Santa Anna.	8000	25000
Huamantla.	Oct. 9, 1847	Lane.	Santa Anna.	500	1000
Mexico.	Sept. 14, 1847	Scott.	Santa Anna.	6000	.....
Molino del Rey.	Sept. 8, 1847	Worth.	Alvarez.	3500	14000
Monterey.	Sept. 24, 1846	Taylor.	Ampudia.	6600	10000
Palo Altó.	May 8, 1846	Taylor.	Arista.	2300	6000
Resaca de la Palma.	May 9, 1846	Taylor.	Arista.	2000	5000
Sacramento.	Feb. 28, 1847	Doniphan.	Trias.	900	4000
Vera Cruz.	Mar. 27, 1847	Scott.	Landero.	12000	6000

The only naval engagements of importance during the war with Mexico were the bombardment of Vera Cruz, by Commodore Conner, which lasted four days, and the bombardment of Monterey, Commodore Sloat, both cities being forced to surrender.

Causes of the War

Long-standing irritation over claims of American citizens upon Mexico, which the latter refused to pay.
The annexation by the U. S. of Texas which Mexico claimed as still a part of her territory.
Disputes as to whether the Rio Grande or Nueces River was the boundary of Texas.

Results of the War

The Treaty of Guadalupe Hidalgo:
a. The Rio Grande was made the boundary between Texas and Mexico.
b. California and New Mexico were ceded to the United States.
c. The United States paid Mexico $15,000,000, and assumed $3,500,000 due American citizens.
It intensified the slavery question in American politics.

THE UNITED STATES

Political Events	Presidents and Cabinet Officials	Social and Industrial Progress	British North America	Latin America and the West Indies
1846-1847. Attempt to pass the Wilmot Proviso fails.		1847. Richard M. Hoe invents the rotary printing press. Use of adhesive postage stamps authorized.	1847-1854. Earl of Elgin, governor of Canada, pursues policy of pacification. Industrial depression resulting from British free-trade legislation.	1847. Faustin Soulouque, a negro, elected President of Hayti. Third Central American federation established.
1848. Organization of the Free-Soil party. Admission of Wisconsin. Organization of Oregon without slavery.		1848. The Associated Press first organized. First school for the feeble-minded opened. Discovery of gold in California.		1848. Peace between Mexico and U. S.
1849. Creation of the Department of Interior. California applies for statehood. Angry debates in Congress over the status of California, New Mexico and Utah, the Texas boundary, fugitive slave rendition, the inter-state slave trade, and slavery and the slave trade in the District of Columbia.	**Zachary Taylor,** *President.* Millard Fillmore, *Vice-President.* John M. Clayton, *Secretary of State.* Wm. M. Meredith, *Secretary of Treasury.* Geo. W. Crawford, *Secretary of War.* R. Johnson, *Attorney-General.* Wm. B. Preston, *Secretary of Navy.* Jacob Collamer, *Postmaster-General.* Thomas Ewing, *Secretary of Interior.*	1849. Rush of gold-seekers to California.	1849. Rebellion Losses Bill, to pay both loyal and disloyal for property destroyed in rebellion of 1837, passed by Canadian legislature and approved by Elgin on ground of popular demand. In protest rioters burn the Parliament House at Montreal. University of Toronto founded.	1849. Soulouque proclaimed Emperor of Hayti; establishes a grotesque imperial court. Liberal success in New Granada; Jesuits expelled. War of Central American Federation against Guatemala. Confederation defeated and virtually destroyed.
1850. "Compromise of 1850" admits California and adjusts other slavery questions. Death of Calhoun. Nashville Convention to consider Southern situation and policies. The Hulsemann letter. Clayton-Bulwer treaty with Great Britain ratified. Death of President Taylor.	(Death of President Taylor, July 9, 1850. **Fillmore** becomes *President.*) Daniel Webster, Edw. Everett, *Secretaries of State.* Thos. Corwin, *Secretary of Treasury.* Chas. M. Conrad, *Secretary of War.* J. J. Crittenden, *Attorney-General.* Wm. A. Graham, J. P. Kennedy, *Secretaries of Navy.*	1850. First national labor organization, that of the printers, formed. Government grant of land to the Illinois Central Railroad, inaugurating a new plan for stimulating railroad building. First census of manufactures made by federal government.		1850. Cuba invaded by American filibusters under Lopez. African slave-trade abolished in Brazil.
1850-1856. Passage of Personal Liberty laws in Northern states.		1850-1860. Period of railroad consolidation.		
1851-1852. Visit of Louis Kossuth to the United States. "Finality Resolutions" adopted by Congress.	Nathan K. Hall, S. D. Hubbard, *Postmaster-Generals.* A. H. H. Stuart, *Secretary of Interior.*	1851. H. J. Raymond founds the New York *Times.* The B. and O. railroad reaches the Ohio. Western Union Telegraph Company established. Hudson River railroad reaches Albany.	1851. Renewed agitation over clergy reserves. Parties split into factions.	1851. Second filibustering expedition against Cuba; Lopez captured and shot.
1852. Death of Clay and Webster.		1852. Publication of "Uncle Tom's Cabin."		
1853. The Gadsden Purchase from Mexico.		1853. N. Y. clearing house established. Chicago is reached by rail.		1853. Republican constitution framed for Argentine Confederation; civil war prevents its use until 1862.
1854. Commodore Perry secures favorable commercial treaty from Japan. Native American party (the "Know-Nothings") becomes prominent. Black Warrior affair. Ostend manifesto. Kansas-Nebraska Act. Organization of the Republican party.	**Franklin Pierce,** *President.* Rufus King, *Vice-President.* Wm. L. Marcy, *Secretary of State.* James Guthrie, *Secretary of Treasury.* Jefferson Davis, *Secretary of War.* Caleb Cushing, *Attorney-General.* J. C. Dobbin, *Secretary of Navy.*	1854. The Mississippi river is reached by rail from the East. Hotel elevator patented by Otis. First marble soda fountain erected in Boston.	1854. Led by John A. McDonald, Conservatives of Upper Canada fuse with Liberals (French) of Lower Canada, establishing an effective ministry which settles the clergy reserves question, abolishes seigniorial tenure, and makes a reciprocity treaty with U. S.	1854. Castilla revolution in Peru; slavery abolished. Gradual abolition of slavery, initiated by law of 1821, completed in New Granada, Venezuela and Ecuador.
1855. Troubles in Kansas. First Agricultural college in U. S. opened at Cleveland, Ohio.	Jas. Campbell, *Postmaster-General.* R. McClelland, *Secretary of Interior.*	1855. St. Louis is reached by rail. Bessemer process patented.		1855. Completion of railroad across Isthmus of Panama. William Walker, filibuster from U. S., invades Nicaragua.

V. FROM THE ADOPTION OF THE CONSTITUTION TO THE CIVIL WAR—Continued

THE UNITED STATES				
Political Events	Presidents and Cabinet Officials	Social and Industrial Progress	British North America	Latin America and the West Indies
1856. First Republican national convention. Assault of Brooks upon Sumner. Civil strife in Kansas.		1856. First bridge across the Mississippi built at Rock Island, Illinois. University of Iowa admits women to various departments.	1856. Legislature for Vancouver Island established. Gold discovered on Fraser river, British Columbia.	1856-1857. Walker, President of Nicaragua; driven out in 1857 but returns for another attempt at end of year.
1857. The Dred Scott Decision. Mormon rebellion in Utah. Great financial panic.	**James Buchanan,** *President.* J. C. Breckenridge, *Vice-President.* Lewis Cass, J. S. Black, *Secretaries of State.*	1857. Attempt to lay first telegraphic cable across the Atlantic fails. New York organizes a system of metropolitan police.	1857. Ottawa selected as capital of Canada. Confusion in politics; ministries feeble and short-lived.	1857. Mexico adopts a new constitution. 1857-1863. Civil war in New Granada; victory of revolutionists under Mosquera.
1858. Lincoln-Douglas debates in Illinois. Admission of Minnesota. Second treaty with China ratified.	Howell Cobb, P. F. Thomas, John A. Dix, *Secretaries of Treasury.* John B. Floyd, Joseph Holt, *Secretaries of War.* J. S. Black, E. M. Stanton, *Attorney-Generals.*	1858. Second attempt to lay cable successful temporarily. First transatlantic message. Gold discovered near Pike's Peak. 1858-1861. Division of Presbyterian church over slavery.	1858. Canadian delegation visits England to ask for changes in system of government. Governor is appointed for British Columbia, but no legislature provided.	1858. Soulouque dethroned, Haytian Republic reëstablished; regime of chronic disorder ensues.
1859. Admission of Oregon. John Brown's raid on Harper's Ferry.	Isaac Toucey, *Secretary of Navy.* A. V. Brown, J. Holt, H. King, *Postmaster-Generals.*	1859. First petroleum well dug. Photolithography for maps in colors introduced.	1859. Convention of reformers at Toronto demands separation of Upper from Lower Canada in matters of local government.	
1860. Democratic Party splits asunder on slavery question. Constitutional Union party formed. Lincoln elected over Breckenridge, Bell and Douglas. South Carolina secedes, Dec. 20.	Jacob Thompson, *Secretary of Interior.*	1860. Salt first attains commercial importance in Michigan. Oil fever in the Allegheny river valley.	1860-1864. George Brown urges a federation of all British North American provinces.	1860. William Walker, on a filibustering expedition against Honduras, is captured and shot.

VI. PERIOD OF THE CIVIL WAR AND RECONSTRUCTION, 1861-1876

THE CIVIL WAR, 1861-1865

Causes	Executive of the Confederacy	The Southern Confederacy	Campaigns and Battles (See American Battles for further details)
The underlying causes of the war were: (a) Conflict between the doctrines of state sovereignty and nationalism. (b) Sectional antagonism over numerous issues concerning negro slavery. The immediate cause was the secession of southern states. The reasons for secession, as given by southern leaders, were: (a) Northern hatred of slavery and slander of slaveholders; the political campaign against the slave holding interest, and the endorsement of such exploits as the John Brown Raid. (b) The misinterpretation of the Constitution by the North in its refusal to admit the doctrine of state sovereignty, the repudiation of the Dred Scott Decision, and the enactment by Northern states of "personal liberty laws." (c) The sectional election of Lincoln. The purpose of the North was to maintain the supremacy of the federal government under the Constitution and to preserve the Union. The purpose of the South was to set up an independent slave-holding Confederacy.	**Jefferson Davis,** *President.* A. H. Stephens, *Vice-President.* Robt. Toombs, R. M. T. Hunter, Judah P. Benjamin, *Secretaries of State.* C. G. Memminger, G. A. Trenholm, *Secretaries of Treasury.* L. P. Walker, Judah P. Benjamin, G. W. Randolph, Jas. A. Seddon, J. C. Breckenridge, *Secretaries of War.* S. R. Mallory, *Secretary of Navy.* J. P. Benjamin, Thos. Bragg, Thos. H. Watts, George Davis, *Attorney-Generals.* John H. Reagan, *Postmaster-General.*	The Confederacy comprised the states of Va., N. C., S. C., Ga., Fla., Tenn., Ala., Miss., Ark., La. and Tex. 1861. Feb. 4. Convention of seceded states at Montgomery, Ala., which established a provisional government and framed a constitution. May 13. Recognition of the belligerency of the Confederacy by England, followed by other nations. April-June. Provision made by the Confederate Congress for establishing a larger army and floating loans.	(Note: "F" indicates Federal victory, "C" Confederate, and "Ind." Indecisive.) 1861. April 13-14, bombardment of Fort Sumter (C). July 21, first battle of Bull Run (C). Aug. 10, battle of Wilson Creek (C).
		1862. Feb. 22. Permanent constitution goes into effect. Military conscription act. Beginning of huge issues of bonds and paper money.	1862. **In the East:** March 9, naval battle of the *Monitor* and *Merrimac* (Ind.) May-July, the Peninsular Campaign (C). Lee's first invasion of the North, resulting in the capture of Harper's Ferry, Sept. 15 (C), and the battle of Antietam, Sept. 17 (F). **In the West:** Feb.-April, Grant's West Tennessee campaign (F). April 25, capture of New Orleans (F). Dec. 31-Jan. 2, battle of Murfreesboro (F).
		1863. Provision for seizure of food supplies at rates fixed by Confederate commissioners.	1863. **In the East:** May 2 and 3, battle of Chancellorsville (C). June-July, Lee's second invasion of the North. Gettysburg, July 1-3 (F). **In the West:** July, opening of the Mississippi by the capture of Vicksburg, July 4 (F), and Port Hudson, July 9 (F). Sept. 19-20, battle of Chickamauga (C). November, Chattanooga campaign (F).
Results The Union was preserved. Slavery was abolished. Secession as a working program was shown to be impracticable. The war cost the lives of nearly one million able-bodied men. The national debt was increased to $2,750,000,000. An incalculable amount of property was destroyed.		1864. Drastic military conscription act. Controversies of President Davis with Vice-President Stephens, Governor Vance of N. C. and Governor Brown of Ga.	1864. **In the East:** May 5-7, battles of the Wilderness (Ind.); this was the beginning of Grant's campaign for Richmond. June 19, naval battle of the *Alabama* and *Kearsarge* off the coast of France (F). Oct. 19, battle of Cedar Creek (F). **In the West:** May-Sept., Sherman's campaign before Atlanta (F). Aug. 5, battle of Mobile Bay (F). Nov.-Dec., Sherman's march to the sea. Dec. 15-16, battle of Nashville (F).
		1865. April. The Confederacy collapses. May 11, Davis is captured.	1865. **In the East:** End of the Richmond campaign by the surrender of Lee at Appomatox Court House, Virginia, April 9 (F). April 26, surrender of Johnston (F). **In the West:** May 4, surrender of Gen. Taylor (F). May 26, surrender of all the remaining Confederate troops west of the Mississippi by Gen. Kirby Smith, and end of the war.

VI. PERIOD OF THE CIVIL WAR AND RECONSTRUCTION, 1861–1876—Continued

THE UNITED STATES			British North America	Latin America and the West Indies
Political Events	Presidents and Cabinet Officials	Social and Industrial Progress		
1861. Admission of Kansas. Peace convention at Washington fails. Morrill high tariff bill enacted. Trouble with England over the *Trent* affair. Southern states form a confederacy.	**Abraham Lincoln,** *President.* Hannibal Hamlin, *Vice-President.* Wm. H. Seward, *Secretary of State.* Salmon P. Chase, W. P. Fessenden, *Secretaries of Treasury.* Simon Cameron, E. M. Stanton, *Secretaries of War.* Edward Bates, James Speed, *Attorney-Generals.* Gideon Welles, *Secretary of Navy.* M. Blair, Wm. Dennison, *Postmaster-Generals.* Caleb B. Smith, John P. Usher, *Secretaries of Interior.*	1861. McKay invention for sewing soles on uppers. Invention of the stereotyping process and its adoption by New York papers. First message sent over transcontinental telegraph line.	1861. Nova Scotia legislature asks for a general federation.	1861-1864. Hayti temporarily subject to Spain.
1862. Slavery abolished in the District of Columbia. Legal tender notes, "greenbacks," issued. Slavery abolished in the territories. Preliminary proclamation of emancipation, Sept. 22. Treaty with Great Britain for the suppression of the slave-trade.		1862. Passage of the Morrill Act to found agricultural colleges. Passage of the Homestead Act. Union Pacific railroad chartered. Chicago becomes the recognized center of the packing industry.		1862. Napoleon III. plans to erect Mexican Empire for Archduke Maximilian.
1863. Proclamation of Emancipation, Jan. 1. Draft riots in New York. Admission of West Virginia. **National banking act passed.**		1863. **Organization of the Brotherhood of Locomotive Engineers.** **Delivery of mail by carriers begins.**		1863. **New Granada renames itself the United States of Colombia and adopts a federal constitution, comprising eight states including Panama.** **Mexico occupied by French army under Bazaine.**
1864. **Fugitive Slave act (of 1850) repealed.** Admission of Nevada. Very high tariff act. Grade of vice-admiral in the navy provided.		1864. **Postal money orders first issued.** First sleeping-car is built. Northern Pacific railroad chartered.	1864. **June. Canadian ministry is forced by Brown to endorse federation.** Oct. 10 to 28. Delegates from Canada, Nova Scotia, New Brunswick and Prince Edward Island meet at Quebec and adopt 72 resolutions presenting a plan for federation.	1864. Maximilian crowned Emperor of Mexico.
1865. **Thirteenth amendment ratified.** President Lincoln shot at Ford's theater, Washington, April 14th; dies next day. General amnesty is proclaimed, following the end of the war.	**Abraham Lincoln,** *Reëlected President.* Andrew Johnson, *Vice-President.* (On death of Lincoln **Johnson** becomes president and keeps Lincoln's cabinet.) Wm. H. Seward, *Secretary of State.* Hugh McCulloch, *Secretary of Treasury.* E. M. Stanton, U. S. Grant, L. Thomas, J. M. Schofield, *Secretaries of War.* James Speed, Henry Stanberry, Wm. M. Evarts, *Attorney-Generals.* Gideon Welles, *Secretary of Navy.* Wm. Dennison, A. W. Randall, *Postmaster-Generals.* John P. Usher, James Harlan, O. H. Browning, *Secretaries of Interior.*	1865. **First organization of the Standard Oil Company.**	1865. **Canadian legislature endorses Union Resolutions.**	1865. Insurrection in Jamaica led by Gordon, a mulatto, quickly suppressed by Gov. Eyre. U. S. protests against French interference in Mexico.
1866. Civil Rights bill passed over the president's veto. Organization of the Ku-Klux-Klan. Fenian raid into Canada.		1866. Formation of the National Labor Union. First permanently successful cable laid. Salmon-canning on the Columbia river begins. Massachusetts passes an eight-hour law for children.	1866. Union Resolutions endorsed by Nova Scotia and New Brunswick, rejected in Prince Edward Island and Newfoundland. Reciprocity treaty with U. S. expires; not renewed. Fenian raid from U. S. into Canada fruitless. Vancouver and British Columbia united by Imperial Act.	1865-1870. Brazil and Argentina in alliance at war with Paraguay.
1867. Plan of military reconstruction of the South adopted by Congress. Admission of Nebraska. Purchase of Alaska from Russia. Passage of the Tenure of Office act. **Organization of the Grangers.**		1867. Introduction of the Bessemer process in making steel. Beginning of the manufacture of steel rails in the U. S. Ground wood-pulp first used for making paper.	1867. Canadian Union Act passed by Imperial Parliament, approved Mch. 28, providing federation of all British North American provinces ratifying. Created central government of a royally appointed Governor-General, a Senate of 78 appointed life members, a House of Commons of elected members apportioned to population, and a Cabinet responsible to the House of Commons. Term of House five years maximum, and subject to dissolution by Gov.-Gen. Each province to have a Lieut.-Gov., a legislature and a responsible ministry. Upper Canada, renamed Ontario, separated from Lower Canada, renamed Quebec. Specified local powers assigned to provincial governments; general and residuary powers entrusted to Dominion Parliament. 1867-1868. Lord Monck, Gov.-Gen. 1867-1873. Sir John A. McDonald, Dominion Premier.	1867. French troops withdrawn from Mexico. Native forces overthrow Maximilian's government and put him to death. Republic reëstablished.
1868. President Johnson impeached, tried and acquitted. Six southern states readmitted to representation in Congress. Fourteenth amendment ratified. Burlingame treaty with China signed. 1868-1874. "Carpet-bag" rule in the South.		1868. Westinghouse airbrake first successfully applied. First Siemens-Martin open-hearth furnace built. Founding of Cornell University.	1868-1872. Sir John Young, afterward Lord Lisgar, Gov.-Gen.	1868-1878. Cespedes insurrection in Cuba.
1869. Attempt to annex Santo Domingo. Organization of the National Prohibition Party. Disbandment of the Ku-Klux-Klan. Decision in the case of Texas *vs.* White. Soldiers' monument at Gettysburg dedicated. Woman suffrage, upon equal terms with men, established in Wyoming.	**U. S. Grant,** *President.* Schuyler Colfax, *Vice-President.* E. B. Washburne, Hamilton Fish, *Secretaries of State.* Geo. S. Boutwell, *Secretary of Treasury.* J. A. Rawlins, W. W. Belknap, *Secretaries of War.*	1869. Passage of eight-hour law for federal employees. First provision made for bureau of statistics of labor. Formation of the Knights of Labor. Institution of the "Elmira penal system." Invention of the refrigerator car. First transcontinental railroad completed.	1869. Dominion purchases the vast territory of the Hudson Bay Co. 1869-1870. Rebellion of half-breeds led by Louis Riel in Red river valley; crushed by troops under Col. (afterward Lord) Wolseley.	1869. Negotiations by President Grant for acquisition of Santo Domingo by U. S.; project failed of support in U. S. Senate.

VI. PERIOD OF THE CIVIL WAR AND RECONSTRUCTION, 1861-1876—Continued

THE UNITED STATES				
Political Events	Presidents and Cabinet Officials	Social and Industrial Progress	British North America	Latin America and the West Indies
1870. Fifteenth amendment ratified. 1870-1872. Organization of the Liberal Republican party.	E. R. Hoar, A. T. Akerman, G. H. Williams, *Attorney-Generals.* A. E. Borie, G. M. Robeson *Secretaries of Navy.*	1870. Opening at Boston of first kindergarten in the U. S. Steel rails first used on railroads. 1870-1871. First war correspondence by cable appears in the New York *Tribune.*	1870. Manitoba enters Dominion as a province. 1870-1871. Fisheries dispute with U. S. adjusted by treaty of Washington, 1871, which also refers western boundary dispute to arbitration.	
1871. First Civil Service Reform bill enacted. Legal Tender act is decided to be constitutional. "Tweed ring" in New York is exposed. Treaty of Washington with Great Britain.	J. A. J. Creswell, *Postmaster-General.* J. D. Cox, C. Delano, *Secretaries of Interior.*	1871. Hoe perfecting press completed. Texas Pacific railroad incorporated.		1871. Brazil provides for gradual abolition of slavery.
1872. Act for removing political disabilities passes Congress. Geneva award of $15,000,000 to U. S. Modoc Indian war in California. First nominating convention of the Prohibition party held.		1872. Invention of duplex telegraphy. Import duties on tea and coffee abolished. Water-gas process patented by Lowe. Bonanza mines on the Comstock lode discovered.	1872. Dominion Parliament offers subsidy to promote building of Canadian Pacific R. R. Rival companies contend for the grant. Scandals investigated, 1873. 1872-1878. Earl of Dufferin, Gov.-Gen.	
1873. Crédit Mobilier investigation by Congress. One-cent postal cards issued. The demonetization of silver. "Salary Grab" act. The *Virginius* affair.	**U. S. Grant,** *Reëlected President.* Henry Wilson, *Vice-President.* Hamilton Fish, *Secretary of State.*	1873. Great financial panic throughout the country. The Westinghouse automatic air-brake is introduced.	1873. Prince Edward Island enters Dominion. 1873-1878. Alexander McKenzie, Premier, with Liberal ministry.	1873. Slavery abolished in Porto Rico.
1874. Organization of the Greenback party. Democrats control the House of Representatives for first time since 1856.	W. A. Richardson, B. H. Bristow, Lot M. Morrill, *Secretaries of Treasury.* Wm. W. Belknap, Alphonso Taft, J. D. Cameron, *Secretaries of War.*	1874. The Eads bridge across the Mississippi at St. Louis completed. First trunk pipe-line from oil regions to Pittsburg. Barbed-wire manufacture begins.	1874. Dominion Parliament votes to construct Canadian Pacific by public contracts. Friction between Dominion government and British Columbia, relieved by mediation of Dufferin, 1876.	1874. Religious orders suppressed in Mexico.
1875. Exposure of the Whisky ring. Act authorizing the resumption of specie payments.	G. H. Williams, Edw. Pierrepont, Alphonso Taft, *Attorney-Generals.*	1875. Hoosac tunnel is completed. Founding of Smith and Vassar colleges for women.	1875. Dominion Court of Appeals (Supreme Court) established. Mounted police organized in western territories.	
1876. Sioux War. Massacre of Custer's troops by Sitting Bull. Admission of Colorado. Great corruption found in War Department. Formation of the National Greenback party.	G. M. Robeson, *Secretary of Navy.* J. A. J. Creswell, J. W. Marshall, M. Jewell, J. N. Tyner, *Postmaster-Generals.* C. Delano, Zach. Chandler, *Secretaries of Interior.*	1876. Export of dressed beef begins. Great centennial exposition at Philadelphia. Bell secures his first patent for the telephone. Founding of Johns Hopkins University.		1876. Venezuela repudiates Papal authority.

VII. PERIOD OF ECONOMIC DEVELOPMENT, 1877-1896

THE UNITED STATES				
Political Events	Presidents and Cabinet Officials	Social and Industrial Progress	British North America	Latin America and the West Indies
1877. The Electoral Commission decides the contested election in favor of Hayes. Withdrawal of troops from the South. "Molly Maguires" hanged in Pennsylvania. War with the Nez Perce Indians.	**R. B. Hayes,** *President.* W. A. Wheeler, *Vice-President.* Wm. M. Evarts, *Secretary of State.* John Sherman, *Secretary of Treasury.* G. W. McCrary, Alex Ramsey, *Secretaries of War.*	1877. Bell's improved telephone put into general use. Great railroad strike at Pittsburg. Col. A. A. Pope has the first bicycle built in this country. Goodyear welt machine brought into use.		1877. Porfirio Diaz leads a Mexican revolution and becomes President; term expires 1880.
1878. Bland-Allison silver bill passed over the President's veto.	Charles Devens, *Attorney-General.* R. W. Thompson, Nathan Goff, Jr., *Secretaries of Navy.*	1878. Introduction of the probation system for criminal offenders. Introduction of incandescent lights.	1878. Election endorses Conservative "national policy" of protective tariffs. 1878-1883. Marquis of Lorne, Gov.-Gen.	1878. Argentine and Paraguay boundary arbitrated.
1879. United States government resumes specie payment. Women permitted to practice before United States courts.	D. M. Key, H. Maynard, *Postmaster-Generals.*	1879. French Atlantic cable laid. Steamboat traffic on the Mississippi reaches maximum. Organization of First Christian Scientist Church.	1878-1891. Sir John A. McDonald, Premier, with Conservative ministry.	1879-1884. Chile makes war on Peru to acquire region of nitrate deposits. Chile victorious, Peru exhausted.
1880. National Civil Service league formed. The Kearney agitation in California.	Carl Schurz, *Secretary of Interior.*	1880. Edison builds the first electric railroad at Menlo Park. U. S. takes first rank among the nations in agricultural products. 1880-1890. Decade of great railroad building.	1880-1881. Commission investigates Canadian Pacific R. R., and censures system of public contracts.	1880-1884. Gonzalez, a lieutenant of Diaz, President of Mexico.
1881. President Garfield is shot by Charles J. Guiteau, July 2; dies September 20.	**J. A. Garfield,** *President.* C. A. Arthur, *Vice-President.*	1881. Organization of the American Federation of Labor. International Cotton Exposition at Atlanta, Georgia.	1881. Contract made with new Canadian Pacific R. R. Co. for completion and operation of the transcontinental road. Company receives heavy subsidies for construction.	1881. Treaty between Chile and Argentina divides Patagonia between them.
1881-1884. Lieutenant Greeley's Arctic explorations. 1882. Congress passes act to exclude Chinese laborers for ten years. Edwards law for the suppression of polygamy. "Star Route" trials begin. Apache Indian War.	J. G. Blaine, *Secretary of State.* Wm. Windom, *Secretary of Treasury.* R. T. Lincoln, *Secretary of War.* Wayne MacVeagh, *Attorney-General.*	1882. Reorganization of the Standard Oil Company as a trust. Tolls abolished on the Erie Canal. District school system abolished by Massachusetts.		
1883. Pendleton Civil Service Act passed. Tariff lowers slightly the average rate of duties.	W. H. Hunt, *Secretary of Navy.* T. L. James, *Postmaster-General.* S. J. Kirkwood, *Secretary of Interior.*	1883. Brooklyn suspension bridge opened. First canneries for Alaska salmon established. Northern Pacific railroad completed.	1883-1888. Marquis of Lansdowne, Gov.-Gen.	

VII. PERIOD OF ECONOMIC DEVELOPMENT, 1877-1896—Continued

THE UNITED STATES			British North America	Latin America and the West Indies
Political Events	Presidents and Cabinet Officials	Social and Industrial Progress		
1884. Creation by Congress of the Bureau of Labor in the Department of the Interior.	**C. A. Arthur,** *President.* J. G. Blaine, F. T. Frelinghuysen, *Secretaries of State.* Wm. Windom, C. J. Folger, W. Q. Gresham, Hugh McCulloch, *Secretaries of Treasury.* R. T. Lincoln, *Secretary of War.* Wayne MacVeagh, B. H. Brewster, *Attorney-Generals.* W. H. Hunt, W. E. Chandler, *Secretaries of Navy.* T. L. James, T. O. Howe, W. Q. Gresham, Frank Hatton, *Postmaster-Generals.* S. J. Kirkwood, H. M. Teller, *Secretaries of Interior.*	1884. Great floods in the Ohio Valley. Telephone wires first put underground.		1884-1911. Diaz, president of Mexico.
1885. Apache war in New Mexico.	**Grover Cleveland,** *President.* T. A. Hendricks, *Vice-President.*	1885. International exposition at New Orleans. Long-distance telephone introduced.	1885. Canadian Pacific R. R. completed.	
1886. Repeal of the Tenure of Office Act of 1867. Passage of the Presidential Succession law. Silver certificates authorized.	T. F. Bayard, *Secretary of State.* Daniel Manning, C. S. Fairchild, *Secretaries of Treasury.* W. C. Endicott, *Secretary of War.* A. H. Garland, *Attorney-General.*	1886. Railroad strikes and anarchistic riots in Chicago. Wire nails first manufactured. Formation of Stove Founders' National Defence Association, first national association of employers. Bartholdi's Statue of Liberty unveiled.	1886. Dispute with U. S. as to jurisdiction and fishing rights in Behring Sea referred to arbitration and settled in Canada's favor (concluded in 1897).	1886. Colombia adopts new constitution. Slavery abolished in Cuba.
1887. Passage of the Interstate Commerce bill. Edmunds-Tucker Act dissolves corporation of the Mormon church. Dawes Indian Bill.	W. C. Whitney, *Secretary of Navy.* Wm. F. Vilas, D. M. Dickinson, *Postmaster-Generals.* L. Q. C. Lamar,	1887. First vestibuled Pullman train in service. Beet sugar first successfully produced in U. S. at Alvarado, Cal.	1887. Liberal party agitates for reciprocity with U. S.; Conservatives oppose it.	
1888. The states begin the introduction of the Australian ballot. New Chinese exclusion bill enacted by Congress.	Wm. F. Vilas, *Secretaries of Interior.* N. J. Colman, *Secretary of Agriculture.*	1888. First electric street railway built by F. J. Sprague at Richmond, Va.	1888. Quebec legislature appropriates $400,000 to quiet Catholic claims to former Jesuits' estates. 1888-1893. Lord Stanley of Preston Gov.-Gen.	1888. Final act of Brazil abolishing slavery immediately.
1889. Admission of North Dakota, South Dakota, Washington and Montana. Head of Department of Agriculture, established in 1862, is given cabinet rank. Pan-American Congress meets in Washington.	**Benj. Harrison,** *President.* Levi P. Morton, *Vice-President.* Jas. G. Blaine, John W. Foster, *Secretaries of State.* Wm. Windom, Chas. Foster, *Secretaries of Treasury.*	1889. Oklahoma is opened for settlement.		1889. Revolution in Brazil expels Emperor and establishes republic.
1890. Admission of Idaho and Wyoming. McKinley Tariff act. Sherman silver purchase act. Sioux War; Sitting Bull killed. Passage of Dependent Pension Bill.	R. Proctor, S. B. Elkins, *Secretaries of War.* W. H. H. Miller, *Attorney-General.* Benj. F. Tracy, *Secretary of Navy.*	1890. The United States takes first place among the nations in the production of iron. Passage of the Sherman Anti-Trust Law.		1890. Revolution and financial revulsion in Argentina.
1891. Formation of the People's Party. Massacre of Italians in New Orleans.	John Wanamaker, *Postmaster-General.* John W. Noble, *Secretary of Interior.* J. M. Rusk, *Secretary of Agriculture.*	1891. Opening of the cog railroad to the top of Pike's Peak.	1891-1892. Sir John Abbot, Premier.	1891. Civil war in Chile.
1892. Passage of the Geary Anti-Chinese Act. Behring sea dispute referred to arbitration.		1892. Great strike at Homestead Iron Works. Long distance telephone line between New York and Chicago formally opened.	1892-1894. Sir John Thompson, Premier.	
1893. Equal suffrage granted to women in Colorado. Intervention in Hawaii by the United States. Settlement of the Behring Sea dispute. Repeal of law requiring purchases of silver.	**Grover Cleveland,** *President.* A. E. Stevenson, *Vice-President.* W. Q. Gresham, Richard Olney, *Secretaries of State.* J. G. Carlisle, *Secretary of Treasury.* D. S. Lamont, *Secretary of War.*	1893. Great financial depression. World's Columbian Exposition at Chicago. World's parliament of religions at Chicago. Edison patents the kinetoscope.	1893. Liberal party platform demands tariff reform, reciprocity with U. S. restriction of public land sales, senate reforms, investigation of ministerial misconduct, and the submission of the prohibition question to popular vote. 1893-1898. Earl of Aberdeen, Gov.-Gen.	1893. Naval revolt in Brazil. Insurrections in Argentina.
1894. New treaty with Japan. Passage of the Wilson tariff act. Republic of Hawaii is recognized. "Coxey's army" marches on Washington.	Richard Olney, Judson Harmon, *Attorney-Generals.* H. A. Herbert, *Secretary of Navy.* W. S. Bissell, W. L. Wilson, *Postmaster-Generals.*	1894. The U. S. attains first rank among nations in the volume of its manufactures. Great railroad strike from Ohio to the Pacific coast. Also miners' strike and "Debs insurrection."	1894. Imperial Conference at Ottawa of delegates from eight self-governing British dependencies in Australasia, South Africa and America, to discuss imperial problems and promote colonial interests. 1894-1896. Sir McKensie Boswell, Premier.	
1895. Income tax declared unconstitutional by the Supreme Court. Special message of the president on the Venezuelan question.	Hoke Smith, D. R. Francis, *Secretaries of Interior.* J. S. Morton, *Secretary of Agriculture.*	1895. Harlem ship canal opened. Formation of the National Association of Manufacturers. The name "yellow journalism" first applied to sensational papers.		1895. Boundary dispute between Venezuela and Great Britain becomes critical. Cuban insurrection.

VII. PERIOD OF ECONOMIC DEVELOPMENT, 1877-1896—Continued

THE UNITED STATES			British North America	Latin America and the West Indies
Political Events	Presidents and Cabinet Officials	Social and Industrial Progress		
1896. Equal suffrage granted to women in Utah and in Idaho. Admission of Utah. Great agitation for the ree coinage of silver.		1896. Sault Ste. Marie canal completed. Niagara Falls electric power turned on in Buffalo, N. Y.	1896. April-July, Sir Charles Tupper, Premier. 1896. Dispute between Manitoba legislature and Dominion courts and ministry over Catholic school rights in Manitoba deadlocks the Dominion Parliament. General election gives great victory to Liberals. 1896-1911. Sir Wilfred Laurier, Premier.	1896. Gen. Weyler administers Spanish reconcentrado policy in Cuba.

VIII. PERIOD OF NATIONAL EXPANSION, 1897-1912

THE UNITED STATES			British North America	Latin America and the West Indies
Political Events	President and Cabinet Officials	Social and Industrial Progress		
1897. Treaty for the annexation of Hawaii signed. Dingley tariff law goes into operation. 1897-1898. Decisions of the Supreme Court that railroad rate agreements violate the Anti-Trust Law.	**Wm. McKinley,** *President.* G. A. Hobart, *Vice-President.* John Sherman, Wm. R. Day, John Hay, *Secretaries of State.* R. A. Alger, Elihu Root, *Secretaries of War.*	1897. The steel rail pool collapses. Sextuplex telegraphy invented. Universal postal congress meets in Washington. Union Pacific Railroad sold to the reorganization committee.	1897. Laurier persuades Manitoba legislature to make concessions to Catholic schools. Dominion Parliament gives British imports a preferential tariff reduction of 33 1-3%. Discovery of gold in the Klondike. Rush of miners thither necessitates adjustment of ambiguous Alaskan boundary.	1897. Venezuelan boundary adjusted by arbitration.
1898. South Dakota adopts initiative and referendum. Annexation of Hawaii by joint resolution. Destruction of the *Maine* in Havana harbor, Feb. 15. Congress orders forcible intervention in Cuba; war with Spain follows.	Lyman J. Gage, *Secretary of Treasury.* Jos. McKenna, J. W. Griggs, *Attorney-Generals.* John D. Long, *Secretary of Navy.* James A. Gary, C. E. Smith, *Postmaster-Generals.* C. N. Bliss, E. A. Hitchcock, *Secretaries of Interior.* James Wilson, *Secretary of Agriculture.*	1898. Commercial treaty with France signed. Boston builds a subway. Method of mercerizing cloth under tension to make it silky is patented.	1898. Joint high commission to adjust various questions between Canada and U. S. disrupted by disagreement over Alaskan boundary. 1898-1904. Earl of Minto, Gov.-Gen.	1898. U. S. battleship Maine destroyed by explosion in Havana harbor.

SPANISH AMERICAN WAR, 1898

Causes	Results
Sympathy for the oppressed Cubans. The "reconcentrados," people driven into the towns by Weyler, die by thousands, and Americans who aided them are arrested and their property destroyed. The proximity of Cuba and its geographical position make its situation of great importance to the United States. Destruction of American property. Publication of a letter of the Spanish Minister, in which he speaks slightingly of President McKinley. The blowing up of the battleship *Maine*.	The Treaty of Paris: Spain gives up title to Cuba. Spain cedes Porto Rico, Guam and the Philippines to the United States. The United States gives Spain $20,000,000. The direct cost of the war to the United States is about $130,000,000. Soldiers killed, 430. A larger number die of disease. The United States becomes the guardian of Cuba. An increase in our navy and standing army. The war in the Philippines. The question of territorial expansion in our politics.

THE ARMY

Engagements—The Army	Our Losses	
	Killed	Wounded
Bombardment of Cienfuegos, May 11, 1898	1	11
Bombardment of San Juan, May 12, 1898	1	7
Guantanamo, June 11-20, 1898	6	16
Bombardment of Santiago, June 22, 1898	1	9
Santiago campaign, June 21-July 17, 1898	260	1341
Porto Rico campaign, July 25-28, 1898	3	40
The reduction of Manila, August 13, 1898	17	106

THE NAVY

Manila Bay, Philippine Islands. May 1, 1898.	American Vessels: *Olympia, Baltimore, Raleigh, Boston, Concord, Petrel.* American Commander: Geo. Dewey.	Spanish Vessels: *Reina Cristina, Castella, Don Antonio de Ulloa, Isla de Luzon, Isla de Cuba, General Lezo, Marquis de Duero, Cano Velasco, Isla de Mindanao, Sandoval, José García, Leyte* and torpedo boat *Barcelona.*
American Casualties: Seven men slightly injured. No damage to ships.	Spanish Casualties: All ships destroyed, 450 men killed and wounded.	Spanish Commander: Admiral Montijo.
Before Santiago, July 3, 1898.	American Vessels: *Brooklyn, Texas, Oregon, Iowa, Gloucester.* American Commander: Winfield Schley.	Spanish Vessels: *Almirante, Oquendo, Christobal Colon, Vizcaya, Infanta Maria Teresa,* and torpedo boats *Pluton* and *Furor.*
American Casualties: One man killed. *Brooklyn* struck thirteen times, *Texas* once, but neither badly damaged.	Spanish Casualties: All ships destroyed, more than 600 men killed and wounded, and rest surrendered.	Spanish Commander: Admiral Cervera.

The total number of vessels captured from Spain during the war of 1898 was 58.

VIII. PERIOD OF NATIONAL EXPANSION, 1897-1912—Continued

THE UNITED STATES			British North America	Latin America and the West Indies
Political Events	Presidents and Cabinet Officials	Social and Industrial Progress		
1899. War in the Philippine Islands, led by Aguinaldo, against American domination. Appointment of the first Philippine commission.		1899. Great commercial and financial prosperity. American Steel and Wire Company is incorporated. First juvenile courts organized in Chicago.		1899. Cuban independence established under protectorate of U. S. Porto Rico acquired by U. S. from Spain.
1900. Congress passes act providing civil government for the Philippines. Commercial treaty with Italy ratified. Currency bill approved. Civil government established in Alaska. American forces sent to China under General Chaffee.			1900. Rapid colonization of Canadian Northwest, largely by emigrants from U. S.	1900. Civil war in Colombia.
1901. Passage of Platt amendment relating to Cuban independence. "Open door policy" for China announced. Hay-Pauncefote treaty. Commission form of government adopted by the city of Galveston. "Insular Cases" decisions. President McKinley shot by assassin, Sept. 6; dies Sept. 14.	**Wm. McKinley,** *Reelected President.* Theo. Roosevelt, *Vice-President.* (On death of McKinley, Sept. 14, **Roosevelt** becomes president). John Hay, *Secretary of State.*	1901. Formation of the United States Steel Corporation. Pan-American Exposition held at Buffalo. Northern Securities company organized. Discovery of the Texas oil-field.		1901. War between Venezuela and Colombia. Pan-American Congress at City of Mexico. Isthmian canal treaty between Colombia and the United States signed, but not ratified.
1902. Civil government established in the Philippines and amnesty granted to political prisoners.	L. J. Gage, L. M. Shaw, *Secretaries of Treasury.* Elihu Root, W. H. Taft, *Secretaries of War.* P. C. Knox,	1902. Great strike of anthracite coal miners; President Roosevelt appoints a commission for arbitration. The Carnegie Institution of Washington is established.	1902. Canadian-Australian cable laid.	1902. Revolution in San Domingo.
1903. Alaskan boundary tribunal in London decides in favor of the United States. Creation of the Department of Commerce and Labor. Reciprocity treaty with Cuba, commercial treaty with China, and canal treaty with Panama are ratified.	W. H. Moody, *Attorney-Generals.* J. D. Long, W. H. Moody, Paul Morton, *Secretaries of Navy.* C. E. Smith, H. C. Payne, R. J. Wynne, *Postmaster-Generals.*	1903. Formation of the "Citizens Industrial Association of America."	1903. Joint commission of jurists on Alaskan boundary decides favorably to claims of U. S.	1903. Independence of Panama declared under guardianship of U. S. Treaty between Panama and U. S., ceding Canal Zone for $10,000,000.
1904. Arbitration treaty with France signed. Payment of $40,000,000 made to Panama Canal company.	E. A. Hitchcock, *Secretary of Interior.* James Wilson, *Secretary of Agriculture.* G. B. Cortelyou, V. H. Metcalf, *Sec. of Com. and Labor.*	1904. Louisiana Purchase Exposition at St. Louis. Work on Panama canal commences. Northern Securities Co. dissolved by U. S. Supreme Court.	1904-1911. Earl Grey, Gov.-Gen.	1904. Strained relations between Venezuela and U. S.
1905. President Roosevelt acts as mediator between Japan and Russia. Arbitration treaties concluded with Great Britain, Germany, Italy and other powers. Beef Trust declared illegal by U. S. Supreme Court.	**Theo. Roosevelt,** *Reelected President.* C. W. Fairbanks, *Vice-President.* John Hay, Elihu Root, Robert Bacon, *Secretaries of State.*	1905. Investigation of insurance companies in New York begins. United States becomes greatest silk manufacturing nation in the world.	1905. Saskatchewan and Alberta become members of the Dominion.	1905. Movement to establish confederation of Canada and British West Indies.
1906. Riot at Brownsville, Texas. Dismissal of negro troops. Military occupation of Cuba. Passage of pure food and drug inspection law.	L. M. Shaw, G. B. Cortelyou, *Secretaries of Treasury.* W. H. Taft, L. E. Wright, *Secretaries of War.* W. H. Moody, C. J. Bonaparte, *Attorney-Generals.*	1906. Incorporation of the Carnegie Foundation for the Advancement of Teaching.	1906. Life-insurance investigation in Canada.	1906. Pan-American Congress at Rio de Janeiro. Destructive earthquake at Valparaiso, Chile.
1907. Admission of Oklahoma. Standard Oil Co. fined $29,240,000; decision afterward reversed.	Paul Morton, C. J. Bonaparte, V. H. Metcalf, T. H. Newberry, *Secretaries of Navy.* G. B. Cortelyou,	1907. Jamestown exposition. Commercial agreement with Germany.	1907. Demonstrations against Japanese at Vancouver.	1907. Finances of San Domingo reorganized and put under supervision of U. S.
1907-1909. United States fleet makes a round-the-world cruise. 1908. Conference of governors at the White House. The United States remits the Chinese Boxer indemnity of $11,000,000.	G. von L. Meyer, *Postmaster-Generals.* E. A. Hitchcock, J. R. Garfield, *Secretaries of Interior.* James Wilson, *Secretary of Agriculture.* V. H. Metcalf, O. S. Straus, *Sec. of Com. and Labor.*	1908. Tunnels opened under East river and Hudson river, connecting Manhattan with Brooklyn and Jersey City. National Conservation Congress meets at Washington. Great strike of coal miners in Pennsylvania.	1908. Quebec tercentenary celebration.	
1909. Payne-Aldrich tariff law enacted. Congress proposes income tax amendment.	**Wm. H. Taft,** *President.* J. S. Sherman, *Vice-President.* P. C. Knox, *Secretary of State.* F. MacVeagh, *Secretary of Treasury.*	1909. Alaska-Yukon-Pacific Exposition at Seattle. Hudson-Fulton celebration at New York. Commander Peary reaches the North Pole.		1909. U. S. withdraws army from Cuba.
1910. Equal suffrage granted to women in the state of Washington. Passage of postal savings bank law. Tariff board is established. Telegraph and telephone companies put under the jurisdiction of the interstate commerce commission.	J. M. Dickinson, H. L. Stimson, *Secretaries of War.* G. W. Wickersham, *Attorney-General.* G. von L. Meyer, *Secretary of Navy.* F. H. Hitchcock, *Postmaster-General.* R. A. Ballinger, W. L. Fisher, *Secretaries of Interior.*			1910. Pan-American Congress at Buenos Ayres.

VIII. PERIOD OF NATIONAL EXPANSION, 1897-1912—Continued

THE UNITED STATES				
Political Events	Presidents and Cabinet Officials	Social and Industrial Progress	British North America	Latin America and the West Indies
1911. Equal suffrage granted to women in California. Congress passes Canadian reciprocity treaty, which, however, is defeated in Canada.	James Wilson, *Secretary of Agriculture.* Charles Nagel, *Sec. of Com. and Labor.*	1911. Western Union inaugurates night, day and cable letter service.	1911. Jan., Reciprocity agreement with U. S. formulated. April, Preferential trade agreement made with British West Indies. Sept., General election on issue of reciprocity with U. S. returns Conservative majority opposed to reciprocity. 1911.—H. R. H., the Duke of Connaught, Gov.-Gen. Robert L. Borden, Premier.	1911. Revolution in Mexico, expels Diaz and makes Francisco I. Madero, President. Ramon Caceres, president of San Domingo since 1906, assassinated.
1912. Congress proposes amendment for direct election of senators. Admission of New Mexico and Arizona. Woodrow Wilson (Democrat) elected President by huge electoral majority over Taft (Republican) and Roosevelt (Progressive). Equal suffrage granted to women in Kansas, Oregon and Arizona.				
1913. Extra session of Congress called by President Wilson for Tariff legislation. New Department of Labor added to Cabinet Portfolios. Underwood Tariff bill passed by House of Representatives. Ratification of sixteenth and seventeenth amendments to the Constitution. Currency bill passed.	**Woodrow Wilson,** *President.* Thomas R. Marshall, *Vice-President.* William J. Bryan, *Secretary of State.* William G. McAdoo, *Secretary of Treasury.* Lindley M. Garrison, *Secretary of War.* James C. McReynolds, *Attorney-General.* Albert S. Burleson, *Postmaster-General.* Josephus Daniels, *Secretary of Navy.* Franklin K. Lane, *Secretary of Interior.* David F. Houston, *Secretary of Agriculture.* William C. Redfield, *Secretary of Commerce.* William B. Wilson, *Secretary of Labor.*	1913. Parcels Post System inaugurated. Great floods in the Ohio and Mississippi Valleys.		1913. Madero government overthrown; Gen. Huerta made provisional President.
1914. Anti-Trust legislation begun in Congress. President Wilson orders the military occupation of Vera Cruz, Mexico. Declares neutrality in the European War. New regional banking system goes into operation.		1914. Reorganization of New Haven railroad under decree of the Administration.	1914. Canada establishes a Parcels Post service.	1914. Huerta regime is overthrown. United States troops occupy Vera Cruz in an effort to enforce respect for the American flag and American rights.

HISTORY OF NATIONS AND IMPORTANT DEPENDENCIES

Argentine Republic, or **Argentina.**—In 1516 the estuary of La Plata was discovered by Juan Diaz de Solis, who, with his companions, were killed and devoured by the natives. In 1526, Sebastian Cabot visited the Plate, and one of his captains, ascending the Paraná, built a fort at the mouth of the Carcarana. The Emperor Charles V. subsequently sent out an expedition under the command of Mendoza, who founded the city of Buenos Ayres, in 1535. The Spaniards, after the lapse of half a century, succeeded in establishing their power over the entire country, built cities, and founded Jesuit missions.

In 1726 the Portuguese, jealous of the ascendency of Spain, founded the city of Montevideo in the Banda Oriental. In 1776 the Plate provinces were separated from the government of Lima, and formed into the viceroyalty of Buenos Ayres. In 1806, a British expedition was dispatched to the Rio de la Plata, and captured Buenos Ayres, which was ultimately retaken by the Spaniards. A second attack met with no better result. In 1808 the Spaniards revolted, deposed the viceroy, and declared a provisional government. After a protracted struggle with the mother country, they accomplished their independence.

Between 1810 and 1835 the Argentine province had no fewer than thirty-six changes of government. In the last-named year, Gen. Rosas was elected president, with dictatorial powers. He ruled the country with an iron tyranny for seventeen years, sought to bring the Banda Oriental, or Uruguay (as it is now termed), under his control, and also to exclude foreign commerce from the river Plata. Upon this, France and England blockaded Buenos Ayres, occupied Montevideo, and captured the Argentine fleet. In 1849 a peace was concluded.

In 1851 Brazil and Paraguay, objecting to the control of Rosas over the navigation of the Paraná, declared war against the Argentine Republic. Their confederated forces, amounting to 18,000 men, utterly defeated Rosas in the battle of Caceres, or Pacheco, in Feb., 1852, and obliged him to seek refuge in England. The navigation of the Paraná was then declared open to the world; and in 1853, the present constitution was established. After the fall of Rosas, the government was successively assumed by Gen. Urquiza and others; and, in 1860, by Gen. Mitré. In 1862 Buenos Ayres was declared the capital of the Argentine Republic, which it continued to be until 1868, when Rosario was made the seat of the federal government.

When the ambitious designs of Lopez, the dictator of Paraguay, led to a war with Brazil, the Argentine Republic took a neutral attitude, but upon the refusal of Mitré to allow the Paraguayan troops passage through his territory, Lopez crossed the Paraná, and invaded Corrientes, seizing two Argentine vessels, as well as the persons of Argentine subjects, upon whom he levied blackmail. These outrages obliged the Argentine Republic to ally itself with Brazil, and Uruguay, against the common enemy. A long and sanguinary war followed, with varying success, until the fall of Angostura, the last stronghold of Lopez, which was taken by the allies on Dec. 22d, 1868, after a desperate resistance.

After a wise and popular rule, Gen. Mitré was succeeded as president, in 1868, by Senhor Domingo Sarmiento. In 1874 an insurrection broke out in Buenos Ayres, which was suppressed in 1875, and the president peacefully installed, 1880, and his successor, Dr. Coleman, in 1886. In 1890 financial troubles and political turmoil seriously injured the well-being of what was long the best governed and most prosperous of South American states. Dr. Saenz Pena has been president since 1910.

References.—Turner's *Argentina and the Argentines;* Child's *The Spanish American Republics;* Campbell's *Through Patagonia;* Pritchard's *Through the Heart of Patagonia* (1902); Mulhall's *Handbook of the River Plate Republics;* Grant's *Directory and Argentine Commercial Guide;* Koebel's *Modern Argentina.*

Austria-Hungary.—The empire of Austria arose from the smallest beginnings at the end of the eighth century. In 796 a margraviate, called the eastern mark (*i. e.,* march or frontier-land), was founded as an outpost of the empire of Charlemagne, in the country between the Enns and the Raab. The name *Oesterreich* appears first in 996.

In 1156 the mark was raised to a duchy; and after coming into the possession of the house of Hapsburg in 1282, it rapidly rose to be a powerful state. The princes of that house extended their dominion by marriage, by purchase, and otherwise, over a number of other states, including the crowns of Bohemia and Hungary; and from 1438 down to the nineteenth century they held almost without interruption the throne of the German empire (nominally the Holy Roman empire), the emperor being the most conspicuous, if not always the most powerful personage among the crowned heads of Europe.

In 1804 Francis declared himself hereditary Emperor of Austria, and two years afterward resigned the dignities of German emperor and king of the Romans. Thenceforward, especially during the troublous times of 1848-50, Austria held the preëminence among German states; but after the victory of Prussia at Königgrätz (Sadowa), in the short but decisive Austro-Prussian war of 1866, Austria was excluded from Germany—and exclusion made final by the reconstruction of the German empire with the kings of Prussia as hereditary German emperors.

Since 1866 Austria has been occupied chiefly with the internal affairs of the empire. Hungarian demands for self-government were finally agreed to, and the empire of Austria divided into the two parts already mentioned—the Cisleithan and the Transleithan. This settlement was consummated by the coronation of the Emperor Francis Joseph I. at Budapest, as King of Hungary, on the 8th of June, 1867. In the same year the Concordat of 1855 came up for discussion, and measures were passed for the reëstablishment of civil marriage, the emancipation of schools from the domination of the church, and the placing of different creeds on a footing of equality. The fact of the Austro-Hungarian dominions comprising so many different nationalities has always given the central government much trouble, both in regard to internal and to external affairs. In regard to the "Eastern question," for instance, the action of Austria has been hampered by the sympathies shown by the Magyars for their blood relations, the Turks, while the Slavs have naturally been more favorable to Russia.

During the war between Russia and Turkey in 1877-8 Austria remained neutral; but at its close, in the middle of 1878, it was decided, at the Congress of Berlin, that the provinces of Bosnia and Herzegovina should in future be administered by Austria-Hungary instead of Turkey. Since that time the external history of the Austro-Hungarian monarchy has been uneventful, but in internal affairs there has been considerable friction between the different nationalities and the numerous political parties. An anti-Semitic agitation assumed vast proportions in 1895, and resulted in the Czechs carrying the Bohemian diet. More internal unrest has recently been displayed in Austria-Hungary than in any other nation of Europe, Turkey excepted. In 1907-8 socialist demonstrations in favor of universal suffrage were frequent and impressive. In 1909 Bosnia and Herzegovina became absolute possessions.

References.—Bryce's *The Holy Roman Empire;* Fisher's *The Mediæval Empire;* Felbermann's *Hungary and Its People;* Drage's *Austria-Hungary;* Whitman's *Austria.*

NOTABLE BATTLES OF UNIVERSAL HISTORY

Dates of events in this table are according to the Julian calendar (Old Style) until the promulgation of Gregorian calendar (New Style) in 1582. For events occurring within the limits of Great Britain the events are Old Style until the acceptance by Parliament of the Reformed calendar in 1752. In the seventeenth century the difference between the New Style and the Old was ten days, and in the eighteenth century eleven days. The victorious contestant is printed in **bold-face** type.

Name of Battle	Date	Approximate Location	Contestants	Remarks
Abensberg (*ä'bens-berg*) ★ 50	1809, Apr. 20	Bavaria	**French and Bavarians;** Austrians	About 90,000 engaged on each side.
Aboukir (*ä-bōō-kēr'*), **Battle of the Nile** 55	1798, Aug. 1	Egypt	**English;** French	Nelson cut off Napoleon's return to Europe.
Aboukir 55	1799, July 25	Egypt	**French;** Turks	Two-thirds of Turkish troops killed.
†**Abydos** (*ä-bī'dŏs*) 7b	B. C. 411	Hellespont	**Athenians;** Peloponnesians	
Acragas (*ak'rä-gas*), **Siege of**	B. C. 406	Sicily	**Carthaginians;** Greeks	The citizens evacuated the fortress.
Acre (*ä'ker* or *ā'ker*), **Siege of** 36	1189–1191	Syria	**Christians;** Saracens	Richard the Lion Hearted won renown by this siege.
Acre, Siege of 55	1799, Mar. 17	Syria	**Turks;** French	
†**Actium** (*ak'shi-um*) 24	B. C. 31, Sept. 2	Greece	**Augustus;** Antony	At the critical moment Antony and Cleopatra sail away.
Adowa (*ä'dō-wä*)	1896, Mar. 1	N. E. Africa	**Ethiopians;** Italians	Italians routed with enormous loss.
Adrianople (*ad-ri-an-ō'pl*) 28	323, July 3	Thrace	**Constantine;** Licinius	Constantine gained empire.
Adrianople 29	378	Thrace	**Visigoths;** Romans	Emperor Valens defeated and slain.
Adwalton Moor (*ad'wal-ton*) 48	1643, Jan. 30	England	**Royalists;** Parliamentarians	
Ægadian Islands (*ē-gā'di-an*) 14	B. C. 241	Sicily	**Romans;** Carthaginians	This victory put an end to the first Punic war.
†**Ægospotami** (*ē-gos-pot'a-mi*) 7	B. C. 405	Thrace	**Spartans;** Athenians	Virtually ended Peloponnesian war.
Aghrim (*ō'grim*)	1691, July 12	Ireland	**William III;** James II	Irish savagely slaughtered.
Agincourt (*ä-zhan-kōōr'*; E. *aj'in-kŏrt*) 39	1415, Oct. 25	France	**English;** French	Great victory for Henry V.
Agnadello (*ä-nyä-del'lō*) 43	1509, May 14	Italy	**French;** Venetians	One of the most disastrous battles in the history of Venice.
Agrigentum (*ag-ri-jen'tum*), **Siege of** 14	B. C. 262	Sicily	**Romans;** Carthaginians	
Alamo (*ä'lä-mō*), **Storming of the**	1836, Feb. 22	Texas, U. S.	**Mexicans;** Texans	Survivors put to the sword.
Albuera (*äl-bwä'rä*) 56	1811, May 16	Spain	**British;** French	Heavy losses on both sides.
Aleppo (*ä-lep'ō*) 34	638	Syria	**Moslems;** Syrians	Last serious resistance in Syria to the invading Moslems.
Alexandria (*ä-leks-an'dri-ä*), **Siege of** 34	638	Egypt	**Moslems;** Egyptians	Left Moslems masters of Egypt.
Alexandria, Bombardment of	1882, July 11-12	Egypt	**English;** Arabi Pasha	Forts totally destroyed. English occupy Egypt.
Algiers (*al-jērz'*), **Bombardment of**	1816	Algeria	**English and Dutch;** Dey of Algeria	Dey agreed to total abolition of Christian slavery in his dominion.
Allia (*al'i-ä*)	B. C. 390	Italy	**Brennus and his Gauls;** Romans	Rome left defenseless.
Alma (*äl'mä*) 60	1854, Sept. 20	Crimea	**English and French;** Russians	British carried heights at the point of the bayonet.
Almansa (*äl-man'sä*) 50	1707, Apr. 25	Spain	**French;** British and Portuguese	Spain lost to the allies.
Amphipolis (*am-fip'ō-lis*), **Siege of** 7	B. C. 422	Thrace	**Spartans;** Athenians	Both Brasidas and Cleon fell.
Anaquito (*ä-nä-kē'tō*)	1546	Peru	**Pizarro;** Viceroy Menez	Government of Peru fell into Pizarro's hands.
Angora (*an-gō'rä*)	1402	Asia Minor	**Tartars;** Turks	Tamerlane said to have had 800,000 men.
Antietam (*an-tē'tam*) 63	1862, Sept. 17	Maryland, U. S.	***Confederates;** Federals	Heavy losses on both sides. Lee's army greatly outnumbered.
Antioch, Siege of 36	1097–1098	Syria	**Crusaders;** Saracens	Defenders massacred.
Antwerp (*ant'wirp*) 40	1576	Belgium	**Spaniards;** Walloons	Massacre of inhabitants known as the "Spanish Fury."
Aquæ Sextiæ (*ä'kwe seks'ti-ē*)	B. C. 102	Gaul	**Romans;** Teutons	Caius Marius annihilates the barbarian army.
Arbela (*är-bē'lä*) 12	B. C. 331	Persia	**Macedonians;** Persians	This victory made Alexander master of Asia
Arcola (*är'kō-lä*) 55	1796, Nov. 15-17	Italy	**French under Napoleon;** Austrians	Napoleon prevented the junction of two Austrian armies.
Arcot (*är-kot'*), **Siege of**	1751, Aug. 31-Nov. 15	India	**English and Sepoys;** French	Robert Clive held out ten weeks against a far superior force before being relieved.
†**Arginusæ** (*är-ji-nū'sē*) 7	B. C. 406	Asia Minor	**Athenians;** Peloponnesians	Command of the sea temporarily restored to Athens.
†**Armada** (*är-mä'dä*), **The Invincible**	1588, July	English Channel	**English;** Spanish	Beginning of English sea-power.
Arsuf (*ar-suf*) 36	1191, Sept. 7	Syria	**English Crusaders;** Saracens	Great victory of Richard the Lion Hearted over Saladin.

† Naval battles; * Indecisive; ★ Numbers after names of battles refer to wars so numbered under Notable Wars of History, p. 193.

NOTABLE BATTLES OF UNIVERSAL HISTORY—Continued

Name of Battle	Date	Approximate Location	Contestants	Remarks
†**Artemisium** (*ăr-te-mish'-um*)	B. C. 480	Eubœa	***Persians;** Greeks	Fought at the same time as the battle of Thermopylæ.
Ascalon (*as'ka-lon*)	1099	Syria	**Crusaders;** Saracens	Moslem resistance to Christians ended for a time.
Asculum (*as'ku-lum*)	B. C. 279	Italy	**Pyrrhus;** Romans	Pyrrhus, though victorious, suffered great loss.
Aspern (*ăs'pern*)	1809, May 21-22	Austria	***Austrians;** French	Napoleon retired. Each side lost about 20,000 men.
Assaye (*ă-sī'*)	1803, Sept. 23	India	**English;** East Indians	Sir Arthur Wellesley (later duke of Wellington) defeated forces almost ten times as numerous.
Austerlitz (*ous'ter-lits*)	1805, Dec. 2	Austria	**French;** Russians, Austrians	The Battle of the Three Emperors: Napoleon, Alexander I, Francis I.
†**Azores** (*ă-zōrz'*)	1591	Atlantic	**Spanish;** English	Gallant fight made by Sir Richard Grenville in the *Revenge*.
Balaclava (*băl-ă-klä'vä*)	1854, Oct. 25	Crimea	**Russians;** English	"Charge of the Light Brigade" celebrated by Tennyson.
Bannockburn (*ban'ok-burn*)	1314, June 24	Scotland	**Scots;** English	Bruce drives back English invaders with great slaughter.
Barnet (*bär'net*)	1471, Apr. 4	England	**Yorkists;** Lancastrians	Earl of Warwick ("Kingmaker") slain.
Bautzen (*bout'sen*)	1813, May 20-21	Germany	**French;** Prussians, Russians	The allies lost 15,000 killed and wounded.
†**Beachy Head**	1690, June 30	England	**French;** English, Dutch	The French had been sent to create a diversion in favor of James II. in Ireland.
Belgrade (*bel-grăd'*), **Siege of**	1456, April	Servia	**Hungarians;** Turks	John Hunyady's last exploit.
Beneventum (*ben-e-ven'-tum*)	B. C. 275	Italy	**Romans;** Pyrrhus	Pyrrhus' last serious attack against the Romans.
Beresina (*ber-yä'zē-nä*), **Crossing of the**	1812, Nov. 28	Russia	**Russians;** French	A most terrible disaster on the retreat from Moscow.
Bergen-op-Zoom (*berch'-en-op-zōm'*), **Siege of**	1747	Netherlands	**French;** English, Dutch	French lost heavily in the siege.
Bibracte (*bi-brak'tē*)	B. C. 58	Gaul	**Romans;** Helvetians	A defeat would have meant destruction to Cæsar.
Blenheim (*blen'im*)	1704, Aug. 13	Bavaria	**British, Imperialists;** French, Bavarians	Brilliant victory of Marlborough and Prince Eugene.
Borodino (*bor-o-dyē-nō'*; commonly Anglicized, *bor-ō-dē'nō*)	1812, Sept.	Russia	***French;** Russians	One of the most bloody battles on record.
Bosworth Field	1485, Aug.	England	**Lancastrians;** Yorkists	Richard III. slain; Henry Tudor becomes Henry VII. of England.
Bouvines (*bō-vēn'*)	1214	Flanders	**French;** Flemish, English, Germans	Secures the position of Philip Augustus on the throne of France.
Bovianum (*bō-vi-ā'num*), **Siege of**	B. C. 305	Italy	**Romans;** Samnites	End of second Samnite war.
Boyne (*boin*), river	1690, July 1	Ireland	**William III.;** James II.	Irish under James II. totally defeated.
Breitenfeld (*brīt'en-felt*)	1631, Sept. 7	Germany	**Swedes, Saxons;** Imperialists	Brilliant victory of Gustavus Adolphus over Tilly.
Breitenfeld	1642	Germany	**Swedes;** Imperalists	Victory of Tortenson over Piccolomini.
Brill, Seizure of	1572	Holland	**Netherlanders;** Spanish	The first success of the Netherlanders.
Buena Vista (*bwā'nä vēs'tä*)	1847, Feb. 22-23	Mexico	**Americans;** Mexicans	General Zachary Taylor victorious over much larger force.
Bull Run	1861, July 21	Virginia, U. S. A.	**Confederates;** Federals	The first important battle of the Civil war.
Bunker's Hill	1775, June 17	Mass., U. S. A.	**British;** Americans	Though dislodged from their position, the Americans won a practical victory.
Byzantium (*bi-zan'shi-um*), **Siege of**	323	Thrace	**Constantine;** Licinius	Byzantium refounded as Constantinople, the capital of the empire.
†**Cadiz** (*kā'diz*, Sp. *kä'dēth*)	1587	Spain	**English;** Spanish	Here Drake "singed the King of Spain's beard."
Calais (Fr. *kä-lā'*) **Siege of**	1346–1347	France	**English;** French	Calais remained in English possession until 1558.
†**Camperdown** (*kam-per-doun'*)	1797, Oct. 11	Holland	**British;** Dutch	The Dutch fleet, allied with France, was practically destroyed.
Cannæ (*kan'ē*)	B. C. 216	Italy	**Carthaginians;** Romans	Hannibal inflicts one of most disastrous defeats the Romans ever suffered.
†**Cape St. Vincent**	1797, Feb. 14	Portugal	**British;** Spanish	Spanish fleet, allied with France, beaten by Admiral Jervis.
Capua (*kap'ū-a*; It. *kä'pōō-ä*), **Siege of**	B. C. 211	Italy	**Romans;** Capuans and Carthaginians	Hannibal was unable to break through Roman lines and relieve the city.
Carrhæ (*kar'ē*)	B. C. 53	Mesopotamia	**Parthians;** Romans	Crassus, one of the triumvirs, defeated and shortly after slain.
Carthage (*kär'thij*), **Siege of**	B. C. 146	N. Africa	**Romans;** Carthaginians	Carthage razed to the ground.
Castillon (*käs-te-yōn'*)	1453, July 17	France	**French;** English	This victory ended the Hundred Years' war.
†**Catana** (*kä-tän'ä*)	B. C. 387	Sicily	**Carthaginians;** Syracusans	Syracusans utterly routed. Carthaginians besieged Syracuse.
Caudine (*kä'din*) **Forks**	B. C 321	Italy	**Samnites;** Romans	The whole Roman army was "sent under the yoke."
Cawnpore (*kän-pōr*)	1857, Dec. 6	India	**British;** Mutineers	Sir Colin Campbell routs mutineers.
Chæronea (*ker-ō-nē'ä*)	B. C. 338	Greece	**Macedonians;** Athenians and Thebans	Philip of Macedon wins hegemony of Greece.
Chalons (*shä-lōn'*)	451	France	**Romans and Visigoths;** Huns	Attila retreated and western Europe was saved from the Huns.
Chattanooga (*chat-ä-nōō'gä*)	1863, Nov. 24-27	Georgia, U.S.A.	**Federals;** Confederates	The "Battle above the Clouds" fought on Lookout Mountain.
Chickamauga (*chik-ä-mō'gä*)	1863, Sept. 19-20	Tenn., U. S. A.	**Confederates;** Federals	Federal losses 16,000; Confederate about 11,000.
Chioggia (*kyod'jä*), **Blockade of**	1380, Jan.–June	Venetia	**Venetians;** Genoese	Loss of this city broke the power of the Genoese republic for many years.
Chotusitz (*chō'tō-zits*) **(Caslau)**	1742, May 17	Bohemia	**Prussians;** Austrians	This victory led Austria to sign the peace of Breslau, June 11, 1742.
Clusium (*klōō'shi-um*)	B. C. 225	Italy	**Gauls;** Romans	Romans said to have lost 25,000.
†**Cnidus** (*nī'dus*)	B. C. 394	Asia Minor	**Athenians and Persians;** Spartans	Sparta lost her recently gained maritime ascendency.
Colenso (*kō-len-sō*)	1899, Dec. 15	S. Africa	**Boers;** British	First action in Buller's campaign for the relief of Ladysmith.
Colline (*kol'in*) **Gate**	B. C. 82	Rome	**Optimates;** Democrates and Samnites	Sulla's victory ended the Roman civil war.
†**Constantinople** (*kon-stan-ti-nō'pl*), **Siege of**	1204	Thrace	**Crusaders and Venetians;** Greek empire	Baldwin of Flanders becomes Latin emperor of the East.

NOTABLE BATTLES OF UNIVERSAL HISTORY—Continued

Name of Battle	Date	Approximate Location	Contestants	Remarks
Constantinople, Siege of..34	1453, Apr. 6-May 29	Thrace	**Turks;** Greeks	Final overthrow of Greek empire.
Copenhagen (*kō-pen-hā'-gen*) **Bombardment of**..56	1807	Denmark	**British;** Danish	England forces surrender of Danish fleet to save it from Napoleon.
Coronea (*kor-ō-nē'ā*)	B. C. 394	Greece	**Sparta;** Thebes, Corinth, Argos and Athens	Agesilaus, Spartan king compelled to evacuate Bœotia.
Corunna (*kō-run'ā*)..56	1809, Jan. 16	Spain	**British;** French	Sir John Moore killed. French kept at bay while British embarked.
Courtral (*kōōr-trā'*)	1302, July 11	Flanders	**Flemish;** French	"Battle of the Spurs." Great carnage among French knighthood.
Crécy (*krā'sē*)..39	1346, Aug. 26	France	**English;** French	Victory due to English archers.
Crimisus (*kri-mī'sus*), **the river**	B. C. 340	Sicily	**Sicilians;** Carthaginians	Secured Greek towns of Sicily peace for many years.
Culloden (*ku-lō'den* or *-lod'en*)	1746, Apr. 16	Scotland	**British;** Scots under Young Pretender	Last attempt of the Stuarts to recover British throne.
Cunaxa (*kū-nak'sā*)	B. C. 401	Babylonia	**Cyrus and the "Ten Thousand";** Persians	Cyrus was slain and the Greeks made the "Anabasis" to the sea.
Custozza (*kōs-tōd'zā*)..65	1866, June 24	Italy	**Austrians;** Italians	Though defeated the Italians gained Venetia through Prussia.
Cynoscephalae (*si-nō-sef'-ā-lē* or *sin-ō*)..16	B. C. 197	Greece	**Romans;** Macedonians	Philip V. forced to abandon the hegemony of Greece.
†Cyzicus (*siz'i-kus*)..7	B. C. 410	Propontis	**Athenians;** Peloponnesians	Alcibiades surprised and practically annihilated the Peloponnesian fleet.
Delhi (*del'i*), **Siege of**..61	1857, June 8-Sept. 20	India	**British;** Mutineers	Delhi was the real center of the Indian mutiny.
Delium (*dē'li-um*)..7	B. C. 424	Greece	**Boeotians;** Athenians	Decisive and disastrous defeat for Athenians.
Dennewitz (*den'ne-vits*)..56	1813, Sept. 6	Germany	**Russians, Prussians, Austrians and Swedes, Allies;** French	Victory of Bernadotte (afterward Charles XIV. of Sweden) over Ney.
Deorham (*de-or'hăm*)..29	577	England	**West Saxons;** Welsh	Wessex extended to Bristol channel, severing Welsh into two parts.
Dessau (*des'ou*)..47	1626	Germany	**Imperialists;** Protestants	Wallenstein totally routed Mansfeld.
Dettingen (*det'ing-en*)..52	1743, June 27	Germany	**British;** French	Last battle in which a British sovereign engaged in person.
Douro (*dō'rōō*, Span. *dwā'rō*) **the river**..56	1809, May 12	Portugal	**British;** French	French driven out of Oporto.
†Downs, The	1666, June 11-14	North Sea	***Dutch;** English	English fleet took shelter in the Thames; Dutch too crippled to pursue.
†Drepana (*drep'a-nā*)..14	B. C. 249	Sicily	**Carthaginians;** Romans	This and other defeats led Romans to abandon the sea temporarily.
Dresden (*drez'den*; Ger. *drās'den*)..56	1813, Aug. 26, 27	Germany	**French;** Russians, Prussians and Austrians	Napoleon's last great victory on German soil.
Drogheda (*drō'he-dā* or *drō'-e-dā*), **Storm of**..48	1649, Sept. 12	Ireland	**British: Parliamentarians;** Royalists	Cromwell put the garrison to the sword.
Dunbar (*dun-bär'*)	1650, Sept. 3	Scotland	**Parliamentarians;** Scottish Royalists	Cromwell's victory followed by the surrender of Edinburgh and Glasgow.
Ebersberg (*ā'bers-berg*), **Storm of**..56	1809, May 3	Bavaria	**French;** Austrians	A horrible combat in which thousands were burned in the ruined village.
†Ecnomus (*ek'no-mus*)..14	B. C. 256	Sicily	**Romans;** Carthaginians	Romans laid waste Carthaginian territory in Africa.
Edgehill..48	1642, Oct. 23	England	***Royalists;** Parliamentarians	The first battle of the Civil war. Royalists march on London.
El Caney (*el kā-nā'*)..69	1898, July 1	Cuba	**Americans;** Spaniards	The chief battle of the war in Cuba.
Ellandun (*el'lan-dŏn*)..32	825	England	**West Saxons;** Mercians	The West Saxon Egbert becomes overlord of all the English.
Evesham (*ēvz'ham*)..38	1265, Aug. 4	England	**Prince Edward;** Simon de Montfort	This defeat ended the war. Simon de Montfort fell.
Eylau (*ī'lau*)..56	1807, Feb. 8	Prussia	***Russians and Prussians;** French	The bloodiest and most desperate battle of a century.
Falkirk (*fôl'kerk*; Scot., *fô'kerk*)	1298, July 22	Scotland	**English;** Scotch	Edward I. utterly routed Wallace.
Fehrbellin (*fär-bel-lēn'*)	1675, June 18	Brandenburg	**Brandenburgers;** Swedes	The first great victory of Brandenburg, Prussia.
Flodden (*flod''n*)	1513, Sept. 9	England	**English;** Scots	The Scottish king perished, with the bravest of his nobility.
Fontanet (*fŏn-tăn-ā'*)	841, June 20	France	**Louis and Charles;** Lothaire (Grandsons of Charlemagne)	Followed by the famous Partition of Verdun (843).
Fontenoy (*fŏn-t'-nwā'*)..52	1745, May 11	Belgium	**French;** British, Dutch and Austrians	Last great victory of France under the Old Regime.
Fornovo (*for-no'vō*)	1495, July 6	Italy	**French;** Italians	Charles VIII. enabled to continue his retreat following his conquest of Naples.
Friedland (*frēt'lănt* or *frēd'lănt*)..56	1807, June 14	Prussia	**French;** Russians	This defeat induced the Czar to conclude the peace of Tilsit.
Gettysburg (*get'iz-bûrg*)..63	1863, July 1-3	Penn., U.S.A.	**Federals;** Confederates	One of bloodiest battles of the war, forcing Lee from northern soil.
Gibraltar (*ji-brăl'tăr*), **Siege of**..54	1779–82	Spain	**British;** French and Spanish	The last formidable attack upon Gibraltar (British since 1704).
Granada (*grā-nā'dā*; Sp. *grā-nā'thā*), **Capitulation of**	1492, Jan. 2	Spain	**Spaniards;** Moors	Completes the overthrow of the Moorish power in Spain.
Granicus (*grā-ni'kus*) **river** 12	B. C. 334	Asia Minor	**Alexander the Great;** Persians and Greek Mercenaries	Destroyed the only army opposed to Alexander in Asia Minor.
Granson (*gran-sŏn'*)	1476, Mar. 2	Switzerland	**Swiss;** Burgundians	First of the three great victories of the Swiss over Charles the Bold.
Gravelotte (*grăv-lot'*)..66	1870, Aug. 18	Lorraine	**Prussians;** French	The first great victory of the Prussians in the war.
Guinegate (*gēn-gāt'*)	1513, Aug. 16	France	**English and Imperialists;** French	Called the "Battle of the Spurs" from the French haste in flight.
Haarlem (*här'lem*), **Siege of** 46	1572-3, Dec. 9-July 14	Holland	**Spaniards;** Dutch	30,000 Spaniards against 4,000 Dutch; 2,000 Dutch massacred.
Halidon (*hal'i-dn*) **hill**	1333, July 19	England	**Edward III. of England;** Scots	Won by combination of archers and dismounted men-at-arms.
†Hampton (*hamp'tn*) **roads**..63	1862, March 8	Va. U. S. A.	**Monitor (Federal);** Merrimac (Confederate)	After this wooden ships give way to ironclads in naval warfare.
Hastenbeck..53	1757, July 26	Germany	**French;** Hanoverians	Followed by the convention of Closter-Zeven, which George II. repudiated.
Hastings (*hās'tingz*)..35	1066, Oct. 14	England	**Normans;** English	Harold fell; William the Conqueror became king of England.
Heraclea (*her-ā-klē'ā* or *-klī'ā*)..13	B. C. 280	Italy	**King Pyrrhus;** Romans	"One more such victory and I shall be ruined." Pyrrhus.
Hexham (*hek'sam*)..42	1464, May 15	England	**Yorkists;** Lancastrians	The Lancastrian cause was completely crushed by this defeat.
Himera (*him'er-ā*)	B. C. 480	Sicily	**Syracuse and Agrigentum;** Carthaginians	Hamilcar slain. Carthaginians purchased peace for 2,000 talents.

NOTABLE BATTLES OF UNIVERSAL HISTORY—Continued

Name of Battle	Date	Approximate Location	Contestants	Remarks
Himera, Siege of	B. C. 409	Sicily	**Carthaginians;** Sicilian Greeks	Town sacked and prisoners sacrificed to the shade of Hamilcar.
Höchst (*hûkst*) 47	1622, June 20	Germany	**Imperialists;** Palatinate troops	Practically ends the Bohemian–Palatinate phase of the Thirty Years' war.
Hohenfriedburg (*hō'ēn-frēd'berg*) 52	1745, June	Germany	**Prussians;** Austrians and Saxons	One of Frederick the Great's victories; due partly to Austrian overconfidence.
Hohenlinden (*hō-en-lin'den*) 55	1800, Dec. 3	Bavaria	**French;** Austrians	The crowning event of the winter campaign; won by Moreau.
Hohkirchen (*hō'kirch-en*) 53	1758, Oct. 14	Germany	**Austrians;** Prussians	Frederick the Great, though surprised by a night attack, made good his retreat.
Homildon (*hom'l-dn*) **hill**	1402, Sept. 14	England	**English;** Scots	Another great victory due to the prowess of the English longbowmen.
Hydaspes (*hī-das'pēz*) **river** 12	B. C. 326	India	**Greeks;** Asiatics	The last important battle in the eastward advance of Alexander the Great.
Inkermann (*ing-ker-mān'*) 60	1854, Nov. 5	Crimea	**British and French;** Russian	A series of hand-to-hand combats fought in a dense fog.
Inverlochy (*in-ver-lock'i*) 48	1645, Feb. 2	Scotland	**Royalist Highlanders;** Campbells and Lowland Covenanters	Power of the Campbells in the Highlands broken for many years.
Ipsus (*ip'sus*)	B. C. 301	Asia Minor	**Seleucus;** Antigonus	Chief battle between Alexander's generals over the partition of his empire.
Issus (*is'us*) 12	B. C. 333	Asia Minor	**Macedonians;** Asiatics	Alexander's brilliant victory over an immense horde of Persians.
Ivry (*ēv-rē'*) 45	1590, March 14	France	**Huguenots;** Catholics	Henry IV. gained a complete victory and invested Paris, his capital.
Jarnac (*zhär-nāk'*) 45	1569, March 13	France	**Catholics;** Huguenots	Prince de Condé slain.
Jemmapes (*zhe-māk'*) 55	1792, Nov. 6	Belgium	**French;** Austrians	Followed by annexation of the Austrian Netherlands to France.
Jena (*yā'nä*) 56	1806, Oct. 14	Germany	**French;** Prussians	Napoleon advanced thence to Berlin and issued the decree for a continental blockade
Jerusalem (*jē-rōō'sa-lem*), **Siege of** 25	70	Syria	**Jews;** Romans	Titus destroyed the city and massacred or sold into slavery its inhabitants.
Jerusalem, Storm of 36	1099, July 15	Syria	**Crusaders;** Moslems	A terrible massacre; feudal kingdom established under Godfrey of Bouillon.
Kappel (*käp'pel*)	1531, Oct. 11	Switzerland	**Swiss Catholic Cantons;** Zurichers	Zwingli, the Swiss Protestant reformer, fell in this battle
Kars (*kärs*), **Storm of** 67	1877, Nov. 17-18	Armenia	**Russians;** Turks	Russian success caused angry negotiations between England and Russia.
Katzbach (*käts'bäk*) 56	1813, Aug. 26	Germany	**Prussians;** French	A decisive victory of Blücher over one of Napoleon's marshals.
Khartoum (*kär-tōm'*), **Siege of**	1884-5, Mar. 12-Jan. 26	Soudan	**Mahdi;** Gordon	"Chinese" Gordon killed; the Soudan evacuated by the Anglo-Egyptian government.
Killiecrankie (*kil-i-krang'ki*)	1689, July 17	Scotland	**Highland Jacobites;** Royalists	The Jacobite victory was nullified by the fall of their leader, Dundee.
Kimberley (*kim'ber-li*), **Siege of** 70	1899-1900, Oct. 15-Feb. 15	S. Africa	**British;** Boers	The brilliant defense of Kimberley was a notable feature of the war.
Kin-chau (*kin-chow'*) 71	1904, May 26	Manchuria	**Japanese;** Russians	General Oku opened the way for the land investment of Port Arthur.
Koniggrätz (*kō'nich-grätz'*), **(or Sadowa)** 65	1866, July 3	Germany	**Prussians;** Austrians	This victory gave the supremacy in Germany to Prussia, unity to North Germany.
Kolin (*kō-lēn'*) 53	1757, June 18	Bohemia	**Austrians;** Prussians	Following this defeat, Frederick the Great evacuated Bohemia.
Kossova (*kos'ō-vō*) 34	1389, June 15	Servia	**Turks;** Christian Slavs	A battle famed in the history, legend and literature of Servia.
Kossova 34	1448, Oct. 17-19	Servia	**Turks;** Christians	The hero, John Hunyady, overcome at the cost of 40,000 Turkish lives.
Kotzim (*cho-tem'*) 34	1673, Nov. 11	Russia	**Poles;** Turks	John Sobieski, by sheer personal ascendency, stems tide of Turkish advance.
Kulm (*kōōlm*) 56	1813, Aug. 29-30	Germany	**Austrians, Russians and Prussians;** Napoleon	7,000 French capitulate; "The Caudine Forks of modern war." Conduces to the defeat at Leipzig.
Kunersdorf (*kōō'ners-dorf*) 53	1759, Aug. 12	Germany	**Austrians and Russians;** Prussians	Inactivity of the allies saved Frederick the Great from annihilation.
†Lade (*lä'dē*)	B. C. 494	Asia Minor	**Persians;** Ionian Greeks	This defeat put an end to the Ionian revolt.
Ladysmith (*lā'di-smith*) **Siege of** 70	1899-1900, Nov. 2-Feb.	S. Africa	**British;** Boers	Like the siege of Kimberley, a notable incident of the war.
†La Hogue (*lä hōg*)	1692, May 19-20	N. W. France	**English and Dutch;** French	Overthrew the hopes of James II. of recovering his throne.
†Lake Erie 57	1813, Sept. 10	Lake Erie	**Americans;** British	"We have met the enemy and they are ours."—Perry.
†La Rochelle (*lä rō-shel'*) 39	1372, June 22-23	France	**French and Spaniards;** English	Control of the sea passes for a time to the side of the French.
La Rochelle, Siege of	1627-8, Nov. 1-Oct. 28	France	**Richelieu;** Huguenots and English	Huguenots no longer an armed political party but a tolerated sect.
Lechfeld (*lech'feld*)	955, Aug. 10	Germany	**Otto I;** Hungarians	A crushing defeat inflicted on the waning power of the Hungarians.
Lech (*lech*), **the river** 47	1632, April 15	Germany	**Gustavus Adolphus;** German Catholic League	Tilly mortally wounded.
Legnano (*len-yä'nō*) 37	1176, May 29	Italy	**Lombard League;** Frederick Barbarossa	In the peace of Constance (1183), Frederick renounced all regal privileges over the cities.
Leipzig (*lip'sik*) 47	1631, Sept. 17	Saxony	**Swedes and Saxons;** Catholic Imperialists	Brilliant victory of Gustavus Adolphus saves Protestant cause.
Leipzig 56	1813, Oct. 16, 18-19	Saxony	**Allies;** Napoleon	This disaster lost Germany to Napoleon.
Le Mans (*le mon'*) 66	1871, Jan. 6-12	France	**Prussians;** French	French army almost annihilated.
†Lepanto (*le-pan'tō*)	1751, Oct. 7	Gulf of Corinth	**Don John of Austria;** Turks	One of the most splendid naval victories ever achieved.
Leuctra (*lūk'tra*)	B. C. 371	Greece	**Thebans;** Spartans	Epaminondas' overthrow of Sparta gives Thebes the hegemony in Greece.
Leuthen (*loi'ten*) 53	1757, Dec. 5	Germany	**Prussians;** Austrians	This battle "would alone make Frederick immortal and rank him among the greatest generals."—Napoleon.
Lewes (*lū'is*) 38	1264, May 14	England	**Simon de Montfort;** Henry III. and Prince Edward	Simon de Montfort's victory followed by Parliament, the first to which borough representatives were called (1265).
Leyden (*lī'den*), **Seige of** 46	1574, May 26-Oct. 3	Holland	**Dutch;** Spaniards	Prince of Orange cut the dikes to bring the fleet to the relief of the city.
Liegnitz (*lēch'nits*) 53	1760, Aug. 15	Germany	**Prussians;** Austrians	Frederick prevented the union of the Austrians and Russians.
Ligny (*lēn-yē'*) 56	1815, June 16	Belgium	**Napoleon;** Blücher	Napoleon's last victory; Blücher joined Wellington at Waterloo on the 18th.

NOTABLE BATTLES OF UNIVERSAL HISTORY—Continued

Name of Battle	Date	Approximate Location	Contestants	Remarks
Lille (*lēl*), **Siege of** 50	1708, Aug. 12-Oct. 22	France	**Imperialists;** French	France now lay open to the advance of the allies.
Lilybæum (*lil-i-bē'um*), **Siege of** 14	B. C. 250-241	Sicily	**Carthaginians;** Romans	One of most protracted sieges in history; surrendered only with Sicily at close of war.
Linköping (*lēn'chû-ping*)	1598, Sept. 25	Sweden	**Swedes;** Poles under King Sigismund	Led to perpetual hostility between Sweden and Poland in seventeenth century.
†Lissa (*lis'a*) 65	1866, July 20	Adriatic	**Austrians;** Italians	The only battle between ironclads fought in European waters.
Lobositz (*lō'bō-zits*) 53	1756, Oct. 1	Bohemia	***Prussians;** Austrians	18,000 Saxons besieged at Pirna were now forced into the Prussian army.
Lodi (*lō'dē*), **Bridge of** 55	1796, May 10	Italy	**Napoleon Bonaparte;** Austrians	This success gave the whole of Lombardy to the French.
Loigny-Poupry (*lwän-ye' poo-pree'*) 66	1870, Dec. 2	France	**Prussians;** French	Prevented the French from relieving Orleans.
Louisburg (*lō'ē-berg*), **Siege of** 53	1758, June 8-July 27	Canada	**British;** French	Destruction of one of the strongest fortresses in America.
Lucknow (*luk'nou*), **Siege of** 61	1857-8, July 1-Mar. 19	India	**British;** Sepoy mutineers	The turning of the tide; next year the mutiny was totally quelled.
Lutter (*lōt'ter*) 47	1626, Aug. 26	Germany	**Catholics and Imperialists;** Danes and Protestant Germans	Christian of Denmark, severely defeated, retires into Holstein and Mecklenburg.
Lützen (*lüt'sen*) 47	1632, Nov. 16	Saxony	**Swedes and Protestant Germans;** Catholics and Imperialists	Gustavus Adolphus slain in winning his third great victory.
Lützen 56	1813, May 2	Saxony	**Napoleon;** Allies	The first battle in the great German War of Liberation.
Luzzara (*lōt-sä'rä*) 50	1702, Aug. 15	Italy	***French;** Imperialists	Followed by French ascendency in Italy until 1706.
Macalo (*mäk-ä'lo*)	1427, Oct. 11	Italy	**Venice;** Milan	Carmagnola gained a brilliant victory over the famous condottieri, Sforza, Piccinino and Malatesta.
Madras (*mä-dras'*), **Siege of** 53	1758-9, Dec. 12-Feb. 16	India	**English;** French	Failure to take Madras was a great blow to French power in India.
Maestricht (*mäs'tricht*), **Siege of** 46	1579, Mar. 12-June 29	Belgium	**Spaniards;** Netherlanders	Inhabitants and garrison massacred.
Mafeking (*maf'e-king*), **Siege of** 70	1899-1900, Oct.-May 17	S. Africa	**British;** Boers	Baden Powell's resistance aroused world-wide enthusiasm.
Magdeburg (*mäg'de-boörch*), **Storm of** 47	1631, May 20	Germany	**Catholics and Imperialists;** inhabitants	The sack of Magdeburg is one of the darkest spots on the pages of history.
Magenta (*mä-jen'tä*)	1859, June 4	Italy	**French and Piedmontese;** Austrians	Napoleon III. and Victor Emmanuel entered Milan.
Magnesia (*mag-nē'shä*)	B. C. 190	Asia Minor	**Romans;** Antiochus the Great	The kingdom of the Seleucidæ dismembered.
Malaga (*mä'lä-gä*)	1487, May 8—Aug 18	Spain	**Spaniards;** Moors	The inhabitants were sold into slavery.
†Malaga 50	1704, Aug. 24	Spain	***English and Dutch;** French	French fleet prevented from uniting with Spanish which was besieging Gibraltar.
Malakoff (*mä-lä'kof*), **Storm of** 60	1855, Sept. 8	Crimea	**French;** Russians	Loss of this and other earthworks led that night to the evacuation of Sebastopol.
Malo-Jaroslavitz (*mä'lō yä-rō-slä'vets*) 56	1812, Oct. 24	Russia	***Russians;** French	Napoleon was obliged to abandon southerly line of retreat from Moscow.
Malplaquet (*mäl-plä-kä'*) 50	1709, Sept. 11	France	**British and Imperialists;** French	Bloodiest battle of this war; "carnage, not a battle."
†Manila (*mä-nil'ä*) **bay** 69	1898, May 1	Philippines	**Americans;** Spaniards	Admiral Dewey totally destroyed the Spanish fleet.
Mansurah (*män-sōō'rä*) 36	1250, April 8	Egypt	***French Crusaders;** Saracens	The last of the great pitched battles of the crusaders. Shortly after Louis IX. was captured and ruinously ransomed.
Mantineia (*man-ti-nē'ä*) 7	B. C. 418	Greece	**Spartans;** Athenians and Argives	The Spartans regained their supremacy in Peloponnesus.
Mantineia	B. C. 362	Greece	**Thebans;** Spartans	The death of Epaminondas in this battle ends Theban supremacy.
Mantua (*man'tū-ä*), **Siege of** 55	1796-7, June-Feb. 2	Italy	**French;** Austrians	The close of Napoleon's marvelous first Italian campaign.
Marathon (*mär'ä-thon*) 5	B. C. 490	Greece	**Athenians and Plataeans;** Persians	Miltiades' victory causes Persians to abandon their first expedition against Greece.
Mardia (*mär'di-ä*) 28	315	Thrace	**Licinius;** Constantine the Great	Licinius lost all his European territory except Thrace.
Marengo (*mä-reng'gō*) 55	1800, June 14	Italy	**French;** Austrians	Won for Napoleon largely by General Desaix.
Marignano (*ma-rēn-yä'nō*)	1515 Sept. 13, 14	Italy	**French;** Swiss	Francis I. reconquered Milan by this brilliant victory.
Marsaglia (*mär-säl'yä*) 49	1693, Oct. 4	Italy	**French;** Duke of Savoy	French infantry with bayonets charged the cavalry, a new maneuver.
Marston Moor 48	1644, July 2	England	**Parliamentarians;** Royalists	This victory due to Cromwell's Ironsides gave the north to parliament.
Maserfield (*mä'ser-feld*) 32	642	England	**Mercians;** Northumbrians	Mercia becomes a competitor with Northumbria for English hegemony.
Maxen (*mäks'en*) 53	1759, Nov. 20	Germany	**Austrians;** Prussians	The capitulation of Finck with 12,000 Prussian soldiers, disastrous to Frederick.
Maypu (*nū'pō*)	1818, April 5	Chili	**Chilians;** Spaniards	Established the independence of Chili.
Medellin (*mä-TNel-yēn'*) 56	1809, March 28	Spain	**French;** Spaniards	Spaniards mercilessly sabered in the pursuit, losing 18,000.
Megalopolis (*meg-ä-lop'ō-lis*)	B. C. 331	Greece	**Macedonians;** Spartans	Antipater, in absence of Alexander, puts down revolted Spartans in a bloody battle.
Mentana (*men-tä'nä*)	1867, Nov. 3	Italy	**Garibaldians;** French and Papal troops	Garibaldians routed after defeating papal forces.
†Messina (*mes-sē'nä*)	1282, Sept. 28	Sicily	**Sicilians and Aragonese;** French	Charles of Anjou evacuated Sicily, which his descendants never recovered.
Metaurus (*mä-tau'rus*) 15	B. C. 207	Italy	**Romans;** Carthaginians	Italy saved by preventing the junction of Hasdrubal with Hannibal.
Metz (*mets*), **Siege of**	1870, Aug. 19—Oct. 27	Lorraine	**Prussians;** French	The release of the besieging army for service elsewhere was fatal to the French cause.
Milazzo (*mē-lät'sō*) 62	1860, July 20	Sicily	**Garibaldians;** Neapolitans	This completes the expulsion of the Neapolitans from Sicily.
Minden (*min'den*) 53	1759, Aug. 1	Prussia	**English, Hessians and Hanoverians;** French	The French were decisively beaten and driven from Hesse.
Miraflores (*mē-rä-flō'res*)	1883, Jan. 13 and 15	Argentina	**Chilians;** Peruvians	Practically ended the war of the Pacific (1879-1884) between Chili, and Bolivia and Peru.
Missolonghi (*mis-ō-long'gē*) **Siege of** 58	1825-6, April 27-April 22, 23	Greece	**Turks;** Greeks	Greek heroism excited sympathy throughout Europe. (Byron died here. 1824.)
Mitylene (*mit-i-lē'nē*), **Siege of** 7	B. C. 428-427	Lesbos	**Athenians;** revolted inhabitants	Prisoners killed, walls pulled down, fleet forfeited, annual tribute imposed.
Modder (*mod'er*) **river** 70	1899, Nov. 28	S. Africa	**British;** Boers	Lord Methuen drives Cronje from his intrenchments after a fierce fight.

NOTABLE BATTLES OF UNIVERSAL HISTORY—Continued

Name of Battle	Date	Approximate Location	Contestants	Remarks
Mohacs (*mō'häch*) 34	1526, Aug. 29	Hungary	**Turks;** Hungarians	"Never was a single battle so disastrous to a people."
Mollwitz (*mōl'vitz*) 52	1741, April 10	Germany	**Prussians;** Austrians	Frederick's victory forces Europe to recognize in Prussia a new power.
Montaperti (*mon-tä-per'tē*)	1260, Sept. 4	Italy	**Florentine Ghibellines, Siennese;** Guelphs of Florence	Secured the triumph of the Ghibellines over all Tuscany.
Monterey (*mon-te-rā'*) 59	1846, Sept. 21-23	Mexico	**Americans;** Mexicans	Followed by the occupation of the whole of northern Mexico.
Montreal (*mont-ri-ōl'*) 53	1760, Sept. 8	Canada	**British;** French	Completes the British conquest of Canada from France.
Mook (*mōk*) 46	1574, April 14	Holland	**Spaniards;** Dutch	The battle terminated in a horrible butchery of the patriot army.
Morgarten (*mōr'gär-ten*)	1315, Nov. 15	Switzerland	**Swiss;** Austrians	The first battle fought for Swiss independence.
Mortimer's (*mōr'ti-mer*) **Cross** 42	1461, Feb. 2	England	**Yorkists;** Lancastrians	The Yorkist prince advanced to London and was proclaimed king as Edward IV.
Mukden (*mōōk-den'*) 71	1905, Feb. 24 to March 10	Manchuria	**Japanese;** Russians	Release of Japanese from before Port Arthur enables Oyama to crush Kuropatkin.
Mühlberg (*mül'berg*) 44	1547, April 24	Saxony	**Charles V. and Prince Maurice;** Saxony and Hesse	Maurice in 1552 retrieves his treason to Protestantism by driving Charles V. from Germany.
Muhldorf (*mül'dorf*)	1322, Sept. 28	Bavaria	**Louis of Bavaria;** Frederick of Austria	The disputed imperial election, over which this battle was fought, began a new struggle between empire and papacy.
Munda (*mun'dä*) 24	B. C. 45	Spain	**Julius Caesar;** Pompeians	Cæsar's last battle; it put an end to armed resistance.
Muret (*mü-rā'*)	1213, Sept. 12	France	**Crusaders;** Albigenses and Aragonese	Practically ends the Albigensian crusade; Toulousean territories pass ultimately to the French crown.
Mycale (*mik'ä-lē*) 5	B. C. 479	Asia Minor	**Greeks;** Persians	This battle and that of Platæa end the Persian wars against Greece.
†Mylæ (*mī'lē*) 14	B. C. 260	Sicily	**Romans;** Carthaginians	First naval victory of Romans; due to boarding bridges.
Näfels (*nä'fels*)	1388, April 9	Switzerland	**Swiss;** Austrians	Hapsburgs renounced all feudal claims over the Swiss cantons (1389).
Nancy (*nän-sē'*)	1477, Jan. 5	Lorraine	**Swiss;** Charles the Bold	Charles was slain, leaving his motley territories a prey to neighboring princes.
Narva (*när'vä*) 51	1700, Nov. 30	Russia	**Swedes;** Russians	Charles XII. won a brilliant victory over the much larger army of Peter the Great.
Naseby (*nāz'bi*) 48	1645, June 14	England	**Parliamentarians;** Royalists	Complete defeat of Charles I., followed by the general ruin of his cause.
†Naupactus (*nō-pak'tus*) 7	B. C. 429	Gulf of Corinth	**Athenians;** Peloponnesians	Victory wrested from defeat by the genius of Phormio, the Athenian commander.
†Navarino (*nä-vä-rē'nō*) 58	1827, Oct. 20	Greece	**English, French and Russians;** Turks	Destruction of Turkish naval power; Ibrahim retreats from Morea.
Navas de Tolosa (*nä'väs dä-tō-lō'sä*) 34	1212, July 16	Spain	**Spaniards;** Moors	Secured forever the preponderance of Christianity in Spain.
Neerwinden (*nār'vin-den*) 49	1693, July 24	Belgium	**French;** English	The French won a brilliant but barren victory over William III.
Neville's (*nev'ilz*) **Cross** 39	1346, Oct. 17	England	**English;** Scots	Scots crushed at home, while Edward III. was winning Crécy.
New Orleans (*ôr'li-anz*) 57	1815, Jan. 8	Louisiana (U. S. A.)	**Americans;** British	Owing to slowness of communication, Jackson fought this battle after peace had been made.
Nicæa (*nī-sē'ä*), **Siege of** 36	1097	Asia Minor	**Crusaders;** Turks	First conquest of crusaders in the East.
Nicopolis (*ni-kop'ō-lis*)	B. C. 66	Asia Minor	**Pompey;** Mithradates	Mithridates' last fight against the legions of Rome.
Nördlingen (*nerd'ling-en*) 47	1634, Sept. 6	Bavaria	**Catholics and Imperialists;** Swedes and German Protestants.	One of the most bloody and decisive battles of the war; followed by the peace of Prague.
Northampton (*nôrth-amp'tn*) 42	1460, July 10	England	**Yorkists;** Lancastrians	Capture of Henry VI.; flight of Queen Margaret and her son to Scotland.
Numantia (*nū-man'shi-ä*), **Siege of**	B. C. 142-133	Spain	**Romans;** Celtiberian tribes	City razed by Scipio Æmilianus and its inhabitants sold as slaves.
Obligado (*ōb-lē-gä'thō*), **Bombardment of**	1845, Nov. 28	Argentina	**British and French;** Argentines	Over the opening the waters of the Parana to the shipping of all nations.
Olmutz (*ol'müts*), **Siege of** 53	1758, May 27-July 1	Moravia	**Austrians;** Prussians	General Daun forced Frederick the Great to raise the siege and retire.
Orleans (*or-lä-än'*; Eng. *ôr'li-anz*), **Siege of** 39	1428-9, Oct. 13-May 8	France	**French;** English	Joan of Arc saves France by driving back English and crowns Charles VII. at Rheims.
Ostend (*ost-end'*), **Siege of** 46	1601-4, July-Sept.	Belgium	**Spaniards;** Dutch garrison and inhabitants	Scarcely a house in the town left standing; Spaniards lost 70,000.
Ostrolenka (*os-tro-leng'kä*)	1831, May 26	Poland	**Russians;** Poles	Poland becomes a province of the Russian empire (1832).
Otterburn (*ot'er-bûrn*)	1388, Aug. 10	England	**Scots;** English	The ballad of Chevy Chase deals with this battle.
Otumba (*ō-tōm'bä*)	1520, July 8	Mexico	**Cortes;** Aztecs	Two hundred Spanish horsemen rout an immense army and make good their retreat.
Oudenarde (*ou-de-när'de*) 50	1708, July 11	Belgium	**English and Imperialists;** French	One of the great victories of Marlborough and Prince Eugene over Louis XIV.
Palmyra (*pal-mī'rä*), **Siege of**	272-273	Syria	**Romans;** Queen Zenobia	Palmyra destroyed and Zenobia taken captive to Rome.
Palo Alto (*pä'lō-äl'tō*) 59	1846, May 8	Mexico	**Americans;** Mexicans	Mexicans completely routed at small cost to the victors.
Panormus (*pa-nôr'mus*) 41	B. C. 251	Sicily	**Romans;** Carthaginians	Brilliant victory restored confidence to Romans; demonstrated value of elephants in warfare.
Paris (*par'is*), **Siege of** 66	1870-1, Sept. 19-Jan. 28	France	**Prussians;** French	City reduced to desperate conditions through bombardment, famine and disease.
Pavia (*pä-vē'ä*) 43	1525	Italy	**Emperor Charles V.;** Francis I. of France	The capture of Francis was followed by the peace of Madrid, which, however, was soon repudiated.
Pharsalus (*fär-sä'lus*) 24	B. C. 48	Greece	**Caesar;** Pompey	The West and the new monarchy completely triumphed over the East and the old republic.
Philippi (*fi-lip'ī*) 24	B. C. 42	Thrace	**Antony and Octavius;** Brutus and Cassius	Cassius and Brutus committed suicide following their defeat.
Pinkie (*ping'ki*)	1547, Sept. 10	Scotland	**English;** Scots	Scots thrown into the arms of France and the little queen, Mary, married to the dauphin.
Plassey (*plās'ē*) 53	1757, June 23	India	**English;** Bengalese	Established English control in Bengal and ultimately in all India.
Platæa (*pla-tē'ä*) 5	B. C. 479	Greece	**Greeks;** Persians	Won by the discipline and prowess of the Spartan hoplites.

NOTABLE BATTLES OF UNIVERSAL HISTORY—Continued

Name of Battle	Date	Approximate Location	Contestants	Remarks
Plevna (*plev'nä*), **Siege of**	1877, July 16-Dec. 10	Bulgaria	**Russians;** Turks	Brilliant defense by Osman Pasha, who surrendered only after four desperate battles.
Poitiers (*pwä-tyā'*)	1356, Sept. 19	France	**English;** French	Brilliant victory by the Black Prince over five times his numbers.
Pollentia (*po-len'shi-ä*)	402, April 6	Italy	**Romans;** Visigoths	Alaric, attacked by Stilicho on Easter Sunday, was driven out of Italy.
Pondicherry (*pon-di-sher'i*), **Siege of**	1760-1, Aug.-Jan. 18	India	**English;** French	Destroyed French power in India.
Port Arthur, Siege of	1904-5, Feb. 8-Jan. 1.	Manchuria	**Japanese;** Russians	Port Arthur, the Sea of Japan and Mukden were turning points in the war.
†Portland	1653, Feb. 18-20	English channel.	**English;** Dutch	This battle completely restored to England the lordship of the seas.
Potidæa (*pot-i-dē'ä*), **Siege of.**	B. C. 432, Sept.-430	Thrace	**Athenians;** Potidæans and Corinthians	Inhabitants and foreign soldiers were allowed to leave the city, which Athens then colonized.
Prague (*prāg*), **(White hill)**	1620, Nov. 8	Bohemia	**Catholic League;** Frederick V. and Bohemian rebels	Frederick proved but a "Winter King" of Bohemia.
Preston (*pres'tun*)	1648, Aug. 17-19	England	**Cromwellians;** Scottish Royalists	This second civil war determined the army to put Charles I. to death.
Pultava (*pōl'tä-vä*)	1709, July 8	Russia	**Russians;** Swedes	Russia takes the place of Sweden as the leading power of the North.
Pydna (*pid'nä*)	B. C. 168	Macedonia	**Romans;** Macedonians	Brilliant triumphs of Paulus Æmilius over the phalanxes of King Perseus.
Pyramids	1798, July 21	Egypt	**French;** Mamelukes	The crowning victory of Napoleon in Egypt.
Pyrenees (*pir'a-nēz*), **Battles of**	1813, July 25-Aug. 1	Spain	**British and Spaniards;** French	Followed by the fall of San Sebastian and Pampeluna, and expulsion of French from Spain.
Quatre Bras (*kätr-brä'*)	1815, June 16	Belgium	**British and Allies;** French	The allied success here was rendered fruitless by the Prussian reverse at Ligny.
Quebec (*kwē-bek'*; locally often *ki-bek'*), **Siege of**	1759, June-Sept. 18	Canada	**British;** French	Wolfe was slain and Montcalm mortally wounded in the battle of the Plains of Abraham (Sept. 13).
†Quiberon (*kē-brōn'*) **bay**	1759, Nov. 20	France	**British;** French	Hawke, with a loss of 40 men, captured, burned, or drove on shore most of the French vessels.
Ramillies (*rä-mē-yē'*)	1706, May 23	Belgium	**English and Allies;** French	Followed by French evacuation of the chief towns of the Netherlands.
Rhe (*rä*), **Siege of**	1627, July 20-Nov. 8	France	**French;** English	An attempt of Buckingham to prevent the reduction of the Huguenot stronghold of La Rochelle.
Rhodes (*rōdz*, or **Rhodos** (*rō'dos*), **Siege of**	1522, July 28-Dec. 26	Mediterranean	**Turks;** Knights of Rhodes	Following the loss of Rhodes the Knights (Hospitallers) retired to Malta.
Rieti (*ri-ä'tē*)	1821, March 7	Italy	**Austrians;** Neapolitan rebels	The defeat of General Pepe enabled Austria to restore the absolute monarchy.
Rivoli (*rē'vō-lē*)	1797, Jan. 14-15	Italy	**French;** Austrians	Napoleon's victory, followed by surrender of Mantua, completed the conquest of Lombardy.
Rocroi (*rō-krwä'*)	1643, May 19	France	**French;** Spaniards	This victory, won by Condé, made France the first military power of Europe.
Rome, Sack of	B. C. 390	Italy	**Gauls**	Following the battle of the Allia, the Gauls Plundered and destroyed city.
Rome, Sieges of	408, 409, 410	Italy	**Visigoths;** Romans	Following the third siege, Alaric sacked the city.
Rome, Sack of	455	Italy	**Vandals**	For fourteen days Genseric's Vandals plundered Rome.
Rome, Storm of	1527, May 6	Italy	**Mutinous Army of Charles V.;** Papal troops	Marks the end of the artistic, pleasure-loving Rome of the Renaissance.
Rome, Siege of	1849, June 4-July 3	Italy	**French and Papalists;** Roman Republicans	The republic, founded by Mazzini, overthrown and Pope Pius IX. restored.
Roncesvalles (*rōn-thes-väl'yes*)	778	Spain	**Basques;** Franks	Death of Charlemagne's paladin, Roland (Chanson de Roland).
Roosebek (*rōs'bek*)	1382, Nov. 27	Flanders	**French;** Flemings	A great triumph for the nobles against the cities.
Rossbach (*ros'bak*)	1757, Nov. 5	Saxony	**Prussians;** French and Austrians	Makes Frederick the Great a national hero of Germany.
Rouen (*rōō-än'*), **Siege of**	1418-9, June-Jan.	France	**English;** French	Because of its desperate resistance, Henry V. granted the city honorable capitulation.
Sacriportis (*sak-ri-pōr'tus*)	B. C. 82	Italy	**Optimates;** Democrates	Followed by Sulla's reign of terror.
Saguntum (*sa-gun'tum*), **Siege of**	B. C. 219	Spain	**Carthaginians;** Inhabitants	Capture of this city by Hannibal the chief cause of the second Punic war.
St. Albans (*sānt ôl'banz*)	1455, May 22	England	**Yorkists;** Lancastrians	The first battle of the wars of the Roses; Yorkists defeated here in a second battle (1460).
Salamanca (*sal-ä-mang'kä*)	1812, July 22	Spain	**British;** French	This rout of the French lost them all southern Spain.
†Salamis (*sal'ä-mis*)	B. C. 480, Sept. 20	Greece	**Greeks;** Persians	Themistocles' great victory followed by Xerxes' withdrawal to Asia.
San Jacinto (*san jä-sin'tō*)	1836, April 2	Texas, U. S. A.	**Texan rebels;** Mexicans	Santa Anna captured by General Houston.
†Santiago (*sän-tē-ä'gō*)	1898, July 3	Cuba	**Americans;** Spaniards	Fleet of Admiral Cervera totally destroyed.
Saragossa (*sä-rä-gos'ä*), **Siege of**	1808-9, Dec.-Feb. 21	Spain	**British;** French	An important success which broke the spell of French invincibility.
Saratoga (*sar-a-tō'gä*)	1777, Oct. 7	New York U.S.A.	**Americans;** British	Followed (Oct. 17) by the surrender of Burgoyne, which was the turning point of the war.
†Sea of Japan	1905, May 27-29	Sea of Japan	**Japanese;** Russians	Russia's naval power destroyed.
Sebastopol (*se-bas'tō-pōl*), **Siege of**	1854-5, Sept. 26-Sept. 9	Crimea	**French, British and Sardinians;** Russians	Brought to a close the active operations of Crimean war.
Sedan (*sē-dan'*)	1870, Sept. 1	France	**Prussians;** French	Followed by the surrender of Napoleon III. with an army of 84,000 men.
Shipka (*ship'kä*) **pass**	1877, Aug. 20-23	Bulgaria	**Russians;** Turks	Russians hold this stragetic position against blindfold violence of the Turks.
Sempach (*zem'päкh*)	1386, July 9	Switzerland	**Swiss;** Austrians	Celebrated for the heroic devotion of Arnold von Winkelried.
Sentinum (*sen-tī'num*)	B. C. 295	Italy	**Romans;** Samnites and Gauls	Failure of the coalition to crush Rome from the north.
Seringapatam (*ser-ing'ga-pa-tam'*), **Siege of**	1799, Apr. 24-May 4	India	**British;** Tippoo Sahib	With Bonaparte's failure in Egypt, this battle foils French designs on India.
Shiloh (*shi'lō*)	1862, April 6 and 7	Tenn., U. S. A.	**Federals;** Confederates	Defeated in the first day's fighting, Grant turned the tables the next day.
Shrewsbury (*shrōōz'ber-i*)	1403, July 21	England	**Henry IV.;** Percies	Hotspur defeated and slain.

NOTABLE BATTLES OF UNIVERSAL HISTORY—Continued

Name of Battle	Date	Approximate Location	Contestants	Remarks
Silistria (*si-lis'tri-ä*), **Siege of**	1854, Mar. 28-June 22	Bulgaria	**Turks;** Russians	A brilliant defense conducted by the Turks under three English officers.
†Sinope (*si-nō'pē*)	1853, Nov. 30	Black Sea	**Russians;** Turks	Turkish fleet destroyed and crews massacred.
Slivnitza (*slēv-nēt'sä*)	1885, Nov. 17, 18, 19	Bulgaria	**Bulgarians;** Servians	The decisive action in the Servo-Bulgarian war.
†Sluys (*slois*)	1340, June 22	Flanders	**English;** French	Gave English control of the sea for thirty years, enabling them to land troops in France at will.
Smolensk (*smol-yensk'*)	1812, Aug. 17-18	Russia	**French;** Russians	First stand of the retreating Russians before Napoleon's advance on Moscow.
Soissons (*swä-sôn'*)	486	France	**Franks;** Romans under Syagrius	The first military exploit of Clovis.
Solferino (*sōl-fä-rē'nō*)	1859, June 24	Italy	**French and Piedmontese;** Austrians	The horrors of this battle and Prussia's threatening attitude caused Napoleon III. to make peace.
†Southwold (*south'wōld*), **bay**	1672, May 28	North Sea	**English and French;** Dutch	A victory gained by the duke of York over De Ruyter's superior numbers.
Sphacteria (*sfak-tē'ri-ä*)	B. C. 425	Greece	**Athenians;** Spartans	To the amazement of the Greek world, 292 Spartan hoplites surrendered.
Spicheren (*spich'er-en*)	1870, Aug. 6	Palatinate	**Prussians;** French	Reveals great superiority of Prussians from the outset of the war.
Stamford (*stam'ferd*) **bridge**	1066, Sept. 25	England	**English;** Danes	This diversion of Harold to the North left William to land in England undisturbed.
Standard, Battle of the (or Northallerton)	1138, Aug. 22	England	**English;** Scots	For 200 years saved Yorkshire from Scottish invasion.
Steenkerke (*stān'kerk'e*)	1692, July 24	Netherlands	**French;** English and Allies	Five English regiments utterly cut to pieces.
Sterling	1297	Scotland	**Scots;** English	Before the end of the year all Scotland threw off the English yoke.
Stralsund (*shträl'zōōnt*), **Siege of**	1628, Mar. Aug. 3	Germany	**Protestant Inhabitants;** Catholic Imperialists	Wallenstein fails to secure this important Baltic port.
Syracuse (*sir'a-kūs*), **Siege of**	B. C. 415-413	Sicily	**Syracusans and Spartans;** Athenians	The weakening of Athenian resources in this siege was the final cause of their failure in the Peloponnesian war.
Syracuse, Siege of	B. C. 387	Sicily	**Greeks;** Carthaginians	The Syracusan tyrant, Dionysius, connives at the escape of the Carthaginian Himilco.
Syracuse, Siege of	B. C. 214-212	Sicily	**Romans;** Carthaginians and Syracusans	Syracuse captured and plundered by the Romans.
Talavera (*tä-lä-vä'rä*)	1809, July 28	Spain	**British and Spaniards;** French	After this first great pitched battle in the Peninsular campaign Wellesley became commander-in-chief of all the English troops.
Tanagra (*tan'ä-grä*)	B. C. 457	Greece	**Spartans and Boeotians;** Athenians	The Spartans failing to follow up their victory, Athens conquered Bœotia the following year.
Tarentum (*tä-ren'tum*), **Siege of**	B. C. 274-272	Italy	**Romans;** Tarentines and Epirots	Tarentum, deprived of her army, her ships and her walls, retained the right of local self-government.
Tauss (*tous*)	1431, Aug. 14	Bohemia	**Bohemian Hussites;** Catholic Imperialists	At Procop's approach the Imperialists fled in confusion; this was the last effort to crush the Hussites by force of arms.
Telamon (*tel'ä-mon*)	B. C. 225	Italy	**Romans;** Gauls	The annihilation of the Gallic army was followed by the Roman invasion and conquest of Cisalpine Gaul.
Tel-el-Kebir (*tel'el-kä-bēr'*)	1882, Sept. 13	Egypt	**British;** Egyptian Rebels	Arabi Pasha's army completely broken up; the British entered Cairo the next day.
Temesvar (*tem'esh-vär*)	1849, Aug. 9	Hungary	**Austrians;** Hungarians	The last stand made by the Hungarians in the war; their army was totally routed and dispersed.
Testry (*tes-trē'*)	687	France	**Austrasians;** Neustrians	Pippin of Heristal, mayor of the palace, unites the Frankish territories under one rule.
Tewkesbury (*tūks'ber-i*)	1471, May 4	England	**Yorkists;** Lancastrians	Ends armed opposition to Edward IV.; Margaret of Anjou was captured and her son slain.
Texel (*tek'sel*)	1653, June 2, 3	North Sea	**British;** Dutch	The command of the sea fell into the hands of the English fleet.
Thapsus (*thap'sus*)	B. C. 46, Feb. 6	N. Africa	**Caesar;** Followers of Pompey	The battle of Thapsus was the death-knell of the Pompeian cause.
Thermopylæ (*ther-mop'i-lē*)	B. C. 480	Greece	**Persians;** Spartans and Thespians	Leonidas, with 300 Spartans and 700 Thespians, defended the pass to the last man against overwhelming forces.
Tiberias (*tī-bē'ri-äs*)	1187	Palestine	**Saracens;** Crusaders	Followed by the conquest of Jerusalem by Saladin, which led to the third crusade.
Ticinus (*ti-sī'nus*)	B. C. 218	Italy	**Carthaginians;** Romans	Hannibal's success brought in numerous adhesions from Gallic tribes, followed by the battle on the Trebia.
Ticonderoga (*tī-kon-de-rō'gä*)	1758, July 8	New York, U.S.A.	**French;** British and Americans	British and Americans displayed in vain prodigies of valor in the rush on Montcalm's almost impregnable position.
Tigranocerta (*tig-rā-no-cer'-tä*)	B. C. 69, Oct. 6	Armenia	**Romans;** Armenians	Lucullus cut to pieces the huge army of Tigranes and secured immense booty.
Tinchebrai (*tansh-brā*)	1106	France	**English;** Normans	Henry I. defeated and captured his brother Robert and annexed Normandy to the crown of England.
Tolbiac (*tol-bī'ak*)	496	Germany	**Franks;** Alemanni	Clovis wins lands of the Alemanni; he and his followers become Roman Christians in fulfillment of a vow taken on the battlefield.
Torgau (*tôr'gou*)	1760, Nov. 3	Saxony	**Prussians;** Austrians	The last pitched battle of the Seven Years' war, in which the Austrians are said to have lost 20,000 men.
Torres Vedras (*tor'resh vä'-drāsh*), **Lines of**	1810-1, Oct. 12-March 5	Portugal	**British and Portuguese;** French	Wellington's defense permanently arrested Napoleon's march of conquest and was thus the turning point of the Peninsular campaign.
Toulon (*tōō-lôn'*), **Siege of**	1793, Sep. 18-Dec. 17	France	**French;** garrison of British, Spaniards, Italians and French Royalists	This siege is memorable as the first important appearance of Napoleon, who commanded the artillery.
Tours (*tōr*)	732	France	**Franks;** Saracens	Here Charles Martel saved western Christendom from the Moslem invader.
Towton (*tou'ton*)	1461, Mar. 28 and 29	England	**Yorkists;** Lancastrians	This battle, the most obstinate and bloody of the war, secured Edward IV. in his possession of the crown.
†Trafalgar (*traf-al-gär*)	1805, Oct. 21	Spain	**British;** French	Nelson's last and greatest victory destroyed all possibility of Napoleon's invading England.

NOTABLE BATTLES OF UNIVERSAL HISTORY—Continued

Name of Battle	Date	Approximate Location	Contestants	Remarks
Trebia (*trē'bi-ä*)	B. C. 218, Dec.	Italy	**Carthaginians;** Romans	By this splendid victory Hannibal justified his march into Italy; the way into Etruria was now open to him.
Tunis (*tū'nis*), **Siege of**	1270	N. Africa	**Moslems;** French Crusaders	This crusade, in which Louis IX. lost his life, was the last.
Turin (*tū'rin*)	1706, Sept. 7	Italy	**Prince Eugene;** French	The French were permanently excluded from Italy.
Tyre (*tīr*), **Siege of**	B. C. 332, Jan.-Aug.	Phenicia	**Macedonians;** Tyrians	The greatest of Alexander's triumphs; Alexandria in Egypt takes the place of Tyre as a commercial metropolis.
†**Ushant** (*ush'ant*)	1794, June 1	N. Atlantic	**British;** French	A brilliant victory won by Lord Howe.
Valmy (*val-mē'*)	1792, Sept. 2	France	**French;** Prussians	Goethe said that from Valmy dates a new era. It showed that revolutionary France would and could resist Europe.
Varna (*vär'nä*)	1444, Nov. 10	Bulgaria	**Turks;** Hungarians	King Ladislas lost his life and his army was scattered to the winds.
Vercellae (*ver-sel'ē*)	B. C. 101, July 30	Italy	**Romans;** Cimbri	Marius and Catulus utterly destroyed the vast barbarian horde, which had been threatening Italy with invasion.
Vicksburg, Siege of	1863, May 19-July 4	Miss., U. S. A.	**Federals;** Confederates	Grant's success at Vicksburg, together with the battle of Gettysburg, were the turning points of the war.
Vienna (*vē-en'ä*), **Siege of**	1683, July 14-Sept. 12	Austria	**Austrians;** Turks	The besieged were reduced to the last extremity when Sobieski intervened and put the invading Turks to flight.
†**Vigo** (*vē'gō*) **bay**	1702, Oct. 12	Spain	**English and Dutch;** French and Spaniards	The destruction of the Spanish galleons and the protecting French fleet gave a blow to the finances and prestige of the two crowns.
Vimiero (*vē-mä'rō*)	1813, Aug. 21	Spain	**British;** French	Wellesley inflicted a signal defeat on the French, but his senior officer made no use of the victory.
Vittoria (*vē-tō'rē-ä*)	1813, June 21	Spain	**British;** French	This, the crowning victory of Wellington's peninsular campaign, won Spain from Napoleon.
Wagram (*vä'gräm*)	1809, July 6	Austria	**French;** Austrians	One of the most terrible and least decisive battles of all time.
Wakefield	1460, Dec. 30	England	**Lancastrians;** Yorkists	Queen Margaret's army completely defeated that of the duke of York, who was slain on the battlefield.
Wandewash (*wän-de-wäsh'*)	1760, Jan. 22	India	**British;** French	Coote's victory was the death-blow to French power in India.
Warsaw (*wôr'sô*), **Siege of**	1831, Aug. 19-Sept. 7	Poland	**Russians;** Poles	The fall of Warsaw ends the Polish insurrection and Poland becomes a province of the Russian empire.
Waterloo (*wô-ter-lōō*)	1815, June 18	Belgium	**British and Prussians;** French	The final overthrow of Napoleon by Wellington and Blucher. Napoleon was transported to St. Helena, where he died in 1821.
Wavre (*vä'vr*)	1815, June 18	Belgium	**French;** Prussians	Grouchy's victory was useless, while he might have saved the day for Napoleon had he arrived at Waterloo when expected.
Wei-hai-Wei (*wā'hī'wā'*)	1894, Jan.30-Feb. 12	China	**Japanese;** Chinese	The Chinese admiral gave up the remnant of his fleet and killed himself; followed by negotiations for peace.
Worcester (*wōōs'ter*)	1651, Sept. 3	England	**Cromwellians;** Scottish Royalists	Followed by the submission of Scotland and Charles II.'s adventurous escape to France.
Wörth (*virt*)	1870, Aug. 6	Bavaria	**Prussians;** French	A bloody contest and a decisive victory, followed by the retreat of the French.
Xeres (*hä-räs'*)	711, July 19	Spain	**Moors;** Visigoths	Without having to fight any second battle, the Moors under Tarik mastered Spain.
Yalu (*yä'lōō*) **river**	1894, Sept. 17	Manchuria	**Japanese;** Chinese	This action conferred upon the Japanese the full command of the sea and greatly aided the land-power.
Yorktown, Siege of	1781, Sept. 30-Oct. 19	Va., U. S. A.	**Americans;** British	The surrender of Cornwallis at Yorktown practically brought to an end the war of the American Revolution.
Zama (*zä'mä*)	B. C. 202	N. Africa	**Romans;** Carthaginians	Scipio defeated Hannibal and annihilated his army, thus ending the second Punic war.
Zorndorf (*tsôrn'dorf*)	1758, Aug. 25	Prussia	**Prussians;** Russians	A desperate and bloody struggle, after which the Russians retired into Poland.
Zurawno (*tsu-raw'no*), **Siege of**	1676	Austria	**Poles;** Turks	John Sobieski made a heroic defense against numbers and won an honorable peace.

AMERICAN BATTLES TABULATED

Naval engagements are printed in *italics;* names of victorious commanders in **bold-face** type. *Drawn battle. †General estimate.

Name of Battle	Date	Approximate Locations	Commanders	Opponents	Victor	Casualties: United States Killed	Casualties: United States Wounded	Casualties: Opponents Killed	Casualties: Opponents Wounded
Aguadores, including July 1st.	July 2, 1898.	Cuba.	**Gen. Shafter** (U. S.)	Spanish	U. S.	0	12	10	30
Aikens.	Feb. 11, 1865.	South Carolina.		Conf.	U. S.	6†	9†	31	160
Albemarle.	May 5, 1864.	Albemarle Sound, North Carolina.	**Lt. Com. F. A. Roe** vs. Capt. J. W. Cooke.	Conf.	U. S.	4	25	0	0
Albemarle.	Oct. 27, 1864.	Plymouth, North Carolina.	**Lt. W. B. Cushing** vs. Capt. Cooke.	Conf.	U. S.	2	0	0	0
Allatoona.	Oct. 5, 1864.	Georgia.	**Gen. Corse** vs. Gen. Johnston.	Conf.	U. S.	142	352	338	704
Alfred—Transports.	Nov. 13, 1776.	Cape Canso.	**Capt. John Paul Jones** (U. S.)	English.	U. S.	0	2	3	10
Alliance—squadron.	May 28, 1781.	North Atlantic.	**Capt. John Barry** vs. Com. Sampson Edwards and Com. James Smith.	English.	U. S.	5	20	11	30
Alligator.	Jan. 29, 1814.	Cole's Island.	**Sailing Master Basset.**	English.	U. S.	2	2	8	14†
America—Elizabeth.	March 2, 1815.	North Atlantic.	**Capt. James W. Chever** vs. Capt. Edward L. Gower	English.	U. S.	0	0	2	13
Anderson's Cross-Roads.	Oct. 2, 1863.			Conf.	U. S.	8	16	32	41
Andrea Doria—Racehorse.	Aug. 12, 1776.	Porto Rico.	**Capt. Isaiah Robinson** vs. Lt. Jones.	English.	U. S.	4	8	6	3
Antelope—Zephyr.	March 17, 1813.			English.	Eng.	1	3	0	3

AMERICAN BATTLES, TABULATED—Continued

Name of Battle	Date	Approximate Location	Commanders	Opponent	Victor	Casualties: United States Killed	United States Wounded	Opponents Killed	Opponents Wounded
Antietam.	Sept. 16-17, 1862.	Maryland.	**Gen. McClellan** vs. Gen. Lee.	Conf.	U. S.	2,010	9,416	1,842	9,399
Appomattox.	April 9, 1865.	Virginia.	**Gen. Grant** vs. Gen. Lee.	Conf.	U. S.	203	297	189	386
Argus—Pelican.	Aug. 14, 1813.	St. David's Head	**M. Com. W. H. Allen** vs. Capt. John F. Maples.	English.	Eng.	6	17	2	5
Arkansas.	July 15, 1862.	Mississippi.	**Capt. Davis** vs. Capt. Montgomery.	Conf.	U. S.	18	50	10	15
Arkansas Post. Jan. 10. Arkansas Post, ended Jan. 11.	Jan. 10-11, 1863.	Arkansas.	**Gen. McClernand** and **Com. Porter** (U. S.)	Conf. Conf.	U. S. U. S.	6 129	25 831	10† 60	30† 78
Arrow Rock.	Oct. 12-13, 1863.	Missouri.	**Gen. E. B. Brown** vs. Gen. Shelby and Gen. Coffee.	Conf.	U. S.	45	162	84	205
Assault on Savannah.	Oct. 9, 1779.	Georgia.	**Gen. Prevost** vs. Count D'Estaing and Gen. Lincoln.	English.	Eng.	68	173	18	37
Asp, Attack on the.	July, 14, 1813.	Yeocomico Creek Virginia.	**Lt. Rodger C. Curry** vs. Mids'pm'n J. B. Sigourney	English.	Eng.	4	6	10	21
Athens.	Sept. 23, 1864.	Alabama.	**Gen. Forrest** vs. Col. Campbell.	Conf.	Conf.	0	0	12	18
Atlanta, Hood's first sortie.	July 22, 1864.	Georgia.	**Gen. Logan** vs. Gen. Hood.	Conf.	U. S.	499	2,142	1,162	7,337
Atlas—Planter and Pursuit.	Aug. 3, 1812.	North Atlantic. 37° 50′ N. 46° W.	**Capt. David Moffitt** (U. S.)	English.	U. S.	2	5	2	4
Attack on Tripoli.	Aug. 3, 1804.	North Africa.	Commodore Preble vs. the Dey of Tripoli.	Tripolitan.	*	1	13	60	70
Attack on Tripoli.	Aug. 7, 1804.	North Africa.	Commodore Preble vs. the Dey of Tripoli.	Tripolitan.	*	22	6	50†	80†
Autosse.	Nov. 29, 1813.	Alabama.	**Gen. John Floyd.**	Indians.	U. S.	11	54	204	0
Averysboro.	March 16, 1865.	North Carolina.	**Maj. Gen. Slocum** vs. Lt. Gen. Hardee.	Conf.	U. S.	77	477	86	632
Bachelor's Creek.	Feb. 1, 1864.	North Carolina.	**Gen. G. E. Pickett** vs. Gen. J. W. Palmer.	Conf.	Conf.	24	77	13	22
Ball's Bluff.	Oct. 21, 1861.	Virginia.	**Gen. Evans** vs. Col. Edwin D. Baker.	Conf.	Conf.	223	226	58	242
Batesville.	Feb. 4, 1863.	Arkansas.		Conf.	U. S.	2	4	5†	7†
Baton Rouge.	Aug. 5, 1862.	Louisiana.	**Gen. Thomas Williams** vs. Gen. Breckinridge.	Conf.	U. S.	99	203	125	234
Baxter's Springs.	Oct. 4, 1863.	Kansas.		Conf.	Conf.	80	21	12	32
Bayou Metea.	Aug. 27, 1863.	Arkansas.	**Col. J. M. Glover** (U. S.)	Conf.	U. S.	2	8	11	31
Bear River	Jan. 29, 1863.	Utah.	**Col. P. E. Connor.**	Indians.	U. S.	12	49	224	8
Beaver Dam.	June 24, 1813.	Canada.	**Lt. Fitzgibbon** vs. Col. Boerstter.	English.	Eng.	25	50†	30†	34
Belmont.	Nov. 6-7, 1861.	Missouri.	**Gen. Pillow** vs. Gen. Grant.	Conf.	U. S.	90	173	231	682
Bennington.	Aug. 16, 1777.	Vermont.	**Gen. Stark** vs. Col. Baum and Col. Breyman.	English.	U. S.	30	41	59	81
Bentonville.	March 18, 1865.	North Carolina.	**Gen. J. C. Davis** vs. Gen. Johnston.	Conf.	U. S.	191	1,108	267	1,381
Bermuda Hundreds.	May 26-30, 1864.	Virginia.	**Gen. Butler.** vs. Gen. D. H. Hill.	Conf.	U. S.	201	998	864	2,136
Beverly Ford, also known as Fleetwood and Brandy Station.	June 9, 1863.	Virginia.	**Gen Pleasanton** vs. Gen. Stuart.	Conf.	Conf.	156	289	253	354
Beverly, W. Va.	Jan. 11, 1865.	West Virginia.		Conf.	Conf.	5	20	3	6
Big Blue.	Oct. 24-25, 1864.	Missouri.	**Gen. S. R. Curtis and Gen. Pleasonton** vs. Gen. Price.	Conf.	U. S.	41	62	78	135
Big Creek.	July 26, 1864.	Arkansas.		Conf.	U. S.	18	32	48	102
Big Horn.	June 25, 1876.	Montana.	**Sitting Bull** vs. Gen. Custer.	Indians.	Ind.	261	)	81	126
Black River.	May 17, 1863.	Louisiana.	**Gen. Carr** vs. Gen. Pemberton.	Conf.	U. S.	29	242	40	186
Bladensburg.	Aug. 24, 1814.	Maryland.	**Gen. Ross** vs. Gen. Winder.	English.	Eng.	30	42	183	297
Blooming Gap.	Feb. 13, 1862.	Virginia.	**Gen. F. W. Lander** vs. Gen. Jackson.	Conf.	U. S.	0	2	13	26
Blue Springs.	Oct. 10, 1863.	Tennessee.	**Gen. Burnsides** vs. Gen. S. Jones.	Conf.	U. S.	33	62	48	94
Boat Attack on Charleston.	Jan. 31, 1863.	South Carolina.	**Flag Officer D. N. Ingraham** vs. R.-Adm. H. A. DuPont.	Conf.	Conf.	23	57	0	2
Boats—Black Snake.	April 3, 1780.			English.	U. S.	0	2	3	5
Boats—Tender to Nautilus.	June 3, 1776.			English.	U. S.	)	3	4	18
Bonhomme Richard—Serapis.	Sept. 23, 1779.	North Sea.	**Capt. John Paul Jones** vs. Capt. Pearson.	English.	U. S.	49	67	49	68
Boston—Berceau.	Oct. 12, 1800.	51° West 22° 55′ N.	**Capt. George Little** vs. Capt. André Senez.	French.	U. S.	4	11	4	17
Boydton and White Oak Road.	March 31, 1865.	Virginia.	**Hancock, Crawford, Pierce, Gregg** vs. Hith, Hampton.	Conf.	U. S.	177	1,134	236	998
Brandywine.	Sept. 11, 1777.	Delaware.	**Lord Cornwallis** vs. Gen. Washington.	English.	Eng.	289	568	98	398
Brice's Cross-Roads.	June 10, 1864.	Mississippi.	**Gen. N. B. Forrest** vs. Gen. S. D. Sturgis.	Conf.	Conf.	223	394	124	582
Bridgeport, West Bridge.	April 29, 1862.	Alabama.	**Gen. O. M. Mitchell** vs. Gen. E. Kirby Smith.	Conf.	U. S.	3	8	31	42
Bristow Station.	Oct. 14, 1863.	Virginia.	Gen. G. K. Warren vs. Gen. Hill.	Conf.	*	50	150	150	250

AMERICAN BATTLES, TABULATED—Continued

Name of Battle	Date	Approximate Location	Commanders	Opponent	Victor	Casualties: United States Killed	United States Wounded	Opponents Killed	Opponents Wounded
Brownstown.	Aug. 4, 1812.	Michigan.	**Tecumseh** vs. Maj. Thomas B. Van Horne	English.	Eng.	17	30	0	0
Buckland's Mills.	Oct. 19, 1863.	Virginia.	**Gen. J. E. B. Stuart** vs. Gen. G. A. Custer.	Conf.	Conf.	8	23	4	31
Buena Vista.	Feb. 22-23, 1847.	Mexico.	**General Taylor** vs. Gen. Santa Anna.	Mexican.	U. S.	267	456	568	1,241
Bull Run.	July 21, 1861.	Virginia.	**Gen. Beauregard** and **Gen. Johnston** vs. Gen. McDowell.	Conf.	Conf.	481	1,011	362	1,390
Bull Run No. 2.	Aug. 29-30, 1862.	Virginia.	**Gen Lee** and **Gen. Jackson** vs. Gen. Pope.	Conf.	Conf.	798	4,023	1,090	6,154
Bunker Hill.	June 17, 1775.	Massachusetts.	**Gen. Howe** vs. Gen. Warren, Gen. Putnam and Col. Prescott.	English.	Eng.	145	304	359	695
Cabin Creek.	July 1, 1863.	Oklahoma.	**Col. Williams** vs. Col. Stand Waitie.	Conf.	U. S.	8	15	42	108
Cache Swamp.	July 7, 1862.	Arkansas.	**Col. C. E. Hovey** vs. Gen. Rust.	Conf.	U. S.	8	45	110	150
Caledonia and Detroit—boats.	Oct. 7, 1812.	Lake Erie.	**Lt. Elliot** vs. Mr. Irvine and Lt. Roulette.	English.	U. S.	1	4	5	10
Camden.	Aug. 16, 1780.	South Carolina.	**Lord Cornwallis** vs. Gen. Gates.	English.	Eng.	94	281	80	245
Camp McCalla.	June 11-14, 1898.	Cuba.	**Lt. Col. R. W. Huntington** and **Capt. G. F. Elliott.**	Spanish.	U. S.	6	11	60†	140†
Campbell Station.	Nov. 16, 1863.	Tennessee.	**Gen. Burnside** vs. Gen. Longstreet.	Conf.	Conf.	112	186	136	214
Camp Defiance.	Jan. 27, 1814.			Indians.	U. S.	17	132	37	0
Cane River.	April 23, 1864.	Louisiana.	**Gen. W. H. Emory** vs. Gen. B. E. Bee.	Conf.	U. S.	98	152	108	164
Canonnier—Medusa.	April 13, 1813.			English.	Eng.	1	3	0	4
Canonnier—Warsprite.	March 1, 1813.			English.	Eng.	1	3	0	1
Canton Forts.	Nov. 20-22, 1856.	China.		Chinese.	U. S.	12	28	400	540
Cape Girardeau.	April 26, 1863.	Missouri.	**Gen. McNeil** vs. Gen. Marmaduke.	Conf.	U. S.	6	18	22	43
Carney's Bridge.	Jan. 14, 1863.			Conf.	U. S.	7	27	14	36
Castletown.	July 7, 1777.	Vermont.	**Gen. Fraser** vs. Col. Francis and Col. Warner.	English.	Eng.	211	583	35	144
Catawba Fords.	Aug. 19, 1780.	South Carolina.	**Col. Tarleton** vs. Sumter.	English.	Eng.	162	281	2	21
Cedar Creek.	Oct. 19, 1864.	Virginia.	**Gen. Sheridan** vs. Gen. Early.	Conf.	U. S.	588	3,516	961	3,239
Cedar Mountain.	Aug. 8-9, 1862.	Virginia.	**Gen. Jackson.** vs. Gen. Banks.	Conf.	Conf.	450	660	223	1,060
Cerro Gordo.	April 18, 1847.	Mexico.	**Gen Scott** vs. Gen. Santa Anna.	Mexican.	U. S.	63	368	100†	500†
Champion Hills.	May 16, 1863.	Mississippi.	**Gen. Grant** vs. Gen. Pemberton.	Conf.	U. S.	426	1,842	486	1,954
Chancellorsville.	April 30-May 4, 1863.	Virginia.	**Gen. Lee** and **Gen. Jackson** vs. Gen. Hooker.	Conf.	Conf.	1,512	9,518	1,718	10,563
Chapultepec	Sept. 13, 1847.	Mexico.	**Gen. Scott** vs. Gen. Santa Anna.	Mexican.	U. S.	116	671	1,000†	2,000
Charming Sally—Revenge.	June 4, 1782.		**Capt. T. Dunn** (U. S.).	English.	U. S.	1	4	3	6
Chasseur—St. Lawrence.	Feb. 25, 1815.	Cuba.	**Capt. Boyle** vs. Lt. Henry Cranmer Gordon.	English.	U. S.	5	8	15	23
Chattahoochee.	July 6-10, 1864.	Georgia.	**Gen. Sherman** vs. Gen. Johnston.	Conf.	U. S.	80	450	201	402
Chattanooga, including **Orchard Knob, Lookout Mountain** and **Missionary Ridge.**	Nov. 23-25, 1863.	Tennessee.	**Gen. Grant, Gen, Sherman** and **Gen. Hooker** vs. Gen. Bragg.	Conf.	U. S.	757	4,529	850	2,150
Chesapeake—Shannon.	June 1, 1813.	Massachusetts Bay.	**Capt. Broke** vs. Capt. Lawrence.	English.	Eng.	47	99	24	59
Chestnut Hill.	Dec. 7, 1777.	Pennsylvania.	Gen. Morgan (U.S.) vs. Gen. Cornwallis (Eng.).	English.	*	14	36	42	64
Chickamauga	Sept. 18-20, 1863.	Georgia.	**Gen. Bragg** vs. Gen. Rosecrans.	Conf.	Conf.	1,644	9,262	6,000	10,000
Chihuahua	Feb. 27, 1847.	Mexico.	**Gen. Taylor** vs. Gen. Santa Anna.	Mexican.	U. S.	3	5	33	67
Chippewa.	July 5, 1814.	New York.	**Gen Brown** vs. Gen. Riall.	English.	U. S.	60	244	199	328
Chrysler's Fields.	Nov. 11, 1813.	Canada.	Lt. Col. Morrison and Lt. Col. Pearson vs. Gen. Wilkinson.	English.	*	102	237	22	147
Churubusco.	Aug. 20, 1847.	Mexico.	**Gen. Scott** vs. Gen. Santa Anna.	Mexican.	U. S.	131	876	3,000†	1,000†
Cloyd's Mountain and **New River Bridge.**	May 9, 1864	Virginia.	**Gen. George Crook** vs. Gen. A. G. Jenkins.	Conf.	U. S.	126	585	248	652
Coffeeville	Dec. 5, 1863.	Mississippi.	**Gen. Van Dorn** vs. Col. Lee.	Conf.	Conf.	38	62	21	32
Columbia	June 5, 1864.	Arkansas.		Conf.	U. S.	19	73	22	81

AMERICAN BATTLES, TABULATED—Continued

Name of Battle	Date	Approximate Location	Commanders	Opponent	Victor	Casualties: United States Killed	United States Wounded	Opponents Killed	Opponents Wounded
Columbus	April 16, 1865.	Alabama.	**Gen. Upton** (U.S.).	Conf.	U. S.	10	14	30	50
Col. Matthews.	Dec. 9, 1862.	Tennessee.	**Col. Stanley Matthews** vs. Gen. Joseph Wheeler.	Conf.	U. S.	18	22	32	68
Col. Gooding.	April 4, 1864.	Louisiana.	**Col. Gooding** (U.S.).	Conf.	U. S.	8	26	18	39
Cold Harbor.	June 2-3, 1864.	Virginia.	**Gen. Lee** vs. Gen. Grant.	Conf.	Conf.	1,905	10,570	364	1,336
Comet—frigate.	Jan. 14, 1813.	Pernambuco.	**Capt. Thomas Boyle** (U.S.)	Port'guese.	U. S.	1	3	10	14
Comoeta Creek.	Aug. 3, 1814.			English.	U. S.	2	8	10	20
Commerce—brigand schooners.	Dec. 1, 1782.		Cap. Thomas Truxtun (U.S.)	English.	*	1	2	14	24
Concord and retreat.	April 21, 1775.	Massachusetts.	**Major Pitcairn.** (Eng.)	English.	Eng.	49	34	74	199
Congress—Savage.	Sept. 6, 1781.	Georgia.	**Capt. George Geddes** vs. Capt. Sterling.	English.	U. S.	11	19	25	31
Constellation—Insurgent.	Feb. 9, 1799.	St. Kitts.	**Capt. Thomas Truxtun** vs. Capt. Barreaut.	French.	U. S.	2	3	29	41
Constellation—Vengeance.	Feb. 2, 1800.	Basse Terre.	**Capt. Thomas Truxtun** vs. Capt. A. M. Pitot.	French.	U. S.	14	25	50	110
Constitution—Guerriere.	Aug. 19, 1812.	N. Atlantic.	**Capt. Isaac Hull** vs. Capt. Dacres.	English.	U. S.	7	7	15	63
Constitution—Java.	Dec. 29, 1812.	Bahia.	**Capt. William Bainbridge** vs. Capt. Lambert.	English.	U. S.	9	25	60	101
Constitution—Cyane and Levant.	Feb. 20, 1815.	Madeira Islands	**Capt. Stewart** vs. Capt. Gordon Falcon and Capt. George Douglas.	English	U. S.	4	10	35	42
Contreras.	Aug. 19, 1847.	Mexico.	**Gen. Scott.** vs. Gen. Santa Anna.	Mexican.	U. S.	20	40	700	2,200
Cook's Mills.	Oct. 19, 1814.			English.	U. S.	11	54	20	60
Cora—boats.	Feb. 23, 1813.	Chesapeake Bay.	**Capt. J. Gold.**	English.	Eng.	1	3	1	2
Corinth	Oct. 3-4, 1862.	Mississippi.	**Gen. Rosecrans** vs. Gen. Van Dorn.	Conf.	U. S.	315	1,812	1,423	5,692
Courier—Andromache.	Feb. 29, 1812.			English.	Eng.	0	3	0	1
Cowpens.	Jan. 17, 1781.	South Carolina.	**Gen. Morgan** vs. Col Tarleton.	English.	U. S.	12	60	120	199
Crampton Gap.	Sept. 14, 1862.	Maryland.	**Gen. Franklin** vs. Gen. Cobb.	Conf.	U. S.	115	418	98	342
Craney Island.	June 22, 1813.	Virginia.	**Col. Beatty** vs. Sir Sidney Beckwith and Admiral Warren.	English.	U. S.	0	0	75†	125†
Cross Keys.	June 8, 1862.	Virginia.	Gen. Ewell vs. Gen. Frémont.	Conf.	*	125	498	29	302
Culpepper Court-House.	Aug. 1, 1863.	Virginia.	Gen. Stuart (Conf.) vs. Gen. Buford.	Conf.	*	16	98	22	104
Cumberland.	Feb. 21 1865.	Maryland.		Conf.	U. S.	1	3	2	8
Dabney's Mills.	Feb. 5-7, 1865.	Virginia.	**Warren, Humphreys** and **Gregg** vs. Lee.	Conf.	U. S.	232	1,062	249	751
Decatur—Commerce.	July 11, 1812.			English.	U. S.	0	0	4	7
Decatur—Dominica	Aug. 5, 1813.	Bermudas.	**Capt. Dominique Diron** vs. Lt. G. W. Barretté.	English.	U. S.	4	16	18	45
Defense—transports.	June 17, 1776.	Massachusetts.	**Capt. Seth Harding** vs. Major Ménzies.	English.	U. S.	0	9	18	30†
Del Rey	Sept. 9, 1847.	Mexico.	**Gen. Worth** vs. Gen. Leon.	Mexican.	U. S.	8	31	46	89
Derne.	April 15, 1813.	N. Africa.		Turkish.	U. S.	6	8	10†	20†
Deveraux's Neck.	Dec. 6, 8, and 9. 1864.			Conf.	*	39	390	112	228
Diligent—squadron.	April 15, 1813.			English.	Eng.	1	3	0	1
Diomede—Upton.	Aug. 22, 1814.	N. Atlantic.	**Capt. J. Crowninshield** (U. S.)	English.	U. S.	0	0	1	2
Dolphin—two ships.	Sept. 2, 1812.			English.	U. S.	4	7	3	8
Dolphin—squadron.	Feb. 25, 1813.	Cape St. Vincent	**Capt. W. S. Stafford** vs. Capt. W. A. Brigham.	English.	U. S.	3	8	6	9
Donaldsonville.	June 28, 1863.	Louisiana.	**Maj. Porter** vs. Gen. Green.	Conf.	U. S.	1	3	85	114
Dover.	Feb. 3, 1863.	Tennessee.	**Col. Harding** vs. Gen. Wheeler.	Conf.	U. S.	16	60	150	400
Drury's Bluff.	May 15, 1862.	Virginia.	**Gen. Beauregard** vs. Gen. Butler.	Conf.	Conf.	422	2,380	514	1,086
Droop Mountain.	Nov. 6, 1863.	West Virginia.	**Gen. Wm. W. Averell** vs. Gen. John Echols.	Conf.	U. S.	41	79	82	158
Dunn's Bayou.	May 5, 1864.	Louisiana.	**Gen. Polignac** vs. Gen. Nickerson.	Conf.	Conf.	38	64	4	18
Duvall's Bluff.	Aug. 23, 1864.	Arkansas.		Conf.	Conf.	13	42	0	33
Econochaca.	Dec. 23, 1813.	Mississippi.	**Gen. F. L. Claiborne** vs. Weatherford.	Indians.	U. S.	1	6	30	0
El Caney.	July 1, 1898.	Cuba.	**Gen. Shafter** vs. Gen. Vara de Rey.	Spanish.	U. S.	88	356	120	400
Elizabeth City.	Feb. 10, 1862.	North Carolina.	**Burnside** and **Goldsborough** vs. Gen. Wise.	Conf.	U. S.	2	2	4	10
Enucfau.	Jan. 22, 1814.	Creek Nation.	**Gen. Jackson** vs. Monohoee.	Indians.	U. S.	20	75	220†	0
Ennoree Ford.	Nov. 20,1780.			English.	U. S.	3	4	92	102
Enotachopco.	Jan. 24, 1814.	Creek Nation.	**Gen. Jackson.**	Indians.	U. S.	40	60	200†	0
Enterprise—Boxer.	Sept. 5, 1813.	Penguin Point.	**Lt. Wm. Burrows** vs. Capt. Samuel Blythe.	English.	U. S.	2	10	4	17
Enterprise—Tripoli.	Aug. 1, 1801.	Malta.	**Lt. Andrew Sterett** (U.S)	Tripolitan.	U. S.	0	0	20	30
Essex—Alert.	Aug. 13, 1812.	North Atlantic.	**Capt. David Porter** vs. Capt. Thomas Langharne	English.	U. S.	0	0	0	3
Essex—Phoebe and Cherub.	March 28, 1814.	Valparaiso.	**Capt. Hillyar** vs. Capt. David Porter.	English.	Eng.	58	66	5	16
Eutaw Springs.	Sept. 8, 1781.	South Carolina.	**Gen. Greene** vs. Col. Stuart.	English.	U. S.	130	349	85	402
Ezra Chapel.	July 28, 1864.	Georgia.	**Gen. Howard** vs. Gen. Hood.	Conf.	U. S.	99	601	864	3,778
Fair Oaks.	Oct. 27-28, 1864.	Virginia.	Gen. McClellan vs. Gen. Johnston.	Conf.	*	120	783	150	301

AMERICAN BATTLES, TABULATED—Continued

Name of Battle	Date	Approximate Locations	Commanders	Opponent	Victor	Casualties: United States Killed	United States Wounded	Opponents Killed	Opponents Wounded
Falling Waters.	July 14, 1863.	Maryland.	**Gen. Buford** and **Gen. Kilpatrick** vs. Gen. Lee.	Conf.	U. S.	25	80	125	354
Falmouth.	Feb. 26, 1863.	Va.-Ky.		Conf.	Conf.	5†	8†	6	8
Farragut at Vicksburg.	June 28, 1862.	Mississippi.	**Com. David Farragut.**	Conf.	U. S.	15	30	0	0
Farragut at Mobile.	Aug. 5, 1864.	Alabama.	**Admiral David Farragut** (U. S.) vs. Admiral Franklin Buchanan.	Conf.	U. S.	145	170	12	20
Farmington.	Oct. 7, 1863.	Mississippi - Missouri.		Conf.	U. S.	8	16	22	37
Fayetteville.	April 18, 1863.	Arkansas.	**Col. M. La Rue Harrison** vs. Gen. Cabell.	Conf.	U. S.	4	26	17	36
Five Forks.	April 1, 1865.	Virginia.	**Gen. Sheridan** vs. Gen. Lee.	Conf.	U. S.	124	706	450	750
Fort Blakely.	April 9, 1865.	Alabama.	**Gen. Steele** vs. Gen. Lidell.	Conf.	U. S.	113	516	242	874
Fort Blunt.	May 20, 1863.			Conf.	U. S.	12	38	25	37
Fort Bowyer.	Sept. 15, 1814.		**Maj. Wm. Lawrence** (U. S.)	English.	U. S.	4	5	32	40
Fort Davidson.	Sept. 27, 1864.	Missouri.	**Gen. Price** (Conf.)	Conf.	Conf.	47	154	245	756
Fort Donelson.	Feb. 15, 1862.	Tennessee.	**Gen Grant** vs. Gen. Floyd, Gen. Pillow and Gen. Buckner.	Conf.	U. S.	560	746	466	1,534
Fort Erie.	Aug. 15, 1814.	Canada.	**Gen. Gaines** vs. Cols. Drummond, Fischer and Scott.	English.	U. S.	17	56	222	309
Fort Erie (Sortie).	Sept. 17, 1814.	Canada.		English.	U. S.	79	216	110	250
Fort De Russey.	March 12, 1864.	Louisiana.	**Gen. A. J. Smith** vs. Gen. Richard Taylor.	Conf.	U. S.	18	29	14	33
Fort Fisher.	Dec. 24-25, 1864.	North Carolina.	**Gen. Whiting** vs. Adm. Porter and Gen. Butler.	Conf.	Conf.	20	63	3	55
Fort Fisher.	Jan. 13-15, 1865.		**Adm. Porter, Gen. Terry** vs. Gen. Whiting and Col. Lamb.	Conf.	U. S.	184	749	150	249
Fort George.	May 27, 1813.	Canada.	**Gen. Boyd** and **Col. Miller** vs. Col. Vincent.	English.	U. S.	39	121	108	163
Forts Gregg and Alexander.	April 2, 1865.	Virginia.	**Gen. Ord.** vs. Gen. Lee.	Conf.	U. S.	198	304	249	353
Fort Harrison.	Sept. 5, 1812.	Indiana.	**Capt. Zachary Taylor** vs. Indians.	Indians.	U. S.	2	2	8	20
Fort Hatteras.	Aug. 28, 1861.	North Carolina.	**Gen. Butler** and **Com. Stringham** vs. Com. Barron.	Conf.	U. S.	0	0	4	25
Fort Henry.	Feb. 6, 1862.	Tennessee.	**Gen. Grant** and **Com. Foote** vs. Gen. Tilghman.	Conf.	U. S.	17	27	5	11
Fort Macon.	April 25, 1862.	North Carolina.	**Gen. Parke** vs. Col White.	Conf.	U. S.	0	3	7	18
Fort McAllister.	March 3, 1863.	Georgia.	**Gen. Hazen** vs. Admiral Du Pont.	Conf.	Conf.	0	1	0	1
Fort Meigs.	May 5, 1813.	Ohio.	**Gen. Harrison** vs. Gen. Proctor and Tecumseh.	English.	U. S.	64	124	30†	60†
Forts Montgomery and Clinton.	Oct. 6, 1777.	New York.	**Col. Campbell** and **Sir Henry Clinton** vs. Gov. Clinton.	English.	Eng.	84	166	62	141
Fort Pemberton.	March 11-16, 1863.	Mississippi.	**Lt. F. E. Shepperd** vs. Lt.-Com. Watson Smith.	Conf.	Conf.	7	19	3†	8†
Fort Pillow.	May 10, 1862.	Tennessee.	**Com. Walke** and **Com. Stembel** vs. Mr. Montgomery.	Conf.	U. S.	0	4	2	1
Fort Pillow.	April 12, 1864.	Tennessee.	**Gen. Forrest** vs. Maj. Bradford.	Conf.	Conf.	348	52	19	61
Fort Pulaski.	April 11, 1862.	Georgia.	**Col. Olmstead** vs. Gen. Hunter.	Conf.	Conf.	1	3	1	7
Fort Ridgeley.	Oct. 17, 1862.	Minnesota.		Indians.	U. S.	1	6	44	108
Fort Schuyler.	Aug. 6, 1777.	New York.	**St. Leger** vs. Col. Ganzevoort.	English.	Eng.	120	268	86	204
Fort Smith.	July 27, 1864.	Arkansas.	**Lt. Burgoyne** (U. S.)	Conf.	Conf.	10	15	12	19
Fort Stedman.	March 25, 1865.	Virginia.	**Gen. Grant** vs. Gen. Lee.	Conf.	U. S.	68	337	134	698
Fort Stephenson.	Aug. 2, 1813.	Ohio.	**Maj. Croghan** vs. Gen. Proctor.	English.	U. S.	1	7	50	101
Fort Wagner.	July 18, 1863.	South Carolina.	**Gen. Gilmore** vs. Col. Keitt.	Conf.	Conf.	624	876	26	74
Fort Wessels.	April 17, 1864.			Conf.	Conf.	20	31	29	42
Foster's Expedition (ended).	Dec. 18, 1862.	Goldsborough, North Carolina.	**Gen. Foster** (U. S.)	Conf.	U. S.	90	478	201	538
Fox—Lapwing.	Jan. 6, 1813.			English.	U. S.	1	3	14	8
Franklin.	April 10, 1863.	Louisiana.	**Gen. Grover** vs. Gen. Taylor.	Conf.	U. S.	17	20	79	163
Franklin.	Nov. 30, 1864.	Tennessee.	**Gen. Hood** vs. Gen. Schofield.	Conf.	U. S.	189	1,033	1,141	5,113
Fredericksburg.	Dec. 11-13, 1862.	Virginia.	**Gen. Lee** vs. Gen. A. E. Burnside.	Conf.	Conf.	1,152	9,101	505	4,061
Frenchtown.	Jan. 18, 1813.	Michigan.	**Gen. Proctor** and **Chiefs Roundhead** and **Splitlog** vs. Gen. Winchester.	English.	U. S.	12	55	30†	50†
Frenchtown No. 2.	Jan. 22, 1813.	Michigan.		English.	Eng.	357	64	150	155
Front Royal.	May 23, 1862.	Virginia.	**Gen. R. S. Ewell,** vs. Gen. John W. Geary.	Conf.	Conf.	32	122	0	13
Gaines Mill.	June 27, 1862.	Virginia.	**Gen. A. Elzey** vs. Gen. F. J. Porter.	Conf.	Conf.	3,000	4,500	2,000	4,000
Galveston.	Jan. 1, 1863.	Texas.	**Gen. J. B. Magruder** vs. Col. I. S. Burrell.	Conf.	Conf.	17	20†	26	117
Gen. Armstrong—Queen.	Sept. 7, 1813.	Demerara River.	**Capt. Guy R. Champlin** (U. S.)	English.	U. S.	0	1	10	19

AMERICAN BATTLES, TABULATED—Continued

Name of Battle	Date	Approximate Location	Commanders	Opponent	Victor	Casualties			
						United States		Opponents	
						Killed	Wounded	Killed	Wounded
Gen. Armstrong—British boats.	Sept. 26, 1814.	Fayal Roads.	**Capt. Samuel Reid** vs. Lt. Wm. Matterface.	English.	U. S.	2	7	137	107
Gen. Pickering—Achilles.	June 4, 1780.	Bilboa, Spain.	**Capt. Jonathan Haraden** (U. S.)	English.	U. S.	1	3	8	12
Gen. Sturgis.	June 10, 1864.	Guntown, Miss.	**Gen. Forrest** vs. Gen. Sturgis.	Conf.	U. S.	8	32	16	49
Gen. Wayne.	Sept. 21, 1777.			English.	Eng.	94	162	2	5
George Little—Granicus.	Feb. 18, 1815.			English.	Eng.	2	6	0	1
Germantown.	Oct. 4, 1777.	Pennsylvania.	**Gen. Howe** vs. Gen. Washington.	English.	Eng.	189	542	98	402
Gettysburg.	July 1-3, 1863.	Pennsylvania.	**Gen. George G. Meade** vs. Gen. Lee.	Conf.	U. S.	2,834	13,709	4,000	14,000
Glasgow.	April 7, 1776.	Long Island.	**Capt. Tyringham Howe**	English.	Eng.	10	14	1	3
Globe—packets.	Nov. 8, 1813.	Madeira.	**Capt. Richard Moon** vs. Capt. Esek Hopkins.	English.	U. S.	8	18	9	18
Globe—Sir Simon Clark.	Sept. 25, 1812.	North Atlantic.	**Capt. J. Grant,** (U. S.)	English.	U. S.	2	1	4	4
Governor Tompkins—Mary Ann.	Nov. 2, 1813.	Lake Ontario.	**Lt. W. C. B. Finch** (U.S.)	English.	U. S.	0	0	1	4
Grand Gulf.	April 29, 1863.	Mississippi.	**Adm. David Porter** vs. Col. Wade.	Conf.	Conf.	19	57	8	16
Great Bridge.	Dec. 15, 1775.	Virginia.	**Col. Woodford** vs. Lord Dunmore.	English.	U. S.	0	0	24	81
Guaymas.	Nov. 17, 1847.			Mexican.	U. S.	0	0	12	18
Guerriere—Mashouda.	June 17, 1815.	Mediterranean.	**Capt. Stephen Decatur** (U. S.)	Algerine.	U. S.	3	11	12	18
Guilford Court-House.	March 15, 1781.	North Carolina.	**Lord Cornwallis** vs. Gen. Greene.	English.	Eng.	123	314	231	318
Gum Swamp.	May 22, 1863.	North Carolina.	**Col. J. Richter Jones**	Conf.	U. S.	3	8	4	16
Hancock—Fox.	May 11, 1777.	Boston	**Capt. John Manly** vs. Capt. Fotheringham.	English.	U. S.	3	5	14	18
Hanover Court-House.	May 27, 1862.	Virginia.	**Gen. Fitz-John Porter** vs. Gen. Branch.	Conf.	U. S.	53	344	198	732
Harlem Plains.	Sept. 16, 1776.	New York.	Maj. Leitch and Col. Knowlton (U. S.)	English.	*	7	8	2	20
Harper's Ferry.	Sept. 13, 1863.	West Virginia.	**Gen. Jackson** vs. Col. Miles.	Conf.	Conf.	80	120	0	0
Harrisonburg.	June 5, 1862.	Virginia.	**Gen. Bayard** and **Col. Cluseret.**	Conf.	U. S.	15	32	20	50
Harrison.	Oct. 1, 1864.	Missouri.		Conf.	U. S.	8	24	16	46
Hartsville.	Dec. 7, 1862.	Tennessee.	**Gen. John H. Morgan** vs. Col. Moore.	Conf.	Conf.	48	102	35	115
Hartville.	Jan. 10, 1863.	Missouri.	**Col. Merrill** vs. Gen. Marmaduke.	Conf.	U. S.	7	69	18	74
Hatcher's Run.	Oct. 27, 1864.	Virginia.	Gen. Lee vs. Gen. Warren and Gen. Parke.	Conf.	*	56	1,047	247	763
Hatteras—Alabama.	Jan. 11, 1863.	Galveston, Tex.	**Capt. Semmes** vs. Capt. Blake.	Conf.	Conf.	2	6	0	1
Hazard—Active.	March 16, 1779.	St. Thomas.	**Capt. J. F. Williams** vs. Capt. Sims.	English.	U. S.	3	5	13	20
Hazard—Caledonia.	Feb. 22, 1812.		**Capt. P. Le Chartrier** (U. S.)	English.	U. S.	0	7	2	11
Hazard.—Admiral Duff.	July 9, 1780.	North Atlantic.	**Mr. John Foster Williams.**	English.	U. S.	2	4	31	64
Helena.	July 4, 1863.	Arkansas	**Gen. Prentiss** vs. Gen. Holmes.	Conf.	U. S.	98	152	205	504
Henderson's Hill.	March 21, 1864.	Louisiana.	**Gen. Mower** vs. Col. Vincent.	Conf.	U. S.	1	3	5	18
Hibernia—brig of war.	June 25, 1779.	North Atlantic.	Capt. John O'Brien vs. Lt. Chiene.	English.	*	1	3	3	9
Highflyer—Caledonia.	July 22, 1812.			English.	U. S.	0	7	3	9
Highflyer—Poictiers.	Feb. 17, 1813.	West Indies.	**Capt. J. Grant** (U. S.)	English.	Eng.	1	3	0	0
Hillabeetowns.	Nov. 18, 1813.	Creek Nation.	**Gen. White.**	Indians.	U. S.	0	0	61	0
Hobkirk's Hill.	April 25, 1781.	South Carolina.		English.	Eng.	52	141	38	104
Holker—brig.	July 30, 1779.		**Capt. M. Lawler** (U. S.)	English.	U. S.	6	16	6	20
Holker—Hypocrite.	Feb. 17, 1781.		**Capt. R. Kean** (U. S.)	English.	U. S.	3	1	4	7
Holly Springs.	Dec. 20, 1862.	Mississippi.	**Gen. Van Dorn** vs. Col. Murphy.	Conf.	Conf.	3	4	2	21
Honey Hill.	Nov. 30, 1864.	South Carolina.		Conf.	Conf.	66	645	18	114
Honey Springs.	July 17, 1863.	Indian Territory.	**Gen. Blunt** vs. Gen. Cooper.	Conf.	U. S.	17	60	153	378
Hornet—Peacock.	Feb. 24, 1813.	Demarara, S. A.	**Master-Com. Lawrence** vs. Capt. Wm. Peake.	English.	U. S.	1	4	5	33
Hornet—Penguin.	March 23, 1815.	Tristan d'Acunha	**Capt. Biddle** vs. Capt. James Dickinson.	English.	U. S.	1	11	10	28
Horseshoe Bend.	March 27, 1814.	Creek Nation.	**Gen. Jackson.**	Indians.	U. S.	26	106	557	0
Hunter—Armed Ship.	April 14, 1779.	North Atlantic.	Capt. J. Douglass (U.S.)	English.	*	0	4	3	6
Huntersville.	Jan. 3, 1862.	West Virginia.	Maj. Geo. Webster vs. Capt. Hoge.	Conf.	*	1	3	2	4
Hyder Ally—Gen. Monk.	April 8, 1782.	Cape May Roads	**Lt. Joshua Barney** vs. Capt. Rodgers.	English.	U. S.	4	11	20	33
Impertinent—Harlem.	July 6, 1779.	North Atlantic.	**Capt. J. Young** (U. S.)	English.	U. S.	0	1	8	3
Indianola.	Feb. 24, 1863.	Mississippi.	**Lt.-Com. Brown.**	Conf.	Conf.	1	1	2	5
Industry—brig.	Nov. 16, 1776.		Capt. Child (U. S.)	English.	*	2	6	3	8
Industry—brig.	March 19, 1776.		Capt. Child (U. S.)	English.	Eng.	0	3	2	6
Intrepid.	Sept. 4, 1804.	Tripoli.	Master-Com. Richard Somers.	Tripolitan	Trip.	13	0	20	30
Ironclads at Charleston.	April 7, 1863.	South Carolina.	Admiral Dupont and Gen. Hunter vs. Gen. Beauregard.	Conf.	*	3	18	0	2
Island No. 10.	April 7, 1862.	Mississippi River	**Gen. Pope** and **Com. Foote** vs. Gen. Mackall.	Conf.	U. S.	19	32	1	3
Iuka.	Sept. 19, 1862.	Mississippi.	**Gen. Rosecrans** vs. Gen. Price.	Conf.	U. S.	144	598	385	692

AMERICAN BATTLES, TABULATED—Continued

Name of Battle	Date	Approximate Location	Commanders	Opponent	Victor	Casualties: United States Killed	United States Wounded	Opponents Killed	Opponents Wounded
Jackson.	July 12, 1863.	Mississippi.	**Gen. Sherman** vs. Gen. Johnston.	Conf.	U. S.	88	765	71	504
Jackson.	May 14, 1863.	Mississippi.	**Gen. Sherman** vs. Gen. McPherson.	Conf.	U. S.	37	228	64	392
James Island.	July 16, 1863.	South Carolina.		Conf.	U. S.	24	76	48	152
Jamestown Island.	July 6, 1781.			English.	Eng.	37	81	21	49
Jason—Perseus.	Nov. 1, 1779.	Newfoundland.	**Capt. Manly** (U. S.)	English.	Eng.	18	12	7	9
Jason—privateer.	July 25, 1779.	New York.	**Capt. Manly** (U. S.)	English.	U. S.	1	3	3	6
Jenkin's Ferry.	April 30, 1864.	Arkansas.	**Gen. Steele** (U. S.)	Conf.	U. S.	222	978	842	1,458
Jonesboro.	Aug. 31-Sept. 1, 1864	Georgia.	**Gen. Sherman** vs. Gen. Hardee.	Conf.	U. S.	0	1,149	498	1,502
Julia—Gloucester.	July 31, 1812.	Thousand Islands	**Midshipman Henry Wells** (U. S.)	English.	U. S.	0	0	0	3
Kearsarge—Alabama.	June 19, 1864.	Cherbourg.	**Capt. John A. Winslow** vs. Capt. Semmes.	Conf.	U. S.	1	2	9	21
Kellar's Bridge.	June 10, 1864.	Kentucky.		Conf.	U. S.	13	54	0	0
Kelly's Ford.	March 18, 1863.	Virginia.	Gen. Averill vs. Gen. Fitz Hugh Lee.	Conf.	*	24	80	22	28
Kemp—merchantmen (armed).	Dec. 3, 1815.	North Atlantic.	**Capt. Jacobs** (U. S.)	English.	U. S.	1	4	3	8
Kernstown.	March 23, 1862.	Virginia.	**Gen. Shields** vs. Gen. Jackson.	Conf.	U. S.	103	441	80	342
King's Mountain.	Oct. 7, 1780.	South Carolina.	**Colonels Campbell, Shelby** and **Cleaveland** vs. Maj. Ferguson.	English.	U. S.	28	60	168	284
Kingston.	Dec. 14, 1862.	Tennessee.		Conf.	U. S.	90	478	71	268
Kirksville.	Aug. 6, 1862.	Missouri.	**Col. McNeill** vs. Porter.	Conf.	U. S.	28	60	180	498
Knoxville.	Nov. 17, 1863.	Tennessee.	Gen. Burnside vs. Gen. Longstreet.	Conf.	*	24	72	18	64
Knoxville.	Nov. 29, 1863.	Tennessee.	**Gen. Burnside** vs. Gen. Longstreet.	Conf.	U. S.	24	68	259	432
La Colle Mill.	March 30, 1814.	Canada.	**Maj. Hancock** vs. Gen. Wilkinson.	English.	Eng.	8	66	11	47
Lady Washington—barges.	June 3, 1776.	Boston.	**Capt. Cunningham** (U. S.)	English	U. S.	0	2	3	11
Lake Borgne.	Dec. 14, 1814.	Louisiana.	**Adm. Sir Alexander Cochrane** vs. Lt. Thomas Jones.	English.	Eng.	6	35	17	77
Lake Champlain.	Oct. 11, 1776.	New York.	**Capt. Pringle** vs. Gen. Benedict Arnold.	English.	Eng.	30	50	15	26
Lake Champlain.	Sept. 11, 1814.	New York.	**Com. Macdonough** vs. Capt. Pring.	English.	U. S.	52	58	84	110
Lake Erie.	Sept. 10, 1813.	Western end of lake.	**Com. Perry** vs. Com. Barclay.	English.	U. S.	27	96	41	94
Lake Ontario.	Sept. 28, 1813.			English.	U. S.	10	17	12	20
Las Guasimas.	June 24, 1898.	Cuba.	**Gen. Wheeler** vs. Gen. Linares.	Spanish.	U. S.	16	50	28	124
Lawrence.	Aug. 21, 1863.	Kansas.	**Col. Quantrell** (Conf.)	Conf.	Conf.	140	22	3	14
Lebanon.	July 5, 1862.	Kentucky.	**Gen. Morgan** vs. Col. Hanson.	Conf.	Conf.	4	8	3	4
Lee—ship.	Nov. 29, 1775.	Cape Ann.	Capt. John Manly (U. S.)	English.	*	1	0	2	8
Legareville.	July 7, 1864.	South Carolina.		Conf.	Conf.	36	61	12	25
Lewisburg.	May 23, 1862.	Virginia.	**Col. Crook** vs. Gen. Heath.	Conf.	U. S.	11	52	49	76
Lexington.	April 19, 1775.	Massachusetts.	**Maj. Buttrick** vs. Col. Smith and Lord Percy	English.	Eng.	7	9	0	0
Lexington—Alert.	Sept. 20, 1777.	Morlaix.	**Lt. Bazely** vs. Capt. Henry Johnston.	English.	Eng.	3	10	2	3
Lexington—Edward.	April 17, 1776.	Capes of Virginia	**Capt. John Barry** vs. Lt. Boucher.	English.	U. S.	2	2	5†	8†
Lexington.	Sept. 12, 1861.	Missouri.	Gen. Price vs. Col. Mulligan.	Conf.	*	42	108	33	65
Lexington, Red River.	April 12, 1864.			Conf.	U. S.	0	0	164	341
Little Rock.	Sept. 10, 1863.	Arkansas.	**Gen. Steele** vs. Gen. Holmes.	Conf.	U. S.	22	59	31	45
London, Ky.	Aug. 17, 1862.	Kentucky.		Conf.	Conf.	12	18	3	8
Long Island.	Aug. 27, 1776.	New York.	**Gen. Howe** vs. Gen. Washington.	English.	Eng.	62	188	61	257
Lottery—boats.	Feb. 14, 1813.	Chesapeake Bay.	**Lt. Kelly Nazer** vs. Capt. John Southcomb.	English.	Eng.	8	10	2	4
Lynchburg.	June 17-18, 1864.	Virginia.	**Gen. Early** vs. Gen. Hunter.	Conf.	Conf.	99	503	47	157
Maguaga.	Aug. 9, 1812.	Michigan.	**Col. Miller** vs. Tecumseh.	English.	U. S.	18	58	50	75
Major Montgomery.	Aug. 6, 1862.	Dodd Co., Mo.	**Maj. Montgomery** vs. Coffin.	Conf.	Conf.	14	40	0	2
Malvern Hill.	July 1, 1862.	Virginia.	**Gen. McClellan** vs. Gen. Lee.	Conf.	U. S.	2,860	3,500	3,023	4,077
Malvern Hill No. 2.	Aug. 4, 1862.	Virginia.	**Col. Averill** vs. 18th Virginia Cavalry.	Conf.	U. S.	6	8	10	18
Manassas Gap.	July 24, 1863.	Virginia.	**Gen. Meade** vs. Gen. Lee.	Conf.	U. S.	30	59	41	79
Manassas Junction.	Aug. 27, 1862.	Virginia.	**Gen. Jackson** vs. Gen. Pope.	Conf.	Conf.	14	28	11	16
Manila.	May 1, 1898.	Manila Bay, Philippine Is.	**Admiral Dewey** vs. Admiral Montojo.	Spanish.	U. S.	0	7	318	298
Manila.	Aug. 13, 1898.	Philippine Is.	**Gen. Merritt.**	Spanish.	U. S.	8	40	.....	.....
Manzanillo.	Aug. 12, 1898.			Spanish.	U. S.	0	0	10†	(?)
Marengo—Lady Sherlock.	Aug. 10, 1812.	Nantucket Shoals.	**Capt. Ordronaux.**	English.	U. S.	0	0	0	1
Mark's Mills.	April 25, 1864.	Arkansas.	**Gen. Shelby** vs. Col. Drake.	Conf.	Conf.	98	142	126	394
Marksville.	May 16, 1864.	Louisiana.		Conf.	U. S.	9	18	32	64
Mars—Active.	Aug. 20, 1779.		**Capt. Y. Taylor** vs. Capt. Irvine.	English.	U. S.	0	3	2	7

AMERICAN BATTLES, TABULATED—Continued

Name of Battle	Date	Approximate Location	Commanders	Opponent	Victor	Casualties: United States Killed	United States Wounded	Opponents Killed	Opponents Wounded
Martinsburg.	July 23-24, 1864.	West Virginia.	**Gen. Early** vs. Gen. Averell and Gen. Crook.	Conf.	U. S.	342	836	26	152
Massachusetts—Lawnsdale.	Dec. 2, 1777.		**Capt. D. Souther** (U.S.)	English.	U. S.	3	5	6	13
Mathias Point.	June 27, 1861.	Virginia.	Com. Ward and Lt. Chaplin (U. S.)	Conf.	Conf.	1	4	0	0
McDowell's.	May 8, 1862.	Virginia.	**Gen. Jackson** vs. Gen. Milroy and Gen. Schenck.	Conf.	Conf.	80	176	71	390
McMinnville.	April 20, 1863.	Tennessee.	**Gen. Reynold** vs. Gen. Wheeler.	Conf.	U. S.	0	0	4	8
Mechanicsville.	June 26, 1862.	Virginia.	**Gen. McClellan** vs. Gen. Jackson.	Conf.	U. S.	149	224	156	236
Memphis.	June 6, 1862.	Tennessee.	**Admiral Davis** (U. S.)	Conf.	U. S.	10	4	20†	30†
Merrimac in Hampton Roads.	March 8, 1862.	Virginia.	**Capt. Franklin Buchanan** vs. Lt. Upton Morris and Lt. J. B. Smith.	Conf.	Conf.	250	301	8	11
Middle Creek.	Jan. 7, 1862.	Kentucky.	**Col. Garfield** vs. Marshall.	Conf.	U. S.	3	8	11	32
Middletown.	June 12, 1863.	Virginia.	**Col. Shawl** (U. S.)	Conf.	U. S.	1	4	18	32
Milliken's Bend.	June 7, 1863.	Louisiana.	**J. G. Walker.**	Conf.	U. S.	154	223	148	294
Mill Spring (Logan Cross Roads).	Jan. 19, 1862.	Kentucky.	**Gen. George H. Thomas** vs. Gen. Zollicoffer.	Conf.	U. S.	39	207	192	132
Mine Run (ended).	Nov. 28, 1863.	Virginia.	**Gen. Meade** vs. Gen. Lee.	Conf.	U. S.	99	398	121	432
Mingo Swamp.	Feb. 3, 1863.	Missouri.	**Maj. Reeder** vs. Dan McGee.	Conf.	U. S.	0	0	8	20
Mississinewa.	Dec. 17, 1812.	Indiana.	**Col. Campbell.**	Indians.	U. S.	11	26	39	0
Monk's Corner.	April 14, 1780.			English.	Eng.	26	73	3	6
Monitor—Merrimac.	March 9, 1862.	Hampton Roads, Virginia.	**Lt. J. L. Worden** vs. Capt. Franklin Buchanan.	Conf.	U. S.	0	1	0	2
Monmouth.	June 28, 1778.	New Jersey.	**Gen. Washington** vs. Lord Cornwallis.	English.	U. S.	72	160	294	170
Monocacy.	July 9, 1864.	Maryland	**Gen. Early** vs. Gen. Lew Wallace.	Conf.	Conf.	90	579	78	322
Monterey.	Sept. 24, 1846.	Mexico.	**Gen. Taylor** vs. Gen. Ampudid.	Mexican.	U. S.	142	364	200†	450
Montgomery—armed ship.	Dec. 6, 1812.	Surinam.	**Capt. Upton** (U. S.)	English.	U. S.	4	13	6	21
Moore's Creek.	Feb. 14, 1776.	North Carolina.	**Col. Caswell** and **Col. Livingston** vs. Col. McLeod.	English.	U. S.	0	3	13	22
Moorfields.	Aug. 30, 1814.	Maryland.	**Col. Reed** vs. Sir Peter Parker.	English.	U. S.	0	3	13	20
Moravian Towns.	Oct. 5, 1813.			English.	U. S.	7	22	80	101
Mount Washington.	Nov. 16, 1776.			English.	Eng.	48	101	252	448
Mumfordsville.	Sept. 14, 1862.	Kentucky.	**Lt. Col. Van Treba** vs. Col. Terry.	Conf.	Conf.	15	22	29	31
Murfreesboro.	July 13, 1862.	Tennessee.	**Gen. Forrest** vs. Gen. Buell.	Conf.	U. S.	33	62	47	103
Murfreesboro.	Dec. 30, 1862-Jan. 2, 1863.	Tennessee.	**Gen. Rosecrans** vs. Gen. Bragg.	Conf.	U. S.	1,533	7,245	1,384	6,892
Nashville.	Dec. 15-16, 1864.	Tennessee.	**Gen. Thomas** vs. Gen. Hood.	Conf.	U. S.	399	1,741	584	3,021
Near Baltimore.	Sept. 13, 1814.	Maryland.		English.	Eng.	24	139	80	301
Near Donaldsonville.	June 28, 1863.	Louisiana.	**Com. Woolsey** vs. Gen. Green.	Conf.	Conf.	151	349	88	126
Near New Orleans.	Dec. 23, 1814.	Louisiana.		English.	Eng.	24	113	99	230
Near New Orleans.	Dec. 28, 1814.	Louisiana.		English.	U. S.	7	8	120	149
Near Opelousas.	Nov. 3, 1863.	Louisiana.		Conf.	*	26	124	58	298
Near Pomeroy.	July 19, 1863.	Ohio.		Conf.	U. S.	2	8	12	41
Near Tabasco.	Oct. 25-26, 1846.	Mexico.	**Capt. Perry** (U. S.)	Mexican.	U. S.	0	7	20†	30†
New Berne.	March 14, 1862.	North Carolina.	**Gen. Burnside** vs. Gen. O. B. Branch.	Conf.	U. S.	102	432	50	152
New Bridge.	May 24, 1862.	Virginia.	**Col. Woodbury** (U. S.)	Conf.	U. S.	3	5	4	15
New Lisbon.	July 26, 1863.	Ohio.	Gen. Morgan (Conf.)	Conf.	U. S.	1	12	22	43
New London.	Sept. 6, 1781.			English.	Eng.	88	34	86	142
New Market Heights.	Sept. 28-30 1864.	Virginia.		Conf.	U. S.	398	2,031	399	1,601
New Market.	May 15, 1864.	Virginia.	**Gen. Breckinridge** vs. Gen. Sigel.	Conf.	Conf.	120	563	96	306
New Orleans.	Jan. 1, 1815.	Louisiana.		English.	U. S.	11	23	20	30†
New Orleans.	Jan. 8, 1815.	Louisiana.	**Gen. Jackson** vs. Gen. Pakenham.	English.	U. S.	4	13	700	1,400
New Orleans.	April 23, 1862.	Louisiana.	**Adm. Farragut** and **Gen. B. F. Butler** vs. Gen. Lovell and Gen. Duncan.	Conf.	U. S.	37	147	12	40
Newtown.	Aug. 29, 1779.	New York.	**Gen. Sullivan** vs. Johnson, Butler and Brandt.	Indians.	U. S.	8	22	12	34
Niagara Batteries.	Nov. 28, 1812.			English.	U. S.	8	12	14	30
Niagara (Lundy's Lane).	July 25, 1814.	Canada.	**Gen. Scott, Gen. Brown** and **Gen. Ripley** vs. Gen. Riall and Gen. Drummond.	English.	U. S.	171	572	201	559
Ninety-six.	June 18, 1781.	South Carolina.	**Col. Cruger** vs. Gen. Greene.	English.	Eng.	48	107	24	61
Nonesuch—Privateer.	Sept. 28, 1812.			English.	U. S.	3	8	7	16
Norfolk—Picaroons.	Oct. 31, 1799.	San Domingo.	**Lt. William Bainbridge** (U. S.)	Picaroons.	U. S.	0	0	65	70
North Anna.	May 26-27, 1864.	Virginia.	**Gen. Grant** vs. Gen. Lee.	Conf.	U. S.	223	1,460	304	1,513

AMERICAN BATTLES, TABULATED—Continued

Name of Battle	Date	Approximate Location	Commanders	Opponent	Victor	Casualties: United States Killed	Casualties: United States Wounded	Casualties: Opponents Killed	Casualties: Opponents Wounded
Oak Grove, near Richmond.	June 25, 1862.	Virginia.	**Gen. McClellan** vs. Gen. Hill and Gen. Huger.	Conf.	U. S.	51	401	60	300
Off Charleston.	Jan. 31, 1863.	South Carolina.	Adm. Du Pont.	Conf.	Conf.	23	24	0	0
Ogdensburg.	Oct. 4, 1812.	New York.	**Frazer** and **McDonnell** vs. Capt. Forsythe.	English.	U. S.	0	0	3	6
Old River.	Feb. 10, 1863.	Louisiana.	**Capt. F. Tucker** (U. S.)	Conf.	U. S.	5	7	4	7
Olustee.	Feb. 20, 1864.	Florida.	**Gen. Finegan** vs. Gen. Seymour.	Conf.	Conf.	193	1,175	150	350
Operations at Mine Run.	Nov. 26-27, 1863.	Virginia.	**Gen. Meade** vs. Gen. Lee.	Conf.	U. S.	.....	.....	.....	.....
Opequan.	Sept. 19, 1864.	Virginia.	**Gen. Sheridan** vs. Gen. Early.	Conf.	U. S.	653	3,719	1,632	3,868
Oswego.	May 6, 1814.	New York.	**Gen. Drummond** vs. Col. Mitchell.	English.	U. S.	6	38	70	165
Palo Alto.	May 8, 1846.	Mexico.	**Gen. Taylor** vs. Gen. Arista.	Mexican.	U. S.	4	42	102	127
Parker's Cross-Roads.	Dec. 31, 1862.	Tennessee.	**Col. C. L. Dunham** vs. Gen. Forrest.	Conf.	U. S.	23	139	48	152
Paterson Creek.	Feb. 2, 1864.	West Virginia.	**Gen. Rosser** (Conf.)	Conf.	Conf.	0	3†	4	5†
Paulus Hook.	Aug. 18, 1779.	New Jersey.	**Maj. Lee** vs. Maj. Southerland.	English.	U. S.	2	3	5	12
Paul Jones—Hassan.	Nov. 5, 1812.	North Atlantic.	**Capt. J. Hazard** (U. S.)	English.	U. S.	6	1	1	1
Peacock—Epervier.	April 29, 1814.	Florida.	**Com. Lewis Warrington** vs. Capt. Richard Wales.	English.	U. S.	0	2	8	15
Peacock—Nautilus.	June 30, 1815.	Straits of Sunda.	**Capt. Warrington** vs. Lt. Charles Boyce.	English.	U. S.	0	0	6	8
Pea Ridge.	March 6-8, 1862.	Arkansas.	**Gen. Curtis** and **Gen. Franz Sigel** vs. Gen. Van Dorn.	Conf.	U. S.	203	972	1,040	3,638
Peach Tree Creek.	July 20, 1864.	Georgia.	**Gen. Thomas** vs. Gen. Hood.	Conf.	U. S.	301	1,411	880	3,916
Perote.	April 22, 1847.	[illegible]	[illegible]	Mexican.	U. S.	0	3	0	4
Perryville.	Oct. 8, 1862.	Kentucky.	**Gen. Buell** vs. Gen. Bragg.	Conf.	U. S.	916	2,943	980	1,520
Petersburg.	April 2, 1865.	Virginia.	**Gen. Grant** vs. Gen. Lee.	Conf.	U. S.	298	2,565	341	3,092
Petersburg (from June 15).	June 19, 1864.	Virginia.	Gen. Lee vs. Gen. Smith, Gen. Hancock and Gen. Burnside.	Conf.	*	1,298	7,474	984	6,721
Petersburg.	June 20-30, 1864.	Virginia.	**Gen. Grant** vs. Gen. Lee.	Conf.	U. S.	112	506	801	1,417
Petersburg (from July 1, exclusive of losses at the Crater and Deep Bottom).	July 31, 1864.	Virginia.	**Gen. Grant** vs. Gen. Lee.	Conf.	U. S.	419	2,076	799	4,023
Petersburg (Aug. 1, to Aug. 31).	Aug. 31, 1864.	Virginia.	**Gen. Grant** vs. Gen. Lee.	Conf.	U. S.	87	484	101	605
Petersburg (Sept. 1 to Oct. 30).	Oct. 30, 1864.	Virginia.	**Gen. Grant** vs. Gen. Lee.	Conf.	U. S.	170	822	240	761
Philadelphia (frigate).	Feb. 16, 1804.	Tripoli.	**Lt. Stephen Decatur.**	Tripolitans.	U. S.	0	1	100†	0
Philadelphia.	Oct. 20, 1863.	Tennessee.		Conf.	Conf.	26	73	34	62
Piedmont.	June 5, 1864.	Virginia.	**Gen. Hunter** vs. Gen. Imboden.	Conf.	U. S.	130	650	633	2,337
Pilgrim—Mary.	Jan. 5, 1781.	North Atlantic.	**Capt. J. Robinson** vs. Capt. Stowards.	English	U. S.	4	16	13	22
Pine Bluff.	Oct. 25, 1863.	Arkansas.	**Col. Clayton** vs. Gen. Marmaduke.	Conf.	U. S.	17	40	39	111
Pineville.	Aug. 13, 1863.	Missouri.		Conf.	U. S.	3	18	28	92
Pittsburg Landing.	April 6-7, 1862.	Tennessee.	**Gen. Grant** vs. Gen. Johnston and Gen. Beauregard.	Conf.	U. S.	1,735	7,882	1,128	8,012
Plattsburg.	Sept. 11, 1814.	New York.	**Gen. Macombs** vs. Gen. Prevost.	English.	U. S.	37	62	50	98
Pleasant Hill.	April 8-9, 1864.	Louisiana.	**Gen. Taylor** vs. Gen. A. J. Smith.	Conf.	U. S.	99	688	348	1,654
Plymouth.	April 20, 1864.	North Carolina.	**Gen. Hoke** vs. Lt. Charles W. Flusser.	Conf.	Conf.	41	59	125	174
Pocotaligo.	Oct. 22-23, 1862.	South Carolina.		Conf.	Conf.	84	152	14	102
Port Gibson.	May 1, 1863.	Mississippi.	**Gen. McClernand** vs. Gen. Pemberton.	Conf.	U. S.	130	718	144	832
Port Hudson.	March 13, 1863.	Louisiana.	**Adm. Farragut** (U. S.)	Conf.	U. S.	8	7	0	0
Port Hudson.	June 14, 1863.	Louisiana.	Gen. Gardner vs. Gen. Banks.	Conf.	*	250	680	188	364
Port Hudson.	May 27, 1863.	Louisiana.	**Gen. Gardner** vs. Gen. Banks.	Conf.	Conf.	293	1,549	110	173
Port Republic.	June 9, 1862.	Virginia.	**Gen. Jackson** vs. Gen. Tyler and Gen. Carroll.	Conf.	Conf.	67	361	104	796
Port Royal.	Nov. 7, 1861.	South Carolina.	**Adm. Du Pont** vs. Gen. Drayton.	Conf.	U. S.	8	23	11	48
Prairie d'Anne.	April 10, 1863.	Arkansas.		Conf.	U. S.	8	15	18	36
Prairie Grove.	Dec. 7, 1862.	Arkansas.	**Gen. Blunt** and **Gen. Herron** vs. Gen. Hindman.	Conf.	U. S.	167	798	164	817
Preble's Farm.	Sept. 30-Oct. 1, 1864.	Virginia.		Conf.	U. S.	141	788	214	686
President—Belvidere.	June 23, 1812.	Nantucket Shoals	**Capt. John Rodgers** vs. Capt. Richard Byron.	English.	U. S.	3	19	2	22
President—Endymion.	Jan. 15, 1815.	Long Island.	**Capt. Stephen Decatur** vs. Capt. Henry Hope.	English.	Eng.	24	56	11	14
Prince de Neuchatel—Endymion.	Oct. 9, 1814.	Nantucket.	**Capt. J. Ordronaux** vs. Capt. Henry Hope.	English.	U. S.	7	23	33	37
Princeton.	Jan. 3, 1777.	New Jersey.	**Gen. Washington** vs. Col. Mawhood.	English.	U. S.	31	64	49	151
Prosperity—privateer.	Dec. 4, 1781.	St. Thomas.	**Capt. Alexander Murray** (U. S.)	English.	U. S.	3	8	4	9
Protector—Admiral Duff.	Jan. 9, 1779.	North Atlantic.	**Capt. J. F. Williams** vs. Capt. R. Strange.	English.	U. S.	1	3	140	3

AMERICAN BATTLES, TABULATED—Continued

Name of Battle	Date	Approximate Location	Commanders	Opponent	Victor	Casualties: United States Killed	Casualties: United States Wounded	Casualties: Opponents Killed	Casualties: Opponents Wounded
Providence—Diligent.	May 7, 1779.	Boston.	**Capt. Hoysted Hacker** vs. Capt. Thomas Davy.	English.	U. S.	4	10	8	19
Puebla.	May 15, 1847.	Mexico.	**Gen. Worth** (U. S.)	Mexican.	U. S.	18	62	83	142
Qualla Batoo.	Feb. 7, 1832.	Sumatra.	**Mr. Endicott** (U. S.)	Malays.	U. S.	2	11	120†	200†
Quebec.	Dec. 31, 1775.	Canada.	**Gen. Carleton** vs. Gen. Montgomery and Col. Arnold.	English.	Eng.	18	42	1	8
Queenstown.	Oct. 13, 1812.	Canada.	**Gen. Brock** vs. Gen. Van Rensselaer.	English.	Eng.	90	160	50	101
Raleigh—Druid.	Sept. 3, 1777.	40° 33′ N. 50° 17′ W.	**Capt Thomas Thompson** vs. Capt. Carteret.	English.	U. S.	1	2	6	26
Randolph—Yarmouth.	March 7, 1778.	Barbadoes.	**Capt. Vincent** vs. Capt. Nicholas Biddle.	English.	Eng.	311	0	5	12
Ranger—Drake.	April 24, 1778.	Irish Sea.	**Capt. John Paul Jones** vs. Capt. Burdon.	English.	U. S.	2	6	18	24
Ranger—privateer.	Oct. 16, 1776.	North Atlantic.	**Capt. Hume** (U. S.)	English.	U. S.	3	11	16	24
Rapids of Miami.	May 5, 1813.			English.	U. S.	80	101	15	45
Rappahannock Station.	Nov. 7, 1863.	Virginia.		Conf.	U. S.	149	250	80	160
Raymond.	May 12, 1863.	Mississippi.	**Gen. McPherson** vs. Gen. Pemberton.	Conf.	U. S.	69	341	103	720
Ream's Station.	Aug. 25, 1864.	Virginia.	Gen. A. P. Hill vs. Gen. Hancock.	Conf.	*	127	546	289	1,211
Red Bank.	Oct. 22, 1777.	New Jersey.	**Col. Greene** vs. Col. Donop.	English.	U. S.	11	21	142	258
Red Hill.	Jan. 14, 1865.			Conf.	U. S.	7	27	14	36
Red River.	April 7, 1864.	Louisiana.	**Gen. A. J. Smith** vs. Gen. Taylor.	Conf.	U. S.	23	39	45	88
Red River.	April 26, 1864.	Louisiana.	**Gen. A. J. Smith** vs. Gen. Taylor.	Conf.	U. S.	17	31	28	61
Resaca.	May 13, 1864.	Georgia.	**Gen. Sherman** vs. Gen. Johnston.	Conf.	U. S.	598	2,147	861	1,949
Resaca de la Palma.	May 9, 1847.	Mexico.	**Gen. Taylor** vs. Gen. Arista.	Mexican.	U. S.	39	83	160	228
Revenge—Narcissus.	March 29, 1813.			English.	Eng.	0	3	0	1
Richmond.	Aug. 30, 1862.	Kentucky.	**Gen. Kirby-Smith** vs. Gen. Nelson.	Conf.	Conf.	199	689	153	248
Roanoke Island.	Feb. 8, 1862.	North Carolina.	**Gen. Burnside** and **Gen. Goldsborough** vs. Gen. Wise.	Conf.	U. S.	47	198	25	30
Rock House.	Feb. 12, 1864.			Conf.	U. S.	3	5	15	23†
Rogersville.	Nov. 6, 1863.	Tennessee.		Conf.	Conf.	5	12	3	24
Rossie—Princess Amelia.	Sept. 16, 1812.	North Atlantic.	**Capt. Barney** vs. Capt. Moorson.	English.	U. S.	0	8	3	0
Rover—Africa.	Dec. 19, 1776.	North Atlantic.	**Capt. Forrester** (U. S.)	English.	U. S.	0	3	23	0
Sabine Cross-Roads.	April 8, 1864.	Louisiana.	**Gen. Taylor** vs. Gen. Franklin.	Conf.	Conf.	199	893	486	1,024
Sabine Pass.	Sept. 8, 1863.	Texas.	**Gen. Magruder** (Conf.)	Conf.	Conf.	17	19	0	0
Sabine Pass.	Jan. 21, 1863.	Texas.		Conf.	Conf.	1	3	0	2
Sachem—privateer.	July 6, 1776.	North Atlantic.	**Capt. Isaiah Robinson** (U. S.)	English.	U. S.	1	3	2	6
Sackett's Harbor.	May 29, 1813.			English.	U. S.	21	84	29	101
Sailor's Creek.	April 6, 1865.	Virginia.	**Gen. Sheridan** vs. Gen. Ewell.	Conf.	U. S.	166	1,014	268	2,032
Sakelhatchie.	Feb. 3, 1865.			Conf.	U. S.	18	70	20	80
Sally—transports.	Dec. 21, 1779.	North Atlantic.	Capt. J. Smith (U. S.)	English.	*	5	12	6	11
San Blas.	Jan. 12, 1848.	Lower California.	**Lt. Theodorus Bailey** (U. S.)	Mexican.	U. S.	0	2	3	8
Sandy Creek.	April 30, 1814.			English.	U. S.	1	3	13	28
San Gabriel.	Jan. 8, 1847.	California.	**Capt. Stockton** vs. Gen. Flores.	Mexican.	U. S.	2	9	70	150
San Juan.	July 1-3, 1898.	Cuba.		Spanish.	U. S.	151	1,007	204	1,340
San José.	Feb. 16, 1848.	Lower California.	**Com. Du Pont** (U. S.)	Mexican.	U. S.	3	8	13	30†
San José.	Nov. 21, 1847.	Lower California.	**Lt. Heywood** (U. S.)	Mexican.	U. S.	0	3	8	20
Santiago.	July 10-12, 1898.	Cuba.	**Gen. Shafter.**	Spanish.	U. S.	2	13	0	0
Santiago forts bombarded.	June 22, 1898.	Cuba.	Adm. Sampson.	Spanish.	*	1	11	(?)	(?)
Saratoga.	Oct. 7, 1777.	New York.	**Gen. Gates** vs. Gen. Burgoyne.	English.	U. S.	32	61	98	156
Saratoga—Chance.	Dec. 22, 1778.	North Atlantic.	**Capt. Murray** (U. S.)	English.	U. S.	4	9	5	13
Saratoga—Molly.	Oct. 8, 1780.	North Atlantic.	**Capt. James Young** (U. S.)	English.	U. S.	2	4	6	10
Saratoga—Morgiana.	Dec. 10, 1812.	La Guayra.	**Capt. Charles W. Wooster** vs. Capt. Cunningham.	English.	U. S.	3	7	2	5
Saucy Jack—Pelham.	April 30, 1814.	Cape Nocola Mole.	**Capt. Chazel** vs. Capt. Boyd.	English.	U. S.	2	9	4	11
Saucy Jack—Sherbroke.	Nov. 10, 1813.			English.	U. S.	0	3	2	5
Saucy Jack—troop ship.	Oct. 31, 1814.	San Domingo.	**Capt. Chazel** vs. Lt. Price.	English.	U. S.	8	15	3	2
Savannah.	Dec. 29, 1778.	Georgia.	**Col. Campbell** vs. Gen. Robert Howe.	English.	Eng.	28	69	7	19
Savannah.	Oct. 8, 1779.	Georgia.	**Gen. Prevost** vs. Count D'Estaing and Gen. Lincoln.	English.	Eng.	98	136	20	35
Scottsboro.	Jan. 10, 1865.			Conf.	U. S.	1	8	14	32
Secessionville.	June 16, 1862.	South Carolina.	**Col. T. G. La Mar** vs. Gen. Benham.	Conf.	Conf.	137	438	63	141
Selma.	April 2, 1865.	Alabama.	**Gen. Wilson** vs. Gen. Forrest.	Conf.	U. S.	153	347	198	409
Seven Pines, or Fair Oaks.	May 31, 1862.	Virginia.	Gen. Johnston vs. Gen. McClellan.	Conf.	*	891	3,627	1,987	2,233
Shelbyville.	June 27, 1863.	Tennessee.	**Gen. Rosecrans** vs. Gen. Bragg.	Conf.	U. S.	143	361	164	344
Shepardstown.	July 15, 1863.	West Virginia.		Conf.	*	22	78	34	60

AMERICAN BATTLES, TABULATED—Continued

Name of Battle	Date	Approximate Location	Commanders	Opponent	Victor	Casualties: United States Killed	Casualties: United States Wounded	Casualties: Opponents Killed	Casualties: Opponents Wounded
Siege of Charleston (ended).	May 12, 1780	South Carolina.	**Sir Henry Clinton** vs. Gen. Lincoln.	English.	Eng.	92	142	76	189
Siege of Suffolk, N. C. (ended).	May 3, 1863.	North Carolina.		Conf.	U. S.	15	94	898	1,202
Six-Mile House.	Aug. 18-21, 1864.			Conf.	U. S.	212	1,155	862	3,138
Somerset.	March 30, 1863.	Kentucky.		Conf.	U. S.	11	38	24	73
Southfield—Albemarle.	April 19, 1864.	Plymouth, N.C.	**Capt. J. W. Cooke** vs. Lt. C. W. Flusser.	Conf.	Conf.	2	12	0	0
South Mills or Camden.	April 20, 1862.	North Carolina.		Conf.	U. S.	15	98	12	67
South Mountain.	Sept. 14, 1862.	Maryland.	**Franklin, Reno** and **Hooker** vs. Hill and Cobb.	Conf.	U. S.	312	1,234	224	860
Spanish Fort (to April 8).	March 26, 1865.	Alabama.		Conf.	U. S.	99	695	152	401
Spanish squadron destroyed off Santiago.	July 3, 1898.	Cuba.	**Adm. Sampson** and **Adm. Schley** vs. Adm. Cervera.	Spanish.	U. S.	1	1	342	461
Spottsylvania.	May 8-11, 1864.	Virginia.	**Gen. Grant** vs. Gen. Lee.	Conf.	U. S.	3,288	19,278	3,342	20,187
Spottsylvania.	May 18, 1864.	Virginia.	**Gen. Grant** vs. Gen. Lee	Conf.	U. S.	2,031	7,956	1,752	7,248
Springfield.	Jan. 8, 1863.	Missouri.	**Gen. Brown** vs. Gen. Marmaduke.	Conf.	U. S.	14	145	23	164
Spring Hill.	March 5, 1863.	Tennessee.	**Gen. Hood** vs. Gen. Schofield.	Conf.	Conf.	8	14	1	4
St. Charles.	Jan. 17, 1863.	Arkansas.		Conf.	U. S.	136	20	6	8
St. James—ship (armed).	Dec. 26, 1781.	New York.	Capt. Truxton (U. S.)	English.	*	1	4	3	8
Stillwater.	Sept. 19, 1777.	New York.	**Gen. Gates** vs. Gen. Burgoyne.	English.	U. S.	98	252	161	328
Stone Ferry.	June 2, 1778.	South Carolina.	**Col. Maitland** vs. Gen. Lincoln.	English.	Eng.	51	99	31	63
Stonington.	Aug. 11, 1814.	Connecticut.	**Com. Hardy** (Eng.)	English.	U. S.	1	5	21	55
Stony Creek.	June 6, 1813.	Canada.	**Gen. Chandler** vs. Col. Vincent.	English.	Eng.	17	38	20†	30
Stony Creek.	Jan. 23, 1813.			Indians.	Ind.	400	0	0	0
Stony Lake.	July 29, 1863.	Dakota.		Indians.	U. S.	12	42	32	98
Strawberry Plains, etc.	Aug. 18, 1864.	Tennessee.		Conf.	U. S.	401	1,754	338	762
Stony Point.	July 16, 1779.	New York.	**Gen. Anthony Wayne** vs. Col. Johnson.	English.	U. S.	20	70	63	31
Streight's Raid (to May 3).	April 28, 1863.	Alabama, Georgia		Conf.	U. S.	12	69	0	0
Surprise—Star.	Jan. 28, 1815.	Brest.	**Capt. Barnes** (U. S.)	English.	U. S.	0	0	1	1
Sturgis' Raid (Jan. 16-28).	Jan. 20, 1864.			Conf.	U. S.	6	17	30	62
Swift Creek.	May 9-10, 1864.	Virginia.		Conf.	Conf.	90	401	124	376
Tabasco.	Oct. 26, 1846.	Mexico.	**Capt. Perry** (U. S.)	Mexican.	U. S.	0	0	4	10
Talladega.	Nov. 9, 1813.	Creek Nation.	**Gen. Jackson** (U. S.)	Indians.	U. S.	15	86	299	0
Talluschatches.	Nov. 3, 1813.	Creek Nation.	**Gen. Coffee** (U. S.)	Indians.	U. S.	5	41	186	0
Tamultay.	June 30, 1847.	Mexico.	**Capt. Bigelow** (U. S.)	Mexican.	U. S.	6	53	42	103
Thompson's Station.	March 4-5, 1863.	Tennessee.		Conf.	Conf.	99	301	152	453
Tibb's Bend.	July 4, 1863.			Conf.	U. S.	6	23	280	687
Ticonderoga.	May 10, 1775.	New York.	**Col. Ethan Allen** and **Col. Benedict Arnold** (U. S.)	English.	U. S.	.....	.....	.....	.....
Tippecanoe.	Nov. 7, 1811.	Indiana.	**Gen. Harrison** vs. The Prophet.	Indians.	U. S.	37	151	120	180
Tom—Townsend.	Nov. 12, 1813.	Baltimore.	**Capt. T. Wilson** (U. S.)	English.	U. S.	0	2	8	13
Town Creek	Feb. 20, 1865.	North Carolina.		Conf.	U. S.	5†	8†	8†	18†
Trenton.	Dec. 25, 1776.	New Jersey.	**Gen. Washington.**	English.	U. S.	2	4	17	78
Trevilian Station.	June 11-12, 1864.	Virginia.	**Gen. Sheridan** vs. Wade Hampton and Fitzhugh Lee.	Conf.	U. S.	85	490	124	582
Trumbull—Iris.	Aug. 7, 1781.	Capes of Del.	Capt. James Nicholson (U. S.)	English.	Eng.	5	11	0	3
Trumbull—Watt.	June 2, 1780.	35° 54′ N. 66° W.	Capt. James Nicholson Mr. Coulthard.	English.	*	19	20	39	52
Trumbull—transports.	April 9, 1777.	New York.	**Capt. Dudley Saltonstall** (U. S.)	English.	U. S.	7	8	9	14
Tunnel Hill.	Feb. 22, 1864.	Georgia.		Conf.	U. S.	150†	200†	80†	180
Tupelo, Harrisonburg and Old Town Creek.	July 15, 1864.	Mississippi.		Conf.	U. S.	85	563	184	516
Tuspan.	April 18, 1847.	Mexico.	**Capt. Perry** (U. S.)	Mexican.	U. S.	3	11	25	34
Tyrannicide—Dispatch.	June 13, 1776.	Nova Scotia.	**Capt. J. Fiske** vs. Mr. Gutteridge.	English.	U. S.	1	2	2	5
Tyrannicide—Revenge.	March 29, 1779.	Bermuda.	**Capt. J. Fiske** vs. Capt. Kendall.	English.	U. S.	0	8	11	22
Ultor—boats.	Jan. 5, 1813.		**Capt. Mathews** (U. S.)	English.	U. S.	0	2	1	7
Underwriter.	Jan. 30, 1864.	New Berne, N. C.	**Com. John T. Wood** vs. Acting-Master Jacob Westervelt.	Conf.	Conf.	9	20	6	32
Union—Iris.	Jan. 26, 1813.			English.	Eng.	1	3	0	2
United States—Macedonian.	Oct. 25, 1812.			English.	U. S.	5	7	36	68
Upperville.	June 21, 1863.	Virginia.		Conf.	U. S.	30	70	50	100
Urias.	Nov. 19, 1847.	Lower California.	**Lt. Sildon** vs. Col. Telles.	Mexican.	U. S.	0	0	8	12
Van Buren.	Feb. 10, 1863.	Arkansas.	**Col. Stuart** vs. Col. Carroll.	Conf.	U. S.	0	3	2	5
Vaught's Hill.	March 20, 1863.	Tennessee		Conf.	U. S.	23	33	63	241
Vengeance—Defiance.	Oct. 15, 1779.	North Atlantic.	**Capt. Deane** (U. S.)	English.	U. S.	3	5	4	11
Vengeance—Harriet.	Sept. 18, 1778.	North Atlantic.	**Capt. Newman** (U. S.)	English.	U. S.	1	3	3	8
Vera Cruz.	March 24, 1847.	Vera Cruz.	**Gen. Scott** and **Com. Perry** vs. Gen. Landero.	Mexican.	U. S.	11	56	981	2,000†
Vicksburg.	April 16, 1863.	Mississippi	**Adm. Porter.**	Conf.	U. S.	0	3	7	13

AMERICAN BATTLES, TABULATED—Continued

Name of Battle	Date	Approximate Location	Commanders	Opponent	Victor	Casualties: United States Killed	United States Wounded	Opponents Killed	Opponents Wounded
Vicksburg.	May 19-25, 1863.	Mississippi.	Gen. Pemberton vs. Gen. Grant.	Conf.	*	1,848	2,378	1,420	2,151
Vicksburg Assault.	Dec. 27-28, 1862.	Mississippi.	**Gen. Pemberton** vs. Gen. Sherman.	Conf.	Conf.	724	990	63	134
Vicksburg (ended).	July 4, 1863.	Mississippi.	**Gen. Grant** vs. Gen. Pemberton.	Conf.	U. S.	545	3,688	25	20
Wasp—Avon.	Sept. 1, 1814.	47° 30′ N. 11° W.	**Com. Johnston Blakeley** vs. Capt. John J. Arbuthnot.	English.	U. S.	2	1	10	32
Wasp—packet.	Oct. 6, 1782.		**Capt. McNeill** (U. S.).	English.	U. S.	3	10	4	17
Wasp—Frolic.	Oct. 18, 1812.	East of Albemarle Sound.	**Com. Jacob Jones** vs. Capt. Thomas Whingates.	English.	U. S.	5	5	15	47
Wasp—Reindeer.	June 28, 1814.	48° 36′ N. 11° 15′ W.	**Com. Johnston Blakeley** vs. Capt. R. W. Manners.	English.	U. S.	11	15	25	42
Wauhatchie.	Oct. 27-29, 1863.	Tennessee.	**Gen. Hooker** vs. Gen. Longstreet.	Conf.	U. S.	76	339	153	208
Waxhaws.	May 15, 1780.	South Carolina.	**Col. Tarleton** vs. Col. Buford.	English.	U. S.	250	130	5	14
Weehawken—Atlanta.	June 17, 1863.	Warsaw Sound Georgia.	**Capt. John Rodgers** vs. Lt. Wm. A. Webb.	Conf.	U. S.	0	0	0	8
Weldon Railroad.	June 23, 1864.	Virginia.	**Gen. Hill** vs. Birney and Wright.	Conf.	U. S.	604	2,494	156	344
West Point.	May 7, 1862.	Virginia.	**Gen. Franklin** vs. Gen. G. W. Smith.	Conf.	U. S.	84	110	3	15†
White Oak Swamp.	June 29, 1862.	Virginia.	**Gen. Franklin** vs. Gen. Jackson.	Conf.	U. S.	34	42	65	86
White Plains.	Oct. 25, 1776.	New York.	Gen. Washington vs. Gen. Howe, Gen. Clinton, Gen. Knyphausen and Gen. De Heister Shelby.	English.	*	24	66	89	144
White River.	June 27, 1864.	Arkansas.		Conf.	U. S.	52	148	162	341
Whitestone Hill.	Sept. 3, 1863.	Dakota.	**Gen. Sully** vs. Sioux Indians.	Indians.	U. S.	8	23	194	42
White Sulphur Springs.	Aug. 26, 1863.	Virginia.	**Gen. Longstreet** vs. Gen. McDowell.	Conf.	Conf.	63	144	42	75
Wilcox's Bridge.	March 8-10, 1865.	North Carolina.		Conf.	Conf.	80	421	132	643
Wilderness.	May 5-7, 1864.	Virginia.	**Gen. Grant** vs. Gen. Lee.	Conf.	U. S.	2,309	12,188	1,956	10,444
Wile Renard—ship.	Nov. 14, 1813.	Nova Scotia.		English.	U. S.	6	40	82	0
Williamsburg.	May 5, 1862.	Virginia.	**Hooker, Kearney** and **Hancock** vs. Longstreet.	Conf.	U. S.	456	1,400	351	1,403
Williston Station.	Feb. 8, 1865.	South Carolina.		Conf.	U. S.	2	3	3	6
Wilson Creek.	Aug. 10, 1861.	Missouri.	**Gen. Price** vs. Gen. Lyon.	Conf.	U. S.	223	721	331	764
Wilson's Raid (June 22-30).	June 30, 1864.	Virginia.	**Gen. Wilson** vs. W. H. F. Lee, Wade Hampton, Fitzhugh Lee, Mahone.	Conf.	U. S.	76	265	48	252
Wilson's Raid (to April 24).	March 22, 1865.	Alabama-Georgia	**Gen. Wilson** vs. Gen. Forrest.	Conf.	U. S.	99	598	352	1,231
Winchester.	May 25, 1862.	Tennessee.	**Col. Lytle** (U. S.)	Conf.	Conf.	38	154	68	329
Winchester.	June 14-15, 1863.	Virginia.	**Gen. Ewell** vs. Gen. Milroy.	Conf.	Conf.	203	397	50	81
Winton.	Feb. 19, 1862.	North Carolina.	**Capt. Rowan** and **Col. Hawkins** vs. Col. Williams.	Conf.	*	0	0	1	4
Wood Lake.	Sept. 22, 1862.	Minnesota.	**Gen. H. H. Sibley** vs. Little Crow.	Indians.	U. S.	8	24	84	138
Wyoming, or Fort Forty.	July 3, 1778.	Pennsylvania.	**Col. John Butler** and **Brandt** (Eng.)	English.	Eng.	225	0	8	8
Wyoming—Japanese batteries.	July 16. 1863.			Japanese.	U. S.	6	4	100	200
Wytheville.	July 18, 1863.	Virginia.		Conf.	Conf.	21	62	3	8
Yankee—Royal Bounty.	Aug. 1, 1812.	Halifax.	**Capt. Oliver Wilson** vs. Capt. Henry Gambles.	English.	U. S.	0	2	2	7
Yellow Bayou.	May 19, 1864.	Louisiana.		Conf.	U. S.	42	108	74	158
York.	April 27, 1813.	Canada.	**Gen. Pike** vs. Gen. Sheaffe.	English.	U. S.	66	203	100†	302
York—Lord Somers.	April 18, 1814.	Nova Scotia.	Capt. E. Staples (U. S.)	English.	*	0	0	6	12
Yorktown (ended).	Oct. 19, 1781.	Virginia.	**Gen. Washington** and **Count de Rochambeau** vs. Lord Cornwallis.	English.	U. S.	8	16	199	353

Belgium.—In the time of the Romans the name *Gallia Belgica* was given to the Southern Netherlands lying on the confines of Gaul and Germany, peopled by Celtic and German tribes. Until the close of the eleventh century the feudal system, which arose at the fall of the Carlovingian dynasty, prevailed in the Netherlands, where the several southern provinces were made duchies and counties.

After the abdication of Charles V. these provinces passed into the hands of Philip II., and by the law of primogeniture should have remained united with Spain. But scarcely had the peace of Château-Cambresis put an end to the encroachments of France, when the religious disputes of the Reformation, and the despotic measures of Philip, excited in the provinces a long and bloody war for civil and religious freedom, which ended in the independence of the Northern or Teutonic Netherlands, while the Southern endured a long conflict with the Romish, Spanish, and, afterward, French authorities.

The kingdom of Belgium originated in 1830, by the severance from the kingdom of the Netherlands of its southern provinces, the former Austrian Netherlands and the bishopric of Liège. A provisional government was formed, and was acknowledged by the whole of Belgium. The resolution of the Dutch Parliament that Belgium and the Netherlands should be separately administered, but under the same king, came too late to check the revolution. The crown of the new kingdom was offered to Leopold of Saxe-Coburg, husband of the Princess Charlotte of England

and uncle of Queen Victoria, and accepted by him in 1831. In the ensuing struggle the Dutch forces defeated the Belgians; but the latter were speedily supported by a French army, and the Dutch ports were blockaded by British and French fleets. King William had, therefore, to recognize the inevitable, and Belgium became definitely (1832) a separate kingdom. In 1849 a new commercial treaty for ten years was concluded with France, and the duration of the treaty with the German Zollverein was lengthened.

Leopold II. succeeded his father in 1865. In recent years the chief feature of Belgian politics has been a keen struggle between the clerical and the liberal party. Till 1878 the clerical party maintained the upper hand, but to a large extent by corruption at the elections. In 1877 a bill was passed to put down corruption, and to increase the number of town deputies to the chamber of representatives; and at the next elections, in June, 1878, the liberals gained a majority, which they lost in 1884. The clerical party continued in power till 1894, when it again obtained a large majority. In 1893 a bill giving an extension of the franchise was passed. Recent years have been marked by socialistic movements and labor troubles. Leopold II. died in 1909, and was succeeded by Albert I.

References.—Boulger's *History of Belgium;* Sendamore's *Belgium and the Belgians;* Smythe's *The Story of Belgium;* Vincent's *Constitution of Belgium.*

Bolivia.—Bolivar, the liberator of Bolivia, drew up a constitution, which was adopted in the year 1827. This constitution, which was exceedingly complicated, vested the executive power in a president for life, with the privilege of naming his successor; and the legislative function in three bodies, a senate, tribunes, and censors. The code and constitution of Bolivar were soon after abandoned and the latest constitution bears the date 1880. But the constitution has rarely been allowed to assert itself peacefully, the history of Bolivia, from the presidency of Gen. Santa Cruz (1828-39), being a record of military insurrections, the victor for the time being making himself supreme.

In 1836 a federal republic was formed, consisting of three states, North Peru, South Peru, and Bolivia, with Santa Cruz as supreme protector, but the protector was overthrown in 1839, and the confederation dissolved. In 1841 Peru made war upon Bolivia, but the Peruvian president was defeated and killed at the battle of Yugavi, and peace was soon after restored. During the succeeding period, up to the war with Chili, only two presidents were regularly elected, Dr. Linares, in 1858, and Col. Ballivian, in 1873.

In 1879 began the disastrous war with Chili, its cause being the disputed possession of the rich nitrate region of Atacama, on the Pacific coast, Bolivian territory, but which had been seized, and its deposits worked, by Chili. In the war that followed Bolivia and its ally, Peru, were decisively beaten, and as a result of the war the nitrate region was annexed to Chili, and Bolivia deprived of her coast territory.

A boundary dispute with Brazil as to the territory of Acre was settled in 1903, when, in return for Upper Acre, Upper Purus, and Upper Jurua, Bolivia acquired territory on the frontier of Matto Grosso and the river Madeira (1,221 square miles), together with a money payment of $10,000,000, and commercial facilities. An important railway connecting Brazil and Bolivia was begun in 1909.

References.—Suarez' *Notes on Bolivia;* Conway's *Bolivian Andes;* Mathews' *Through Bolivia and Peru.*

Brazil was discovered in 1499 by Vicente Yanez Pinzon, one of the companions of Columbus in the service of Spain, and next year was taken possession of by Pedro Alvares de Cabral on behalf of Portugal. The first governor-general was Thome de Sousa, who in 1549 arrived in the Bay of Bahia and established the new city of that name, making it the seat of his government.

The usurpation of the crown of Portugal by Philip II. left Brazil in a defenseless and neglected condition, and the English, French, and Dutch made successive attempts to obtain a footing. The Dutch were the most persevering, and for a time almost divided the Brazilian territory with the Portuguese. The tyranny of the Dutch governors, however, incited their native and Portuguese subjects to revolt, and after a sanguinary war, in 1654 the Dutch were driven out and the Portuguese remained masters of an undivided Brazil. The value of Brazil to Portugal continued steadily to increase after the discovery of the gold mines in 1698 and the discovery of the diamond mines in 1728.

The vigorous policy of the Portuguese government under the administration of the Marquis de Pombal (1760-77) did much to open up the interior of Brazil, though his high-handed modes of procedure left among the Brazilians a discontent with the home government which took shape in the abortive revolt of 1789.

On the invasion of Portugal in 1808 by the French the sovereign of that kingdom, John VI., sailed for Brazil, accompanied by his court and a large body of emigrants. He raised Brazil to the rank of a kingdom, and assumed the title of king of Portugal and Brazil. But on his return to Portugal in 1820 he found the Portuguese cortes unwilling to grant civil and political equality to the Brazilians—a fact which raised such violent convulsions in Rio de Janeiro and other parts of Brazil that Dom Pedro, the king's son, was forced to head the party resolved to make Brazil independent, and in 1822 a national assembly declared the separation of Brazil from Portugal, and appointed Dom Pedro the constitutional emperor.

In 1864 began a severe struggle between Brazil and Paraguay, caused principally by the arbitrary conduct of Lopez, the dictator of Paraguay. Brazil, though joined by Uruguay and the Argentine Confederation, had to bear the brunt of the war, which terminated only with the death of Lopez in 1870. This struggle was attended with an immense expenditure of men and money to Brazil, but it established her reputation as a great power, and secured the freedom of the navigation of the La Plata river system.

In 1871 an act was passed for the gradual emancipation of slaves, and in 1888 slavery was finally abolished. In 1889 took place the revolution and establishment of the republic. The proceedings of the president, Fonseca, led to a revolutionary movement in 1891, which was not quelled without difficulty, and Rio de Janeiro was several times bombarded. In 1906-7 Brazil took the lead in an effort to reach a better understanding among the countries of North and South America. A great demonstration was given by the city of Rio de Janeiro, in 1908, to the United States Pacific squadron. Hermes da Fonseca became president in 1910.

References.—*The United States of Brazil,* by Bureau of American Republics; Martin's *Through Five Republics;* Akers' *History of South America;* Nery's *The Land of the Amazons.*

Bulgaria.—The Bulgarians belonged originally to the Ural-Altaic stock, but have adopted a Slavonic dialect. First crossing the Danube in the sixth century A. D., by 1186 they had split up into three principalities, and from 1393 fell under the domination of the Turks. It was constituted, by the treaty of Berlin, 1878, an autonomic and hereditary principality, under the nominal suzerainty of the sultan. In April, 1879, Prince Alexander of Battenberg, cousin of the grand-duke of Hesse, was elected czar by unanimous vote of the constituent assembly.

In 1885 a national rising took place in eastern Roumelia, the Turkish governor was expelled, and union with Bulgaria proclaimed. In consequence, Servia demanded an addition to her own territory, and in 1885, began a war against Bulgaria, in which she was severely defeated. By the treaty which followed, the Prince of Bulgaria was appointed governor-general of eastern Roumelia for a term of five years, to be renominated at the end of that time by sanction of the great powers.

These events greatly irritated Russia, whose agents managed to seduce certain regiments of Bulgarians; and in August, 1886, the prince was seized and carried off, while a proclamation was issued to the effect that he had abdicated. When he was set free on Austrian territory he discovered that the people were still with him, and determined to return. Seeing, however, that his presence would cause an immediate interference on the part of Russia, he formally abdicated and left the country (1886). In 1887 Prince Ferdinand of Saxe-Coburg accepted an invitation to occupy the throne; but his position was insecure till the six great powers sanctioned the step taken by him.

References.—Dicey's *The Peasant State;* Samuelson's *Bulgaria, Past and Present;* Miller's *The Balkans;* Herbert's *By-Paths in the Balkans.*

Canada is said to have been discovered by Sebastian Cabot in 1497. In 1535 it was taken possession of by Jacques Cartier, in the name of Francis I., and called New France. In 1542, La Roque of Roberval, at no great distance from Quebec, founded the fort of Charlebourg; and in 1608, Samuel Champlain laid the foundation of Quebec. In 1617 a French expedition was formed to explore the colony; after which the English made several attempts between 1689 and 1711, without much success.

In 1754 the war between France and England broke out, and continued till between 1759-60, when Canada was conquered by the British, and definitely ceded to them by the treaty of Paris in 1763. One of the chief events of this war was the taking of Quebec, in 1759, where the French general, Montcalm, and the British leader, Wolfe, both fell, mortally wounded. During the American war of independence, Canada, in 1775, was invaded, but without success. In 1791 an act of Parliament divided Canada into two provinces—an upper and a lower.

In 1812, during the second American war, Upper and Lower Canada were the scenes of frequent combats between the British and Americans. In 1837 and 1838 both provinces were shaken by a violent insurrectionary movement, which was finally quelled. The two provinces were again united in 1841. In 1858 Ottawa was finally selected as the capital of Canada, the choice having been referred to the queen of England.

During these years the population of Upper Canada, or Ontario, had been rapidly increasing, and now exceeded that of Lower Canada, or Quebec by nearly 300,000. Under the old constitution, however, the two provinces had equal representation in the legislature. Hence a demand arose on the part of the Upper Canadians for representation by population. This demand was practically conceded in a scheme of federation of the British North-American colonies approved of by the Canadian Parliament at Quebec in 1865 and forwarded to the imperial government for approbation. In 1866 the reciprocity treaty with the United States having expired, the government of that country practically refused to renew it except on the most disadvantageous terms for Canada. About the same time a Fenian movement against Canada, originating in the United States, began to be heard of. Gangs of desperadoes, mostly the refuse of the Civil war, collected near the frontier, and ultimately crossed, occupying some villages and plundering the neighborhood. But the prompt mustering of Canadian volunteers made the filibusters recross the frontier in some haste, to be ultimately disarmed and dispersed by United States troops.

In 1867 the British North America act for confederation of the colonies passed the British Parliament. It united Upper Canada, or Ontario, Lower Canada, or Quebec, New Brunswick, and Nova Scotia, into one territory, to be named the Dominion of Canada. Newfoundland declared against joining the confederation, but with that exception all the British territory north of the United States was gradually included within the Dominion—the Hudson's Bay company's territory by purchase in 1868, British Columbia in 1871, Prince Edward Island in 1873.

In 1870 an insurrection of the Red river settlers, who were under apprehensions as to how the titles to their lands might be affected by the cession of the Hudson's Bay company's rights, took place under the leadership of Louis Riel, and had to be suppressed by a military expedition under Colonel (now Viscount) Wolseley. To reassure the settlers

a part of the newly-purchased territory was erected into an independent province under the name of Manitoba, the unorganized territory beyond receiving the name of the Northwestern Territory.

In 1871 the Washington treaty arranged that the fisheries of both Canada and the United States should be open to each country for the next twelve years, Canada receiving a compensation, afterward fixed at five and a half million dollars, for its fisheries.

In 1884 considerable disaffection was caused among the half-breeds and Indians in the Saskatchewan and Assiniboine districts on account of the difficulty of obtaining valid titles to their lands. The discontent at length took shape in an insurrection which Louis Riel was invited to head. The rebels seized the government stores at Duck lake and induced some of the Indian tribes to coöperate with them, with the result that a massacre of settlers took place at Frog's lake. Within a few months an expedition under Gen. Middleton, who had under his command several thousand volunteers, suppressed the rebellion. Only the leaders were arrested. Riel was tried and executed at Regina on July 28, 1885.

On November 7th of the same year the Canadian Pacific railway (which see) was completed, being opened for through traffic the following year. Since 1883, when the Washington treaty expired, disputes between the American and Canadian fishermen have again been frequent, and several American fishing vessels have been seized on the Canadian coasts, and others prevented from buying bait. A joint British and American commission was instituted in 1887, for the adjustment of differences, but no final settlement has yet been arrived at. The seal fishing in Behring's Sea also caused friction with the United States, but this matter, as well as the boundary between Canada and Alaska, was adjusted in 1903. The year 1905 marked the formation of several new provinces. In September, 1907, a serious riot, directed against the Japanese and Chinese, broke out in Vancouver, largely organized by American labor agitators, but supported by local malcontents. The Dominion authorities suppressed the outbreak.

References.—Bourinot's *Canada*; Bradley's *Canada in the Twentieth century*; Cockburn's *Political Amends of Canada*; Kingsford's *History of Canada*; Morgan and Burpee's *Canadian Life in Town and Country*; Parkman's *Works*; Whates' *Canada: the New Nation*.

Chili.—Prior to the Spanish conquest, Chili belonged to the Peruvian Incas. In 1535 Pizarro sent Almagro to invade the country, and in 1540, Valdivia; the latter of whom subjugated most of the country excepting Araucania. The revolution which separated the colony from Spain broke out in 1810, and in 1817 the victory of Maypu, gained by General San Martin, permanently secured the independence of Chili. In 1865 Chili joined Peru in a war against Spain, in which Valparaiso was bombarded and suffered great loss. Peace was obtained through the mediation of the United States in 1869.

In 1879 a war broke out with Bolivia and Peru, in reference to the rights of Chili in the mineral district of Atacama. This war was virtually finished in 1881, and the victorious Chilians gained a large accession of territory from both Bolivia and Peru. From the war of 1879-81 with Peru, Chili enjoyed peace and prosperity till 1891, when owing to President Balmaceda's aiming at dictatorial powers, a rebellion broke out which ended in Balmaceda's defeat. Boundary disputes with Argentina were referred to British arbitration and arranged in 1898. In 1907 a number of labor disturbances in the mining regions called for armed intervention.

References.—Child's *The Spanish-American Republics*; Hancock's *A History of Chili*; Hervey's *Dark Days in Chili*; Russell's *A Visit to Chili and the Nitrate Fields of Tarapacá*; Smith's *Temperate Chili: a Progressive Spain*; Wiener's *Chile and the Chileans*.

China.—Chinese historical documents begin with the reigns of Yâo and Shun (2356-2206 B. C.). In 403 B. C. we find only seven great states, all sooner or later claiming to be 'the kingdom,' and contending for the supremacy, till Tsin (Chin) put down all the others, and in 221 B. C. its king assumed the title of Hwang Ti, or emperor. From that year dates the imperial form of the government.

The changes of dynasty have been many, two or more sometimes ruling together, each having but a nominal supremacy over the whole nation. The greater dynasties have been those of Hau (206 B. C.–220 A. D.), Tang (618-906), Sung (960-1279), Yüan (the Mongol, 1280-1367), the Ming (1368-1643), and the Ching (Manchû-Tartar), from the Manchu conquest of China in 1643 to the present date).

It was not till after the Cape of Good Hope was doubled, and the passage to India discovered by Vasco da Gama in 1497, that intercourse between any of the European nations and China was possible by sea. It was in 1516 that the Portuguese first made their appearance at Canton; and they were followed at intervals of time by the Spaniards, the Dutch, and the English in 1635. The Chinese received none of them cordially; and Chinese dislike of them was increased by mutual jealousies and collisions.

In the meantime trade gradually increased, and there grew up the importation of opium from India. Before 1767 the import rarely exceeded 200 chests, but in that year it amounted to 1,000. In 1792 the British government sent an embassy under Lord Macartney to Peking. A second embassy from Great Britain in 1816 was dismissed from Peking suddenly and contumeliously because the ambassador would not perform the prostrations required. From the measures of the Chinese to prevent the import of opium resulted the war between China and Great Britain, in 1840; the result of which was the opening of Canton, Amoy, Foo-Chow, Ningpo, and Shanghai to commerce, and the cession of Hong Kong to Great Britain. A second war in 1857, France being allied with Great Britain, ended in the opening of five more treaty ports. A third war (1860) and the march on Peking did even more to open China to the world. After a war in 1884-5 France secured permanent control of Tonkin and Anam.

In 1894 Japan, reviving old claims, drove the Chinese out of Korea, and after victories on land and at sea, captured Port Arthur and Weihaiwei. By the treaty of 1894 Japan secured as indemnity Formosa and the Liaotung peninsula; but the protests of Russia, Germany, and France made Japan resign Liaotung. Russia obtained a lease of Port Arthur and Talienwan, with railway and other privileges in Manchuria; Germany obtained Kiauchau and concessions in Shantung; and Britain, as an offset, obtained a lease of Weihaiwei and sought to secure trading freedom in the Yangtszekiang valley. Russia's refusal to evacuate Manchuria and her movements in Korea led to war with Japan in 1903, the defeat of the Russian armies in Manchuria, the destruction of the Russian fleet, and the fall of Port Arthur (1905), China being nominally neutral. By the peace (1905) Japan secured dominance in Korea, the Russian leases in Liaotung, and great influence in southern Manchuria and in China generally.

A series of far-reaching reforms, promoted by a nationalist reform party in 1898, were summarily canceled by the dowager empress, who assumed supreme authority; and the reactionary and anti-foreign "Boxer" association (more accurately "The Fist of Righteous Harmony"), encouraged by the court, made extermination of the foreigners its war-cry and besieged the foreign legations in Peking, relieved, after a two months' siege by an international army of Japanese, Russians, British, Americans, French and Germans. They remained in occupation for over a twelvemonth. Finally the peace protocol was signed Sept. 7, 1901, and the empress-dowager returned to her capital. The foreign troops were withdrawn; and Russia in terms of a convention, drafted 1901, undertook that Manchuria, which her troops had occupied, should be gradually evacuated; but the undertaking was not fulfilled.

This breach of faith was a considerable factor in the outbreak of the Russo-Japanese war (1904). Prior to the outbreak of war China undertook to remain strictly neutral. An Anglo-Chinese labor convention, containing the regulations for the importation of Chinese laborers into the Transvaal, and their control, was signed in 1904, and a treaty similar to those already concluded with Great Britain, the United States, and Japan was made with Portugal. In 1904 Sir Robert Hart published his scheme for the reorganization of the financial and military resources of the country. In 1908 a limited constitution was proclaimed, in 1910-11 political revolution followed, and China became a republic. Dr. Sun Yat Sen was named provisional president, and was succeded by Prince Yuan, 1912. and a republic was established.

References.—Martin's *Lore of Cathay*; Parsons' *An American Engineer in China*; Smith's *China in Convulsion*; Michie's *Englishman in China*; Hosie's *Manchuria*; Rockhill's *Land of the Llamas*; Williams' *The Middle Kingdom*; Boulger's *China*; Legge's *Chinese Classics*; Mayer's *The Chinese Government*; Scott's *The People of China*; Parker's *China and Religion*.

Colombia, formerly New Granada, was discovered by Alonso de Ojeda in 1499; it was visited by Columbus on his fourth voyage, in 1502. The first Spanish settlement was made in 1510 at Santa Maria in the Gulf of Darien, and the whole country was formed into a province under a captain-general in 1547. New Granada declared its independence of Spain in 1811, and, after eleven years of warfare, succeeded, with the help of Venezuela, in effecting its liberation. Both states then united with Ecuador, also freed from the Spanish domination, to form the first republic of Colombia; but internal dissensions arising, the three states again separated in 1831, forming three independent republics.

In 1861 the states forming New Granada by agreement adopted a new constitution, the republic henceforth to be called the United States of Colombia. This title was retained till, by the new constitution adopted in 1886, the state ceased to be a federal republic and became a unitary republic, with the name of Republic of Colombia. The secession of Panama in 1903 was partly brought about by the dilatoriness of the central government in concluding a satisfactory arrangement with the United States in regard to the construction of the Panama canal.

References.—Scruggs' *The Colombian Republic*; Petre's *The Republic of Colombia*; Moses' *Constitution of Colombia*.

Costa Rica was discovered by Columbus in 1502. Diego de Nicuesa failed in an attempt to colonize it in 1509. The first settlement was made by Francisco Hernandez in 1523, and the country was conquered 1526-65. Independence was declared in 1821, and the territory formed part of the federal republic of Central America from 1823 to 1839. A constitution was promulgated in 1870, and frequently modified since. Between 1870 and 1882 it was under a series of dictatorships. The president in 1910 was Ricardo Jimines.

References.—Villafranca's *Costa Rica*; Church's *Costa Rica*; Calvo's *The Republic of Costa Rica*.

Cuba, spoken of as the "Queen of the Antilles," was discovered in 1492 by Columbus, and first settled by Spaniards at Baracoa in 1511. Havana, founded in 1519, was reduced to ashes by the French in 1538, and again in 1554. In 1762 the English took and held Havana for a year. In 1818 the trade of Cuba was opened to the world, and for some years the island enjoyed unexampled prosperity. During the American Civil war Cuba developed its sugar industry. An insurrection against the Spanish authorities went on from 1868 to 1878, a new one broke out in 1895, and the Spanish severities in suppressing it led to the intervention of the United States and the war, disastrous to Spain, of 1898-9. After the war Cuba was occupied by the Americans till 1902, when a separate constitution was given to it as an independent republic, closely connected with the United States by a reciprocal commercial convention.

References.—Davey's *Cuba, Past and Present*; Clark's *Commercial Cuba*; Fiske's *Discovery of America*; Hill's *Cuba and Porto Rico*; Pepper's *To-Morrow in Cuba*; Rowan and Ramsey's *The Island of Cuba*; Alger's *The Spanish-American War*.

Denmark.—The early history of Denmark is lost in the twilight of the saga period, with

its vikings and their valiant deeds. The Danes coming from the islands occupied the lands deserted by the Jutes and Angles who had in the fifth century migrated to England. The Danish monarchy was founded in 936 by Gorm the Old, whose son became a Christian. Waldemar I. (1157-82) ruled Norway also, and conquered Mecklenburg and Pomerania; under his son Waldemar II. further conquests were made in German and Wendish lands, so that the Baltic became a Danish sea.

By the treaty of Calmar in 1397, Norway, Sweden and Denmark, already under one monarch, Margaret, were formally united into one state. In 1448 the Danes elected as king Christian of Oldenburg, a descendant of their royal family, who was also duke of Schleswig-Holstein; and his line continued on the throne till 1863. Sweden became independent in 1523. Lutheranism was introduced into Denmark in 1527.

In 1815 Denmark had to cede Norway to Sweden; and in 1848 the Germanic peoples of the duchies of Schleswig and Holstein, rebelled against Denmark. For the time the Danes succeeded in retaining the duchies, but the controversy, renewed in 1863, led to the defeat of the Danes by Austria and Prussia (1864), followed by the incorporation of the duchies in the Germanic confederation, and, after the Austro-Prussian war of 1866, in Prussia.

The most remarkable feature of recent Danish history is the unique parliamentary deadlock originating out of the refusal of the Folkething for nearly twenty years to grant the necessary supplies for fortifying Copenhagen and increasing the national armaments. The Estrup administration, formed for the purpose in 1875, resorted repeatedly to such anomalous expedients as provisional financial edicts; the majority in the Folkething, who advocated the neutrality of Denmark, retaliated by systematically rejecting every bill laid before them.

Ultimately, however, a large section of the Left were led to abandon their policy of protest; and in 1893 a new and vigorous political party, which desired parliamentary concord in the agrarian interest, made its influence felt. In April, 1894, both houses, for the first time since 1885, not only framed the current budget, but at the same time confirmed nearly all the provisional financial edicts previously issued by the Estrup government.

Since then the principal events of national importance have been a general strike (1900) of 40,000 artisans engaged in the building trades, which paralyzed industry and resulted in the loss to Denmark of $13,750,000, and the rejection of the proposal (1902) to sell the Danish West Indian islands to the United States.

References.—Saxo Grammaticus' *Nine Books of Danish History;* Bain's *Scandinavia;* Sidgwick's *Story of Denmark;* Thomas' *Denmark's Past and Present.*

Dominican Republic, or San Domingo, occupies the eastern portion of the island of Hayti. It formerly belonged to Spain, and is the oldest colonial settlement in America.

After the discovery of the island in 1492 by Columbus, who named it Hispaniola, it was colonized by the Spaniards, and the larger eastern section remained under Spanish rule until 1844, when independence was gained and the Dominican Republic was formed. Its history during the succeeding twenty-five years is a record of struggles between rivals for the presidency, and of wars with the neighboring republic of Hayti and with Spain.

In 1869 President Baez signed with President Grant a treaty for the annexation of Santo Domingo to the United States. The people of Santo Domingo ratified the treaty, but the United States Senate refused. A revolution in the island republic followed, and in 1886 Gen. Heroux was elected president. In 1899 he was succeeded by President Jimenez, who was defeated by Gen. Vasquez in 1902. There was civil war during part of 1906, and, in 1907, a treaty between the Dominican Republic and the United States was ratified, under which the latter will collect the customs revenues, assist the Dominican government to maintain peace, and act as intermediary between the republic and its foreign creditors.

References.—Hazard's *Santo Domingo, Past and Present;* Gabb's *Topography and Geology of Santo Domingo;* Garrison's *The Island of Santo Domingo.*

Ecuador.—At the time of the conquest of Peru by the Spaniards Ecuador formed part of the great empire of the Incas. As the presidency of Quito it was long included in the viceroyalty of Peru. From 1710 it became part of the presidency of New Granada (or Santa Fé de Bogotá. In the revolutionary war against Spain, Ecuador, along with the neighboring territories, secured its independence (1822), and was ultimately erected into a separate republic in 1831.

A series of civil wars ensued, lasting almost without intermission for more than twenty years. From 1852 to 1858, desultory hostilities existed with Peru. War was declared against New Granada on Nov. 20, 1863, and the Ecuadorian army was routed. In August, 1868, a very destructive earthquake occurred. In 1869, Garcia Moreno, the head of the clerical party, overthrew the government. He was assassinated in 1875 and Dr. Antonio Borrero, the candidate of the non-official party, was elected president. A constitution was adopted and a president elected, and until 1884 the republic enjoyed a reasonably peaceable government. In 1884 another constitution was formed, which, with modifications in 1887 and 1897, has since been in force.

References.—Keane's *Central and South America;* Whymper's *Travels Amongst the Great Andes of the Equator;* Orton's *The Andes and the Amazon.*

Egypt.—The early history of Egypt is involved in obscurity. The beginning of the continuous civilization of Egypt dates from about 8000 or 7000 B. C. There is no break of continuity of human works from that age, through every generation to the present time, though the continuous written record does not begin till about 5000 B. C.

The epoch of Menes, who formed the old empire of Egypt and founded its capital at Memphis, is variously calculated at from 5004 B. C. to 3892. Egypt was in the height of its glory under the nineteenth dynasty, to which Rameses I. and II. and Meneptah (son of the latter, and probably the Pharaoh of Exodus) belonged. In their time all those wonderful structures were raised, and works perfected, which we cannot behold without astonishment. These are the pyramids, the labyrinth, the immense grottoes of the Thebais, the obelisks, temples, and pompous palaces; the lake Moeris, and the vast canals, which served both for trade and to render the land fruitful.

The country continued under the Persian yoke till the time of Alexander the Great, who conquered Persia 333-1 B. C., and built the city of Alexandria. He was succeded by Ptolemy, the son of Lagos, 323 B. C. Ten kings of that name succeeded each other, till Cleopatra, the sister of the last Ptolemy, ascended the throne; then Egypt became a Roman province, and continued so till the reign of Omar, the second caliph of the successors of Mohammed, who drove out the Romans, after it had been in their hands 700 years. When the power of the caliphs declined, Saladin, in 1171, set up the order of the Mamelukes, who usurped the sovereign power in 1260, and extended their dominions over a great part of Africa, Syria, and Arabia.

At the commencement of the sixteenth century Selim, Turkish emperor, conquered it, and for many years it was distracted by the civil wars between the different contending beys by which its provinces were governed. The famous Hassan Ali, the Turkish admiral, gained several victories over them in 1786; but though he repressed, he could not totally subdue them. The French invaded Egypt in 1798, under Gen. Bonaparte, and evacuated the country in 1802.

In 1811 Mehemet Ali became master of Egypt by the massacre of the Mamelukes; and under his sway it progressed rapidly in civilization. He considerably extended his boundaries, and by the treaty of London (1841) was made viceroy of Egypt, as a fief of the Ottoman empire. The independent position of the rulers of Egypt was much enlarged in 1867, by an imperial firman which established the succession of the descendants of Mehemet Ali, under the title of khedive, or king. Still greater powers were granted in 1872, and in 1874-5 Ismail Pasha, the then ruler, greatly extended the Egyptian territory, annexing the Soudan to Darfur and finally to the shores of Victoria Nyanza.

The finances of the country became so involved that they were placed under European management and the country under English and French control. Ismail in 1879 was forced to abdicate and was succeeded by his son Tewfik. A revolt, under Arabi Pasha, of those opposed to European influence, succeeded. It was suppressed by the British army and navy, the French taking no part. In consequence, the dual control ended; and since then Great Britain has been the practical ruler of Egypt, despite the occasional protest of France and other European powers.

About 1880 a serious revolt began in the Soudan, under the leadership of the mahdi, a pretended prophet. Efforts to suppress it proved unavailing; in 1883 an army under Hicks Pasha was totally routed, other officers were defeated, and Khartoum, which was held by Gen. Gordon, was taken and that gallant officer killed. By these operations Egypt lost the whole of the Soudan, except the equatorial province, held by Emin Pasha till 1888, when he was rescued from his dangerous position by the explorer Stanley. In 1892 Tewfik died and was succeeded as khedive by his eldest son, Abbas, the British control continuing. In 1896 an expedition for the reconquest of the Soudan set out, under British leadership; Dongola was taken in September and the dervish forces were defeated in several engagements.

The predominant position of Great Britain in Egypt was formally recognized by France under the Anglo-French agreement of 1904.

References.—Maspero's *Dawn of Civilization, Struggle of the Nations, Passing of the Empires;* Petrie's *History of Egypt;* Mahaffy's *The Ptolemaic Dynasty;* Milne's *Roman Egypt;* Poole's *Egypt in the Middle Ages;* Wiedmann's *Religion of the Egyptians;* Maspero's *Manual of Egyptian Archæology.*

England.—Nothing authentic is known of the history of England before Cæsar, who twice invaded the island, then called Britannia, in 55 and 54 B. C. Claudius resumed the idea of subjugating Britain A. D. 43, and from that time until 85, the Roman armies, making further progress at different times, penetrated as far as the Grampian hills, but the northern portion of the island was never subdued by the invaders.

The Anglo-Saxon Period.—In 411 Honorius abandoned Britain, whose inhabitants, finding it impossible to defend themselves against the Picts, called to their aid the Saxons, who (449) assisted them so effectually that they took possession of the country and founded the four kingdoms of Essex, Wessex, Sussex, and Kent. The Angles, who followed them, established three other kingdoms, *viz.*, East Anglia, Deira, and Mercia (540-584). All these kingdoms ended by being reduced to one, under Egbert, the Saxon king of Wessex (827).

After 835 the Danes ravaged England from time to time, but in 871 Alfred the Great forced them to desist, and from thence till near the end of his reign (900) the Danes left the island in peace. Returning in 981, the Danes succeeded, in 1013, in putting their king, Sweyn, on the throne, which was not recovered by the Saxon dynasty till 1041.

Norman Conquest.—When William of Normandy landed in England to claim the crown which Edward the Confessor had bequeathed to him, he found that the people had raised to the throne Harold, the son of a popular nobleman. The resources of the Saxons, however, had been wasted in domestic conflicts before the attack of William; and the battle of Hastings (1066 A. D.) gave England with comparative ease to the Normans. The next twenty years saw the conquest completed, and nearly all the large landed estates of the Saxons pass, on every pretext except the true one, into the hands of the Normans. In the course of time the Normans were absorbed among the Saxons, their very language disappearing, though leaving many traces. From this union arose the English people and the English language as they now exist. The union of the Normans with the Saxons was not fully

effected so long as the Normans retained their foreign possessions. In King John's reign the whole of these were lost excepting Guienne and Poitou.

In the reign of Stephen occurred the civil war between the Empress Maud, daughter of Henry I., and Stephen; she finally retired to France, and concluded a peace with her adversary. The great struggles of the successors of William were with the ecclesiastics and with the barons. Sometimes in these the popular sympathies were with, and sometimes against, the crown. The Conqueror himself and his immediate successors had no difficulty in maintaining the superiority of the courts of justice over the ecclesiastics; but even a sovereign so bold and skillful as Henry II. was forced, after the outcry occasioned by the murder of Thomas à Becket (1170 A. D.) to yield the point. The right to nominate the higher ecclesiastics was also secured by the popes.

The Plantagenets.—Under the Plantagenets an era of progress, generally, opened for England. The reign of Henry II. gave to the country the constitution of Clarendon; Ireland was conquered 1172; England was divided into six circuits for the better administration of justice, and a digest of the laws was made by Glanville about 1181. Richard I. did little for the internal good of the land, his chief exploits occurring on the field of battle in foreign lands.

Magna Charta.—Under John two important events occurred: Magna Charta was obtained, and the French possessions were nearly all lost—both unmitigated blessings; but otherwise John's influence was cast against progress and reform. The degradation of the English monarchy was at its lowest when he consented (1213 A. D.) to hold the crown as a gift from Rome. From Henry II. something similar to the Great Charter had already been gained; but it was the Magna Charta of John which firmly established two great English principles—that no man should suffer arbitrary imprisonment, and that no tax should be imposed without the consent of the council of the nation.

During the reign of Henry III. England obtained her first regular parliament, and gold money was first coined in 1257. Edward I. was crowned 1272, and almost the first event of his reign was the conquest of Wales; Scotland also was subdued, but revolted again in 1297.

The reign of Edward II. was disastrous to himself and to England. The barons rose against his favorites, and Edward was murdered by the connivance of his wife. A new and vigorous era began with the reign of Edward III. The Scots were defeated at Halidown Hill; important victories were gained in France; the Order of the Garter was instituted, and, most important of all, law pleadings were ordered to be in English, instead of in the Norman-French tongue, which had hitherto prevailed. Richard II. was crowned 1377, and with his death in 1385 ended the line of the Plantagenets.

The House of Lancaster succeeded in the person of Henry IV. His reign was disturbed by an insurrection of the Welsh under the Percies, but was otherwise peaceful. Henry V. invaded France and won the famous battle of Agincourt, and gained the French crown 1420; but during the reign of his successor, Henry VI., all the French possessions were lost save Calais. He was deposed by Warwick the kingmaker, and the first representative of the house of York, Edward IV., was placed on the throne. The wars of the Roses ensued, which continued through the two succeeding reigns of Edward V. and Richard III., ending with the death of Richard on Bosworth field, the coronation of Henry VII., 1485, and his marriage with Elizabeth, daughter of Edward IV.

The Tudors.—The union of the houses of York and Lancaster under Henry VII. begins a new period in English history. Henry VIII. succeeded under the most favorable auspices. He found the alliance of his now important country courted by both of his contemporaries, Francis I. and Charles V. But the interest of the foreign complications of the reign merges in the courts of England and of Rome.

Henry was succeeded by Edward VI. His reign was marked by the general progress which the Reformation made from questions of government to questions of doctrine. The next reign saw the inevitable reaction. The superstitions of the people had been too rudely handled, and, as often happens before a crisis, there came a period of physical suffering. The conversion of cornfields into sheep-walks, induced by the high value of wool as an article of export, had thrown many out of employment; and the country was, moreover, infested with the crowd of vagrants whom the monasteries had been wont to maintain. The popular dissatisfaction coupled these things with the Reformation. Thus the opportunity was prepared for the atrocities of the reign of Mary.

The accession of the Protestant princess Elizabeth came as a relief to the whole nation. The Romanists themselves were weary of the policy which made England the tool of Spain, and were sickened with the cruelties which had been enacted. Fortunately for the country, the ministry of Elizabeth, guided by the able hand of Cecil, was one of peace. The greatest event in her reign was the defeat of the Spanish Armada. On the death of Elizabeth the crowns of England and Scotland were united.

The Stuarts.—The reign of James I. does not present much that is remarkable. The plot for which Sir Walter Raleigh suffered long afterward, and the Gunpowder Plot, created a short-lived excitement. Charles I. succeeded to the throne in 1625. The misfortunes of Charles I. were the legitimate result of the principles of his father. Charles committed the mistake of repeating in the seventeenth century acts which the Plantagenet sovereigns had done with impunity in the fourteenth and fifteenth. In 1637, when the king found himself involved in a war with Scotland in consequence of his endeavor to introduce a liturgy there, he was compelled to call a Parliament. The Commons refused supplies and were again dissolved. In 1640 the king once more summoned a Parliament. He found the temper of the houses more indomitable than ever.

The Grand Remonstrance (November, 1641) destroyed all chance of a reaction in favor of Charles, and in 1642 war broke out. At first Parliament was worsted, and made an alliance with the Scots. Aided by this alliance, and by the ability of Cromwell and his Ironsides, Parliament won the battle of Marston Moor and Naseby, and gradually wore down the royal resistance. Having vainly discussed terms of peace at Oxford and Uxbridge, Charles gave himself up to the Scots, and negotiated with the Parliament. Having been sold to Parliament, Charles was seized by the army, which now stood by itself. Hoping to take advantage of the breach between the Parliament and the army, Charles began intrigues which led to the invasion of England by the Scots on his behalf (the second civil war), and to his death in January, 1649, at the hands of Cromwell and his soldiers.

The Commonwealth.—The army, now supreme, established a commonwealth, which, under Cromwell, became the Protectorate. Till his death Cromwell staved off anarchy, and endeavored, though in vain, to govern by means of parliaments. But he was compelled to fall back upon the military force to preserve order, and after his death (1658) the restoration of Charles II. became inevitable. In Charles' reign the colonization of New England progressed rapidly.

The Restoration.—In 1660, the Stuarts were reëstablished, but the errors of James II. brought about a new revolution in 1688, which finally overthrew the Stuart dynasty and gave to the English, as sovereign, William III., prince of Orange, who had married Mary, daughter of James II. Under Queen Anne, who succeeded him, the union of England and Scotland was consummated, and her reign was further illustrated by the victories of Marlborough.

House of Hanover.—After the death of Queen Anne (1714), the house of Hanover came to the throne as the nearest heirs of the royal line, and this family still holds the throne of England. Under this dynasty took place the Seven Years' war (1756 to 1763); the conquest of Canada (1763); the loss of the Anglo-American colonies, now the United States (1776–83); the conquest of India (1757 to 1816); the struggle against the French revolution and against the empire (1793 to 1815); the Irish union (1800); the repeal of all penal laws against Catholics and Nonconformists (1820 to 1829); the repeal of the corn laws (1846); the Crimean war against Russia, in concert with France (1854–55); the Sepoy mutiny, and its prompt repression, in Hindustan (1857–8), and the several expeditions against China (1842 to 1860); the reform bill (1868), and the Fenian agitation; the Ashantee (1864) and Abyssinian (1868) wars; the Irish land act (1870); the settlement with the United States of the Alabama claims (1873); the disestablishment of the Irish church; the annexation of the Fiji Islands (1874); the assumption by the queen of the title of empress of India (1876); the Berlin treaty, the acquisition of Cyprus; the fisheries settlement with the United States (1878), the Afghan and Kaffir wars (1878-9), the extension of the franchise (1885), and the Nile expedition (1879).

From 1879 to the present time Irish agitation has been for Great Britain a source of serious disquiet. In 1882 Mr. Gladstone adopted a policy of conciliation, but the murder of Lord Frederick Cavendish and of Mr. Burke caused its abandonment and the immediate passing of a coercion law which virtually placed Ireland under martial law. In 1882 the Egyptian army, under the leadership of Arabi Bey, having revolted from the khedive's authority, Great Britain sent a large naval expedition to Egypt, bombarded Alexandria, and defeated the rebellious forces. Since that date the Egyptian government has been under British suzerainty, and in 1896 a British expedition was sent up the Nile with the purpose of regaining the provinces of Egypt held by the mahdist forces.

Within the past quarter of a century Great Britain has largely extended its territory in Africa, bringing great areas in the south and east of the continent under its protection. During the same interval several subjects of dispute have arisen with the United States, which have all been peacefully settled. An imposing festival took place in London in June, 1897, on the occasion of the sixtieth anniversary of Queen Victoria's accession, the fact that she had reigned longer than any preceding monarch giving the greatest interest and importance to the ceremonies, in which representatives from all sections of the empire took part.

Boer War.—October 11, 1899, war was declared by the Boers of the Transvaal and Orange Free State, the aim being the destruction of the British paramountcy in South Africa. This led to the annexation of those states by the British, after a fierce contest, in 1900. In 1900, a new parliament was elected, which again supported the Conservative ministry, with a slightly increased majority.

House of Saxe-Coburg.—Victoria died January 22, 1901, and was succeeded by her eldest son, Edward VII., who proved himself to be an active promoter of peaceful relations with other countries.

The Boer war was concluded in the middle of 1902 by the treaty of Vereeniging, and almost immediately afterward Lord Salisbury retired from office, being succeeded in the premiership by his nephew, Mr. A. J. Balfour. The education act of 1902 did away with school boards where they existed, bringing the voluntary and former board schools alike under education committees in England and Wales, and the same change was made in London in 1903. The Irish land act of 1903 was a measure of the first importance, its object being to transfer practically all the agricultural land of Ireland to farmers or peasant proprietors. In the autumn of 1903 Mr. Chamberlain resigned office in order to be free to advocate a change in the country's fiscal policy, intended to

unite the colonies more closely with the mother country—a change which many have regarded as meaning a return to protection. Mr. Balfour endeavored to steer a middle course in regard to tariff reform, being in favor of preferential tariffs and so-called "retaliation."

In 1904, the introduction of indentured Chinese labor into the Transvaal gold mines aroused much controversy in parliament and the country. The Licensing act of the same year for England and Wales made fundamental alterations in the tenure of licenses. The question of unemployment having compelled attention, the Balfour ministry passed an act in 1905 creating machinery for dealing with distress from this cause. The Aliens act of 1905 should also be mentioned. In foreign affairs the most notable recent events are the Anglo-French agreement of 1904 settling all the outstanding differences between Great Britain and France; and the Anglo-Japanese treaty the following year, extending a similar arrangement of a few years before. The visit of King Edward to Germany in 1906, and of Emperor William to England in the latter part of 1907, did much to secure an amicable understanding between those two powers. The complete autonomy of Australia was recognized in 1907.

In April, 1908, Mr. Asquith became premier on the death of Sir H. Campbell-Bannerman. On May 5th, 1910, the illness of King Edward was announced, followed by that of his death the next day. His son, George V., succeeded to the throne May 6, 1910.

Europe was probably first peopled from Asia, but at what date we know not. The first authentic history begins in Greece at about 776 B. C. Greek civilization was at its most flourishing period about 430 B. C. After Greece came Rome, which, by the early part of the Christian era, had conquered Spain, Greece, Gaul, Helvetia, Germany between the Danube and the Alps, Illyria, Dacia, etc. Improved laws and superior arts of life spread with the Roman empire throughout Europe, and the unity of government was also extremely favorable to the extension of Christianity.

With the decline of the Roman empire a great change in the political constitution of Europe was produced by the universal migration of the northern nations. The Ostrogoths and Lombards settled in Italy, the Franks in France, the Visigoths in Spain, and the Anglo-Saxons in South Britain, reducing the inhabitants to subjection, or becoming incorporated with them. Under Charlemagne (771-814) a great Germanic empire was established, so extensive that the kingdoms of France, Germany, Italy, Burgundy, Lorraine, and Navarre were afterward formed out of it.

About this time the northern and eastern nations of Europe began to exert an influence in the affairs of Europe. The Slaves, or Slavonians, founded kingdoms in Bohemia, Poland, Russia, and the north of Germany; the Magyars appeared in Hungary, and the Normans agitated all Europe, founding kingdoms and principalities in England, France, Sicily, and the East.

The Crusades and the growth of the Ottoman power are among the principal events which influenced Europe from the twelfth to the fifteenth century. The conquest of Constantinople by the Turks (1453), by driving the learned Greeks from this city, gave a new impulse to letters in western Europe, which was carried onward by the invention of printing, and the Reformation.

The discovery of America was followed by the temporary preponderance of Spain in Europe, and next of France. Subsequently Prussia and Russia gradually increased in territory and strength. The French revolution (1789) and the Napoleonic wars had a profound effect on Europe, the dissolution of the old German empire being one of the results.

Since then the most important events in European history have been the establishment of the independence of Greece; the disappearance of Poland as a separate state; the unification of Italy under Victor Emmanuel; the Franco-German war, resulting in the consolidation of Germany into an empire under the leadership of Prussia; and the partial dismemberment of the Turkish empire.

France.—Before the time of Caesar, the whole of France was known to the Romans by the name of Transalpine Gaul; but after its conquest it was divided into the four provinces of *Provincia Romanorum* (Provence), *Gallica Aquitanica, Celtica,* and *Belgica*. In the fifth century it was subdivided into seventeen provinces, inclusive of all the territory on the east bank of the Rhine.

At the latter epoch, the Germanic nations began to pour in an irresistible torrent over Gaul; the Visigoths established themselves in the west and south, from the Loire to the Pyrenees, where they established a kingdom that lasted till about 540. The Burgundians, in a similar manner, settled in the east, from the Lake of Geneva to the Rhine, and afterward stretched along the Rhone to the Mediterranean. The independent sovereignty they erected lasted until about 532.

Merovingians.—The Franks, whose dominion swallowed up those of both the foregoing tribes, had been long settled in the north; and Pharamond, their chief in 420, is considered the founder of the French monarchy, as he was of the first or Merovingian race of Frankish kings. In 485 Clovis defeated Syagrius, the Roman general, at Soissons, and finally extinguished the Roman power in the west, and in 507, by his victory over the Visigoths, he rendered himself master of all the country between the Loire and the Garonne.

Division of the Kingdom.—On the death of Clovis, in 511, his dominions were divided into four kingdoms—those of Paris, Metz, Soissons, and Orleans, each governed by one of his four sons. These, however, were reunited in 558. In 732 Charles Martel defeated the Saracens, who had effected the conquest of a great part of the south of France, and ultimately expelled them from the kingdom.

Carlovingians.—Under Pepin and Charlemagne the country was relatively peaceful and prosperous; but after the latter's death things returned to their original state of confusion. Under his immediate successor France was again divided into four parts, and the Normans began to ravage its northern provinces; the power of the nobility also rapidly increased; and the last sovereign of the Carlovingian dynasty, Louis V., in 986-7, possessed only the town of Laon.

Capetians.—His successor, Hugh Capet, count of Paris and Orleans, the founder of the third race of kings, the Capetians, governed only the Ile-de-France, Picardy, and the Orleannais; the dukes of Normandy, Brittany, Aquitaine, Gascony, Lorraine, and Burgundy, the counts of Flanders, Champagne, Vermandois, Toulouse, and several minor seigneurs, shared among them the rest of the modern kingdom. By degrees, however, all the great fiefs fell in various ways to the crown. Vermandois was united to it by Philip Augustus; Toulouse and Perche, by Louis IX.; Champagne, in 1274; the Lyonnais, Dauphiny, and Languedoc, in the fourteenth century; Berri, Normandy, Gascony, Burgundy, Anjou, Maine, and Provence, in the fifteenth; Bourbonnais, Auvergne, Brittany, Lorraine, and considerable territories in the southwest in the sixteenth and Flanders, Artois, Franche-Comté, and Alsace in the seventeenth century.

Under the Bourbons.—While the monarchy gained in consistency and extent, the regal power was making constant advances. The political rights and privileges which the nobles exercised under the feudal system were the objects of continual attacks on the part of the crown, which, though sometimes defeated, were in most instances successful. At length, under the administration of Richelieu, the nobles were stripped of all power; and there being no other body in the state, with the exception of the parliaments—which had degenerated into little else than courts of law—that enjoyed any constitutional privileges, the power of the crown was raised above control.

Under the vigorous, and for a lengthened period prosperous, government of Louis XIV., the royal prerogative arrived at a maximum. But the close of this reign was eminently unprosperous; and the wars in which Louis had been long engaged, the burdens they obliged him to impose on his subjects, and the vast debts he had contracted, produced not only great suffering and misery, but also great discontent.

During the regency and the subsequent part of the reign of Louis XV., abuses of all sorts multiplied on all hands, and were no longer concealed by the dazzling splendor and magnificence of the preceding period; the most worthless parasites obtained a predominating influence at court; the command of fleets and armies was intrusted to the merest imbeciles; the finances were involved in the greatest disorder; and France and Europe were scandalized and disgusted by the gross sensuality and vulgar profligacy of the king and his intimate associates. Louis XVI., who ascended the throne in 1774, was actuated by the best intentions, but he wanted the firmness of purpose and capacity required in so desperate a crisis. The abuses that infected the whole frame of society, though destructive of the public interests, were either really advantageous, or believed to be so, to a vast number of persons, including the nobility and clergy; and it would have required a mind of a very different order from that of Louis to have frustrated the solicitations, intrigues, and cabals of such powerful parties, and to have safely carried through the reforms that had become indispensable.

French Revolution.—At length after a variety of futile expedients had been in vain resorted to, it was resolved, in 1789, to hold a meeting of the States-General, which had not been convened since 1614, for effecting the necessary changes, and averting a public bankruptcy.

This was the commencement of that tremendous revolution which cost Louis XVI. the crown and his life, and destroyed every vestige of the government and institutions that existed when it broke out. The atrocities connected with the revolution were the wild, but not unnatural excesses of an uninstructed populace, that had suddenly been emancipated from a state of extreme degradation. The proscriptions and anarchy by which the revolution was accompanied continued till Napoleon attained to the supreme direction of affairs. The talents of this extraordinary man were surpassed only by his ambition, which, by overstepping all bounds, precipitated him into enterprises that ultimately led to his overthrow.

Bourbons Restored.—In 1814, the Bourbons were replaced upon the throne; but the elder branch had profited as little as the Stuarts in England under similar circumstances, by the lessons of adversity, and in 1830 they were reëxpelled from the kingdom. The crown was then offered, under certain conditions, to Louis Philippe, Duke d'Orleans, by whom it was accepted. He has the merit of having contributed, under very difficult circumstances, to maintain, for a lengthened period, the peace of France and Europe. But he alienated the public by his plans for advancing and enriching his children, and by the corruption which pervaded every department of his government.

Second Republic.—This led to the revolution of Feb. 24, 1848, and the establishment of the republic, presided over by a provisional government. A new constitution having been voted by a "Constituent Assembly" of nine hundred members, Prince Louis Napoleon was elected head of the republic, for four years, by 5,562,843 votes, on the 10th of December, 1848. The prince-president dissolved the National Assembly by a *coup d'état*, Dec. 2, 1851, and having remodeled the constitution, appealed to universal suffrage, which declared him president for ten years, by 7,439,216 votes, on the 21st of December, 1851.

Empire Restored.—By a third vote, Louis Napoleon was chosen Emperor of France, by 7,864,216 against 231,145 votes, on the 22d of November, 1852, and assumed the title Napoleon III., Emperor of the French, on the 1st of December, 1852. The Crimean war

(1854-55) and the war against Austria on behalf of Italy (1859) distinguished the early part of his reign. The latter greatly aided in the foundation of a united Italy, and gave France the territories of Savoie and Nice (1860).

Franco-Prussian War.—In 1870 the uneasiness of Napoleon and the French at the steady aggrandizement of Prussia broke out into flame at the offer of the Spanish crown to a prince of the house of Hohenzollern. France, not satisfied with the renunciation of the German prince, demanded a guaranty from the king of Prussia that the candidature should never be resumed. This being refused, France declared war. One French army was driven back by the Germans and cooped up in Metz, another was pushed northward to Sedan, and so hemmed in that it had to surrender with the emperor at its head.

Third Republic.—On the news of this disaster reaching Paris the republic was proclaimed. After an almost uninterrupted series of victories the Germans became masters of the French capital (January 28, 1871), and the war ended in France giving up to Germany Alsace and a part of Lorraine, and paying a war indemnity of five milliards of francs ($1,000,000,000). Meanwhile civil war had broken out in Paris, which was suppressed with great difficulty. The assembly elected in 1871 for the ratification of peace with Germany found it expedient to continue their functions, Thiers being the head of the administration. In 1873 the Thiers administration was overthrown and replaced by one under Marshal MacMahon. In 1875 a republican constitution was drawn up. In 1879 MacMahon resigned his presidentship before its legal expiry, being succeeded by Jules Grévy, who has been followed by Carnot (assassinated), Casimir-Perier, Faure, and Loubet. In 1881 France occupied Tunis as a protectorate; in 1883-4 she extended her influence over Tonkin and Anam; in 1895 she reduced Madagascar to submission. The alliance with Russia (1895) was followed in 1905 by the *entente cordiale* with Britain; and 1905 saw the disestablishment of the Roman Catholic church.

References.—The chief histories are those of Henri Martin, Michelet, Dareste, Lavalée, Sismondi, Kitchin, Lavisse, and Durny. These works cover the general history of France. See, in addition, Tocqueville's *The Ancient Régime;* Taine's *French Revolution;* Carlyle's *History of the French Revolution;* Fyffe's *History of Europe;* Hazlitt's *Life of Napoleon Bonaparte.*

Germany.—When first, in the fourth century B.C., the Romans heard of new peoples of common kin, whom they called Germani, the German tribes were living between the Elbe and Rhine and to the north of the Main. In 58 B. C. Cæsar drove back the Germans who had crossed the Rhine. Successful Roman incursions were made into Germany under Augustus; but in 6 A. D. the German tribes rose under Arminius (Hermann) and utterly destroyed Varus and his legions.

Henceforth the Romans were in the main content to hold a strip of territory from the lower Rhine to the upper Danube, and to guard the frontiers of the empire against German raids. From the third century on this became impossible, and in the fourth, the Germans continued to force their way into Roman territory. By the end of the fifth century they had overrun Gaul, Italy, Spain, and part of Africa. After this Germany itself continued in a divided state till it came under the single rule of Charlemagne.

Empire of Charlemagne.—The history of the German empire properly commences with the treaty of Verdun (843 A. D.), which separated the land of the eastern Franks under Ludwig the German from that of the western and central Franks. Out of Ludwig's kingdom was developed the German nationality. Charles the Fat became emperor in 881, and three years later was also elected king of the west Franks, thus again uniting under one scepter the monarchy of Charlemagne.

After his deposition in 887 the two territories of the eastern and western Franks were again separated, the former electing Arnulf as their king. He died in 899, and was succeeded by his infant son Louis, who was proclaimed king of Lorraine in 900, assumed the title of emperor in 908, and as such is designated Louis IV. He died in 911, and the German nations chose Conrad, count or duke of Franconia, as his successor. He died in December, 918, of a wound received in battle with the Huns. In 919 Henry the Fowler, duke of Saxony, was elected.

Holy Roman Empire.—Henry was succeeded by his son Otto the Great in 936, who revived the empire of Charlemagne, receiving the crown of Holy Roman empire from the pope in 962. He died in 973, and was succeeded by his son Otto II., who had been crowned emperor by the pope in his father's lifetime. Henry II., duke of Bavaria, surnamed the Saint, the hereditary heir of the Saxon line, was elected at Mainz, on the death of Otto in 1002, crowned emperor in Rome 1014, and died in 1024. With him ends the Saxon line of emperors.

Conrad II., surnamed the Salic, a Franconian nobleman, was chosen to succeed him. He spent several years in Italian wars, defeated the Poles, and restored Lusatia to the empire. He died in 1039. He was succeeded by his son Henry III., who had been chosen in his lifetime, and who, the imperial power being now at its highest point, exercised more despotic authority in Germany than any of his predecessors.

The fruits of his policy were lost by his son Henry IV. (1056-1106), who was passionate and weak. In his reign occurred the famous quarrel with the pope regarding investitures, which ended in Henry having to humble himself before the pope at Canossa. His life was embittered by contests against rival emperors, and latterly by the defection of his own son Henry to the papal party, by whom he was eventually deposed. Henry V. (1106-25) inherited, however, the quarrel of the investitures, took Pope Paschal II. prisoner, and was excommunicated by seven councils. At length the question of investiture was settled by the Concordat of Worms (1122). On his death there was a contested election and a civil war between Lothaire, duke of Saxony, and Conrad of Hohenstaufen, in which the former was successful.

A contest was now begun between the Saxon and Hohenstaufen (Suabian) families, in which the celebrated party names Guelph and Ghibelline originated. On the death of Lothaire in 1138 Conrad III. (of Hohenstaufen) was chosen to succeed him. Conrad died in 1152, and was succeeded by his nephew Frederick Barbarossa. His son, Henry VI., began his reign with a war in southern Italy. He conquered Sicily, and was crowned king of it in 1194. He died at Messina in 1197. Philip, brother of Henry, and Otto IV., were elected by rival factions in 1198. On Conrad IV.'s death commenced the long interregnum from 1254 to 1273, which ended in delivering Germany from anarchy.

House of Hapsburg.—In 1273 Rudolf I., the first of the Hapsburg line, which still reigns in Austria, began his reign, and restored order by destroying the strongholds of the nobles. For the next 200 years, counting from 1292, the period of the accession of Adolphus, the history of the German empire presents few features of interest. In 1493 Maximilian I. succeeded his father, Frederick III., married Mary, daughter of Charles the Bold of Burgundy, and became, consequently, involved in the general politics of Europe, while his opposition to the reformed faith preached by Luther embittered the religious differences which marked the close of his reign.

Charles V.—Maximilian I. was succeeded by Charles V., the fourth sovereign of the house of Austria, in 1519, and gloriously resuscitated the grandeur of the empire. Although opposed to the Reformation, he left the princes of Germany to settle their religious differences among themselves, and to quell the insurrection of the peasants in 1525, which threatened to undermine society. He abdicated in favor of his brother Ferdinand in 1556, who granted entire toleration to the Protestants.

Thirty Years' War.—Ferdinand's reign was disturbed by domestic and foreign aggressions. Anarchy, both civil and religious, now obtained in his dominions to such an extent as to culminate in the Thirty Years' war, which closed under Ferdinand III. by the treaty of Westphalia, 1648. This terrible war depopulated the rural districts of Germany, destroyed its commerce, crippled the powers of the emperors, burdened the people with taxes, and cut up the empire into a multitude of petty states, whose rulers exercised almost absolute power.

The reigns of Leopold I., Joseph I., and Charles VI. were occupied with long wars with Louis XIV. and XV. of France; and the death of Charles, in 1740, gave rise to the war of the Austrian succession, which secured the throne to the husband of Maria Theresa, Charles' daughter, and thus placed on the throne a member of the House of Lorraine, in the person of Francis I. Thus the house of Hapsburg-Lorraine, which had succeeded to the hereditary possessions of Austria, was recognized as the head of the empire. After a brief interval took place the Seven Years' war (1756-63), in which Austria, Russia, France, and Saxony combined against Prussia, then ruled by Frederick the Great. The peace of Hubertsburg (1763) concluded the war, Prussia retaining her acquisitions.

In 1765 Joseph II. succeeded to the imperial crown, becoming at the same time coregent with his mother of the Austrian hereditary dominions. He joined with Russia and Prussia in the first partition of Poland (1772). He was succeeded by his brother Leopold, who, having died in 1792, was succeeded by his son, Francis II., who joined in 1793 in the second partition of Poland. He took the command of his army against the French in 1794, concluded the peace of Campo Formio with Bonaparte (1797); joined the second coalition against France in 1799, and concluded the treaty of Lunéville (1801); joined the third coalition in 1805, and concluded the treaty of Presburg (1805). In 1804 Francis took the title of hereditary emperor of Austria, renouncing two years later that of head of the German Empire, which, indeed, had ceased to exist, owing to the conquests of Napoleon.

The German Confederation.—The states of Germany were again united by the treaty of Vienna (1815), in a confederation called the German Confederation (*der Deutsche Bund*). In 1818 a general commercial league, called the Zollverein, was projected by Prussia, and was gradually joined by most of the German states, exclusive of Austria. Revolutionary outbreaks caused great disturbances in various German states in 1830 and 1848, particularly the latter. The German diet was restored in 1851 by the efforts of Prussia and Austria, who were latterly rivals for the supremacy in the confederation.

In 1866 the majority of the diet supported Austria in her dispute with Prussia respecting the disposal of the duchies of Schleswig and Holstein, whereupon Prussia withdrew from the confederation and declared it dissolved. The Seven Weeks' war between Austria and Prussia ended in the defeat of the former, the loss of her Italian possessions, and her exclusion from the German Confederation, which was reformed by Prussia under the title of the North German Confederation.

The Present Empire.—After the Franco-German war in which the South German states, as well as the North German Confederation, supported Prussia, the king of Prussia was proclaimed German emperor (William I.) at Versailles on January 18, 1871. The parliament of the new empire soon met at Berlin, and adopted the new constitution. William I. was succeeded by his son Frederick, and grandson, William II., in 1888. The war gave Alsace-Lorraine to Germany, which since then has acquired large areas in southwestern and eastern Africa, with a portion of New Guinea, the chief Samoan islands, etc. In recent years the industries and trade have greatly developed, and the Emperor William II. is bent on making Germany a great naval power.

References.—Pütter's *Historical Development of the Constitution of the Germanic Empire;* Bryce's *The Holy Roman Empire;* Ranke's *History of the Latin and Teutonic Nations,* and *History of the Reformation in Germany;* Gardiner's *The Thirty Years'*

War; Von Sybel's *Foundation of the German Empire;* Headlam's *Bismarck; Bismarck's Memoirs;* Whitman's *Imperial Germany.*

Greece.—Before the dawn of history, we have traces of the encroachments on one another by various Hellenic or Greek races, tribes, or alliances—Pelasgians, Ætolians, Ionians, Bœotians, and Achaians being among them.

Ancient Greece.—The first really historical fact is the invasion from the northward by the Dorians, who made themselves masters of the Peloponnesus about the beginning of the twelfth century B. C. A consequence of this Dorian invasion was the colonization of the islands and of the coasts of Asia Minor by Œolians, Ionians, and later by Dorians also. The seeds of that literature, art, and philosophy which afterward made Greece, and especially Athens, glorious were sown and first nurtured in the colonies.

By degrees Greek colonies established themselves on the shores of the Black Sea, and along both north and south coasts of the Mediterranean, Sicily was largely Hellenized, and South Italy became Magna Græcia.

Neither at home nor abroad had the Greeks the faculty of union as a nation or race; even in the fatherland there were multitudes of small states, a city with three or four miles of territory being often an independent state of itself, and frequently at war with its neighbors. Almost the only central bond of union, besides the Hellenic tongue in its various dialects, was the oracle of Apollo at Delphi.

Sparta and Athens.—For long, two Greek states were preëminent. The powerful Dorian state of Sparta was organized about 800 B. C. by Lycurgus, the kingly institution being retained. Athens was democratic before that date, and its constitution, fixed by Solon in 594 B. C., ultimately triumphed over the tyranny of Pisistratus and his sons. Encroachments of the Persians on the Greek colonies of Asia Minor led to the invasion of Greece by the Persians in 490 B. C., an invasion gloriously repelled by the Athenians at Marathon. Xerxes was defeated at Thermopylæ, Salamis (480), Platæa, and Mycale, Athenians and Spartans for a time combining their forces.

Now it was that Greek literature and Greek art attained a perfection that has made the rest of the world ever since scholars and imitators of the Greeks of the Periclean period.

The next period is marked by the fratricidal struggle between Athens and Sparta in the Peloponnesian war, which ended in the humiliation of Athens in 404 B. C., and the enfeeblement of all Greece.

Macedonian Rule.—In 379-1 the Thebans asserted themselves victoriously against the Spartans; and forty years later Philip of Macedon subjected Greece to a semibarbarous nation. Under his son, Alexander the Great, the Greek name and the Greek fame were extended into Asia and Africa by the Macedonian king's campaigns.

Conquest by Rome.—In 197 the Romans broke the Macedonian power, and by 146 were masters of Greece, which subsequently shared the fortunes of the Roman empire. When the Roman empire was divided (395 A. D.) into the eastern and western empires, Greek was of course the language of the Eastern, Greek, or Byzantine half of the Roman dominion. The Byzantine emperors fell in 1453 before the Turks, under whom the Greek race reached the lowest stage of political, intellectual, commercial, and spiritual decadence, though the Greek church survived, and the old Greek tongue, in corrupted guise, continued to be spoken.

Modern Greece.—From 1715 till 1821 the Greeks were without intermission subject to the domination of the Turks. A national reawakening began in 1821; and by 1828, with the support of Britain, France, and Russia, Greece was again a free, but small and weak kingdom. The Russo-Turkish war of 1877-8 added Thessaly and part of Epirus to its area; but the ambition of the Greeks to secure a large share of the "sick man's" inheritance—especially Macedonia and Constantinople—is one of the causes that has led to growing embarrassment in the national finances, and to the national bankruptcy in 1893.

In 1897 an insurrection in Crete led to the interference of the Greeks and to war with Turkey, the result being the speedy defeat of Greece, entailing the payment of a heavy war indemnity, with some loss of territory on the Thessalian frontier.

References.—Bickford Smith's *Greece Under King George;* Rodd's *Customs and Lore of Modern Greece;* Mahaffy's *Rambles and Studies in Greece;* Tozer's *Islands of the Ægean;* Bent's *Cyclades;* Guerber's *The Story of the Greeks;* Finlay's *History of Greece;* Phillips' *The Greek War of Independence;* Miller's *Greek Life in Town and Country.*

Guatemala.—A republic of Central America, discovered by Columbus in 1502. A large part of it was conquered by the Spaniards about 1524, and erected into a captain-generalship by the Emperor Charles V. in 1527.

Guatemala, together with the other states of Central America, became independent in 1821. A confederation, which existed from 1824 to 1839, was overthrown by an uneducated but able Indian named Carrera, who founded the present republic and governed it until his death in 1865. General Barrios was president from 1871 to 1885, and under his iron rule the country made much progress. In 1897 Guatemala became a member of a new confederation called the Greater Republic of Central America.

References.—Brigham's *Guatemala, the Land of the Quetzal;* Niederlein's *The Republic of Guatemala;* Madslay's *A Glimpse at Guatemala.*

Hayti was discovered by Columbus in 1492. It was then inhabited by perhaps 2,000,000 natives, but so ruthlessly did the Spaniards deal with the aborigines that within a century they practically exterminated them, having introduced negro slaves in their place. In 1630 the French settled in the western part of the island, and in 1697 the western portion was ceded to them, while the eastern remained Spanish.

In 1791 the negroes revolted against France, and latterly the whole island came under the negro leader Toussaint L'Ouverture, who established an independent republic. He was captured, but in 1803 Dessalines headed a new insurrection, drove out the French, and was crowned emperor of Hayti. He was assassinated in 1806, and the Spaniards regained the eastern portion of the island. In 1821 the Spanish portion declared itself independent of the mother country, and assumed the name of Spanish Hayti; but it was subjugated by Boyer, the president of the Haytian republic, or French Hayti.

In 1844 the inhabitants of the Spanish portion rose, and formed themselves into a republic under the name of San Domingo (*Republica Dominica*). In 1861 Santana negotiated a reunion of the state with Spain, but Spain evacuated the island in 1865. From that period its history has presented an almost uninterrupted scene of revolution and bloodshed. It now comprises the republic of Hayti on the west side of the island, and the Dominican republic on the east.

References.—Pritchard's *Where Black Rules White;* St. John's *Haiti or the Black Republic;* Léger's *Haiti, Her History and Detractors.* See, also, Dominican Republic.

Honduras, a republican state of Central America, was discovered by Columbus in 1502, and conquered by one of Cortes' associates in 1523. It joined the republic of Central American states in 1821, and became an independent state in 1839. The present constitution was voted in 1894. The president, Gen. Santos-Guardiola, was assassinated at Comayagua by Pablo Agurcia, commander of his bodyguard, 1862. Honduras united against Guatemala with San Salvador, under President Carrera, 1863. Owing to military reverses, President Montes was compelled to take flight, July 26, when José Maria Medina was provisionally elected in his stead. The election was confirmed in February, 1864. President Medina was reëlected in 1869 for a term of four years. He was subsequently shot: his successor, M. A. Soto, was elected in 1876. Polycarpo Bonilla was elected president in 1894. In 1897 Honduras became a member of the Greater Republic of Central America.

References.—Lombard's *The New Honduras;* Charles' *Honduras;* Soltera's *A Lady's Ride Across Spanish Honduras;* Squier's *Honduras.*

India.—The early history of India is obscurely written in the myths of Sanskrit literature, but the first fact of any certainty is that about the year 2000 B. C., or even earlier, an Aryan people of comparatively high civilization descended from the mountain regions of the northwest into the plains of India and subdued the original inhabitants there.

The expedition of Alexander the Great to the Indus in B. C. 326 gives us a momentary glimpse of that part of India; but between his invasion and the Mohammedan conquest there is little authentic political history of India. In the third century B. C., Buddhism was established throughout India, but it afterward entirely gave way to Brahmanism. The first six centuries of the Christian era were occupied by struggles between the native dynasties and invaders from the northwest.

Mohammedan Conquest.—In the eighth century the tide of Mohammedan influence began with Kasim's advance into Sind (711 A. D.). But the Mohammedans were again driven out in 828, and for more than one hundred and fifty years afterward the strong feudal and tribal organizations of the northern Hindu kingdoms were a barrier to the Mussulmān advance. At length, in the year 1001, Mahmud of Ghazni reduced the Punjab to a province of Ghazni, and the Mohammedan power was gradually extended into southern India. In 1398 Timur or Tamerlane led a great Mogul (or Mongol) invasion of India, and after sacking Delhi retired into Central Asia.

The Moguls.—In 1526 Sultan Baber, a descendant of Tamerlane, founded the Mogul empire in India. His grandson Akbar reigned from 1556 to 1607, and extended his power over most of the peninsula, being distinguished by his justice and his tolerance in matters of religion. His son Jehanghir received an ambassador from James I. in 1615. During the reign of his successor, Shah Jehan, famous for his architectural magnificence, the Mahrattas began to be formidable in Southern India. Shah Jehan was deposed in 1658 by his youngest son Aurengzebe, who made war successfully with the Afghans, the Rajputana tribes, and the rising power of the Mahrattas. The Sikhs, a Hindu sect, formed a religious and military commonwealth in the Punjab in 1675. On the death of Aurengzebe in 1707 the Mogul empire began to decline, Mohammedan viceroys like the Nizam and the ruler of Oudh asserting their independence, while the great Hindu states of the Sikhs, the Rajputs, and the Mahrattas began to harass the decaying empire.

European Colonization.—The Dutch, Portuguese, and French, as well as the British, established themselves in the empire; in the eighteenth century the French more than rivaled the British in power. But the power of the British East India company, originally traders, became dominant after the battle of Plassey in 1757. Gradually English power as represented by the company, its diplomatists, and its soldiers, extended over great part of India, and the governors—Clive, Warren, Hastings, Wellesley, Amherst, Bentinck, Dalhousie, Canning—consolidated what was really the empire of Britain in the east. Then in 1857 came the great Sepoy mutiny, stamped out in blood, and not brought to an end until May, 1858.

A British Colony.—In 1858 the direct sovereignty of India, and the powers of government hitherto vested in the East India company, were vested in the British crown. Lord Canning returned to England early in 1862, and was succeeded by the earl of Elgin, who died in 1863. Sir John (afterward Lord) Lawrence was governor-general from 1863 to 1868, when he was succeeded by the earl of Mayo, who did much to develop the material resources of the country by removing the restrictions upon trade between the different provinces, and constructing roads, canals, and railways. He was assassinated by a Mohammedan fanatic in the Andaman islands, and Lord Northbrook became viceroy in 1872. During his administration a famine in lower Bengal (1874), the dethronement of the Gaekwár of Baroda for disloyalty (1875), and the tour of the Prince of Wales through India (1875-6), were he chief events.

In 1876 Lord Lytton was appointed viceroy, and on January 1, 1877, Queen Victoria was proclaimed empress of India at Delhi. In 1877-8 a serious famine again occurred, and there have been others since, as well as visitations of plague (1896–99). In 1880 Lord Ripon became viceroy; being followed in 1884 by Lord Dufferin, under whom upper Burma was annexed 1886. The latter viceroy was followed by the marquis of Lansdowne, the earl of Elgin, and Viscount Curzon, the last having held the post longer than most viceroys (1899-1905), with much acceptance. Under him were formed the northwest Frontier province and that of east Bengal and Assam, and the expedition into Tibet took place. In the winter of 1905-6 India was visited by the Prince and Princess of Wales. There have since been seditious troubles and a "little war" on the northwest frontier.

Ireland.—In prehistoric times Ireland seems, like Britain, to have been inhabited by peoples of the Iberian stock, who were successively invaded and subdued by Nemedians, Firbolgs, Tuatha Dé Danann, and Scots or Milesians. Most of these invaders seem to have been Celtic, some of the Cymric (British), and some of the Goidelic branch. The Scots were distinctly Goidelic. Ultimately the resulting races, Iberian at base but Celticized by degrees, had assumed the Celtic type of civilization and the Erse (Goidelic) language. The septs, tribes, or kingdoms were numerous, and constantly at war; though with curious permutations and combinations, some, or many of them, at times accepting the overlordship of an ard-righ or chief king.

Irish history really begins with the Christianization of Ireland by St. Patrick, a Briton of Strathclyde, early in the fifth century. In the eighth century came Danish or Norse searovers, who established themselves in the east of Ireland, and, weakened by Brian Boru, and utterly defeated by him at Clontarf in 1014, were ultimately absorbed in the mass of the population. The intestinal strifes of the Irish potentates still went on as before, and led in 1167-72 to the Norman invasion.

Ireland had to undergo just 100 years later, and under Henry II., the fate England underwent under Henry's great-grandfather, William the Conqueror. Much of the Irish soil was parceled out, as England had been, among Norman nobles; but this change, so far from tending to consolidate Ireland into one kingdom, or into an organized province of the English monarchy, seemed but to have introduced additional elements of faction, feud, and warfare. The Norman chiefs fought with the Irish ones, and with one another; and became, as was said, "more Irish than the Irish themselves."

Henry VII. made an effort to reduce Ireland to order on Tudor lines; rebellions, expeditions, slaughterings, and confiscations went on in the reign of Henry VIII. and Elizabeth, the Reformation providing a new element of hostility between the English government and the Irish people. Under James I. vast confiscations took place, and great settlements, especially in Ulster, of English and Scottish immigrants. "The massacre of 1641" was directed against these aliens. Cromwell made a resettlement with a vengeance. The adhesion of the Irish to James II. brought William III. on them; and after the battle of the Boyne and the surrender of Limerick (1691) came the penal laws, which with many vastly more cruel provisions, debarred Catholics from all share in the Irish parliament.

In 1782 the Irish Protestant parliament had greater powers and dignities conferred on it; and under Grattan's influence, the emancipation of the Catholics seemed near. But Irish hopes were blighted by the obstinacy of George III. Hereupon the society of the United Irishmen became a distinctly rebellious organization, and fomented the short and futile rebellion of 1798. The union of the parliaments came into force in 1801.

The next great events in Irish history are Roman Catholic emancipation in 1829; O'Connell's agitation for the repeal of the union, begun in 1842; the potato famine of 1846; the Fenian movement of 1867; the disestablishment of the Irish church (1871); Mr. Gladstone's land act (1881); the Home rule movement under Parnell; the home rule bill of 1886, defeated in the House of Commons; and that of 1893, defeated in the House of Lords.

The most important recent events in Irish history have been the visit of the king and queen to Dublin (1903); the Irish land purchase bill of 1903; and the resignation of Mr. George Wyndham, chief secretary for Ireland, over the incident connected with Sir Anthony MacDonnell.

Italy.—The history of Italy is generally begun where that of Rome (see Rome) ends—with the total fall of the western Roman empire in 476 A. D. under the attacks of the invading Herulian barbarians. In 489 Theodoric and his Ostrogoths founded a Gothic monarchy in Italy, which was subverted by the generals of the Eastern or Byzantine empire in 553. In 568 came the Lombards, who soon held the greater part of the peninsula, and were only crushed by the Franks, whose king, Charlemagne, was crowned emperor of the Romans by the pope in 800.

Under Holy Rome Empire.—In 962 Italy became a part of the Holy Roman Empire as reconstituted under the German Otto; and henceforward Italy was the scene of constant struggles between German rivals for the imperial power, between the emperors and the popes, the Ghibellines and the Guelphs, the various cities against the emperor, the pope, or one another. With the fall of the Hohenstaufens in 1254 the emperors ceased from troubling, and the popes became the chief power in Italy, their faction being also dominant in the most powerful of the cities, many of which had now fallen under the power of hereditary tyrants.

Division of Rule.—In the fourteenth and fifteenth centuries Italy was parceled out among five powers—the kingdom of Naples (first under Angevin, then under Spanish kings), the duchy of Milan, the republics of Florence and Venice, and the papacy. From the time of Charles V. Spanish-Austrian influence became dominant, Charles being able to leave both Naples and Milan to his son, Philip II. In the war of the Spanish succession the little state of Savoy so skillfully used its power (against the French) as to secure the island of Sardinia and the rank of kingdom. After the treaty of Aix-la-Chapelle (1748), the House of Savoy held Sardinia and Piedmont; the Austrians, Milan and Tuscany; the Bourbons, Naples, Sicily (the kingdom of "the two Sicilies"), and Parma; the papal power held the center of the peninsula; Venice survived as a republic till 1797; and Modena and Genoa were under the protection of France, to which power the Genoese now gave Corsica. Despotism was everywhere universal.

After the French revolution numerous republics were established under French influence; in 1805 Napoleon, now emperor, was crowned king of Italy.

The Congress of Vienna restored the map of Italy pretty much to its old appearance, but even more power was given to Austria, Venice, as well as Lombardy, being now Austrian (though Genoa fell to Sardinia). Austrian despotism pressed heavily on the rising spirit of independence; the revolutionary movement of 1849 had but momentary success, but henceforth Sardinia was regarded as the only possible nucleus of an Italian kingdom.

The Unification of Italy.—The war of 1859 between France and Austria ended in the cession of Lombardy and part of Venetia (though the French had to get Savoy and Nice); soon after, the central Italian states voted themselves into the kingdom; and southern Italy welcomed Garibaldi and his volunteers, and for ever expelled the Bourbons. In 1866 the Austro-Prussian war gave Venice to Italy; during the Franco-German war of 1870 Victor Emmanuel entered Rome, henceforth the capital. The unification of the kingdom was now practically complete—Italy being no longer a "mere geographical expression."

On June 30, 1871, the seat of government was formally removed from Florence to Rome. In 1878 Victor Emmanuel died, and was succeeded by his son, Humbert I. In 1900 Humbert was assassinated, and his son Victor Emmanuel III. ascended the throne. In 1911 war was declared between Italy and Turkey over the sovereignty of Tripoli, and Italy occupied the latter by armed force. The war was still pending in the early months of 1912.

References.—Gregorovius's *History of the City of Rome in the Middle Ages;* Sismondi's *History of the Italian Republics;* Symonds' *Age of the Despots;* Burckhardt's *Civilization of the Renaissance in Italy;* Creighton's *History of the Papacy During the Reformation;* Ranke's *History of the Popes* and his *Latin and Teutonic Nations;* King's *A History of Italian Unity;* Stillman's *The Union of Italy;* Orsi's *Modern Italy.*

Japan.—Before 500 A. D. Japanese history is mere legend. Buddhism was introduced from Korea in 552; and the next century Chinese civilization strongly influenced Japan. About the end of the twelfth century the weakness of the emperor led the generalissimo (shogun) to assume a large share of the supreme power, and he handed it on to his descendants. Hence the fable current in Europe that Japan had a mikado, or spiritual emperor, who reigned but did not govern, and a "tycoon" (shogun) who did govern, though he paid homage to the nominal sovereign.

The military caste was dominant until the reign of Iyeyasu (c. 1600), whose descendants reigned till 1868. Total exclusion of foreigners was the rule till 1543, when the Portuguese effected a settlement; but in 1624 all foreigners were expelled.

The policy of isolation was rigidly pursued from 1638 till 1853, when Commodore Perry of the United States steamed into a Japanese harbor, and extorted a treaty from the frightened shogun. Soon sixteen other nations followed the American example, and free ports were opened to foreign commerce.

In 1867-8 a sharp civil war broke the feudal power of the daimios, or territorial magnates, suppressed the shogunate, and unified the authority under the mikado. In a very few years Japanese students took a place of their own in western science; and how thoroughly the Japanese had laid to heart what they had learned from Europe in the military and naval arts was partially revealed by the swift and complete success of the war with China about Korea in 1894, and more impressively by their amazing triumph over the great military empire of Europe in 1904-5, when they defeated the Russians in a succession of bloody battles, took Port Arthur, and utterly destroyed the Russian fleet—so that by the peace the Russians not merely evacuated Manchuria, but recognized Japan's dominance in Korea, and gave up to Japan the "leases" of Port Arthur and the Liaotung peninsula Russia had wrested from China. In 1905 Great Britain concluded a treaty with Japan, more thoroughgoing than that of 1902, for mutual support in eastern Asia and India against unprovoked attack, and for the maintenance of the integrity of China and of the "open door" there. In 1910 Japan formally annexed Korea.

References.—Griffis' *The Mikado's Empire;* Rein's *Japan;* Clement's *Handbook of Modern Japan;* Gulich's *Evolution of the Japanese;* Ransome's *The Japanese in Transition;* Hartshorne's *Japan and Her People; Japan by the Japanese;* Davidson's *Present-Day Japan;* Stead's *Great Japan;* Scherer's *Young Japan;* Dyer's *Dai Nippon;* Suyematsu's *The Rising Sun;* Bacon's *Japanese Girls and Women.*

Liberia.—A republican state of west Africa, owes its origin to the American Colonization society, which, in 1820, sent the first colonists from the United States to the Sherboro islands, who eventually, however, settled at Cape Mesurado in 1822. In 1847, the declaration of independence was made, and a constitution adopted. The first president was Joseph Jenkins Roberts, who served for four terms (1848-56). The establishment of the republic of Liberia was virtually an attempt to show the capacity of the negro race for self-government; but as such it is generally admitted to be a failure.

The republic peaceably annexed in 1880 a large and important tract of land known as the kingdom of Medina, whose forests are full of ebony wood, palms, gum, and gutta-percha trees, while the well-known Liberian coffee tree grows wild in its native beauty up to thirty and forty feet in height. Intertribal wars have been frequent, but a declara-

tion of peace signed in 1904 by the most powerful chiefs may lead to their cessation. At the beginning of 1911 negotiations were in progress with the United States for the adjustment of the Liberian public debt, similar to that in force in Santo Domingo.

References.—Durham's *The Lone Star of Liberia;* Johnston's *Liberia; Report* of the United States Liberian Commission (Washington, 1910).

Luxemburg, Grand Duchy of, a small independent state of western Europe, was ceded to Siegfried by the monastery of Trevés, and created a county in 965. In the twelfth century it came into the possession of the counts of Limburg, who took the title of counts of Luxemburg. The Emperor Charles IV. erected it into a duchy in 1354. It came to Philip of Burgundy by his marriage with Isabella, daughter of the king of Portugal, in 1443, and through him passed to the house of Spain, with whom it remained until the peace of the Pyrenees, when part of it was ceded to France November 7, 1659. It was ceded to France by the treaty of Campo-Formio, October 17, 1797, and it passed to Holland in exchange for certain German principalities in 1814, and became a grand duchy.

In consequence of the Belgian revolution, Luxemburg was dismembered, and a portion was assigned to Belgium by the conference of London, 1831, and a fresh division was made in 1839, the king of Holland retaining the title of grand duke of Luxemburg. The grand duke belongs to the Dutch royal family, and the state is governed according to its own constitution. In the treaty of London (1867) it was declared to be neutral territory.

References.—Baedecker's *Grand Duchy of Luxemburg;* Coster's *History of Luxemburg;* Passmore's *In Further Ardenne.*

Mexico.—The oldest inhabitants, the Toltecs, had by the eighth or ninth century A. D. attained a comparatively high civilization. About the eleventh or twelfth century the kindred but fiercer Aztecs became dominant, and grafted on the institutions of the Toltecs gloomy religious beliefs and bloody rites. Cortes and his Spaniards landed at Vera Cruz in 1519; and the conquest of the empire was as creditable to the audacity and bravery of the Europeans as it was dishonorable to their humanity. Mexico was long the richest province of Spanish America, and was systematically and mercilessly exploited for the benefit of Spain.

Discontent on the part of the inhabitants, Spanish as well as of mixed blood, broke into open rebellion in 1810, and the capital was surrendered by the last of the viceroys in 1821. Iturbide proclaimed himself emperor next year; and after various convulsions and rebellions the federal republic was established in 1823. For the next fifty years the history of Mexico is a mere record of chronic disorder and civil war.

In 1845 Texas was incorporated with the United States; and after the war of 1848, Mexico ceded half a million square miles to the United States. The emperor Napoleon III. declared war against the president, Juarez, in 1862; the Austrian emperor of Mexico, Maximilian, imposed by the French, was executed in 1867, and the republic rëestablished. Under President Diaz, who has been continuously at the head of the government since 1876, the whole energy of the government has been given to the development of railways, mines, and other industries.

References.—Romero's *Mexico and the United States;* Howell's *Mexico: Its Progress and Commercial Possibilities;* Ballou's *Aztec Land;* Kératry's *The Rise and Fall of the Emperor Maximilian;* Butler's *Mexico in Transition;* Lummis' *The Awakening of a Nation;* Lumholtz's *Unknown Mexico;* Southworth's *The Mines of Mexico;* Enoch's *Mexico.*

Monaco, a city and principality on the Mediterranean, surrounded on all other sides by the French dependency of Alpes-Maritimes, nine miles from Nice, under the protection of France. The city is built on a rocky promontory stretching into the sea, and is walled. Monaco passed into the hands of the Genoese house of Grimaldi, about 968. The male branch of the Grimaldis becoming extinct in 1731, the state passed by marriage, to the house of Matignon, which assumed the name of the original family. Mentone and Roccabruna having been sold to France in 1861, the principality is now confined to the city of Monaco and the town of Monte Carlo. In 1869, the reigning prince, Charles III., abolished all taxes, his revenue being confined to the rent of the casino, which became notorious as a gambling establishment. He was succeeded by the present prince, Albert, in 1889, who granted a representative government in 1911.

References.—Métivier's *Monaco and Its Princes;* Pickering's *Monaco;* Taxil's *Monaco.*

Montenegro first appeared as a principality under the name of Zeta in the fourteenth century, and was subject to the great Servian kingdom till about 1389. In 1516 the secular prince abdicated in favor of the Archbishop Vavil, who then formed Montenegro into a theocratic state, under an autocratic vladika or celibate prince-bishop. The dignity was inherited through brothers and nephews, and after 1697 became hereditary in the family of Petrovitch Njegos. The history of Montenegro for many years is a record of deadly struggles with the Turks, and of a slowly growing civilization among its inhabitants. In 1852 Danilo I. became vladika, but in 1855 he married, threw off his ecclesiastical character, assuming the title of hospodar or prince, and transformed his land into a secular principality, the independence of which was soon recognized by Russia. Danilo was assassinated in 1860, and the present prince, Nicolas I. Petrovitch, became hospodar. In 1861-2 he engaged in a not altogether successful war against Turkey; but in 1876 he joined Servia and in 1877-8 Russia against his hereditary foe, with the result that 1900 square miles were added to his territory by the treaty of Berlin. In 1909 Montenegro gained complete sovereignty in national affairs.

References.—Denton's *Montenegro, Its People and Their History;* Wyon and Prance's *The Land of the Black Mountain;* Miller's *Travels and Politics in the Near East* and *The Balkans.*

Morocco in ancient times formed part of Mauritania, and about 43 A. D. was incorporated in the Roman empire. In the latter part of the seventh century the Arabs spread over North Africa, and took possession of Mauritania. Among ruling dynasties since then have been the Almoravides, Almohades, and others. The present dynasty, the ninth, was founded in 1648. In 1814 the slavery of Christians was abolished and piracy was prohibited in 1817. In 1859-60 there was war with Spain, resulting in a small cession of land and an indemnity to Spain. The conquest of Algeria brought France into troublesome connection with Morocco, and Germany latterly intervened and brought about a European conference in 1906, which intrusted France with certain powers. In 1909 the rights of both Germany and France were defined in an additional treaty.

References.—Meakin's *Land of the Moors,* and *The Moors, an Account of Manners and Customs;* Thomson's *A Journey to Southern Morocco and the Atlas Mountains;* Harris' *Tafilet;* Hooker and Ball's *Morocco and the Great Atlas;* Pellow's *Captivity and Adventures;* Dawson's *Things Seen in Morocco;* Keane's *North Africa.*

Nepal, a native kingdom of India, on the southern slope of the Himalayas, between Tibet and Bengal, was formerly divided between numerous independent chiefs, until conquered by the Ghoorkas in 1768. The aggressions of the latter into the Chinese territory was put a stop to in 1792, and the rajah obliged to make an ignominious peace. They next turned their arms against the British, who, after a two years' war, obliged them, in 1816, to cede all the country between the Sutley and the Kali rivers, and to evacuate the territory of Sikkim. They rendered material assistance to the British in the Indian mutiny of 1857. The present sovereign, Shamsher Jang, acceded in 1881.

References.—Vansittart's *Notes on Nepal;* Waddell's *Among the Himalayas; Wright's History of Nepaul.*

Netherlands, Kingdom of the, known generally as Holland, has been an independent state since 1815.

Early History.—The ancient inhabitants of the country, the Batavians and the Frisians, became subjects or allies of the Romans in the first century A. D., and so remained till in the fourth century their territories were overrun by the Saxons and Salian Franks. At the end of the eighth century the Low Countries submitted to Charlemagne, and various feudal dukedoms, counties, and lordships were gradually established (the countship of Holland in the eleventh century). In 1384 the earldom of Flanders passed to the dukes of Burgundy, and Philip the Good (c. 1450) made the Low Countries as prosperous as any part of his Burgundian state.

Dutch Republic.—The Emperor Charles V. inherited the Burgundian dominions; and under his son, Philip II. of Spain, broke out the bitter quarrel between Holland and Spain, between Dutch Protestantism and persistence and Spanish tyranny and persecution, which ended in 1581 in the establishment of the Dutch republic as an independent state under William the Silent (of Orange), though the war continued with intervals till 1648, and the Belgian provinces abode by their allegiance to the kings of Spain. In the seventeenth century Dutch commerce, especially at sea, Dutch science, Dutch classical scholarship, Dutch literature and Dutch art attained an eminence hardly afterward equaled.

Under William of Orange.—The rivalry of Holland and England at sea led to the unfortunate wars of 1652-4 and 1664-7. The accession of William III. of Orange to the stadholdership of the united provinces (1672) proved the salvation of the republic from France; in 1678 Louis XIV. signed the peace of Nimeguen. Ten years later William was hailed as the savior of English liberties, and became king of Great Britain and Ireland. On William's death, the united provinces became a pure republic once more; the hereditary stadholdership was rëestablished in 1747; and when after the French revolution, French armies overran Holland, the Stadholder William V. fled to England, and the united provinces became the Batavian republic.

Napoleon.—In 1806 Louis Bonaparte was made king of Holland by Napoleon; and on the fall of Napoleon, the northern, or Dutch (and mainly Protestant), provinces were united with the southern, or Belgian (and purely Catholic), provinces into the ill-assorted kingdom of the Netherlands, under the princes of the Orange dynasty.

Modern Kingdom.—In consequence of the Congress of Vienna, William V. was proclaimed king of the Netherlands, as William I. in March, 1815, and recognized as an independent sovereign by all the powers of Europe. Belgium seceded in 1830, and Holland fully recognized the independence of the Belgian kingdom in 1839. King William I. abdicated in 1840. William II., his son, granted a new and more parliamentary constitution in 1848, the upper house being elected by the provincial councils, the lower directly, but by a comparatively limited electorate.

During the reigns of William III. (1849-90) and his daughter Wilhelmina, the present queen, the chief political problems have been (1) colonial, (2) financial, and (3) internal reforms. (1) A system of forced native labor, revived and extended by the governor of Java in 1830, and profitable but oppressive, was suppressed after a prolonged struggle in 1870. Slavery in the American colonies was abolished in 1863. In 1872 the colonies in Guinea were ceded to Great Britain, the Dutch in return being allowed a free hand in Sumatra. (2.) The strain of these wars and the example of other countries, led to a protectionist movement, which was checked at the general election of 1905. An income tax was established in 1902. (3.) A bitter conflict over denominational *versus* secular education lasted from 1857 to 1906.

References.—P. J. Blok's *History of the People of the Netherlands;* Motley's *Rise of the Dutch Republic,* and *History of the United Netherlands;* J. E. T. Roger's *Holland,* in Stories of the Nations Series.

Nicaragua, a republic of Central America, was discovered by Gil Gonzales de Avila in 1521, and conquered by Pedro Arias de Avila, the governor of Panama, in 1822. During the great year of revolution in Central America—1821—it threw off allegiance to Spain, and, after a severe and desperate

struggle, gained its independence, and became the second state in the Federal republic of Central America.

On the dissolution of that union, in 1839, Nicaragua became an independent republic; but, like most of the Central and South American republics, it has been the scene of much discord and confusion. The dispute with England concerning the Mosquito territory (1847-8), was settled in favor of Nicaragua; but subsequently, in 1855, the leaders of the opposing parties of Liberals and Conservatives plunged the country into civil war, which ended in the total defeat of the former. In 1897 it joined with its neighboring republics to form the Greater Republic of Central America.

References.—Niederlein's *The State of Nicarapua.*

Norway.—In the earliest times, Norway was divided among petty kings or chiefs (jarls), and its people were notorious for their piratical habits. Harold Fair-hair (who ruled from 863 to 933) succeeded in bringing the whole country under his sway, and was succeeded by his son Erick. He was ultimately driven from the throne, which was seized in 938 by his brother, Hako I., who had embraced Christianity in England.

Magnus the Good, the son of St. Olaf and Alfhild, an English lady of noble birth, was called to the throne in 1036; and having in 1042 succeeded also to the throne of Denmark, united both under one monarchy. After his death the crowns of Norway and Denmark again passed to different individuals. In 1319 the crowns of Norway and Sweden became for a short time united in the person of Magnus V. Eric of Pomerania succeeded, by separate titles, to Norway, Sweden and Denmark, and in 1397 was crowned king of the three kingdoms. Sweden then for a time became a separate kingdom; but the union between Denmark and Norway was drawn closer and closer, and the latter ultimately became a mere dependency of the former.

After the defeat of Napoleon by the allies in 1813 it was arranged by the treaty of Vienna in 1814 that Denmark must give up Norway, and the result was the union of the two countries under the Swedish crown, each remaining practically independent. The union was not unaccompanied with friction, partly owing to the democratic character of the constitution of Norway.

In 1905 Norway demanded a separate consular service, and this being refused, the Storthing declared the union with Sweden at an end. Sweden acquiesced on certain conditions, and Norway having (by plebiscite) decided to remain a monarchy, Prince Charles of Denmark was invited to be king, and now (1911) rules as Haakon (or Hako) VII.

References.—Bain's *Scandinavia;* Murray's *Handbook for Norway;* Monro's *In Viking Land;* Nansen's *Norway and the Union With Sweden.*

Oman or Muscat (Muskat), an Arab state on the Gulf of Oman, was conquered by the Portuguese under Albuquerque in 1507, but recovered by the Arabs in 1648. In 1798, they acquired possession of the coasts of Laristan and Mogistan, the islands of El Kishim and Ormus, and the town of Bender Abbas in Persia, paying to the shah a rent or tribute of 6,000 tomans. The state was very prosperous under the wise and mild sway of Said Seid, who ascended the throne in 1803 and reigned till his death in 1856. In 1854, the Imaums were driven from their Persian dependencies, which in their opinion belonged to them in perpetuity so long as they paid the rental. They recaptured Bender Abbas, but in consequence of English interference, they were compelled to conclude a treaty with Persia in 1856. Said Seid appointed his son Majid to succeed him in Zanzibar, and his son Thuwany to succeed him in Muscat. The latter was murdered by his son Salim in 1868, who reigned for a short time, but was driven out by his uncle, Sayed Tuky. In consequence of the unsettled state of affairs in Muscat, Persia assumed the government of Bender Abbas and the Persian coast territory. Oman is practically on the footing of an independent Indian native state, and essentially under British protection.

Reference.—Gobinian's *Three Years in Asia.*

Panama, a republic occupying what was formerly called the Isthmus of Darien, was formerly a department of Colombia. It asserted its independence in 1903, and formed a republic, which was at once recognized by the United States, and has since been by the chief European powers.

Under Spanish rule the Panama territory formed part of the province of New Granada, which in 1718 became a viceroyalty. The isthmian territory was organized as a province under the viceroy. Before the close of the war of independence, New Granada, Ecuador, and Venezuela constituted themselves the Republic of Colombia (1819). In 1822 the province of Quito was liberated from the Spanish yoke. Soon there were three republics, Venezuela and Ecuador (Quito) separating from New Granada (1829-31). Each of the states of the republic of New Granada, as the name indicates (United Sovereign States of New Granada), was theoretically sovereign, with a limited realm of activity assigned to the central government, with its seat at Bogotá.

Through successive usurpations, the powers of the central government were increased at the expense of the separate provinces. This tendency was partially checked by the adoption of a new constitution in 1858, and under the constitution of 1863, which was adopted after a protracted period of civil war, the autonomy of the states of Colombia (by which name the republic was now known) appeared to be assured. In the late seventies the centralizing tendency again gained control, and after an ineffectual resistance on the part of the supporters of local autonomy, a new constitution was promulgated in 1886 which reduced the states to the rank of administrative departments, with governors appointed from Bogotá.

Panama suffered severely under the new régime. The development of trade, owing to the opening of the Panama railway in 1855, and to the immense sums expended after 1881 by the French Panama Canal company, made this part of Colombia an exceptionally lucrative field for the corrupt officials of the government. Heavy taxes were levied upon Panama, and large bodies of Colombian soldiers were garrisoned in its territory to suppress the conspiracies which were constantly being formed against the government. From 1899 to 1903 several insurrections occurred, but were put down by the Colombian forces.

November 18, 1903, a treaty between the United States and Panama was signed, providing facilities for the construction and maintenance of the interoceanic canal. In this treaty, Panama grants in perpetuity the use of a zone five miles wide on each side of the canal route, and within this zone the exclusive control for police, judicial, sanitary and other purposes. For subsidiary canals other territory is ceded, and, for the defense of the canal the coastline of the zone and the islands in Panama bay are also ceded. The cities of Panama and Colon remain under the authority of the new state, but complete jurisdiction is granted to the United States in both the cities and in their harbors in all that relates to sanitation and quarantine. In return for these grants the United States paid $10,000,000 on the ratification of the treaty, and will pay $250,000 yearly, beginning after nine years.

The treaty was ratified February 23, 1904, and in July, 1904, the provisional delimitation of the boundaries of the United States territory on the isthmus was signed. According to this agreement the city of Panama is, for all practical purposes, left without a seaport for foreign commerce, as the anchorage of vessels at Flamenco island and the wharf at Balboa, now called "Port Ancon," so far as ocean-going vessels are concerned, heboth lie within the territory of the zone. Moreover, a similar port has been opened on the Atlantic entrance to the canal, called "Cristobal."

A treaty for the demarcation of the boundary line between Panama and Costa Rica was signed on behalf of the respective governments on March 16, 1905, and ratified by Panama on January 25, 1907.

References.—Church's *The Republic of Panama;* Cornish's *The Panama Canal;* Johnson's *Four Centuries of the Panama Canal.*

Paraguay, a South American republic, was discovered by Juan Diaz de Solis in 1515, and settled as a province of the viceroyalty of Peru in 1535. The warlike Guaranis long successfully resisted the Spanish arms. In the seventeenth century the home government placed in the Jesuits' hands the entire administration, civil as well as religious. From this time forward the progress of civilization as well as of Christianity was rapid.

On the expulsion of the Jesuits from Paraguay in 1768, the province was again made subject to the Spanish viceroys. In 1810 Paraguay joined with the other states in declaring its independence. In 1814 Dr. Francia was proclaimed dictator, and exercised absolute power till his death in 1840. In 1865-70 the Paraguayans made a heroic but unavailing fight against the combined forces of Brazil, the Argentine confederation and Uruguay, closed by the defeat and death of the president, Lopez, at the battle of Aquidaban, March 1, 1870. In 1908 the reports indicated marked national prosperity.

References.—Bourgade la Cardye's *Paraguay;* Mulhall's *Handbook of the River Plate Republics;* Bruyssel's *La République de Paraguay;* Washburn's *History of Paraguay.*

Persia.—The earliest account we possess of Persia is from the bible, from which we learn that, in the time of Abraham, B. C. 1921, that portion of modern Persia known as Elam, or Susiana, southern Persia, was a powerful monarchy.

But the Persians, as a nation, first rose into notice on the ruins of the great empires founded on the Euphrates. Babylon was taken by Cyrus, and his empire extended wider than any before established in the world. It comprised, on one side, the west of India; on the other, Asia Minor, Syria, and Egypt; and was only bounded by the prodigies of valor with which the Greeks defended their small territory. After a feeble struggle, it succumbed to the brave and disciplined armies of Alexander. It was then split into fragments by the decease of its founder; but Greeks and Greek sovereigns continued, during several centuries, to reign over Asia.

About two centuries before Christ, Arsaces founded the monarchy of the Parthians; and in the third century arose the dynasty of the Sassanidæ, who restored the name, with the religion and laws, of ancient Persia. They were overthrown by the Mohammedan invaders, who suffered in their turn from the successive invasions by the descendants of Genghis, Timur, and by the Turks, who entirely changed the aspect of western Asia.

At length, in 1501, a native dynasty again arose, under Ismail, who placed himself on the throne. His posterity having sunk into voluptuousness, Persia was overrun by the Afghans, who carried fire and sword through its remotest extremities, and reduced its proudest capitals to ashes. The atrocities of the Afghans were avenged, and the independence of Persia vindicated by Nadir Shah; but though the victories of this daring chief threw a luster on his country, after his death it was almost torn to pieces by civil war, till the fortune of arms gave a decided superiority to Kerim, or Kurreem Khan. His death gave rise to another disputed succession, with civil wars as furious as before. At length, in 1794, Aga Muhammed, a eunuch, raised himself, by crimes and daring, to the sovereignty, and not only swayed it during his lifetime, but founded the present dynasty.

Under his reign, Persia had wars with Russia in 1813 and 1828, and with England in 1856-7. Under the Berlin treaty in 1878, Persia acquired from Turkey the territory and city of Khotour. In 1881 the northeastern frontier was settled by a treaty between Russia and Persia, by which the former gained a fertile district of considerable strategical importance. In 1896 the shah, Nasr-ed-Din, was assassinated at Teheran.

Muhammed Ali granted a constitution to his country, 1907. Subsequently the shah broke his pledges, limiting the powers of the sovereign, and revolution ensued. He was

thereupon compelled to abdicate in 1909, and was succeeded by Ahmad Shah, his son. A new cabinet was formed in 1910.

References.—Rawlinson's *Cuneiform Inscriptions of Western Asia*; *The Five Great Monarchies of the Ancient Eastern World*; Duncker's *History of Antiquity*; Kersharp's *Studies in Ancient Persian History*; Jackson's *Persia, Past and Present.*

Peru.—Of the early history of Peru we are almost entirely ignorant, but existing ruins, spoils secured by the Spaniards, and the descriptions left us by the historians of the Spanish conquest, sufficiently prove that the ancient Peruvians had no mean knowledge of architecture, sculpture, metal work, etc. They also had made considerable progress in astronomical science. The early religion of the Peruvians is bound up in the god Viracocha, the creator of the sun and the stars, and from him the Incas or emperors claimed descent as the sons of the sun.

Under the Incas the empire was divided into four parts, corresponding to the four cardinal points; each division had a separate government, presided over by a viceroy of royal blood. All the land belonged to the Inca; and trade was carried on by barter, money being unknown. The thirteenth monarch of the Incas was reigning when the Spanish adventurer Pizarro disembarked in Peru in 1531. The Inca was taken prisoner (1532), numbers of his subjects were massacred, and the whole country fell in a short time into the hands of the invaders. It was then formed into a Spanish viceroyalty; subsequently part of it was incorporated in New Granada, and the viceroyalty of Buenos Ayres was constructed out of some of the provinces.

In 1821 the country proclaimed its independence, but did not obtain actual freedom from Spanish rule until 1824, after a prolonged war. Peru, like the rest of the South American republics, has suffered much from dissensions and revolutions. In the spring of 1879 it joined Bolivia in a war against Chili, resulting in the complete defeat of both the former. Peru had to cede by the peace of 1883 the province of Tarapaca absolutely to Chili, which also got possession provisionally of the department of Tacna. Since then Peru, though little troubled with external complications, has been disturbed by the ambitions of rival politicians, and even civil war. In 1909, a large national loan was obtained from France.

References.—Markham's *Peru, History of Peru*, and *The War Between Peru and Chili*; Bates's *Central and South America*; Evans' *From Peru to the Plate*; Clark's *Twelve Months in Peru*; Middendorf's *Peru*; Wright's *The Old and New Peru.*

BISHOPS AND POPES OF ROME

Pontiff	Pontificate	Surname	Nationality
	First Century A. D.		
St. Peter	41– 67		
Linus	67– 79		Tuscan.
Cletus or Anacletus	79– 91		Greek.
Clement	91–100		
	Second Century		
Evaristus	100–109		Greek.
Alexander I	about109–119		
Sixtus I	119–128		Roman.
Telesphorus	128–139		Greek.
Hyginus	139–142		Athenian.
Pius I	142–157		Native of Aquileia
Anicetus	157–168		Syrian.
Soter	168–176		Greek.
Eleutherus	177–190		Greek.
Victor I	190–202		African.
	Third Century		
Zephyrinus	202–217		
Calixtus I	217–222		Roman.
Urban I	222–230		Roman.
Pontianus	230–235		Roman.
Antherius	235–236		Greek.
Fabianus	236–250		Probably Roman.
Cornelius	251–253		Roman.
Lucius I	253–254		Roman.
Steven I	254–257		Roman.
Sixtus II	257–258		Roman.
Dionysius	259–268		Greek.
Felix I	269–274		Roman.
Eutychianus	275–283		Uncertain.
Caius	283–296		Dalmatian.
	Fourth Century		
Marcellinus	296–304		Roman.
Marcellus I	304–309		Roman.
Eusebius	309		Greek.
Melchiades	310–314		African.
Sylvester I	314–335		Roman.
Marcus	336		Roman.
Julius I	337–352		Roman.
Liberius	352–366		Roman.
Damascus I	366–384		Spaniard.
Siricius	384–398		Roman.
Anastasius I	398–401		Roman.
	Fifth Century		
Innocent I	401–417		Native of Albano
Zosimus	417–418		Greek.
Boniface I	418–422		Roman.
Celestinus I	422–432		Roman.
Sixtus III	432–440		Roman.
Leo I., "The Great"	440–461		Roman.
Hilarius	461–468		Native of Sardinia.
Simplicius	468–483		Native of Tibur.
Felix II	483–492		Roman.
Gelasius	492–496		Native of Africa.
Anastasius II.	496–498		Roman.
	Sixth Century		
Symmachus	498–514		Native of Sardinia.
Hormisdas	514–523		Native of Frusino.
John I	523–526		Tuscan.
Felix III	526–530		Native of Beneventum.
Boniface II	530–532		Roman.
John II	532–535		Roman.
Agapetus I	535–536		Roman.
Sylverius	536–537		Native of Campania.
Vigilius	537–555		Roman.
Pelagius I	555–560		Roman.
John III	560–574		Roman.
Benedict I	575–579		Roman.
Pelagius II	579–590		Roman.
	Seventh Century A. D.		
Gregory I., "The Great"	590–604		Roman.
Sabinianus	604–606		Tuscany.
Boniface III	607		Roman.
Boniface IV	608–615		Native of Abruzzi.
Deusdedit I	615–618		
Boniface V	619–625		
Honorius I	625–638		Native of Capua.
Severinus	638–640		Roman.
John IV	640–642		Native of Dalmatia.
Theodore	642–649		Greek.
Martin I	649–653		Native of Tudertini.
Eugenius I	654–657		Roman.
Vitaleanus	657–672		Native of Signia.
Deodatus II	672–676		Roman.
Donus I	676–678		Roman.
Agathon	678–681		Sicilian.
Leo II	682–683		
Benedict II	684–685		Roman.
John V	685–686		Native of Syria.
Conon	686–687		Native of Thrace.
	Eighth Century		
Sergius II	687–701		Native of Palermo.
John VI	701–705		Native of Greece.
John VII	705–707		Greek.
Sisinnius	708		Syrian.
Constantinus I	708–715		
Gregory II	715–731		Roman.
Gregory III	731–741		Syrian.
Zacharias	741–752		Greek.
Steven II	752–757		
Paul I	757–767		Roman.
Steven III	768–772		Sicilian.
Adrian I	772–795		Roman.
	Ninth Century		
Leo III	795–816		Roman.
Steven IV	816–817		Roman.
Pascal I	817–824		Roman.
Eugenius II	824–827		Roman.
Valentine	827		Roman.
Gregory IV	827–844		Roman.
Sergius II	844–847		Roman.
Leo IV	847–855		Roman.
Benedict III	855–858		Roman.
Nicholas I	858–867		Roman.
Adrian II	867–872		Roman.
John VIII	872–882		Roman.
Martin II	882–884		
Adrian III	884–885		Roman.
Steven V	885–891		Roman.
Formosus	891–896		Bishop of Porto.
Boniface VI	896		
Steven VI	896–897		Roman.
Romanus	897		
Theodore II	897		
John IX	898–900		Native of Tibur.
	Tenth Century		
Benedict IV	900–903		Roman.
Leo V	903		Native of Ardea.
Sergius III	904–911		
Anastasius III	911–913		Roman.
Landon	913–914		Native of Sabina.
John X	914–929		Roman.
Leo VI	929		Native of Rome.
Steven VII	929–931		Roman.
John XI	931–936		
Leo VII	936–939		Roman.
Steven VIII	939–942		Roman.
Martin III	942–946		
Agapetus II	946–955		
John XII	955–964	Ottaviano Conti. He was the first who changed his name on his elevation.	

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Succeeo
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BISHOPS AND POPES OF ROME Continued

Pontiff	Pontificate	Surname	Nationality
	Tenth Century—Con't A. D.		
Benedict V.	965		Roman.
John XIII.	965–972		Roman.
Benedict VI.	973–974		
Benedict VII.	974–983	(Conti)	Roman.
John XIV.	983–985	(Anti-Pope.)	
Boniface VII.	985	Francone	
John XV.	985–996		Roman.
Gregory V.	996–999	Bruno.	
John XVII.	997	Philagathius.	Calabrian.
	Eleventh Century		
Sylvester II.	999–1003	Gerbert	Native of Auvergne.
John XVIII.	1003–1009	Secco	Roman.
Sergius IV.	1009–1012		
Benedict VIII.	1012–1024	Fasio	Roman.
John XIX.	1024–1033		
Benedict IX.	1033–1044	Theophylactus	Of Tusculum.
Sylvester III.	1044	(Anti-Pope.)	
Gregory VI.	1045–1046	Giovanni Braziano	Roman.
Clement II.	1046–1047	Suidger	Native of Saxony.
Damasus II.	1048	Poppo.	
Leo IX.	1048–1054	Bruno	Bishop of Toul.
Victor II.	1054–1057	Gebhard	Bishop of Eichstadt.
Steven IX.	1057–1058	Frederick	Abbot of Monte Casino.
Nicholas II.	1058–1061		Native of Burgundy.
Alexander II.	1061–1073		Native of Milan.
Gregory VII.	1073–1085	Hildebrand	Native of Tuscany.
Victor III.	1086–1087		Native of Beneventum.
Urban II.	1088–1099	Otho or Endes	Native of France.
	Twelfth Century		
Pascal II.	1099–1118		Native of Tuscany.
Gelasius II.	1118–1119		Native of Caieta.
Calixtus II.	1119–1124		Native of Burgundy.
Honorius II.	1124–1130	Cardinal Lamberti	Bishop of Ostia.
Innocent II.	1130–1143		Roman.
Celestine II.	1143–1144		Tuscan.
Lucius II.	1144–1145		Native of Bologna.
Eugenius III.	1145–1153		Native of Pisa.
Anastasius IV.	1153–1154		Roman.
Adrian IV.	1154–1159	Nicholas Breakspere	Englishman.
Alexander III.	1159–1181	Cardinal Orlando Bandinello	Native of Siena.
Lucius III.	1181–1185	Cardinal Ubaldo	Native of Lucca.
Urban III.	1185–1187	Uberto Crivelli	Archbishop of Milan.
Gregory VIII.	1187		Native of Beneventum.
Clement III.	1187–1191	Paul	Bishop of Præneste.
Celestine III.	1191–1198	Cardinal Hyacinthus	Roman.
	Thirteenth Century		
Innocent III.	1198–1216	Cardinal Lotharius	Native of Signia.
Honorius III.	1216–1227	Cardinal Savelli	Roman.
Gregory IX.	1227–1241	Cardinal Ugolino	Native of Anagni.
Celestine IV.	1241		Native of Milan.
Innocent IV.	1243–1254	Sinibaldo de' Fieschi	Native of Genoa.
Alexander IV.	1254–1261	Cardinal Rinaldo Conti.	Native of Anagni.
Urban IV.	1261–1264	James, Patriarch of Jerusalem	Frenchman.
Clement IV.	1265–1268	Guy Foulques	Native of Saint-Gilles, in Languedoc.
Gregory X.	1271–1276	Tebaldo Visconti	Native of Piacenza.
Innocent V.	1276	Peter of Tarantasia	Native of Moutiers, Savoy
Adrian V.	1276	Ottobono Fieschi	Native of Genoa.
John XXI.	1276–1277		Native of Lisbon.
Nicholas III.	1277–1281	Cardinal Orsini	Native of Rome.
Martin IV.	1281–1285	Cardinal Simon de Brie	Frenchman.
Honorius IV.	1285–1288	Cardinal James Sevelli.	Roman.
Nicholas IV.	1288–1292	Cardinal Jerome	Native of Ascoli.
Celestine V.	1294	Pietro da Murrone	Native of Abruzzi.
Boniface VIII.	1294–1303	Cardinal Benedetto Gaetani	Native of Anagni.
	Fourteenth Century		
Benedict XI.	1303–1304	Cardinal Nicholas	Native of Treviso.
Clement V.	1305–1314	Bertrand, removed papal see to Avignon	Native of Bordeaux.
John XXII.	1316–1334	James	Native of Cahors, in France.
Benedict XII.	1334–1342	James Fournier	Frenchman.
	Fourteenth Century—Con't A. D.		
Clement VI.	1342–1352	Pierre Roger	Native of Limoges, France.
Innocent VI.	1352–1362	Steven Aubert	Native of Limoges.
Urban V.	1362–1370	William of Grimoard	Frenchman.
Gregory XI.	1370–1378	Peter Roger	Frenchman.
Urban VI.	1378–1389	Bartolommeo Prignano	Neapolitan.
Boniface IX.	1389–1404	Pietro Tomacelli	Of Naples.
	Fifteenth Century		
Innocent VII.	1404–1406	Cosmo Migliorati	Native of Sulmona.
Gregory XII.	1406–1415	Angelo Cornaro	Native of Venice.
Martin V.	1415–1431	Otho Colonna	Roman.
Eugenius IV.	1431–1447	Gabriele Condolmero	Venetian.
Nicholas V.	1447–1455	Cardinal Thomas	Native of Sarzana.
Calixtus III.	1455–1458	Alfonso Borgia	Spaniard.
Pius II.	1458–1464	Æneas Sylvius Piccolomini	Tuscan.
Paul II.	1464–1471	Pietro Barbo	Native of Venice.
Sixtus IV.	1471–1484	Francesco della Rovere	Genoese.
Innocent VIII.	1484–1492	Giovanni Battista Cisbo	Genoese.
Alexander VI.	1492–1503	Rodrigo Lenzuoli Borgia	Spaniard.
	Sixteenth Century		
Pius III.	1503	Francesco Todeschini Piccolomini	Born at Sienna.
Julius II.	1503–1513	Giuliano della Rovere.	
Leo X.	1513–1521	Giovanni de' Medici	Son of Lorenzo the Magnificent.
Adrian VI.	1521–1523		Native of Utrecht.
Clement VII.	1523–1534	Giulio de' Medici	Nephew of Lorenzo.
Paul III.	1534–1549	Alessandro Farnese	Roman.
Julius III.	1549–1555	Giovan Maria Giocci	Born at Arezzo.
Marcellus II.	1555	Cardinal Cervini	Native of Montepulciano.
Paul IV.	1555–1559	Gianpietro Caraffa	Neapolitan.
Pius IV.	1559–1565	Giovanni Angelo Medichino	Native of Milan.
Pius V.	1565–1572	Michele Ghislieri	Native of Alessandria.
Gregory XIII.	1572–1585	Ugo Buoncompagni	Native of Bologna.
Sixtus V.	1585–1590	Felice Peretti of Montalto	Born near Montalto.
Urban VII.	1590	Gian Battista Castagna	Genoese.
Gregory XIV.	1590–1591	Nicolo Sfondrato	Native of Cremona.
Innocent IX.	1591	Gian Antonio Facchinetti	Native of Bologna.
Clement VIII.	1591–1605	Ippolito Aldobrandini.	Native of Fano.
	Seventeenth Century		
Leo XI.	1605	Alessandro de' Medici.	Native of Florence.
Paul V.	1605–1621	Camillo Borghese	Native of Rome.
Gregory XV.	1621–1623	Alessandro Ludovici	Native of Bologna.
Urban VIII.	1623–1644	Maffeo Barberini	Florentine.
Innocent X.	1644–1655	Giov. Battista Panfili.	Roman.
Alexander VII.	1655–1667	Fabio Chigi	Native of Siena.
Clement IX.	1667–1669	Giulio de Rospigliosi	Native of Pistoia.
Clement X.	1669–1676	Emilio Altieri	Native of Rome.
Innocent XI.	1676–1689	Benedetto Odescalchi	Native of Como.
Alexander VIII	1689–1691	Pietro Ottoboni	Native of Venice.
Innocent XII.	1691–1700	Antonio Pignatelli	Native of Naples.
	Eighteenth Century		
Clement XI.	1700–1721	Gian Francesco Albani	Native of Pesaro.
Innocent XIII.	1721–1724	Michael Angelo Conti.	Native of Rome.
Benedict XIII.	1724–1730	Vincenzo Maria Orsini.	Native of Rome.
Clement XII.	1730–1740	Lorenzo Corsini	Native of Florence.
Benedict XIV.	1740–1758	Prospero Lambertini	Native of Bologna.
Clement XIII.	1758–1769	Carlo Rezzonico	Native of Venice.
Clement XIV.	1769–1775	Giovanni Vencenzo Antonio Ganganelli	Born near Rimini.
Pius VI.	1775–1799	Angelo Braschi	Native of Cesena.
	Nineteenth Century		
Pius VII.	1800–1823	Gregorio Barnaba Chiaramonti	Native of Cesena.
Leo XII.	1823–1829	Annibale della Genga	Native of Romagna.
Pius VIII.	1829–1830	Cardinal Castiglioni	Native of Cingoli.
Gregory XVI.	1830–1846	Mauro Cappellari	Native of Belluno.
Pius IX.	1846–1878	Giovanni Maria Mastai Ferretti	Native of Italy.
Leo XIII.	1878–1903	Gioacchino Pecci	Native of Italy.
Pius X.	1903–1914	Giuseppe Sarto	Venice.
Benedict XV.	1914	Giacoma della Chiesa	Born at Pegli, Italy.

Pius XI 1914-1939
Pius XII 1939-

Portugal.—Like the rest of Iberia, Portugal (the southern part of which was known to the Romans as Lusitania, often taken as a poetical name for the whole country) was thoroughly Romanized after the conquest of the Carthaginians by the Romans in 138 B. C. Then the peninsula was overrun by the Visigoths, and next by the Saracens. Northern Portugal fell under the influence of Castile; but under Alfonso I. (1143) Portugal became an independent kingdom, though the Saracens were not conquered in the south till 1250.

Wars with Castile were frequent from this time on.

Under John (1385-1433) began a close alliance between Portugal and England, and the Portuguese king, John, married John of Gaunt's daughter. With their son, Prince Henry the Navigator (died 1460), began the most brilliant era of oversea enterprise and conquest, including the acquisition of Madeira, and the Azores, the doubling of the Cape of Good Hope (1486), the reaching of India by sea and settlements there (1497), and the discovery and occupation of Brazil (1500).

In the sixteenth century Portugal was one of the most powerful monarchies of Europe, and most prosperous of commercial peoples; but its decline was swift, and Philip II. annexed Portugal to Spain for sixty years. English assistance secured the independence of the kingdom in 1640 (recognized by Spain in 1668); but the glory had departed.

Portugal shared in the troubles of the French occupation and the Peninsular war. After Napoleon's defeat the old family, which had taken refuge in Brazil, was restored; but the country was rent by intrigue, dissension, and civil war. The rush of the European powers to occupy central and southern Africa stirred Portugal to tenaciously cling to her once great colonial empire in Africa; but the march of events has given to Britain, Germany, France, and the Kongo Free State, much that Portugal once claimed as hers.

After enduring sixty years of intolerable hardships and exactions, a Portuguese nobleman, named John, duke of Braganza, pitying his unfortunate countrymen, excited a revolution, which again broke the Spanish fetters, while the people hailed their deliverer as their king, who, being crowned as John IV., 1640, commenced the dynasty of the house of Braganza, a family whose descendants continued to sway the destinies of Portugal until Napoleon, in 1807, entered the country, and declared the family of Braganza had ceased to reign. Then the royal family of Portugal, consisting of Pedro, the old king, and his imbecile wife, Maria Frances Isabella, queen regent, the prince regent, and all the court, set sail from the Tagus to Brazil.

After the downfall of Napoleon, the history of Portugal is composed of a long succession of political disturbances under Pedro I., Don Miguel, and Maria da Gloria. At the death of this last queen, her eldest son ascended the throne, in 1853, as Pedro V., and died prematurely in 1861, leaving the throne to Louis I., second son of Dona Maria, who died in 1889. Louis was succeeded by his son, Carlos I., the same year, who was assassinated Feb. 1, 1908, and in time succeeded by his second son, Manuel II.

In October, 1910, King Manuel of Portugal was deposed, and a republic was proclaimed, order being quickly restored by the provisional government.

References.—Crawford's *Portugal, Old and New*, and *Round the Calendar in Portugal;* Street's *Portuguese Life in Town and Country* and *A Philosopher in Portugal;* Stephens' *Portugal;* Napier's *History of the Peninsular War;* Salisbury's *Portugal and Its People;* Koebel's *Portugal Its Land and People.*

Rome.—**The Royal Period.**—From the founding of the city by Romulus, for a space of 245 years, or till 509 B. C., the Roman people submitted their political destinies to the rule of a succession of seven kings, the line terminating with Tarquinius Superbus, who, with his family, was deposed, and expelled from Rome. The Romans firmly established their infant state, the city was greatly enlarged, civil law and order were established, a religious code was instituted, several of the neighboring states were humbled, and many cities taken; and, while the population of Rome greatly increased, most of the conquered cities were admitted to all the benefits of Roman citizenship.

The Republic.—After the deposition of their kings, the consular form of government was established, and, with a few short interruptions, as during the supremacy of the decemvirs, several dictators, and two triumvirates, continued till the year of the city 724, or 30 B. C., or for a space of 479 years.

In the second period those great undertakings were effected which have, through all time, made Rome so celebrated—the broad, well-paved highways, like the Via Appia, extending from the city to the extremity of Calabria; numerous aqueducts; and the cloacæ, or common sewers, so vast in size and length as to have become the wonder of the ancients themselves. So extensive were these underground channels, that in the time of Augustus the whole of Rome was subterraneously navigable. After these followed the temples, circuses, and baths.

The wars undertaken in this epoch were some of the most important in the whole history of the people. The three Punic wars were fought, and Carthage was exterminated, the whole of Italy was incorporated in the republic, the states of Africa subjugated, Greece converted into Roman provinces, Mithridates of Pontus defeated, and the kingdoms of Asia Minor made tributary; Spain, Gaul, and Britain were occupied, and advanced to the grade of provinces, the boundaries of the republic extending from Hibernia, in the Atlantic, to the Euphrates, in the East, while the wealth and splendor of the city had advanced in a ratio equal with its territorial aggrandizement; and what had once been a town of bricks became a city of marble palaces, that could boast 420 temples, five theaters for the drama, two amphitheaters, seven circuses of vast extent, sixteen public baths, fourteen aqueducts, besides pillars, triumphal arches, porticoes, and lofty obelisks.

The Empire.—From 27 B. C. a line of about sixty emperors assumed dominion, and for a term of 506 years, or till A. D. 476, swayed with absolute power the destinies of the Roman world. During the third period Germany was added to the imperial realms, and the conquering eagles of Rome only ceased their flight on this side of the Indus. All Syria, Egypt, and Germany fell before the conquering Roman, till the overgrown empire, too vast for its own strength, and weakened by vice, riches, and conquest, fell into decay, and then commenced that downfall which has had no parallel in the annals of nations.

It had been predicted by the augurs, from an omen of twelve ravens seen together as Romulus was marking out his infant city, that the state would endure for twelve centuries; and as the termination of that cycle of ages approached, the physical disasters that overwhelmed the people in all parts of the empire, the hordes of barbarians who on every quarter burst like a deluge on the land, the crimes of the emperors, the constant civil wars, and dire reverses encountered in the field, too plainly indicated the coming ruin of the once mistress of the world. So enervated and weak had the troops become, so greatly had they degenerated, that in the reign of Theodosius, about the year 390, the legions were no longer able to bear the fatigues of their armor and heavy military weapons, and, throwing them aside, assumed the light and ineffective arms of the effeminate Persians; while the barbarians, adopting the heavy weapons of the Romans, were everywhere victorious.

The Division of the Empire into eastern and western by Constantine, in 328, was the first fatal blow to the strength of the empire, while the feuds of the rival emperors, the irruption of the Goths, and the sack and burning of Rome in 410, completed the dismemberment. A few weak princes prolonged for half a century the shadow of a western empire, till Romulus Augustulus, the last, bearing the same name as the founder of the state, laid down the insignia of the Roman empire at the feet of Odoacer, the barbarian king of Italy, A. D. 476.

The eastern empire endured for nearly 1,000 years longer, until finally overthrown by the taking of Constantinople by the Turks, in 1453.

References.—Larger histories are Mommsen's *The History of Rome*, and *Provinces of the Roman Empire;* Merivale's *Romans Under the Empire;* Duruy's *History of Rome.* Shorter histories are Merivale's *General History to A. D. 476*, and *Fall of the Roman Republic; History of Rome*, by Howe and Leigh; *History of Rome to Battle of Actium*, and *History of Rome for Beginners*, by E. S. Shuckburgh; *Student's Roman Empire*, by J. B. Bury; *Outlines of Roman History to 476*, by H. F. Pelham; *A Constitutional and Political History of Rome*, by T. M. Taylor. For later history, Gibbon's *Decline and Fall of the Roman Empire; The Later Roman Empire, 395-800*, by J. B. Bury; *Italy and Her Invaders*, by T. Hodgkin; *The Holy Roman Empire*, by J. Bryce. See also, E. A. Freeman's *Historical Essays* and *History of Federal Government in Greece and Italy;* Vernon Lee's *The Spirit of Rome.* For political antiquities, Ramsay's *Roman Antiquities;* W. W. Fowler's *Roman Festivals*, and Smith's *Dictionary of Roman Antiquities.*

Roumania.—The country that is now Roumania was anciently part of Dacia. The latter was conquered by Trajan, made a Roman province in 106 A. D. and a great many Roman colonists settled in it. In the third century it was overrun by the Goths, and subsequently by Huns, Bulgars, Avars, and Slavs; all of whom have left more or less distinct traces on the land and people. At the beginning of the ninth century Roumania formed part of the great Bulgarian kingdom, after the fall of which, in 1019, it nominally belonged to the eastern Roman empire, although soon taken possession of by Turkish tribes. Wallachia and Moldavia were long divided.

About 1241 Radu Negra, duke of Fogaras, is said to have founded a voivodeship in Wallachia, which finally fell under Turkish supremacy after the battle of Mohacs, in 1526. The boiars retained the nominal right of electing the voivodes until 1726; but thenceforward the sultan openly sold the office to the highest bidders, who, without security of tenure, mercilessly plundered the unfortunate province so long as their power lasted. In Moldavia, Dragosh, or Bogdan, about 1354 founded a kingdom, much as Radu had done in Wallachia, and it, too, fell under the overlordship of the porte after the death of the voivode, Stephan the Great, in 1504.

The Turks subsequently introduced the same custom of selling the hospodarship or voivodeship. In both provinces the government was most frequently purchased by Phanariotes, Greek inhabitants of the Phanar district of Constantinople.

The successive wars between Russia and Turkey, the first of which began in 1768, were on the whole beneficial to Roumania, for the Russians gradually established a kind of protectorate over their fellow-Christians on the Danube. The treaty of Paris in 1856, after the Crimean war, confirmed the suzerainty of the porte, but preserved the rights and privileges of the Danubian principalities, and added to them part of Bessarabia.

In 1858 the two provinces, each electing Colonel Couza as its hospodar, were united by a personal union, which in 1861 was formally converted into a real and national union. Couza, who assumed the title of Prince Alexander John I. in 1860, was forced by a revolution to abdicate in 1866, and Prince Charles of Hohenzollern-Sigmaringen, the present Carol I., was elected in his place. In the Russo-Turkish war of 1877-8 Roumania sided with Russia, and proclaimed its independence of Turkey. This claim was recognized by the treaty of Berlin in 1878, but Roumania was compelled to retrocede to Russia the part of Bessarabia acquired in 1856, and to receive the Dobrudscha in exchange. In 1881 Roumania declared itself a kingdom. The crown prince married Princess Marie of Edinburgh in 1893. Since 1900 the country has been marked by a strong national feeling.

References.—Samuelson's *Roumania, Past and Present;* Millar's *The Balkans;* Walker's *Untrodden Paths in Roumania;* Laveleye's *The Balkan Peninsula.*

RULERS OF THE WORLD

ROMAN EMPERORS

Name	Lineage, Etc.	Period of Rule	Birth	Death
	THE CÆSARS	B.C.-A.D.	B.C.	A.D.
Augustus	A title conferred by the Senate	30– 14	63	14
		A.D.		
Tiberius	Stepson of Augustus	14– 37	42	37
Caligula	Youngest son of Germanicus, nephew of Tiberius	37– 41	12	41
Claudius	Grandson of Tiberius	41– 54	10	54
			A.D.	
Nero	Son of Domitius Ahenobarbus	54– 68	37	68
			B.C.	
Galba	Proclaimed Emperor	68– 69	3	69
			A.D.	
Otho	Proclaimed Emperor	69–	32	69
Vitellius	Proclaimed Emperor	69– 69	15	69
Vespasian	Proclaimed Emperor	70– 79	9	79
Titus	Son of Vespasian	79– 81	41	81
Domitian	Second son of Vespasian	81– 96	51	96
	THE FIVE GOOD EMPERORS			
Nerva	Proclaimed Emperor	96– 98	32	98
Trajan	Adopted son of Nerva	98– 117	53	117
Hadrian	Nephew of Trajan	117– 138	76	138
Titus Antoninus Pius	Adopted son of Hadrian	138– 161	86	161
Marcus Aurelius Antoninus	Nephew of Antoninus Pius	161– 180	121	180
	THE PERIOD OF MILITARY DESPOTISM			
Commodus	Son of Marcus Aurelius	180– 193	161	192 (Dec.31)
Pertinax	Proclaimed Emperor	193–	126	193
Didius Julianus	Proclaimed Emperor	193–	...	193
Septimius Severus	Proclaimed Emperor	193– 212?	146	211
Caracalla	Son of Septimius Severus	212– 217	188	217
Macrinus	Proclaimed Emperor	217– 218	164	218
Heliogabalus (Elagabalus)	First cousin of Caracalla	218– 222	205?	222
Alexander Severus	Cousin of Heliogabalus, by whom he was adopted	222– 235	205	235
Maximin	Elevated by soldiers	235– 238	173	238
Pupienus and Balbinus	Appointed by the Senate	238– 238	...	238 238
Gordian	Grandson of Gordian I	238– 244	224	244
Philippus	Murdered Gordian and usurped the throne	244– 249	...	249
Decius	Proclaimed Emperor by the army	249– 251	...	251
Gallus	Elected Emperor by Senate and soldiers	251– 254	...	254
Æmilianus	.....	254– ...	208?	254?
Valerian	.....	254– 260	...	269
Gallienus	Son of Valerian	260– 268	...	268
Flavius Claudius	.....	268– 270	214	270
Aurelian	Designated by Claudius	270– 275	212	275
Tacitus	.....	275– 276	200	276
Florian	Proclaimed Emperor	276– 277	...	?
Probus	Choice of the army	277– 282	...	282
Carus	Elevated to throne by soldiers	282– 283	222	283
Carinus and Numerian	Elder son of Carus Son of Carus	283– 284	... ...	285 ...
Diocletian and Maximian	Proclaimed Emperor by the army Made Cæsar by Diocletian	284– 305	245 ...	313 310
Constantius and Galerius	Created Cæsar	305– 306	250 ...	306 311
Constantine the Great	Eldest son of Augustus Constantius Chlorus	306– 336	272	337
Constantius II	Third son of Constantine the Great	336– 361	317	361
Julian the Apostate	Son of Julius Constantius	361– 363	331	363
Jovian	Elevated to the throne by the army	363– 364	332	364
	ROMAN EMPERORS OF THE WEST			
Valentinian I	Proclaimed Emperor by the army	364– 375	321	375
Gratian	Son of Valentinian I	375– 383	359	383
Maximus	Made Emperor by the legions in Britain	383? ...	?	398
Valentinian II	Son of Valentinian I	383? 388	371	392
Eugenius	Proclaimed Emperor	388– 394	...	...
Theodosius the Great	Son of Theodosius, a Roman general	394– 395	346	395
Honorius	Second son of Theodosius	395– 423	384	423
Valentinian III	Son of Constantius	423– 455	419	455
Maximus Petronius	Proclaimed Emperor	455– ...	395?	455
Avitus	Assumed the purple	455– 457	...	457
Majorian or Majorien	Elected by Ricimer	457– 461	...	?
Severus	Raised to imperial dignity by Ricimer	461– 467	...	465-7?

ROMAN EMPERORS—Continued

Name	Lineage, Etc.	Period of Rule	Birth	Death
		A.D.	A.D.	A.D.
Anthemius	Son-in-law of Emperor Marcian	467– 472	...	?
Olybrius	Made Emperor through influnce of Ricimer	472– 473	...	?
Glycerus	Proclaimed Emperor ..... [or Genseric	473– ...	...	?
Nepos	Proclaimed Emperor by order of Leo X	473– 475	...	480
Romulus Augustulus	Son of Orestes Augustus is deposed and banished by Odoacer, who thus puts an end to the Western Empire of Rome.	475– 476	...	476

KINGS, EMPERORS, AND PRESIDENTS OF FRANCE

Name	Lineage, Etc.	Period of Rule	Birth	Death
	THE MEROVINGIANS	A.D.	A.D.	A.D.
Pharamond	.....	420– 428	...	...
Clodian	Son of Pharamond (obscure)	428– 448	...	...
Merovæus	Founder of the Merovingian Dynasty	448– 457	411?	457
Childeric	Son of Merovæus, King of the Franks	458– 481	...	481
Clovis I	Son of Childeric	481– 511	465	511
Childebert I	Son of Clovis	511– 558	495	558
Thierry I Clodomir and Cloatire I	Son of Clovis Son of Clovis Fourth son of Clovis	558– 561	... ...	 561
	KINGDOM DIVIDED INTO FOUR PARTS:			
Caribert	Reigns at Paris	... ...	...	567
Gontran	King of Orleans and Burgundy	561– 584	...	593
Chilperic I	King of Neustria at Soissons	... ...	535	575
Sigebert	King of Austrasia at Metz	... ...	570	596
Childebert II Clotaire II	King of Sigebert I. of Austrasia Son of Chilperic I	584– 596	584	628
Dagobert I	Son of Clotaire II	628– 638	602	638
Clovis II. and Dagobert II	"The Young," sons of Dagobert I	638– 665	633 652	656 679
Clotaire III	.....	665– 673	652?	670?
Thierry III	Son of Clovis II	673– 691	652?	691
Clovis III	King of Neustria	691– 695	681	695
Childebert III	King of Neustria	695– 711	...	...
Dagobert III	King of Neustria	711– 715	699	715
Chilperic II	.....	715– 720	?	720
Thierry IV	Son of Dagobert III	720– 747	712	747
Childeric III	Son of Childeric II. (obscure)	747– 751	?	755
	THE CARLOVINGIANS			
Pepin the Little (or Short)	Son of Charles Martel	751– 768	714	768
Charlemagne, or Charles the Great	Son of Pepin the Short	768– 814	742	814
Louis le Débonnaire	Son of Charles the Great	814– 840	778	840
	CARLOVINGIAN KINGS			
Charles the Bald	Younger son of Louis le Débonnaire	843– 877	823	877
Louis II	Son of Charles the Bald	877– 879	846	879
Louis III. and Carloman	Sons of Louis II Reigns two years	879– 884	863 ?	882 ?
Charles the Fat	Son of Louis the German	884– 888	839?	888
Count Eudes	.....	888– 898	?	898
Charles the Simple	Son of Louis the Stammerer	898– 922	879	929
Raoul (Rodolphe of Burgundy)	.....	922– 936	?	?
Louis IV	Son of Charles the Simple	936– 954	921	954
Lothaire	Son of Louis IV	954– 986	941	986
Louis V	Son of Lothaire	986– 987	966	987
	HOUSE OF CAPET			
Hugh Capet	Son of Hugh the Great	987– 996	?	996
Robert II	Son of Hugh Capet	996–1031	971	1031
Henry I	Son of Robert II	1031–1060	1011?	1060
Philip I	Son of Henry I	1060–1108	1052	1108
Louis VI. (le Gros)	Son of Philip I	1108–1137	1078	1137
Louis VII	Son of Louis VI	1137–1180	1120	1180
Philip Augustus	Son of Louis VII	1180–1223	1165	1223
Louis VIII	Son of Philip Augustus	1223–1226	1187	1226

KINGS, EMPERORS, AND PRESIDENTS OF FRANCE—Continued

Name	Lineage, Etc.	Period of Rule	Birth	Death
	HOUSE OF CAPET—Continued	A.D.	A.D.	A.D.
Louis IX., or St. Louis	Son of Louis VIII.	1226–1270	1215	1270
Philip the Bold	Son of Louis IX.	1270–1285	1245	1285
Philip the Fair	Son of Philip III.	1285–1314	1268	1314
Louis X.	Son of Philip IV.	1314–1316	1239	1316
Philip the Hardy	Second son of Philip IV.	1316–1321	1294	1322
Charles the Fair	Youngest son of Philip the Fair	1321–1328	1294	1328
	HOUSE OF VALOIS			
Philip of Valois	Son of Charles of Valois	1328–1350	1293	1350
John the Good	Son of Philip VI.	1350–1364	1319?	1364
Charles the Wise	Son of John II.	1364–1380	1337	1380
Charles VI.	Son of Charles V.	1380–1422	1368	1422
Charles the Victorious	Son of Charles VI.	1422–1461	1403	1461
Louis XI.	Son of Charles VII.	1461–1483	1423	1483
Charles VIII.	Son of Louis XI.	1483–1498	1470	1498
Louis XII.	A descendant of the younger son of Charles V.	1498–1515	1462	1515
Francis I.	Son of Charles, Count of Angoulême	1515–1547	1494	1547
Henry II.	Son of Francis I.	1547–1559	1519	1559
Francis II.	Eldest son of Henry II.	1559–1560	1543	1560
Charles IX	Second son of Henry II.	1560–1574	1550	1574
Henry III.	Third son of Henry II.	1574–1589	1551	1589
	HOUSE OF BOURBON			
Henry IV.	Son of Antoine de Bourbon, King of Navarre	1589–1610	1553	1610
Louis XIII	Son of Henry IV.	1610–1643	1601	1643
Louis XIV.	Son of Louis XIII. and Anne of Austria	1643–1715	1638	1715
Louis XV.	Great-grandson of Louis XIV.	1715–1774	1710	1774
Louis XVI.	Grandson of Louis XV.	1774–1793	1754	1793
	FROM THE REVOLUTION OF 1792 TO THE FIRST REPUBLIC			
National Convention.	First sat September 21, 1792	1792–1795		
Directory nominated.	November 1, 1795	1795–1799		
	THE CONSULATE			
Bonaparte, Cambacérès, Lebrun	December 24, 1799	1799–1804	1769, 1753, 1739	1821, 1824, 1824
Bonaparte	Consul for ten years, May 6, 1802			
Bonaparte	Consul for life, August 2, 1802			
	THE EMPIRE			
Napoleon I.	Decreed Emperor, May 18, 1804	1804–1814		
Napoleon II	Never reigned	....	1811	1832
	THE RESTORATION			
Louis XVIII.	Brother of Louis XVI., reëntered Paris May 3, 1814	1814–1824	1755	1824
Charles X.	Younger brother of Louis XVIII., deposed July 30, 1830	1824–1830	1757	1836
	HOUSE OF ORLEANS			
Louis Philippe	Son of Philippe Egalité, abdicated February 24, 1848	1830–1848	1773	1850
	THE SECOND REPUBLIC			
Provisional Government formed		1848–1848 (Feb22) (Dec19)		
Louis Napoleon	Elected President	1848–1852	1808	1873
	THE SECOND EMPIRE			
Napoleon III.	Nephew of Napoleon I., elected Emperor. Deposed 1870	1852–1870	1808	1873
	THE THIRD REPUBLIC			
Committee of Public Defense		1870–1871		
L. A. Thiers	Elected President	1871–1873	1797	1877
Marshal MacMahon	Elected President	1873–1879	1808	1893
Jules Grévy	Elected President	1879–1887	1807	1891
Marie F. S. Carnot	Elected President	1887–1894	1837	1894
Jean Casimir-Perier	Elected President	1894–1895	1847	1907
Francois Félix Faure	Elected President	1895–1899	1841	1899
M Emile Loubet	Elected President	1899–1906	1838	....
Armand C. Fallieres	Elected President	1906–1913	1841	....
Raymond Poincaré	Elected President	1913	1860	....

SOVEREIGNS OF RUSSIA

Name	Lineage, Etc.	Period of Rule	Birth	Death
	HOUSE OF RURIK	A.D.	A.D.	A.D.
Ivan the Great	Grand Duke of Moscow	1462–1505	1438	1505
Vasili IV	Son of Ivan the Great	1505–1533	1479	1533
Ivan the Terrible	Son of Vasily IV.	1533–1584	1529	1584
Feodor I.	Son of Ivan the Terrible	1584–1598	1557	1598
Boris Godoonof	Was elected to the throne	1598–1604	1552	1605
Demetrius	Usurped the throne	1604–1606	....	1606
Shooiskoi (Vasili V.)		1606–1610	....	1612
An Interregnum		1610–1613	....	....
	HOUSE OF ROMANOFF			
Michael Romanoff	Unanimously elected Czar	1613–1645	1598	1645
Alexis	Son of Michael Feodorovitch	1645–1676	1629	1676
Feodor II.	Eldest son of Emperor Alexis	1676–1682	1656	1682
Ivan V. and Peter	Half-brother of Peter the Great, in whose favor Ivan resigned	1682–1689	1666, ...	1696, ...
Peter the Great	Son of Alexis	1689–1725	1672	1725
Catharine I.	Was married to Peter the Great in 1707	1725–1727	1679?	1727
Peter II.	Grandson of Peter the Great	1727–1730	1715	1730
Anna	Daughter of Ivan V.	1730–1740	1693	1740
Ivan VI.	Son of Antoin Ulrich Leopoldovina and Anna.	1740–1741	1740	1764
Elizabeth	Daughter of Peter the Great	1741–1762	1709	1762
Peter III.	Son of Charles Frederick, Duke of Holstein	1762–....	1728	1762
Catharine II.	Wife of Peter III.	1762–1796	1729	1796
Paul	Son of Peter III.	1796–1801	1754	1801
Alexander I.	Son of Paul	1801–1825	1777	1825
Nicholas I.	Third son of Paul I.	1825–1855	1796	1855
Alexander II.	Son of Nicholas I.	1855–1881	1818	1881
Alexander III.	Son of Alexander II.	1881–1894	1845	1894
Nicholas II.	Son of Alexander III.	1894	1868	....

EMPERORS OF GERMANY

Name	Lineage, Etc.	Period of Rule	Birth	Death
	CARLOVINGIAN EMPERORS	A.D.	A.D.	A.D.
Louis "The German" and Lothaire	Son of the Emperor Louis I. He is regarded as the founder of the German Empire	843–855, ...	804, 795	876, 855
Louis II.	Son of the Emperor Lothaire I	855–875	822	875
Charles the Fat	Son of Louis the German	875–887	839	888
Arnulf	Son of Carloman of Bavaria	887–898	850	899
Louis the Child	Son of the Emperor Arnulf	898–911	893	911
	HOUSE OF FRANCONIA			
Conrad I.	Duke of Franconia	911–919	?	918 (Dec.)
	HOUSE OF SAXONY			
Henry the Fowler	Son of the Duke of Saxony	919–936	876	936
Otho the Great	Son of Henry I.	936–973	912	973
Otho II.	Son of Otho I.	973–983	955	983
Otho III.	Son of Otho II	983–1002	980	1002
Henry the Saint	Son of Henry the Quarrelsome of Bavaria	1002–1024	972	1024
	HOUSE OF FRANCONIA			
Conrad II.	Was crowned Emperor	1024–1039	?	1039
Henry III.	Son of Conrad II.	1039–1056	1017	1056
Henry IV.	Son of Henry III.	1056–1106	1050	1106
Henry V.	Son of Henry IV.	1106–1125	1081	1125
	HOUSE OF SAXONY			
Lothaire II.	Was elected King and crowned by the Pope	1125–1138	?	1137 (Dec.)
	THE HOHENSTAUFENS			
Conrad III	Elected in an irregular manner	1138–1152	1093	1152
Frederick Barbarossa	Nephew of Conrad III	1152–1190	?	1189
Henry VI.	Son of Frederick Barbarossa	1190–1197	1165	1197
Otho IV. and Philip, of Swabia	Second son of Henry the Lion; Youngest son of Frederick Barbarossa	1197–1208	1174, 1177	1218, 1208
Frederick II	Son of Henry VI.	1218–1250	1194	1250
An Interregnum		1250–1273	....	....
	HOUSE OF HAPSBURG			
Rudolph of Hapsburg	Son of Albert IV.	1273–1291	1218	1291

RULERS OF THE WORLD—Continued

EMPERORS OF GERMANY—Continued

Name	Lineage, Etc.	Period of Rule	Birth	Death
	HOUSE OF NASSAU	A.D.	A.D.	A.D.
Adolph	Elected	1291–1298	1252	1298
	HOUSE OF AUSTRIA			
Albert	Eldest son of Rudolph I	1298–1308	1250	1308
	HOUSE OF LUXEMBURG			
Henry VII	Son of the Count of Luxemburg	1308–1313	1262	1313
	HOUSE OF BAVARIA.			
Louis V. or IV	Son of the Duke of Bavaria	1313–1347	1286	1347
	HOUSE OF LUXEMBURG			
Charles IV	Son of John of Luxemburg	1347–1378	1316	1378
Wenceslaus	Son of the Emperor Charles IV	1378–1400	1361	1419
	HOUSE OF PALATINATE			
Rupert	Was chosen King	1400–1410	1352	1410
	HOUSE OF LUXEMBURG			
Sigismund	Son of Charles IV	1410–1438	1361	1438
	HOUSE OF HABSBURG			
Albert	Third son of Frederick I	1438–1440	1414	1486
Frederick III	Was elected Emperor	1440–1493	1415	1493
Maximilian I	Son of Frederick III	1493–1519	1459	1519
Charles V	Son of Philip of Burgundy	1519–1556	1500	1558
Ferdinand I	Younger brother of Charles V	1556–1564	1503	1564
Maximilian II	Son of Ferdinand I	1564–1576	1527	1576
Rudolph II	Son of the Emperor Maximilian II	1576–1612	1552	1612
Matthias	Younger son of Maximilian II	1612–1619	1557	1619
Ferdinand II	Son of Charles, Duke of Styria	1619–1637	1578	1637
Ferdinand III	Son of Ferdinand II	1637–1657	1608	1657
Leopold I	Second son of Ferdinand III	1657–1705	1640	1705
Joseph I	Son of Leopold I	1705–1711	1678	1711
Charles VI	Son of Leopold I	1711–1740	1685	1740
	HOUSE OF BAVARIA			
Charles VII	Son of Maximilian Emmanuel	1741–1745	1697	1745
	HOUSE OF LORRAINE			
Francis I	Son of Leopold, Duke of Lorraine	1745–1765	1708	1765
Joseph II	Son of Francis I	1765–1790	1741	1790
Leopold II	Third son of Francis I	1790–1792	1747	1792
Francis II	Son of Leopold II	1792–1806	1768	1835
	THE CONFEDERATION OF THE RHINE	1806–1815	....	....
	THE GERMANIC CONFEDERATION	1815–1866	....	....
	THE NORTH GERMAN CONFEDERATION	1866–1871	....	....
	THE HOUSE OF HOHENZOLLERN			
William the Victorious	Second son of Frederick William III	1871–1888	1797	1888
*William II	Son of Frederick III. and Grandson of William I.	1888	1859	....

*Frederick III., son of William I., was emperor from March 9 to June 15, 1888.

KINGS AND QUEENS OF ENGLAND

Name	Lineage, Etc.	Period of Reign	Birth	Death
	ANGLO-SAXON KINGS	A.D.	A.D.	A.D.
Egbert	First King of all England	827– 837	775?	837
Ethelwulf	Son of Egbert	838– 857	....	858
Ethelbald	Son of Ethelwulf	857– 860	....	860?
Ethelbert	Second son of Ethelwulf	860– 866	....	866?
Ethelred I	Third son of Ethelwulf	866– 871	....	871
Alfred the Great	Fourth son of Ethelwulf	871– 901	849	901
Edward the Elder	Son of Alfred	901– 924	870?	924
Athelstan	Eldest son of Edward	925– 940	895?	941
Edmund I	Brother of Athelstan	940– 946	923	946 or 8
Edred	Brother of Edmund I	946– 955	....	955?
Edwy	Son of Edmund I	955– 959	939?	959
Edgar	Second son of Edmund I	959– 975	943?	975
Edward the Martyr	Son of Edgar	975– 978	961?	978
Ethelred II	Half-brother of Edward	978–1016	....	1016
Edmund Ironside	Eldest son of Ethelred	1016–1017	989	1017
	DANISH KINGS			
Canute	By conquest and election	1017–1035	995	1035
Harold I. (Harefoot)	Son of Canute	1035–1040	....	1040
Hardicanute	Another son of Canute	1040–1042	1019	1042

KINGS AND QUEENS OF ENGLAND—Continued

Name	Lineage, Etc.	Period of Reign	Birth	Death
	SAXON KINGS	A.D.	A.D.	A.D.
Edward the Confessor	Son of Ethelred II	1041–1066	1004	1066
Harold II	Brother-in-law of Edward	1066	1022	1066
	NORMAN KINGS			
William I	Obtained the Crown by conquest	1066–1087	1027	1087
William II	Third son of William I	1087–1100	1056	1100
Henry I	Youngest son of William I	1100–1135	1068	1135
Stephen	Third son of Stephen, Count of Blois	1135–1154	1105	1154
	THE PLANTAGENETS			
Henry II	Son of Geoffrey Plantagenet	1154–1189	1133	1189
Richard I. the Lion-hearted	Eldest surviving son of Henry II	1189–1199	1157	1199
John	Youngest son of Henry II	1199–1216	1166	1216
Henry III	Eldest son of John	1216–1272	1207	1272
Edward I	Eldest son of Henry III	1272–1307	1239	1307
Edward II	Eldest surviving son of Edward I	1307–1327	1284	1327
Edward III	Eldest son of Edward II	1327–1377	1312	1377
Richard II	Son of the Black Prince, eldest son of Edward III.	1377–1399	1366	1400
	HOUSE OF LANCASTER			
Henry IV	Son of John of Gaunt, fourth son of Edward III.	1399–1413	1366?	1413
Henry V	Eldest son of Henry IV	1413–1422	1388	1422
Henry VI	Only son of Henry V	1422–1461	1421	1471
	HOUSE OF YORK			
Edward IV	His grandfather was Richard, son of Edmund, fifth son of Edward III.; and his grandmother, Anne, was great-granddaughter of Lionel, third son of Edward III	1461–1483	1441	1483
Edward V	Eldest son of Edward IV	1483	1470	1483
Richard III	Younger brother of Edward IV	1483–1485	1452	1485
	HOUSE OF TUDOR			
Henry VII	Son of Edmund, eldest son of Owen Tudor, by Katharine, widow of Henry V.; his mother, Margaret Beaufort, was great-granddaughter of John of Gaunt	1485–1509	1457	1509
Henry VIII	Only surviving son of Henry VII	1509–1547	1491	1547
Edward VI	Son of Henry VIII. by Jane Seymour	1547–1553	1537	1553
Mary I	Daughter of Henry VIII. by Katharine of Aragon	1553–1558	1516	1558
Elizabeth	Daughter of Henry VIII. by Anne Boleyn	1558–1603	1533	1603
	HOUSE OF STUART			
James I	Son of Mary, Queen of Scots, granddaughter of James IV., and Margaret, daughter of Henry VII	1603–1625	1566	1625
Charles I	Only surviving son of James I	1625–1649	1600	1649
Commonwealth	Commonwealth declared May 19	....	....	....
	Oliver Cromwell, Lord Protector	1649–1660	1599	1658
	Richard Cromwell, Lord Protector	.....	1626	1712
	HOUSE OF STUART RESTORED			
Charles II	Eldest son of Charles I	1660–1685	1630	1685
James II	Second son of Charles I	1685–1688	1633	1701
William III and Mary II	Son of William, Prince of Orange, by Mary, daughter of Charles I	1689–1702	1650	1702
	Eldest daughter of James II		1662	1694
Anne	Second daughter of James II	1702–1714	1665	1714
	HOUSE OF HANOVER			
George I	Son of Elector of Hanover, by Sophia, daughter of Elizabeth, daughter of James I	1714–1727	1660	1727
George II	Only son of George I	1727–1760	1683	1760
George III	Grandson of George II	1760–1820	1738	1820
George IV	Eldest son of George III	1820–1830	1762	1830
William IV	Third son of George III	1830–1837	1765	1837
Victoria	Daughter of Edward, fourth son of George III	1837–1901	1819	1901
	HOUSE OF SAXE-COBURG			
Edward VII	Son of Victoria	1901–1910	1841	1910
George V	Son of Edward VII	1910	1865	....

EDWARD VII SON OF GEORGE V.

Russia.—The monarchy is usually regarded as having been founded by Rurik, about A. D. 862, his dominions, and those of his immediate successors, comprising Novgorod, Kiev, and the surrounding country. In 980-1015 Vladimir introduced Christianity, and founded several cities and schools. But from this period down to 1237, when the country was overrun by the Tartars, Russia, with few exceptions, was the theater of civil war. In 1328 the seat of government was transferred to Moscow; and in 1481 the Tartars were finally expelled.

The Romanoffs.—In 1613 the house of Romanoff, whence his present majesty is descended, was raised to the throne; and from this period the empire acquired strength and consistency. Under Alexis Mikhailovitch (1645–76), White Russia and Little Russia were conquered from the Poles, and the Cossacks of the Ukraine acknowledged the supremacy of the czar, various internal improvements were effected, and the power of Russia began to be felt and feared by all her neighbors.

Under Peter the Great.—At length, in 1696, Peter the Great ascended the throne, and the destinies of Russia and of the northern world were immediately changed. Peter became sole ruler in 1689, and occupied the throne till his death in 1725. He completed the conquest of Siberia, waged successful war with Charles XII. of Sweden, and by the treaty of Nystad in 1721 obtained Esthonia, Livonia, Ingermannland, and part of Finland, thus gaining a large maritime territory on the Baltic Sea. He founded St. Petersburg in 1703, and made it the capital in place of Moscow.

The Eighteenth Century in Russian history is a century of empresses. Peter the Great was succeeded by his wife, Catherine I. (1725-7). A grandson of Peter the Great, Peter II., followed Catherine, reigning from 1727 to 1730. The next sovereign was Anna (1730-40), whose reign was a period of German influence. Ivan VI. (1740-1) was soon displaced by the anti-German party, and Elizabeth (1741-62), daughter of Peter the Great, ascended the throne. A part of Finland was obtained by the treaty of Abo, and Russia took part against Prussia in the Seven Years' war. The first Russian university, that of Moscow, was founded in 1755.

The death of Elizabeth and the accession of Peter III. in January, 1762, greatly relieved the hard-pressed Frederick the Great, because Peter at once reversed the Russian policy. In July, 1762, he was deposed and murdered by his wife, Catherine II. (1762-96), whose reign is of great importance in the progress of Russian power. She added to the empire by the three partitions of Poland (1772, 1793, 1795), in which she had the principal share. The treaty of Küchük-Kainarja, which concluded a war with Turkey in 1774, freed the Crimea from the suzerainty of the porte, and prepared the way for its annexation by Russia in 1783. Georgia came under Russian protection in 1783, and Courland was incorporated in 1795.

Napoleonic Period.—In the Napoleonic period Russia took an important part in the general history of Europe. Catherine's son and successor, Paul I. (1796-1801), joined the second coalition against Napoleon, and a Russian army operated with some success in Italy and Switzerland, but in 1800 Paul formed an alliance with Napoleon. He was murdered in 1801, and his son, Alexander I. (1801-25), succeeded to the throne.

Alexander joined Austria in 1805 against Napoleon, but the battle of Austerlitz (1805) ended that alliance. He was then associated with Prussia, but the victories of Jena and Auerstädt, in 1806, made Prussia helpless. The bloody battle of Eylau (1807) was drawn, but at Friedland, in the same year, Russia was heavily defeated. Alexander then concluded the peace of Tilsit with Napoleon, and supported the measures directed against British commerce. But the French alliance gradually became irksome to Russia. Ultimately Alexander broke with Napoleon, and to punish him Napoleon made his disastrous march to Moscow in 1812. The Russians coöperated in the later operations against France, and by the treaty of Vienna (1815) Poland was given to Russia as a subordinate kingdom.

By the treaty of Frederikshavn (1809) Finland was ceded by Sweden to Russia, but it kept its own constitution. Georgia was fully incorporated with the empire in 1801. A war with Turkey, ended by the treaty of Bukharest (1812), gained Bessarabia for Russia; and the treaty of Tiflis (1813) deprived Persia of some territory in the Caucasus.

The Alexanders.—Alexander began his reign with liberal measures, but latterly he became more and more reactionary and despotic. He was the prime mover in the Holy Alliance of 1815, which aimed at the complete suppression of liberalism in every form. By his earlier liberal policy, however, he sowed the seeds of the revolutionary and constitutionalist movement.

The reign of his brother, Nicholas I. (1825-55), was, throughout, one of thorough reaction. Poland revolted in 1830, and was deprived of its constitution. The popular uprisings in Europe during 1848 alarmed Nicholas, who sent an army to the assistance of Austria against Hungary in 1849. On the other hand, he coöperated with Britain and France at Navarino (1827), and by making war on Turkey (1828-9) assisted in freeing Greece. The treaty of Adrianople (1829) gave Russia an accession of territory at the expense of Turkey, and in 1828 Erivan was conquered from Persia. Further designs on Turkey led, in 1854, to the Crimean war (which see), but it was not concluded till after the accession of Alexander II. The treaty of Paris (1856) neutralized the Black Sea and restored Bessarabia to the porte.

Important Reforms.—The reign of Alexander II. (1855-81) is one of the most important in Russian history. Russia's failure in the Crimean war caused her rulers to turn their attention to home affairs, and initiated a period of reform. The millions of serfs in the empire were liberated by the famous emancipation decree of 1861. The judicial system was reorganized on modern lines, and jury trial was introduced. A law of 1864 created provincial and district councils, known as zemstvos, in thirty-four governments of European Russia, and similar representative bodies, called dumas, were established in many towns in 1870.

An insurrection in Poland in 1863 led to the withdrawal of its separate government, and in 1868 Poland was completely incorporated with Russia. Compulsory military service became the law in 1874. The government of the Baltic provinces was incorporated with that of Russia in 1876. The reforming energy of the government was exhausted by about 1866, and fear of its own work caused it to adopt a reactionary policy.

Rise of Nihilism.—From this time nihilism becomes a notable force in Russian politics, and its increasing strength led Alexander to make Loris-Melikoff practically dictator in 1880. Melikoff recommended a policy of moderate reform, and Alexander was about to issue a decree calling an assembly of notables when he was assassinated in St. Petersburg in March, 1881.

Alexander's reign witnessed a great advance of the empire in Central Asia and the Far East. Khiva and Bokhara were made vassal states; Khokand, Tashkent, and Samarkand were conquered; and China ceded to Russia her present Amur and coast provinces on the Pacific and the northern half of Sakhalien, in addition to trading and other rights. The southern half of Sakhalien was obtained from Japan in 1875 in exchange for the Kurile islands. Alaska was sold to the United States in 1867. In the three great Prussian wars of his reign Alexander maintained strict neutrality, but without concealing his friendliness to Prussia. He took advantage of the Franco-German war to free himself from the Black Sea clauses of the treaty of Paris (1856).

War with Turkey.—The Russo-Turkish war of 1877-78 was partly the outcome of Panslavism. It led to the treaty of Berlin (1878), under which Russia recovered Bessarabia.

Alexander II. was succeeded by his son, Alexander III. (1881–94), who soon reversed his father's liberal policy. Press freedom disappeared completely, and the universities were again suppressed. The powers of the zemstvos were severely restricted in 1890, and the direct representation of the peasants on them was abolished. The dumas were deprived of all real independence in 1892. Alexander II.'s judicial reforms were partly undone, and the village communities, known as mirs, were brought under the more direct control of the land-owners. Russification was vigorously pursued in Poland and the Baltic provinces, and in 1890 the first steps toward the Russification of Finland were taken.

Alexander III. was not friendly to Germany, but avoided hostilities more serious than those of a tariff war, although the Bulgarian crisis of 1885 subjected their relations to a severe strain. Russia and France now began to draw close together, but a Franco-Russian alliance was not officially admitted till 1896-7, and its terms are still secret. Merv was annexed in 1884, and the occupation of Penjdeh in 1885 nearly led to war with Britain. Alexander III. escaped several attempts at assassination, and died of disease in November, 1894.

The Far East.—After the reign of Alexander III. comes the fateful reign of his son, Nicholas II. In 1896 China granted permission to carry the Siberian railway (begun in 1889) through Manchuria to the far eastern Russian seaport Vladivostok. In December, 1897, in consequence of the Germans having extorted Kiauchau from China, Russia occupied Port Arthur, and in the following year she obtained from China a lease of it and some neighboring territory, although in 1895 she had taken the chief part in preventing Japan from taking it as a prize of victory. She shared in the international expedition to China in 1900, and herself suppressed risings in Manchuria with the utmost cruelty. Professing to be ready, and even anxious, to evacuate Manchuria as soon as possible, she was preparing for virtual annexation; but her aggressive action in Korea aroused Japanese opposition, and led to the war of 1904-5.

By the treaty of Portsmouth (1905), which ended this war, Russia lost—for the time being at least—all influence in Manchuria, Korea, and China, and had to cede to Japan Port Arthur and its territory, and also southern Sakhalien.

The Czar's Peace Proposal.—In 1898 the czar sent a proposal to all the powers suggesting a conference on armaments, and the result was the notable peace conference at the Hague in 1899. The machinery created by this conference proved sufficient to settle peaceably the serious dispute with Britain which arose out of firing of Russian warships on British fishing vessels at the Dogger Bank in October, 1904.

Nicholas II.'s internal policy has been, on the whole, reactionary, especially in regard to Finland, whose free institutions were one by one destroyed, until in December, 1903, she was deprived of the last remnants of self-government. Bobrikov, the governor, who carried out this work, was assassinated in June, 1904; and in the following month De Plehve, minister of the interior, the principal agent of the reaction, also fell a victim to assassination. He was succeeded by the liberal-minded Prince Sviatopolk-Mirsky, and for a time the czar seemed inclined to reform.

Recent Reforms.—Representatives of the zemstvos met in November at the invitation of the czar, and formulated a program of reforms. Similar demands were made by gatherings of professional men, and by working-class organizations. A great strike occurred in St. Petersburg in January, 1905, and the strikers, led by a priest named Gapon, marched unarmed on Sunday, January 22, 1905, to present an address to the czar at the winter palace. The czar had fled to Tsarskoe Selo, and the crowd were shot down and sabered without mercy. This was followed by a period of disorder approaching chaos throughout European Russia.

The Imperial Duma.—In August, 1905, the czar issued a manifesto ordering the election of an imperial representative duma; in Sep-

tember, Caucasia, and especially Baku, was the scene of terribled is orders, during which the oil industry suffered severely. Near the end of October a general railway strike rendered the autocracy almost powerless, and on October 30 the czar was compelled to promise complete liberty and self-government. Count Witte was made president of a reorganized council of ministers, with instructions to form a reformist cabinet. The general strike in Finland compelled the czar to restore Finland's constitution and liberties. The bureaucrats have attempted to discredit the reform movement by instigating attacks on Jews, and other outrages, especially in Odessa, where the authorities have permitted appalling atrocities.

The imperial duma, promised in 1905, was duly elected early in 1906, and held its first meeting on May 10 at St. Petersburg. It was dissolved later in the year because too liberal, and a second one, elected in 1907, met the same fate. By various devices the government managed to get a less advanced duma elected late in 1907, which did some useful work in 1908. An important Anglo-Russian convention was signed in 1907.

References.—Wallace's *Russia*; Leroy-Beaulieu's *The Empire of the Tsars*; Norman's *All the Russias*; Brockhaus and Efron's *Russian Cyclopædia*, in Russian; Drage's *Russian Affairs*; Suvorin's *All Russia—a Directory of Industries*, etc.; Stepniak's *King Log and King Stork*; Krapotkin's *Memoirs of a Revolutionist*; Morfill's *Russia*; Villari's *Russia Under the Great Shadow*; Perris' *Russia in Revolution*; Wellesley's *With the Russians in Peace and War*; Ganz's *The Downfall of Russia*; Milyoukov's *Russia and Its Crisis*; Meakin's *Russia, Travels and Studies*.

Salvador is the smallest but most densely-peopled republic of Central America. It was originally called Cuscatlan, and was conquered by Alvarado in 1525-6. In the first half of the sixteenth century it was a province of the Spanish colony of Guatemala, but shared in the liberation from Spanish rule which followed the Mexican uprising of 1821. It was for a short time included in the empire of Iturbide, after which it was a state in the Central American federation until the latter's dissolution in 1839.

Its present constitution was proclaimed in 1824, under the federation, and subsequently modified in 1886. The country adopted a gold standard in 1897, but is burdened by a large foreign debt amounting, in 1911, to more than $5,000,000.

References.—Squier's *The States of Central America*, and *Salvador*, Bureau of American Republics *Bulletin 68*.

Scotland.—When the Romans extended their conquests (84 A. D.) to the Forth and Clyde, the country beyond, known to them as Caledonia, was occupied by the Picts, a Celtic people (perhaps partly by Celticized Iberians) speaking Gaelic, who called their country Alban or Albyn; while the south of what is now Scotland was possessed, like south Britain, by Cymric Celts, speaking a kind of Welsh. In the fifth century the Scots came from their home in Ireland into Argyllshire, and after centuries of war with the Picts, put the crown of Scots and Picts on the head of their king, Kenneth, in 843. The Scots, partially Christianized when they came, had Columba as their great missionary, and by means of him and his followers converted the Picts, the Cymri, and the northern tribes of the English, who since the fifth century had established themselves in the eastern parts of Britain as far north as the Forth.

In the tenth century the country of the Picts and Scots came to be known by the name of Scotia (till then the name of Ireland), Nova Scotia, or Scotland; and it soon came to include all of what is now called Scotland, and for a time even Cumberland and Westmorland; Cymric Strathclyde became permanently Scottish in the tenth century; and in the same century and the beginning of the next, Lothian, the Merse, and Teviotdale, all heretofore part of Northumbria, all as English as any part of England, and more Anglian, perhaps, than any part of the south, were bestowed on the Scottish kings.

The reign of Malcolm Canmore (1057-93) was a period of social, political, and religious revolution. Malcolm, long an exile in England, married Margaret, the sister of Edgar Atheling. Malcolm and his saintly queen (afterward canonized) encouraged the introduction of English customs and civilization, the English language and English settlers; and began the process which led to the conforming of the stubborn Celtic church to Roman usages. English (Anglo-Saxon) settlers established themselves in large numbers outside of the already purely English region in the southeast, which more and more became the headquarters of the kingdom; and the Anglo-Saxons were soon followed by many Normans, bringing with them a measure of French culture.

David (1242-53) greatly promoted the well-being of church and state; and Scotland was a prosperous country till the death of Alexander III. (1286). Then the attempts of Edward I. of England to get Scotland incorporated by hook or crook with the rest of south Britain, led to the long, bloody, and destructive wars of independence, wars disastrous to all save national spirit and energy; and for 400 years Scotland, though free, was poor, barbarous, and torn by dissension.

The Celtic element ventured, under the lord of the isles, to try conclusions with the Saxon lowlanders at Harlaw in 1411, but were signally worsted. Bannockburn (1314) encouraged the nation to resist to the uttermost the superior might of England; and not till after the Reformation (when Scotland adopted heartily the Presbyterian polity) were the crowns of England and Scotland united in the person of James VI. of Scotland, heir also to the English crown (1603). The Scots, enraged by the attempts of Charles I. to impose the Anglican ritual, fought stoutly with the English parliament against the king, but enthusiastically supported the Restoration.

Under Charles II. and James II. the national church was depressed, and the covenanters persecuted; and the revolution was welcomed (1688) by the great bulk of the nation. The crowns had been conjoined by the personal tie of the sovereign in 1603; the kingdoms were united by legislative union in 1707 (the Scottish church and Scots law being maintained intact), in spite of a good deal of Scottish discontent; and it was mainly the highlanders who, in 1715 and 1745, rose in defense of the claims of the family of the exiled James II., under the old and the young pretenders. From this time the history of Scotland may be regarded as merging in that of Great Britain.

Servia.—Servia was anciently inhabited by Thracian tribes; subsequently it formed part of the Roman province of Moesia. It was afterward occupied in succession by Huns, Ostrogoths, Lombards, Avares, and other tribes. The Servians entered it in the seventh century, and were converted to Christianity in the next century. They acknowledged the supremacy of the Byzantine emperors, but later made themselves independent, and under Stephen Dushan (1336-56) the kingdom of Servia included all Macedonia, Albania, Thessaly, northern Greece and Bulgaria.

About 1374 a new dynasty ascended the throne in the person of Lazar I., who was captured by the Turks at the battle of Kossovo (in Servia) in 1389, and put to death. Servia now became tributary to Turkey. About the middle of the fifteenth century it became a Turkish province, and so remained for nearly 200 years. By the peace of Passarowitz, in 1718, Austria received the greater part of Servia, with the capital, Belgrade. But by the peace of Belgrade, in 1739, this territory was transferred to Turkey. The barbarity of the Turks led to several insurrections.

Early in the nineteenth century Czerni-George placed himself at the head of the malcontents, and, aided by Russia, succeeded after eight years of fighting in securing the independence of his country by the peace of Bucharest, 1812. The war was renewed in 1813, and the Turks prevailed. In 1815 all Servia rose in arms under Milosh, and after a successful war obtained complete self-government, Milosh being elected hereditary prince of the land. Milosh was compelled to abdicate in 1839, and was nominally succeeded by his son Milan, who died immediately, leaving the throne to his brother Michael. In 1842 this prince was compelled to follow the example of his father and quit the country.

Alexander Kara-Georgevitch, son of Czerny George, was elected in his stead; but in December, 1858, he also was forced to abdicate. Milosh was then recalled, but survived his restoration little more than a year. His son Michael succeeded him (1860), but was assassinated by the partisans of Prince Alexander July 10, 1868. The princely dignity was then conferred on Milan (Obrenovitch), grand-nephew of Milosh.

After the fall of Plevna, in the Russo-Turkish war of 1877-8, Servia took up arms against Turkey, and by the treaty of Berlin (July, 13, 1878) it obtained an accession of territory and the full recognition of its independence. It was erected into a kingdom in 1882. In 1885 a short war took place between Servia and Bulgaria, resulting in favor of the latter. In 1889 Milan abdicated in favor of his son Alexander I. He and his queen were assassinated in 1903 and Peter Kara-Georgevitch succeeded.

References.—Vivian's *Servia* and *The Servian Tragedy*; Miller's *The Balkans*; Mijatovitch's *Servia and the Servians*.

Siam appears to have no place in history prior to A. D. 638, and the credible records go back only to 1350, the date of the foundation of Ayuthia, the old capital. The Portuguese established intercourse with Siam in 1511, but in the seventeenth century were gradually supplanted by the Dutch. English traders were in Siam very early in the seventeenth century, but in consequence of a massacre their factory at Ayuthia was abandoned in 1688. The French were expelled about the same time, and the trade was neglected until 1856, when Sir John Bowring's treaty again opened up Siam to Europeans. Since that date western ideas of civilization have been introduced to some extent, and a few of the Siamese youth are now sent to Europe for their education.

The present king is Chulalonkorn I., who was born in 1853, and succeeded his father in 1868. Like his father, he has had an English education, and is an enlightened ruler. Recently considerable portions of Siamese territory next Cambodia and partly on the west of the Mekong have been acquired by France, the last treaty being in 1907. A great area in eastern Siam is also recognized as under French influence, and, in 1909, Great Britain obtained important rights in a number of Malay states.

References.—Henri d'Orléans' *Around Tonkin and Siam*; Smyth's *Journeys on the Upper Mekong* and *Five Years in Siam*; Young's *The Kingdom of the Yellow Robe*; McCarthy's *Surveying and Exploring in Siam*; Campbell's *Siam in the Twentieth Century*; Thompson's *Lotus Land*.

Spain was first known to the Phenicians, subsequently to the Carthaginians, and, in the third century before the birth of Christ, to the Romans. It was completely subdued under Augustus, after which it enjoyed tranquillity for nearly 400 years. This state of peace was disturbed by the irruption of the barbarians—the Visigoths, the Suevi, the Vandals and the Alani. Christianity was introduced about the end of the sixth century, the invasion of the Moors took place in the beginning of the eighth, and they overran the whole country except the Asturias. They were finally expelled in the year 1492.

Under Charles V., Spain made a great figure in the general affairs of Europe. He reigned forty years, and, in 1556, abdicated in favor of his son, Philip II., who died in 1598, and bequeathed to his successor, Philip III., Belgium, Naples, Sicily, and Portugal. Charles II., the last prince of the Austrian branch, reigned from 1668 to 1700; after which began the well-known war for the succession of the Spanish dominions, in which the claim of Austria was supported by the grand alliance against Louis XIV. Notwithstanding the opposition of the allies, however, the grandson of Louis XIV. reigned in Spain, relinquishing the Belgic provinces to the house of Austria.

Philip V., the first king of the French line, had a long and turbulent reign. After him Ferdinand VI., a prudent prince, introduced various reforms, and maintained peace; but,

he dying in 1759, his son, Charles III., went to war with Great Britain. Peace ensued in 1763, and continued till 1778, when Spain, at first neutral in the American war of independence, was prevailed on to take up arms against England, and obtained, at the peace of 1783, the Floridas and Minorca.

Charles IV. succeeded to the crown in 1788, and became soon after a party to the coalition against republican France, which then declared war, and invaded Spain, but was, after Prussia, the first of the great powers to conclude a treaty of peace, in 1795. In little more than a year after this, the cabinet of Spain joined its late opponent, and declared war against Britain. The abdication of the royal family of Spain took place at Bayonne, in May, 1808. It was followed by the general resistance of the inhabitants to the invasion of their country by Napoleon I., and by the subsequent expulsion of the French by the troops of Great Britain combined with those of Portugal and Spain.

The dissatisfaction and indignation excited by the tyrannical proceedings of Ferdinand led, in the beginning of 1820, to a revolution of great importance, by which the constitution of the cortes, as established in 1812, was restored, and such salutary restraints established on the power of the crown as seemed best calculated for securing the rights of the people.

In 1823 Spain was again invaded by French troops, under the Duc d'Angoulême, whose object was to put down the new government, and to restore Ferdinand to absolute power. They penetrated the country without resistance; and, having laid siege to Cadiz, the king was given up to them, and afterward the town. In 1833, on the death of Ferdinand VII., the queen-mother, Christina, was appointed queen-regent during the minority of her daughter Isabella, to whom, by his will, he bequeathed his throne. On this, Don Carlos, the late king's brother, laid claim to the crown, when a civil war, which lasted till 1840, ensued. In that year, the partisans of Don Carlos were finally defeated.

The next event of importance was the contest between Espartero, the regent, and the queen-dowager Christina, for the supreme power during the minority of the queen. Espartero was successful from 1840 to 1843, but was compelled to flee before O'Donnell and Narvaez, and was not restored till 1847. Espartero's success had obliged Christina to retire to France, whence she returned after his fall, Narvaez and the moderados having control of the government. Isabella was now declared of age, married her cousin, Francis of Assisi, and succeeded to the throne as Isabella II.

During her reign Spanish history presented a dismal picture of faction and intrigue, the queen leading a dissolute life, and the liberals and conservatives successively gaining control of the government. The disputes finally ended in a successful revolt of the liberals, the queen being obliged to fly to France, and the throne being offered in 1870 to Amadeus, a son of Victor Emmanuel. Finding his task too difficult, he resigned in 1873.

A republic was now formed, with Castelar as its leading spirit, but it was soon brought to an end, and the throne was offered, in 1874, to Alfonso, the young son of the exiled Queen Isabella. The death of Alfonso XII., at the early age of twenty-eight, in 1885, threw upon his widow, Maria Christina of Austria, the burden of the regency (till 1902) for her then unborn son, Alfonso XIII., the present king (born May, 1886). During her regency the material progress of the nation was considerable, and the financial condition became more hopeful.

Owing to the bad faith of the conservative party (1879), the promise made by Martinez Campos of reforms in Cuba was broken, and the secession of the colony became inevitable. All that was left of the old Spanish empire of the west was lost in the consequent war with the United States in 1898, and Spain was free of what for years had been a burden to her.

In May, 1906, King Alfonso married Princess Victoria Eugenie, daughter of Prince Henry of Battenberg, the youngest sister of the late King Edward VII. The life of the king has been attempted several times, and at the beginning of 1911 the spirit of popular government threatened to overturn the monarchy.

References.—Burke's *History of Spain*; Hume's *Spain, Its Greatness and Decay*, and *History of Modern Spain*; Watt's *Spain*, Story of the Nations Series; Lane-Poole's *The Moors in Spain*, Story of the Nations Series; Meyrick's *The Church in Spain*; Seymour's *Saunterings in Spain*.

Sweden.—The history of Sweden before the union of Calmar in 1397 is rather obscure in its earlier part and rather confused throughout. Christianity was introduced by German missionaries in the ninth century, and the first Christian king, Olaf Skötkonung, ascended the throne about 1001, but for some time after there was a keen conflict between the Christian and the pagan parties.

One of the most notable men of this early time was Birger Jarl, a sort of mayor of the palace under Eric the Stammerer (1222-50), who gained so strong a position that he was able to place his son Valdemar on the throne in 1250. Valdemar was dethroned by his brother, Magnus Ladulos (1275–90), a vigorous ruler and wise lawgiver. Sweden and Norway came under the same king in the person of Magnus Smaek, a nephew of Birger, in 1319, and with him began the series of events which led to the union of the three Scandinavian kingdoms under Margaret of Denmark and her nephew Eric of Pomerania (Eric XIII.) in 1397.

Margaret died in 1412, and thereafter Eric XIII. ruled alone; but his incompetence and oppression drove the Swedes to revolt under Engelbrecht Engelbrechtsson, and in 1436 he was compelled to appoint Charles Canutson, as regent in Sweden. In 1448 Christian of Oldenburg became king of Denmark and Norway, but the Swedes proclaimed Charles Canutson king; and after banishments and recalls he died king of Sweden in 1470. Sten Sture the Elder, a nephew of Canutson, was appointed administrator in 1471, and King Christian was defeated in an attempt to enforce his claims. Christian died in 1481, and was succeeded by his son Hans, who invaded Sweden and established his authority in 1497. Sture was, however, recalled by the Swedes in 1500, and ruled till his death, in 1503.

Christian II. succeeded his father Hans in 1513, and thrice invaded Sweden. Sten Sture the Younger was defeated and mortally wounded, and Christian was crowned at Stockholm in 1520. He signalized his coronation by wholesale executions, notably the Blood Bath of Stockholm, and in consequence a rebellion took place in 1521 under Gustavus Vasa, who in 1523 was proclaimed independent king of Sweden.

Gustavus Vasa, whose reign extended from 1523 to 1560, introduced the Lutheran religion as that of the state, and in 1544 he made the monarchy hereditary. He was succeeded by his eldest son, Eric XIV., a cruel and half-insane man, who was deposed in 1568 by his brother John. John ascended the throne as John III., and caused Eric to be poisoned in 1577. He concluded the peace of Stettin, by which the separation of Sweden from Denmark and Norway was definitely ratified. John's son, Sigismund, who came to the throne in 1592, was brought up in the Catholic faith in Poland, but he undertook to maintain Protestantism in Sweden. He did not keep his promise, and was deposed in 1599, Duke Charles of Södermanland, youngest son of Gustavus Vasa, being appointed regent.

In 1604 the regent was proclaimed king as Charles IX. On his death, in 1611, his son Gustavus II. (Gustavus Adolphus) ascended the throne. This famous monarch, aided by his chancellor, Axel Oxenstjerna, reorganized the administration of the country, promoted industry, commerce, and education, and strengthened the army and navy. He negotiated the conclusion of wars begun by his father against Denmark and Russia, and played a great part in Germany as the champion of Protestantism during the Thirty Years' war. He met his death at the battle of Lützen, in 1632, and was succeeded by his daughter Christina.

The peace of Westphalia, which ended the Thirty Years' war, in 1648, added to Sweden Bremen, Verden, and a large part of Pomerania, while Sweden already possessed, on the Russian side of the Baltic, Livonia, Esthonia, and other territories. Christina, who had left the real work of government to Oxenstjerna, abdicated in 1654, leaving as her successor Charles X., son of a sister of Gustavus Adolphus. Charles' short reign (1654–60) was mostly occupied by wars with Poland and Denmark. Charles XI., son of his predecessor, came to the throne at the age of four.

The country was then long under a council of regency, but Charles assumed the government in 1672. He reorganized the army, adopting a regular system of conscription, and restored the finances. He died in 1697, and was succeeded by his son, the celebrated Charles XII. His career of conquest ended in the disastrous battle of Poltava, July 8, 1709, and he was killed at the siege of Fredrikshald, November 30, 1718, while pushing the conquest of Norway. He was succeeded by his sister, Ulrica Eleonora, who in 1720 resigned the government to her husband, Frederick I., crown-prince of Hesse-Cassel. The absolute authority which the crown had enjoyed under Charles XI. and Charles XII. was checked by the power of the nobles, and Sweden now lost most of her great oversea possessions—Livonia, Esthonia, Ingermanland, part of Finland, etc.

The struggles of the Hats and Caps, the former a war party, and the latter in favor of peace, began at this time. On the death of Frederick, in 1751, Adolphus Frederick of Holstein-Gottorp was elected king. During his reign the country was distracted by the rivalries of the Hats and Caps, and the royal power sank to a shadow. Adolphus died in 1771, and was succeeded by his son Gustavus III., whose reign was distinguished by a monarchical revolution. He was assassinated at a ball by Count Ankarström in 1792. His son Gustavus IV. was deposed, and his family declared forever incapable of succeeding to the crown, in 1809. His uncle, the duke of Södermanland, was declared king with the title of Charles XIII. Finland was finally ceded to Russia in 1809.

In 1810 the states elected Jean Baptiste Bernadotte crown prince. In the final struggle with Napoleon previous to 1814 Sweden joined the allies, while Denmark took the part of France. By the treaty of Kiel (1814) Sweden ceded to Denmark her last German possessions in Pomerania, while Denmark was compelled to cede Norway to Sweden. Norway resisted the cession, and accepted Charles as king only when he had agreed to their free constitution as a separate state. Bernadotte succeeded to the crown in 1818, under the title of Charles XIV. He died in 1844, and was succeeded by his son Oscar I., whose reign was singularly peaceful and uneventful. He died in 1859, and was succeeded by his son Charles Louis Eugene, under the title of Charles XV., whose reign was marked by constitutional reforms. Charles XV. died in 1872, and was succeeded by his brother Oscar II., a wise and prudent ruler. In 1905 the union between Norway and Sweden was dissolved by mutual agreement after negotiation and after the Norwegian legislature had decreed its dissolution. Oscar II. died in December, 1907, and was succeeded by his son Gustavus V., who reconstructed the ministry in 1909.

References.—Montelius' *Civilization of Sweden in Ancient Times*; Thomas' *Sweden and the Swedes*; Baker's *Pictures of Swedish Life*; Bain's *Scandinavia*; Kennedy's *Thirty Seasons in Scandinavia*.

Switzerland.—The original inhabitants of Switzerland were the Celtic Helvetii, and the Rhætii, of doubtful affinity; both were conquered by Julius Cæsar and the generals of Augustus, and Romanized. Overrun by the Burgundians in the west, and their Germanic kinsmen, the Alemannians on the north, Helvetia became subject to the Frankish kings and was Christianized in the seventh century. Most of the country was subsequently part of the Holy Roman empire; and in

1273 a Swiss noble, Rudolf of Hapsburg in Aargau, became German emperor.

Soon after Rudolf's death (in 1291) the inhabitants of Uri, Schwyz, and Unterwalden formed a league to defend their common interests, and in 1315 crushed an Austrian army at Morgarten. In 1332 Lucerne joined the alliance, and in 1353, Bern, Zurich, Glarus, and Zug. The Austrians were again routed at Sempach in 1386, and in 1388 at Näfels. The Swiss next had a fierce but triumphant struggle with Charles the Bold of Burgundy, whom they routed at Grandson and Morat in 1476, and finally at Nancy (where Charles was slain) in 1477.

When the reformation began there were thirteen cantons, and the cantons took opposite sides from the beginning, not without serious turmoil and bloodshed. The treaty of Westphalia in 1648 recognized Switzerland as an independent state. Some of the cantons were strictly aristocratic and some highly democratic, and there was much discontent long before the French revolution, when, in 1798, between civil strife and French armies, the old republic (or rather alliance) came to an end.

The Helvetic republic of nineteen cantons, under French auspices, endured till 1805; then a new republican constitution was adopted, the Federal Pact of twenty-two cantons. On Napoleon's downfall Valais, Neuchâtel, and Geneva, which had been incorporated with France, were restored, and Swiss neutrality and inviolability were recognized by the treaty of Vienna in 1815. Religious troubles led to a Catholic league in 1844, which was suppressed by the Federal forces in 1847. The present constitution was adopted in 1848, but revised in 1874. The most important recent event was the purchase of the railway lines by the state in 1898.

References.—McCrackan's *Rise of the Swiss Republic*; Vincent's *Government in Switzerland*; Adams and Cunningham's *The Swiss Confederation*; Dawson's *Social Switzerland*; Coolidge's *The Alps in Nature and History*.

HISTORIC TREATIES AND ALLIANCES

Name of Treaty	Date	Character or Result
Adrianople.	1829	Adrianople restored to Turkey by the Russians.
Aix-la-Chapelle.	1748	Between Great Britain, France, Holland, Hungary, Spain, and Genoa. A number of previous treaties renewed and confirmed.
	1818	Between the Allies and France. The latter pays 265,000,000 francs to the Allies.
Amiens	1802	Treaty of peace between Great Britain and Holland, France, and Spain.
Augsburg, League of	1686	Between Holland and other European powers to enforce respect for the treaties of Munster and Nimeguen.
Baden	1714	Terminating the war of the Spanish succession between France and the emperor.
Basle	1795	Between France and Prussia and between France and Spain.
Berlin decree	1806	Issued by Napoleon I. against the commerce of England.
Breda	1667	Treaty between England, Holland, France, and Denmark.
Breslau	1742	Between Maria Theresa of Austria and Frederick II. of Prussia.
Bretigny	1360	Treaty of peace that interrupted the Hundred Years' war between England and France.
Calmar, Union of	1397	United Denmark, Sweden, and Norway under Queen Margaret of Denmark.
Cambray	1508	League against Venice, comprising the pope, the emperor, and the kings of France and Spain.
Cambray, Peace of	1529	Between Francis I. and Charles V.
Campo Formio, Peace of	1797	Between France and Austria.
Carlowitz, Peace of	1699	Between Turkey and Austria, Poland and Venice. Humiliating concessions made by Austria.
Carlsbad, Congress of	1819	Held by the German powers to protest against the progress of free institutions and popular rights.
Coalitions against France	1792-1813	Led by England for the purpose of breaking down the French influence in Europe.
Concordat	1801	Between Napoleon I. and Pius VII., whereby the former was made in effect head of the Gallican church.
Constance	1183	Between Frederick Barbarossa and the Lombard cities.
Copenhagen	1660	Between Denmark and Sweden.
Fontainebleau	1807	Between Napoleon and the royal family of Spain.
Frankfort	1871	Conclusion of the preliminary treaty of Versailles.
Gastein, Convention of	1865	Between Prussia and Austria.
Ghent	1814	Between United States and England, closing war of 1812.
Hague	1659	Between England, France, and Holland, with a view to preserve the equilibrium of northern Europe.
Hamburg	1241	League with Lubeck, giving rise to the Hanseatic league.
Holy Alliance	1815	A league between the emperors of Russia and Austria and the King of Prussia, by which they ostensibly bound themselves to Christian principles in political matters.
Hubertsburg	1763	Peace between Austria, Prussia, and Saxony.
Jay's treaty	1794	Between the United States and Great Britain.
Kiel	1814	Between Denmark, Sweden, and England. Norway and Sweden united.
Kutchuk-Kainardji	1774	Between Turkey and Russia.
League, Catholic	1576	Formed to prevent the accession of Henry IV. of France.
London	1840	Quadruple treaty between Great Britain, Austria, Prussia, and Russia on the one hand and Turkey, touching the states of Egypt.
Luneville	1801	Between France and Austria and the German empire.
Madrid	1526	Treaty between Charles V. and Francis I.
Munster	1648	Between France and the Kingdom of Sweden. By this peace, the principle of a balance of power in Europe was first recognized.
Nankin	1842	Ended the opium war between Great Britain and China.
Nantes, Edict of	1598	Henry IV. of France granted toleration to the Huguenots.
Nystadt	1721	Closed the war between Sweden and Russia.
Paris, Treaties of	1763	Terminated the Seven Years' war in Austria, and the French and Indian war.
	1783	Terminated the American Revolutionary war.
	1814	Settled the war between France and
	1815	the Coalition.
	1856	Terminated the Crimean war.
	1898	Terminated the Spanish-American war.
Partition of Poland	1772	Secret treaty between Russia and Prussia at St. Petersburg.
	1795	Between Russia, Austria, and Prussia.
Passau	1552	Securing the liberties of German Lutherans.
Perry's treaty	1854	Commercial treaty between United States and Japan.
Portsmouth	1905	Treaty between Japan and Russia, closing the Russo-Japanese war.
Prague	1866	Peace between Prussia and Austria.
Presburg	1805	Between France and Austria; ancient states of Venice ceded to Italy, and independence of Switzerland stipulated.
Pretoria	1902	Terminated the Boer war between Great Britain and Transvaal.
Pyrenees	1659	Between France and Spain; mutual concessions of territory made.
Quadruple Alliance	1718	Between Great Britain, France, the emperor, and Holland, for the purpose of guaranteeing the succession of the reigning families in Great Britain and France, and settling the partition of the Spanish monarchy.
Rastadt	1714	Between France and Austria.
Rastadt, Congress of	1797	Between France and the empire, established a general peace with the Germanic powers.
Ratisbon	1806	Secession of the Germanic princes from the empire, to the cause of Napoleon, forming the Confederation of the Rhine.
Ryswick	1697	Between France and the allied powers, closing the war of the "Patch Note."
St. Clair-Sur-Epte	911	Terminated the war between the Norse under Rolla and Charles the Simple of France.
Saint Germain	1570	Between the Catholics and Huguenots.
San Stefano	1878	This treaty, supplemented by the Congress of Berlin, closed the Russo-Turkish war.
Schonbrunn	1809	Treaty between France and Austria.
Shimonoseki	1895	Closed the war between Japan and China.
Thorne	1466	Settled the terms of the Polish conquest of western Prussia.
Tientsin	1858	Between China and each of the nations of Great Britain, France, Russia, and the United States.
Tilsit	1807	Between France and Russia, whereby Napoleon restored to the Prussian monarch one-half of his territories, and Russia recognized the Confederation of the Rhine, and the elevation of Napoleon's brothers, Joseph, Louis, and Jerome, to the thrones of Naples, Holland, and Westphalia.
Tolentino	1797	Between the Pope and the French republic.
Triple Alliance	1668	Between the States-General and England against France for the protection of the Spanish Netherlands. Sweden afterward joined the league.
	1879	Between Austria, Germany, and Italy.

HISTORIC TREATIES AND ALLIANCES—Continued

Name of Treaty	Date	Character or Result
Troyes	1420	Between England, France, and Burgundy, whereby Henry V. of England succeeded to the throne of France.
Ulm	1620	Frederick V. lost Bohemia.
Utrecht	1713	Terminated the wars of Queen Anne of England, and secured the Protestant succession in England, and enlarged British colonization in America.
Utrecht, Union of	1579	Foundations of the Dutch republic laid.
Valencay	1813	Between Napoleon and Ferdinand VII. of Spain, whereby the latter regained full possession of his kingdom upon agreeing to maintain its integrity.
Verdun, Contract of	843	Concluded the war between Lothaire, Louis the German, and Charles the Bald, and settled their respective imperial dominions after the death of their father, Louis the Pious.
Verona, Congress of	1822	Held by the great powers to adjust Spanish and Grecian disturbances.
Versailles	1783	Between Great Britain and the United States at close of American Revolution; the treaty was signed in Paris.
	1783	Between Great Britain, France, and Spain.
	1871	Between France and Germany; William I. proclaimed emperor of Germany.
Vienna	1725	Between the emperor of Germany and the king of Spain, settling the sovereignty over certain parts of the Spanish dominions.
	1731	Treaty of alliance between Germany, Great Britain, and Holland, by which the Pragmatic sanction was granted, and the Spanish succession settled.
	1738	Treaty of peace between Germany and France; Lorraine ceded to France, and France guaranteed the Pragmatic sanction.
	1809	Treaty of peace between Napoleon and Francis I. of Austria. Austria ceded to France the Illyrian provinces.
	1815	Treaty between Great Britain, Austria, Russia, and Prussia, confirming the treaty of Chaumont.
	1815	Treaty between the Low countries, and Great Britain, Russia, Austria, and Prussia, agreeing to the enlargement of the Dutch territories, and vesting the sovereignty in the house of Orange.
	1815	Federative constitution of Germany signed.
Warsaw	1683	Alliance between Austria and Poland against Turkey, in pursuance of which John Sobieski assisted in raising the siege of Vienna.
	1768	Treaty between Russia and Poland.
Washington	1842	Ashburton treaty defined the northwestern boundary between the United States and Canada.
	1871	Between Great Britain and the United States to adjust the Alabama claims.
Westphalia	1648	Treaty of peace between France, Germany, and Sweden, terminating the Thirty Years' war.
Worms, Concordat of	1122	Between the emperor and the pope, closed the long strife called the war of Investitures.
Worms, Diet of	1521	Imperial conclave before whom Luther was summoned and presented.
Zürich	1859	Closed hostilities between Austria and France and Sardinia.

Turkey, or the Ottoman empire, comprises the wide but heterogeneous territories really or nominally subject to the Osmânli sultan, in Europe, Asia, and Africa. These territories which once extended from the Danube to the cataracts of the Nile, and from the Euphrates to the borders of Morocco, were greatly reduced in the nineteenth century.

A small tribe of Turks forced their way into Armenia in the thirteenth century, and helped the Seljûks against the Mongols; in the fourteenth century the Turks under Osmân or Othmân conquered the Seljûk kingdom, and became known as Osmânlis or Ottomans. By 1336 they pushed their way to the Hellespont; under Murâd I. (Amurath) they occupied Adrianople and Philippopolis, received homage from the kings of Servia and Bulgaria, and practically held all the Balkan peninsula except Constantinople, which, after much fighting, fell before Mohammed II. in 1453. In the same century they conquered Albania, Greece, the Crimea, etc.; and in the sixteenth, Syria, Egypt, Tunis, Hungary, and south Russia, and had wars with the Russians, Persians, and Venetians.

Their star began to decline in the seventeenth century; in 1682 they were driven back from Vienna, and lost Hungary, Transylvania, and Podolia. In the eighteenth century the Russians were their most successful enemies, wresting from them the territories from the Dniester to the Caspian. Greece attained independence in 1828, though Egypt failed to throw off its allegiance. The Crimean war (1854-7) was fought in aid of the Turks against the Russians. The next great crisis, after risings in Herzegovina, Bulgaria, and Servia, was the Russian war of 1877-8. The worst Armenian massacres were in 1895-6. Turkey held her own against Greece in 1897; Crete was put under an autonomous government in 1898. But the Macedonian question was acute in 1903-6.

A form of constitution modeled on that of western European countries was suggested by various reformers from 1856-78, but until 1908 the rule of the sultan was based on the precepts of the Koran. On July 24, 1908, an imperial irade promulgated a constitution which embraced an elective legislature. In consequence of a long period of misrule the sultan, Abdul Hamid II., was deposed in 1909, and he was succeeded by his brother, Mohammed V.

References.—Mitchell's *The Greek, the Cretan, and the Turk*; Salmoné's *The Fall and Resurrection of Turkey*; Poole's *Turkey*; Broadhead's *Slav and Moslem*; Brailsford's *Macedonia*; Freeman's *The Ottoman Power in Europe*; Monroe's *Turkey and the Turks*; Warner's *In the Levant*; Lee's *Village Life in Palestine*; Cooke's *Palestine in Geography and History*.

United States.—Exploration.—The territories now occupied by the United States of America, though they were probably visited on their northeastern coast by Norse navigators about the year 1000, continued the sole possession of numerous tribes of Indians (who had succeeded earlier and extinct races), until the discovery of America by Columbus, 1492. In 1498 an English expedition, under the command of Sebastian Cabot, explored the eastern coast of America from Labrador to Virginia, perhaps to Florida. In 1513, Juan Ponce de Leon landed near St. Augustine in Florida, and explored a portion of that region in a romantic search for the fountain of youth. In 1520, some Spanish vessels from St. Domingo were driven upon the coast of Carolina. In 1521, by the conquest of Cortes and his followers, Mexico, including Texas, New Mexico, and California, became a province of Spain. In 1539-42, Ferdinand de Soto led a Spanish expedition from the coast of Florida across Alabama, and discovered the Mississippi river. In 1584-5, Sir Walter Raleigh sent two expeditions to the coast of North Carolina, and attempted to form settlements on Roanoke island.

Colonial Settlements.—A Spanish settlement was made at St. Augustine, Fla., 1565. Jamestown, Va., was settled in 1607; New York, then called the New Netherlands, 1613; Plymouth, Mass., 1620. A large part of the country on the great lakes and on the Mississippi was explored by La Salle in 1682; and settlements were made by the French at Kaskaskia and Arkansas Post, 1685; Mobile and Vincennes, 1702. The first effort at a union of colonies was in 1643, when the settlements in Massachusetts, New Hampshire, Rhode Island and Connecticut formed a confederacy for mutual defense against the French, Dutch, and Indians, under the title of "The United Colonies of New England."

French and Indian War.—They experienced the benefits of united action in 1754, when an English grant of lands to the Ohio company brought on the French and Indian war—the French claiming, at that period, as the first explorers, northern New England, half of New York, and the entire Mississippi valley. George Washington was sent on his first expedition, to remonstrate with the French authorities; and the colonies being advised to unite for general defense, a plan for a general government of all the English colonies was drawn up by Benjamin Franklin; but it was rejected by both the colonies and the crown—by the colonies, who wished to preserve their separate independence, and by the crown from a jealousy of their united strength.

The colonists, however, took an active part in the war. Under Major Washington, they joined General Braddock in his unfortunate expedition against Fort Du Quesne, now Pittsburg; they aided in the reduction of Louisburg, Ticonderoga, Crown Point, Niagara, and Quebec. The English area was enormously increased after the great struggle with France, and, in 1763, by the peace of Paris, France gave up all her claims to Canada and all lands east of the Mississippi and north of Florida. Spain also ceded most of her holdings.

The Spirit of Democracy.—The principles of a democratic or representative government were brought to America by the earliest colonists. The colonies themselves were founded by private adventure, with very little aid from government. The Plymouth colony was for eighteen years a strict democracy, and afterward a republic under a charter from the crown. A representative and popular government was established in Virginia in 1620. It was not until the Protectorate and the reign of Charles II. that the colonies were considered as portions of the empire, to be governed by parliament. Then when navigation acts were passed to give English ships a monopoly of commerce, when the produce of the colonies was required to be sent to England, and duties were levied on commodities sent from one colony to another, protests were made against these assumptions; Virginia asserted her right of self-government; and it was not until the English revolution of 1688 that settled and uniform relations with the different colonies were established.

Introduction of Slavery.—In 1713, by the treaty of Utrecht, England, which, since the reign of Elizabeth, had imported slaves from Africa into her American and West Indian colonies, obtained a monopoly of the slave-trade, engaging to furnish Spanish America, in thirty-three years, with 144,000 negroes. A great slave-trading company was formed in England, one-quarter of the stock being taken by Queen Anne, and one-quarter by the king of Spain, these two sovereigns becoming the greatest slave-dealers in Christendom. By this monopoly, slavery was extended in, and

to some extent forced upon, all the American colonies.

At this period there was a general feeling of loyalty toward the mother country. The sons of the more wealthy colonists, especially in the south, were educated in England; English literature pervaded the colonies; the British throne was the fountain of honor; the colonies, though distinct, and differing in origin and character—Puritan in the east, Dutch Reformed in New York, Quaker in Pennsylvania, Catholic in Maryland, and Church of England in Virginia—were yet united by language, common ties, fears, and interests.

Union and Independence.—In 1761 the enforcement of the navigation act against illegal traders, by general search-warrants, caused a strong excitement against the English government, especially in Boston. In 1765 the passing of an act of parliament for collecting a colonial revenue by stamps caused general indignation, and led to riots. In 1766 the stamp act was repealed; but in 1767 duties were levied on glass, paper, printer's colors, and tea. This renewed attempt met with a general resistance, and cargoes of tea were thrown into the harbor of Boston. To punish this measure, parliament passed the Boston Port Bill, 1774, by which the chief town of New England was no longer a port of entry, and its trade transferred to Salem.

To enforce the act of the government, a fleet conveying 10,000 troops was sent from England, while the colonists prepared to resist the unconstitutional assumptions of the mother country. The first encounter took place at Lexington, April 19, 1775. A congress of the colonies assembled at Philadelphia, which resolved to raise an army of 20,000 men, and appointed George Washington commander-in-chief. June 17, Bunker Hill, in Charlestown, near Boston, where 1,500 Americans had hastily intrenched themselves, was taken by assault by the British troops, but with so heavy a loss that the defeat had for the Americans the moral effect of a victory. After a winter of great privations, the British were compelled to evacuate Boston, carrying away in their fleet to Halifax 1,500 loyal families.

The British government now put forth a strong effort to reduce the colonies to submission. An army of 55,000 men, including 17,000 German auxiliaries (Hessians) was sent, under the command of Sir William Howe, to put down this "wicked rebellion." On June 7, 1776, Richard Henry Lee, of Virginia, offered a resolution in congress, declaring that "the united colonies are, and ought to be, free and independent states; that they are absolved from all allegiance to the British crown; and that all political connection between them and the state of Great Britain is, and ought to be, totally dissolved."

Declaration of Independence.—This resolution, after an earnest debate, was adopted by the votes of nine out of thirteen colonies. A committee, consisting of Thomas Jefferson, John Adams, Benjamin Franklin, Roger Sherman, and Robert R. Livingston, was instructed to prepare a declaration in accordance with the above resolution; and on July 4, 1776, the Declaration of Independence received the assent of the delegates of the colonies, which thus dissolved their allegiance to the British crown, and declared themselves free and independent states, under the general title of the Thirteen United States of America.

War of the Revolution.—The first campaign of the war was disastrous for the Americans, and for the moment the prospects of the cause of freedom looked gloomy. But in the midst of the general despondency, Washington, sustained by the firmness of Congress, maintained his fortitude and confidence in final success. Carefully watching the opportunity to retrieve the credit of the American army, he defeated the British forces at Trenton, December 25, 1776; and his exploits in the following campaigns revived the spirit of the nation, and confounded and dismayed the enemy.

In 1780 England sent an additional force of 35,000 troops, and a strong effort was made to subjugate the Carolinas, where the war became of a bitter partisan character, and was conducted with spirit by Sumter, Marion, and other southern chieftains. Lord Cornwallis, with a large army, marched from Charleston, through North Carolina, and arrived in Virginia, where he was confronted by Lafayette, Wayne, and Steuben. In the meantime, Admiral de Terney had arrived upon the coast with a powerful French fleet, and 6,000 soldiers of the élite of the French army, under Count de Rochambeau. Cornwallis was obliged to fortify himself at Yorktown, blockaded by the fleet of Count de Grasse, and besieged by the allied army of French and Americans, waiting for Sir Henry Clinton to send him relief from New York. October 19, 1781, he was compelled to surrender his army of 7,000 men.

This event produced such a change of feeling in England as to cause the resignation of the ministry, and the dispatch of General Sir Guy Carleton to New York with an offer of terms of peace. The preliminaries were signed at Paris, November 30, 1782; and on September 3, 1783, peace was concluded between England and France, Holland, and America. The independence of each of the several states was acknowledged, with a liberal settlement of territorial boundaries. In April a cessation of hostilities had been proclaimed, and the American army disbanded; New York, which had been held by the English through the whole war, was evacuated November 25th; and on December 23 General Washington took leave of his companions in arms, and resigned into the hands of Congress his commission as commander.

The Constitution.—In 1787 a national convention met at Philadelphia, May 14, and after four months' deliberation adopted the present constitution of the United States, and submitted it to the people for ratification. After a thorough discussion, lasting in some of the states for two or three years, the constitution was accepted by all of them; first by Delaware, December 7, 1787, and lastly by Rhode Island, May 27, 1790. This constitution, which still remains the basis of the government, came into operation in March, 1789, and George Washington was elected the first president.

Organization of the Government.—The Congress appointed by the thirteen states then proceeded to impose duties, establish a federal judiciary, organize the executive administration, fund the debt of the United States, and establish a national bank. In 1793 Washington was unanimously reëlected president. During his administration the states of Vermont, Kentucky, and Tennessee were admitted into the union.

In 1796 Washington, worn and irritated by partisan conflicts and criticisms, refused a third election, and issued his farewell address to the people of the United States, warning them against the dangers of party-spirit and disunion, and giving them advice worthy of one who was said to be "first in war, first in peace, and first in the hearts of his countrymen." John Adams was elected president; and Thomas Jefferson, the second choice of the people for the presidency became according to the rule at first adopted, vice-president. In 1798 the commercial regulations of France, and the assertion of the right to search and capture American vessels, nearly led to a war between the two republics. In 1799 the nation, without distinction of party, mourned the death of Washington; and, in the following year, the seat of government was removed to the city he had planned for a capital, and which bears his name.

Fall of the Federalists.—The partiality of Mr. Adams for England, the establishment of a federal army, and the passing of the alien and sedition laws, by which foreigners could be summarily banished, and abuse of the government, by speech or the press, punished, caused great political excitement, and such an increase of the Republican, or, as it was afterward called, the Democratic party, that the president failed of reëlection in 1801; and there being no election by the people, the House of Representatives, after thirty-five ballotings, chose Thomas Jefferson, the Republican candidate, with Aaron Burr for vice-president; and the offices of the country were transferred to the victorious party.

The New Domestic Policy.—Internal duties, which a few years before had led to an insurrection in Pennsylvania, called the whisky insurrection, were abolished, and the alien and sedition laws repealed. Tennessee, Kentucky, Vermont, and Ohio had now been organized as states, and admitted into the union. In 1803 the area of the country was more than doubled by the purchase of Louisiana—the whole region between the Mississippi and Rocky mountains—from France for $15,000,000. The infant navy waged a successful war with Tripoli. In 1805 Mr. Jefferson was elected for a second term; but Burr, having lost the confidence of his party, engaged in a conspiracy to seize upon the Mississippi Valley, and found a new empire, with its capital at New Orleans. He was tried for treason, but not convicted.

The commerce of America at this period was highly prosperous, her ships enjoying much of the carrying trade of Europe; but in May, 1806, England declared a blockade from Brest to the Elbe, and Bonaparte, in November, decreed the blockade of the coasts of the United Kingdom. American vessels were captured by both parties, and were searched by British ships for British subjects; and those suspected of having been born on British soil, were, in accordance with the doctrine, "once a subject always a subject," impressed into the naval service.

Even American men-of-war were not excepted from this process. The British frigate *Leopard* meeting the American frigate *Chesapeake*, demanded four of her men, and on refusal, fired into her, and the surprised *Chesapeake* struck her flag. British ships were thereupon forbidden United States harbors.

Jefferson, following the example of Washington, declined a third election; and, in 1809, James Madison became president. The French decrees, prejudicial to neutral commerce, were revoked in 1810; but the English continued a source of loss and irritation, while hundreds of Americans citizens were in forced service in British vessels. The feeling was increased by a night encounter between the American frigate *President* and the British sloop-of-war *Litte Belt*, May 16, 1811.

War of 1812.—In April, 1812, an embargo was again declared by Congress, preparatory to a declaration of war against Great Britain, July 19, for which Congress voted to raise 25,000 enlisted soldiers, 50,000 volunteers, and 100,000 militia. General Hull, with 2,000 men at Detroit, invaded Canada; but on being met by a small force of British and Indians, under General Brock, recrossed the river, and made a shameful surrender. He was sentenced to death for his cowardice, but pardoned by the president. A second invasion of Canada was made near Niagara falls by General Van Renssalaer. One thousand American militia stormed the heights of Queenstown, and the British general, Brock, was killed; but reinforcements arriving opportunely, the heights were retaken

American disasters on the land were, however, compensated by victories at sea. August 19 the United States frigate *Constitution* captured the British frigate *Guerriere;* October 18 the *Wasp* took the *Frolic;* October 25 the frigate *United States* captured the *Macedonian;* December 29 the *Constitution* took the *Java.* American privateers took 300 British vessels and 3,000 prisoners.

In 1813, general Proctor crossed the Detriot river with a considerable force of British and Indians, and defeated General Winchester, with the usual results of savage warfare. In April an American army of 1,700 men captured York (now Toronto), and about the same time another American force of 800 men was defeated with great loss by the Indians under Tecumseh; but the remainder of this campaign was wholly favorable to the Americans. The attempt of the British general, Prevost, on Sackett's Harbor was repulsed; the squadron on Lake Erie, consisting of six vessels, sixty-three guns, was captured by Commodore Perry at the head of an American flotilla of nine vessels, fifty-four guns and this latter success enabled General

Harrison to invade Canada, where he defeated General Proctor in the battle of the Thames, in which the great Indian warrior-chief Tecumseh was killed.

Later, another invasion of Canada was attempted; and York was taken by General Dearborn; and an unsuccessful attempt was made to take Montreal. Villages were burned on both sides. The British also destroyed American shipping in Delaware bay. At the same period General Jackson defeated the Creek Indians in Alabama and Georgia, who had been excited to make war upon the frontier settlements.

In 1814 Generals Scott and Ripley crossed the Niagara, and sharp actions, with no decisive results, were fought at Chippewa and Lundy's Lane, close by the great cataract. General Wilkinson also invaded Canada on the Sorell river, but was easily repulsed. A British invasion, via Lake Champlain, by General Sir George Prevost, with 14,000 men and a flotilla on the lake, was not successful. On the 6th of September, the flotilla was defeated and captured in the harbor of Plattsburg, while the army was repulsed on shore, and retreated with heavy loss.

In August a British fleet ascended Chesapeake bay, took Washington with but slight resistance, and burned the government buildings. A subsequent attack on Baltimore was unsuccessful. New York, New London, and Boston were blockaded, and a large expedition was sent against Mobile and New Orleans.

On January 8, 1815, General Packenham advanced with 12,000 men against the latter city, which was defended by General Jackson, at the head of 6,000 militia, chiefly from Tennessee and Kentucky, aided by a small force of artillery. The Americans were sheltered by a breast-work, and the British assault was met with so deadly a fire of riflemen, that it was repulsed, with the loss of General Packenham and several others, with 700 killed and 1,000 wounded; while the entire American loss is stated to have only amounted to 71. This ill-planned and unfortunate action was fought more than a month after peace had been concluded between England and America, and was followed by two naval actions in February and March.

Though during this contest fortune at first favored the Americans on the high seas, she changed sides completely from June, 1813, as if to counterbalance the disasters of the British on land. June 1 the *Chesapeake* was taken by the *Shannon*; June 3 the *Growler* and *Eagle* were captured by British gunboats; the *Argus* was taken by the *Pelican* August 14; the *Essex* by the *Phoebe* and *Cherub* March 29, 1814; the *President* by the *Endymion* January 15, 1815; the only counterbalancing success being the sinking of the British sloop *Avon* by the *Wasp* September 8, 1814.

In December, 1814, the Federalists of New England held a convention at Hartford in opposition to the war and the administration, and threatened a secession of the New England states. In 1815 Commodore Decatur, who had taken a distinguished part in the recent war, commanded an expedition against the Algerians—whose corsairs had preyed on American commerce in the Mediterranean—and dictated terms to Algiers, Tunis, and Tripoli.

The Democratic-Republican party having brought the war to a satisfactory conclusion, the Federalists disappeared; and in 1817 James Monroe was elected to the presidency, almost without opposition, in what was termed "the era of good feeling." A rapid emigration from Europe and from the Atlantic states to the richer lands of the west, had in ten years added six new states to the union. Difficulties arose with the warlike southern Indian tribes, whose hunting-grounds were invaded; and General Jackson, sent against the Seminoles, summoned to his aid the Tennessee volunteers who had served under him against the Creeks and at New Orleans, defeated them, pursued them into Florida, took Pensacola, and banished the Spanish authorities and troops. In 1819 Florida was ceded by Spain to the United States.

Missouri Compromise.—In 1819 Alabama and Maine, a slave and a free state, were added to the union; and the question of the admission of Missouri arose in Congress—the question of its admission with or without slavery. At the period of the Revolution slavery existed in all the states except Massachusetts; but it had gradually been abolished in the Northern and Middle states, except Delaware, and excluded from the new states between the Ohio and Mississippi by the terms on which the territory had been surrendered by Virginia to the union.

Under the constitution, slaves were not counted in full as a represented population; but by a compromise, three-fifths of their numbers were added to the whites. The slave states were almost exclusively agricultural, with free-trade interests. The free states were encouraging manufactures by protection. The two sections had already entered upon a struggle to maintain the balance of power against each other. After an excited contest, Missouri was admitted, with a compromise resolution, that in future no slave state should be erected north of the parallel of 36 degrees 30 minutes north latitude, the northern boundary of Arkansas.

During the second term of Mr. Monroe, in 1824, General Lafayette visited America, and was everywhere received with great enthusiasm.

In the presidential election of 1824 there were four candidates—John Quincy Adams, Andrew Jackson, Henry Clay, and William H. Crawford. There being no choice by the people, the House of Representatives chose Mr. Adams; John C. Calhoun being elected vice-president. Party and sectional feeling became stronger. Mr. Adams and Mr. Clay, who had heretofore acted with the party of Jefferson and Madison, were henceforth identified with what was called the National Republican, and later, the Whig, and finally, in union with the Anti-Slavery party, the Republican party.

National Democracy.—The four years of Mr. Adams, during which there were violent contests on protection and the powers of the federal government to carry out public works within the states, ended with an excited election contest, which resulted in the triumph of the Democratic party, and the election of Andrew Jackson, with John C. Calhoun as vice-president. The bold, decisive, and impetuous character of General Jackson was shown in a general removal of those who held office, down to small postmasters and tide-waiters, under the late administration, and the appointment of his own partisans. An act for the rechartering of the United States bank was met by a veto of the president, who declared it unconstitutional and dangerous.

In 1832 an Indian war, called the Black Hawk war, broke out in Wisconsin; but the passing of a high protective tariff act by Congress caused a more serious trouble. The state of South Carolina declared the act unconstitutional, and therefore null and void, threatening to withdraw from the union if any attempt were made to collect the duties on foreign importations. The president prepared to execute the laws by force; Mr. Calhoun resigned his office of vice-president, and asserted the doctrine of state-rights, including the right of secession, in the senate. A collision seemed imminent, when the affair was settled by a compromise bill, introduced by Henry Clay, providing for a gradual reduction of duties, until 1843, when they should not exceed 20 per cent ad valorem.

The popularity of General Jackson caused his reëlection by an overwhelming majority against Henry Clay, the leader of the Bank, Protection, and Internal Improvement party; and he entered upon his second term with Martin Van Buren of New York as vice-president. The removal of the government deposits from the United States bank to certain state banks led to the failure of the bank, and, after some years, to the adoption of Mr. Van Buren's plan of an independent treasury.

The Cherokee Indians in Georgia, who had attained to a certain degree of civilization, appealed to the president for protection against the seizure of their lands by the state; but they were told that he "had no power to oppose the exercise of the sovereignty of any state over all who may be within its limits"; and the Indians were obliged to remove to the territory set apart for them west of the Mississippi. In 1835 the Seminole war broke out in Florida; and a tribe of Indians, insignificant in numbers, under the crafty leadership of Osceola, kept up hostilities for years, at a cost to the United States of several thousands of men and some $50,000,000.

In 1837 Martin Van Buren succeeded General Jackson in the presidency. His term of four years was a stormy one, from the great financial crisis of 1837, which followed a period of currency expansion and wild speculation. All the banks suspended payment, and the great commercial cities threatened insurrection. Mr. Van Buren was firm in adhering to his principle of collecting the revenues of the government in specie, and separating the government from all connection with the banks. His firmness in acting against the strong sympathies of the northern and western states with the Canadian insurrection of 1837-8 also damaged his popularity; and in 1840 the election of General Harrison, with John Tyler for vice-president, was one of unexampled excitement, characterized by immense popular gatherings, political songs, the use of symbols, and the participation of both sexes to a degree hitherto unknown in America. The Whigs triumphed in nearly every state; General Harrison was inaugurated March 4, 1841; and the rush to Washington for offices was as great as the election had been exciting and remarkable.

Worn down with the campaign and the office-seekers, General Harrison died in a month after his inauguration, and was succeeded by John Tyler, who, having been a Democrat, was no sooner in power than he seems to have reverted to his former political principles. He vetoed a bill for the establishment of a national bank and other measures of the party by which he had been elected. His cabinet resigned, with the exception of Daniel Webster, secretary of state, and others, Democratic or neutral, were appointed in their place.

During Mr. Tyler's administration the northeastern boundary question, which nearly occasioned a war with England, was settled by Mr. Webster and Lord Ashburton; a difficulty amounting almost to a rebellion was settled in Rhode Island; but the most important question agitated was that of the annexation of Texas. This annexation was advocated by the south, as a large addition to southern and slave territory; and, for the same reason, opposed by the Whig and Anti-slavery parties of the north. Besides, the independence of Texas, though acknowledged by the United States and England, had not been acknowledged by Mexico, and its annexation would be a *casus belli* with that power. The recent admissions of Iowa and Florida into the union had kept the balance of power even between north and south, but Texas would be an advantage to the south. But the gain of territory, and a contempt for Mexico, overcame these objections, and in 1845 Texas was formally annexed to the United States; and James K. Polk of Tennessee succeeded Mr. Tyler in the presidency.

The Mexican War.—M. Almonte, the Mexican minister at Washington, protested against the annexation of Texas, as an act of warlike aggression; and to guard against a threatened invasion of Texas, General Zachary Taylor was ordered, with the United States troops of his military district, to its southern frontier. The Mexicans crossed the Rio Grande and commenced hostilities April 26, 1845. General Taylor moved promptly forward, and won the victories of Palo Alto, Resaca de la Palma, Monterey, Saltulo, and finally, against great odds—20,000 to 4,759—the hard-fought battle of Buena Vista, a victory that excited great enthusiasm. In the meantime, General Wool had been sent on an expedition to Chihuahua, in northern Mexico; General Kearney to New Mexico; and Captain Fre-

mont and Commander Stockton took possession of California. March 9, 1847, General Scott landed at Vera Cruz, which he took on the 29th, after a siege and bombardment by land and water. Marching into the interior with a force of about 9,000 men, he found General Santa Anna intrenched on the heights of Cerro Gordo with 15,000 men. On April 18 every position was taken by storm, with 3,000 prisoners, 43 cannon, 5,000 stands of arms, etc. Waiting at Puebla for reinforcements until August, General Scott advanced with 11,000 men toward Mexico, near which General Santa Anna awaited him with large forces and in strong positions.

On the 19th and 20th of August were fought the battles of Contreras and Churubusco, in which 9,000 Americans vanquished an army of over 30,000 Mexicans in strongly fortified positions. After a brief armistice, hostilities recommenced on the 7th of September; and after a series of sanguinary actions, the American army, reduced to about 8,000 entered the City of Mexico, which ended the war.

By a treaty of Guadalupe, the United States obtained the cession of New Mexico and upper California, paying Mexico $15,000,000, and assuming the payment of the claims of American citizens against Mexico.

Slavery Struggle in the Territories.—The opposition to the annexation of Texas, and to the war and the acquisition of the newly-acquired territory, became now complicated and intensified by sectional feelings and the opposition to slavery. The northern party demanded that slavery should never be introduced into territories where it had not existed; the south claiming the right of her people to emigrate into the new territories, carrying with them their domestic institutions. During the debates on the acquisition of the Mexican territories Mr. Wilmot of Pennsylvania introduced an amendment, called the "Wilmot proviso," providing that there should be neither slavery nor involuntary servitude in the acquired territory. This was voted down, but became a party principle.

In 1849 General Taylor, the "Rough and Ready" victor of Buena Vista, became president, with Millard Fillmore as vice-president. September 1, 1849, California, rapidly peopled by the discovery of gold, adopted a constitution which prohibited slavery. Violent struggles and debates in Congress followed, with threats of secession, and protests against interference with slavery. The more zealous abolitionists of the north denounced the constitution for its support of slavery, and its requirement of the return of fugitive slaves to their owners, and threatened separation. The south denounced the violation of the constitution by interference with slavery—a domestic institution of the states—the carrying off of negroes secretly by organized societies, and what was termed the "underground railway," and the passage of personal liberty bills in several states, which defeated the fugitive slave law, and the requirements and guaranties of the constitution. Mr. Clay introduced a compromise into congress, admitting California as a free state, and introducing a new and more stringent law for the rendition of fugitive slaves. President Taylor, more used to the rough life of a frontier soldier than the cares of state, died July 9, 1850, and was succeeded by Mr. Fillmore.

The election of Franklin Pierce in 1852, against General Scott, was a triumph of the Democratic, States' Rights, and Southern party. Jefferson Davis, a senator from Mississippi, a son-in-law of General Taylor, and who had served under him in Mexico, was appointed secretary of war. New elements were added to the sectional controversies which agitated the country by the repeal of the Missouri compromise, and the passage of the Kansas-Nebraska bill of Senator Douglas, which left the people of every territory, on becoming a state, free to adopt or exclude the institution of slavery. The struggles of Kansas, approaching a civil war between the Free-Soil and Pro-Slavery parties in that rapidly growing territory, resulted in the exclusion of slavery. A brutal assault upon Mr. Sumner, senator from Massachusetts, by Preston Brooks, in consequence of a violent speech on southern men and institutions, increased the excitement of both sections. The formation of an Anti-Foreign and No-Popery party, called the "Know-Nothing" party, acting chiefly through secret societies, was a singular but not very important episode in American politics, though it may have influenced the succeeding election.

James Buchanan was inaugurated president March 4, 1857, with John C. Breckenridge, afterward a general of the confederate army, as vice-president. A difficulty with the Mormons, which caused the president to send a military force to Utah, was settled without bloodshed. The efforts of the government to execute the fugitive slave law kept up an irritated feeling. There were savage fights between the northern and southern parties in Kansas, and on the western borders of Missouri. Resolute and well-armed settlers were sent out by New England emigration societies.

John Brown's Raid.—In October, 1859, John Brown, known in Kansas as "Ossawattamie Brown," who, with his sons, had been engaged in the struggles in Kansas, planned and led an expedition for freeing the negroes in Virginia. He made his attempt at Harper's Ferry, on the Potomac, where, after a vain attempt to induce the negroes to join him, he and his small party took possession of one of the government workshops, where he was taken prisoner by a party of United States soldiers, and handed over to the authorities of Virginia, tried and executed, December 2. His body was taken to his home in New York for burial, and he was regarded by the Abolition party as a martyr.

In 1860 the Democratic party, which, except at short intervals, had controlled the federal government from the election of Jefferson in 1800, became hopelessly divided. The southern delegates withdrew from the convention at Charleston, and two Democratic candidates were nominated, Stephen A. Douglas of Illinois, and John C. Breckenridge of Kentucky; while the Republicans, or united Whig and Abolition party, nominated Abraham Lincoln of Illinois. The Republican convention adopted a moderate and even conservative platform of principles, denounced the John Brown raid, and put forward as a principle, "the maintenance inviolate of the rights of the states, and especially the right of each state to order and control its own domestic institutions according to its own judgment exclusively." Still, the country was sectionally divided, and all who had labored to limit and destroy the southern institution of slavery were acting with the Republican party.

Secession and Civil War.—At the election of November, 1860, Mr. Lincoln received every northern vote in the electoral college, excepting the three of New Jersey, and was declared president. The south lost no time in acting upon what her statesmen had declared would be the signal of their withdrawal from the union. On the 10th of November, as soon as the result was known, the legislature of South Carolina ordered a state convention, which assembled December 17, and on the 20th unanimously declared that "the union now subsisting between South Carolina and other states, under the name of the United States, is hereby dissolved"; giving as a reason that fourteen of these states had for years refused to fulfill their constitutional obligations. The example of South Carolina was followed by Mississippi, January 8, 1861; Florida, 10th; Alabama, 11th; Georgia, 19th; which were followed by Louisiana and Texas; and in 1861, by North Carolina, Virginia, Tennessee, and Arkansas. Kentucky and Missouri were divided, and had representatives in the governments and armies of both sections.

On February 4, 1861, delegates from the seven then seceded states met at Montgomery, Ala., and formed a provisional government, under the title of the Confederate States of America. A constitution was adopted similar to that of the United States, and the government fully organized, February 18, 1861; president, Jefferson Davis of Mississippi; vice-president, Alexander H. Stephens of Georgia; and, May 24, established at Richmond, Va. The secession movement appears to have been nearly unanimous in the more southern states, and to have been carried in all by decided majorities.

As state after state withdrew from the union, its senators and representatives in Congress at Washington resigned their seats; and nearly all the officers of the army and navy, of southern birth, believing that their first and final allegiance was due to their states, and that the action of each state carried with it all its citizens, also resigned their commissions, and tendered their swords to their respective states, and to the confederacy they had formed.

President Buchanan, doubting his constitutional power to compel the seceding states to return to the union, made a feeble and ineffectual attempt to relieve the garrison of Fort Sumter, in Charleston harbor, closely besieged by the forces of South Carolina. Commissioners were sent to Washington to negotiate for the settlement of the claims of the federal government, and great efforts were made to effect compromises of the difficulties, but without result.

On March 4, 1861, President Lincoln was inaugurated at Washington. In his address, he said: "I have no purpose, directly or indirectly, to interfere with the institution of slavery in the states where it exists. I believe that I have no lawful right to do so, and I have no inclination to do so."

Events of 1861.—On the 7th of April, a naval expedition set sail from New York for the relief of Fort Sumter; and its arrival off Charleston harbor was the signal for the commencement of a bombardment of the fort by the confederate batteries of General Beauregard. The surrender of the fort, April 11, was followed by a sudden outburst of excited feeling in the north. The government called out 75,000 volunteers, large numbers of whom were in a few days marching to the defense of Washington. April 18 the confederates seized the United States arsenal at Harper's Ferry, and took or destroyed a large quantity of arms and machinery. On the 20th the navy-yard, near Norfolk, Va., was destroyed by United States officers, and five large men-of-war burned or sunk, to prevent their falling into the hands of the confederates. Opposed to the federal volunteers assembled at Washington, the confederates took up a position at Bull Run, a few miles distant from the Potomac, under General Beauregard, where they were attacked by General McDowell. A severe action resulted in the repulse and complete panic of the federals, who hastily retreated to Washington.

Congress saw that it must act in earnest, and that the rebellion was not to be put down in ninety days by 75,000 volunteers. It voted to call out 500,000 men. The confederate states had a population of 5,582,122 free inhabitants, and 3,519,902 slaves; total, 9,102,024; and though the negroes were not called into the field except as laborers, they were not less useful in supplying the armies by carrying on the agricultural labor of the country. The confederates had also the strong sympathy and aid of the four slave-holding border states, prevented by their position from seceding—Delaware, Maryland, Kentucky, and Missouri.

Holding their position in Virginia, the confederates erected fortifications on the Tennessee and Cumberland rivers, and on important points of the Mississippi, from Columbus, in Kentucky, to its mouth. They also made a strong effort to secure the state of Missouri, as well as to defend the seaports through which they must receive their most important supplies from abroad. The federal government, on its side, blockaded the whole line of coast from Virginia to Texas, and sent large forces to secure the doubtful states. Gunboats were rapidly built for the rivers of the west, and vessels purchased and constructed for the navy. In December, 1861, the federals had 640,000 men in the field; and the confederates had 210,000, and had called for 400,000 volunteers.

Events of 1862.—The first important operation of 1862 was the taking of the defenses of the

Cumberland and Tennessee rivers (February 6), which led to the occupation of Nashville, the capital of Tennessee, henceforth held by the federals—Andrew Johnson, formerly governor and senator, having been appointed military governor. Roanoke island was also captured, on the coast of North Carolina. In March General McClellan, who had succeeded the aged Lieutenant-General Scott as commander-in-chief, commenced a movement on Richmond, the seat of the confederate government, now defended by General Lee.

On the 8th of March, the confederate ironclad *Virginia*, constructed from the United States steamer *Merrimac*, which had been sunk at Norfolk, and raised by the confederates, attacked the federal fleet in Hampton roads, and in forty minutes sunk the *Cumberland*, and set on fire and captured the *Congress* (frigates); while the other vessels took refuge in shoal water or in flight. The next day, the *Monitor*, a war-vessel of entirely novel construction, low and flat, with a revolving turret, invented by Capt. Ericsson, engaged the *Virginia*. The battle lasted two hours without result.

On April 6-7 a sanguinary battle was fought at Shiloh or Pittsburg Landing between the armies of Grant and Johnston resulting in great losses. Soon after, Admiral Farragut, with a fleet of forty-five vessels, carried the forts at the mouth of the Mississippi river, and took New Orleans; while the armies and gunboats captured the fortifications on the upper part of the river as low as Memphis, Tenn. In the meantime General McClellan had besieged and taken Yorktown, and fought his way up the peninsula of the James river, until within five miles of Richmond, when he was beaten in a series of sanguinary battles, and driven, with a loss, in six days, of 15,000 men, to the shelter of his gunboats; while Generals Banks and Pope, sent to coöperate with him in the Shenandoah valley, were defeated and driven back by General "Stonewall" Jackson.

On the 1st of July the president called for 300,000, and August 4, 300,000 more men for the federal army. Congress abolished slavery in the District of Columbia, prohibited it in the territories and passed a resolution to compensate the masters in any state that would abolish slavery. They also authorized the president to employ negroes in the army, and to confiscate the slaves of rebels. In August the federals were a second time defeated at Bull Run, and General Lee crossed the Potomac into Maryland, creating great alarm in Washington, and even in Philadelphia. General McClellan made a rapid march, and met him at Sharpsburg or Antietam. A drawn battle resulted in the retreat of General Lee, covering an immense train of provisions, horses, cattle, etc., which was probably the object of his expedition. A confederate invasion of Kentucky, about the same time, was attended with the same results. Another advance on Richmond was led by General Burnside, who had superseded General McClellan; but he was confronted by General Lee at Fredericksburg, and defeated in one of the most sanguinary battles of the war.

President Lincoln issued a proclamation declaring the freedom of all the slaves in the rebel states, which it was expected might cause them to rise against their masters; but it was without result. While the army of the Potomac was vainly endeavoring to advance on Richmond, the army of Tennessee, under General Rosecrans, with its base at Nashville, was trying to sever the Atlantic from the gulf states, and cut off the railways that supplied the confederate armies in Virginia. At Murfreesboro, Tenn., the Confederate General Bragg attacked General Rosecrans with the usual result of heavy losses on both sides, but no decided victory.

Events of 1863.—Early in May, 1863, General Hooker, who had succeeded General Burnside in the command of the army of the Potomac, crossed the Rappahannock, and was defeated by General Lee at Chancellorsville with great slaughter; but this victory was dearly bought by the loss of General Jackson, mortally wounded in mistake by his own soldiers. General Lee now took the offensive, and invaded Pennsylvania, advancing as far as Harrisburg; but being met by General Meade, the new commander of the army of the Potomac, he attacked him in a strong position at Gettysburg without success, and was compelled to recross the Potomac.

In the meantime the two principal fortresses of the Mississippi, Vicksburg and Port Hudson, attacked by land and water, after a long siege, were starved into capitulation, and the entire river was open to federal gunboats. Charleston, blockaded since the beginning of the war, was now strongly besieged—its outworks, Forts Gregg and Wagner, taken, Fort Sumter battered in pieces, but still held as an earthwork, and shells thrown a distance of five miles into the inhabited part of the city. In September, General Rosecrans had taken the strong position of Chattanooga, and penetrated into the northwest corner of Georgia, where he was disastrously defeated by General Bragg at the battle of Chickamauga.

At this period there were great peace-meetings in the north, terrible riots in New York against the conscription and the negroes; while the banks having suspended specie payments, the paper money of both federals and confederates was largely depreciated. The confederates were, however, cut off from all foreign aid, except what came to them through the blockade, and their own resources, both of men and material, were becoming exhausted. The railways were worn, many destroyed or occupied by the federals, and it became difficult to transport supplies and feed armies. The federals had command of the sea, and access to all the markets of Europe.

Events of 1864.—At the commencement of 1864 the federals held, including the garrisons on the Mississippi, nearly 100,000 prisoners of war. The southerners also had about 40,000 federal prisoners, whom they could feed with difficulty, and who suffered great hardships. General Ulysses S. Grant, who had been successful at Vicksburg, was appointed commander-in-chief of the federal armies, and commenced a vigorous campaign over an immense area—in Virginia, the Carolinas, Georgia, Louisiana, and Arkansas, with the determination "to hammer continuously against the armed forces of the enemy and his resources, until by mere attrition he should be forced to submit." Of the confederates, General Lee defended Petersburg and Richmond, General J. E. Johnston opposed the army of Tennessee at Dalton, Ga.; General Forrest was in Mississippi; Generals Taylor and Kirby-Smith commanded in Louisiana and Arkansas. In February, General Sherman marched from Vicksburg, making a destructive raid across northern Mississippi to Alabama. In March the federals had 1,000,000 of men raised and provided for. The entire confederate forces probably numbered 250,000.

The army of the Potomac, commanded by General Meade, under the personal superintendence of General Grant, covered Washington, and advanced toward Richmond. General Butler advanced from Fortress Monroe up the James river; General Sigel marched up the Shenandoah. Sherman united the armies of Tennessee, Cumberland, and Ohio, at Chattanooga, where he had nearly 100,000 men and 250 guns. General Banks had 61,000 men in Louisiana. In March General Banks moved up the Red river, toward Shreveport, but was defeated on the 24th, and driven back to New Orleans.

In May the campaign of Virginia commenced, and the army of the Potomac fought a series of battles at the Wilderness, Spottsylvania Courthouse, Jericho's Ford, North Anna, and Cold Harbor, with terrible losses. After each repulse, the federals took up a new position further south, with a new base, until they had made half the circuit of the confederate capital. General Breckenridge defeated Sigel in the Shenandoah valley, and once more threatened Washington. General Sheridan, with a strong cavalry force, drove back the confederates, and laid waste the valley. In September General Sherman, advancing with a superior force, captured Atlanta. General Hood, who superseded Johnston in the command of the confederates, was outgeneraled and beaten. While he marched west to cut off General Sherman's base, and attack Nashville, where he was defeated, Sherman burned Atlanta, destroyed the railway, and marched boldly through Georgia to Savannah. The confederates made strong efforts, and won victories, but with no permanent result.

Events of 1865.—The federals made a new draft for 500,000 men. Expeditions were organized against Mobile. Wilmington, the most important confederate port, was taken by a naval and military expedition. Savannah and Charleston, approached in the rear by Sherman, were evacuated. Cavalry raids cut off the railways and canal that supplied the confederate army in Petersburg and Richmond. Finally, on March 29, 1865, a series of assaults was made upon the confederate works, during ten days of almost continual fighting, until the confederates were worn down with fatigue. Richmond and Petersburg were evacuated April 2; and on the 9th, after several conflicts, General Lee surrendered at Appomatox Courthouse, his army numbering 28,000.

At this period it is said that there was not lead enough remaining in the confederate states to fight a single battle. On the 12th Mobile surrendered with 3,000 prisoners and 300 guns. Then General Johnston, in North Carolina, surrendered a few days after to General Sherman; and the trans-Mississippi confederate army followed his example.

Mr. Lincoln was in 1864 triumphantly reelected to the presidency, with Andrew Johnson as vice-president. On April 14, while the north was rejoicing over the capture of Richmond and the surrender of the confederate armies, the president was assassinated at a theater in Washington, by John Wilkes Booth, an actor. Andrew Johnson became president. Jefferson Davis and the members of the confederate government were supposed to be privy to the assassination of President Lincoln, and large rewards were offered for their apprehension. Mr. Davis was captured in Georgia, and placed in Fortress Monroe, but was released without trial in May, 1867.

Reconstruction.—An amendment to the constitution, forever abolishing slavery in the states and territories of the union, was declared ratified by two-thirds of the states December 18, 1865. The vast change in the organization of the republic made by this new fundamental law was completed by the fourteenth and fifteenth amendments, passed in 1868 and 1870, which gave to the former slaves all the rights and privileges of citizenship. The seceded states were readmitted to the union on condition of their adhesion to the constitution as thus amended.

In 1867 the United States acquired by purchase the whole of Russian America. In 1872 the Alabama Court of Arbitration gave its decree in favor of the United States, while the San Juan boundary dispute with Great Britain was settled on the same side by the emperor of Germany. The outrages of a secret organization known as the Ku-Klux Klan, in the southern states, necessitated the passing of an act in 1871, giving cognizance of such offenses to the United States courts.

The year 1876, memorable in the annals of the republic as the hundredth anniversary of the Declaration of Independence, was celebrated by a great centennial exhibition at Philadelphia. The presidential election of the same year was of more than usual interest. General Ulysses S. Grant, chosen president in 1869, had been reëlected in 1873. When the result of the keenly contested election toward the close of 1876 was made known, it seemed as if fortune had favored the Democratic party. But many of the returns from the various states were disputed; and for several months the intensest excitement prevailed. At last, a special tribunal, selected from the Senate, the House of Representatives, and the judges of the supreme court, was appointed to examine the election

returns. The result was that Mr. Hayes, the Republican candidate, was declared to have been elected president, and inaugurated March 4, 1877.

President Hayes, soon after his inauguration, withdrew the federal troops from the south, saying that it was time to let the people govern themselves. The effect in the contested states was to return the Democratic governments to power, yet by 1879 the Republican senate was ready to approve of the president's course by agreeing to a law forbidding the use of federal troops at the polls. The year 1877 marks the close of an era in American history which began with the slavery discussions in 1850. During this time slavery was abolished and the doctrine of secession abandoned. With the restoration of home rule the country entered upon a period of united activity hitherto unattainable.

Economic Problems.—Since that time the issues have been for the most part of an economic character. Opinion has been divided upon problems of money, taxation, tariff, civil service reform, and the control of corporations, but with respect to party divisions the Republicans, either in the national legislature or in the executive chair, have been, except for two separate periods of four years, continuously in control to the present time (1911). Legislation has been throughout in favor of high protection, and with slight deviation on the side of sound money. Government, both national and state, has become more effective, and the history of the period is chiefly concerned with the persons and processes by which these results have been attained.

Prosperity was not uniform. The rush of activity and speculation after the war reached a crisis in 1873. Two or three years of depression were followed by industrial success until 1893, when another crash caused a halt. The country presently recovered and no interruption to prosperity has since occurred. Legislation has been concerned largely with economic questions, and party lines have been curiously obliterated on many economic questions.

A case in point was the demand for the inflation of the silver currency in 1878. The market price of silver had fallen to a ratio of about 20 to 1 in gold. The mine owners attributed this to the fact that the government had ceased to coin dollars in 1873, and the Greenback party, which desired more currency on principle, joined in the demand for increase of silver; this party (which later fused with the Labor party) also demanded the withdrawal of all bank currency in favor of national currency, and wished to have that part of the national debt not specifically payable in gold paid in currency. The party had for a time considerable strength in Indiana, Illinois, Kansas, Iowa, and Michigan. The Bland bill of 1878 provided that at least two millions and not more than four millions per month should be coined into dollars at a ratio of 16 to 1. This continued for twelve years, silver passing at its face value like treasury notes. The national credit constantly improved. The debt was annually reduced in large payments, and in 1879 the government resumed specie payments.

In 1880 James A. Garfield of Ohio was elected president after a useful career in his state, in the war, and in Congress; but he had been only a few months in office when he was shot by an insane office-seeker, and after a lingering illness died (Sept. 19, 1881). Chester A. Arthur, of New York, vice-president, succeeded, and continued Republican policy in a conservative manner. A halt was called in the appointment and removal from office for political reasons. The Jacksonian system had grown to a point where Republicans were removed to make place for henchmen of a rival candidate, and office-holders were regularly assessed for campaign expenses. The civil service act of 1883 provided examinations for the classified service, prohibited removals for political reasons, and forbade political assessments by a government official or in a government building. Out of this act the present system has grown chiefly by expansion of the classes of officials to be affected.

Democrats in Power.—In 1884 the prosperity of the country had so filled the national treasury that the tariff became a real issue between parties. Two years before a commission had made wide inquiries through the country, but Congress ended by increasing rather than diminishing duties. The Democrats nominated Grover Cleveland, who as mayor of Buffalo and governor of New York had been a pronounced reformer. In the hope of a purification of politics he attracted many independent voters, and defeated James G. Blaine, who in the course of a long and brilliant public career had created many enemies as well as a devoted following.

Cleveland was supported by a Democratic House, but the Senate was Republican; consequently tariff matters were at a standstill, but important laws on other subjects were enacted during his first term. The death of Vice-President Hendricks brought forward the presidential succession bill. Hitherto in case of a loss of both great officers, first the president of the Senate and then the speaker of the House would succeed, but if neither house had elected a presiding officer, there would have been no one to take up the duties of president. The law of 1886, therefore, provided that the succession should first fall upon the secretary of state and after him, in order, the secretaries of the treasury, war, the attorney-general, postmaster-general, secretaries of navy and interior. The continuation of the public policy desired by the party which elected the president would be thus assured.

The electoral count law prevented the recurrence of a situation like that of 1876. Hereafter each state shall be the judge of its own electoral vote, but if through opposing courts the state is unable to decide, the matter must be settled by joint resolution of the two houses of Congress.

The Interstate Commerce Commission was established in 1887. Hitherto Congress had given railways free rein, but the formation of huge systems and the combination of interests supposed to be in competition led to national legislation. The commission was given very limited powers, but it forms an interesting landmark in the interpretation of the commerce clause placed in the constitution just a century before.

Mr. Cleveland showed great independence in vetoing private pension bills and other laws which he deemed unsuitable, sending back about three hundred without his signature. He stood in advance of his party upon the tariff question, particularly toward the end of his term, when the surplus revenues of the country exceeded $55,000,000. The public debt was paid off so far as it was due, and the tariff, with its inequalities and war-time rates, went on piling up funds. "It is a condition which confronts us, not a theory," was the phrase that caught the public ear. The President devoted to this subject the whole of his annual message to the Fiftieth Congress, but the Mills bill formed on this policy was blocked in the Senate. Rather against the desires of the Democratic leaders, the tariff became the paramount issue in the presidential campaign of 1888.

Republican Party Again in Power.—Mr. Cleveland was renominated without opposition, and Benjamin Harrison of Indiana was put forward upon a strong protective platform. The Republicans were united upon this subject, and Harrison won by a vote of 233 against 168, although his popular vote was less than that of his opponent. Both houses of Congress were also Republican, and the result was taken as a mandate from the people to raise the tariff still more. In 1890 the McKinley bill increased the duties to an average of 50 per cent, but with some concessions to free trade in the provisions for possible reciprocity with other countries.

The dependent pension bill gave a pension to any soldier or sailor who had served ninety days and was unable to earn a living. Widows, children and dependent parents were included. The pension list was nearly doubled, and the expenditures presently reached $158,000,000 for that item alone.

The Bland bill was replaced by the Sherman bill for the purchase of an increased amount of silver. To keep up the price four and a half million ounces of bullion must be bought and stored in the treasury every month. Much valuable minor legislation stands to the credit of this Congress, but at the close the surplus was spent. There was considerable popular discontent, which made itself felt in the ensuing presidential election.

Cleveland Returned.—President Harrison was renominated, and Mr. Cleveland, in spite of the machinations of the politicians whom he had offended, was put forward again by the Democrats. The chief issue was again the tariff, but silver came near setting it aside. The decline of silver had not been arrested and there was a great call from the west and south for free coinage. Mr. Cleveland pronounced against it and offended many supporters, but there was also defection in the Republican party. A third party now appeared in formidable numbers. Hitherto the recent political groups had not drawn seriously upon the old parties, but socialistic views of various kinds now united in the "Populist" party and profited by the cry for silver. Their candidate received over a million votes. The popular votes for Cleveland and Harrison were each over five millions, but Cleveland was elected by a large majority of electoral votes, and Congress in both branches was heavily Democratic.

When President Cleveland returned to office the situation was quite different from that of his first entry. Instead of a surplus there was stringency. Labor discontent and business depression were evident. Congress was called in special session to repeal the silver purchase bill and to protect the gold reserve now approaching the danger limit. The project met obstruction in the Senate, where the mining states could make their votes the most effective, but eventually the purchase clause was annulled.

The business depression became a financial panic in 1893, and the uncertainty lasted for several years. As the Democratic party was at the moment in power the blame was thrown upon it; nevertheless, the leaders went forward with a revision of the tariff. The Wilson bill, as it came from the House, placed raw materials on the free list and substantially reduced the rates. In the Senate, Democratic though it was, the measure was altered beyond recognition; coal and iron ore were taken from the free list, and many duties raised. Mr. Cleveland was displeased, but as the duties were somewhat lower than the McKinley act he permitted the bill to become a law without his signature. An income tax law was passed, but was declared unconstitutional by the Supreme Court. A bill to coin the silver of the "seigniorage" was vetoed by the President.

No sufficient legislation having been enacted, the secretary of the treasury was obliged to take the unusual measure of borrowing money to keep the gold reserve at the proper level. The Congress elected in 1894 reversed the majority in the House and made parties about equal in the Senate; consequently legislation during the balance of Mr. Cleveland's term was insignificant.

The Monroe doctrine came to life again suddenly in 1895 owing to a boundary dispute between Great Britain and Venezuela. Representations having been frequently made to the English government, and the suggestions for a settlement having been as often declined, Mr. Cleveland sent a sharp message to Congress recommending the appointment of a commission to determine this boundary. The measure if carried out meant eventual war, but Congress voted unanimously for the commission. The British attitude, however, presently became less rigid and before the commission had finished its work the matter was settled with Venezuela by arbitration.

The Silver Campaign of 1896.—The demand for the free coinage of silver increased to such an extent that it became the chief issue in the presidential election of 1896. The Democratic party nominated William J. Bryan of Nebraska and gave the silver question the

foremost place in its platform. With them were the Populists and certain other small groups. The Republicans would have preferred to make the tariff the issue, but spoke clearly for sound money. The National Democratic party, or "Gold Democrats," drew some votes from the old party, but everywhere the mass of sound money voters cast their ballots directly for William McKinley, who was elected by a heavy majority. Putting aside all considerations of persons and parties, the promptness with which the Americans rose in behalf of conservative finance was an interesting phenomenon.

With a Republican congress, there naturally followed a return to the protective method in customs duties. The Dingley tariff bill was intended not only to restore the depleted revenues, but to maintain more than ever a certain theory of economic prosperity.

The Spanish-American War.—The chief event of this administration was the war with Spain on account of Cuba, which broke out in 1898. A rebellion in Cuba had been in progress since 1895 and was being suppressed by the Spanish authorities with great and unnecessary cruelties, bringing death to 260,000 Cubans. Repeated warnings from America had no effect. The American people were already exasperated when the United States battle-ship *Maine* blew up in the harbor of Havana. This was not the cause of war, but undoubtedly hastened American intervention. Congress voted war measures and war taxes by immense majorities. Hostilities began at Manila, in the Philippine islands, where a Spanish fleet was destroyed on May 1, 1898, by Admiral Dewey. American forces by land and sea held the Spanish in check at Santiago de Cuba. On July 3, in attempting to escape, the Spanish fleet was utterly destroyed.

Peace negotiations were soon opened, and by the treaty of Paris, December 10, 1898, the island of Porto Rico was ceded outright to the United States, and the Philippine islands on a payment of $20,000,000. A Cuban republic was established under a protectorate of the United States.

In the meantime, on request of the principal inhabitants, Hawaii was annexed.

President McKinley was inaugurated for the second term March 4, 1901, was shot by an assassin on September 6, following, and died September 14th, of the same year. He was succeeded by Vice-President Roosevelt, who, after the election of 1904, was inaugurated March 5, 1905, for a full term.

President Roosevelt at once set about initiating needed reforms in railroad, corporation, and trust methods, and in pushing forward the construction of the Panama canal. In 1906, a race war occurred at Brownsville, Texas, resulting in the colored troops stationed there being ordered out of the state, and in their subsequent expulsion from the United States army by order of the President. In March, 1907, the president issued orders for the exclusion of Japanese laborers, and for the dismissal of suits against the San Francisco school board. This action opened the way for negotiations between the governments of Japan and the United States, which culminated, early in 1908, in the complete restraint of Japanese immigration to the United States.

On March 4, 1909, William H. Taft became president of the United States, and James S. Sherman vice-president. His policy has been one of attempted compromise between the progressive and conservative wings of his party. His adhesion to the Payne-Aldrich tariff law of 1909 led to disastrous political results in the elections of 1910, and a serious conflict in his own party in 1911.

References.—Adam's *History of the United States*; Bryce's *The American Commonwealth*; Channing's *A History of the United States*; Harper's *Encyclopedia of United States History*; Hart's *The American Nation and Actual Government*; Johnston's *History of American Politics*; McMaster's *History of the People of the United States*; Rhodes' *History of United States*; Scudder's *American Commonwealths*; E. E. Sparks' *The United States of America*; Winsor's *Narrative and Critical History of America*; Wilson's *A History of the American People*; Cooley's *Constitutional Law in the United States*; Gannett's *North America*; Shaler's *Nature and Man in America*; Dawson's *North America*, and *The Physiography of the United States*; Henry's *Climatology of the United States*; Sargent's *Silva of North America*; Hornaday's *American Natural History*; Baird, Brewer, and Ridgway's *History of American Birds*; Jordan and Evermann's *Fishes of North and Middle America*; Dana's *Manual of Geology*; Tarr's *Economic Geology of the United States*; Bruncken's *North American Forests and Forestry*; Wright's *Industrial Evolution of the United States*; Poor's *Manual of the Railroads of the United States*; Ringwalt's *Development of Transportation Systems in the United States*; Dewey's *Financial History of the United States*; Giddings' *Democracy and Empire*; Nelson's *Army of the United States*; Long's *New American Navy*; *Reports* of the Commissioner of Education; Butler's *Education in the United States*; Foster's *American Diplomacy*; Wendell's *Literary History of America*.

Uruguay, or Republica Oriental del Uruguay, a state of South America, was originally occupied by Spaniards, who founded a permanent colony in 1624 on the banks of the Rio Negro, at Santo Domingo de Soriano. Portuguese colonists from Brazil gradually established trading posts which brought them into close contact with the Spaniards, until in 1723 the latter occupied the heights on the Bay of Montevideo, from which the Portuguese were dislodged. Contests for supremacy ended in favor of the Spaniards. A British fleet attacked and captured Montevideo in 1807, but the failure of an attack on Buenos Ayres caused it to withdraw. In 1810 the people revolted against Spain, and in 1814 the Spanish forces were compelled to evacuate Montevedio. War with the Brazilians followed, and Uruguay was annexed to Brazil; but in 1825 a revolt was organized and in 1828 the independence of Uruguay was recognized. After a few years of peace civil war began, and continued until quiet was restored by the interference of Brazil in 1864. Uruguay then became an ally of Brazil and Argentina against Paraguay, and the resulting war lasted until 1870. From that year until 1903 the history of the republic was comparatively uneventful. In 1909, practically the entire railway system passed into British control.

References.—*Uruguay*, Bureau of American Republics; Mulhall's *Handbook of the River Plate*; Keane's *Central and South America*; Martin's *Through Five Republics*; Vincent's *Round and About South America*.

Venezuela, United States of, a republic of South America, on the Caribbean Sea, was discovered by Columbus in 1498; Ojeda and Vespucci followed in 1499, and entering Lake Maracaibo, they found an Indian village constructed on piles, to prevent the ill effects of inundation, and accordingly named the place Venezuela, or Little Venice, a name which afterward spread to the whole country. The first settlement was made at Cumana in 1520 by the Spaniards; and Venezuela remained subject to Spain till it asserted its independence in 1811, which was followed by a war of nearly eleven years' duration.

In 1813, it formed with New Granada and Ecuador what was called the republic of Colombia. The battle of Carabobo, fought June 24, 1821, destroyed the Spanish yoke and established the new republic. In 1830, on the dissolution of the confederation, Venezuela became an individual republic. The subsequent history of Venezuela was marked by a long period of civil wars, extending from 1847 to 1870, when Guzman Blanco became dictator and then president, holding the reins of power until 1890, when discord again broke out.

The next most important event in the history of Venezuela was its determined opposition to the alleged encroachments of Great Britain on its territory, through an extension of British Guiana, the inducement being, apparently, the discovery of a rich gold field near the border. The dispute, through the intervention of the United States, was submitted to arbitration.

The government of the republic, having been temporarily released from foreign interference, was soon confronted by insurrections, one of which, led by General Castro, was successful. In 1901 he was made president, but was compelled to subdue several armed attempts to displace him. In October, 1902, the last of the insurrections was put down. Soon afterward the claims of France, Great Britain, Germany, and Italy, based chiefly on loans for public works and the demands of foreign property owners for compensation for losses, were urgently presented to the government. The French claims afterward were settled, but Germany, Great Britain, and Italy, having failed to collect the amounts demanded, joined in a blockade of Venezuelan ports and hostilities were begun. President Castro requested the United States minister at Caracas, Herbert W. Bowen, to arrange with the blockading powers for a final settlement of their claims. The question arose as to whether the blockading powers should be preferred in payment to those who had not made any hostile demonstration. Near the close of 1902 the matter was referred to the Hague tribunal, which decided in favor of the blockading powers. A new constitution was adopted in 1909.

References.—W. L. Scrugg's *The Colombian and Venezuelan Republics*; Spence's *The Land of Bolivar*; Curtis' *Venezuela*; Sievers' *Venezuela*; Cleveland's *Presidential Problems*.

NOTABLE WARS OF HISTORY

The figures prefixed to the name of leaders and battles, etc., indicate to which of the two contesting parties the leader belonged, or by which the victory was won; they correspond to the numbers used in the column giving the names of the contesting parties. Battles given in *italics* were naval battles. Fuller details of the more important battles will be found in the table of Universal Battles given on page 147.

Name of War, Contestants and Dates	Cause of Conflict	Leaders	Chief Battles and Incidents	Results and Comments
1. **TROJAN WAR.** (Mythical) —circa 1200 B.C. (1) **Greeks** vs. (2) Trojans.	Greeks avenge the abduction of Helen of Troy by Paris.	(1) **Agamemnon, Achilles, Ulysses.** (2) Hector.	(1) **Siege of Troy.**	Capture and destruction of Troy. Schliemann's excavation identify Ilium on the Hellespont as the site of ancient Troy.
2. **FIRST MESSENIAN WAR**—8th Century B.C. (1) **Spartans** vs. (2) Messenians.	Spartans covet Messenian land.	(2) Aristodemus.	(1) **Siege of Mount Ithome.**	Messenians become tributary of Sparta and their land is, in part, confiscated.
3. **SECOND MESSENIAN WAR**—c. 630-600 B.C. (1) **Spartans** vs. (2) Messenians	Spartan oppression causes Messenian revolt.	(1) **Tyrtaeus** (poet). (2) Aristomenes.	(1) **Eira.**	Greater part of Messenians flee to Sicily. Those remaining become Helots (Spartan serfs).

NOTABLE WARS OF HISTORY—Continued

Name of War, Contestants and Dates	Cause of Conflict	Leaders	Chief Battles and Incidents	Results and Comments
4. FIRST SACRED WAR—c.590-589 B.C. (1) **Amphictyonic League** vs. (2) Crisæans.	People of the city of Crisa (port of Delphi) oppress pilgrims to the oracle.	(1) **Cleisthenes of Sicyon.**	(1) **Siege of Crisa.**	For the first time Greek cities join in an effective league. Crisa destroyed.
5. PERSIAN WARS—500-579 B.C. (1) **Persians** vs. (2) Greeks.	Aid given by Athens and Eretria to revolting Ionic Greek cities, leading to burning of Sardis, C. 497.			
a. First Persian Expedition—493 B.C.	Continued plans of Darius for subjugating Greece.	(1) **Mardonius.**	(1) **300 ships lost by storm off Mt. Athos.**	Partial success against Macedonians and Thracians.
b. Second Persian Expedition—490 B.C.		(1) **Datis, Artaphernes.** (2) Miltiades.	(1) **Naxos, Eretria.** (2) Marathon (490).	The Athenians are victorious and the Persians retreat to Asia Minor.
c. Third Persian Expedition—481-480 B.C.	Xerxes desires to avenge his father's defeat.	(1) **Xerxes.** (2) Leonidas, Eurybiades, Themistocles	(1) **Thermopylæ, Artemisium, Athens burned.** (2) Athens laid waste.	Xerxes retreats to Persia after his defeat at Salamis.
d. Fourth Persian Expedition—479 B.C.	War continued by troops which Xerxes left behind.	(1) **Mardonius.** (2) Pausanias, Aristides.	(2) **Platæa, Mycale.**	All Persian invasions and attempts to subjugate Greece cease.
6. THIRD MESSENIAN WAR—464-456 B.C. (1) **Helots of Messenian descent** vs. (2) Spartans.	Confusion following earthquake gives Helots courage to revolt.		(2) Mt. Ithome besieged. Sparta sent home her Athenian allies.	Messenians capitulate and are allowed to leave the Peloponnesus never to return. Athens retaliates by settling them at Naupactus.
7. PELOPONNESIAN WAR—431-404 B.C. (1) **Sparta and Allies** vs. (2) Athens and Allies.	Envy of Sparta and her allies at Athens' growing power and influence. Discontent among some of the Athenian subject states.	(1) **Archidamus, Agis, Brasidas.** (2) Demosthenes, Cleon, Nicias.	(1) **Invasion of Attica, Plague in Attica, Siege of Platæa, Delium, Amphipolis.** (2) Mitylene, Sphacteria.	By the peace of Nicias (421) both sides are to restore conquests and prisoners but terms are imperfectly carried out.
a. First Period—431-421 B.C. b. Second Period or Decelean War—413-404 B. C.	Sparta takes advantage of Athens' weakness, resulting from the failure of the expedition to Syracuse, to renew the war.	Alcibiades serves Athens, Sparta and Athens in turn. (1) **Lysander.** (2) Conon.	(1) **Decelea occupied. Attica ravaged. Many subject states of Athens revolt. Notium, Ægospotami, Surrender of Athens.** (2) Abydos, Cyzicus, Arginusæ.	The Spartans tear down the walls of Piræus and Athens. Athens loses her foreign possessions and fleet but becomes an independent ally of Sparta. Sparta is now supreme in Greece.
8. GAULS' INVASION OF ITALY—390 B.C. (1) **Gauls** vs. (2) Romans.	Roman people refuse to surrender Roman ambassadors who had aided the Etruscans against the Gauls.	(2) M. Manlius, Capitolinus, Camillus.	(1) **Battle of the Allia. Sack of Rome.**	Gauls retire on payment of ransom. The overthrow of Rome had no permanent effect on her fortunes.
9. SECOND SACRED WAR—c. 356-346 B.C. (1) **Phocians** vs. (2) Amphictyons.	Phocians seize and plunder Delphi because of fine imposed by Amphictyonic Council.	(1) **Onomarchus.** (2) Philip of Macedon.		Thebans and Thessalians invite aid of Philip against Phocians and he takes their place in the Amphictyonic Council.
10. THIRD SACRED WAR—339-338 B.C. (1) **Macedonians** vs. (2) Athenians, Thebans.	Amphictyons call in Philip to punish Amphissa, whereupon he seizes Elatea, thereby threatening Athens. Athenians aroused by Demosthenes.	(1) **Philip of Macedon.**	(1) **Chæronea.**	Philip gains leadership of Greece. Henceforth Greece is under the control of Macedonia.
11. SAMNITE WARS—343-290 B.C. (1) **Romans** vs. (2) Samnites.	A duel between two rival races for supremacy in Italy.	(1) **Marcus Valerius Corvus, P. Decius Mus.**		Capua is retained by the Romans and Teanum surrendered to Samnites.
a. First Samnite War—343-341 B.C.	Campanians implore aid of Romans against Samnites who are laying waste their territories in revenge for aid given the Sidicini of Teanum.			
b. Second or Great Samnite War—327-304 B.C.	The occupation of Palaeopolis by the Samnites. In 311 the Etruscan cities joined in the war against Rome.	(1) **Papirius Cursor.** (2) Fabius Rullianus Gavius Pontius.	(1) **Fregellæ, Sutrium, Lake Vadimonis, Bovianum.** (2) Caudine Forks.	Samnites sue for peace. They resign all their conquests but retain their independence within their native mountains.
c. Third Samnite War—298-290 B.C.	While Romans are engaged with the Gauls the Samnites enter Lucania and refuse to withdraw.	(1) **Q. Fabius Rullianus, P. Decius Mus (son).** (2) Gellius Egnatius, Gavius Pontius.	(1) **Sentinum.**	Samnites defeated but not crushed.
12. WARS OF ALEXANDER THE GREAT IN ASIA—334-328 B.C. (1) **Greeks** vs, (2) Persians. Egyptians, Bactrians, Indians.	A war of conquest, a scientific expedition and a journey of discovery.	(1) **Alexander the Great, Nearchus.** (2) Darius III., Memnon.	(1) **Granicus, Issus, Siege of Tyre, Arbela.**	Alexander conquers Asia from the Mediterranean Sea to the Indus R. and from the Arabian Sea to the Jaxartes R. and begins the Hellenizing of the East. Founds Alexandria in Egypt. The empire breaks up after Alexander's death 323.
13. ROMAN WAR WITH TARENTUM AND EPIRUS—282-272 B.C. (1) **Romans** vs. (2) Tarentum and King Pyrrhus.	The people of Tarentum capture Roman ships and insult Roman embassy. They call in King Pyrrhus of Epirus.	(1) **Manius Curius.** (2) Pyrrhus.	(1) **Beneventum, Tarentum.** (2) Heraclea, Asculum.	Pyrrhus returns to Epirus and his allies one by one submit to Rome, which is left supreme from Straits of Messina to the River Arno and the headland of Ancona.
14. FIRST PUNIC WAR—264-241 B.C. (1) **Romans** vs. (2) Carthaginians.	A struggle for supremacy in Sicily. Pretext, Campanian mercenaries, having seized Messina, appeal to Rome for aid.	(1) **C. Duilius. M. Atilius Regulus. P. Claudius Pulcher. C. Lutatius Catulus.** (2) Hamilcar Barca, Himilco, Hanno.	(1) **Agrigentum, †Mylæ, Ecnomus, †Panormus, †Ægadian Islands,** (2) Siege of Lilybæum, (2) Drepana.	Carthaginians surrender Sicily and pay a war indemnity. Carthage retains the Western Mediterranean and Rome is launched on her career of conquest.
15. SECOND PUNIC WAR—218-201 B.C. (1) **Romans** vs. (2) Carthaginians.	A duel to the death between East and West. Pretext, Hannibal's attacks on Saguntum in Spain.	(1) **Q. Fabius Maximus, Publius Scipio. P. Cornelius Scipio Africanus.** (2) Hannibal, Hasdrubal.	(1) **Syracuse, Capua, Metaurus, Zama.** (2) Ticinus, Trebia, Trasimene, Cannæ.	Hannibal succumbs as a result of the loyalty of Italy. Carthage forced to give up Spain, to pay an annual tribute, to surrender her fleet, and to agree not to go to war without the permission of Rome.
16. FOUR MACEDONIAN WARS—214-146 B.C. (1) **Romans** vs. (2) Greeks.	Alliance of Philip, King of Macedon, with Carthage.	(1) **T. Quinctius Flaminius. L. Aemilius Paulus.** (2) Philip of Macedon, Perseus.	(1) **Cynoscephalæ, Pydna**	Macedonia becomes a Roman province.

NOTABLE WARS OF HISTORY—Continued

Name of War, Contestants and Dates	Cause of Conflict	Leaders	Chief Battles and Incidents	Results and Comments
17. THIRD PUNIC WAR—149–146 B.C. (1) **Romans** vs. (2) Carthaginians.	War of Carthage with Massinissa gives Rome the pretext for completing the destruction of Carthage.	(1) **Scipio Æmilianus Africanus.**	(1) **Siege of Carthage.**	Carthage destroyed. Most of her territory becomes a Roman province of Africa.
18. JUGURTHINE WAR—111–105 B.C. (1) **Romans** vs. (2) Jugurtha of Numidia.	Jugurtha, disregarding intervention of Rome, captures Citra and massacres male population.	(1) **C. Marius.** (2) Jugurtha.	(1) **Muthul, Citra.**	Numidia divided. The war reveals the corruption and incapacity of the Senatorial government of Rome.
19. MARSIAN OR SOCIAL WAR—90–88 B.C. (1) **Romans** vs. (2) Italian Allies.	Italian socii (allies) are denied the right of Roman citizenship.	(1) **C. Marius. Sulla.**	(1) **Asculum.** Italians form a Federal republic, Italia, with capital at Corfinium.	Roman citizenship granted to all Italian residents.
20. FIRST ROMAN CIVIL WAR—88–82 B.C. (1) **Optimates** vs. (2) Democrats.	Reform measures of Sulpicius are carried by means of violence. Command of army of Asia is transferred from Sulla to Marius.	(1) **Sulla, Pompey.** (2) Marius, Cinna, Sertorius. Carbo.	(1) **Sacriportis, Colline Gate, Sulla's proscription.** (2) Marius's Reign of Terror.	Sulla is appointed dictator.
21. THREE MITHRIDATIC WARS—88–63 B.C. (1) **Romans** vs (2) Pontines and Armenians.	Ambition of Mithridates VI. and Roman interference.	(1) **Sulla, Lucullus. Pompey.** (2) Mithridates (Pontus). Tigranus. (Armenia).	(1) **Chæronea, Orchomenus, Cabira, Tigranocerta.** (2) Massacre of Italians in Asia.	Reorganization of the East, Pontus, Syria and Cilicia become Roman provinces.
22. GLADIATORIAL AND THIRD SERVILE WAR—73-71 B.C. (1) **Romans** vs. (2) Revolted Gladiators and Slaves.	Uprising of a band of gladiators, escaped from Capua and joined by many slaves of southern Italy.	(1) **Crassus, Pompey.** (2) Spartacus.	(1) **Silarus.** (2) Mt. Vesuvius.	Revolt put down with cruelty, 6,000 crucified.
23. GALLIC WAR—58–51 B.C. (1) **Romans** vs. (2) Tribes of Gaul.	Desire to extend the Roman empire.	(1) **Julius Cæsar.** (2) Vercingetorix. Ariovistus.	(1) **Siege of [illegible].**	Conquest and organization of Gaul by Cæsar. Gauls Romanized; boundaries of the old world enlarged (Cæsar's expedition to Britain 55-54 B. C.); means acquired for changing Rome into a monarchy.
24. SECOND ROMAN CIVIL WAR—49–31 B.C. First period, 49–45 B.C. (1) **Followers of Cæsar (democrats)** vs. (2) Followers of Pompey (republican aristocrats).	Struggle for mastery between Cæsar, conqueror of Gaul, and Pompey, conqueror of the East.	(1) **Cæsar.** (2) Pompey and his sons.	(1) **"Crossing the Rubicon." Pharsalus, Thapsus, Munda.**	Cæsar is appointed dictator for life. He is the founder of the new monarchy at Rome.
Second period, 43–42 B.C. (1) **Friends of Cæsar (Second Triumvirate)** vs. (2) Cæsar's Assassins.	Assassination of Cæsar, 44 B. C.	(1) **Antony, Octavius, Lepidus.** (2) Brutus, Cassius, Sextus Pompey.	(1) **New proscription (Murder of Cicero). Philippi.**	Brutus and Cassius, defeated, commit suicide.
Third period—31–30 B.C. (1) **Octavius** vs. (2) Antony.	A continued struggle for supreme power.	(1) **Octavius.** (2) Antony. Cleopatra.	(1) **Actium.**	Triumph of Octavius, grand nephew of Julius Cæsar. End of the republic and beginning of the empire.
25. JEWISH WAR—A. D. 66–70. (1) **Romans** vs. (2) Jews.	Revolt of the Jews against Rome.	(1) **Titus, son of Emperor Vespasian.**	(1) **Siege of Jerusalem.**	Destruction of Jerusalem and the temple.
26. DACIAN WARS—86–90, 101–102, 105–107. (1) **Romans** vs. (2) Dacians.	Rome desires to extend her conquests.	(1) **Domitian, Trajan.** (2) Decebalus.		Dacia is made a Roman province. Roman conquest and empire. reaches its highest point.
27. CIVIL WARS OF THE ROMAN EMPIRE—193–284.	Contests for the throne among rival generals (barrack emperors).			Reorganization of empire by Diocletian (284-305).
28. WARS OF CONSTANTINE THE GREAT FOR THE EMPIRE—310–323. (1) **Constantine** vs. (2) Others. Augusti.	Confusion following abdication of Diocletian.	(1) **Constantine.** (2) Maxentius, Maximinus. Licinius.	(1) **Turin.**	Constantine becomes sole ruler of Roman empire. He redistricts the empire, moves the capital to Constantinople and recognizes Christianity.
29. INVASION OF ROMAN EMPIRE BY NORTHERN BARBARIANS—375–493. (1) **Romans** vs. (2) Teutons and (Huns) Teutonic Tribes; Visigoths, Vandals, Suevi, Franks, Burgundians, Ostrogoths, Alemanni, Jutes, Saxons, Angles, Lombards.	The Huns (Mongolians) press upon the Teutons, who are forced to seek new lands within the boundaries of the Roman empire.	(1) **Valens, Stilicho Ætius, Leo (bishop of Rome)** (2) Alaric, Walja (Visigoth); Genseric (Vandal); Hengist and Horsa (Saxons); Attila (Hun); Theodoric the Great (Ostrogoth).	(1) **Battle near Chalons (451).** (2) Adrianople, Sack of Rome. Visigothic kingdom of Tolosa (Toulouse), (415-507). Vandals settle in Africa (429-534). Carthage, (439). Burgundians occupy Rhone Valley (443). Angles, Saxons and Jutes invade England (449), Huns and Ostrogoths ravage Gaul. Huns destroy Aquiliea and Venice founded (452). Vandals plunder Rome (455). Odoacer gains ascendency in Rome. The fall of the Roman empire (476). Ostrogothic kingdom in Italy (493–555).	Overthrow of the Roman empire in the west, though it continued in the east until 1453. This blending of Roman and Teutonic elements under the influence of the Christian religion and what remained of classic civilization formed the civilization of the middle ages.
30. WARS OF JUSTINIAN. (1) **Eastern Empire** vs.—533–534. (2) Vandals in Africa and (3) Ostrogoths in Italy—535–555.	Desire to restore west to eastern empire.	(1) **Belisarius, Narses.** (3) Vitiges, Totila.	(1) **Battle of Taginae (552).**	Destruction of Vandal power in Africa and of the Ostrogothic kingdom in Italy. Exarchat established at Ravenna.

NOTABLE WARS OF HISTORY—Continued

Name of War, Contestants and Dates	Cause of Conflict	Leaders	Chief Battles and Incidents	Results and Comments
31. WARS OF THE FRANKS—486–814. (1) **Franks** vs. (2) Neighboring Peoples.	Desire to extend the limits of Frankish territory and to ward off attacks from without.	(1) **Clovis (486-511), Charles Martel (814-741). Pepin the Short (751-768). Charlemagne (768-814).**	(1) **Soissons (486), Clovis conquers Alemanni and becomes a Catholic Christian (496). Battle of Tours (732). Conquest of Burgundy (534), Charlemagne conquers Lombards (774-776), Saxons (772-804), Bavarians (788), Avars (791), Northern Spain (778).**	Franks become leading power in the west and revive the western empire. (Christmas day, 800).
32. HEPTARCHIC WARS IN ENGLAND—588–828.	Struggle for supremacy among the seven Teutonic kingdoms.	Ethelbert (Kent). Edwin (Northumbria). Offa (Mercia). Egbert (Wessex).	The supremacy was successively held by kings of Kent, Northumbria, Mercia, and Wessex. Maserfield (642), Ellandun (825).	"The indistinct noise of many battles and devastations of many kingdoms overrun and lost." (Milton.) All England at last united under Egbert, king of Wessex (802-837).
33. NORTHMEN INVASIONS—ninth and tenth Centuries. (1) **Northmen** vs. (2) People of Western and Southern Europe.	Opportunity for plunder and conquest and later the driving out of adventurous spirits by the organization of settled kingdoms in the north.	(1) **Hastings, Rolf, Sweyn, Canute.** (2) Alfred (England), Odo (France).	*In England.* Treaty of Wedmore. Massacre of Danes, (1002). *In France.* (2) Siege of Paris. Grant of Normandy to Rolf (977).	The Northmen are the last swarm of Teutonic conquerors. They readily assimilate civilization and infuse new energy into western Europe.
34. SARACEN OR MOHAMMEDAN WARS—632–1492.	Saracens are ambitious to found a world wide Mohammedan empire.	(1) **Omar, Amru, Hassan, Mousa, Tarik, Abderrahman, Mohammed II. Abdallah.** (2) Yezdegerd (Persia), Leo the Isaurian, Charles Martel, Constantine, Palæologus, Ferdinand of Aragon.	(1) **Yarmouk (Syria). Damascus Jerusalem Cadesia (Persia), Alexandria Carthage, (697), Xeres (Spain), Granada, Toledo.** (2) Constantinople (716), Tours, Jerusalem, Las Navas de Tolosa (1212). (1) **Constantinople** (1453). (2) Granada (1492).	The Saracens attempted to conquer and convert Europe at three different times between 710 and 1492. Their power began to wane from the latter date.
35. NORMAN CONQUEST—1066. (1) **Normans** vs. (2) English.	William, duke of Normandy wishes to increase his territory and his power.	(1) **William the Conqueror.** (2) Harold, king of England.	(1) **Hastings.**	The king received added power and a modified feudalism introduced into England. Southern Italy and Sicily were also conquered by bands of Normans in the eleventh century and the kingdom of Naples founded.
36. CRUSADES—1096–1270. (1) **European Christians** vs. (2) Turks and Moslems. First Crusade—1096–1099.	The appeal of the eastern emperor for aid, the desire to recover the Holy Sepulcher from the infidels, the love of adventure, and hope of gain.	(1) **Peter the Hermit, Godfrey of Bouillon, Bohemond of Tarentum. Robert of Normandy.**	(1) **Nicæa, Antioch, Jerusalem.**	Jerusalem is subdued and a transient kingdom is founded at Jerusalem.
Second Crusade—1147–1149.	The Conquest of Edessa by the Mosiems threatens Jerusalem. Preaching of Saint Bernard.	(1) **Conrad III. of Germany, Louis VII. of France.**	Unsuccessful attack on Damascus.	Armies almost annihilated by hunger, disease and the enemy.
Third Crusade—1189–1192.	Capture of Jerusalem by Saladin.	(1) **Richard I. of England. Philip Augustus of France. Frederick Barbarossa of Germany.** (2) Saladin.	(1) **Acre.**	The Latin Christians secure by treaty the privilege of visiting the tomb of Christ for three years without molestation.
Fourth Crusade—1201–1204. (1) **Crusaders** vs. (2) Eastern Empire.	Appeals of Innocent III. Through influence of the Venetians the Crusaders turn aside to attack Constantinople.	(1) **Dandolo, Doge of Venice. Baldwin of Flanders.**	(1) **Sack of Constantinople.**	Division of eastern empire. The Venetians get the monopoly of trade and most of the islands and coast lands of the Ægean and Ionian seas. The remainder is erected into a feudal state, the Latin empire.
Children's Crusade (legendary)—1212.	Ignorant enthusiasm aroused by visions and miraculous tales.	A shepherd lad, Stephen of Vendome.	Thousands of children, women and peasants march from France and Germany to the Mediterranean.	Only a small number return home; the others perish on the way or are sold into slavery by French merchants.
Fifth Crusade—1228–1229.	Vow of Frederick II. of Germany. He goes under pope's excommunication.	(1) **Frederick II.**		Frederick, by treaty with the sultan, secures a truce for ten years and the restoration of Bethlehem, Nazareth and Jerusalem to the Christians. Jerusalem is finally lost in 1244.
Sixth Crusade—1248–1254.	Louis IX. of France starts on a crusade via Egypt.	(1) **Louis IX., later St. Louis.**	(1) **Damietta.** (2) Expedition to Cairo.	Louis is captured in battle and released on payment of heavy ransom and evacuation of Damietta.
Last, Seventh Crusade—1270–1291.	Louis IX goes against Mohammedans of Tunis, Prince Edward of England to Syria.	(1) **Louis IX. Prince Edward.**	Death of Louis by the plague. (2) Acre, last Christian stronghold in Syria, falls (1291).	The results of the crusades were development of commerce, introduction of new customs, products and manufactures, increase in freedom of lower classes, especially townsmen, and the power of the crown.
37. WAR OF THE (1) **Empire** vs. (2) Italian Communes—1158–1183.	Frederick Barbarossa's attempt to restore imperial rights over the cities of northern Italy.	(1) **Frederick I. Barbarossa.** (2) Pope Alexander III.	(1) **Milan (1162).** (2) Legnano (1176).	By treaty of Constance (1183) the cities of Lombardy are recognized as practically self-governing republics, the barest overlordship remaining to the emperor.
38. WARS OF THE BARONS IN ENGLAND—1215–1265. (1) **Barons** vs. (2) Kings John and Henry III.	Misgovernment of John and Henry III.	(1) **Stephen Langton, Simon de Montfort.** (2) King John, Prince Edward, later Edward I.	(1) **Signing of Magna Charta. Lewes, Simon de Montfort's Parliament.** (2) Evesham.	The beginning of constitutional monarchy—henceforth the king is below the law, not above it.

NOTABLE WARS OF HISTORY—Continued

Name of War, Contestants and Dates	Cause of Conflict	Leaders	Chief Battles and Incidents	Results and Comments
39. HUNDRED YEARS' WAR 1337–1453. (1) **English vs.** (2) French.	The conflict of interests of the French and English kings in Guienne, Flanders and Scotland. Edward III. advances claim by descent to the throne of France.	(1) **Edward III. Edward the Black Prince. Prince Henry V. Duke of Bedford.** (2) Du Guesclin, Charles V., Joan of Arc.	(1) **Crécy, Calais, Poitiers, Peace of Bretigny, Agincourt. Treaty of Troyes.** (2) Orleans (1429), Castillon (1453).	England loses all her land in France except Calais. During the earlier stage of this war about one-third of the population of western Europe perished from the Black Death.
40. AUSTRO-SWISS WAR—1315–1388. (1) **House of Hapsburg** vs. (2) Swiss Confederation.	Hapsburgs assert feudal rights over the peasants of the Swiss cantons.	(1) **Leopold III. of Austria.** (2) Arnold von Winkelried.	(2) Morgarten, Sempach, Näfels.	Independence of Swiss secured.
41. HUSSITE WAR–1419–1436. (1) **Bohemian followers of John Huss** vs. (2) Catholic Europe.	Execution of John Huss, the Bohemian religious reformer by the council of Constance.	(1) **Ziska, Procopius the Great.** (2) Emperor Sigismund, Cardinal Cesarini, Frederick of Brandenburg.	Revolt of Prague. Four crusades repulsed.	After the overthrow of the radical Hussites (Taborites) by the conservative Hussites (Calixtines) in the battle of Lipan a Catholic reaction set in which culminated in 1462 with the revocation of the compacts made by the Council of Basel with the Hussites.
42. WARS OF THE ROSES—1455–1485. (1) **Yorkists (White Rose)** vs. (2) Lancastrians(Red Rose).	Misgovernment under Henry VI. encourages Richard, duke of York, representing the second line of descent from Edward III. to claim the throne against Henry VII. (third line).	(1) **Richard, duke of York. Edward IV. Richard III.** (2) Duke of Somerset. Queen Margaret. Earl of Warwick ("Kingmaker"). first a Yorkist and then a Lancastrian. Henry VII.	(1) **St. Albans, Northampton, Mortimer's Cross, Towton, Barnet, Tewkesbury.** (2) Wakefield, Bosworth Field.	Henry Tudor (Lancastrian in the female line) secures throne as Henry VII. By his marriage with Elizabeth of York he unites the warring fact[illegible] nd establishes an almost despotic rule in England.
43. WARS FOR CONTROL OF ITALY—1494–1529. (1) **French** vs. (2) Spanish.	Conflicting claims to the throne of Naples and to the duchy of Milan.	(1) **Charles VIII. Louis XII., Bayard ("Chevalier sans peur et sans reproche"), Francis I.** (2) Ferdinand of Aragon, Charles V., duke of Bourbon, Fürstenburg.	Invasion of Italy by Charles VIII. (1494). League Cambray (1508). Holy League (1511). (1) **Marignano.** (2) Pavia.	All the leading powers of western Europe were drawn into this struggle. By the peace of Cambraes (1529) France renounced her claims to Italy. One effect of these wars was to tie the hands of Charles V. so as to prevent his putting down Lutheranism in Germany.
44. SCHMALKALDIC WAR—1546–1547. (1) **Charles V.** vs. (2) League of Schmalkalden.	Charles V. attempts to crush Protestantism in Germany.	(1) **Emperor Charles V., Duke Maurice of Saxony.** (2) John Frederic, Elector of Saxony; Philip, Landgrave of Hesse.	(1) **Mühlberg.**	Protestantism temporarily crushed. Its recovery in 1552 was followed by the religious peace of Augsburg 1555.
45. RELIGIOUS WARS IN FRANCE—1562–1598. (1) **Catholics** vs. (2) Huguenots (Protestants).	Massacre of Huguenots at Vassy is a signal for uprising.	(1) **Duke of Guise, Henry III.** (2) Catherine de Medici. Conde, Coligny, Henry of Navarre (Henry IV.)	(1) **Massacre of St. Bartholomew (1572).** (2) Siege of Paris. Ivry (1590), Henry of Navarre becomes a Catholic (1593). Riots of Image Breakers. Council of Blood.	By the edict of Nantes (1598) the Huguenots are given equal political rights with Catholics, limited freedom of worship, the possession of La Rochelle and other strong places as cities of refuge.
46. WAR OF LIBERATION IN THE NETHERLANDS—1568–1648. (1) **Spain** vs. (2) Revolted provinces in the Netherlands.	Political and religious tyranny of Spain. Duke of Alva enforces the Inquisition.	(1) **Duke of Alva. Alexander of Parma.** (2) William of Orange, Jan van Olden, Barneveldt, Maurice of Nassau.	(1) **Mechlin, Haarlem.** (2) Brill, Siege of Leyden, "Spanish Fury" at Antwerp. Pacification of Ghent (1576). Union of Utrecht (1579). Declaration of Independence (1581).	By the Peace of Westphalia (1648) the independence of the seven northern provinces, the United Netherlands, is recognized. The ten southern provinces continue under Spanish rule until 1713.
47. THIRTY YEARS' WAR—1618–1648. (1) **German Protestants and their Allies, England, Holland, Sweden and France** vs. (2) Imperial German Catholics and their allies, Spain, Italy.	Disputes over interpretation of peace of Augsburg (religious and political disputes leading to the revolt of Bohemia). The war passes through four phases—(1) Bohemian–Palatinate. (2) Danish. (3) Swedish. (4) Swedish–French.	(1) **Frederick, Elector Palatine, Mansfield, Gustavus Adolphus, (Sweden) Turenne and Conde (France).** (2) Emperor Ferdinand II., Maximilian of Bavaria, Tilly, Wallenstein.	(1) **Stralsund, Edict of Restitution, Breitenfeld, Lützen.** (2) White Hill, Magdeburg, Nördlingen.	This war is closed by the peace of Westphalia. Alsace thereby goes to France, Switzerland is separated from the empire and the Palatinate is divided. The secularized lands of northern Germany are secured to Protestanism while leaving to Catholicism, Austria, Bohemia and Bavaria. Germany is left desolate.
48. CIVIL WAR IN ENGLAND—1642–1649. (1) **Royalists (Cavaliers)** vs. (2) Parliamentarians(Roundheads) allied with Scots (to 1647).	Charles I. attempts to force a personal government on England. His disputes with Parliament covered (1) taxation, (2) privileges of Parliament, (3) religion, (4) control of the militia.	(1) **Charles I., Prince Rupert, Montrose.** (2) Cromwell, Essex, Fairfax, Leslie.	(2) Marston Moor, Naseby, Preston.	The second civil war (1648) determines the army leaders to bring Charles I. to trial and execution (1649). A Commonwealth was then established without King or House of Lords but with Oliver Cromwell as Protector (1653 to 1659). The son of Charles I. restored in 1660 as Charles II.
49. FIRST THREE WARS OF LOUIS XIV.—1667–1697. (1) **France** vs. (2) a. Spanish Netherlands. b. Dutch republic. c. Grand Alliance (German states, England, Holland).	Louis XIV.'s passion for fame and desire to increase French territory in Europe.	(1) **Turenne, Conde, Luxembourg.** (2) William III., De Ruyter.	Chambers of Reunion. (1) **Ravaging of Palatinate, Steenkirke, Neerwinden.** (2) Sasbach, La Hogue, Namur.	Extension of boundaries of France to the northeast.
50. SPANISH SUCCESSION in America, **QUEEN ANNE'S WAR**—1701–1714. (1) **France, Spain and Bavaria** vs. (2) Austria, England, Holland, Portugal, Savoy.	Acceptance by Louis XIV. of the bequest of the Spanish dominion to his grandson, Philip of Anjou, in violation of the partition treaty to which he had consented.	(1) **Vendome Villars, Leopold of Dessau.** (2) Duke of Marlborough, Eugene of Savoy, Heinsius.	(2) Gibraltar, Blenheim, Ramillies, Turin, Oudenarde, Malplaquet.	By the peace of Utrecht in 1713 and that of Rastadt in 1714 Spain and the Indies go to Philip of Anjou; Naples, Milan, Sardinia and former Spanish Netherlands to the Austrians. England receives Newfoundland, Acadia and Hudson Bay Territory from France and Gibraltar from Spain.

NOTABLE WARS OF HISTORY—Continued

Name of War, Contestants and Dates	Cause of Conflict	Leaders	Chief Battles and Incidents	Results and Comments
51. NORTHERN WAR—1700–1721 (1) **Sweden** vs. (2) Russia, Poland, Denmark, Saxony.	Peter the Great joins Poland, Denmark and Saxony for the purpose of despoiling Sweden, the first power of the north, of her Baltic ports.	(1) **Charles XII.** (2) Peter the Great (Russia), Augustus II. of Saxony.	(1) **Invasion of Denmark. Narva, Invasion of Saxony.** (2) Pultava.	By the peace of Nystadt (1721) Sweden cedes large territories to Russia. Russia takes the place of Sweden as the foremost power of the north.
52. WAR OF THE AUSTRIAN SUCCESSION—1740–1748. (1) **Austria, supported by Hungary, Bohemia, England, Holland and Saxony** vs. (2) Prussia, France, Spain, Bavaria.	When Maria Theresa succeeded her father, Charles IV. of Austria, Frederick the Great of Prussia seized Silesia. This precipitated a struggle for Austrian territories. At the death of Charles VI. of Austria the right of Maria Theresa to the throne is contested chiefly by Frederick the Great of Prussia who seizes Silesia.	(1) **Maria Theresa, George II of England, Charles of Lorraine.** (2) Frederick the Great of Prussia, Emperor Charles VII, Schwerin.	(1) **Dettingen.** (2) Mollwitz, Chotusitz, Prague, Fontenoy, Hohenfriedburg, Soor. Peace of Dresden.	By the treaty of Aix-la-Chapelle Silesia is secured to Prussia, which state now becomes a great European power. This war is one phase of the long rivalry between France and Great Britain for seapower and dominion in America and India.
53. SEVEN YEAR'S WAR, OR THIRD SILESIAN WAR; in America, **FRENCH AND INDIAN WAR**—1756–1763. (1) **England, Prussia** vs. France, Austria, Russia Spain, Sweden.	Maria Theresa wishes to regain Silesia. Hostilities between French and English in America and India. George II's concern for his ancestral territory of Hanover.	(1) **Frederick the Great, Duke of Cumberland. Wolfe (America) Robert Clive, (India).** (2) Daun (Austria) Charles of Lorraine, Montcalm (America).	(1) **Dresden, Rossbach, Leuthen, Zorndorf, Minden.** (2) Kolin, Hohkirchen, Kunersdorf. *In America:* (1) **Louisburg, Fort Duquesne, Quebec.** *In India:* (1) **Plassey, Wandewash.**	The peace of Paris (1763) gives England, Canada, the supremacy in India and certain islands, especially in the West Indies. Prussia retains Silesia. This war really founded the British empire which is based on sea-power and colonial dominion.
54. AMERICAN REVOLUTIONARY WAR—1775-1783. (1) **English Colonies in America aided by France** vs. (2) England.	The revolt of the colonies against England was caused by infringements upon what they considered their rights of government, especially local self government and taxation.	See page 135.	See page 135.	Recognition of the independence of the United States in the peace of Paris (1783). The Mississippi river becomes the western boundary of the United States.
55. WARS OF THE FRENCH REVOLUTION—1792-1802. (1) **Revolutionary France** vs. (2) Coalitions of England, Austria, Prussia, Holland, and Spain. The Empire, Russia. a. First Coalition—1792–1797.	Intrigues of emigrés; horror of Europe at the execution of the king; French offer of aid to revolutionists in other countries.	(1) **Dumouriez, Kellermann, Jourdan, Hoche, Pichegru, Napoleon Bonaparte, Moreau.** (2) Duke of Brunswick, Coburg, Charles of Austria.	(1) **Valmy, Occupation of Nice and Savoy, Jemmapes. Execution of king (1793). Annexation of Belgium, Fleurus, Lodi, Siege of Mantua.** (2) Mainz, Neerwinden, Kaiserslautern, Wurzburg.	By peace of Campo Formio (1797) the French frontier is advanced to the Rhine, Venice is given to Austria and the Cisalpine and Ligurian republics founded in Italy under French control.
b. Bonaparte's Egyptian Expedition—1798–1799.	Bonaparte aims to prepare the way to attack Great Britain's power in India and dreams of rivaling early conquerors of the east.	(1) **Napoleon Bonaparte.** (2) Nelson (England).	(1) **Battle of the Pyramids.** (2) Battle of the Nile at Aboukir, Acre.	Nelson's victory removes a serious menace to British power in India, cuts off the French in Egypt and deprives France of communication with its best troops and ablest general.
c. Second Coalition.—1799–1802.	The mistakes of the government of the Directory and the prestige of Nelson's victory enable Great Britain to form the Second Coalition.	(1) **Napoleon, Joubert, Moreau.** (2) Suvaroff, Melas, Archduke John.	(1) **Marengo, Hohenlinden.** Napoleon's passage of the Alps (Great St. Bernard). (2) Novi.	The Peace of Presburg ends the contest between France and Austria. Much harsher terms are imposed on Austria.
56. NAPOLEONIC WARS—1802–1815. (1) **France under Napoleon** vs. (2) European Powers led by England. a. Third Coalition—1805.	Neither England nor France regarded the peace of Amiens as more than a truce. Among the many causes of friction leading to renewal of war chief place was given to England's refusal to restore Malta.	(1) **Napoleon.** (2) Nelson, Mack, Alexander I. (Russia), Kutusoff.	(1) **Ulm, Austerlitz.** (2) Trafalgar.	Peace of Luneville with Austria (1801); peace of Amiens with England (1802); Surrender of England's conquests except Trinidad and Ceylon; Malta to be restored to Knights of Malta. As a result of his brilliant successes Napoleon in 1802 becomes consul for life and in 1804 took the title emperor of the French. Confirmation of treaty of Campo Formio, with the recognition of Batavian, Helvetian, Cisalpine and Ligurian republics.
b. (Fourth) War with Prussia and Russia.—1806–1807.			(1) **Double battle of Jena and Auerstadt. Berlin decree. Eylau (indecisive). Friedland.**	By the treaties of Tilsit (1807) Russia recognizes Napoleon's relatives as kings of Naples, Holland and Westphalia and consents to the creation of the Confederation of the Rhine and the grand duchy of Warsaw under Napoleon's control. Alexander and Napoleon combine to dominate Europe. Prussia cedes territories containing half her population.
c. Peninsular War—1808–1814.	Rebellion of Spain against Joseph Bonaparte, whom Napoleon had placed on the throne.	(1) **Soult, Massena.** (2) Duke of Wellington.	(1) **Corunna.** (2) Talavera, Lines of Torres Vedras, Albuera, Salamanca, Vittoria, Toulouse.	French expelled from the peninsula
d. Fifth War with Austria—1809.		(1) **Napoleon.** (2) Archduke Charles.	(1) **Aspern, Wagram.**	Austria cedes 32,000 square miles of territory, containing 3½ million inhabitants.
e. Invasion of Russia—1812.	Alexander's refusal to enforce Napoleon's continental system, and other causes of dispute.	(1) **Napoleon, Marshal Ney.** (2) Kutusoff, Barclay de Tolly.	(1) **Smolensk, Borodino.** Burning of Moscow. Retreat from Moscow. Passage of the Beresina.	Less than 20,000 of the half million men in Napoleon's army recrossed the Russian frontier.
f. War of Liberation—1813–1814.	The disastrous Russian campaign, together with the steady progress of the British in the peninsular war encourages the oppressed states of Germany to rise against Napoleon's tyranny, Prussia taking the lead.	(1) **Napoleon, Ney, Macdonald.** (2) Frederick, William III., Francis I. Alexander I, Schwarzenberg Blücher, Bernadotte.	(1) **Lützen, Bautzen, Dresden,** (2) Dennewitz, Leipzig, (Battle of the Nations.) Allies enter Paris.	Driven from Russia in 1812, from Germany in 1813, Napoleon in 1814 was forced to surrender France itself. By the treaty of Fontainebleau he was given the Island of Elba and an annual revenue of 2,000,000 francs.
g. Waterloo Campaign—1815.	Quarrels among the allies and dissatisfaction of French with Louis XVIII. tempt Napoleon to return from Elba.	(1) **Napoleon, Ney.** (2) Wellington, Blücher.	Napoleon lands at Cannes (March 1); enters Paris March 20. (1) **Ligny.** (2) Quatre Bras, Waterloo, (June 18).	Waterloo marks the final downfall of Napoleon. He is transported to the island of St. Helena, where he died in 1821. In the Congress of Vienna the allies reconstructed Europe, restoring in general the legitimate rulers and erecting barriers against democratic movements and liberal ideas.

NOTABLE WARS OF HISTORY—Continued

Name of War, Contestants and Dates	Cause of Conflict	Leaders	Chief Battles and Incidents	Results and Comments
57. WAR OF 1812—1812–1814. (1) **United States** vs. (2) Great Britain.	Controversies over aggressions on neutral trade and British impressment of American seamen.	See page 138.	See page 138.	Peace of Ghent in 1814 led to the settlement of the northern boundary of the United States.
58. WAR OF GRECIAN INDEPENDENCE—1821–1829. (1) **Greeks, aided by England, Russia and France** vs. (2) Turks.	Revived feeling of Greek nationality, stimulated by a widespread secret society working for a restoration of a Greek empire at Constantinople.	(1) **Ypsilanti, Diebitsch** (Russia) **Codrington,** (England), **Byron,** (England). (2) Ibrahim, Pasha.	Massacre of Greeks at Chios. (1) **Navarino, Adrianople.** (2) Missolonghi.	The treaty of Adrianople, 1829, compelled Turkey to acknowledge the independence of Greece, which chose as king the Bavarian prince Otto I.
59. MEXICAN WAR—1846–1848. (1) **United States** vs. (2) Mexico.	Boundary disputes occasioned by the annexation of Texas.	See page 140.	See page 140.	By the treaty of Guadalupe Hidalgo, Mexico gives up to the United States all territory north of the Rio Grande and Gila rivers, comprising Texas, New Mexico, California, Nevada, Utah, Arizona and part of Colorado and Wyoming.
60. CRIMEAN WAR—1854–1856. (1) **Russia** vs. (2) Turkey aided by Great Britain, France and Sardinia.	The question of the political status and future of the lands of the Turkish empire. Immediate cause, the claim of Russia to a protectorate over all Greek Christians living under the sultan's rule.	(1) **Mentchikoff, Gortchakoff.** (2) Canrobert, Pelissier (France), Raglan, Simpson (England).	(1) **Balaclava.** (2) Alma, Siege of Sebastopol, Inkermann.	In the peace of Paris (1856) Russia's claim to a protectorate is disallowed, the Danube is opened to navigation and the Black Sea is closed to war vessels of all powers.
61. SEPOY MUTINY—1857–1858. (1) **Sepoys** vs. (2) English.	Uneasiness created by the rapid progress of British ways and rule causes a revolt of native Sepoy troops of India. Immediate cause the rumor that cartridges furnished troops were greased with a mixture of hog and beef fat—the one animal an object of loathing to Mohammedans, the other of religious worship to the Hindu.	(1) **Nana Sahib.** (2) Nicholson, Havelock, Campbell.	Mutiny of Sepoys at Meerut. (1) **Massacre at Cawnpore.** (2) Delhi, Relief of Lucknow.	Following the suppression of the mutiny the charter of the East India company is revoked and India passes directly under the crown, a secretary of state for India being added to the British ministry.
62. WAR OF ITALIAN LIBERATION—1859. (1) **Sardinia-Piedmont and France** vs. (2) Austria.	Since 1848 Sardinia-Piedmont had been the center of the movement for Italian unity. Following promises of aid from Napoleon III. Cavour traps Austria into declaring war over the question of disarmament.	(1) **Victor Emmanuel, Napoleon III., Garibaldi.** (2) Francis Joseph II., Gyulay.	(1) **Montebello, Magenta, Solferino.** Peace signed at Zurich, Nov. 10, 1859.	By this war Victor Emmanuel gained Lombardy. In 1860 Tuscany, Parma, Modena and the papal legations were added. In 1861 he gained Sicily and Naples, together with the title King of Italy. Venetia followed as a result of alliance with Prussia in 1866 and the addition of Rome in 1871 completed the unification of Italy.
63. AMERICAN CIVIL WAR—1861–1865. (1) **Federal Government of United States** vs. (2) Southern Confederacy.	The election of Lincoln, which marked the triumph of the Free-Soil Republican party, was made the pretext for secession and the formation of the Southern Confederacy. War followed upon the attempt of President Lincoln to supply Fort Sumter.	See page 141.	See page 141.	Resulted in the abolition of slavery and the preservation of the union.
64. DANISH WAR—1864. (1) **Austria and Prussia** vs. (2) Denmark.	Incorporation of the duchy of Schleswig with Denmark in violation of treaty of 1852.	(1) **Gablenz (Aus), Prince Frederic Charles (Prus.)** (2) Dermeza, Gerlach.	(1) **Invasion of Jutland** (1) **Storming of Düppel.**	Denmark gives up Schleswig-Holstein, which is jointly administered by Austria and Prussia.
65. AUSTRO-PRUSSIAN WAR—1866. (1) **Prussia with smaller North German States, and Italy** vs. (2) Austria, Hanover, Saxony, and South German States.	Friction over Schleswig-Holstein enables Bismarck to force Austria into a war for supremacy in Germany.	(1) **William I., Prince Frederic Charles, Moltke, Victor Emmanuel.** (2) Benedek, Archduke Albert, Gablenz, Prince Charles of Bavaria.	*In Bohemia:* (1) **Soor, Koniggrätz or Sadowa.** (2) Trautenau. *In the West:* (1) **Aschaffenburg.** (2) Langensala. *In Italy:* (2) Custozza, Lissa.	Closed with the peace of Prague, Aug. 23, 1866, which authorized the re-establishment of the federated German states, excluding Austria; Austria ceded Venetia to Italy, and her rights in Scleswig-Holstein to Prussia. Hanover, Hesse, Nassau are also annexed to Prussia.
66. FRANCO-PRUSSIAN WAR—1870–1871. (1) **France** vs. (2) Prussia supported by all German States including South.	Jealousy of France at Prussian gains and friction over Hohenzollern candidacy for the throne of Spain. Bismarck's falsification of the "Ems dispatch" tricked France into a declaration of war.	(1) **Napoleon, Mac Mahon, Bazaine.** (2) William I. Moltke, Prince Frederic Charles, Crown Prince Frederic William.	(1) **Saarbrucken.** (2) Weissenberg, Wörth, Vionville, Gravelotte, Sedan, Capitulation of Metz, Orleans, Capitulation of Paris.	Closed in 1871 with the treaty of Versailles with the following results: (1) The French military power was destroyed; (2) the western frontier of Germany was rendered secure; (3) The German empire was established; (4) Germany acquired Alsace and Lorraine. In France Napoleon III. is deposed and the Third republic established, 1870.
67. RUSSO-TURKISH WAR—1877–1878. (1) **Russia** vs. (2) Turkey.	Turkish misgovernment and revolts in her Christian subject provinces, which were barbarously put down ("Bulgarian atrocities") arouse all Europe but Russia alone declares war.	(1) **Grand Duke Nicholas, Gurka, Gran J Duke Michael, Alexander II.** (2) Suleiman Pasha, Osman Pasha, Mukhitar Pasha.	(1) **Passages of the Danube at Shitova. Shipka Pass, Plevna, Storm of Kars.**	By the peace of San Stefano as revised in the congress of the powers at Berlin, Montenegro, Servia and Roumania become independent; Bulgaria remains tributary but receives a Christian prince; Russia obtains large indemnity and part of Armenia and also Bessarabia.
68. CHINESE-JAPANESE WAR—1894–1895 (1) **Japan** vs. (2) China.	Rival claims to suzerainty over Korea.	(1) **Ito, Yamagata, Oyama, Nogi.** (2) **Tso, Yeh, Wei.**	(1) **Yalu River, Port Arthur, Wei-hai-wei, Niuchwang.**	Treaty of Shimonoseki, signed April 17, 1895, removed Korea from Chinese influence; ceded Formosa and the Pescadores to Japan, and awarded to the latter an indemnity of $180,000,000.

NOTABLE WARS OF HISTORY—Continued

Name of War, Contestants and Dates	Cause of Conflict	Leaders	Chief Battles and Incidents	Results and Comments
69. SPANISH WAR—1898. (1) **United States** vs. (2) Spain.	Interference of the United States on account of the inhuman warfare waged by Spain in an attempt to suppress Cuban independence.	See Spanish-American War, p. 144.	See p. 144.	By the treaty of Paris, Dec. 10, 1898, recognized the sovereignty of the United States in Cuba, and ceded to this country the Philippines, Porto Rico and Guam, in consideration of $20,000,000.
70. SOUTH AFRICAN or BOER WAR—1899–1902. (1) **Great Britain** vs. (2) Transvaal, Orange Free State.	Resistance by the Boers to the British form of government in the Transvaal.	(1) **Sir George White Buller, Methuen, Roberts, Kitchener, French.** (2) Cronje, Botha, De Wet, Delarey.	(1) **Siege of Ladysmith, Paardeberg.** (2) Colenso, Spion Kop, Vaal Krantz, Magersfontein.	Boers surrendered May 31, 1902; are granted the right of self-government under British sovereignty, and united with other self-governing British colonies in South Africa, in 1910, to form the Union of South Africa.
71. RUSSO-JAPANESE WAR—1904–1905. (1) **Japan** vs. (2) Russia.	Russian encroachments in Manchuria, and their fortification of Port Arthur.	(1) **Togo, Kuroki, Oku, Nodzu, Oyama, Nogi.** (2) Kuropatkin, Alexieff, Makaroff, Stoessel, Stakelberg, Liniovitch.	(1) **Port Arthur and Chemulpo, Vladivostok, Yalu River, Dalny, Siege of Port Arthur, Mukden, Sea of Japan.**	Closed Sept. 5, 1905, by treaty of Portsmouth by which Korea passes under control of Japan, China regains Manchuria, and Japan is granted important railroad rights.
72. THE BALKAN WAR—1912-1913. (1) **Balkan Allies; Bulgaria, Greece, Servia and Montenegro) vs** (2) **Turkey.**	Turkish misrule and atrocities, combined with racial and religious hatred.	(1) **Czar Ferdinand, Crown Prince Constantine, Gen. Savoff, King Peter.** (2) Nazim Pasha, Muktor Pasha.	(1) **Lule Burgas, Adrianople, Janini, Scutari, Kirk-Kilissa.**	By treaty of peace, signed May 30, 1913, between Turkey and the Balkan Allies by which the frontiers of Turkey were greatly delimited, the war was closed.

Language.—Language is the whole spoken and written body of words and methods of combining words used by a nation, a people, a race.

Classification of Languages.—The researches of philologists have resulted in the classification of the languages of the world into the following families:

The Indo-European or Aryan Family.—This family is of greatest interest to us because our own tongue belongs to it, and the races speaking these languages are the foremost nations in the history of the world. They have produced the greatest and richest literatures; their languages have a great wealth of words; and because of these things philologists have made a more thorough study of these languages than of any other group, and a study of them is at the basis of our modern science of comparative philology.

The Indian or Sanskrit Branch has been used in India since 2000 B. C. or earlier. The oldest form is the Sanskrit, in which are written the Songs of the Veda. The Sanskrit, Prakrit, and Pali are now dead; the Hindi, Bengali, and Mahratti are the modern representatives, and are spoken by 225,000,000 people.

The Iranian Branch occupies the great plateau of Iran and the valleys of the Euphrates and the Tigris. The dead dialects of this branch are the Old Persian, handed down to us in a few cuneiform inscriptions, and Zend, or Old Bactrian. The chief modern representatives are New Persian (in part), Kurdisch, Baluchi, Afghan, and Ossetic.

The Greek Branch comprises the ancient and modern Greek literary languages and dialects. Our own civilization owes much to the Greek language, since it was the means of transmitting to us the wonderful civilization of the ancient Greeks. Much that is best in the literature, philosophy and art of modern Europe is due to Greek influence. The modern Greek is used in Greece, the Balkan states, Constantinople, along the coast of Asia Minor, Crete and Cyprus. It is the commercial language of the east Mediterranean.

The Italic Branch includes the ancient Latin, Umbrian, Sabellian, and Oscan, the Latin having in time entirely absorbed the other three. The Latin was the language of the Roman republic and empire and was used in western Europe and in the Mediterranean basin. In spite of the break-up of the Roman empire Latin continued to be the language of the literary and scholarly classes for many centuries. Even to-day the Catholic church uses Latin as its official language. With the coming of the barbarians the Latin was gradually modified and with it as a basis there were formed ultimately a number of new languages called Romance languages. They are Italian, French, Provençal, Spanish, Portuguese, Roumanian, and Rhætian.

The Celtic Branch is more closely related to the Italic branch than to any of the other branches of the Indo-European family. At one time it was dominant in all of western Europe, but in the course of centuries it was gradually crowded toward the west and is now used only in the northwestern part of France and in the British isles. There are two groups: (1) the Northern or Gaelic, including Irish, Gaelic or Scotch, and Manx, and (2) the Southern or Britannic, including Welsh or Cymric, Cornish (extinct since the eighteenth century), and Armorican or Bas Breton in Brittany.

The Slavonic or Slavo-Lettic Branch is found in eastern Europe and has two groups: (1) the Slavic, to which belong the Russian, Bulgarian, Servian, Polish, and Bohemian; (2) the Lettic, comprising Lithuanian, Lettish, and Prussian (now extinct). This branch is spoken by about 150,000,000 people.

The Germanic or Teutonic Branch is divided into three groups: (1) the Gothic or East Germanic, (2) the Scandinavian or North Germanic, (3) the West Germanic.

The Italian Language in its literary form was the old Tuscan dialect, and was given its literary preëminence through the writings of Dante, Petrarch and Boccaccio in the fourteenth century. Although the literary Italian is read and spoken by all the educated people of Italy there still remain numerous dialects throughout the peninsula, and it is impossible for a native of southern Italy to understand the dialect of northern Italy. The Italian is spoken in the various dialects by at least 35,000,000 of people in Italy, Sicily, Corsica, Sardinia, Malta, Southern Switzerland, southwestern Austria, a small region in southeastern France, in Argentina, Brazil, and the United States.

The French Language assumed something like definite form in the middle of the ninth century. There were various dialects in different parts of France, but soon two supplanted all others; the langue d'oïl, which was the language of the north of France, and the langue d'oc, the language of the south of France, which became the modern provencal. These are thus named because the word "yes" was *oïl* and *oc* in northern and southern France respectively. The langue d'oïl had its origin in the dialect of Paris and the surrounding country, the Ile de France of Capetian times. Modern French was well formulated by the seventeenth century, and is known for its polish, clearness, conciseness, and logicalness. It has a rich literature and has been the diplomatic language of the world since the sixteenth century and is still largely used for that purpose. Outside of France the language is spoken in Belgium, western Germany, Switzerland, and eastern Canada, being used by about 65,000,000 people.

The Provencal takes its name from the region in which it originated, Provençe, originally a Roman province. It was the language of the troubadours and the Albigenses and is still spoken by 8,000,000 people.

The Spanish Language arose in different dialects in the small states of the Iberian peninsula, but ultimately the Castilian dialect became the literary language. Spanish is very important, inasmuch as it is spoken by the people of Mexico, Central America, the southwestern part of the United States, all of South America except Brazil, many islands of the West Indies, and the Philippine islands. In

all about 50,000,000 use the Spanish tongue; of these 20,000,000 live in Europe.

The Portuguese Language resembles Spanish more than any other of the Romance languages. It is spoken in Portugal, the Spanish province of Galicia, the Cape Verde islands, Brazil, Portuguese Guinea, Angola, and Portuguese East Africa. In all between 15,000,000 and 20,000,000 people speak Portuguese.

The Roumanian Language is spoken by about 10,000,000 people in Roumania, southeastern Hungary, Bessarabia, Macedonia, Albania, Thessaly, Epirus, and Istria. The origin of the language dates back to the second century of our era, in which the Emperor Trajan conquered Dacia and colonized it with Romans.

The Rhaetian Language is spoken by about 100,000 people in the eastern part of Switzerland, especially in the canton Grisons.

The Gothic Group has long been extinct, and we know it largely through the work of Ulfilas, who in the fourth century of our era translated the bible for the Goths who lived in the Danube valley and north of the Black Sea. The language ceased to be used when the Gothic kingdoms fell, with one exception; a small remnant of the Goths found refuge in the Crimean peninsula and partially maintained their language until the eighteenth century.

The Scandinavian Group comprises four languages, Danish, Swedish, Norwegian and Icelandic. Until the eleventh century these languages differed very little from each other.

The West Germanic Group is the most widely spread of all the Teutonic languages and is divided into High German, Low German, and Anglo-Saxon or English. From earliest times there were several dialects of the German language, all having sprung originally from one common tongue. These dialects tended to increase in number and each had its own written form. From the configuration of Germany the various groups of languages take their name, High German from the upper, or higher, part of Germany and Low German from the coastal plain. The modern literary German originated in the fourteenth century. At that time the imperial chancery and many of the lesser courts in Germany adopted German for Latin as the official language. Naturally in the intercourse between the imperial and other courts the imperial dialect was adopted. The imperial dialect was, of course, that used by the local court of the emperors, who at that time were living at Prague. So a High German dialect (Franconian) became *the kanzlei-sprache* or official language of Germany. By the end of the fifteenth century this language was used not only for private correspondence but was used by some of the universities. Through the work of Luther this language was given its greatest impetus toward widespread usage. In his translation of the bible he used the language of the Saxon chancery because it was the most widely used dialect. The bible and Luther's numerous writings were read throughout Germany. Gradually one part of Germany after another adopted this as the written language. The German language is spoken by about 90,000,000 people in Germany, Switzerland, Austria, the United States, Brazil, Argentine republic, and in the German colonies. German is a very expressive and forceful language and its great writers and thinkers have produced literary, philosophical, historical and scientific works which are unexcelled.

In the Netherlands a Low German dialect is the literary and official language, and is known to us as Dutch. About 5,500,000 speak this language. The Flemish, a language closely resembling the Dutch, is used in Belgium by about 3,000,000 Flemish people.

The Anglo-Saxon, or English, Language was introduced into the British isles in the fifth century (A. D. 449) by Teutonic tribes—Angles, Saxons and Jutes—coming over from the Danish peninsula and northwest Germany. One of the most striking features of the English language is its composite nature; no other language is made up of such diverse elements. The English have been the greatest word-borrowers of all nations. When the Anglo-Saxons came to England they adopted some of the expressions of the Celts whom they conquered. In the sixth century, when England was opened up to the Roman Catholic church, various Latin words were introduced. During the ninth and tenth centuries, while the Danes controlled England, and afterward, many Scandinavian words were brought into the language. The Norman conquest (1066) caused the introduction of the great bulk of the French element, which of course was originally Latin. The era of the crusades brought in several Arabic words. The trade and maritime relations with Holland caused Dutch words to be introduced. The Renaissance added many Italian words. Many literary and scientific terms were borrowed from the Greek, especially since the sixteenth century. All the countries and peoples with whom the English had any political or commercial relations in modern times were made to contribute to the English vocabulary—French, Spanish, Portuguese, Germans, Persians, Chinese, Russians, Malays, Tartars, Hindus, American Indians, and Australian aborigines. Because of this cosmopolitan character of our language it contains more words than any other language, variously estimated at from 150,000 to 300,000. English is spoken by about 150,000,000 people in the British isles, the United States, Canada, Australia, New Zealand, South Africa, and extensively in all the dependencies of England, such as Egypt and India. English is the commercial language of a large part of the world to-day and its influence in this field is steadily growing.

The Semitic Family.—This is second in importance because some of the Semitic people (Hebrews, Phenicians, Carthaginians, Assyrians, and Arabs) have played very prominent parts in the world's religious and commercial history and have made great literary contributions. It has two groups: (1). The northern group comprises the Assyrian and Babylonian, known to us through cuneiform tablets, Hebrew, Samaritan, Phenician, Punic or Carthaginian, Chaldean, and Aramaic or Syriac. All of these are now practically extinct, Hebrew being used to a certain extent for religious purposes. The Old Testament of the Hebrews is of great importance to us because on it our religion is partly based. (2). The southern group comprises Arabic and numerous dialects of little importance. The Arabic was the language of Mohammed and is now used, for religious purposes at least, in all the Mohammedan countries—northern Africa, including Egypt, all of the Turkish empire, and by about 50,000,000 in India.

The Hamitic Family has been sometimes classed with the Semitic, but insufficient proof of its connection has been produced. It has three groups: (1) The Libyan or Berber in northern Africa; (2) the Ethiopian, spoken from the southern part of Egypt south to the equator, the most conspicuous members being the Galla and Somali; (3) the Egyptian, the hieroglyphic language found on the old Egyptian monuments and papyrus remains. It had a modern representative, the Coptic, which, however, was overpowered by the Mohammedan conquests.

The Ural-Altaic or Scythian Family, like the Indo-European, is found in Europe and Asia, and has five branches. (1) The Finno-Hungarian is spoken by the Finns, Lapps, and Hungarians or Magyars. (2) The Samoyed is spoken in the northern part of Russia and Siberia, there being five dialects. (3) The Turkish is spoken from Turkey in Europe with interruptions as far east as the Lena. (4) The Mongolian is spoken still farther east but does not reach to the Pacific. (5) The Tungusic is spoken by the Tunguses and Manchus in the northeastern part of Asia. The grammar of this family is very simple; each word has an unchangeable root and one or more suffixes are attached, making it an agglutinative language. The western branches have a resemblance to the Indo-European family.

The Monosyllabic Languages of Southeastern Asia (Indo-Chinese).—Here belong Chinese with all its dialects, Siamese, Burmese, Tibetan, and all the Himalayan dialects. These languages consist entirely of monosyllables which can undergo no change. Each word or root can have the properties of various parts of speech according to its position in a sentence. The most important of all of these languages is the Chinese, it being the greatest in the world. The number of people speaking it is variously estimated at from 270,000,000 to 433,000,000.

The Malay-Polynesian Family is found in the islands south and east of Asia in the Pacific and Indian Oceans. It has three divisions: (1) The Malayan division is spoken on the islands extending from Formosa south to Australia and west to Madagascar, including Sumatra, Java, Borneo, the Philippine islands, the Celebes, the Moluccas, Formosa and Madagascar. (2) The Melanesian division is spoken on the Solomon islands, the New Hebrides, and the Fiji Islands, and probably by the people of New Caledonia, the Marshall islands, and other small islands north and east of Australia. (3) The Polynesian division is spoken on New Zealand (Maoris), the Samoan islands, the Tonga islands, the Marquesas islands, the Society islands, the Hawaiian islands, and Easter island. These languages have a very simple structure, having many vowels and very few consonants. The Polynesian dialect is the simplest of the whole group.

The Dravidian Family of Southern India and Ceylon is spoken by 56,000,000 people and has no known relation to other languages. In the cultivated dialects the influence of the Sanskrit is very noticeable owing to geographical proximity.

The Bantu Family occupies the southern part of Africa from the equator south to Cape Colony, with the exception of a region almost coterminous with German Southwest Africa, which is occupied by Hottentots and Bushmen. This language has numerous dialects, and is characterized by its uses of prefixes instead of suffixes.

The Central African Languages.—Between the Bantu family and the Sahara desert is a large group of dialects, numbering hundreds. These vary in structure, but philologists have not studied them sufficiently to come to any definite and satisfactory conclusions about them.

The American Family comprises the languages of the nations of North and South America excepting the Eskimo language in the extreme north. There are over four hundred dialects altogether, the most important of which are the Athabaskan, the Algonquin, the Iroquois, the Shoshonean, the Siouan, and the Maya in North America; the Caribbean, the Tupi, the Aymaran, and the Patagonian of South America. Whether these languages are derived from one original language is at the present time very doubtful.

The Australian Family.—In Australia and in Tasmania there are a number of related dialects which are rapidly becoming extinct. These languages have no importance except to the philologist.

Isolated Languages.—Besides these families of languages there is a considerable number of isolated languages. Such are the Basque in the Pyrennes mountains, the Etruscan (now extinct for 2,500 years) in Tuscany, some of the dialects of the Caucasus region, the Japanese and the Korean, the Eskimo language in the arctic region, and finally the clicking languages of the Hottentots and Bushmen in southern Africa, so-called because of the clicking sounds made by placing the tongue against the roof of the mouth and withdrawing it with a sucking action.

Universal Languages.—There have been over forty attempts to create a universal language which might serve as a means of communication for all peoples of the earth. Most of these attempts were made in the last fifty years. Those of greatest importance are: *Volopuk*, published in 1879 by Schleyer of Baden. Of the vocabulary, about one-third is of English origin, while the Latin and Romance languages furnish a fourth. The grammar is simplified to the utmost. *Esperanto*, published in 1887, by Zamenhof of Warsaw, latterly taken up for practical purposes in many countries, its use being promoted by special societies and periodicals. Its structure is so simple that the whole grammar can be completely mastered in an hour. There are no exceptions to the rules, perfect regularity being a leading feature of the language. The essential roots number only some 900, including grammatical inflexions, prefixes, and suffixes, and these are chosen from the principal European languages in such a way as to make their mastery easy to any person of ordinary education. *Ido*, a modification of Esperanto, published in 1907; and *Universal*, a very recent attempt of Molenaar of Bavaria.

PRACTICAL ENGLISH.—The word *English* as used above does not refer merely to English words. It concerns more than such questions as to whether this word or that is good English. It means the whole art of writing English for practical purposes, so far as that art is itself a practicable subject of study. It means not merely English, but the art of writing.

The art of writing has been studied systematically for two thousand years, and the principles laid down by Aristotle, after a careful inductive scrutiny of Greek authors, hold good for any language. They are psychological principles. They concern the nature of different audiences and different situations, and the fundamental laws of appeal to all audiences and every situation.

Aristotle devotes a third of his rhetoric to a study of audiences. There is no more practical injunction to a writer than this: Know the man you are writing to. Adapt your discourse to him and to the situation he is now in. Books on rhetoric, if they mention this principle at all, are likely to defer it till they come to the subject of argument. We place it first. It will keep you from writing into the air.

Keeping this preliminary principle in mind, we may proceed to divide our subject into ten sections: (1) Structure of the composition as a whole; (2) Structure of the paragraph; (3) structure of the sentence; (4) diction, or the choice of words; (5) punctuation and capitals; (6) proofreading; (7) argument and debate; (8) the forms of public speech; (9) journalism and short stories; (10) business English, especially business and social letters.

It will be observed that half of these topics deal with a great variety of particular situations—debates, after-dinner speeches, addresses, lectures, sermons, newspaper writing, short stories, advertisements, sales-letters, etc. The other and earlier half deal with principles which are applicable to all forms of writing, all audiences, all situations.

Structure of the Composition as a Whole.—No matter what the audience or the situation, no piece of English is practically effective unless it has unity, coherence, emphasis, and proportion. These terms are formal and time-honored, but they are the summing up of centuries of practical experience.

Unity implies singleness of purpose. It rests on the fact that you can produce only one effect at a time. Don't scatter. Make your point. Stick to your subject. Learn to shut out half the things that occur to you. Don't divide the reader's attention. Don't let him wander away and forget you. It is now or never.

Conversely, don't omit the one thing that you really meant to say. It is not enough to avoid irrelevance; you must bring in all that is relevant. Every practical writer can remember the days when he used to fill paper with readable stuff, only to find—later on—that it was mostly not to the point, and that the thing which lay nearest to his heart didn't get written down at all.

The Title.—Choose your title and then narrow it to fit the situation. At this minute I am writing in my cabin in the woods, and the birds are filling the birches with melody. But can I write about "Birds"? No; nor about "North American Birds," nor "Michigan Birds," nor any other vast phase of a vaster subject. But just outside my window a Wilson thrush is repeating his liquid, mellow performance at intervals of exactly five seconds; and I might possibly manage an article on "Intervals of Song in the Thrushes of Northern Michigan."

Outlines.—If you would be certain of unity, make an outline. It may be a very simple affair, consisting of half a dozen items. But a careful scrutiny of it will tell you whether you are attempting too much, and whether all your items logically come under the title you have chosen. Unity consists in a vital relation between title and content. In the case of an argument the outline must be not a mere list of topics, but a list of statements. In those half-dozen sentences you can read the whole theme in brief.

Never allow yourself to believe that you can't work from an outline. It is what all poor writers plead. The people who can't think till they have the pen in hand, and who then wander along after their own pens instead of guiding them—these are the people whose articles and letters are ineffective. Their stuff has no skeleton, no bones, no structure, no organic life. Make your work—not like an angleworm, that will live if you cut it in two. Make it like a human being. Make it as vitally organized as you yourself are.

Coherence means more than mere cohesion; it means a living connection of parts. It implies such an arrangement as will enable the reader to follow the thought readily. It implies a normal order. For narration the normal order is that of time; events must be set down in the order in which they occur. For description it is that of the relative position of objects, grouping, contiguity, nearness and distance, etc. For exposition and argument it is the logical relation of fact and observation to conclusion. When the parts of a composition are thus set down in their normal order a sufficient degree of coherence is usually established for the simpler forms of writing.

In the more subtle forms, however, such as exposition, and especially argument, coherence will demand not only a normal order but also connecting links in the form of conjunctions, transition sentences, and sometimes transition paragraphs. Such terms as "moreover," "consequently," "however," "on the other hand," "in the next place," my "second contention is," etc., are of great value in articulating an explanation or an argument.

Emphasis.—There will be a gain in emphasis if, without violating the principle of coherence, the items of a composition can be so arranged as to bring the most important or most striking at the end. The reader is more likely to remember the theme as a whole if his final impression is a strong or vivid one.

But the opening words of a composition are as important as the closing. Get attention at the start. Strike out at once for some vivid interest of the reader—only let it be a legitimate and not a sensational interest.

Scale.—It is often necessary to bring what one has to say within a certain assigned limit of space. This will call into requisition the faculties of comprehensive view and judicious selection. Inexperienced writers usually say a great deal more than is necessary to an adequate presentation of the subject.

A good exercise for training in the matter of writing to scale is to reduce a paper of one thousand words to five or six hundred without sacrificing any essential point. A converse exercise is to treat a given topic in five hundred words, expand it to a thousand, and then to five thousand.

Writing to scale is one of the best exercises for the development of a logical and organized sense of composition.

Proportion.—A piece of writing that is well proportioned is one in which the various points are given space in accordance with their relative importance. Of course mere physical size or mere extent of theme has nothing to do with that importance. The valve gear of a locomotive will probably call for more space than the boiler. Similarly a certain half-hour of your outing

may call for more space than the entire week preceding.

Introductions and conclusions should, in general, be very brief. Your paper must not be top-heavy, nor must you keep on after you have really finished. For a theme of five hundred words, probably the first one or two sentences of the opening paragraph will constitute a sufficient introduction; for one of twelve hundred to two thousand words perhaps one or two paragraphs might be required; for a book of three or four hundred pages the opening chapter might be reserved for introduction.

As a practical method of securing a right proportion, the assigning of a numerical value to the various topics of the outline will be found helpful. It may prevent the young writer from expending too much energy and flow of speech upon the first few points, and then telescoping the rest as the task begins to wear upon him.

Structure of the Paragraph.—Definition.—The paragraph is a modern device for avoiding an interminable sentence. In Milton's time a man could write a sentence of five hundred words, a sentence that would cover two pages of print, and go scot-free. Scholars would read it, and nobody else read anything in those days. Nowadays people wouldn't. But those old Latin-trained scholars were aiming at a large unit of thought. Often they indented before and after such a sentence to show that it was a unit. Now we keep the indentions, but we break the long unit up into several.

We state the topic briefly in one sentence. We are content to state it merely. Then we go on to illustrate it or defend it or amplify it. It may take three or four sentences to do this, but they will all be closely related. The group of sentences is unified by a single topic. The indention is a halting-place that permits the reader to breathe, look back, and fix the paragraph in mind.

So remember that the paragraph is a device to give you time. Take your time. Don't be afraid of making a short sentence if the thought is really emphatic. Save your long sentence to mass details of illustration or proof.

Unity in the Paragraph.—Our definition indicates in general what we mean by *paragraph unity*. But a bit of caution must be added with respect to the word *topic*. The amateur is likely to think of every item or point as a topic, and to indent accordingly. The result is a rapid-fire series of pseudo-paragraphs of two or three lines each, disconcerting and often misleading to the reader. Paragraph unity involves the generalizing of points under a real topic of sufficient note to command a real paragraph, with bulk enough to constitute a real unit of thought, and not a mere fragment. Colonel Roosevelt, in a paragraph of about two hundred words, deals with the following points: Premiums on meritorious conduct of policemen, a new system of pistol practice, the Bertillon system for identifying criminals, a police bicycle squad, and a new municipal lodging house. These points are all generalized, however, under the topic "Minor ways in which we sought to reform the police force," thus producing a logically unified paragraph.

Paragraph Length.—What we have said above has its bearing on paragraph length. By our definition a paragraph is a group of sentences. It should contain, as a rule, therefore, not less than three sentences of average length—twenty-five to thirty words each. This is the minimum. Your shortest paragraph should contain ordinarily not less than seventy-five to a hundred words. The paragraph consisting of a single long involved sentence should be avoided. Break such a sentence up into three or four shorter ones.

As to its maximum, a paragraph, even when theoretically well unified, should not include much more than three or four hundred words. A paragraph running on through several pages of print has a discouraging look to most readers, and is likely to result in a hazy impression. The normal average should be about two hundred words.

In three exceptional cases the short single sentence paragraph is in place. The first is that of *dialogue*, in which, by more or less arbitrary usage, whatever is said by a single speaker at one time, together with identifying or brief explanatory remarks by the writer, is put into a paragraph by itself. The second case is that of *special emphasis*, wherein the moment or point is of such supreme importance as to be briefly paragraphed by itself, and thus visually emphasized in the printing by its contrast with the longer units before and after it. The writer should be very sparing, however, in such use of the short paragraph, as any approach to a frequent use will naturally defeat its own end—that of emphasis. The third case is that of the *transition paragraph*, which expresses a brief summary, or anticipation, or both.

The number of paragraphs in a composition bears no necessary relation to the number of topics or points in an outline. It is possible occasionally to develop a theme by assigning a paragraph to each point in the outline. It is more probable, however, that related points will have to be grouped into a single paragraph; and it may be that a single point will require two or three paragraphs for its development. This is in accordance with what we have said about paragraph length and unity.

Coherence in the Paragraph means simply that every sentence shall be in its normal place in the paragraph, and that whatever connectives may be necessary to a ready progress of one's thought through the paragraph shall be supplied. The reader resents being led astray, and being compelled to zigzag through a paragraph.

Proportion in the Paragraph.—This means precisely the same as proportion in the theme as a whole, except that the principle is applied on a smaller scale. The points or subtopics in a paragraph must be given space in accordance with their relative importance.

Connection Between Paragraphs.—In exposition and argument it is often desirable to indicate the relation of paragraph to paragraph. This may be done by the conjunction at the beginning of the following paragraph (*e. g.*, "Moreover," "Besides," "As a result," "Notwithstanding," "Of no less importance," etc.). Or it may be done by the transition sentence, which is usually the first sentence of the following paragraph, although it may be found preferable sometimes to make it the last sentence of the preceding one. Or it may be done by the short transition paragraph. This last, however, is usually reserved for connecting one group of paragraphs with another group, rather than for connecting paragraph with paragraph.

Structure of the Sentence.—Definition.—The sentence is the fundamental unit of discourse. Hence the "sentence-sense," as it is often called, the ability instantly to recognize a sentence when one sees it, is a fundamental necessity of accurate writing. A sentence is a statement, question, or command that is grammatically complete—one that contains a subject and a predicate expressed, and that is not introduced by a dependent or subordinating word. The only exception is the imperative form, in which the subject is usually implied.

The sentence may be very short. The following are complete sentences (the first three being in the imperative form): "Wait." "Don't." "Come here." "I can't." "You're quite right."

A mere phrase (prepositional, participial, infinitive, etc.), or a dependent clause, is not a sentence, and may not stand alone as such. The following are not sentences: "In a few minutes." "Frightened almost to death." "Being sure of my ground." "Now, to proceed with the argument." "At least not at present." "Although of course we can't be certain." "Not unless you are willing." "Which is quite a different story." It is a mark of slovenly style to leave such expressions as these straying about like lost dogs. They must be attached to something—to a main clause of some sort; *e. g.*, "I can't answer all these letters, at least not at present." Of course in conversation such expressions are common enough, but the only right use of them in written discourse is in dialogue, when they represent what was actually said.

The converse error is that generally referred to as the comma blunder. Complete separate statements, and those closely connected in thought, must accordingly be separated by the period, the colon or the semicolon, but less often by the comma, unless there is a real conjunction joining the statements. The greatest temptation to the comma blunder comes when the second statement begins with a personal pronoun (*he, they, it*, etc.) or a conjunctive adverb (*then, therefore*, etc.), or when there is a close relation of cause and effect, or of contrast, between the two statements. The following sentences are correctly punctuated: "Come on, laddie. It's time to go home." "Tom wasn't afraid. He was simply waiting for the right moment." "You'd better not try that bridge. It isn't safe." "He would not take the crown; therefore 'tis certain he was not ambitious." "Be sure you're right; then go ahead." "Be sure you're right, and then go ahead." Special care should be observed in the writing of dialogue to avoid the comma blunder.

The only exception to the rule here stated is the case of the series form, in which short statements are sometimes separated merely by the comma; *e. g.*, "I have fought a good fight, I have finished my course, I have kept the faith."

Agreement.—Grammatical correctness requires an agreement or concord between certain parts of speech in the sentence. The commonest error is to confuse singular with plural. A verb must agree with its subject in number; both must be singular, or both plural.

The writer is sometimes misled in this matter when the subject comes before the verb. Notice the following: "Here *were* located the banking facilities of the colonies" (not *was*). "Coupled with the demand for the teaching of patriotism *have* come suggestions as to what course such instruction should take" (not *has*). "There *exist* in the minds of many people certain

prejudices against the foreigner." (Not *exists*).

Subjects joined by *and* commonly require a plural verb; *e. g.*, "There *are* my friend Barton and his wife coming toward us." (Not *there is* or *there's*.) "There *are* in this room a table, three or four chairs, and a small stove." (Not *is*.)

A plural noun coming between subject and verb sometimes misleads the writer: "The sound of his steps *was* gradually lost." "The size of the plates *varies* with the current capacity of the battery."

A collective noun is to be construed as singular or plural according as its parts are thought of separately or in the mass: "The crowd *were* throwing up their hats and shouting with excitement." "The crowd *was* headed by McAndrews, who was carrying a red flag."

The pronoun must agree with its antecedent in number: "The negro did not ask for the suffrage; but the responsibility involved in it has been good for *him*." (Not *them*.) "The drill press is a very useful machine. *It is* made in various forms and sizes." (Or, drill presses *are* made: not *They are* made.) The indefinite pronouns, *each, everybody, any one, a person, one*, etc., are singular, and should be so construed: "A person must have plenty of time if *he is* to do good work." (Not if *they are*.) "England expects every man to do *his* duty." (Not *their*.) The same is true of the correlatives *either—or, neither—nor*, when they connect singular nouns: "Either Arch street or Bond street *is* to be paved at once." "Neither your assumption nor your conclusion *is* justified."

Certain miscellaneous cases of agreement may be noted: "All the sprinters were attired in *track suits*." (Not *a track suit*.) A student writes: "The faces of both Goldsmith and Johnson were disfigured." He should say: "The face of Goldsmith was disfigured, and so was that of Johnson." Again: "There were *two* stained glass windows on *both* sides of the entrance." This is ambiguous. The writer means either "*A window to each side* or *two windows to each side*."

Government.—Certain cautions must be observed in the use of nominative and objective. After *it is* and *it was* we must have the nominative forms of the pronoun: "Is it *I* whom you mean?" "I believe it is *they*." "Wasn't it *she* whom we met at Newport?" Do not use the objective form of the pronoun for the nominative, or the nominative form in place of the objective. "*We* boys are going to the circus." "Uncle is going to take *us* boys to the circus." The same holds true when two pronouns are joined by *and*: "*He* and *I* were asked to report on the power loom." "The instructor asked *him* and *me* to report on the power loom." "Mr. Barlow invited Frank and *me* to be present at the recital." "Between you and *me*, I think he will bear watching."

Who and *whom* follow the same rule as any other pronoun: "I can't remember *who* it was." "*Who* was present at the reception?" "*Whom* are you looking for?" "For *whom* are you looking?" "He is a man *who*, I believe, is well qualified for the position." "He is a man *whom* I believe to be well qualified for the position."

In this connection may be noticed the correct use of verb tenses. The confusion of present, past, and perfect forms is unpardonable. We need only mention such horrible examples as, "He *come* up and introduced himself to me." "I think he *has went* out to lunch." "The water was *froze* solid." "I *seen* at once that there was no hope."

The forms of *lie* and *lay* are as follows:

Present	*Past*	*Past Participle*	*Present Participle*
lie (lies)	lay	lain	lying
lay (lays)	laid	laid	laying

Notice the following sentences: "I usually *lie* down for a little nap after dinner." "Just as I *lay* down yesterday, Dr. Harmon called." "The leaves have been *lying* on the lawn for some days." "*Lay* your books on the shelf, and let them *lie* there." Less obvious are certain inaccuracies in the use of the perfect tenses. In general, whatever goes back of the main verb should be stated in the pluperfect tense: "I often wish I *had been* born in the country." (Not *was born*.) "Men and women who *had been* shut up all day in the houses and shops came out to get a little fresh air." (Not *were* shut up.)

Unity.—Unity in the sentence means on a smaller scale the same thing as unity in the theme and in the paragraph. The sentence must be about *one* principal thing.

This does not imply that all sentences must be short: a very short sentence may be lacking in unity, while a very long one may be perfectly unified. "Peter Cooper founded Cooper Union, and his father made hats." Here is a sentence of only ten words, stating only two facts about Cooper, but the facts are so distantly related that they do not belong in the same sentence. Now take a longer sentence: "The road winds along by the river bank, and affords a glimpse of the stream now and then; and it is a shady, quiet road; but once in a while there is a clearing, and there the sun is very bright and warm." Here are five facts about the road; but they are so stated that not one of them stands out as the unifying fact.

Such a sentence may either be broken up into two or three shorter ones, or some of the facts may be subordinated by the use of other connectives besides the overworked *and*. Both methods might easily be applied to this sentence, and we should get something like this: "It is a shady, quiet road, *winding* along by the river bank, and affording a glimpse of the stream now and then; once in a while, however, there is a clearing, *where* the sun is bright and warm." A mastery of the principle of subordination, and of the various subordinating connectives, is more than half the battle for sentence unity.

Converse to the example just cited is the practice of writing a sentence in several separate fragments, when they really belong together: "We came to a path. It led off from the wagon road. It led through the woods. This path apparently was not much used. It was a narrow path." It should read somewhat as follows: "We came to a narrow path, apparently not much used, that led off from the wagon road through the woods."

Coherence.—So far as this principle applies to the sentence, it means that the parts should stand in a normal position. The subject must not be very far removed from the verb; modifiers must be reasonably close to the parts they modify; the reader must not be zigzagged through the sentence in a disconcerting way. A few examples will make the principle clear. The portions italicized should be inserted where indicated by the encircled 1: "Last week *I*, with an old friend of my father's, ①took a trip to New York City." "If a workman is honest, he *usually* is①repaid for his honesty." "Of course①everybody can*not* become the head of a great business concern." "I lived①in the small western town in which I was born, *for about three years*." "*While I was in New Mexico*, I remember that①I had a burro, which I rode every day." "The account was confirmed① by Colonel Shackleton, who some years ago headed an exploration party to the far south, *to-day*." "In front of the stores① different kinds of electric lights *hang*." "His hat①had a narrow black band around it, *which he had worn all summer*."

A special case is that of condensed comparison, often attempted in such sentences as the following: "Every year was as bad if not worse than the year before." Such sentences are faulty in syntax as well as incoherent, and should be written as follows: "Every year was as bad as the year before, if not worse."

It is disconcerting to travel through a sentence like the following, with two *but*'s in it: "Even in his letter to his wife, Macbeth shows that the temptation is strong, but he does not put it actually into words, but suggests that the third prophecy may come true." The second part of the sentence should read, "He does not, however, actually put it into words, but suggests," etc.

Coordination.—Parts of a sentence that are joined by coördinating conjunctions, such as *and, but, or*, should be similar in form: *e. g.*, "This ordinance was passed by the village board May 13th last, and which is now in effect." This is bad form. *Which* after *and* must be elided, or else it must appear in the first part of the sentence. Either of the two following forms is correct: "This ordinance was passed by the village board May 13th last, and is now in effect." "We have here an ordinance which was passed by the village board May 13th last, and which is now in effect." Take another example: "Elaine's treatment of Lancelot shows not only how great her love was, but also that she was kind and gentle." It should read, "*that* she loved him greatly," or "*how* kind and gentle she was," so that both clauses shall be introduced by *that*, or both by *how*. Again: "Finally the two friends parted, Savage going to the west of England, and Johnson remained in London." It should read, "Savage *went*," (with period after *parted*), or, "and Johnson *remaining*," so that both expressions shall be participial, or neither expression. Again: "A protective tariff is laid not as a source of revenue, but to protect growing industries." It should read, "*to produce* a revenue," or, "*as* a protection for." Again: "The northern colonies produced wheat, corn, and potatoes; and in the southern, tobacco, rice, and cotton were produced." Make both members active by writing, "and the southern, tobacco, rice, and cotton."

A special case of faulty coördination is what is known as the false series. A true series requires that all the members be in the same grammatical form. One method of correcting a false series is to introduce another *and*, where indicated, for example, by the circled 1 in the following: "The men were at work making molds,①cores, and fixing the cupola for the afternoon heat." "The sudden introduction of a large volume of water causes contraction,①leakage, and necessitates rapid firing." "During the summer I got lost in a cornfield①got into two or three fights, and a few other disturbances." Another method is to supply such words as will make the three

members of similar construction; *e.g.*, "The men were at work making molds, *making* cores, and fixing the cupola."

Wordiness.—In general all statements should be as brief as is consistent with clearness. The thought is often unnecessarily repeated in the words of a sentence: "to return again," "to try the attempt," "a fine-looking appearance," "during the meantime," "all the whole afternoon," etc. Such phrases should be condensed. Somewhat more obvious, perhaps, is a certain loose extravagance of words resulting in a weak, spongy effect. The portions bracketed in the following should be excised: "It isn't right to lie to your employer in order [that you may be able] to go to the ball game." "You can see a number of fishermen fishing for [a species of fish known as the] black bass." "We drove along a beautiful road [which was] bordered by tall elms."

A careless writer will sometimes duplicate his constructions, especially his prepositions and conjunctions. The words bracketed in the following should be cut out: "The experience [of] which I am going to write about happened in my childhood." "It is argued that, because many children leave school at an early age, [that] their schooling should be such as will enable them to become good workmen."

A word may be said about *repetition*. There should be no awkward attempt to avoid repetition when it is necessary to clearness or effectiveness, but when neither of these ends is served the repetition becomes a burden. There is nothing gained by the presence of the bracketed words in the following: "Some of the lights were strung straight across the street, some [were strung] in a circle, and some [were strung] in arches." On the other hand, there is a distinct gain in force by the presence of those bracketed in the following: "I don't expect you to depend altogether on your notes, but [I do expect you] to study them." "If slavery is not wrong, nothing is [wrong]."

Ellipsis.—Words should not be omitted that are necessary to the grammatical or logical completeness of the statement. The verbal forms must be expressed whenever a change of construction makes it impossible for a single form to do double duty. Notice the forms supplied in brackets: "We rode back a great deal faster than we had [ridden] coming out." "Several proposals were received, but only one [was] considered." "All that Burns writes about is true; it has [taken place], and will again take place in the life of man." The same is true of the preposition: "We are not only prepared [for] but equal to the task." The article must be repeated when the nouns stand for distinct persons or things: "Thine is the kingdom, the power, and the glory." "The sum and substance of the matter is this." "Goldsmith produced a descriptive poem, a novel, and a comedy that are among the best of their kind." "We think of Browning as a poet and as a philosopher." *The* must always be used before *United States*. Idiom requires the following: "All day," "all night," "all the morning," "all the afternoon," "all the evening," "all the week," "all the spring," "all the autumn (or fall)," "all summer," "all winter." An adverb should be inserted between *very* (or *too*) and the participle in *ed*: "very greatly pleased," "very well satisfied," "too highly delighted." *That* should not ordinarily be omitted from the indirect discourse construction: "It must be remembered [that] they had no difficulty in getting the best education." Logical comparison requires insertions as follows: "The general appearance of the church is like [that of] most city churches." "His face has the appearance of [that of] a bright, hard-working young man." "Our basket-ball team ranks high compared with [those of] other schools." Correct syntax requires the following: "On the opposite shore from [that on] which the town is situated, you can see lofty hills."

Reference.—Pronouns and other reference words must be clear and explicit in their reference. The agreement of pronoun with antecedent has already been explained. A pronominal reference must not be ambiguous, as it is in the following: "Chesterfield had treated Johnson discourteously many years before when *he* had called on *him*." "The parasite lives on the host until all *his* energy is gone." "Duncan tells Macbeth that he intends to stay over night at *his* castle."

Reference must be explicit, and not merely implied: "There's no use writing to John; he won't answer *it*." Here *it* refers to the noun *letter implied* in the verb *writing*. Similarly we have sentences like the following: "He invited me to join him in a bear hunt, *which* I readily accepted." "True friendship is so rare that when you find *one* you cling to *him* like a drowning man to a straw." Sometimes the implied reference is in a noun: "The shore is very rocky at this point, and *these rocks* are broken by the force of the waves." "The marquis taxes the people for everything. they use; *this money* he spends in banquets and suppers." Occasionally it is the adverb that is not explicit: "The increase of patriotism is due to school training; it is *there* that the child is first taught to love the flag." "He fainted, and remained *so* for some minutes."

The participial construction is often difficult to handle. There must be a real subject to which the participle can be logically and grammatically related. The misrelated participle is a mark of careless thought and careless writing: "On preparing to leave the next morning, the ax could not be found." Grammatically this means, "The ax, on preparing to leave, could not be found." Now, it is not the ax that is preparing to leave. The writer really means, "On preparing to leave, *we* could not find the ax." The same fault is apparent in the following: "Some time ago, while attending a debate, the negro question was discussed." "On hauling up the anchor the breeze carried us down to the far end of the lake." "After scarfing the two pieces of iron, they are heated to a high temperature." "Being a girl, he saw that she was afraid to protest."

In this connection we may notice what Professor Newcomer has called sins against *logical conformity*. One or two examples will illustrate: "Honesty is the best policy in business as well as any other place." But *business* is not a *place*, and cannot logically be referred to as a place. The sentence should read: "as well as in any other calling, or occupation." Again: "The same thing is true of the doctor, the lawyer, or any other profession." Medicine and the law may be referred to as professions, but not doctor and lawyer.

Diction.—The bulk of the English language is made up of Latin and of Saxon terms. In the dictionary there are more words of Latin origin than of Saxon, but in the usage of conversation and in the most enduring monuments of our literature the Saxon element prevails. In general the inexperienced writer will do well to rely mainly on Saxon words. They are the words with which he is most familiar. They have the merits of naturalness, directness, simplicity, strength, and emotional coloring. They come from the heart, and life, and experience. On the other hand Latin words afford the advantages of formality, dignity, sonorousness, and a certain lofty and superior tone of discourse. They also offer a more exact and discriminating choice of terms than the Saxon, and hence constitute by preference the scientific and professional vocabulary.

Good Usage.—The choice of words implied in the term good usage is impossible of exact limitation. The best we can do is to indicate certain forms that are to be avoided, and generalize from the result. In ordinary written discourse, except realistic narrative, the following classes of words should be avoided: *localisms*, such as "peart," "sun-up," "tuckered out," "right smart," "some chilly," etc.; *vulgarisms*, such as "ain't," "might of been," "hadn't ought," "complected," "most everybody," "photo," "auto," etc.; *improprieties*, such as "leave us see," "the balance of the morning," "a man who is well posted," "an invite," "real pleasant," "a nearby house," etc., and slang terms, except in rare instances; *colloquialisms*, such as "up-to-date," "anyway," "quite warm," "right away," "handy," "a nice time," etc.; *technical terms*, except when one is writing for a special group of readers, such as "tort," "metabolism," "eidolon," "pony brake," "isothermic," "epicycloidal," "oxymoron" "esemplasm," "rheostat," etc.; *pretentious and affected terms*, such as "fistic encounter," "tonsorial parlor," "culinary department" (for kitchen), etc.; and *foreign terms*, such as "de trop," "fin de siècle," "cuisine," "sub rosa," "nil admirari," "zeitgeist," etc.

Apart from such cautions little can be said. The right choice of words is the ultimate test of one's place among the elect, and is a thing which only in its more obvious phases is subject to rule. It is to be acquired in its finer and more real quality only through wide and sympathetic contact with the masters of literature. (See Correct Use of Words.)

Precision, or discrimination between words of related meaning, can be acquired by scrupulous attention to definition and usage. Certain grosser faults, almost as much matters of spelling as of meaning, are involved in the confusion of the following: There, their; to, too; its, it's; then, than; lose, loose; led, lead; forth, fourth; principal, principle; quite, quiet; effect, affect; except, accept; later, latter; cavalry, Calvary. The writer should, however, train himself in the finer distinctions, such as are involved in obtain, attain; secure, procure; survive, recover; apt, likely, liable; imaginary, imaginative; poetry, verse; fact, truth; democracy, republic; egoist, egotist; human, humane; effective, effectual, efficient; grief, grievance; act, action, activity; last, latest; education, schooling, culture; accurate, correct, exact, precise; start, begin; politic, political, etc. (See Multiplex Dictionary, or books by Fernald Fallows, or Roget. See, also, Dictionary of Homonyms.)

Idiom.—Every language has its idioms—peculiar personal forms that are in a way the meat and kernel of it, and yet often illogical and not amenable to rules or principles. No one knows English who does not know its idioms, and yet few suggestions can be given as to how they can be learned. They must be acquired by con-

tact and absorption. The most we can here do is to indicate a few idiomatic expressions by way of illustration.

Much of our idiom centers about the preposition. The cars stop *at* Adams street, not *on* Adams street. The picture hangs *on* the wall, *at* the right hand end of it, *to* the left of the door. There is a window *in* the west wall, not *on* it. We have the privilege *of hearing* a noted speaker, not the privilege *to hear* him. We are *under* the necessity of cutting expenses. We go *into* the room, and move about *in* it. There is a fence *in front of* the house, and one *back of it*, or *to the back of it*, or *behind it* (not *in back of* it). We leave *about* nine o'clock in the morning, not *around* nine o'clock, and there are *about* twenty of us in the party. We say *seldom if ever*, or *seldom or never*, but not *seldom ever*, or *seldom or ever*. Similarly we say *seems to be*, or *looks as if*, but not *looks to be*. We have confidence *in* a person, and confide a secret *to* him, because we have a high regard *for* him on account of our long intimacy *with* him. Your way may be different *from* mine, but is not necessarily better *than* mine. The student will have to master these and hundreds of others, each in its own special application. (See Dictionary of Prepositions.)

Proof Reading.—The correction of proof requires scrupulous attention to every unit of composition from the smallest to the largest. Corrections should be indicated in the margin, as nearly as possible opposite the mistake. When this is not possible a line should be drawn from the mistake to the correction. Mistakes are indicated on the page by underscoring, crossing out, drawing a vertical line through certain letters, drawing a line around certain words, and placing the caret where necessary. Corrections should be made neatly, and should be absolutely legible and unambiguous.

The signs commonly used in the correction of proof are the following:

✗ Change bad letter.	⊏ Move over.
⊥ Push down space.	☐ Em quad space.
Turn over.	/–/ One-em dash.
Take out (*dele*)	/–2–/ Two-em dash
∧ Left out; insert.	¶ Paragraph.
# Insert space.	No ¶ No paragraph.
V Even spacing.	*w.f.* Wrong font.
⌣ Less space.	..... Let it stand.
⌢ Close up entirely.	*stet.* Let it stand.
⊙ Period.	*tr.* Transpose.
/ Comma.	*Caps* Capital letters.
⊙ Colon.	*s. c.* Small caps.
;/ Semicolon.	*l. c.* Lower case or small letters.
✓ Apostrophe.	*Ital.* Italics.
✓✓ Quotation.	*Rom.* Roman.
/ Hyphen.	
// Straighten lines.	

Punctuation and Capitals.—The Period as indicating the end of a declarative statement has been already explained. It must also be placed after every abbreviation, and after Roman numerals.

The Interrogation Point is placed after a direct question, or a part of a statement that is a question: "Where are you going?" "'What about the boy?' is a question that is more and more demanding an adequate answer." It is used—but with doubtful propriety—in parentheses to indicate doubt: "The patriotism (?) typified by the *Dreadnought* is much in evidence," etc.

The Exclamation Point is placed after words or expressions that are definitely exclamatory in character: "Oh! look! They're being driven back." "Oh, if John were only here now!" The words Oh and O are interjections expressing strong feeling. O is used in direct address and in expressions of surprise, indignation, or regret, and should never be followed directly by the exclamation point. "O Thou Great Helper of the weak, give us now of Thy strength."

The Comma is used (a) to set off clauses within the sentence, as "The way was long, and the wind was cold." "Not that I loved Cæsar less, but that I loved Rome more." (b) The dependent clause is usually set off when it begins a sentence, and is also set off when it ends one, unless closely connected in sense with preceding clause: "When you are ready, say so." "Come to the tent when you are ready." "We were about to give up the search and start for home, when we heard a faint call in the distance." (c) The relative clause is set off when it is additional, but not when it is restrictive: "This road, which is the old St. Louis trail, runs past our farm." "Our farm is on the road which is known as the old St. Louis trail." (d) The comma is used to separate the members of a true series: "Days, weeks, months passed slowly by." "* * * * * precept upon precept; line upon line; here a little, and there a little." "Society has to care for the pauper, the delinquent, and the defective." "For winter is past, the rain is over and gone; the flowers appear on the earth; the time of the singing of birds is come, and the voice of the turtle is heard in our land." Notice the comma before *and* in the last two quotations. The comma is used to separate two or more adjective or adverbial modifiers when they are not logically an integral part of the word they modify: "A tall, young, handsome fellow he was." "A tall, handsome young man." (e) The comma is used to set off vocatives, and introductor and more closely related parenthetical elements. "My gentle Puck, come hither." "What mercy can you render him, Antonio?" "Well, honor is the subject of my story." "There is, if I remember rightly, a spring near the shore." (f) The comma is used to set off an introductory adverb lest it may be regarded as a preposition: "Beyond, the mountains rose in their strength and silence." "Beyond the mountains lies the land of our hope." The comma, as does punctuation in general, marks divisions in the grammatical construction and it is used especially to prevent misunderstanding. It should not be overworked, and must not be used to show elocutionary pauses. A good elocutionist may make a pause, called the rhetorical pause, after any word of a sentence, if by so doing he can increase the impressiveness of his interpretation.

The Semicolon is often used to separate complete statements that are so closely related in thought as to make the period too much of a stop. It should not ordinarily be used to separate a dependent clause from the main clause. It is used before *i. e.*, "that is," and *e. g.*, "for example."

The Colon is the most formal of all the marks of punctuation. It is used to separate statements that are set in formal apposition with each other, the second being a repetition or explanation or illustration of the first: "The engineer is supremely the man of scientific imagination: he must see the structure before he builds it." The colon was formerly much used to separate the two parts of a long compound sentence, if the parts themselves contained semicolons; but the practice is not to be commended. It is used, also, to introduce a list, or a quotation formally stated: "We have to consider, therefore, the three following propositions: government ownership, government control, and private enterprise." Moulton, on page 246, says as follows: "A foundation task of the artist, etc." The colon is also used after the salutation in a letter: "Gentlemen: Referring to yours of the 14th, etc." No dash need follow the colon after such a salutation.

The Dash is used informally, somewhat as the colon is used formally: "There is only one method left—concession." "There were only three of us present—Hayes, Carter, and I." The dash also indicates a sudden break in the thought: Now, the silurian strata—but of course that doesn't interest you." It is further used to set off a parenthesis more decided than those inclosed by commas: "Any one who has had that experience—and almost every one has had—will understand what I mean."

The Parentheses, or curves, are used to inclose a still more definite parenthesis, one that is often independent grammatically of the rest of the sentence: "Late that night (it was about eleven-thirty, as a matter of fact) I became aware that he (Stanley) was regaining consciousness."

The Quotation Marks are used to include quoted matter that is stated in direct form. A quotation within a quotation is indicated by single quotation marks. Notice the following, observing, also, the use and position of period, comma, question mark, and capitals: "I can hardly agree with you in that matter," said David. "I don't suppose," remarked Anne, quietly, "that there is anything more to be said." "Come here, Silas," said Arden; "I want you to look at this letter." "Why do you ask me that?" inquired the grocer, anxiously. "A few minutes later," continued my father, "Dexter came up to me and said, 'What are you doing here?'" But note the absence of quotation marks in the following: The printer said that the bill would come to about twelve dollars.

The Apostrophe is used to indicate possession. For the singular we add *'s*: "Henry's watch." "Fisherman's luck." "Charles's ideas." The apostrophe without *s* is permissible when the noun ends in *s*; *e. g.* "Charles' ideas," and must be used alone in such names as Crœsus', Achilles', Moses', etc. For the plural we add the apostrophe when the noun ends in *s* and *'s* when it does not: "The boys' tasks." "The ladies' aid society." "A book of children's stories." The apostrophe is less frequently used to indicate the possessive of objects; as, "the length of the field," not "the field's length," etc. But we say, "A year's absence," "two weeks' vacation," "at arm's length," "the water's edge," "a day's wages," "a dollar's worth," etc. The apostrophe is also used to indicate omitted letters in contractions: Don't, hasn't, you're, o'clock, etc. The *'s* is used also to indicate the plural of letters and figures: "Three 8's." "He doesn't make his *m's* correctly."

Capitals are used in general to distinguish personal or individual names from class names: David Farragut, Harlequin, Hamburg, Ceylon, American, etc. The words river, mountain, lake, street, building, etc., and official and professional titles are capitalized only when attached to prope

names: the Ohio River, Lake Erie, the Borland Block, the Hamilton Club, Central Park, Amherst College, Doctor McDonald, President Harper, etc. The following words are regularly capitalized: names of the Supreme Being; important words in the title of a book, article, etc.; historical epochs, wars, etc.; days of the week and months of the year (but not the seasons), holidays, holy days, etc.; abbreviations of title attached to proper names, and also A. D. and B. C.; the interjection O and the pronoun I; names of relationship when immediately preceding the name (*e. g.*, Aunt Amanda, Brother Amos,), and Father, when referring to any of the orthodox writers of the early Christian church (as, the Fathers); names of things personified, the first word of every independent sentence, and of every direct quotation (unless it is a phrase or fragment not in dialogue), the first word after a colon if it begins a letter or a formal quotation, and the first word of every line of poetry.

Argument and Debate.—The purpose of *argument* is to convince some one of the truth or falsity of a proposition—to make him agree with you in your view of the matter. To bring some one else to think as you do means that you must have good reasons for your own attitude and be able to present them in a convincing way. We have to consider, therefore, what constitutes a good reason.

(1) Practically all our reasoning falls under two broad general laws—those of induction and deduction. *Induction* is the primary form of reasoning. It means the drawing of a general conclusion from specific facts and observations. You decide, from certain facts, that a particular business firm is unfair or unreliable. It is apparent that the soundness of your conclusion will depend upon your getting at the real truth of the matter, and getting at it in a broad way.

Direct evidence is, on the whole, the best kind of proof. What you have yourself actually seen or experienced, may well be offered in support of your attitude. The experience of some one else may, however, be more convincing than your own, if he is a more practical observer or an authority. In citing authorities, it is absolutely essential to cite the best, those who are known to be accurate, truthful, unprejudiced, and thoroughly informed. Depend on weight of authorities, not on number. In offering *examples* to support a contention, you must remember that "one swallow does not make a summer," and that, similarly, one example does not prove a contention. In the same connection we may notice that, because one thing happens *after some other thing*, the first is not necessarily to be declared the cause of the second. We may be pretty certain that, if a field looks fresher after a rain, it is because of the rain; but we cannot be so sure that, if the wheat field is discovered ablaze after the train has just passed, it was the train that set it ablaze. A step further removed is the argument by *analogy*. The growth of the lily from the bulb is no argument for the immortality of the soul, though it is a very beautiful symbol of it. *Indirect evidence* is often very strong, as, to quote Thoreau, when you find a trout in the milk; but it is subject to the same allowances as direct evidence. The presence of a man at a horse race may indicate that he is interested in racing, but not that he is a gambler.

(2) The other general law of reasoning is that of *deduction*. It consists in the application to a specific case of a general proposition that is already admitted. The general proposition (major premise), its application (minor premise), and the resulting conclusion, constitute what is known as the syllogism. Take an example: Governments derive their just powers from the consent of the governed; our government of the Filipinos is without their consent; therefore it is unjust. It is obvious that you must be absolutely sure of your premises, or else your conclusion will be false. Practically every argument involves both the inductive and the deductive process.

(3) The presentation of arguments by speakers on both sides of a stated question constitutes a *debate*. The purpose of debate is, or ought to be, to get at the truth of the matter; and nothing can be more humiliating or demoralizing than the use of subterfuge, quibbling, rant, abuse, and intellectual trickery for the trivial satisfaction of beating one's opponents. The question chosen for debate should have two distinct sides to it. It should be stated affirmatively; *e. g.*, Resolved that the United States is justified in her occupancy of the Philippines (not, is *not* justified). The question should be discussed, and so formulated that both sides understand exactly in what sense it is to be understood. Then the preparation of the debate should proceed. The affirmative should apportion the arguments among its speakers, and the negative among its speakers. Each speaker should then study his argument, formulate its terms, collect his material, and prepare his brief.

The brief is the most important step in the process. It consists of a statement of the points which the speaker proposes to make, arranged in a logical way as main topics, minor topics, and subtopics. The order should be that of increasing importance, the weaker points coming first, and the stronger ones toward the end. All the points in the brief should be stated in the form of complete sentences. The speaker must prepare his refutation as well as his direct argument: that is, he must answer arguments that will be made, or might be made, on the other side. He will do well also to consult frequently with his colleagues to see that there are no overlappings or omissions. When the brief is completed, the argument should be written out *in extenso*, and absolutely mastered. It need not, and ordinarily should not be learned word for word. But the speaker must be sure of the exact phrasing of certain points, and must make certain that his transitions are easily apparent. In the delivery there should be no shouting, no striving for applause, no cheap allusion to the "ignorance and stupidity of our opponents." Speak calmly, naturally, firmly, quietly, and above all courteously.

The Forms of Public Speech.—We may distinguish the after-dinner speech, the address, the oration, the lecture, the sermon.

The After-Dinner Speech must be short and informal, yet it may be weighty. The greatest offense of after-dinner speeches is tedium. One good story is better than half a dozen. The diction should be eminently simple; for it is the very essence of the social temper to avoid technicalities on the one hand and extravagance on the other. Simplicity, restraint, and understatement are marks of breeding. Yet an examination of five-minute addresses by such men as Lowell, Curtis, and Henry Grady shows that this tiny form of composition may express important thoughts: it can get down to fundamentals; it can set up noble ideals. It can be "built like a watch," obeying on its own scale all those rules of organization which have been previously set forth.

The Address is a dignified speech of considerable length and great variety of subject. In a recent collection of addresses we note such topics as the influence of universities, the leadership of educated men, the scholar in a republic, the drama in America, the child and the state, general amnesty, secession. The presidential address of a society usually sums up recent tendencies which interest the society, and then gives some outlook on the future. Such is Miss Jane Addams' address on "Charity and Social Justice," before the St. Louis Congress of Charities, 1910, an address marked by broad historical retrospect and a penetrating philosophic prospect. The tone, or degree of dignity, in the diction of an address must be high. Humor must be kept very subordinate, and colloquialisms must be rare. On the other hand, unnecessary technicalities must be avoided, and display must be entirely absent. Before a recent meeting of the American Philosophical association the "papers" were so technical that even the members wrangled for hours as to their meaning. But the presidential address, by the late William James, on "The Energies of Men," was given in language so picturesque and clear that it was sought by a popular magazine, and was quoted far and wide.

The Oration is an elaborate discourse, treating an important subject in an impressive manner. Its purpose is not primarily that of the address; it seeks sooner or later to move the loftier emotions deeply. For this reason it is commonly felt that an oration should not be read; it should seem impressively impassioned and extemporaneous. The very name suggests *oral*, and recalls the whole ancient tradition of *rhetoric*, or public speech. It recalls Aristotle, with his distinction between the oratory of deliberation and that of display. Ancient *epideictic* oratory permitted a certain amount of display and beauty for its own sake. The modern form of oration which still preserves this tradition is the *eulogy*. Blaine's eulogy upon Garfield is a striking example of the legitimate exercise of the power of pure oratory. One who listened to the nominating speeches in the Republican Convention of 1908 cannot help regretting that the power of dignified eulogy—eulogy which unites a significant man to the times of which he is the expression—is practically lost. But the loss has some compensations. It is almost wholly a gain that young men are now advised to study Wendell Phillips instead of Daniel Webster. The plain, direct, *conversational* style is far more effective to-day than the older decorative and rhetorical style.

The basis of every good oration must be good organization and sound argument. Beyond that, the most important thing is for the orator to know his audience, that he may appeal to their sympathy, and, if need be, to their foibles. Remember that Aristotle, that great student of humanity, devoted a third of his treatise on oratory to the psychology of different audiences.

Journalism. Short Stories.—Perhaps the most valuable single gift to the journalist is the sense of mass and proportion. He must write accurately to space. He must

dwell on the significant, and boil the less important down to its lowest terms. Headlining is a science in itself, and keeps one man busy on every daily, for it is the art of telling the whole story in a few phrases.

As for diction, the trend of the times is toward simple words. It is only in rural districts that we find "fine writing," pretentious phraseology. Here it is often due to forcing an ignorant man to report something that he knows nothing about—as, for example, in this: "He has a pliable tenor of immense range, coupled with deep organ tones in his lower register. He will doubtless advance into deserved prominence in that mimic world which proves so fascinating to the actor and the singer." The day is passing when reporters talk about "infuriated animals" when they mean runaway horses. Headlining, however, has one bad effect on diction. It leads to the coining of short and ugly cant words, like *talk-fest*, to fit the exigencies of space. A sensible reporter avoids smartness in his diction; the people want the news, and not his verbal antics.

Short Stories.—The writing of short stories is an art which has grown with journalism and is closely allied to it. The short story finds its audience in the tired business men and the tired youths and maidens who shrink f om prolonged dealings of mind with novels—especially the sociological novels of the day. This means that the short story must be so constructed as to capture weak attention. An allegory or a tale, however lovely, does not do that, because it lacks plot and surprise.

Plot and surprise, then, the short story must have. Its material may be realistic or romantic, but it must be worked up into a story. On the other hand, there can be no intricate and elaborate plot, for that takes up space and time. The problem is to get a surprising incident, a surprising turn of affairs, and lead up to it neatly and briefly. The events must not cover a long period; the past must be ruthlessly foreshortened; a single day, sometimes a single hour, must disclose the whole complication and resolution of the events. So, as Brander Mathews has put it, a short story is not merely an abridged novel.

Again, there is no opportunity for showing the development of character. If there is to be change of character in your hero, you must catch him at the moment before the change comes. Most short stories do not attempt character-change, but deal with incidents. Of course, the more significant the incident is, the better. The ideal thing would be to catch the most important day, hour, and incident in the hero's life.

A good beginning is half the battle for it gets you your reader. Make it fresh and striking. Roughly speaking, do not begin either with description or with dialogue. Votes have shown that both are less acceptable than a paragraph which flashes before you an intrinsically interesting person or a striking situation.

Avoid dialect: there is no sale for it now, except to a few magazines from a few masters.

Avoid unpleasant and ghastly and cynical and "suggestive" material. Pure love, heroism in daily life, friendship, loyalty, ludicrous happenings, fair and honorable getting on in the world; hope, poetic justice—these are the themes that sell. Be human! and don't be trite, hackneyed, or commonplace.

Choose your title as carefully as if you were advertising.

Study your market—as in the book *1001 Places to Sell MS.* (Editor Co., Ridgewood, N. J.)

Sermons.—A sermon is not a lecture, although preachers sometimes forget the fact. The primary business of a sermon is to influence the human will in such a way as to bring the eternal into time; to make men feel that they may live the eternal life in the midst of time; and to make them attempt this divine task immediately. This definition may seem vague and abstract, but neither *eternal* nor *will* can be omitted from it. The teaching of morality without reference to spiritual motives is not preaching. The words *eternal* and *spiritual* are indeed difficult of definition, but the practical and progressive definition of these words is precisely the homiletic task.

So far as literary art is concerned, this end may be advanced by, say, three means: vitality of diction, vitality of organization, vitality of direct appeal.

Vitality of diction may best be studied in the sermons of the Christ. What strikes the literary student here is the variety, homeliness, beauty, and freshness of the language. The kingdom of heaven is not formally or scientifically defined. It is a kingdom of children, and of men reborn. It is a pearl, a net, a wedding-feast, a piece of silver, etc. This warm flood of fresh spiritual poetry was poured by the Great Preacher into the formal and frozen vocabulary of the Pharisees. No evangelist can be effective who does not learn this lesson. Preaching means relating the eternal to the ever-changing temporal, and the universally spiritual to the individually human.

Vitality of organization means that the whole sermon is easily grasped, that its main divisions are easily remembered, and that the point of the whole could be expressed in one paragraph or sentence.

Vitality of direct appeal means that the end is direct and forcible; that the peroration is not for display, but to accomplish a change of mental habits. Lyman Beecher drove one of his theological students back into the pulpit, and cried: "You have not cracked your whip; your whip has no lash." The figure was not wholly happy, for a preacher should leave his audience with a sense that he loves their souls more than he loves to lash them. But it emphasizes the indispensable appeal to the will.

Preaching from texts is primarily exegetical; but exegesis must not stop with formal explanation; it must run deep into life; here and now there are words and situations of common life which are essential to such exegesis as really comes home to men's business and bosoms. From the literary point of view there is one thing about texts, which the present writer does not remember to have seen mentioned. The Bible is full of superficially contradictory texts. This is because, of all books, it is truest to life. It does not blink the paradoxes of experience, but reconciles them by the *will*. A sermon on private prayer (Matt. 6: 6) should logically include or be followed by one on religious solidarity (Matt. 6: 10). It is characteristic of the Christ that he demands the coming of the whole kingdom as the first interest in the most private petition.

The *diction* of sermons should have a full Saxon element, and should be free from neologisms. The pulpit has done too much toward introducing such wretched words as *enthuse* and *mentality*. The pronunciation of the preacher should be correct, not eccentric; this is for no other reason than that false or eccentric pronunciation diverts the attention of the critical (and that means all the young) from his message.

Lecture means "reading," and most lectures are read—at least by the authors. They vary from the technical lectures of a university to the popular humorous lectures of a Bill Nye. Even in the case of popular lectures, no two styles or messages could differ more than Matthew Arnold's lecture on *Numbers* differs from Artemus Ward's on *The Mormons*. In the very same evening Wendell Phillips used occasionally to give his famous lecture on *The Lost Arts*, and follow it with an impassioned appeal to the same audience on the iniquity of slavery.

But in all popular lectures it is the primary purpose to please rather than to exhort. There must be fresh information, and there must be fresh humor. Scientific terms, if used at all, must be used sparingly, and must be explained. A wise lecturer will note the effect of his first delivery on the audience, and will remodel the lecture accordingly. Long descriptive passages will be shortened. Even in narratives of travel the human element must be present in every paragraph; for, as Stevenson said: "Nobody talks about mere scenery for more than two minutes at a time."

Business English. Social and Business Letters.—**Saxon and Latin Elements.**—Many of our most technical business words are of Latin origin; *e. g.*, *advertise, auction, bill, bona fide, bonus, cancel, capital, cheat, clerk, collateral, competition, coöperation, corporation, currency, fiscal, fortune, gratis, grocer, guinea, interest, item, lien, mint, money, pecuniary, pound, premium, redeem, salary.*

A study of the history of these words, as found in any good unabridged dictionary, will throw a flood of light upon the movements which have produced modern business conditions. But, apart from these technical terms, it is inadvisable to load business English with Latin derivatives. Saxon terms still make the strongest appeal to the emotions and the will, and goods cannot be sold unless the will is touched. Plain, simple, strong words are the most effective. People's love of food, dress, the family—this must be reached; and it is best reached through words which were earliest associated in the buyer's mind with these deep interests.

Degree of Dignity.—But plain, simple words are not necessarily slang words. Business slang has so vast a vocabulary that it vitiates the usage of everybody. Business expressions are tending to displace social and literary expressions. Many Americans speak of "the balance" of the day instead of "the rest"; they speak of a man as "well posted," as if he were a ledger; and instead of asserting, declaring, maintaining, contending, they "claim" everything.

The young business man will not regret mastering certain more dignified phrases for many of the commoner vulgarisms of business parlance. If he is in the habit of saying *ain't*, he should master the following: *I'm not; you're not* or *you aren't; he's not* or *he isn't; we're not* or *we aren't; they're not* or *they aren't.*

Business English cannot always be as dignified as literary English, for business deals with all sorts and conditions of men. But a business man must command more than one vocabulary. Note the following

list of phrases, the second of which in each pair is the more dignified: *knock, complain; boost, praise; folks, family; cheap, inexpensive; back down, recede; anyway, at all events; a great success, very successful; mighty fine, extremely fine; right then, just then; quite a few, several; fired, dismissed; faked, falsified; hadn't ought, ought not; indorse, approve; auto, car; without, unless.*

These are merely examples. Different situations and different customers require different vocabularies. But in general, business English should be plain and forcible without being vulgar. It is an error to think that educated customers wish to be addressed in magnificent words and swelling sentences. A truly educated man speaks simply. He goes to bed—not "retires"; has legs, not "lower limbs"; eats dinners, not "banquets"; builds a house, not a "residence"; calls a soup delicious, not "elegant"; has in his house a kitchen, not a "culinary department." If he receives a booklet advertising certain goods in highflown and bombastic language, he is as much offended by it as if it were full of such words as *fake, knock, boost, graft, boodle, swell, scads.*

Wordiness.—Time is money, and business English should cultivate brevity. A few words that catch the eye, hold the attention, present the arguments in a nutshell, are better than a wilderness of fine expressions. This principle applies to every form of business composition, from advertisements to reports, from letters to booklets. Yet there is no merit in mere brevity. The few words must be the right ones. The short paragraphs must contain much meaning. Important facts must not be omitted. And if a good deal depends on one word, that word should appear often enough to be remembered.

This is particularly true in advertisements. A good advertiser keeps his keyword before the people. He varies the context to give freshness and attract attention, but he does not allow you to miss his precious word—his "Sapolio" or "Gold Dust Twins," or whatever it be. Into that word or phrase he packs as much of his story as possible.

Also the name and address of the maker are never absent from a good advertisement.

The headlines of an advertisement, like the headlines of a newspaper item, are extremely important. Their business is to catch the fleeting attention, for (as has been proved by the investigations of Professor W. D. Scott) people do not spend more than one-tenth the time on advertisements that they spend on the text of a paper or magazine, and many persons are unaware that they ever read advertisements—though we all do. A clear Saxon phrase, striking at once into some genuine human instinct or interest—this is the proper opening of an advertisement.

Not the price, but the quality—that is the important matter to name tellingly.

Business Letters.—We may distinguish three essentials of a good business letter—first, *courtesy;* second, *clearness;* third, *persuasiveness.* Brevity has been mentioned above.

Salutation and Closing.—Courtesy requires, first, that the salutation and the leave-taking should be free from brusqueness or indifference. Every man is entitled to the abbreviation *Mr.* before his name in the salutation and on the outside of the envelope. Physicians and other professional men are never offended if their correspondents take the trouble to give them their right professional title. Firms are entitled to be addressed as *Messrs.*, though incorporated companies—*e. g.*, The Macmillan Company—are not usually so addressed nowadays. *Dear Sir, Dear Sirs, Gentlemen, Dear Madam,* are proper business salutations. The last-given applies equally to girls and married women. The leave-taking may be *Yours truly, Yours very truly, Very truly yours*—the capital being used for the first word only. An unmarried woman should prefix *Miss* to her signature, or should place her full address to the left. A married woman should sign her legal name, and then place to the left the exact address which she wishes to see on the envelope of the reply, thus:

Yours truly,
Ellen Gates Adams.

Address;
Mrs. James Ward Adams,
1372 Linden avenue,
Chicago.

Care should be taken to avoid hackneyed, curt phrases, such as "Yours received and contents noted." The letter should have some ease, some individuality. It should impress the receiver as a piece of the courteous conversation of an educated and alert business man. Note how beginnings of replies may be varied: "We are glad to learn from your letter of March 12;" "The impression that we get from your favor of the third;" "We are glad to have your inquiry of the seventh concerning;" "You advised us on the fifth of last month that."

In cases where business relations are long established, the social form of salutation may be used; as, *My dear Mr. Jones.* This, however, should follow the full name and address of the person saluted, since business is business, and the letter is addressed to a particular Mr. Jones. Go out of your way to get his name right, and sign your own name uniformly every time; don't have John G. Jones doing business with F. H. Smith one day, and J. G. Jones with Frank H. Smith the next. Or, the name of the addressee may be put at the end of the letter, to the left of your signature.

Latterly it is the custom of many correspondents to begin sales-letters to strangers with the familiar *Dear Mr. Jones.* A good many people resent being so addressed by strangers. The form is not to be recommended, although it shows that the would-be seller is taking pains to be personal.

Circular or Form Letters are a necessity of modern business, and great things are claimed for them by houses that make a business of preparing and supplying them, together with specially inked ribbons which make it possible to match the salutation with the body. But no form-letter can wholly take the place of the individual letter. The personal touch at the end—"The last time I saw you"—cannot successfully be imitated in any form-letter.

In all business letters it is both courteous and persuasive to say *we* as little as possible and *you* as much as possible, provided condescension and undue familiarity are avoided. The customer is not much interested in your affairs or your success; he is deeply interested in his own. You must learn to take his point of view.

Collecting Letters.—In answering letters of complaint or in sending collection letters, courtesy must be observed with especial care. The hotter your correspondent's tone, the cooler should be your own. Do not argue with an angry man. Take all the blame you honestly can, and then be generous, if you would keep your trade.

Clearness means that descriptions and terms should be beyond mistake. Description of goods should be exact, but not tedious. The person addressed must receive a clear mental picture, and without undue effort. Try to hit the thing off in telling phrases, presenting the goods imaginatively—*i. e.*, in a way that satisfies the buyer's needs.

Sales Letters.—A good sales-letter begins by nailing attention; the start is half the battle. It proceeds to describe the goods. Then it gives reasons for buying them—for the particular man's buying them; but he should not be furnished with descriptions of competing goods, for that divides his attention, increases his responsibility, and often unintentionally suggests buying elsewhere. Then the letter closes with some inducement to act promptly. The imperative mood "Do it now" is well enough if reasons and inducements have actually been offered; otherwise it is an impertinence.

Too much care cannot be exercised in the selection of stationery, the type of engraving or printing, penmanship or typing, etc. The first impression of a letter is given not by its subject matter (ideas, phraseology), but by its general appearance. A letter represents to some degree its sender, and one should not forward a shabby or a gaudy missive; these characteristics do not inspire confidence.

Social Letters.—We distinguish (a) formal notes in the third person, (b) notes to a stranger, (c) notes to acquaintances, (d) intimate personal letters.

Formal notes should be in the third person throughout, except when engraving makes the words "your presence" necessary. Thus: *Mr. and Mrs. Charles Henry Webster request the pleasure of Mr. and Mrs. James Henry Hammond's company at dinner, Monday, June the seventeenth, at seven o'clock.* Below, at the left, appears the street number of the sender, and the date, thus; *1274 Washington avenue, June the third.* The acceptance reads: *Mr. and Mrs. James Henry Hammond accept with pleasure the kind invitation of Mr. and Mrs. Charles Henry Webster to dinner on Monday, June the seventeenth.* The sender's address appears below, at the left. Regrets read: *Mr. and Mrs. James Henry Hammond regret that a previous engagement prevents their acceptance of Mr. and Mrs. Charles Henry Webster's kind invitation to dinner on Monday, June the seventeenth.*

These forms are pretty definitely fixed, and do not admit of much alteration or addition. The full names are used; it is *at* dinner in the invitation, *to* dinner in the reply; it is *on Monday* in the invitation, and *on* or *for Monday* in the reply. It is *June third* or *June the third*, not June 3d; and the year is not given. Wedding invitations of course give the year, and etiquette varies slightly in other details from year to year, as any good stationer is able to indicate. *Previous engagement* covers all excuses in regrets. *Illness in the family, absence from the city*—these expressions may be used, but are not necessary; and other excuses are inserted at the risk of bungling the note. Notes to a stranger begin *My dear Sir*, or *My dear Madam*, and his or her name appears at the left at the end. *Yours sincerely, Yours very truly* are proper endings. *Yours respectfully* is no longer used by careful writers in any sort of letter. *Yours cordially* is impossible in a note to a

stranger, and is of doubtful taste except when used by women in social notes. Observe the use of capitals in *Sir* and *Madam*, and the small letter in *dear* after *My*.

Notes to acquaintances begin with *My dear Mr. Jones, My dear Miss Jones, My dear Mrs. Jones*, and end *Yours sincerely, Yours very sincerely, Very sincerely yours*. The addressee's full name need appear nowhere save on the envelope. In no kind of note or letter should a clergyman be addressed or referred to as *Rev. Jones*. The initials, or the name, or *Mr.*, or *Dr.* must appear after *Rev.* The best form is *The Rev. William Mead Jones, D. D.*

Notes and letters to friends and intimates are of every shade of familiarity. *My dear Mr. Jones, My dear Jones, My dear William Jones, My dear Billy Jones, My dear Billy, Billy*—all of them are good if used with tact. Signatures vary from *Yours sincerely* to *Yours ever* or *Yours*, and may respond still further to personal affection, whim, or humor. *Your friend* is very rarely used, but it comes well from older people who mean it. The tone of intimate letters should be individual, recalling the very voice and gesture of the writer. All pretense, all stiffness, all bookishness must be absent from a truly intimate letter. In their place there is room for all the personal charm that the writer can command.

FIGURES OF SPEECH.—For practical purposes the distinction sometimes made between figures of speech, figures of grammar, and figures of thought, may here be discarded. The essential principle, which the reader may apply for himself, holds the same in all.

Definition.—A figure of speech is a means of expressing or intensifying one idea in terms of another. This fusion of terms is the essential principle of figures of speech; it is called connotation. That is to say, in addition to what is *denoted* or literally meant, there is *connoted* something else which serves as a helping or carrying idea. This connoted idea may be a distinct thought in itself, in which case its value is mainly illustrative; or it may be merely felt in the manner of expression, in which case it has an emotional value of some kind. The two values may be proportioned or blended in many degrees; but in any case the principle of connotation is present; the reader is made to think or feel somehow in terms foreign to the literal idea.

Illustration.—This connotation of ideas may be seen in its simplest form in the following paragraph from Macaulay, in which he is explaining the difference between two kinds of historical composition, the descriptive and the philosophical: "Of the two kinds of composition into which history has been thus divided, the one may be compared to a map, the other to a painted landscape. The picture, though it places the country before us, does not enable us to ascertain with accuracy the dimensions, the distances, and the angles. The map is not a work of imitative art. It presents no scene to the imagination; but it gives us exact information as to the bearings of various points, and is a more useful companion to the traveler or the general than the painted landscape could be, though it were the grandest that ever Rosa peopled with outlaws, or the sweetest over which Claude ever poured the mellow effulgence of a setting sun." Here the terms applicable to a map and a painting respectively, used purely to illustrate, are of material aid in making clear a somewhat abstruse literal subject. On the other hand, we are aware of a heightened feeling when David, lamenting over Saul and Jonathan, says of them: "They were swifter than eagles, they were stronger than lions." Here his sense of their worth is so keen that he greatly overstates the case, describing them in terms that belong only to another order of beings; this because his emotion has so borne him on.

The Good of Figurative Language.—It is a mistake to suppose that figures of speech are merely decorative and ornamental elements put on for display. Nor are they more natural to educated people and men of letters than to the common and unlearned. They are an even more primitive and spontaneous manner of expression than the literal; reflecting, as they do, the picturing play of imagination, more native to man than the logical powers. Figurative language has advantages over literal both for reader and writer. For the reader it is of advantage because it gives him the benefit of an associated idea more concrete or more intense than the literal, thus calling forth his more vivid realization. For the writer it is of advantage because it enables him to express a hard or subtle idea not only more clearly but in much less space; it enables him also to imply his feeling about some matter without dictating what the reader's emotion shall be. It is a kind of literary shorthand, conveying twice as much thought in the same space, thus economizing attention; and a literary tonic, using as it does twice as vivid terms and forms.

Note.—It follows from this that figurative language is especially adapted to the more inward and abstract ideas, which need to be reduced from hard logical processes to the picturing terms of sense perception. Thus, when Tennyson wants to describe the subtle idea of the manifold meanings of poetry, he puts it: "Poetry is like shot-silk with many glancing colors. Every reader must find his own interpretation according to his ability, and according to his sympathy with the poet." Here the simile both shortens and vivifies the whole description.

The Most Commonly Used Figures.—It would serve no practical purpose to make a minute list or analysis of the various figures of speech. It will be better to classify the most commonly occurring ones, reduce them to principle as the connoting idea is related to the literal, and refer them in each class to certain salient types.

As intimated in the paragraph of "Definition" figures fall into the two leading classes of *illustrative* and *emotional;* and as several figures in each class may be mere variants of one essential principle, they are best grouped according to types.

Illustrative.—In this class, which comprises the forms most commonly recognized as figurative, the connoted idea is introduced mainly for its interpretative and clarifying value; that is, the literal idea is associated with something more concrete, or better known, or more directly present to the senses. Three types may be named.

Figures of the Similitude Type.—In this type of figures the writer's effort is most purely illustrative: he is concerned with showing how in some point the literal idea resembles something which in other respects is totally different. Note that it is the general difference of class between the literal and the connoted idea which makes the figure; comparison of things in the same class is not figurative at all, but literal.

Simile.—When the idea to be illustrated is relatively simple it is said or assumed to be like something else; the word simile being just the Latin adjective *similis, simile*, like. Generally the comparing term, *like, as, so, resembles*, is expressed, though this is not essential.

Examples.—The figures from Macaulay and Tennyson are similes; the way in which they apply the connoted idea to the literal explains itself. The following is a plain and telling simile from Abraham Lincoln: "Once let slavery get planted in a localty, by ever so weak or doubtful a title, and in ever so small numbers, and it is *like the Canada thistle or Bermuda grass*—you cannot root it out."

Analogy.—But the ideas that need figurative illustration are not always so simple; they involve complex relations and principles that need to be brought out into the open, where the whole can be seen. Hence the similitude needs to be enlarged and deepened; it becomes not so much a likeness of things as a likeness of relations; one thing is represented as working in its sphere as does some other thing in its sphere. This deepening of the likeness, less picturesque perhaps but more charged with thought, is called analogy.

Examples.—Abraham Lincoln's well-known illustration of the divided house is an analogy. Its point is not that the state is like a house, but that the state in a certain condition is like the house in an analogous condition. "A house divided against itself cannot stand. I believe this government cannot endure permanently half slave and half free. I do not expect the Union to be dissolved—I do not expect the house to fall—but I do expect it will cease to be divided." A very familiar analogy is that between an argument and a chain: as a chain is no stronger than its weakest link, so an argument is no stronger than its weakest premise. Analogy is probably the most widely useful of all the figures of the similitude type.

Parable.—In this figure the analogy is carried out in detail, in the form of a story or an extended description, so that not merely one but several elements of the connoted idea are made to convey a meaning and lesson. It is an analogy elaborated into a parallel case in which more familiar objects or events are displayed in like relations.

Examples.—The parables of the bible, especially in the teachings of Jesus, furnish the most perfect examples of this figure. A whole series of his parables, for instance, is devoted to explaining the real inwardness of the kingdom of heaven, in many aspects and relations. The following is one of his shortest parables: "The kingdom of heaven is like unto leaven, which a woman took, and hid in three measures of meal, till it was all leavened." In other parables he represented it as "like unto a grain of mustard seed"; as "like unto a man that is a merchant seeking goodly pearls"; as "like unto a treasure hidden in the field," etc. (*R. V.*); and by such parables he revolutionized men's ideas of what the kingdom of heaven essentially is.

Figures of the Identity Type.—This type comprises the figures wherein the similitude is not expressed, but implicit; that is, the connoted idea is not likened to the literal, but squarely identified with it. By this means vigor is gained, and the reader is put more directly in position to think the matter out for himself.

Metaphor.—In this figure the type is embodied most plainly, the other figures being in fact merely aspects or enlargements of this. Instead of saying one thing is like another, it says or assumes that one thing *is* the other. The word metaphor means a transfer; that is, of meanings.

Example.—In the following, from Chesterton, the literal idea conveyed is that men have many more ways of communicating ideas to each other than by words: "In the last resort all men talk by signs. To talk by statues is to talk by signs; to talk by cities is to talk by signs. Pillars, palaces, cathedrals, temples, pyramids, are *an enormous dumb alphabet; as if some giant held up his fingers of stone.*" Here, it will be noted, the figure is finished by a kind of simile (*as if*, etc.). Metaphor and simile, in fact, often interact with each other.

Trope.—This figure is merely metaphor in its most condensed and least obtrusive form.

The word, derived from a Greek word meaning *to turn*, denotes a word turned from its literal meaning to connote some figurative idea. *Trope* is by far the most frequent and spontaneous figure of all; all language, in fact, that has vigor and life in it will be found to derive its interest in large part from the words of metaphorical suggestiveness that it contains.

Examples.—Thus, to speak of a man's character as *warped*, or *twisted*, or *unbalanced*; of his disposition as *sunny* or *sour*; to speak of one as an *all-round* man, or as having intellectual *poise*, or as standing *four-square to all the winds that blow*, is to use the perfectly natural yet vigorous language of trope. Men are frequently using the vocabulary of their business or occupation in this accommodated sense; as when a person's sincerity of conduct is described as *straight goods*, or when a man who fulfills his promises is said to *deliver the goods*. A certain Cape Cod skipper once described an untrustworthy man's character by saying that "his center-board was crooked"; a farmer would perhaps have said that "you could not hitch to him." Stevenson describes the endeavors made by a certain community to dispossess a supposed haunted house of its infernal occupant: "Every kind of spiritual *disinfectant* was put in requisition." (*R. V.*,) When we speak of "improving the moral *tone*," we are employing the language of music for a more abstract idea.

Personification.—This is a form of metaphor in which the literal idea is conceived as a person, having something of the life and traits of personality; thus the idea is made to think and act is if alive. A very powerful figure, rightly used; its abuse consists in employing it idly or insincerely.

Examples.—Instead of enumerating the noble qualities with which a man was endowed by nature, Shakespeare puts the thought in far more vigorous form by making nature speak:

"His life was gentle; and the elements
So mix'd in him, that Nature *might stand up*
And say to all the world, This was a man!"

Personification is fully as effective in the form of personal touches, a kind of trope, as for instance: "Ideas have hands and feet, as Hegel said, and move the world," where the metaphorical attribution of personal members is sufficient to suggest the life that inheres in personality.

Allegory.—This figure expands and carries out the metaphor, much as parable expands the similitude; only, instead of blending the literal and connoted ideas, it gives merely the connoted idea, in the form of a narrative or description, and leaves the reader to make out the literal meaning for himself. It is much used as a vehicle for moral or spiritual truth.

Example.—It is a mistake to deem allegory an obsolete form, or to associate it only with its great literary exemplars like the *Pilgrim's Progress*, or Spenser's *Faërie Queene*. Its principle can be seen equally well in a shorter example, such as the following, from a German source: "A man had a plain strong-bow with which he could shoot far and true. He loved his bow so well that he would needs have it curiously carved by a cunning workman. It was done; and at the first trial the bow snapt." Here a story is told, and no claim is made for a second meaning of it; yet the reader cannot help getting a moral lesson from it. Another example employs the kindred figure called fable, in which animals are endowed with personality: "An old ruinous tower: which had harbored innumerable jackdaws, sparrows and bats, was at length repaired. When the masons left it, the jackdaws, sparrows, and bats came back in search of their old dwellings, but these were all filled up. 'Of what use now is this great building?' said they: 'come, let us forsake this useless stone-heap'" The figures allegory, fable, apologue, and parable are closely akin to each other, and frequently so run together that a minute distinction between them is unpractical.

Figures of the Selective Type.—In this type of figures the connoted idea, instead of being taken from some alien class of objects, is selected from the class to which the literal idea belongs; that is, the part or accompaniment which is immediately concerned in the action—the business part so to say—is used, and the rest is left out or taken for granted. Thus the reader's attention is concentrated and economized. Two figures, alike in principle, belong to this type.

Synecdoche.—This figure takes a part for the whole, or, less often the whole for a part, and makes it do the work of the whole idea. The figurative suggestion may be conveyed either by the noun or the verb, as best serves the writer's purpose.

Examples.—1. A part for the whole. This is very common in the language of business or labor; as when we say so many *hands* for work in the field; so many *spades* for digging; so many *spindles* in a factory; so many *rifles* in the army; so many *sail*, or *hulls*, in a fleet. "Every *eye* shall see him; with *fire* and *sword*," "sounds as if some fair city were one *voice*," are synecdoches. 2. This is seen in the use of such a term as the *administration* for the persons in power. "That I may make thee an *astonishment*, and the *inhabitants* thereof a *hissing*," is a Scripture synecdoche, the effect or result, as a whole, put for the cause of it. 3. "Coleridge *sat on the brow* of Highgate hill in those days," is a synecdoche conveyed by the verb; it is Carlyle's way of saying that Coleridge resided in Highgate at a certain period of his life, which (also by synecdoche) he designates as "those days."

Metonymy.—In this figure not a part stands for the whole, but the aspect or accompaniment or result of the idea which has most direct significance for the thought conveyed is selected to do the work. The word metonymy means a transfer of terms.

Examples.—In "The bright *death* quivered at the victim's throat," Tennyson is speaking of a sacrificial knife. In "he had drunk up two thriving *businesses* like a bottle of sherry," Stevenson names the result of a life of dissipation. "The *pen* is mightier than the *sword*" uses the concrete instruments for what they produce: literature and war.

Emotional.—In this class of figures the connoted idea is not a definite image called up from a different class of objects, but rather a state of mind belonging to a different level of feeling: an emotion of wonder, or intense realization, or humor, or contempt, which draws the reader out of his ordinary placid mood to some degree of its own intensity. This emotional state is brought about not directly, but by assuming the manner of expression peculiar to such connoted mood and trusting to the reader's sympathy to share in it. Two types of this class of figures may be distinguished.

Figures of the Intensity Type.— In this type of figure the writer's feeling is heightened by his sense of the greatness or importance or deep meaning of his idea, and his manner of setting it forth corresponds. Of this type of emotional figures the most representative are:

Exclamation; which is simply an outburst of wonder or exultation, generally expressed by an elliptical form of the sentence, in which the thought is not formally stated by an indicative verb, but held up, as it were, for contemplation and wonder. In cases where the thought is stated in full grammatical structure there is intensity enough in the context to support the emotion, which then is indicated merely by the mark of exclamation (!). The utterance of the emotion is often aided also by interjectional words.

Examples.—Hamlet's expression of wonder at the greatness of man is a very pure example of the figure: "What a piece of work is a man! how noble in reason; how infinite in faculty! in form and moving how express and admirable! in action how like an angel! in apprehension how like a god!"—Simple as the figure is, the right use of exclamation is a delicate mark of literary skill. Especially, if the writer marks his emotion merely by an exclamation point, he must judge accurately if the emotional value of his context warrants it; and, if he ventures on the support of interjections, he needs to guard against giving the impression of forcing the emotional note.

Interrogation.—A figure used principally in oratory and animated argument, is the asking of a question, not in order to elicit an answer, but to imply strongly the opposite of what is asked. It connotes a conviction so strong that the truth of it cannot be gainsaid; it is thus a kind of challenge.

Examples.—In the following, from one of Burke's speeches, it can be felt how he is asking questions: not to get an answer, as if it were something to be investigated, but as indignantly challenging his hearers to make any other answer than is implied: "What! Gentlemen, was I not to foresee? or, foreseeing was I not to endeavor to save you from all these multiplied mischiefs and disgraces? * * Was I an Irishman on that day that I boldly withstood our pride? or on that day that I hung down my head, and wept in shame and silence over the humiliation of Great Britain? I became unpopular in England for the one, and in Ireland for the other. What then? What obligation lay on me to be popular?"

Apostrophe.—This figure is an address to some absent or distant object as if it were present and could hear and respond; it connotes the fervor of intense realization. Thus, with the connoted idea, is conveyed emotionally the beauty or pathos of the thought.

Examples.—In the following, Stevenson, filled with the vivid realization of the truth that men follow ceaselessly after vague ideals, and never attain them, breaks forth into this fervid address to them: "O toiling hands of mortals! O unwearied feet, travelling ye know not whither! Soon, soon, it seems to you, you must come forth on some conspicuous hilltop, and but a little way further, against the setting sun, descry the spires of El Dorado." The intensity of the apostrophe, it will be noted, is supported by exclamation. Note also the synecdoche, "toiling hands," "unwearied feet."

Figures of the Animus Type.—In this type, as in the previous, there is a degree of intensity in the emotion; but the controlling element is the *kind* or direction of the emotion: it reveals how the writer would have his reader feel, in a sense of sublimity or of humor or of the absurd, toward the idea thus set forth—in other words, a certain animus toward it.

Hyperbole.—This is simply overstatement: describing a thing in terms so beyond all reasonable or possible bounds that the reader cannot be misled into understanding it literally; he adjusts the statement to fact, rather, in the spirit of it.

Examples.—The figure hyperbole, which is essentially a descriptive figure, seems to have had an interesting history. In the old times men used hyperbole because they could not set bounds to their own imagination; as when the Hebrew spies, sent out to explore Canaan, reported that the cities of that land were "fortified up to heaven," and of the inhabitants: "we were in our own sight as grasshoppers, and so we were in their sight." Of a hostile army also it is said: "The children of the east lay along the valley like locusts for multitudes; and their camels were without number, and as the sand which is upon the sea-shore for multitude." (*R. V.*) In modern times, however, it is used rather to induce in the reader an unbounded imagination, describing in exaggerated terms so that he will not try to measure or to number, but

simply surrender himself to an impression; as when an old-fashioned table is described by Hawthorne as "exhibiting as many feet as a centipede," or as when, describing an astonishing run in a violin passage, a nonmusical man averred that the performer played "more than a million notes."

One can produce much the same effect as in hyperbole by a studied *understatement*, an exaggeration in reverse; and this may be regarded as a kind of transition to the next figure.

Irony.—In this figure the writer's animus is so strong, and the real state of the case so obvious, that he says or assumes the exact opposite, in the certitude that his meaning will be taken as it is. It connotes various degrees of contempt, or resentment, or indignation, or ridicule. Being mainly a vituperative figure, it is best employed in a tone of playfulness and lightness, else the writer may injure his case by seeming morose and cynical.

Examples.—When Job says to his friends, in whose arguments he has discovered a fallacy, "No doubt but ye are the people, and wisdom shall die with you," we can feel the contempt with which he estimates their mental powers and conclusions. When Macaulay, describing a man whose character he detests, begins, "It may well be conceived that, at such a time, such a nature as that of Marlborough would riot in the very luxury of baseness," the word *luxury* apprises us that he is putting his conduct in ironical terms; and he goes on to say, "Lest his admirers should be able to say at the time of the Revolution he had betrayed his King from any other than selfish motives, he proceeded to betray his country." Here the animus is unrelieved by any lightness of touch; it is pure vituperation. Such handling of one's aversions does not make friends.

The figure *Irony* has many forms and degrees of intensity; giving rise to a whole class of kindred figures; from *Innuendo*, which conveys the ironical suggestion by light hints and touches; through *Satire*, which makes its way by the general ironical or disparaging tone of the writing, to *Sarcasm*, which lets loose its indignant animus in undisguised and scathing terms. On the whole, irony is a rather dangerous figure; if much employed, it is apt to react on the writer's own disposition, or at best to misrepresent his character, especially to unsubtle readers.

How Not to Do It.—Figures are a wonderful means of giving life and vigor to one's language, spoken or written; and probably all can think in figurative terms when the copy is set them by usage; but not all are equally capable, and perhaps only the few, comparatively speaking, can *originate* a telling figurative style. It is here that the main caution—how not to do it—lies. Figures are not things to be manufactured in cold blood; they are essentially an appeal to the imagination; and it requires an active and controlled imagination, on the part of the user, to employ them to their true purpose, or rightly, to utilize the figurative language already current; for the language both of literature and of daily intercourse is as full of figure as it can be—figure full of pristine power for those whose minds are ready to apprehend it. The principal misuse or abuse of figures, in both readers and writers, comes from the prevalent tendency not to use them with thought and realization—not to keep them alive. The tendency may be noted in three ways.

Dead Figures.—Everything that is used becomes worn, and the more commonly it is worn the faster it wears out. Figures that to begin with were full of life and "go," become dead. The language is as thickly sown with dead figures as with live ones; current speech and journalism, from year to year, witness the use and decline of figurative expressions, telling tropes and phrases, which have their day, and either pass into the permanent fund of the language or lose their usage altogether. This is the main source of what is called slang. As to the use of slang, the caution is not against using it—everybody uses it more or less freely while it is alive—but against using it as a substitute for your own thinking, and without realizing that it is slang. To do that is to go on using a dead figure; and like all dead things, if kept too long above ground, its odor is not good. Of course this does not apply to coarse and dirty slang; to use that is malodorous from the start; it is of a piece with coarse and dirty manners.

Mixed Figures.—The caution that first rises in most people's minds is against mixing your metaphors so as to form an incongruous and ludicrous image of the whole idea. It comes from employing figures that have become so worn that the image contained in them is not realized as an image, but only as literal; in other words, from not keeping your imagination active. As a matter of fact, figures of various kinds are constantly mixed together in good and skillful usage; the passage may be a tissue of combined figures, each one doing its fitting work. It is only the incongruous mixture that is to be shunned; and this means simply that slipshod and heedless thinking is to be shunned, which, in fact, "goes without saying."

Examples of Mixture Good and Bad.—1. When Stevenson, speaking of certain suburban resorts in the vicinity of Edinburgh, says, "There are places that still smell of the plough in memory's nostrils," he is mixing three figures together: trope or metaphor (*smell*), metonymy (*plough*, for farm usages), and personification (*memory's nostrils*, as if memory were a person); and all the figures are alive. 2. When, however, a rustic preacher says "the Gospel ship is sailing on, full-laden and well-rigged, and will continue to sail and prosper, because it is founded on a rock," he is using two figures that have had their day, and were both true; but the mixture of them makes an incongruous idea, the two members annulling each other. The literal of each idea is true, and it is the literal that he is thinking of; the figurative, long current in the religious vocabulary, has become worn and dim.

Insincere Figures.—The insincere use of figures rises from the mistaken notion that the figure itself, as a device and a trick, rather than the value of the thought and the honest conviction of the man, is to be relied on for the desired effect. Every figure, indeed, employed heedlessly, a counter as it were instead of a coin, is to some extent an insincere figure, because the man's mind is not in it; this needs no caution, however, its effect being merely futile. The main caution against insincerity applies to the emotional figures. To try to raise a tempest of emotion, by exclamation or interrogation or apostrophe, when there is no true feeling to warrant it, has the effect of bombast, or what is popularly called "highfalutin." To indulge in hyperbole when the literal idea has an insignificant net value, is to betray either an unbalanced imagination or a desire to play on the reader's realizing powers beyond the warrant. There is nothing for it, after all, in the use of figurative language, but to keep your thoughts about you, your imagination active, and your aim sincere.

DICTIONARY OF HOMONYMS

WORDS HAVING THE SAME OR NEARLY THE SAME SOUND, BUT DIFFERENT IN SPELLING AND MEANING

v. Adds, *joins*
n. Adz, *an ax*
v. Ail, *to be ill*
n. Ale, *malt liquor*
n. Air, *one of the elements*
prep. Ere, *before*
adv. E'er, *ever*
n. Heir, *inheritor*
a. All, *every one*
n. Awl, *a sharp tool*
n. Altar, *a raised structure for divine offerings*
v. Alter, *to make different*
n. Analyst, *one who analyzes*
n. Annalist, *writer of annals*
n. Anchor, *of a ship*
n. Anker, *a liquid measure*
n. Ant, *an insect*
n. Aunt, *a father's or mother's sister*
prefix. Ante, *before*
prefix. Anti, *against*
n. Arc, *part of a circle*
n. Ark, *a chest; a large floating vessel*
n. Ascent, *going up; rising ground*
n. or *v.* Assent, *agree(ment)*
v. Ate, *did eat*
a. Eight, *twice four*
n. Auger, *a boring tool*
n. Augur, *a soothsayer*
n. Aught, *anything*
v. Ought, *should*
n. August, *name of a month*
a. August, *noble*
a. Bad, *not good*
v. Bade, *did bid*
n. Bail, *a surety*
n. Bale, *a bundle of goods*
n. Ball, *a dance-entertainment*
n. Ball, *a round body*
v. Bawl, *to speak very loud*
a. Bare, *naked*
n. Bear, *an animal*
v. Bear, *to carry*
n. Bark, *dog's cry*
n. Bark, *outer rind of a tree*
n. Barque, *kind of ship*
a. Base, *mean*
n. Base, *the lower part*
n. Bass, *the lowest part of a tune*
v. Bate, *to lower (one's price)*
n. Bait, *an allurement*
v. Bait, *to prepare or offer an allurement*
n. Bay, *the laurel tree*
n. Bey, *a governor (Turkish title)*
v. Be, *to exist*
n. Bee, *an insect*
n. Beach, *the seashore*
n. Beech, *a tree*
n. Bean, *a plant*
part. Been, *of the verb "to be"*
v. Beat, *to strike*
n. Beet, *a plant*
n. Beau, *an escort, a lover; a dandy*
n. Bow, *an instrument to shoot arrows*
n. Beer, *malt liquor*
n. Bier, *a frame for bearing the dead*
n. Bell, *a sounding instrument*
n. Belle, *a fine young lady*
n. Berry, *a small fruit*
v. Bury, *to inter*
n. Birth, *coming into life*
n. Berth, *office or situation, on board ship*
v. Blew, *did blow*
a. Blue, *a color*
n. Boar, *male of swine*
v. Bore, *to make a hole*
n. Board, *a thin, long and broad piece of wood of even thickness*
n. Board, *maintenance in food for pay*
v. Bored, *did bore*
n. Bough, *a branch*
v. Bow, *to bend*
n. Boy, *a lad*
n. Buoy, *an anchor mark; a float*
n. Brake, *a thicket*
v. Break, *to part or sever*
n. Bread, *food made of flour or meal*
part. Bred, *brought up*
v. Brews, *does brew*
v. Bruise, *to crush or hurt*
v. Broach, *to tap, to first mention: to fist open: as stores*
n. Brooch, *an ornamental pin*
n. Burrow, *a hole in the earth*
n. Borough, *an incorporated town*
conj. But, *yet; on the other hand*
n. Butt, *a large cask*
v. Buy, *to purchase*
prep. By, *near*
v. Call, *to name; to summon*
n. Caul, *a membrane*
n. Cannon, *an engine of war*
n. Canon, *a law or rule*
n. Canon, *a church dignitary*
n. Cask, *a vessel*
n. Casque, *a helmet*
v. Cast, *to throw*
n. Caste, *a social class*
v. Cede, *to give up*
n. Seed, *part of a plant*
n. Ceiling, *overhead lining of a room*
v. Sealing, *pres. part. of "to seal"*
n. Cell, *a small, close room*
v. Sell, *to dispose of*
n. Cellar, *a vault*
n. Seller, *one that sells*
n. Censer, *a vessel to burn incense in*
n. Censor, *a Roman officer; faultfinder*
n. Cent, *a copper coin*
n. Scent, *odor*
v. Sent, *did send*
v. Cere, *to cover with wax*
v. Sear, *to burn*
a. Sere, *withered; dry*
n. Seer, *a prophet; one that sees (into the future)*
a. Cereal, *relating to grain*
n. Serial, *a periodical publication (the parts following each other in a series)*
n. Cession, *surrender, giving up*
n. Session, *a sitting*
n. Check, *restraint*
n. Cheque, *a money order*
n. Choler, *anger, wrath*

Collar, *neckband*
Cite, *to summon*
Sight, *perception*
Site, *situation*
Clause, *part of a sentence*
Claws, *nails of an animal*
Climb, *to ascend*
Clime, *climate*
Coarse, *not fine*
Course, *race*
Corse, *a dead body*
Complement, *the full number or quantity*
Compliment, *expression of appreciation, praise*
Concert, *a musical entertainment; agreement*
Consort, *a companion*
Cord, *a thin rope*
Chord, *string of a musical instrument*
Core, *the central part*
Corps, *a body of men*
Counsel, *advice*
Council, *an assembly for consultation*
Cousin, *a relative*
Cozen, *to cheat*
Creak, *to make a harsh sound*
Creek, *a small inlet of the sea*
Crews, *the sailors on more than one ship*
Cruise, *to sail about*
Currant, *a shrub and its fruit*
Current, *a stream*
Dam, *to keep back water by raising a bank*
Dam, *a mother (of beasts)*
Damn, *to condemn, to curse*
Day, *twenty-four hours*
Dey, *officer of the Janizaries; the governor of Algiers*
Days } *plurals of the foregoing*
Deys }
Daze, *to dazzle*
Dear, *costly*
Deer, *a forest animal*
Decease, *death*
Disease, *malady*
Demean, *to behave*
Demesne, *manor house and unrented land adjacent*
Descent, *declivity*
Dissent, *disagreement*
Desert, *to forsake*
Dessert, *service of fruits, etc.*
Dew, *a vapor*
Due, *owing*
Die, *a stamp (in coining); a cube (in gaming, and in architecture)*
Die, *to lose life, to cease to exist*
Dye, *to stain, to color (especially cloth materials)*
Divers, *several, many*
Diverse, *varied, distinct, separate*
Doe, *a female deer*
Dough, *unbaked paste*
Done, *performed, completed*
Dun, *dull brown color*
Dose, *as much medicine as is taken at once*
Doze, *to slumber*
Draft, *a bill*
Draught, *a drink, etc.*
Dram, *a glass of spirits*
Drachm, *the eighth part of an ounce*
Ewe } *see Yew*
Yew }
n. You,
and adv. Fain, *eager, pleased; gladly*
Fane, *a temple*
Feign, *to dissemble, to pretend*
Faint, *languid*
Feint, *a pretense*
Fair, *beautiful, honest*
Fair, *a market*
Fare, *price of passage; diet*
Feat, *an exploit*
Feet, *plural of "foot"*
Find, *to discover*
Fined, *made to pay for breaking a rule or law*
Fir, *a tree*
Fur, *skin covered with short, fine, soft, thick hair, taken from certain animals*
Flea, *an insect*
Flee, *to escape*
Flour, *the finely ground meal of wheat or other grain*
Flower, *the blossom of a plant*
Flue, *a passage (for smoke or heat)*
Flew, *did fly*
Fool, *senseless person*
Full, *opposite to empty*
Fore, *in front*
Four, *twice two*
Fort, *a fortified place*
Forte, *that in which one excels*
v. Forth, *out, abroad*
Fourth, *numeral*
Foul, *unclean*
Fowl, *a bird*
Freeze, *to congeal*
Frieze, *a coarse woolen cloth with heavy nap; an architectural term*

n. Furs, *plural of "fur"*
n. Furze, *a shrub*
n. Gage, *a pledge*
v. Gauge, *to measure contents of a cask*
n. Gait, *manner of walking*
n. Gate, *an entrance*
v. Gild, *to cover with gold*
n. Guild, *a society or union*
part. Gilt, *covered with gold*
n. Guilt, *wickedness*
n. Grate, *a fireplace*
a. Great, *large*
n. Groan, *a deep sigh*
v. Grown, *increased*
n. Guest, *a person entertained*
v. Guessed, *did guess*
n. Hair, *of the head*
n. Hare, *an animal*
a. Hale, *sound, robust*
n. Hail, *little masses of ice falling from the clouds*
v. Hail, *to call to*
intj. Hail, *a term of salutation*
n. Hall, *entrance of a house; a large room*
v. Haul, *to drag*
n. Hart, *an animal*
n. Heart, *the seat of life*
v. Heal, *to cure*
n. Heel, *hind part of the foot*
n. Herd, *a flock*
v. Heard, *did hear*
adv. Here, *in this place*
v. Hear, *to listen to*
v. Hew, *to cut*
n. Hue, *shade of color*
n. Hugh, *a man's name*
v. Hie, *to hasten*
a. High, *lofty*
pron. Him, *objective case of "he"*
n. Hymn, *a sacred song*
n. Hire, *wages*
a. Higher, *farther up*
n. Hole, *a hollow place*
a. Whole, *entire, complete*
n. Horde, *a wandering tribe or body of persons*
n. Hoard, *store (of things amassed)*
pron. I, *myself*
n. Eye, *the organ of sight*
adv. Aye, *yes*
a. Idle, *doing nothing*
n. Idol, *an image, or false god*
n. Idyl, *a poem*
prep. In, *within*
n. Inn, *house of entertainment*
v. Indite, *to compose, dictate*
v. Indict, *to accuse by a jury, to charge*
a. Invalid, *having no force*
n. Invalid, *an infirm or disabled person*
n. Isle, *an island*
n. Aisle, *a passage in a church*
n. Jam, *preserved fruit*
n. Jamb, *the side piece of a door, fireplace, etc.*
n. Kernel, *fruit within a shell*
n. Colonel, *commander of a regiment*
n. Key, *an instrument to fasten and open locks*
n. Quay, *a wharf*
v. Kill, *to put to death*
n. Kiln, *place for burning lime, also for baking bricks*
n. Lac, *gum; 100,000 (rupees)*
v. Lack, *to want*
n. Lane, *a long, narrow way*
v. Lain, *p. part. of lie, rested*
n. Laps, *plural of "lap," an overlying edge; a lick of water, etc., with tongue*
v. Laps, *does lap*
v. Lapse, *to fall away, slip by*
n. Lapse, *flow, passing*
n. Lea, *meadow*
n. Lee, *the sheltered side (of a ship, etc.)*
n. Lead, *a metal*
v. Led, *did lead*
n. Leaf, *part of a plant*
adv. Liel, *readily, willingly*
v. Leak, *to let out (liquid)*
n. Leek, *a herb*
v. Lessen, *to make less*
n. Lesson, *a portion of a book learned*
n. Levée, *assembly of visitors*
v. Levy, *to raise money or troops*
n. Liar, *one who tells lies*
n. Lyre, *a musical instrument*
n. Lie, *falsehood*
v. Lie, *to recline*
n. Lye, *a liquor*
n. Limb, *a member*
v. Limn, *to paint*
n. Lineament, *one of the features or outlines of the face*
n. Liniment, *ointment*
n. Links *(of a chain), plural of link*
n. Lynx, *an animal*
a. Literal, *according to the letter*
a. Littoral, *belonging to a shore*
intj. Lo! *look*
a. Low, *opposite of high*
n. Loan, *a thing loaned*
a. Lone, *solitary*
n. Maid, *an unmarried woman*
v. Made, *did make*

n. Mail, *a postman's bag with letters and papers; armor*
a. Male, *masculine*
a. Main, *chief, principal*
n. Mane, *long, heavy hair at side of, or about the neck of some animals*
n. Mantel, *a shelf over a fireplace*
n. Mantle, *a cloak*
n. Marshal, *an officer of arms*
v. Marshal, *to arrange*
a. Martial, *pertaining to war*
n. Maze, *an intricate arrangement; a labyrinth*
n. Maize, *Indian corn*
n. Mead, *a sweet drink*
n. Meed, *reward*
a. Mean, *wanting dignity; low*
v. Mean, *to intend*
n. Mien, *manner; carriage; bearing*
n. Meat, *flesh for food*
a. Meet, *suitable, becoming*
v. Meet, *to encounter*
v. Mete, *to measure*
n. Medal, *a piece of metal struck like a coin*
v. Meddle, *to interfere*
n. Meddler, *one who interposes officiously*
n. Medlar, *name of a tree and of its fruit*
n. Message, *advice or information sent*
n. Messuage, *entire premises, with buildings and grounds for household use*
n. Metal, *a hard elementary substance*
n. Mettle, *spirit, vivacity*
n. Meter, *a measuring instrument*
n. Meter, *verse*
n. Miner, *one who digs for minerals*
n. and *a.* Minor, *one under age; smaller, less*
n. Mite, *a very small insect*
n. Might, *power*
v. Might, *past tense of "may"*
v. Moan, *to utter a deep sound from pain, to lament*
v. Mown, *cut down*
n. Moat, *a ditch around a fortified place*
n. Mote, *a particle*
n. Muscle, *flesh (of the body)*
n. Mussel, *a shellfish*
n. Nave, *middle of a church (not including the aisles), or of a wheel*
n. Knave, *a rogue*
a. Naïve, *ingenuous (is pronounced nä′ēv)*
adv. Nay, *no*
n. Neigh, *the voice of a horse*
n. Need, *want*
v. Need, *to lack; to require, as supply*
v. Knead, *to work dough*
a. New, *opposite of old*
v. Knew, *did know*
n. Night, *opposite of day*
n. Knight, *a person who has received a certain title of honor*
n. Nose, *the organ of smell*
v. Knows, *does know*
n. Nun, *a female recluse*
a. None, *not one, not any*
intj. O or Oh! *exclamation of surprise, or of pain*
v. Owe, *to be indebted*
n. Oar, *an instrument to row boats*
prep. O'er, *over*
n. Ore, *a metal as found in combination with some other substance*
n. Ode, *a poem*
v. Owed, *did owe*
prep. Of, *from, concerning*
adv. Off, *noting distance*
a. One, *single, an individual*
v. Won, *gained, achieved*
a. Our, *belonging to us*
n. Hour, *60 minutes*
n. Pail, *a vessel*
a. Pale, *destitute of color*
n. Pain, *suffering*
n. Pane, *of glass*
n. Pair, *a couple*
v. Pare, *to cut off the surface*
n. Pear, *a fruit*
n. Palate, *the organ of taste*
n. Palette, *a painter's mixing plate*
n. Pallet, *a bed*
n. Pause, *a stop, a delay*
n. Paws, *the feet of certain animals*
n. Peace, *quietness*
n. Peas, *plural of "pea"*
n. Peas, *collective plural of "pea"*
n. Piece, *a part, fragment*
n. Peak, *top*
n. Pique, *ill-will*
n. Peal, *a loud sound, or series of loud sounds, as of bells, thunder, etc.*
n. Peel, *rind of fruit*
v. Peel, *to take off the rind*
n. Peer, *a nobleman*
n. Pier, *a projecting wharf; a support of a bridge*
n. Pendant, *a flag; a hanging ornamental appendage, as an earring*
a. Pendent, *hanging down*
n. Phrase, *a mode of speech; an expression*

n. Frays, *combats, plural of "fray"*
n. Place, *rank, room, space*
n. Plaice, *a kind of fish*
a. Plain, *simple*
n. Plain, *level country*
n. Plane, *joiner's tool; level surface*
n. Plait, *fold*
n. Plate, *household vessels, wrought in gold and silver*
n. Plate, *a shallow vessel*
v. Please, *to gratify, to delight*
n. Pleas, *lawsuits, allegations*
n. Plum, *a fruit*
a. Plumb, *perpendicular*
n. Pole, *a long, narrow, roundish piece of timber*
n. Poll, *the head; register of voters, the casting and recording of the votes*
v. Pore, *to look closely and steadily*
n. Pore, *an opening (in the skin)*
v. Pour, *to cause to flow*
n. Practice, *habit, use; doing*
v. Practice, *to exercise*
v. Pray, *to beseech, ask earnestly for*
n. Prey, *plunder, booty*
v. Prays, *does pray*
n. Praise, *laudation, renown*
n. Precedent, *former instance of a like kind*
n. President, *a presiding officer*
a. and *n.* Principal, *chief, capital*
a. Principle, *a settled truth*
n. Prize, *reward*
v. Prize, *to set value on*
v. Pries, *looks inquisitively into*
n. Profit, *gain, benefit*
n. Prophet, *one who foretells future events*
n. Prophecy, *a prediction*
v. Prophesy, *to predict*
n. Quartz, *a kind of rock*
n. Quarts, *plural of "quart" (a measure)*
n. Quire, *24 sheets of paper*
n. Choir, *a body of singers*
n. Rain, *water falling from the clouds*
v. Reign, *to rule*
n. Rein, *strap of a bridle*
v. Raise, *to lift*
n. Rays, *plural of "ray" (of light)*
v. Raze, *to obliterate*
n. and *v.* Rap, *knock*
v. and *n.* Wrap, *to envelop; something to take about one (for warmth, etc.)*
part. Read, *of the verb "to read"*
a. Red, *a color*
v. Read, *to peruse*
n. Reed, *a plant*
n. Rear, *the part behind*
v. Rare, *uncommon*
v. Reck, *to care*
n. Wreck, *a breaking to pieces, destruction*
v. and *n.* Rest, *repose*
n. Rest, *the others*
v. Wrest, *to pull violently away*
n. Right, *justice*
n. Rite, *ceremony*
v. Write, *to communicate by letter, etc.*
n. Rime, *hoarfrost*
n. and *v.* Rhyme, *similarity of sound in endings of verses of poetry (also sometimes spelled "rime")*
n. and *v.* Ring, *make sound, as a bell*
n. Ring, *a circle*
v. Wring, *to press, squeeze hard, extort*
n. Road, *highway*
v. Rode, *did ride*
v. Rowed, *did row*
n. Roe, *a female deer*
v. Row, *to propel with an oar*
n. Row, *a line, rank*
n. Root, *the end of a plant fixed in the ground*
n. Route, *direction or road in which one goes*
n. Rye, *a grain*
a. Wry, *crooked*
n. Sail, *a sheet of canvas*
v. Sail, *as a ship*
n. Sale, *act of selling*
n. Satire, *sarcastic reproof; ridicule*
n. Satyr, *a fabled monster, part man, part goat*
v. Scull, *to propel a boat (in a particular way)*
n. Skull, *the bony case of the brain*
n. Sea, *ocean*
v. See, *to perceive by the eye*
n. See, *the jurisdiction of a bishop*
n. Seam, *a union or line of joining*
v. Seem, *to appear*
v. Seen, *beheld*
n. Scene, *view*
a. Sere } *See Cere*
n. Seer }
v. Sear }
v. Cere }
v. Sew, *to connect with thread*
v. Sow, *to scatter seed*
v. Shear, *to cut, or clip*
adv. Sheer, *completely*
a. Sheer, *pure, complete; perpendicular, or unbroken descent*
n. Size, *magnitude*
n. Size, *weak glue*

n. Sighs, *plural of "sigh"*
n. Sleight, *artful trick*
a. Slight, *thin, trifling*
n. Sloe, *a certain small, wild plum*
a. Slow, *opposite of quick*
v. Soar, *to mount on the wing*
n. Sore, *an ulcer*
n. Sole, *the underpart of shoe*
n. Sole, *a flatfish*
n. Soul, *the immortal part of man*
v. Soled, *did furnish with a sole*
v. Sold, *did sell*
a. Some, *indefinite quantity or number*
n. Sum, *an amount*
n. Son, *a male child*
n. Sun, *the luminary that enlightens the earth*
n. Stake, *a wager; a stick*
n. Steak, *a slice of flesh*
v. Stare, *to look with fixed eyes*
n. Stair, *a step; series of steps*
a. Stationary, *fixed, settled*
n. Stationery, *articles sold by a stationer*
n. Statue (*of metal or stone*), *an image*
n. Statute, *law*
v. Steal, *to take unlawfully*
n. Steel, *tempered iron*
n. Stile, *steps for passing over a fence*
n. Style, *manner*
v. Style, *to designate*
a. Straight, *not crooked*
a. Strait, *narrow*
n. Strait, *a narrow pass (of water), a difficulty*
n. Surplice, *a clergyman's white robe*
n. Surplus, *excess*
a. Sweet, *of a saccharine taste*
n. Suite, *a retinue of attendants*
n. Suite, *a set of rooms*
n. Sword, *a weapon*
v. Soared, *did soar*
n. Tacks, *small nails*
n. Tax, *tribute*
n. Tail, *the posterior appendage of an animal; the inferior or last part*
n. Tale, *a narrative*
n. Team, *animals drawing together*
v. Teem, *to be full of*
v. Tear, *to rend*
n. Tare, *a weed*
n. Teas, *kinds of tea*
v. Tease, *to torment, to vex*
pr. or *a.* Their, *belonging to them*
adv. There, *in that place*
v. Threw, *did throw*
prep. Through, *passing from one surface to the opposite surface*
n. Thyme, *a fragrant plant*
n. Time, *a part of duration*
n. Tier, *a row (of guns, seats, etc.)*
n. Tear, *a drop of the saline fluid from the eye*
prep. To, *toward*
adv. Too, *also*
a. Two, *one and one*
n. Toe, *part of the foot*
n. Tow, *coarse flax or hemp*
v. Tow, *to pull along*
n. Ton, *2,000 pounds (large ton, 2,240)*
n. Tun, *a large cask*
n. Trait, *a feature of one's character*
n. Tray, *a shallow, trough-like vessel*
v. Use, *to avail one's self of; to apply to some purpose*
n. Ewes, *plural of ewe, female of the sheep and of sheep-like animals*
a. Vain, *empty, conceited*
n. Vane, *weathercock*
n. Vein, *a blood vessel*
n. Vale, *a valley*
n. Veil, *a thin covering*
v. Wade, *to walk through water*
v. Weighed, *did weigh*
n. Waist, *part of the body*
v. Waste, *to consume uselessly*
v. Waive, *to relinquish*
n. Wave, *a moving ridge or swell of the surface of a liquid*
v. Wane, *to decrease*
n. Wain, *a wagon*
n. Ware, *merchandise*
v. Wear, *to bear upon the person*
n. Way, *passage, manner*
v. Weigh, *to poise*
n. Whey, *the thin part of milk*
a. Weak, *feeble*
n. Week, *seven days*
n. Weald, *a wooded country*
v. Wield, *to handle and use (as the ax, the sword, the scepter, power, etc.)*
n. Weather, *state of the atmosphere*
n. Wether, *male of the sheep*
c. Whether, *if (implying two alternatives, usually)*
v. Ween, *to think, to suppose*
v. Wean, *to accustom (as a child etc.) to do without something*
n. Weight, *heaviness*
v. Wait, *to stay for*
a. Wet, *soaked with water, rainy*
v. Whet, *to sharpen*
pron. Which, *relating to one thing among several*
n. Witch, *a woman who practices sorcery*
v. Witch, *to charm, enchant*
adv. Whither, *to what place*
v. Wither, *to fade, to waste away*
n. Wood, *timber*
v. Would, *was willing*
n. Yew, *an evergreen tree*
pron. You, *the one addressed*
n. Ewe, *a female of the sheep*
n. Yoke, *coupling for oxen; bondage*
n. Yolk, *the yellow part of an egg*

DICTIONARY OF WORDS FREQUENTLY MISUSED

Americans are said to speak their own language with less correctness than do any other intelligent people in the world. Perhaps the reason is that we do things too rapidly to do them well; we are careless of our speech as we are careless of many things we do; we perhaps consider correct speech a trifle, being quite satisfied in our communications of thought with a crude approximation of our real meaning.

The general classes of errors made by people of ordinary intelligence are few, and if one cares, these may be readily corrected. If one wishes to use words correctly he must give attention to what he reads; he must read good things, and he must study the words as well as the thought. If one wishes to speak correctly he must give conscious daily attention to his own speech, and to the speech of others. A man's speech is judged by the worst he does—not by the best—so that one who realizes that his use of words is faulty will be saved from his errors only by constant attention to his regular and daily use of words, either in speech or writing. It is not a case of using words with correctness and effectiveness on occasion, but if one is to be prepared for the occasion, he must learn never to lapse into slovenliness. Any man who values correct speech, and is willing to pay the price of constant attention to his own speech, will soon make few errors.

Abbreviations.—Such abbreviations as *e'er, ne'er, o'er, e'en, 'tis, 'mid,* and *'neath,* are legitimate in verse, but should not be used in prose.

Ability, Capacity.—*Ability* is the power of doing; *capacity* the faculty of receiving. "The *ability* is in me to do him good." "Man's *capacities* have never been measured."

Abortive.—That is *abortive* which is premature, not brought to completion. A plan may be *abortive* but not an act. We may speak of an *abortive* effort.

About.—Not to be used as *almost.* "The day is *almost* gone," not "The day is *about* gone."

Above.—This word should not be used as an adjective; as, "The *above* statement." Say "The *foregoing* statement."

Accept, Except.—*Accept* means to take; *except* means to exclude. "I *accept* your terms." "A few were *excepted* from condemnation."

Administer.—Not to be used in the sense of *deal.* We *deal* blows; we *administer* medicine, oaths of office, and affairs of state.

Affect, Effect.—To *affect* means to influence or to pretend. To *effect* means to bring about. "He *affected* intoxication." "He *affected* the audience strongly." "I shall *effect* a reform."

Aggravate.—This word means to make worse or to increase in intensity. Do not say, "His conduct *aggravates* (annoys) me," but "The climate *aggravates* the disease."

Ain't.—This is illiterately employed as a contraction for *are not, am not, is not.* It should not be used.

Allow.—This word is frequently misused for *think,* as "I *allow* that I shall go to town." Say, "I *think* that," etc.

Alone, Only.—That is *alone* which is unaccompanied; that is *only* of which there is no other. "He suffered *alone*" means that no one was with him. "*Only* he *suffered*" means that no other person did.

Alternative.—This word should not be used when more than two things are referred to. Not to be used for *course.* "He had this *alternative* left him"—a choice between two.

Amateur.—Do not use the word to mean one new, or unskilled, at a business, a novice. An *amateur* is skilled in something he likes but does not pursue as a business, as "An *amateur* photographer."

Anxious.—The word does not mean desirous, but concerned or worried. "I am not *anxious* to live in the country" should be "I am not *desirous.*" We may say, "I am *anxious* concerning your safety."

Anybody, Any one, Anything.—These words are singular, and should always be referred to by singular pronouns. "*Anybody* can do as *he* pleases." "*Any one* is at *his* best here."

Anybody else's, Anybody's else.—The predominance of usage seems to be in favor of the first form, which is correct according to analogy of similar cases, which "throw" the apostrophe and s to the last word of the unified expression, generally nouns in apposition.

Appreciate.—The word does not mean *prize* or *value,* but *to rate at its true value.* In such expressions as "I *appreciate* your services *highly,*" the adverb is superfluous.

Apt, Likely, Liable.—*Apt* means fit; *likely* means probable; *liable,* unpleasant probability. "Such *apt* and gracious words." "We are all *likely* to make mistakes." "If he exposes himself to the weather, he is *liable* to contract a cold."

As—As, So—As.—Use the former in affirmative and the latter in negative propositions. "We are *as* wise *as* our teachers." "I am not *so* young *as* I used to be."

As I take it.—Better say "As I understand," or "As it seems to me."

As though is often used for *as if.* In the sentence "He walked *as though* he were lame," if the ellipsis is supplied the error will be evident. "He walked *as* (he would walk) *though* he were lame." *As though* is seldom correct.

At.—"Where are you *at?*" A common error, in which *at* is superfluous. Say "Where are you?"

Audience.—Do not use when you mean *spectators.* An *audience* listens; *spectators* see what occurs. The preacher had a good *audience.* There were many *spectators* at the ball game.

Avoid is often used for prevent. "He shall receive no pay if I can *avoid* it." Say, rather, "If I can *prevent* it."

Awful, Awfully.—Do not use these words as intensives or for supposed force. *Awful* should mean that which inspires awe. "The *awful* mysteries of the world unseen."

Bad, Badly.—*Bad* is not to be used for severe, as "I have a *bad* headache." *Badly* is also inelegantly used for very much, as "I need money *badly.*"

Balance.—The word means the *excess of one thing over another,* and should not be used for *remainder* or *what is left.* We may say, "He has a large *balance* in the bank."

Been to.—Do not say "I have *been to* New York," for "I have *been in* (or *at*) New York." You cannot *be to* a place.

Beside, Besides.—*Beside* is a preposition; *besides* is an adverb. "The tree stands *beside* the house." "I have more *besides* this."

Between.—Should be used with reference to two things only. Not "*Between* us three," but "*Between* you and me."

Blame it on.—A vulgarism used to mean *accuse* or *suspect.* "He *blames it on me,*" should be "He *accuses* (or *suspects*) me."

Both alike.—In such expressions as "They are *both alike,*" "The two boys *both* have blue eyes," *both* should be omitted.

Bran new.—The correct form is *brand new.*

Bring, Fetch.—*Bring* means to convey to this point; *fetch* means to go and bring. "*Bring* me your books." "*Fetch* the racquets from the house."

Burgle.—The word is an entirely unauthorized form.

But what.—Do not use when you mean *but that.* "I know nothing *but what* you told me," is correct. "I do not doubt *but what* he will succeed," should be, "I do not doubt *but that,*" etc.

Calculate.—Often vulgarly used for *think* or *suppose.* To *calculate* means to arrive at by a mathematical process. We *calculate* a result. We do not *calculate* that it will rain.

Caliber.—The word means the diameter of a body, especially of the hollow inside of a cylinder. Figuratively it means *capacity of mind.* "His work is of high *caliber*" should be "His work is of high *order.*" "He has a mind of great *caliber*" is correct.

Can, May.—These two forms are often misused. *Can* suggests power or ability; *may,* permission. "*Can* I take your place?" means "Am *I able* to do it." "*May* I go with you?" requests *permission.*

Character, Reputation.—One's *character* is what one really is; one's *reputation* is what people think of one. We may have a good *character* and a poor *reputation,* and *vice versa.*

Claim.—Not to be used in the sense of *assert* or *affirm.* *Claim* means properly to demand as due. It is incorrect to say "He *claims* that he is your brother." We may correctly say "I *claim* my right."

Clerk.—Not a verb. Do not say "John *clerks* for Smith & Co.," but "He is a *clerk,*" etc.

Co-ed.—An unauthorized expression used to mean a young woman in a coeducational institution.

Complected.—This word is generally misused for *complexioned.*

Condign.—Often used to mean *severe,* but properly means *worthy* or *deserved,* as "The criminal suffered *condign* (that is *deserved*) punishment."

Congregate together.—In such expressions as "A large crowd *congregated together*" the word *together* should be omitted. *Congregate* means *gather together.*

Continual, Continuous.—The former often means *frequently repeated;* the latter means *uninterrupted, without break,* and is the stronger word. Thus we may say that the flow of a stream is *continuous;* that the clanging of a bell is *continual;* that *continual* showers drenched the ground.

Convict, Convince.—*Convict* is always used of something wrong, and refers to one's outer condition; "The man was *convicted* of the crime." *Convince* refers to the inner judgment, and may be used of either right or wrong; as, "I am *convinced* that you are right."

Couple.—This word does not mean *two* merely, but *two things paired* together; as, "The young *couple* is living on the hill."

Credible, Creditable.—*Credible* means worthy of belief, as, "Dr. Cook's story is not *credible.*" *Creditable* means *worthy,* as, "He made a *creditable* address."

Dandy.—As an adjective the word is overworked slang, and should be avoided.

Definite, Definitive.—*Definite* means *specific; definitive,* final. "A *definite* (that is, *specific*) answer was given, but it was not *definitive (final).*"

Demean.—This word is often incorrectly used for *behave* (that is, *lower*), as "He *demeaned* himself by his careless actions." It properly means to *behave one's self,* as "He *demeaned* himself properly."

Depot, Station.—A *depot* is properly a place where goods or stores are kept. The place where a railway train stops for passengers may better be called a *station.*

Die with, from.—Invalids do not die *with*, nor *from* but *of*, a disease.

Differ from, with.—One thing differs *from* another in appearance; one person differs *with* another in opinion.

Directly.—Not to be used in the sense of *as soon as*. Do not say "*Directly* they came we left," but "We left *directly*" is correct.

Disremember.—Provincial for *forget*, and should not be used.

Donate.—An unauthorized formation from *donation*. Better say "Make a *donation*."

Don't for doesn't.—Don't is the plural contraction of *do not*, therefore such common expressions as "He *don't* live here," "She *don't* like to sing," etc., are ungrammatical.

Don't think.—Instead of saying "I *don't think* it will rain," it is better to say "I *think* it will *not* rain."

Double negative.—Double negatives in English are universally common but incorrect. Avoid such expressions as "I *didn't* know *nothing* about it;" "I *haven't never* been there," "I *haven't* had *but* one vacation in ten years."

Due, Owing.—That is *due* which ought to be paid; as, "The note is *due* next month." *Owing* is used in the sense of *on account of;* as, "It was *owing* to his daring that the insurrection was checked."

Dutch for German.—Do not say *Dutch* when you refer to *German*. *Dutch* refers to *Holland*.

Each.—*Each* is singular in number, and should be used with a singular noun and verb. Do not say "*Each* comes in *their* turn," but "*Each* comes in *his* turn;" not "*Each* man were singled out," but "*Each* man *was*," etc.

Elegant.—*Elegant* means *refined*, in *good taste*. A much misused and much overused word.

Elocute.—This form is not justified by good usage.

Else.—By preponderance of custom, when *else*, joined to *anybody*, *somebody*, *any one*, or *some one*, forms a possessive, the *'s* is added to *else*, as *somebody else's*. Many, however, prefer to write the form *somebody's else*.

Emigrant, Immigrant.—These two words are often confused. *Emigrants* are people going out of a country; *immigrants* are people coming into a country.

Endorse or **Indorse.**—Do not say "*Endorse* (or *indorse*) on the back of," for these words mean *to write upon the back of*. *Indorse* is the spelling now generally preferred.

Enjoy poor health.—This expression should be avoided; no one really enjoys poor health.

Enthuse.—A verbal form not authorized by good usage. Better say "*Arouse enthusiasm*."

Equally as well.—The *as* is not necessary; say "*Equally well*."

Every.—Be careful to see that a verb in the singular number follows. "*Every* man *was* at his post."

Every one, Everybody, Everything.—These words, being singular, should always be referred to by singular pronouns. "*Every one* should mind *his* own business." "*Everybody* has *his* troubles." "*Everything* is in *its* place."

Evidence, Testimony, Proof.—*Evidence* is anything that tends to convince; *testimony* is evidence given by witnesses; *proof* is whatever establishes the truth of a proposition.

Except, Unless.—*Except* is not to be used for *unless*. Do not say "*Except* I am delayed, I shall arrive at three," but "*Unless* I am delayed," etc.

Existing truths.—*Existing truths* should always be expressed in the present tense. Do not say "Galileo taught that the world *was* round," but "*is* round."

Expect.—*Expect* refers only to the future, and is not to be used for *think* or *suppose*. Do not say "I *expect* I was there;" "I *expect* you had a pleasant time yesterday."

Farther, Further.—*Farther* refers to *linear distance*. "We had gone *farther* than I supposed." *Further* measures quantity or degree as, "I shall speak *further* on the question."

Female.—Not correctly used for *woman*.

Few and **a few.**—These words are different in meaning. "*Few* persons like Mr. Jones" means that he is generally disliked. "*A few* persons like him" means some, and perhaps all who know him.

Firstly.—Not an approved form. *First* is both an adjective and an adverb.

First-rate.—Correctly used as an adjective. "He has a *first-rate* place." but not "He did *first-rate*."

Fix.—Be sure that you intend to convey the idea of fastening firmly when you use *fix*. It should not be used to mean *repair*, *arrange*, or *set up*. "He stopped to *fix* the machine" is an error.

Former, Latter.—The less a writer uses these words the better, unless they are followed by a noun, as "the *former* rule" or "the *latter* member."

For to.—Do not say "I went *for to* see the show." *For* is superfluous.

Funny.—The word should not be used to mean *strange* or *curious*.

Gent.—This word should never be used.

Gesture.—Not to be used as a verb. Do not say "The speaker *gestured* frequently." Say, rather, "*gesticulated*."

Get.—Strictly, *get* means to obtain by voluntary effort. It does not signify mere possession. Do not say "I haven't *got* a cent," but "I haven't a cent." *Got* is also preferred by good writers to *gotten* in such expressions as "When he had *gotten* over his illness."

Get over.—Often incorrectly used for *survive* or to *recover*, as "He *got over* the disease," or "*to get over* a fact," meaning to *refute* it.

Get to go.—This expression is common in some parts of the country but should be avoided. Say "I was unable to go," or "I was prevented from going" rather than "I didn't *get to go*."

Good deal, great deal.—Perfectly correct expressions. "I have walked a *great deal*." "The boy liked school a *good deal* better than play."

Good, Well.—*Good* should not be used as an adverb. Do not say "You sang *good*," "Did you sleep *good* last night?" In these cases *well* should be used.

Guess.—*Guess* is commonly used in the United States to mean *think*, as in "I *guess* you are right" for "I *think*," etc.

Had ought.—Provincial and incorrect. *Had* or any form of the verb *to have* cannot correctly be used as an auxiliary with *ought*. Use *should* or *ought not*. Not "He *hadn't ought* to have gone," but "He *should not* have gone."

Hain't.—A vulgarism. There is no such contraction for *have not* or *has not*.

Hang, Hanged.—The verb *hang* has two forms for the past participle, *hanged* and *hung*. *Hanged* is used for persons; *hung* for other objects. "The man was *hanged*." "The coat was *hung* on the rack."

Have got.—See *get*.

Healthy, Healthful.—That is *healthy* which is in good health; that is *healthful* which promotes health. "The family was in a *healthy* condition, because they had been living on *healthful* food."

How.—*How* is not to be used for *what* nor for "*What did you say?*"

Human.—Not to be used as a noun. Do not say "The house was not fit for *humans* to live in," but "The house was not fit for *human beings* to live in.

Ideal.—Not to be used in the sense of *perfect* or *beautiful*; it properly means *that which exists in idea only*. "His *ideals* are high."

If I was.—Use the subjunctive in all cases where the conditions are contrary to fact. "If I *were* you, I should go." "If I *were* a man, I should practice law." I am not you, and I am not a man. Use the indicative in cases of uncertainty. "If I *was* in town that day, I did not see you." I am uncertain as to whether I was or not.

Illy.—Should be avoided; *ill* is the proper word, both as adjective and adverb. "He did the work very *ill*."

In, Into.—Use *in* to signify rest in a place; use *into* to signify motion toward a place. "He was standing with his hands *in* his pockets." "I put my hands *into* my pockets." "I came *in* an automobile." "The stranger walked *into* the room."

Inaugurate.—The word means to *induct into office* or to make a *ceremonious beginning*. It is not to be used for the simple things of life.

Individual.—The word should not be used in the mere sense of *person*. The word is correctly used in "Changes both in *individuals* and in communities."

Infinitive, cleft.—The *cleft* or *split infinitive* (that is, the *infinitive* with an adverb between the two parts) is avoided by careful writers. Do not say "He was in a position *to accurately observe* the proceedings," but "*accurately to observe*," or "*to observe* the proceedings *accurately*."

Initiate.—The word ought not to be used simply for begin. The word suggests ceremonious form; as, "The candidates were *initiated* into the lodge."

In our midst.—The possessive case is not to be used, but rather a construction with of; as, "*in the midst of us*."

Invite.—Not to be used as a noun. Do not say "I received an *invite*," but "I received an *invitation*."

Kind of a.—The "*a*" is superfluous.

Lady.—This word is not to be used for *wife*, or to mean simply *woman*.

Learn, Teach.—These words are often vulgarly misused. *To learn* is to receive instruction; *to teach* is to give instruction. "I can *learn* if you will *teach* me," is correct.

Lend.—*Lend* is a verb; *loan* a noun. I *lend* a man a dollar, and he receives the *loan*.

Less, Fewer.—*Less* has to do with *amount* or *quantity*, and *fewer* with numbers. "He had *less* money and *fewer* clothes than he needed."

Let requires the objective case. "*Let him* and *me* go," not "Let *he* and *I*."

Liable.—See *Apt*.

Lie, Lay.—By a vulgar error these verbs have been so confounded as to deserve some notice. *To lie* is neuter, and designates a state: *to lay* is active, and denotes an action on an object; it is properly to cause *to lie*. "A thing *lies* on the table;" "Some one *lays* it on the table." "He *lies* with his fathers;" "They *laid* him with his fathers." In the same manner, when used idiomatically, we say, "A thing *lies* by us until we bring it into use;" "We *lay* it by for some future purpose."

The confusion arises probably from the fact that *lay* appears in both verbs. The words are correctly used in the following sentences:

I *lay* myself upon the bed (action). I *lie* upon the bed (rest).

I *laid* myself upon the bed (action). I *lay* upon the bed (rest).

I *have laid* myself upon the bed (action). I *have lain* upon the bed (rest).

A hen *lays* an egg (action). A ship *lies* at the wharf (rest).

The murdered Lincoln *lay* in state (rest); The people *laid* the crime upon the rebels (action).

Like. As.—*Like* has a prepositional use, but *as* is a conjunction. Do not say "It looks *like* it was caused by fire," but "It looks *as if*," etc. The following are correct: "My brother looks *like* me." "He acted *as if* he were insane." "Do it *as* I do."

Likely.—See *Apt*.

Limb.—Do not use *limb* when you mean *leg*. *Limb* may be applied to any member, and it is not more modest than *leg*. "The woman had her *leg* broken."

Lit.—Not to be used for *lighted*. Instead of saying "He *lit* the gas," say "He *lighted* the gas." Do not say "He *lit* on his feet," but he *lighted* on his feet."

Locate.—This word should not be used in the sense of *settle*. It is used transitively to mean to *fix* or *place in a position;* as, "He *located* a claim."

Lot, Lots.—Very inelegantly used for *a great many*, *a great deal;* as, "He had a *lot* of money left him;" "She looks a *lot* like her brother." The word means *a distinct part or portion*. "He divided his goods into *lots*."

Lunch.—An authorized form both as noun and verb, but not considered so elegant as a noun as *luncheon*.

Mad.—Should not be used for *angry*.

Mail man.—An inelegant form for *postman*.

Me being.—Do not say, "He did not know of *me being* there." The possessive case is required. "He did not know of *my being* there." "There is little chance of *his winning* the game."

Monstrous.—*Monstrous* means *abnormal* or *deformed*. Not to be used for *large* or *immense;* as, "It was a *monstrous* gathering."

Most.—Not to be used for *almost;* as "He is here *most* every day."

Mutual.—Does not mean *common*, but *reciprocal*. "We may have a *common* friend, but a *mutual* dislike;" that is, a dislike for each other.

Myself.—Not to be used for *I*. Do not say "John and *myself* are friends;" but "John and *I*," etc.

Near.—Not to be used for *nearly*. Say "He was not *nearly* so unselfish as his brother," instead of "not *near* so unselfish," etc.

Nearby.—Should not be used as an adjective. We may say "The house is *nearby*," but not "A *nearby* house."

New beginner.—Omit the *new*; all beginners are *new*.

Nice.—A very generally misused word. Properly *nice* means *delicate*, *discriminating*, *fastidious*. The works of a watch show *nice* construction; a man may be *nice* in his manners. The word should not be used to mean *agreeable* or *charming*, as "I had a *nice* time."

Nicely.—Do not use *nicely* for *well*, as "The sick man is doing *nicely*."

Not as I know of.—Incorrectly used for *not that I know of*.

Notorious.—Implies some *bad* or *doubtful quality;* as, "He has a *notorious* reputation." Here his reputation is *not good*.

Noways.—Incorrectly used for *nowise*. Say "He was *nowise* to blame."

Of all others.—Do not say "He is the last one *of all others* you would expect it of." He could not be one of the *others*.

Off of.—Ordinarily *of* is superfluous. Say "The man fell *off* the roof," not "*off of*."

Only.—This word is often misplaced. Properly it should immediately precede the word or expression which it limits. Say "I have *only* three dollars;" "She sang *only* for us;" not "I *only* have" and "She *only* sang." "She *only* sang" would mean she did nothing else but sing.

Onto.—We get *on* a horse and *on* a chair, not *onto*.

Orate.—An unauthorized form commonly used to mean *to give an oration*.

Over.—Do not use *over* in the sense of *more than;* as, "I have *over* a hundred dollars;" "The stick is *over* a yard long."

Pants.—The word is a vulgar abbreviation for *pantaloons*, and should not be used.

Pardner.—Often incorrectly used for *partner*.

Partake.—One cannot *partake* of a meal alone. *Partake* means to *take* or *share* with another.

Partially.—The word is sometimes used in the sense of *partly;* as, "I have only *partially* examined it." It also means *with partiality*.

Party.—*Party* means a *group of people*, not a *single person*. Do not say "The *party* you sent to me," when you mean the *person*.

Patron.—A *patron* is one who shows *consideration* or *favor*. A charity ball may have *patrons*. Not to be used for *customer*.

Pellmell.—*Pellmell* means *mixed* or *mingled together*. The term cannot properly be applied to an individual. "He rushed *pellmell* out of the house" is obviously impossible.

Per.—*Per* day, *per* man, *per* pound, are better expressed by the plain English *a* day, *a* man, *a* pound. The word should be used only with Latin nouns, as *per diem*, *per annum*.

Photo.—Not to be used as an abbreviation for *photograph*.

Pled.—Not to be used for *pleaded*. Say "He *pleaded* for a pardon," "He *pleaded* for his friend."

Posted.—Not to be used in the sense of *informed*, as "He is a well *posted* man," "If I had been better *posted*."

Prejudiced.—*Prejudice* is an *unfavorable bias*; we cannot, therefore, be *prejudiced in favor* of anything. In such a case we should use *prepossessed*.

Presume.—Not to be used for *think* or *believe*. Do not say "I *presume* he is right," but "I *think* or *believe*."
Preventative.—Wrongly used for *preventive*.
Privilege, Right.—A *privilege* is a special advantage granted or conceded; a *right* is one's due. We grant *privileges*, but we claim *rights*.
Propose, Purpose.—*Propose* means to put forward for discussion or consideration; *purpose* means to intend. "I *purpose* going to town to *propose* a plan to my business partner."
Purchase.—Sometimes used pretentiously when *buy* would be better.
Quite.—To be used in the sense of *fully*, *completely*, as, "I am *quite* satisfied." Do not say, "There was *quite* a crowd," "I have *quite* a few friends."
Raise.—Often misused for *rear* or *bring up*. We *raise* chickens, but we *rear* children.
Real.—Not to be used adverbially in the sense of *very*, as "I am *real* tired. Say "I am *really* tired," or "*very* tired."
Reckon.—Provincial for *think*. "I *reckon* he will come soon." Say "I *think*" or "I *believe*."
Recommend.—Not to be used as a noun; as, "The teacher gave him a good *recommend*." *Recommendation* is the proper word.
Referee.—Not to be used as a verb. "The man acted as *referee*" is correct, but not "He *refereed* the game."
Replace.—To replace an object is *to restore it to its place*. Not used in the sense of *take the place of*.
Resurrect.—A colloquial word not to be used in writing.
Retire.—It is better to avoid the use of *retire* in the sense of *go to bed*.
Reverend.—As a title not to be used without *the*. "*The Reverend* Mr. Brown," not "*Reverend Brown*."
Set, Sit.—These verbs, like *lie* and *lay*, are often confounded in their use. *To set* is both transitive and intransitive; *to sit* is intransitive. "I *set* the hen, but she *sits* on her eggs." Incorrectly we speak of a *setting* hen instead of a *sitting* hen.
Christ came "*sitting* upon an ass," and, therefore, his disciples took a colt and "they *set* him thereon." The verb is correctly used in these sentences: "My dress *sits* well;" "We will *sit* up," that is, will not go to bed; "Congress *sits*." "We *set down* figures," but "We *sit down* on the ground."
We *set* a post, *set* glass, *set* milk, *set* the sails, *set* a bone, *set* a clock, *set* a price, *set* jewels, *set* an example.
The sun *sets*, one *sets* out, the current *sets* to the north; one *sets* forward, *sets* forth, *sets* off; Winter *sets* in.
Shall and Will.—These two forms are perhaps more commonly misused than any other words in English. The rules with regard to the use of these words are as follows:
In declarative sentences, *shall* is used in the first person and *will* in the second and third persons to express simple futurity, as "I *shall* come"; "You *will* come"; "He *will* come."
In questions, however, *shall* is used rather than *will* in the second person to indicate simple futurity, as, "*Shall* you come?" In the first and third person, *will* is the proper word; as, "*Will* I come?" "*Will* he come?" To say "*Shall* I come?" would be to ask permission to come. "Shall he come?" would be a request that he be allowed to come.
In other cases *shall* and *will* express purpose or determination on the part of the speaker—*will* in the first person, and *shall* in the second and third.
Should and Would in general follow the same laws as *shall* and *will*.
In clauses expressing a condition, *should* is used in all three persons. "If I *should* try, I *should* succeed." "If he *should* come, he *would* meet you." (Here *should* expresses a condition.) *Should* is also used in all three persons to express a sense of duty. "I *should* (he *should*) come home early." (*Should* here expresses duty.) *Would* is also sometimes used to express a customary action; as, "He *would* come up to the window and look out." (*Would* here expresses habit or customary action.)
Sleeper.—Very generally misused for *sleeping car*.
Some.—Often misused for *somewhat*. "I am *some* tired this evening." Say "I am *somewhat* tired," etc.
Speciality.—An erroneous writing of *specialty*.
Splendid.—The word properly means *brilliant*. It should not be used for what is only *ordinarily good* or *commonplace*.
Stop.—Wrongly used for *stay*. We *stop* at the roadside; we *stay* with a friend or at a hotel.
Suicide.—Should not be used as a verb; as, "The prisoner *suicided* in the jail."
Sunday.—Not to be used as a verb. Say "He spent *Sunday* at home," not "He *Sundayed* at home."
Sure.—*Sure* is frequently misused for *surely*. "He will be here *sure*." Say, rather, "He will *surely* be here."
Suspicion.—Not a verb. Use instead *suspect*. "I *suspected* the truth of his statements."
That for So.—Instead of "He was *that* independent he would not speak," say "He was *so* independent."
Then.—Not an adjective. Do not say "the *then* president."
Thence.—Remember not to use *from* with this word. *Thence* means *from that place*. "He departed *thence* at noon."
These kind, Those sort.—*Kind* and *sort* are singular nouns, and should be modified by singular adjectives. Say "*this kind*," "*that sort*."
Through.—Often misused in the sense of *finished*. "I am *through* with my breakfast" instead of "I have *finished* my breakfast."
Thusly.—An unauthorized form for *thus*.
Transpire.—*Transpire* properly means *to leak out*, *to become known*. It should not be used for *happen*. "It *transpires* that the couple had been married for a year" is correct.
Try and.—Do not use "*try and*" for "*try to*." Say "*try to come*," not "*try and come*."
Two first, two last.—Say "the *first two*," "the *last two*" rather than "the *two first*" or "the *two last*."
Unbeknown.—Not to be used for *unknown*.
Unique.—*Unique* means the only one of its kind. We cannot say, then, "*very unique*."
Use to.—Properly *used to*. There are many inelegant forms of this verb. Do not say "I *use* to"; "Didn't you *use* to?" "You *usen't* to."
Verbal.—Misused for *oral*. "He would not trust himself to write her a note, but sent her a verbal (should be *oral*) message."
Vocation.—A man's *vocation* is his calling, his regular business. His *avocation* is something outside of his business with which he occupies himself incidentally. My friend's *vocation* is the practice of law; his *avocation* is photography. Still, while *avocation*, in the sense of *vocation*, is usually avoided by good writers, such use has some sanction of authority.
Want, Need.—*Want* expresses both the desire for a thing and the fact that the thing is lacking; *need* expresses the necessity of having a thing. A man may *want* an automobile, though he may not *need* one.
Wa'n't.—Not to be used as a contraction for *was not* or *were not*.
Ways.—Often incorrectly used for *way*. Instead of "I walked a long *ways* with her" say "I walked a long *way*."
Whatsomever.—An unauthorized form for *whatsoever*.
While.—Often incorrectly used for *although* or *and*, as "*While* I believe you are honest, I cannot vote for you." *While* properly means *during the time that*, as "*While* I was musing the fire burned."
Widow woman.—The word *woman* is superfluous in this expression, as all widows are women.
Without, Unless.—*Without* is a preposition, and should not be used to take the place of the connective *unless*. "I shall not go *without* my father consents," should read "*unless* my father consents," or "*without* my father's consent."
Worse.—Not to be used for *more*. We do not dislike one thing *worse* but *more* than another.
Worst kind, worst way.—Vulgarisms used in the sense of *very much*.

DICTIONARY OF PREPOSITIONS

SHOWING THEIR USE IN CONNECTION WITH PARTICULAR WORDS, ESPECIALLY VERBS

Abandoned *to*
Abate *of, from*
Abhorrence *of*
Abhorrent *to*
Abide *in, at, with, by*
Abominable *to*
Abound *in, with*
Abridge *of*
Absent *from*
Abstain *from*
Abstinence *from*
Abut *on*
Accede *to*
Acceptable *to*
Access *to*
Accessory *to*
Accommodate *to, with*
Accompanied *by, with*
Accord (intrans.) *with*
Accord (trans.) *to*
Accordance *with*
According *to*
Account *of, for, to*
Accountable *to* (a person) *or* (a thing)
Accuse *of*
Acquaint *with*
Acquaintance *with*
Acquiesce *in*
Acquit *of*
Adapted *to*
Add *to*
Address *to*
Adept *in*
Adequate *to*
Adhere *to*
Adjacent *to*
Adjourn *to, till, at, for*
Adjudge *to*
Adjust *to*
Admission (access) *to*, (entrance) *into*
Admit *of, to*
Admonish *of, by, against*
Advantage *over, of*
Advise *of, to*
Advocate *of*
Affection *for*
Affinity *to, with, between*
Agree *with* (a person), *to* (a proposal), *upon* (things or conditions)
Agreeable *to*
Aim *at*
Alienate *from*
Allude *to*
Alteration *in*
Ambitious *of, to*
Amenable *to*
Analogous *to*
Analogy *to, with, between*
Angry *with* (a person), *at* (a thing)
Animadvert *on, upon*
Annex *to*
Answer *for, to*
Antecedent *to*
Antipathy *to, against, between*
Anxious *about, for*
Apologize *to* (a person) *for* (some act)
Apology *to, for*
Appeal *from* (one) *to* (another) *for* (aid, justice)
Appertain *to*
Applicable *to*
Apply *to*
Apprehensive *of* (danger), *for* (one's life)
Appropriate *to*
Approve *of*
Argue *with* (one), *against, for* (a person or view), *on* (a subject)
Arraign *for* (treason)
Arrange *with* (one) *for* (something)
Array *in*
Arrive *at*
Ask *of* (a person), *for* or *after* (a person, or thing), ask one *to* (a party)
Aspire *to*
Assent *to*
Assimilate *to*
Associate *with*
Assure *of*
Astonished *at*
Atone *for*
Attached *to*
Attain *to*
Attend *to*
Attentive *to*
Averse *to*
Aversion *to, toward, for*
Ballot *for*
Banish *from, to*
Banter (one) *for* (something)
Bare *of*
Bargain *for*
Battle *for*
Bear *upon, with*, bear witness *against*, *in favor of*
Beguile *of*
Believe *in, on*
Belong *to*
Bereave *of*
Bestow *on, upon*
Betray *to* (a person), *into* (a thing)
Betroth *to*
Bigoted *to* (opinions)
Bind *to*
Blame *for*
Blush *at* (one's vices), *for* (one)
Boast *of*
Border *on, upon*
Born *to* (good luck), *into* (the world), *of* (woman)
Bound *to, for* (Boston)
Brag *of*
Call *on, upon, at, for*
Capable *of*
Care *for*
Careful *of, for*
Careless *of, about*
Carp *at*
Catch *at*
Caution *against*
Certain *of*
Certify (one) *of* (a fact)
Change *for, with*
Charge *on*, or *against* (a person); charge (one) *with* (some act)
Clear (land) *of* (trees), (a man) *from* (debt), (a ship) *for* (action)
Coalesce *with*
Coincide, *with* (one) *in* (opinion)
Commit *to*
Common *to* (several persons)
Commune *with*
Communicate *to, with*
Compare *to, with*
Compatible *with*
Compliance *with*
Comply *with*
Composed *of*
Concede *to*
Conceive *of*; conceive (a purpose or ill-will) *against* (one)
Concerned *at, for*
Concur *with, in, on*
Condemn *to*
Condescend *to*
Conduce *to*
Confer (bestow) *on, upon*
Confer (consult) *with* (one) *on, upon* (a question)
Confide *in, to*
Conform *to*
Conformable *to, with*
Conformity *to, with*
Congenial *to*
Congratulate *on, upon*
Connect *with*
Conscious *of*
Consecrate *to*
Consent *to*
Consign *to*
Consist *of, in, with*
Consistent *with*
Consonant *to, with*
Consult *with, about*
Contend *with, against, for*
Contest *with*
Contiguous *to*
Contrary *to*
Contrast *with*
Conversant *in, with, about*
Convert *to, into*
Convict *of*
Convince *of*
Copy *from, after*
Correspond *to, with*
Correspondence *to, with*
Correspondent *to*
Covenant *between, with, for*
Cure *of*
Dash *against, upon, into, through*
Deal *in, by, with*
Debar *of, from*
Decide *on, upon, in favor of, against*
Defend *against, from*
Deficiency *of*
Deficient *in*
Defraud *of*
Demand *of, from*
Denounce *against* (a person); denounce (one) *for* (misconduct), *for* (a traitor)
Depend *on, upon*
Dependent *on, upon*
Deprive *of*

Derive *from*
Derogate *from*
Derogation *from*
Derogatory *to*
Descended *from*
Deserving *of*
Desirous *of*
Desist *from*
Despair *of*
Despoil *of*
Destined *to, for*
Destitute *of*
Detach *from*
Detract *from*
Deviate *from*
Devolve *on, upon*
Devote *to*
Dictate *to*
Die *of* (disease), *by* (sword, famine), *for* (one, or for some cause)
Differ *with* (a person) *in* (opinion), *from* (a person or thing), *in* (some quality)
Difference *between* (things), *in* (quality, etc.); *on* (questions)
Different *from* (*than* is not allowed)
Difficulty *in, concerning, of, about*
Diminish *from, by*
Diminution *of*
Disabled *from, by*
Disagree *with, to, from; in* (opinion), [*about*
Disagreeable *to, thereunto, in* (a less degree)
Disappointed *of* (a thing not obtained), *in* or *with* (a thing obtained)
Disapprove *of*
Discourage *by, in about, concerning*
Discouragement *to* (vice); *at* (obstacles)
Disengaged *from, on* (a holiday)
Disgusted *at, with, by*
Dislike *to*
Dismission *of, from*
Disparagement *to*
Dispense *with*
Dispose *of, to, for, among* (the poor)
Dispossess *of*
Dispute *with, between, among*
Disqualify *for, from*
Disregard *of*
Dissatisfied *with*
Dissent *from*
Distinct *from*
Distinguish *from, between*
Distrustful *of*
Divested *of*
Divide *between* (two), *among* (more than two)
Dote *on*
Doubt *of, about, concerning*
Dwell *in, at, on, upon, near*
Eager *in, for, after*
Embark *in, for*
Embellish *with*
Emerge *from*
Employ *in, on, upon, about, to*
Emulous *of*
Enamored *of, with*
Encounter *with*
Encouragement *to, of, among* (people)
Encroach *on, upon*
Endeared *to, by*
Endeavor *for, after, at*
Endowed *with, by*
Endued *with*
Engaged *in, with, for*
Enjoin *on, upon, by, from*
Enter *on, upon, into*
Entrance *on, upon, into*
Envious *of, at*
Equal *to, with* [rare]
Equivalent *to, of*
Espouse *to*
Estimated *at, by, for, with, in*, etc.
Estranged *from, by*
Exception *to, against, at*
Excluded *from, by*
Exclusive *of*
Expelled *from, by, for*
Expert *in, at*
Exposed *to, for* (sale)
Expressive *of, to* (them)
Fall *under, on, upon, from, to*
Familiar *with, to*
Fawn *on, upon*
Fearful *of*
Feed *on, upon*
Fight *with, against, for*
Filled *with*
Fond *of*
Fondness *for*
Foreign *to, from*
Founded *on, upon, in* (truth)
Free *from* or *of* (faults), *of* (the city of London), *with* (money), *in* (conduct), *for* (all), *to* (all)
Friendly *to*
Frightened *at*
Frown *at, upon*
Fruitful *in, of*
Full *of*
Furnished *with*
Give *to*
Glad *of, at, with*
Glance *at, upon, from, to*
Glow *with*
Grapple *with*
Grateful *to* (a person), *for* (a favor)
Greedy *of, after*
Grieve *at, for*
Guard *against*
Guilty *of*
Hanker *after, for*
Happen *to, on*
Healed *of*
Hinder *from*
Hiss *at*
Hold *in, against, of, from, for, to,* [under
Ignorant *of*
Immersion *in*
Impatient *at, for, of*
Impenetrable *by, to*
Impervious *to*
Impose *on, upon*
Inaccessible *to*
Incapable *of*
Incentive *to*
Inconsistent *with*
Incorporate *into, with*
Inculcate *on, upon*
Independent *of, on*
Indifferent *to*
Indulge *with, in*
Indulgent *to, of*
Influence *over, with, on*
Inform *of, about, concerning*
Initiate *into, in*
Initiation *into, in*
Inquire *of, after, for, about*
Inroad *into*
Insensible *to, of*
Inseparable *from*
Insinuate *into*
Insist *on, upon*
Inspection *of, over*
Instruct *in*
Insult *on, upon*
Intent *on, upon*
Interfere *with*
Intermeddle *with*
Intervene *between, in*
Intimate *with*
Introduce *into, in*
Intrude *on, upon, into*
Inured *to*
Invested *with*
Irritated *against, by* (a person); *at, by* (a thing)
Jealous *of*
Jeer *at*
Join *with, to*
Knock *at, on*
Known *to*
Laden *with*
Land *at*
Laugh *at*
Lean *on, upon, against*
Level *with*
Liberal *to, of, with, in*
Liken *to*
Live *in, at, with, on, upon*
Loaded *with*
Long *for, after*
Lord *over*
Made *of*
Marry *to*
Meddle *with*
Mediate *between*
Meditate *on, upon*
Meet *with*
Militate *against*
Mingle *with*
Minister *to*
Mistrustful *of*
Mix *with*
Necessary *to, for*
Need *of*
Neglectful *of*
Negotiate *with*
Obedient *to*
Object *to, thereto, against*
Observant *of*
Observation *of*
Obtrude *on, upon*
Obvious *to*
Offend *against*
Offensive *to*
Offer *to*
Operate *on*
Opposite *to*
Overwhelmed *with, by*
Parcel (out) *among*
Parley *with*
Part *from, with*
Partake *of*
Partial *to*
Partiality *to, for*
Participate *in, of* [formerly]
Patient *with, of, under, toward*
Pay *for*
Peculiar *to*
Penetrate *into, through*
Persevere *in*
Pertain *to*
Pitch *upon, on*
Play *on, upon, with*
Pleasant *to*
Pleased *with*
Plunge *into*
Possessed *of*
Pounce *on, upon*
Pour *on, upon, into*
Pray *for, with*
Predisposed *to*
Predominate *over, in*
Prefer *to, before, above*
Preferable *to*
Preference *to, over, above, before*
Prefix *to*
Prejudice *against*
Prejudicial *to*
Prepare *for*
Preserve *from, for*
Preside *over*
Press *on, upon*
Presume *on, upon*
Pretend *to*
Prevail *on, upon, with* (to persuade) *over, against* (to overcome)
Prevent *from*
Previous *to*
Prey *on, upon*
Prior *to*
Productive *of*
Profit *by*
Profitable *to*
Prone *to*
Pronounce *against* (a person), *on* (a thing)
Propose *to*
Protect (others) *from*, (ourselves) *against*
Protest *against*
Proud *of*
Provide *with, for, against*
Purge *of, from*
Pursuance *of*
Pursuant *to*
Quarrel *with, among, about*
Quarter *on, upon*
Questioned *on, upon, by*
Rail *at, against, on* [formerly]
Reckon *on, upon, with*
Recline *on, upon*
Reconcile *to, with*
Recover *from*
Reduce *to, under, by*
Refer *to*
Reflect *on, upon*
Refrain *from*
Regard *for, to*
Regret *for*
Regular *in*
Rejoice *at, in, on account o*
Relate *to*
Release *from*
Relieve *from*
Relish *for, of*, (gives r.) *to* (food)
Rely *on, upon*
Remain *in, at*
Remark *on, upon*
Remit *to*
Remonstrate *with* (a person), *against* (a thing), *for* (doing)
Remove *from*
Repent *of*
Repine *at*
Replete *with*
Repose *on, upon*
Repugnant *to*
Rescue *from*
Resemblance *to, between*
Resolve *on, upon*
Rest *in, at, on, upon*
Restore *to, from*
Restrain *from*
Retire *from, to*
Return *to, from*
Rich *in*
Rid *of*
Rob *of*
Rove *about, over, in*
Rub *against*
Rule *over*
Rush *against, on, upon*
Sated *with*
Satiate *with*
Saturate *with*
Save *from*
Seek *for, after, to*
Seize *on, upon*
Send *to, for*
Sensible *of*
Sick *of*
Significant *to, of*
Similar *to*
Sink *into, in, beneath*
Sit *on, upon, in*
Skillful *in, at, of*
Smile *at, on, upon*
Snap *at*
Snatch *at*
Sneer *at*
Solicitous *about, for*
Sorry *for*
Stay *in, at, with*
Stick *to, by*
Strip *of*
Strive *with, against, for*
Subject *to*
Submissive *to*
Submit *to*
Substitute *for*
Subtract *from*
Suitable *to, for*
Surprised *at*
Suspected *of, by*
Swerve *from*
Sympathize *with*
Taste *of* (a thing possessed), *for* (a thing desired or relished)
Tax *of, with, for, on, upon*
Tend *to, toward*
Thankful *for*
Think *on, upon, of, about*
Thirst *after, for*
Touch *at, on, upon*
Transmit *to*
Triumph *over*
Troublesome *to*
True *to*
Trust *in, to*
Unison *with*
Unite *with, to*
Useful *for, to, in*
Value *on, upon*
Versed *in*
Vest *in* (a person), *with* (a thing)
Void *of*
Wait *on, upon, for, at*
Want *of*
Weary *of*
Weep *at, for*
Witness *of*
Worthy *of*
Yearn *toward, for*
Yield *to*
Yoke *with*
Zealous *for*

DICTIONARY OF ABBREVIATIONS, CONTRACTIONS, AND DEGREES

A., a. Adjective.
A. Alto.
A., ans. Answer.
a., @. (Lat. *ad.*) To; at.
ā., āā. The like quantity of each. (*Used in medical formulas.*)
A. A. Associate of Arts.
A. A. A. S. American Association for the Advancement of Science.
A. A. G. Assistant Adjutant-General.
A. A. S. S. (Lat. *Academiæ Antiquariana Societatis Socius.*) Member of the American Antiquarian Society.
A. B. (Lat. *Artium Baccalaureus.*) Bachelor of Arts. [See *B. A.*]
Abbr., Abbrev. Abbreviated, Abbreviation.
Abl., abl. Ablative.
Abp. Archbishop.
A. B. S. American Bible Society.
A. C. (Lat. *Ante Christum.*) Before Christ; Arch-Chancellor.
Acad. Academy.
A. C. A. American Congregational Association.
Acc., acc. Accusative.
Acc., Acct. Account.
A. D. (Lat. *Anno Domini.*) In the year of our Lord.
Ad., adv. Advertisement.
A. D. C. Aide-de-camp.
Adj. Adjective.
Adjt. Adjutant.
Adjt.-Gen. Adjutant-General.
Ad. lib., Ad libit. (Lat. *ad libitum*), At pleasure.
Adm. Admiral; Admiralty.
Admr. Administrator.
Admx. Administratrix.
Adv. Adverb.
Æ., Æt. (Lat. *Ætatis.*) Of age, aged.
A. F. A. Associate of the Faculty of Actuaries.
A.-G., Adjt.-Gen. Adjutant-General.
Ag. (Lat. *argentum.*) Silver.
Agl. Dept. Agricultural Department.
Agr., Agric. Agriculture, Agricultural.
Agt. Agent.
A. H. (Lat. *Anno Hegiræ.*) In the year of the Hegira, or flight of Mohammed.
A. H. S. (Lat. *Anno Humanæ Salutis.*) In the year of human salvation.
A. I. A. Associate of the Institute of Actuaries.
A. L. of H. American Legion of Honor.
Al. Aluminium.
Ala. Alabama.
Alas. Ter. Alaska Territory.

Ald. Alderman.
Alex. Alexander.
Alf. Alfred.
Alg. Algebra.
A. M. (Lat. *Artium Magister.*) Master of Arts.
A. M. (Lat. *ante meridiem.*) Before noon.
A. M. (Lat. *anno mundi.*) In the year of the world.
Am., Amer. America, American.
Am. Asn. Sci. American Association for the Advancement of Science.
Amer. Phil. Soc. American Philosophical Society.
Amt. Amount.
A. N. Anglo-Norman.
An. (Lat. *anno.*) In the year.
Anal. Analysis.
Anat. Anatomy, anatomical.
Anc. Ancient.
Anon. Anonymous.
Ans. Answer.
A. N. S. S. Associate of the Normal School of Science.
Ant., Antiq. Antiquities, antiquarian.
Anthrop. Anthropology, anthropological.
A. O. U. American Ornithologists' Union.
A. O. U. W. Ancient Order of United Workmen.
Ap., App. Apostle, apostles.
A. P. A. American Protestant Association; American Protective Association.
Apo. Apogee.
Apoc. Apocalypse; Apocrypha.
App. Appendix.
Approx. Approximate, appproximately.
Apr. April.
A. P. S. Associate of the Pharmaceutical Society.
Aq. (Lat. *aqua.*) Water.
A. Q. M. Assistant Quartermaster.
A. Q. M. G. Assistant Quartermaster-General.
A. R. (Lat. *anno regni.*) In the year of the reign.
Ar., Arab. Arabic, Arabian.
Ar., Arr. Arrive, arrives, arrived, arrival.
A. R. A. Associate of the Royal Academy.
Arab. Arabic, Arabian.
Aram, Aramaic.
Arch. Architecture.
Archæol. Archæology.
Archd. Archdeacon.
A. R. H. A. Associate of the Royal Hibernian Academy.
Arith. Arithmetic, arithmetical.
Ariz. Arizona.
Ark. Arkansas.
Arm. Armoric; Armenian.
Arr. Arrive, arrives, arrived, arrival.
A. R. R. (Lat. *anno regni regis or reginæ.* In the year of the King's (*or* Queen's) reign.
A. R. S. A. Associate of the Royal Scottish Academy.
A. R. S. M. Associate of the Royal School of Mines.
Art. Article.
A. S., A.-S. Anglo-Saxon.
Asst. Assistant.
A. S. S. U. American Sunday School Union.
Assyr. Assyrian.
Astrol. Astrology.
Astron. Astronomy, astronomical.
A. T. S. American Tract Society.
Atty. Attorney.
Atty.-Gen. Attorney-General.
A. U. A. American Unitarian Association.
A. U. C. (Lat. *anno urbis conditæ*), In the year from the building of the city—Rome.
Aug. Augmentative.
Aug. Augustus; August.
Auxil. Auxiliary.
A. V. Authorized Version.
A. V. Artillery Volunteers.
Avoir. Avoirdupois.
B. Bass; Book.
B., Brit. British.
b. Born.
B. A. Bachelor of Arts. [A. B.]
Bal. Balance.
Balt., Balto. Baltimore
Bank. Banking.
Bap., Bapt. Baptist.
Bar. Barrel; Barometer.
Bart., Bt. Baronet.
Bat., Batt. Battalion.
Bbl., bbls. Barrel, barrels.
B. C. Before Christ.
B. Ch. (Lat. *Baccalaureus Chirurgiæ.*) Bachelor of Surgery.
B. C. L. (Lat. *Baccalaureus Civilis Legis.*) Bachelor of Civil Law.
B. D. (Lat. *Baccalaureus Divinitatis.*) Bachelor of Divinity.
Bd. Bound.
Bdls. Bundles.
Bds. Bound in boards.
B. E. Bachelor of the Elements; Bachelor of Elocution.
Belg. Belgic, Belgian.
Benj. Benjamin.
Berks. Berkshire.
Bib. Bible, biblical.
Biog. Biography, biographical.
Biol. Biology, biological.
B. LL. (Lat. *Baccalaureus Legum.*) Bachelor of Laws.
B. ès L. (Fr. *Bachelier ès Lettres.*) Bachelor of Letters.
Bls. Bales.
B. M. (Lat. *Baccalaureus Medicinæ.*) Bachelor of Medicine.
B. M., B. Mus. (Lat. *Baccalaureus Musicæ.*) Bachelor of Music.
B. O. Branch Office.
B. O. Bachelor of Oratory.
Boh. Bohemian, *or* Czech.
Bost. Boston.
Bot. Botany, botanical.
B. O. U. British Ornithologists' Union.
Bp. Bishop.
Br., Bro. Brother.
Bret. Bas-Breton, *or* Celtic of Brittany.
Brig. Brigade.
Brig.-Gen. Brigadier-General.
Brit. Britain, Britannia, British.
B. S. Bachelor of Surgery; Bachelor of Science.
B. Sc. (Lat. *Baccalaureus Scientiæ.*) Bachelor of Science.
B. S. L. Botanical Society, London.
Bt. Baronet.
Bucks. Buckinghamshire.
bush. Bushel.
B. V. Blessed Virgin.
B. V. M. Blessed Virgin Mary.
bx., bxs. Box, boxes.
C. Cent, cents; Centigrade; Consul; Centime, centimes.
C., Cap. (Lat. *caput.*) Chapter.
C. A. Chartered *or* Chief Accountant.
Cal. California; Calendar.
Cam., Camb. Cambridge.
Cant. Canticles.
Cant. [Cantuar.]
Cantab. (Lat. *Cantabrigiensis.*) Of Cambridge.
Cantuar., Cant. (Mid. Lat. *Cantuaria.*) Canterbury.
Cap. (Lat. *caput*). Capital; Chapter.
Caps. Capitals.
Capt. Captain.
Card. Cardinal.
Cath. Catharine; Catholic.
C. B. Companion of the Bath.
C. C. Catholic Clergyman, Catholic Curate.
C. D. V. Carte de visite.
C. E. Civil Engineer.
Cel. Celsius.
Celt. Celtic.
Cent. (Lat. *centum.*) A hundred; Centigrade.
Centig. Centigrade.
Cert., Certif. Certify; Certificate.
Cf. (Lat. *confer.*) Compare.
c. ft. Cubic feet.
C.-G. Coast Guard; Commissary-General.
C. G. S. Centimeter, Gram, Second.
C. H. Courthouse.
Ch. Church; Chapter.
Chal. Chaldron.
Chal., Chald. Chaldee, Chaldaic.
Chanc. Chancellor.
Chap. Chapter.
Chas. Charles.
Chem. Chemistry, Chemical.
Ch. Hist. Church History.
Chic. Chicago.
Chin. Chinese.
Chr. Christ; Christian; Christopher.
Chron. Chronicle; Chronology.
C. I. Order of the Crown of India.
C. I. E. Companion of the Order of the Indian Empire.
Cin. Cincinnati.
Cit. Citation; Citizen.
Civ. Civil.
C. J. Chief Justice.
Cl. Clergyman; Clerk; Chlorine.
Class. Classical.
Clk. Clerk.
cm. Centimeter.
C. M. Certificated Master; Common Meter.
C. M. (Lat. *Chirurgiæ Magister.*) Master in Surgery.
C. M. G. Companion of the Order of St. Michael and St. George.
C. M. Z. S. Corresponding Member of the Zoölogical Society.
Co. Company; County; Cobalt.
C. O. D. Cash on delivery; Collect (*payment*) on delivery.
Cogn. Cognate.
Col. Colonel; Colossians; Column.
Coll. College; Collection; Colleague.
Coll. or *Colloq.* Colloquial; Colloquialism, Colloquially.
Colo. Colorado.
Com. Commander; Commerce; Commissioner; Committee; Commodore; Common.
Comm. Commentary; Commerce.
Comp. Compare, comparative; Compound, compounded.
Compar. Comparative.
Compos. Composition.
Com. Ver. Common version.
Con., contra (Lat.) Against.
Con. Cr. Contra credit.
Cong. Congregation, Congregational, Congregationalist; Congress.
Conj. Conjunction.
Conn. Connecticut.
Con. Sec. Conic sections.
Contr. Contracted, contraction.
Cop., Copt. Coptic.
Cor. Corinthians.
Cor. Mem. Corresponding Member.
Corn. Cornwall, Cornish.
Corrup. Corruption, corrupted.
Cor. Sec. Corresponding Secretary.
Cos. Cosine.
C. P. Clerk of the Peace; Common Pleas.
C. P. A. Certified Public Accountant.
C. P. C. Clerk of the Privy Council.
C. P. S. (Lat. *Custos Privati Sigilli.*) Keeper of the Privy Seal.
C. Q. D. Come quick—danger.
Cr. Credit, creditor.
C. R. (Lat. *civis Romanus.*) A Roman citizen.
C. R. (Lat. *Custos Rotulorum.*) Keeper of the Rolls.
Cres. Crescendo.
Crim. Con. Criminal conversation, or adultery.
Crystal., Crystallog. Crystallography.
C. S. Court of Sessions; Clerk to the Signet; Civil service.
C. S. A. Confederate States of America.
C. S. I. Companion of the Star of India.
csks. Casks.
ct. (Lat. *centum.*) A hundred.
Ct. Court.
Ct., Conn. Connecticut.
C. T. Certificated Teacher.
C. T. A. U. Catholic Total Abstinence Union.
Cu. (Lat. *cuprum.*) Copper.
cub., cu. ft. Cubic, cubic foot.
Cur., Curt. Current—this month.
cwt. A hundredweight; Hundredweights.
Cyc., Cyclo., Cyclopædia.
D. Deputy.
d. (Lat. *denarius, denarii.*) A penny, pence.
d. Died.
Dan. Daniel; Danish.
Dat. Dative.
Dav. David.
D. C. (Ital. *da capo.*) From the beginning.
D. C., District of Columbia.
D. C. L. Doctor of Civil (*or* Canon) Law.
D. D. (Lat. *Divinitatis Doctor.*) Doctor of Divinity.
D. D. D. (Lat. *dat, dicat, dedicat.*) He gives, devotes, and consecrates. (The formula by which anything was consecrated to the gods or to religious uses by the Romans; still used in funeral inscriptions.)
D. D. S. Doctor of Dental Surgery.
D. E. Dynamic Engineer.
Dec. December; Declination.
decim. Decimeter.
Def. Definition.
Deft. Defendant.
Deg. Degree, degrees.
Del. Delaware.
Del. (Lat. *delineavit.*) He (*or* she) drew it.
D. Eng. Doctor of Engineering.
Dep., Dept. Department.
Dep. Deputy.
Der. Derived, derivation.
Deut. Deuteronomy.
D. F. Dean of the Faculty; Defender of the Faith.
D. G (Lat. *Dei gratia.*) By the grace of God.
Dict. Dictionary; Dictator.
Dim., Dimin. Diminutive.
Dis., Disct. Discount.
Dist. District.
Dist. Atty. District Attorney.
Div. Divide, dividend, division, divisor.
D. Lit., D. Litt. Doctor of Literature.
D. L. O. Dead Letter Office.
D. M., D. Mus. Doctor of Music.
D. M. D. Doctor of Dental Medicine.
D. O. Doctor of Osteopathy; Doctor of Optics.
do. (Ital. *ditto.*) The same.
Dols. Dollars.
Dom. Econ. Domestic Economy.
Dor. Doric.
doz. Dozen.
Dpt. Deponent.
Dr. Debtor; Doctor; Dram, drams.
Dram. Dramatic, dramatically.
D. S. (Ital. *dal segno.*) From the sign.
D. Sc. Doctor of Science.
D. T. (Lat. *Doctor Theologiæ.*) Doctor of Theology.
Du., Dut. Dutch.
Dub. Dublin.
Duo. 12mo. Duodecimo (twelve leaves to a sheet).
D. V. (Lat. *Deo volente*). God willing.
D. V. M. Doctor of Veterinary Medicine.
D. V. S. Doctor of Veterinary Surgery.
dwt. (Lat. *denarius,* and English *weight.*) Pennyweight, pennyweights.
Dyn., Dynam. Dynamics.
E. East, eastern; English; Edinburgh.
ea. Each.
E. Aram. East Aramæan language, generally called Chaldee.
Eben. Ebenezer.
E. C. Eastern Central; Established Church.
Eccl., Eccles. Ecclesiastes; Ecclesiastical.
Eccles., Ecclesiol. Ecclesiology.
Econ. Economy.
Ed. Editor; Edition; Edinburgh.
Edin. Edinburgh.
Edm. Edmund.
E. D. S. English Dialect Society.
Edw. Edward.
E. E. Errors excepted.
E. E. Electrical Engineer.
e. g. (Lat. *exempli gratia.*) For example.
E. I. East Indies, East Indian.
E. I. C., E. I. Co. East India Company.
E. I. C. S. East India Company's Service.
Elec., Elect. Electric, electricity.
Eliz. Elizabeth, Elizabethan.
Emp. Emperor, empress.
Ency., Encyc. Encyclopædia.
E. N. E. East-northeast.
Eng. England, English.
Eng., Engin. Engineer, engineering.
Eng. Dept. Department of Engineers.
Ent., Entom. Entomology, entomological.
Env. Ext. Envoy extraordinary.
Ep. Epistle.
Eph. Ephesians; Ephraim.
Epiph. Epiphany.
Epis. Episcopal.
Epist. Epistle, epistolary.
Eq. Equal, equivalent.
Equiv. Equivalent.
Esd. Esdras.
E. S. E. East-southeast.
Esp., Espec. Especial, especially.
Esq., Esqr. Esquire.
et al. (Lat. *et alibi.*) And elsewhere.
et al. (Lat. *et alii,* or *aliæ, alia.*) And others.
etc., &c. (Lat. *et cæteri, cæteræ,* or *cætera.*) And others, and so forth.
Eth. Ethiopia, Ethiopian.
Ethnol. Ethnology, ethnological.
et seq., sq., or *sqq.* (Lat. *et sequentes,* or *et sequentia.*) And the following.
Etym. or *Etymol.* Etymology.
Ex. Example; Examined; Exception; Exodus.
Exc. Excellency; Except, excepted.
Exch. Exchange; Exchequer.
Exd. Examined.
Ex. Doc. Executive Document.
Exec. Executor.
Execx. Executrix.
Exod. Exodus.
Exon. (Lat. *Exonia.*) Exeter.
Exr. Executor.
Exx. Executrix.
Ez. Ezra.
Ezek. Ezekiel.
E. & O. E. Errors and omissions excepted.
F. Fellow: Folio: Fahrenheit.
f. Farthing, farthings.
f., fem. Feminine.
f. Franc, francs.
Fahr. Fahrenheit.
F. A. S. Fellow of the Society of Arts.
F. A. S. E. Fellow of the Antiquarian Society of Edinburgh.
F. B. S. E. Fellow of the Botanical Society of Edinburgh.

. C. Free Church of Scotland.
cp. Foolscap.
. C. P. S. Fellow of the Cambridge Philosophical Society.
. C. S. Fellow of the Chemical Society.
. D., Fid. Def. (Lat. *Fidei Defensor*). Defender of the Faith.
eb. February.
ec. (Lat. *fecit.*) He (*or* She) did it.
. E. I. S. Fellow of the Educational Institute of Scotland.
em. Feminine.
. E. S. Fellow of the Entomological (*or* Ethnological) Society.
eud. Feudal.
. F. V. First Families of Virginia. [*Humorous.*]
. G. S. Fellow of the Geological Society.
. I. A. Fellow of the Institute of Actuaries.
. I. C. Fellow of the Chemical Institute.
. fa., *Fieri facias.* (Lat.) A form of judicial writ.
ig. Figure, figures; figurative, figuratively.
inn. Finnish.
. K. Q. C. P. I. Fellow of the King's and Queen's College of Physicians, Ireland.
l. Flemish; Florin, florins; Flourished.
la. Florida.
lem. Flemish.
. L. S. Fellow of the Linnæan Society.
. M. Field Marshal.
o., *Fol.* Folio.
. O. Foreign Office; Field Officer.
. O. B. Free on board.
or. Foreign.
ort. Fortification.
. P. Fire-plug.
. P. S. Fellow of the Philological Society.
. France, French; Francis; Franca.
. From.
. R. A. S. Fellow of the Royal Astronomical (*or* Asiatic) Society.
. R. C. P. Fellow of the Royal College of Physicians.
. R. C. P. E. Fellow of the Royal College of Physicians, Edinburgh.
. R. C. S. Fellow of the Royal College of Surgeons.
. R. C. S. E. Fellow of the Royal College of Surgeons, Edinburgh.
. R. C. S. I. Fellow of the Royal College of Surgeons, Ireland.
red. Frederick.
req. Frequentative.
. R. G. S. Fellow of the Royal Geographical Society.
. R. H. S. Fellow of the Royal Horticultural Society.
. R. H. S. or *F. R. Hist. S.* Fellow of the Royal Historical Society.
i. Friday.
ies. Friesland, Friesic.
is. Frisian.
. R. Met. S. Fellow of the Royal Meteorological Society.
. R. M. S. Fellow of the Royal Microscopical Society.
. R. S. Fellow of the Royal Society.
. R. S. E. Fellow of the Royal Society, Edinburgh.
. R. S. L. Fellow of the Royal Society of Literature.
. R. S. S. Fellow of the Royal Statistical Society.
. S. A. Fellow of the Society of Arts, *or* of Antiquaries.
. S. A. *Scot.* Fellow of the Society of Antiquaries of Scotland.
. Fort; Foot, feet.
h. Fathom.
ur. Furlong.
ut. Future.
Z. S. Fellow of the Zoölogical Society.
& A. M. Free and Accepted Masons.
. Genitive; Guinea, guineas; Gulf.
. Georgia.
A. General Assembly.
el. Gaelic; Gadhelic.
al. Galatians.
l. Gallon, gallons.
lv. Galvanism, galvanic.
. A. R. Grand Army of the Republic.
B. Great Britain.
B. & I. Great Britain and Ireland.
C. B. Grand Cross of the Bath.
C. H. Grand Cross of Hanover.
C. L. H. Grand Cross of the Legion of Honor.
C. M. G. Grand Cross SS. Michael and George.
C. S. I. Grand Commander of the Star of India.

G. D. Grand Duke, Grand Duchess.
Gen. General.
Gen. Genesis; Genitive.
Gend. Gender.
Genit. Genitive.
Gent. Gentleman, gentlemen.
Geo. George; Georgia.
Geog. Geography, geographical.
Geol. Geology, geological.
Geom. Geometry, geometrical.
Ger., Germ. German.
Gi. Gill, gills.
G. L. Grand Lodge.
G. M. Grand Master.
Go., Goth. Gothic.
G. O. M. Grand Old Man (applied to Gladstone).
Gov. Governor.
Gov.-Gen. Governor-General.
Govt. Government.
G. P.-O. General Post-Office.
gr. Grain, grains; Gross.
Gr. Great; Greek.
Gram. Grammar, grammatical.
gro. Gross.
G. T. Good Templars; Grand Tyler.
gtt. (Lat. *gutta* or *guttæ.*) Drop *or* drops.
Gun. Gunnery.
H. Hour, hours.
Hab. Habakkuk.
Hag. Haggai.
Hants. Hampshire.
H. B. C. Hudson's Bay Company.
H. B. M. His (*or* Her) Britannic Majesty.
H. C. Heralds' College; House of Commons.
H. C. M. His (*or* Her) Catholic Majesty.
h. e. (Lat. *hoc est, hic est*). That (*or* this) is.
Heb., Hebr. Hebrew, Hebrews.
Her. Heraldry, heraldic.
Hf.-bd. Half-bound.
H. G. Horse Guards.
H. H. His (or Her) Highness; His Holiness (the pope).
Hhd. Hogshead, hogsheads.
H. I. H. His (or Her) Imperial Highness.
Hind. Hindu, Hindustan, Hindustani.
Hist. History, historical.
H. J., H. J. S. (Lat. *hic jacet, hic jacet sepultus.*) Here lies, Here lies buried.
H. M. His (*or* Her) Majesty.
H. M. P. (Lat. *hoc monumentum posuit.*) Erected this monument.
H. M. S. His (*or* Her) Majesty's Service, Ship, *or* Steamer.
Hon., Honble. Honorable.
Hond. Honored.
Hor., Horol. Horology, horological.
Hort., Hortic. Horticulture, horticultural.
Hos. Hosea.
H. P. Half-pay; High-Priest; Horse power.
H. R. House of Representatives.
H. R. E. Holy Roman Empire, *or* Emperor.
H. R. H. His (*or* Her) Royal Highness.
H. R. I. P. (Lat. *hic requiescit in pace.*) Here rests in peace.
H. S. (Lat. *hic situs.*) Here lies.
H. S. H. His (*or* Her) Serene Highness.
Hum., Humb. Humble.
Hun., Hung. Hungary, Hungarian.
Hund. Hundred, hundreds.
Hyd., Hydros. Hydrostatics.
Hydraul. Hydraulics.
Hydros. [See *Hyd.*]
Hypoth. Hypothesis, hypothetical.
I. Island.
Ia. Iowa.
Ib., Ibid. (Lat. *ibidem.*) In the same place.
Icel. Iceland, Icelandic.
Ich., Ichth. Ichthyology.
Id. (Lat. *idem.*) The same.
Ida. Idaho.
i. e. (Lat. *id est.*) That is.
I. H. S. (Lat. *Iesus* [or *Jesus*] *Hominum Salvator.*) Jesus the Savior of Men.
Ill. Illinois.
Imp. (Lat. *imperator.*) Emperor; Imperial; impersonal.
Imp., Imperf. Imperfect.
Imper. Imperative.
in. Inch, inches.
Incog. (Ital. *incognito, incognita.*) Unknown.
Ind. India, Indian; Indiana.
Indic. Indicative.
Ind. Ter. Indian Territory.
Inf., Infin. Infinitive.
In lim. (Lat. *in limine.*) At the outset.
In loc. (Lat. *in loco.*) In its place.

I. N. R. I. (Lat. *Iesus* [or *Jesus*] *Nazarenus Rex Iudæorum* [or *Judæorum*].) Jesus of Nazareth, King of the Jews.
Ins., Insur. Insurance.
Ins.-Gen. Inspector-General.
Inst. Instant; the present month; Institute, Institution.
Int. Interest.
Int. Dept. Department of the Interior.
Intens. Intensive; Intensative.
Interj. Interjection.
Intrans. Intransitive.
In trans. (Lat. *in transitu.*) On the passage.
Int. Rev. Internal Revenue.
Introd. Introduction.
I. O. F. Independent Order of Foresters.
I. O. G. T. Independent Order of Good Templars.
I. O. O. F. Independent Order of Oddfellows.
I. O. R. M. Improved Order of Red Men.
I. O. S. M. Independent Order of Sons of Malta.
I. O. U. I owe you.
i. q. (Lat. *idem quod.*) The same as.
Ir. Ireland, Irish.
Irreg. Irregular.
Is., Isa. Isaiah.
I. S. Irish Society.
Isl. Island.
I. S. M. *Iesus* [or *Jesus*] *Salvator Mundi.* Jesus Savior of the world.
It., Ital. Italy; Italic; Italian.
Itin. Itinerary.
J. Judge; Justice.
J. A. Judge Advocate.
Jac. Jacob, Jacobus.
J. A. G. Judge Advocate General.
Jan. January.
Jav. Javanese.
J. C. Jesus Christ.
J. C. D. (Lat. *Juris Civilis Doctor.*) Doctor of Civil Law.
J. D. (Lat. *Jurum Doctor.*) Doctor of Laws.
Jer. Jeremiah.
J. G. W. Junior Grand Warden.
J. H. S. [*I. H. S.*].
Jno. John.
Jon., Jona. Jonathan.
Jos. Joseph.
Josh. Joshua.
Jour. Journeyman; Journal.
J. P. Justice of the Peace.
Jr. Juror; Junior.
J. U. [or *V.*] D. (Lat. *Juris Utriusque Doctor.*) Doctor of Both Laws. (*i. e.*, of civil and of canon law.)
Jud. Judith.
Judg. Judges.
Jul. July; Julius; Julian.
Jul. Per. Julian Period.
Jun. June.
Jun., Junr. Junior.
Juris. Jurisprudence.
K. King; Knight.
Kan., Kans. Kansas.
K. B. Knight of the Bath.
K. B. King's Bench.
K. C. King's Counsel.
K. C. B. Knight Commander of the Bath.
K. C. H. Knight Commander of Hanover.
K. C. M. G. Knight Commander of St. Michael and St. George.
K. C. S. I. Knight Commander of the Star of India.
K. E. Knight of the Elephant (in Denmark).
Ken., Ky. Kentucky.
K. G. Knight of the Garter.
K. G. C. Knight of the Grand Cross.
K. G. C. B. Knight of the Grand Cross of the Bath.
K. G. E. Knight of the Golden Eagle.
K. G. F. Knight of the Golden Fleece.
K. G. H. Knight of the Guelphs of Hanover.
Ki. Kings.
kilog. Kilogramme.
kilom., kilo. Kilometer.
Kingd. Kingdom.
K. L. B. Knight of Leopold of Belgium.
K. L. H. Knight of the Legion of Honor.
K. M. Knight of Malta.
Knick. Knickerbocker.
K. N. S. Knight of the Royal North Star (Sweden).
Knt. Knight.
K. of P. Knights of Pythias.
K. P. Knight of St. Patrick.
Ks. Kansas.
K. S. Knight of the Sword (Sweden).
Kt. Knight.
K. T. Knight of the Thistle; Knight Templar.

K. T. S. Knight of Tower and Sword (Portugal).
Ky. Kentucky.
L. Latin; Lake; Lord; Lady.
L., l., £. (Lat. *libra.*) Pound, pounds (sterling).
L., lb., ℔. (Lat. *libra*), Pound, pounds (weight).
La. Louisiana.
L. A. Law Agent; Literate in Arts.
Lam. Lamentations.
Lat. Latin; Latitude.
lb. Pound, pounds (weight).
l. c. Lower case (in printing).
l. c., loc. cit. (Lat *loco citato.*) In the place before cited.
L. C. Lord Chamberlain; Lord Chancellor.
L. C. J. Lord Chief Justice.
L. C. P. Licentiate of the College of Preceptors.
Ld. Lord.
Ldp. or *Lp.* Lordship.
L. D. S. Licentiate of Dental Surgery.
Leg., Legis. Legislature, legislative.
Leip. Leipzig.
Lev. Leviticus.
Lex. Lexicon.
Lexicog. Lexicography, lexicographer, lexicographical.
L. G. Life Guards.
L. *Ger.* Low German *or* Plattdeutsch.
L. H. D. (Lat. *Litterarum Humanarum Doctor.*) Doctor of Humanities.
L. I. Light Infantry; Long Island.
Lib. (Lat. *liber*), Book.
Lib. Library, librarian.
Lieut., Lt. Lieutenant.
Lieut.-Col. Lieutenant-Colonel.
Lieut.-Gen. Lieutenant-General.
Lieut.-Gov. Lieutenant-Governor.
lin. Lineal, or right-line measures; *e. g.*, lin. yd.; lin. ft., etc.
Linn. Linnæus, Linné, Linnæan.
Liq. Liquor, liquid.
Lit. Literally; Literature, literary.
Lit. D. or *Litt. D.* (Lat. *Literarum Doctor.*) Doctor of Literature.
Lith. Lithography.
Liv. Livre.
LL. B. (Lat. *Legum Baccalaureus.*) Bachelor of Laws.
LL. D. (Lat. *Legum Doctor.*) Doctor of Laws.
LL. I. Lord Lieutenant of Ireland.
LL. M. Master of Laws.
L. M. Long meter.
Lon., Lond. London.
Lon., Long. Longitude.
Loq. (Lat. *loquitur.*) He (*or* she) speaks.
Lou. or *La.* Louisiana.
Lp. Lordship.
L. P. Lord Provost.
L. S. (Lat. *locus sigilli.*) Place of the seal.
l. s. d. (Lat. *libra, solidi, denarii.*) Pounds, shillings, pence.
Lt. Lieutenant.
Lt. Inf. Light Infantry.
Luth. Lutheran.
m. Married; Masculine; Meter, meters; Mile, miles; Minute, minutes.
M. Marquis; Middle; Monday; Morning; Monsieur.
M. (Lat. *mille.*) Thousand.
M. (Lat. *meridies.*) Meridian, Noon.
M. A. (Master of Arts.) [*A. M.*]
Mac., Macc. Maccabees
Mach., Machin. Machine, machinery.
Mad., Madm. Madam.
Mag. Magyar; Magazine.
Maj. Major.
Maj.-Gen. Major-General.
Mal. Malachi; Malay, Malayan.
Manuf. Manufactures, manufacturing.
Mar. March; Maritime.
Marq. Marquis.
Mas., Masc. Masculine.
Mass. Massachusetts.
M. Ast. S. Member of the Astronomical Society.
Math. Mathematics, mathematician, mathematical.
Matt. Matthew.
M. B. (Lat. *Medicinæ Baccalaureus.*) Bachelor of Medicine.
M. B. (Lat. *Musicæ Baccalaureus.*) Bachelor of Music.
M. C. Member of Congress; Master of Ceremonies.
Mch. March.
M. C. P. Member of the College of Preceptors.
M. D. (Lat. *Medicinæ Doctor.*) Doctor of Medicine.
Md. Maryland
Mdlle. (Fr. *mademoiselle.*) Miss.
Mdse. Merchandise.
M. E. Most Excellent; Military Engineer; Mining Engineer; Mechanical Engineer.

M. E. Methodist Episcopal.
Me. Maine.
Meas. Measure.
Mech. Mechanics, mechanical.
Med. Medicine, medical; Mediæval.
Med. Lat., Mediæv. Lat. Mediæval Latin.
Mem. Memorandum, memoranda.
M. E. S. Methodist Episcopal South.
Mess. & Docs. Messages and Documents.
Messrs. (Fr. *messieurs.*) Gentlemen.
Met. Metaphysics, metaphysical.
Metall. Metallurgy.
Metaph. Metaphysics; Metaphorical.
Meteor. Meteorology, meteorological.
Meth. Methodist.
Meton. Metonymy.
Mex. Mexico.
Mfd., Mfs. Manufactured, manufactures.
Mfg. Manufacturing.
M. F. H. Master of Foxhounds.
M. Hon. Most Honorable.
M. H. Ger. Middle High German.
M. I. C. E. Member of the Institute of Civil Engineers.
Mich. Michaelmas; Michigan.
Mid. Middle; Midshipman.
Mid. Lat. Latin of the Middle Ages.
Mil., Milit. Military.
M. I. M. E. Member of the Institute of Mining Engineers.
Min. Mineralogy, mineralogical; Minute, minutes.
Minn. Minnesota.
Min. Plen. Minister Plenipotentiary.
Miss. Mississippi.
Mlle. (Fr. *mademoiselle.*) Miss.
M. L. S. B. Member of the London School Board.
MM. Their Majesties.
MM. (Fr. *messieurs.*) Gentlemen.
mm. Millimeters; Micrometers.
Mme. (Fr. *madame.*) Madam.
M. N. A. S. Member of the National Academy of Sciences.
M. N. S. Member of the Numismatical Society.
Mo. Missouri; Month.
mo. Month.
Mod. Modern.
Mod. (Ital. *moderato.*) Moderately.
Mon. Monday.
Mons. (Fr. *monsieur.*) Sir, Mister.
Mont. Montana.
M. P. Member of Parliament.
M. P. P. Member of the Provincial Parliament.
M. P. S. Member of the Pharmaceutical Society; Member of the Philological Society.
Mr. Master, Mister.
M. R. A. S. Member of the Royal Asiatic Society.
M. R. C. P. Member of the Royal College of Physicians.
M. R. C. S. Member of the Royal College of Surgeons.
M. R. C. V. S. Member of the Royal College of Veterinary Surgeons.
M. R. G. S. Member of the Royal Geographical Society.
M. R. I. Member of the Royal Institution.
M. R. I. A. Member of the Royal Irish Academy.
Mrs. Mistress (when abbreviated pronounced mis'sis).
M. S. Master of Surgery.
M. S. Master of Science.
M. S. (Lat. *Memoriæ sacrum.*) Sacred to the memory of.
MS. Manuscript.
MSS. Manuscripts.
Mt., Mts. Mount, mountains.
Mus. Museum; Music, musical.
Mus. B. (Lat. *Musicæ Baccalaureus.*) Bachelor of Music.
Mus. D., Mus. Doc., Mus. Doct. (Lat. *Musicæ Doctor*), Doctor of Music.
M. W. G. M. Most Worthy Grand Master.
Myth. Mythology, mythological.
N. Noon; North; Noun; Number; New; Neuter.
N. A. North America, North American.
Nah. Nahum.
Nap. Napoleon.
Nat. Natural; National; Natal.
Nat. Hist. Natural History.
Nat. Ord. Natural Order.
Nat. Phil. Natural Philosophy.
Naut. Nautical.
N. B. New Brunswick; North Britain (*i. e.* Scotland).
N. B. (Lat. *Nota bene.*) Note well, Take notice.
N. C. North Carolina.
N. D., N. Dak. North Dakota.
N. E. New England; Northeast.
Neb. Nebraska.
Neg. Negative, negatively.
Neh. Nehemiah.
Nem. con. (Lat. *nemine contradicente.*) No one contradicting; unanimously.
Nem. diss. (Lat. *nemine dissentiente.*) No one dissenting; unanimously.
Neth. Netherlands.
Neut. Neuter.
Nev. Nevada.
New. Test., N. T. New Testament.
N. F. Newfoundland.
N. H. New Hampshire.
N. H. Ger. New High German.
N. J. New Jersey.
N. L., N. Lat. North Latitude.
N. M. New Mexico.
N. N. E. North-northeast.
N. N. W. North-northwest.
N. O. New Orleans.
No. (Lat. *numero.*) Number.
nol. pros. (*nolle prosequi,*) To be unwilling to proceed.
Nom. Nominative.
Non con. Non-content, dissentient. (The formula in which Members of the House of Lords vote.)
Non obst. (Lat. *non obstante.*) Notwithstanding.
Non pros. (Lat. *non prosequitur.*) He does not prosecute.
Non seq. (Lat. *non sequitur.*) It does not follow (as a consequence).
n. o. p. Not otherwise provided for.
Nor., Norm. Norman.
Nor. Fr., Norm. Fr. Norman French.
Norm. [Norman.]
Norw. Norway, Norwegian, Norse.
Nos. Numbers.
Nov. November.
N. P. Notary Public.
N. S. New style (since 1752); Nova Scotia.
n. s. Notspecified.
N. S. J. C. (Fr. *Notre Seigneur Jésu Christ.*) Our Lord Jesus Christ.
N. T. New Testament.
Num., Numb. Numbers.
Numis. Numismatic, numismatology.
N. V. M. Nativity of the Virgin Mary.
N. W. Northwest.
N. W. T. Northwest Territory.
N. Y. New York.
N. Y. H. S. New York Historical Society.
N. Z. New Zealand.
O. Ohio; Old.
ob. (Lat. *obiit.*) He (*or* she) died.
Ob., Obad. Obadiah.
Obdt., Obt. Obedient.
Obj. Objective.
Obs. Obsolete.
Oct. October.
Oct., 8vo. Octavo.
O. F. Odd Fellows.
O. H. Ger. Old High German.
O. H. M. S. On Her Majesty's Service.
O. K. "All correct."
Okl. Oklahoma.
Old Test., O. T. Old Testament.
Olym. Olympiad.
O. M. Old Measurement.
O. M. I. Oblate of Mary Immaculate.
Op. Opposite, opposition.
Opt. Optative; Optics, optical.
Ordn. Ordnance.
Ore. Oregon.
Orig. Original, originally.
Ornith. Ornithology, ornithological.
O. S. Old Style (previous to 1752); Old Saxon.
O. S. A. Order of St. Augustine.
O. S. B. Order of St. Benedict.
O. S. F. Order of St. Francis.
O. T. Old Testament.
O. U. A. M. Order of United American Mechanics.
Oxf. Oxford.
Oxon. (Lat. *Oxonia, Oxoniensis.*) Oxford; of Oxford.
Oxonien. (Lat. *Oxoniensis.*) Of Oxford.
oz. Ounce. [The *z* in this contraction and in *viz.*, represents an old symbol (ȝ), used to mark a terminal contraction.]
P. Page; Participle; Past; Pole; Port.
Pa. Pennsylvania.
P. a., par. a. Participial adjective.
Paint. Painting.
Pal., Palæont. Palæontology, palæontological.
Par. Paragraph.
Parl. Parliament, parliamentary.
Part. Participle.
Particip. Participial.
Pass. Passive.
Pat. Patrick.
Pathol. Pathology.
Payt. Payment.
P. C. (Lat. *Patres Conscripti.*) Conscript Fathers.
P. C. Police Constable; Privy Council, Privy Councilor.
P. C. S. Principal Clerk of Session.
Pd. Paid.
P. E. Protestant Episcopal.
P. E. I. Prince Edward Island.
Penn. Pennsylvania.
Pent. Pentecost.
Per., Pers. Persia; Persian; Personal.
Per. an. (Lat. *per annum.*) Yearly.
Per cent, per ct. (Lat. *per centum.*) By the hundred.
Perf. Perfect.
Peri. Perigee.
Persp. Perspective.
Peruv. Peruvian.
Pet. Peter.
P. G. M. Past Grand Master.
Phar., Pharm. Pharmacy.
Ph. B. (Lat. *Philosophiæ Baccalaureus.*) Bachelor of Philosophy.
Ph. D. (Lat. *Philosophiæ Doctor.*) Doctor of Philosophy.
Phil., Phila. Philadelphia.
Phil. Philip; Philippians; Philosophy, philosophical.
Phil. Trans. Transactions of the Philosophical Society.
Philem. Philemon.
Philol. Philology.
Philos. Philosophy, philosophical.
Ph. M. Master of Philosophy.
Phenic. Phenician.
Photog. Photography, photographic, photographer.
Phren., phrenol. Phrenology, phrenological.
Phys. Physics, physical; physiology, physiological.
Physiol. Physiology, physiological.
Pinx., Pxt. (Lat. *pinxit.*) He (*or* she) painted it.
Pk. Peck.
Pl. Place; Plate; Plural.
P. L. Poet Laureate.
Plff., Pltff. Plaintiff.
Plu. Plural.
Plup., Plupf. Pluperfect.
Plur. Plural.
P. M. (Lat. *post meridiem.*) Afternoon.
P. M. Past Master; Peculiar Meter; Postmaster.
P. M. G. Postmaster-General.
P. O. Post-office.
P. & O. Co. Peninsular and Oriental Steam Navigation Company.
Poet. Poetry, Poetical.
Pol. Polish.
Polit. Econ. Political Economy.
P. O. O. Post-office order.
Pop. Population.
Port. Portugal, Portuguese.
Poss. Possessive.
pp. Pages.
p. p. Past (*or* perfect) participle.
P. P. (Lat. *pater patriæ.*) Father of his country.
P. P. Parish priest.
P. P. C. (Fr. *pour prendre congé.*) To take leave. [*T. T. L.*]
Pph. Pamphlet.
p. pr. Present participle.
Pr. Present; Priest; Prince.
P. R. (Lat. *populus Romanus*), The Roman people.
P. R. Prize Ring.
P. R. A. President of the Royal Academy.
P. R. C. (Lat. *Post Romam conditam.*) After the building of Rome. [*A. U. C.*]
Preb. Prebend.
Pref. Prefix; Preface.
prep. Preposition.
Pres. President; Present.
Pret. Preterit.
Prim. Primary.
Prin. Principal; Principles.
Print. Printing.
Priv. Privative.
Prob. Problem; Probable, probably.
Prof. Professor.
Pron. Pronoun; Pronounced, pronunciation.
pron. a. Pronominal adjective.
Prop. Proposition; Properly.
Pros. Prosody.
Pro tem. (Lat. *pro tempore.*) For the time being.
Prov. Proverbs, proverbial, proverbially; Provincial, provincially; Provost.
Provinc. Provincial.
Prox. (Lat. *proximo.*) Next, *or* of the next month.
Prs. Pairs.
P. R. S. President of the Royal Society.
P. R. S A. President of the Royal Scottish Academy.
Prus. Prussia, Prussian.
P. S. (Lat. *post scriptum.*) Postscript.
P. S. Privy Seal.
Ps., Psa. Psalm, psalms.
Psychol. Psychology.
Pt. Part; Payment; Point; Port.
P. T. Post Town; Pupil Teacher.
Pub. Public; Published, publisher.
Pub. Doc. Public documents.
P. V. Post village.
pwt. Pennyweight.
Pxt. [See *Pinx.*]
Pyro., Pyrotech. Pyrotechnics.
Q., Qu. Query; Question.
Q. C. Queen's College.
q. d. (Lat. *quasi dicat.*) As if he should say.
q. e. (Lat. *quod est.*) Which is.
Q. E. D. (Lat. *quod erat demonstrandum.*) Which was to be proved.
Q. E. F. (Lat. *quod erat faciendum.*) Which was to be done.
Q. E. I. (Lat. *quod erat inveniendum.*) Which was to be found out.
q. l. (Lat. *quantum libet.*) As much as you please.
Q. M. Quartermaster.
Q. M.-Gen. Quartermaster-General.
Qr. Quarter (28 pounds); Quire.
Q. S. Quarter Sessions.
q. s. (Lat. *quantum sufficit.*) A sufficient quantity.
qt. Quart.
Qu. Queen; Query; Question.
Quar., quart. Quarterly.
Quar., 4to. Quarto.
Ques. Question.
q. v. (Lat. *quod vide.*) Which see.
Qy. Query.
R. Railway; Réaumur; River.
R. (Lat. *rex.*) King; (Lat. *regina.*) Queen.
R. (Lat. *recipe.*) Take.
R. A. Royal Academy, Royal Academician; Rear-Admiral; Royal Arch; Royal Artillery.
Rabb. Rabbinical.
Rad. (Lat. *radix.*) Root.
R. A. M. Royal Academy of Music.
R. A. S. Royal Agricultural Society.
R. C. Roman Catholic.
R. D. Rural Dean.
R. E. Royal Engineers; Royal Exchange.
R. E. Reformed Episcopal.
Réaum. Réaumur. [See *R.*]
Rec. Recipe.
Recd. Received.
Recpt. Receipt.
Ref. Reference.
Ref. Ch. Reformed Church.
Ref. Pres. Reformed Presbyterian.
Reg. Regular.
Reg., Regr. Registrar.
Reg., Regt. Regiment, regimental.
Rel. Religion, religious.
Rel. Pron. Relative Pronoun.
Rem. Remark, remarks.
Rep. Report; Representative.
Rep., Repub. Republic; Republican.
Res. Resolution.
Retd. Returned.
Rev. Revelation; Revenues; Reverend; Review; Revise.
Revd. Reverend.
Revs. Reverends.
Rev. Stat. Revised statutes.
R. F. D. Rural free delivery.
Rhet. Rhetoric, rhetorical.
R. H. S. Royal Humane Society.
R. I. Rhode Island.
R. I. H. S. Rhode Island Historical Society.
R. I. P. (Lat. *requiescat in pace.*) May he (*or* she) rest in peace.
Riv. River.
R. M. Royal Mail; Royal Marines.
R. M. A. Royal Marine Artillery; Royal Military Asylum.
R. M. L. I. Royal Marine Light Infantry.
R. M. S. Royal Mail Steamer; Royal Mail Service.
R. N. Royal Navy.
R. N. R. Royal Naval Reserve.
R. O. Receiving Office.
Robt. Robert.
Rom. Roman, Romans.
Rom. Cath. Roman Catholic.
R. P. Regius Professor.
R. R. Railroad.
R. S. A. Royal Scottish Academy.
R. S. E. Royal Society of Edinburgh.
R. S. L. Royal Society of London.
R. S. P. C. A. Royal Society for the Prevention of Cruelty to Animals.
R. S. V. P. (Fr. *répondez s'il vous plaît.*) Answer, if you please; Please reply.
Rt Right.
Rt. Hon. Right Honorable.
Rt. Rev. Right Reverend.
R. T. S. Religious Tract Society.
Rt. Wpful. Right Worshipful.
Russ. Russia, Russian.
R. V. Revised Version.

.W. Right Worshipful; Right Worthy.
.W. D. G. M. Right Worshipful Deputy Grand Master.
.W.G.M. Right Worshipful Grand Master.
.W.G.R. Right Worthy Grand Representative.
.W.G.S. Right Worthy Grand Secretary.
.W.G.T. Right Worthy Grand Treasurer; Right Worthy Grand Templar.
.W.G.W. Right Worshipful Grand Warden.
.W.J.G.W. Right Worshipful Junior Grand Warden.
.W.S.G.W. Right Worshipful Senior Grand Warden.
y. Railway.
. Saint; Saturday; Section; Shilling; Sign; Signor; Solo; Soprano; South; Sun; Sunday; Sabbath. Second, seconds; See; Singular; Son; Succeeded.
. *A.* South Africa; South America.
. *A.* (Lat. *secundum artem.*) According to the rules of art.
ab. Sabbâth.
am., Saml. Samuel.
am., Samar. Samaritan.
ans., Sansc., Sansk. Sanscrit, Sanskrit.
. *A. S.* (Lat. *Societatis Antiquariorum Socius.*) Fellow of the Society of Antiquaries.
at. Saturday.
ax. Saxon, Saxony.
. *B.* South Britain (England and Wales). [N. B.]
. *C.* South Carolina.
. *C.* (Lat. *senatus consultum.*) A decree of the senate.
c. [Scil. Sculp.]
can. mag. (Lat. *scandalum magnatum.*) Defamatory expressions to the injury of persons of high rank or dignity.
. *caps., Sm. caps.* Small capitals (*in printing*).
c. B. (Lat. *Scientiæ Baccalaureus.*) Bachelor of Science.
c. D. (Lat. *Scientiæ Doctor.*) Doctor of Science.
ch. (Lat. *scholium*), A note.
ch., Schr. Schooner.
ci. Science.
ci. fa. Scire facias. (Lat.) A form of judicial writ.
cil. Sc. (Lat. *scilicet.*) Namely; to wit.
. *C. L.* Student in Civil Law.
clav. Sclavonic.
cot. Scotland, Scotch, Scottish.
cr. Scruple, scruples.
crip., Script. Scripture, scriptural.
culp., Sculpt., Sculpture.
culp. Sc. (Lat. *sculpsit.*) He (*or* she) engraved it.
. *D.* Senior Deacon.
. *D., S. Dak.* South Dakota.
. *D. U. K.* Society for the Diffusion of Useful Knowledge.
. *E.* Southeast.
ec. Second.
ec. Leg. Secretary of Legation.
ec., Sect. Section.
ec., Secy. Secretary.
en. Senate, senator.
en. Doc. Senate Document.
ep., Sept. September.
eq. (Lat. *sequentes, sequentia.*) The following or the next.
erg.-Maj. Sergeant-Major.
erg., Sergt. Sergeant.
erj., Serjt. Serjeant.
erv. Servian.
Sess. Session.
S.-G. Solicitor-General.
s. g. [sp. gr.]
Sh., S. Shilling; shillings.
Sing. Singular.
S. J. Society of Jesus.
S. J. C. Supreme Judicial Court.
Skr. Sanskrit.
Slav. Slavonic, Slavonian, Slavic.
Sld. Sailed.
S.-M. Sergeant-Major.
S. M. Lond. Soc. (Lat. *Societatis Medicæ Londiniensis Socius.*) Member of the London Medical Society.
S. N. (Lat. *secundum naturam*), According to nature, naturally.
Soc. Society.
S. of Sol. Song of Solomon.
Sol.-Gen. Solicitor-General.
Sp. Spain, Spanish; Spirit.
s. p. (Lat. *sine prole.*) Without issue.
S. P. C. A. Society for the Prevention of Cruelty to Animals.
S. P. C. C. Society for the Prevention of Cruelty to Children.
S. P. C. K. Society for the Promotion of Christian Knowledge.
Spec. Special, specially.
S. P. G. Society for the Propagation of the Gospel.
sp. gr., s. g. Specific gravity.
S. P. Q. R. (Lat. *Senatus Populusque Romanus.*) The Senate and People of Rome.
sq. Square; *sq. ft.* Square foot, feet; *sq. in.* Square inch, inches; *sq. m.* Square mile, miles; *sq. yd.* Square yard; *sq. rd.* Square rod.
Sr. Senior; sir.
S. R. I. (Lat. *Sacrum Romanum Imperium.*) The Holy Roman Empire.
S. R. S. (Lat. *Societatis Regiæ Socius.*) Fellow of the Royal Society.
SS. Saints.
SS. (Lat. *scilicet*), namely; (Lat. *semis*), half.
S. S. Sunday School.
S. S. C. Solicitor before the Supreme Court.
S. S. E. South-southeast.
S. S. W. South-southwest.
St. Saint; Stone; Strait; Street.
St. (Lat. *Stet.*) Let it stand (*in printing*).
S. T. Sons of Temperance.
Stat. Statute, statutes; Statuary.
S. T. D. (Lat. *Sacræ Theologiæ Doctor.*) Doctor of Divinity.
ster., stg. Sterling.
St. L. St. Louis.
S. T. P. (Lat. *Sacræ Theologiæ Professor.*) Professor of Theology.
Str. Steamer, steam vessel.
Subj. Subjunctive.
Subst. Substantive; Substitute.
Suff. Suffix.
Sun., Sund. Sunday.
Sup. Superior; Superlative; Supplement; Supine; Superfine.
Supt. Superintendent.
Surg. Surgeon, Surgery.
Sur.-Gen. Surgeon-General.
Surv. Surveying, Surveyor.
Surv.-Gen. Surveyor-General.
s. v. (Lat. *sub voce.*) Under the word *or* title.
S. W. Senior Warden; Southwest.
Sw. Sweden, Swedish.
Switz. Switzerland.
Syn. Synonym, synonymous.
Synop. Synopsis.
Syr. Syria, Syriac.
T. Tenor; Ton; Tun; Tuesday.
T. A. B. Total Abstinence Brotherhood.
Tan. Tangent.
Tart. Tartaric.
T. C. D. Trinity College, Dublin.
Tech. Technical, technically.
Tenn. Tennessee.
Ter. Territory.
Term. Termination.
Teut. Teutonic.
Tex. Texas.
Text. rec. (Lat. *textus receptus.*) The received text.
Th. Thomas; Thursday.
Theo. Theodore; Theodosia.
Theol. Theology, theological.
Theor. Theorem.
Thess. Thessalonians.
Tho., Thos. Thomas.
Thurs. Thursday.
Tier. Tierce.
Tim. Timothy.
Tit. Title; Titus.
T. O. Turn over.
Tob. Tobit.
Tom. Tome, volume.
Tonn. Tonnage.
Topog. Topography, topographical.
Tp. Township.
Tr. Translation, translator, translated; Transpose; Treasurer; Trustee.
Trans. Transaction; Translation, translator, translated.
Trav. Travels.
Treas. Treasurer.
Trig., Trigon. Trigonometry, trigonometrical.
Trin. Trinity.
T. T. L. To take leave. [P. P. C.]
Tu., Tues. Tuesday.
Turk. Turkey; Turkish.
Typ. Typographer.
Typog. Typography, typographical.
U. Utah.
U. C. (Lat. *Urbis Conditæ.*) From the building of the city—Rome. [A. U. C.]
U. J. D. [J. U. D.]
U. K. United Kingdom.
U. K. A. Ulster King-at-Arms; United Kingdom Alliance.
Ult. (Lat. *ultimo.*) Last; Of the last month.
um. Unmarried.
Unit. Unitarian.
Univ. University.
U. P. C. United Presbyterian Church.
U. S. United States.
U. S. (Lat. *ut supra.*) As above.
U. S. A. United States of America; United States Army.
U. S. L. United States Legation.
U. S. M. United States Mail; United States Marine.
U. S. M. A. United States Military Academy.
U. S. N. United States Navy.
U. S. N. A. United States Naval Academy.
U. S. S. United States Senate; United States Ship *or* Steamer.
U. S. S. Ct. United States Supreme Court.
Ut. Utah.
Ux. (Lat. *uxor.*) Wife.
V. Verb; Verse; Victoria; Violin.
V., vs., (Lat. *versus.*) Against.
V. (Lat. *Vide.*) See.
V.-A. Vicar Apostolic; Vice-Admiral.
Va. Virginia.
Val. Valve; Value.
Var. Variety.
Vat. Vatican.
v. aux. Verb auxiliary.
V. C. Vice-Chancellor; Victoria Cross.
v. def. Verb defective.
V. D. M. (Lat. *Verbi Dei Minister.*) Minister of the Word of God.
Ven. Venerable.
V.-G. Vicar-General.
v. g. (Lat. *verbi gratia.*) For example.
v. i. Verb intransitive.
Vice-Pres. Vice-President.
Vid. (Lat. *Vide.*) See.
v. imp. Verb impersonal.
v. irr. Verb irregular.
Vis., Visc. Viscount.
Viz. (Lat. *videlicet.*) Namely; to wit. [Oz.]
v. n. Verb neuter.
Voc. Vocative.
Vol. Volume.
Vols. Volumes.
V.-P. Vice-President.
v. r. Verb reflexive.
V. Rev. Very Reverend.
Vs. (Lat. *versus.*) Against.
V. S. Veterinary Surgeon.
v. t. Verb transitive.
Vt. Vermont.
Vul. Vulgate.
Vulg. Vulgar, vulgarly.
vv. ll. (Lat. *variæ lectiones.*) Various readings.
W. Wednesday; Week; Welsh; West, western.
Wall., Wallach. Wallachian.
Walt. Walter.
Wash. Washington.
w. c. Water closet.
W. C. A. Women's Christian Association.
W. C. T. U. Women's Christian Temperance Union.
Wed. Wednesday.
Wel. Welsh.
w. f. Wrong font (*in printing*).
Whf. Wharf.
W. I. West Indies, West India.
Wis., Wisc. Wisconsin.
Wk. Week.
W. Lon. West Longitude.
Wm. William.
W. M. Worshipful Master.
W. N. W. West-northwest.
Wp. Worship.
Wpfu. Worshipful.
W. S. Writer to the Signet.
W. S. W. West-southwest.
Wt. Weight.
W. Va. West Virginia.
Wyo. Wyoming.
X. Christ.
Xm., Xmas. Christmas.
Xn., Xtian. Christian.
Xnty., Xty. Christianity.
Xper., Xr. Christopher.
Xt. Christ.
Xtian. Christian.
Y., Yr. Year.
Yd. Yard.
Yds. Yards.
Ye. The; Thee. [or th.
Ym. Them. (Y for Anglo-Saxon letter
Y. M. C. A. Young Men's Christian Association.
Y. M. Cath. A. Young Men's Catholic Association.
Y. M. H. A. Young Men's Hebrew Association.
Y. P. S. C. E. Young People's Society of Christian Endeavor.
Yr. Their; Year; Younger, Your.
Yrs. Years; Yours.
Y. W. C. A. Young Women's Christian Association.
Zach. Zachary.
Zech. Zechariah.
Zeph. Zephaniah.
Z. G., Zoo. Zoölogical Gardens.
Zoöchem. Zoöchemistry, zoöchemical.
Zoögeog. Zoögeography, zoögeographical.
Zoöl. Zoölogy, zoölogical.

DICTIONARY OF FOREIGN WORDS AND PHRASES

I. FROM THE CLASSIC LANGUAGES

b extra, From without.
b incunabulis, From the cradle.
b initio, From the beginning.
b origine, From the origin *or* commencement.
b ovo, From the egg; from the very beginning.
b ovo usque ad mala (lit., "from the egg to the apples," a term borrowed from Roman banquets, which began with eggs and ended with fruit), From beginning to end; from first to last.
bsens hæres non erit (The absent one will not be the heir), Out of sight, out of mind.
bsit invidia, Let there be no ill-will; envy apart.
b uno disce omnes (From one example judge of the rest), From a single instance infer the whole.
b urbe condita, From the building of the city, *i. e.,* Rome. [A. U. C.]
capite ad calcem, From head to heel.
cruce salus, Salvation by or from the cross.
d arbitrium, At will; at pleasure.
d calendas græcas, At the Greek calends; *i. e.,* never. The Greeks had no calends.
d captandum vulgus, To attract or please the rabble.
a Deo et rege, From God and the king.
ad extremum, To the extreme; at last.
ad gustum, To one's taste.
ad hominem, Personal; to the individual.
a die, From that day.
ad internecionem, To extermination.
ad libitum, At pleasure.
ad modum, In the manner of.
ad multos annos, For many years.
ad nauseam, So as to disgust or nauseate.
ad patres, Gathered to his fathers; dead.
ad referendum, To be further considered.
ad rem, To the purpose; to the point.
adscriptus glebæ, Attached to the soil.
adsum, I am present; I am here.
ad summum, To the highest point or amount.
ad unguem, To a nicety; exactly.
ad unum omnes, All, to a man.
ad utrumque paratus, Prepared for either event (*or* case).
ad vivum, Like life; to the life.
ægrescit medendo, It becomes worse from the remedies employed.
æquabiliter et diligenter, Equably and diligently
æquo animo, With a calm mind.
ætatis suæ, Of his (*or* her) age.
a fortiori, For the stronger reason.
age quod agis, Do what you are doing; Attend to your business.
alere flammam, To feed the flame.
alma mater, Cherishing (*or* benign) mother.
alter ego, Another self.
alter idem, Another, exactly similar.
alter ipse amicus, A friend is another self.
alterum alterius auxilio eget, The one needs the assistance of the other.
alterum tantum, As much more.
amantium iræ amoris integratio, Lovers' quarrels are the renewing of love.
a maximis ad minima From the greatest to the least.
amicus humani generis A friend of the human race.
amicus usque ad aras, A friend even to the altar (of sacrifice); *i. e.,* to the last extremity.
amor patriæ, Love of country; patriotism.

anangka d' oude theoi machontai (Gr.), Not even the gods can fight against necessity.
andron epiphanon pasa ge taphos (Gr.), All the world is a burial place for illustrious men.
aner ho pheugon kai palin machesetai (Gr.), The man who flies shall fight again. (A line said to have been written by Demosthenes as an excuse for his running away and leaving his shield behind him at the battle of Cheronæa, 338 B. C.)
anguis in herba, A snake in the grass; a false friend; an unforeseen danger.
animo et fide, Courageously and faithfully.
anno ætatis suæ, In the year of his or her age.
anno Christi, In the year of Christ. [*A. C.*]
anno humanæ salutis, In the year of man's redemption. [*A. H. S.*]
anno salutis, In the year of redemption. [A. S.]
anno urbis conditæ, In the year from the time the city—*i. e.*, Rome—was built.
annus mirabilis, A year of wonders. (Often applied in English history to the year 1666, noteworthy for the war with the Dutch, the plague, and the great fire of London. See Dryden's poem *Annus Mirabilis.*)
ante bellum, Before the war.
ante lucem, Before daybreak.
ante meridiem, Before noon.
a posse ad esse, From possibility to reality.
a posteriori, From what follows.
a priori, From what goes before.
aptestos pithos (Gr.), A cask that will never fill; an endless job. The allusion is to the Danaïdes, who, for the murder of their husbands, were condemned to draw water in sieves.
arbiter elegantiarum, A judge or authority in matters of taste.
arcana cælestia, Celestial secrets.
arcana imperii, State secrets.
ardentia verba, Words that burn.
argumentum ad crumenam (an argument to the purse), An appeal to one's interests.
argumentum ad invidiam (an argument to envy), An appeal to low passions.
argumentum ad judicium, An argument appealing to the judgment.
argumentum baculinum, The argument of the cudgel; an appeal to force.
ariston men hudor (Gr.), Water is the chief of the elements—*i. e.*, as being the origin of all things. In the *Theogony* of Hesiod, Oceanus and Thetis are regarded as the parents of all the deities who presided over nature.
ars est celare artem, True art is to conceal art.
ars longa, vita brevis, Art is long, life is short.
artium magister, Master of arts.
asinus ad lyram (lit., an ass at the lyre), An awkward fellow.
at spes non fracta, But hope is not yet crushed.
audi alteram partem, Hear the other side.
aurea mediocritas, The golden mean.
aut Cæsar aut nullus, Either Cæsar or nobody; either in the first place or nowhere.
aut vincere aut mori, To conquer or die; death or victory.
auxilium ab alto, Help from on high.
a verbis ad verbera, From words to blows.
avito viret honore, He flourishes on the honors of his ancestors.
beatæ memoriæ, Of blessed memory.
bella! horrida bella, War! horrid war.
bella matribus detestata, War, so detested by mothers.
bellum internecinum, A war of extermination.
bene orasse est bene studuisse, To have studied well is to have prayed well.
bis dat qui cito dat, He gives twice who gives quickly or opportunely.
bis peccare in bello non licet, One must not blunder twice in war.
bis pueri senes, Old men are twice boys.
bona fide, In good faith.
bona fides, Good faith.
brevi manu (with a short hand), Offhand, extempore, summarily.
brevis esse laboro, obscurus fio, If I labor to be brief, I become obscure.
cadit quæstio, The question falls to the ground; there is no discussion.
cæca est invidia, Envy is blind.
cætera desunt, The rest is wanting.
cæteris paribus, Other things being equal.
candida Pax, White-robed Peace.
cantabit vacuus coram latrone viator, The penniless traveler will sing in the presence of the highwayman; a man who has nothing has nothing to lose.
cantate Domino, Sing unto the Lord. (The opening words of many Psalms. *Vulgate.*)
carpe diem, Usually explained, according to popular ideas of Epicurean philosophy, as—Enjoy the present day; but capable of higher interpretation—Seize the present opportunity; improve time.
casus belli, A cause justifying war; a ground of war.
causa sine qua non, An indispensable cause.
cedant arma togæ, Let arms yield to the gown; let violence give place to law.
chremat 'aner, Money makes the man.
circuitus verborum, A circumlocution.
circulus in probando, A circle in the proof; the fallacy of using the conclusion as one of the premises; a vicious circle.
clarior e tenebris, Brighter from obscurity.
clarum et venerabile nomen, An illustrious and venerable name.
cogito, ergo sum, I think, therefore I exist.
comitas inter gentes, Comity between nations.
commune bonum, A common good.
communibus annis, On the annual average; on year with another.
communi consensu, By common consent.
conditio sine qua non, An indispensable condition.
conjunctis viribus, With united powers.
consensus facit legem, Consent makes the law—*i. e.*, if two persons make an agreement in good faith and with full knowledge, the law will insist on its being carried out.
consilio et animis, By wisdom and courage.
consilio et prudentia, By wisdom and prudence.
constantia et virtute, By constancy and virtue.
consuetudo pro lege servatur, Custom is held as law. (The English common law is based on immemorial usage.)
contra bonos mores, Contrary to good morals.
copia verborum, A plentiful supply of words; flow of language.
coram nobis, In our presence.
coram non judice, Before a person who is not a judge; not before the proper tribunal.
crambe repetita, Cabbage warmed up the second time; hence used proverbially for any tedious repetition of a truism, an old story, etc.
credat Judæus Apella, Let the (superstitious) Jew Apella believe it; tell that to the marines.
crede quod habes, et habes, Believe that you have it, and you have it.
credo, quia absurdum, (Corrupted from a passage in Tertullian), I believe it, because it is absurd.
credula res amor est, Love is ready to believe.
crescit amor nummi, quantum ipsa pecunia crescit, The love of money grows as our wealth increases.
crescit eundo, It increases as it goes.
crescit sub pondere virtus, Virtue increases under every oppression.
creta an carbone notandum, To be marked with chalk or charcoal. (The Romans marked lucky days with white, and unlucky ones with black.)
crux, A cross, a difficulty, a stumbling-block, a puzzle—*e. g.*, *crux criticorum, crux mathematicorum, crux medicorum,* The puzzle of critics, mathematicians, physicians.
cucullus non facit monachum, The cowl does not make the monk; don't trust to appearances.
cui bono? (A maxim of Cassius, quoted by Cicero), For whose advantage? Generally used, however, as—What is the good of it?
cui Fortuna ipsa cedit, To whom Fortune herself yields.
cui pam pæna premit comes, Punishment follows hard on crime.
cum grano, cum grano salis, With a grain of salt; with some allowance or modification.
cum privilegio, With privilege.
cum tacent, clamant, Although they keep silence, they cry aloud; their silence is more expressive than words.
curiosa felicitas, Nice felicity of expression (applied by Petronius Arbiter, cxviii, 5, to the writings of Horace); happy knack.
currente calamo, With a running pen; offhand.
da locum melioribus, Give place to your betters.
damnant quod non intelligunt, They condemn what they do not understand.
dare pondus fumo, To give weight to smoke; to impart value to that which is worthless; to attach importance to trifles.
data et accepta, Expenses and receipts.
date obolum Belisario, Give an obolus to Belisarius. It is said that this general, when old and blind, was neglected by Justinian, and obliged to beg. Gibbon treats the story as a fable.
Davus sum, non Œdipus, I am Davus, not Œdipus. I am no conjurer; I am a bad hand at riddles.
deceptio visus, An optical illusion.
decori decus addit avito, He adds honor to the ancestral honors.
de die in diem, From day to day.
de gustibus non est disputandum, There is no disputing about tastes.
Dei gratia, By the grace of God.
de jure, By the law; by right.
de lana caprina, About goat's wool, hence about any worthless object.
delenda est Carthago, Carthage must be utterly destroyed. (A phrase with which Cato the Elder urged the Roman people to the destruction of Carthage, which he looked on as a dangerous rival to Rome.)
de minimis non curat lex, The law does not concern itself with trifles.
de mortuis nil nisi bonum, Let nothing be said of the dead but what is good.
de nihilo nihil, in nihilum nil posse reverti, From nothing nothing is made, and nothing that exists can be reduced to nothing. (The doctrine of the eternity of matter.)
de novo, Anew.
de omnibus rebus, et quibusdam aliis, About everything, and something more besides. Applied ironically to an immature literary production, in which very many subjects are treated.
Deo adjuvante, non timendum, With the help of God, there is nothing to be afraid of.
Deo duce, With God for a leader.
Deo favente, With the favor of God.
Deo gratias, Thanks be to God. [*D. G.*]
Deo juvante, With the help of God.
Deo monente, God giving warning.
Deo, non fortuna, From God, not from chance.
Deo volente, God willing.
de profundis, Out of the depths. (The first words of Ps. cxxix—*Vulg.*)
desinit in piscem mulier formosa superne, A woman, beautiful above, has a fish's tail. (A description of an incongruous style.)
dis krambe thanatos, Cabbage, twice over, is death; repetition is tedious.
dii majorum gentium, The gods of the superior houses; the twelve superior gods.
dii penates, Household gods.
disjecta membra, Scattered remains.
docendo discimus, We learn by teaching.
Dominus vobiscum, The Lord be with you. (The words in which the priest blesses the people in the Roman church.)
domus et placens uxor, Home and the good wife.
do ut des, I give that you may give; the principle of reciprocity.
dramatis personæ, The characters of the play.
dulce est desipere in loco, It is pleasant to play the fool at times.
dulce et decorum est pro patria mori, It is sweet and glorious to die for one's country.
dum spiro, spero, While I breathe, I hope.
dum vivimus, vivamus, Let us live while we live—*i. e.*, Let us enjoy life.
durante vita, During life.
ecce homo, Behold the man—indicative of the giving up of Christ to the people by Pilate.
e flamma cibum petere, To seek food from the flames; to pick the remnants of food from the funeral pyre; to be reduced to the last extremity.
ego et rex meus, My king and I. (An expression attributed to Cardinal Wolsey, and unjustly made the subject of a charge against him, as if he had written "I and my king.")
eheu! fugaces labuntur anni, Alas! our fleeting years pass away.
elapso tempore, The time having elapsed.
en nukti boule, In the night there is counsel; sleep on it.
en oino alethela, In wine there is truth.
eo animo, With that design.
eo nomine, By that name.
e pluribus unum, One out of, or composed of, many. (The motto of the United States of America.)
epulis accumbere divum, To sit down at the banquets of the gods.
e re nata, According to the exigency.
esse quam videri, To be, rather than to seem.
est modus in rebus, There is a middle course in all things.
esto perpetua, Let it endure forever.
esto quod esse videris, Be what you seem to be.
e tan, e epi tan, Either this, or upon this; either bring this back, or be brought home, dead, upon it. The words of a Spartan mother when she gave a shield to her son going on military service.
et cætera, And the rest.
et id genus omne, And everything of the sort.
et sequentes, et sequentia, And those that follow.
et sic de cæteris, And so of the rest.
et sic de similibus, And so of similar things.
et tu, Brute! And thou also, Brutus. (Usually given as the last words of Julius Cæsar, when he saw Brutus amongst his murderers.)
eventus stultorum magister, Fools must be taught by experience.
ex abundantia, Out of the abundance.
ex adverso, From the opposite side.
ex æquo et bono, According to what is right and good.
ex animo, Heartily, sincerely.
ex capite, From the head, from memory.
ex cathedra, From the chair or pulpit; spoken with authority; by virtue of office.
excelsior, Higher; more elevated.
exceptio probat regulam, The exception proves the rule; for if the case in point were not an exception, there would be no rule.
exceptis excipiendis, Due exceptions (*or* allowances) having been made.
ex concesso, From what has been conceded.
ex curia, Out of court.
ex delicto, From the crime.
exegi monumentum ære perennius, I have reared a monument more lasting than brass. (A prophetic estimate by Horace of the value of his poems.)
exempla sunt odiosa, Examples are offensive.
exempli gratia, By way of example. [*e. g.*]
exeunt, They go out.
exeunt omnes, All go out.
ex facto jus oritur, The law arises from the fact. Till the nature of the offense is known, the law cannot be set in motion.
exit, He (or she) goes out.
exitus acta probat, The result justifies the deed.
ex mera gratia, Through mere favor.
ex mero motu, Of his own free will.
ex necessitate rei, From the urgency of the case.
ex officio, By virtue of office.
ex parte, On one part or side.
ex pede Herculem, You may judge of Hercules by his foot; the whole by the part.
experientia docet stultos, Experience teaches even fools.
experimentum crucis, The experiment of the cross; a decisive experiment; a crucial test.
experto crede, Believe one who has tried it, or who speaks from experience; *experto crede Roberto,*

Believe Robert, who has tried it, or who speaks from experience.
expertus metuit, Having had experience of it, he dreads it; a burnt child dreads the fire.
ex post facto, After the deed is done; retrospective.
expressis verbis, In express terms.
ex quocunque capite, For whatever reason.
ex tacito, Tacitly.
ex tempore, Offhand; without preparation.
extinctus amabitur idem, This same man will be loved after his death.
extra muros, Outside the walls.
ex ungue leonem, You may tell the lion by his claws.
faber quisque fortunæ suæ, Every man is the architect of his own fortune; hence, *faber fortunæ suæ*, a self-made man.
facile est inventis addere, It is easy to improve what has been already invented.
facile princeps, The acknowledged chief; one who stands undoubtedly first.
facilis est descensus averni, The descent to hell is easy; it is easy enough to get into trouble.
facsimile, An exact imitation.
fæces populi, fæx populi, The scum of the population.
fama clamosa, A current scandal.
fama nihil est celerius, Nothing travels more swiftly than scandal.
fama semper vivat, May his fame last forever.
fas est et ab hoste doceri, It is right to be taught even by an enemy; you may get a hint from the other side.
fata obstant, The fates oppose.
fata viam invenient, The fates will find a way.
fax mentis incendium gloriæ. The passion for glory is the torch of the mind.
felicitas multos habet amicos, Prosperity has many friends.
felo de se, One who commits self-felony; a suicide.
feræ naturæ, Of a wild nature; applied to wild beasts.
festina lente, Make haste slowly; don't be impetuous.
fiat experimentum in corpore vili, Let the experiment be made on a body of no value.
fiat justitia ruat cælum, Let justice be done though the heavens should fall.
fiat lux, Let there be light.
fide et amore, By faith and love.
fide et fiducia, By fidelity and confidence.
fide et fortitudine, By fidelity and fortitude.
fidei coticula crux, The cross is the touchstone of faith.
fidei defensor, Defender of the faith.
fide, non armis, By faith, not by force of arms.
fide, sed cui vide, Trust, but see whom you are trusting.
fides et justitia, Fidelity and justice.
fides Punica, Punic faith; treachery. (Among the Romans the bad faith of the Carthaginians was notorious.)
fidus Achates, Faithful Achates, the companion of Æneas; a true friend.
fidus et audax, Faithful and bold.
fieri facias, A legal paper authorizing execution on the goods of a debtor.
filius nullius, A son of nobody; an illegitimate son, because he has no legal rights as a son in respect to the inheritance of property.
filius terræ, A son of the earth; one of low origin.
finis coronat opus, The end crowns the work.
flagrante bello, While the war was raging; during hostilities.
flagrante delicto, In the commission of the crime; in the very act.
flamma fumo est proxima, Flame is akin to fire; where there's smoke there's fire.
flecti, non frangi, To be bent, not broken.
flosculi sententiarum, Flowers of fine thoughts.
fœnum habet in cornu, He has hay on his horn (the mark put on a bull to show he was savage); beware of him.
fons et origo malorum, The source and origin of our miseries.
forensis strepitus, The clamor of the forum; "Brawling courts, and dusty purlieus of the law."
forte scutum salus ducum, A strong shield is the safety of leaders.
fortes fortuna juvat, Fortune favors the brave.
forti et fideli nihil difficile, Nothing is difficult to the brave and faithful.
fortiter et recte, With fortitude and rectitude.
fortiter, fideliter, feliciter, Boldly, faithfully, successfully.
fortiter in re, With firmness in action.
fortuna favet fatuis, Fortune favors fools.
fortunæ filius, A spoiled child of fortune.
frangas, non flectes, You may break me, but you shall not bend me.
fraus pia, A pious fraud.
fronti nulla fides, There is no trusting the features; don't trust to appearances.
fruges consumere nati, Born to consume the fruits of the earth; born only to eat.
fugit irreparabile tempus, Irrecoverable time glides away.
fuimus Troes, We once were Trojans; we have seen better days.
fuit Ilium, There once was a Troy; Troy was, but is no more; the place is gone.
fumum et opes, strepitumque Romæ, The smoke, the show, the rattle of the town (Rome).
functus officio, Having discharged his duties; hence, out of office.
furor arma ministrat, Rage provides arms; one uses any weapon in a rage.
furor loquendi, A rage for speaking.
furor poeticus, Poetical fire.
furor scribendi, A rage for writing.
gallice, In French.
gaudeamus igitur, Therefore, let us rejoice. (The burden of a Macaronic song.)
gaudet tentamine virtus, Virtue rejoices in temptation.
genius loci, The genius or presiding spirit of the place.
gens togata, Applied first to Roman citizens, as wearing the toga, the garment of peace; hence, civilians generally.
glaukas eis Athenas, Owls to Athens. The owl was sacred to Minerva, the guardian divinity of Athens; hence, owls were abundant, so the proverb—to carry coals to Newcastle.
glossa diple, A double tongue.
gloria in excelsis Deo, Glory to God in the highest.
gloria Patri, Glory be to the Father.
gnothi seauton, Know thyself. A precept inscribed in gold letters over the portico of the temple at Delphi. Its authorship has been ascribed to Pythagorus, to several of the wise men of Greece, and to Phemonoë a mythical Greek poetess. According to Juvenal, this precept descended from heaven.
gradu diverso, via una, The same road by different steps.
gradus ad Parnassum, A step to Parnassus; aid in writing Latin poetry; a work on Latin verse-making containing rules and examples.
gratia placendi, For the sake of pleasing.
gratis dictum, Mere assertion.
graviora manent, Greater afflictions are in store; the worst is yet to come.
graviora quædam sunt remedia periculis, Some remedies are worse than the disease.
grex venalium, A venal throng.
gutta cavat lapidem, non vi, sed sæpe cadendo, The drop hollows out the stone by frequent dropping, not by force; constant persistence gains the end.
haud longis intervallis, At frequent intervals.
he gloss' omomoch', he de phren anomotos, My tongue has sworn, but my mind is unsworn; I have said it, but don't mean to do it.
helluo librorum, A devourer of books; a bookworm.
heu pietas! heu prisca fides, Alas! for piety! Alas! for our ancient faith.
hiatus valde deflendus, A gap or deficiency greatly to be deplored; words employed to mark a blank in a work but often used of persons whose performances fall short of their promises.
hic et ubique, Here and everywhere.
hic jacet, Here lies; *sepultus* buried.
hic labor, hoc opus est, Here is labor, here is toil.
hic sepultus, Here [lies] buried.
hinc illæ lacrimæ, Hence these tears; this is the cause of the trouble.
hodie mihi, cras tibi, It is my lot to-day, yours to-morrow. (A line often found in old epitaphs.)
hoi polloi, The many, the common people.
homo factus ad unguem, Usually quoted thus, though the proper form is *ad unguer factus homo*, A highly polished, accomplished man. (The expression is borrowed from the practice of sculptors, who, in modeling, give the finishing touch with the nail; or from joiners, who test the accuracy of joints in wood by the nail.)
homo multarum literarum, A man of many letters; a man of extensive learning.
homo solus aut deus aut dæmon, A man to live alone must be either a god or devil.
homo sum; humani nihil a me alienum puto, I am a man; and I consider nothing that concerns mankind a matter of indifference to me.
hon hoi theoi philousin apothneskei neos, A fragment from Menander; He whom the gods love dies young.
honores mutant mores, Honors change manners.
honos habet onus, Honor is burdened with responsibility.
horæ canonicæ, Canonical hours; prescribed times for prayers.
horresco referens, I shudder as I tell the story.
hortus siccus, A dry garden; a collection of dried plants; an herbarium.
hos ego versiculos feci, tulit alter honores (Vergil, on the occasion when some verses he had written on the shows at Rome were unjustly claimed by Bathyllus, who was rewarded for them), I wrote these lines, another has borne away the honor.
humanum est errare, To err is human.
hunc tu caveto, Beware of him.
id genus omne, All that class. (A contemptuous expression for the dregs of the population.)
ignorantia non excusat legem, Ignorance is no plea against the law.
ignoratio elenchi, Ignorance of the point in dispute; the logical fallacy of arguing to the wrong point.
ignoti nulla cupido, There is no desire for that which is unknown; our wants are increased by knowledge.
ignotum per ignotius, (To explain) a thing not understood by one still less understood.
Ilias malorum, An Iliad of woes; a host of evils. (From the fact that the siege of Troy lasted ten years.)
imitatores, servum pecus, Ye imitators; a servile herd.
immedicabile vulnus, An incurable wound; an irreparable injury.
imo pectore, From the bottom of one's heart.
impari marte, With unequal military strength.
impedimenta, Luggage; the baggage of an army.
imperium in imperio, A government existing within another. (Said of a power set up against constituted authority.)
implicite, By implication.
impos animi, Of weak mind.
in actu, In the very act; in reality.
in æternum, For ever.
in articulo mortis, At the point of death.
in camera, In the judge's chamber; in secret.
in capite, In chief.
in cælo quies, There is rest in heaven.
incredulus odi, Being incredulous, I cannot endure it.
in curia, In court.
inde iræ, Hence this resentment.
in dubio, In doubt.
in equilibrio, In equilibrium.
in esse, In being.
in extenso, At length.
in extremis, In very bad circumstances; at the point of death.
infandum, regina, jubes renovare dolorem, You command me, O Queen, to revive unspeakable grief.
in flagrante delicto, In the commission of the act.
in forma pauperis, As a poor man.
infra dignitatem, [*infra dig.*] Beneath one's dignity.
in futuro, In future, henceforth.
in hoc signo vinces, In this sign thou shalt conquer. (The motto is said to have been adopted by Constantine after his vision of a cross in the heavens just before his decisive battle with Maxentius, A. D. 312.)
in limine, On the threshold; preliminarily.
in loco, In the place; upon the spot; in the place of.
in loco parentis, In the place of a parent.
in medias res, In the very midst of the business.
in memoriam, In memory of.
in nomine, In the name of.
in nubibus, In the clouds; hence, undefined, uncertain, vague.
in nuce, In a nutshell.
in omnia paratus, Prepared for all things.
inopem copia fecit, Abundance has made him poor.
in pace, In peace.
in perpetuam rei memoriam, In everlasting remembrance of the event.
in perpetuum, For ever.
in pleno, In full.
in posse, In possible existence.
in propria persona, In one's own person.
in puris naturalibus, In a state of nature; stark naked.
in re, In the matter of.
in rerum natura, In the nature of things.
in sæcula sæculorum, For ages on ages.
inscitia est adversum stimulum calces, It is mere folly to kick against the spur.
in situ, In its proper position.
in statu quo, In its former state.
in suspenso, In suspense.
in te, Domine, speravi (Ps. xxxi, *Vulg.*), In thee, O Lord, have I put my trust.
inter alia, Among other things.
inter arma leges silent, In the time of war the laws are silent.
inter canem et lupum, Between the dog and the wolf; twilight.
interdum vulgus rectum videt, Sometimes the rabble see what is right.
inter nos, Between ourselves.
inter pocula, At one's cups.
in terrorem, In terror; as a warning.
inter se, Amongst themselves.
inter spem et metum, Between hope and fear.
in totidem verbis, In so many words.
in toto, In the whole; entirely.
intra muros, Within the walls.
in transitu, On the passage.
intra parietes, Within the walls; private.
in usum Delphini, For the use of the Dauphin.
in utroque fidelis, Faithful in both.
in vacuo, In a vacuum.
in verba magistri jurare, To swear to a master's words; to accept opinions upon authority.
inverso ordine, In an inverse order.
in vino veritas, In wine there is truth. When a person is under the influence of wine he shows himself in his true colors.
invita Minerva, Minerva (goddess of wisdom) being unwilling; hence, without genius.
ipse dixit, He himself has said it; a mere assertion.
ipsissima verba, The identical words.
ipso facto, By the fact itself.
ipso jure, By the law itself.
ira furor brevis est, Anger is a brief madness.
ita est, It is so.
ita lex scripta est, Such is the written law.
italice, In Italian characters.
jacta alea est, (The exclamation of Julius Cæsar when he passed the Rubicon.) The die is cast.
jam redit et Virgo, redeunt Saturnia regna, Now the Virgin and the Saturnian age return. (Of the reign of Astræa, the goddess of justice, in the golden age.)

januis clausis, With closed doors; in secret.
joci causa, For the sake of a joke.
jubilate Deo (Ps. c. 1), O be joyful in the Lord.
jucundi acti labores, The remembrances of past labor is sweet.
judicium Dei, The judgment of God.
judicium parium aut leges terræ (Magna Charta), The judgment of our peers or the laws of the land.
jure divino, By divine law.
jure humano, By human law.
juris peritus, One learned in the law.
juris utriusque doctor, Doctor of both laws—*i. e.*, of canon and civil laws.
jus canonicum, Canon law.
jus civile, The civil law.
jus divinum, The divine law.
jus et norma loquendi, The law and rule of speech.
jus gentium, The law of nations.
jus gladii, The right of the sword.
jus possessionis, The right of possession.
jus proprietatis, The right of property.
jus summum sæpe summa malitia est, Extreme law is often extreme wrong.
kairon gnothi, Know your opportunity. A saying of Pittacus, one of the wise men of Greece.
kat' exochen, Preëminently.
labitur et labetur in omne volubilis ævum, It glides on, and will glide on forever.
laborare est orare, Work is prayer.
labor ipse voluptas, Labor itself is a pleasure.
labor omnia vincit, Labor overcomes all difficulties.
laborum dulce lenimen, The sweet solace of our labors.
lapis philosophorum, The philosopher's stone.
lapsus calami, A slip of the pen.
lapsus linguæ, A slip of the tongue.
lapsus memoriæ, A slip of the memory.
lares et penates, Household gods.
lateat scintillula forsan, Perchance some small spark may lie concealed. (The motto of the Royal Humane Society.)
latine dictum, Spoken in Latin.
laudari a viro laudato, To be praised by a man who deserves praise—*i. e.*, by an eminent man.
laudationes eorum qui sunt ab Homero laudati, Praises from those who were themselves praised by Homer.
laudator temporis acti, One who praises the good old days.
laudum immensa cupido, An insatiable desire for praise.
laus Deo, Praise to God.
lector benevole, Kind, or gentle, reader.
legatus a latere (A legate from the side [of the pope]), A papal legate.
lex loci, The law of the place.
lex non scripta, The unwritten law; the common law.
lex scripta, The written or statute law.
lex talionis, The law of retaliation.
lex terræ, The law of the land.
licentia vatum, The license allowed to poets.
limæ labor et mora, The labor and delay of the file; the slow and laborious polish of a literary work.
lis litem generat, Strife begets strife.
litem lite resolvere, To settle strife by strife; to end one controversy by another.
lite pendente, During the trial.
litera scripta manet, The written character remains.
loci communes, Common places.
loco citato, In the place quoted.
locus classicus, A classical passage; the acknowledged place of reference.
locus criminis, The scene of the crime.
locus in quo, The place in which.
longo intervallo, By or with a long interval.
lucidus ordo, A perspicuous arrangement.
lucri causa, For the sake of gain.
lupum auribus teneo, I hold a wolf by the ears; I have caught a Tartar.
lupus est homo homini, Man is a wolf to his fellow-man; one man preys on another.
lupus in fabula, The wolf in the fable; talk of the devil and he will appear.
lusus naturæ, A freak of nature; a deformed animal or plant.
magister ceremoniarum, A master of the ceremonies.
magna civitas, magna solitudo, A great city is a great solitude.
magnæ spes altera Romæ, A second hope of mighty Rome; used of any young man of promise.
magna est veritas et prævalebit, Truth is mighty, and will prevail.
magna est vis consuetudinis, Great is the power of habit.
magnas inter opes inops, Poor in the midst of great wealth.
magnum bonum, A great good.
magnum opus, A great undertaking; the great work of a man's life.
magnum vectigal est parsimonia, Thrift is itself a good income.
mala fide, With bad faith; treacherously.
mali exempli, Of a bad example.
mali principii malus finis, The bad end of a bad beginning.
malis avibus, With unlucky birds—*i. e.*, with bad omens.
malo modo, In an evil manner.
malus pudor, False shame.
manibus pedibusque, With hands and feet; tooth and nail.
manu forti, With a strong hand.
manu propria, With one's own hand.
mare clausum, A closed sea, a bay.
mars gravior sub pace latet, A more serious warfare is concealed by seeming peace.
materiem superabat opus, The workmanship was more valuable than the raw material.
mediocria firma, Moderate things are surest.
medio tutissimus ibis, You will travel safest in a middle course.
mega biblion mega kakon (Adapted from a maxim of Callimachus), A big book is a big nuisance.
megale polis megale eremia, A great city is a great solitude.
meden agan, Not too much of anything.
me judice, I being the judge; in my opinion.
memor et fidelis, Mindful and faithful.
memoria in æterna, In eternal remembrance.
mens agitat molem, A mind informs the mass. Used by Vergil in a pantheistic sense of the word; often applied to an unwieldy, dull-looking person.
mens sana in corpore sano, A sound mind in a healthy body.
mens sibi conscia recti, A mind conscious of its own rectitude.
meo periculo, At my own risk.
meo voto, At my own wish.
metron ariston, Moderation is best. (A favorite saying of the philosopher Cleobulus.)
mia chelidon ear ou poiei, One swallow does not make a spring.
mihi cura futuri, My care is for the future.
mirabile dictu, Wonderful to relate.
mirabile visu, Wonderful to see.
modo et forma, In manner and form.
modus operandi, The manner of working.
mollia tempora fandi, The favorable moment for speaking.
more majorum, After the manner of our ancestors.
more suo, In his usual manner.
mors janua vitæ, Death is the gate of [everlasting] life.
mors omnibus communis, Death is common to all men.
mos pro lege, Usage has the force of law.
motu proprio, Of his own accord.
multum in parvo, Much in little.
munus Apolline dignum, A gift worthy the acceptance of Apollo.
mutatis mutandis, The necessary changes being made.
mutato nomine, de te fabula narratur, With a mere change of name the story is applicable to you.
nascimur poetæ, fimus oratores, We are born poets, we become orators by training.
natale solum, The land of one's birth.
naturam expellas furca, tamen usque recurret, Though you may drive out nature with a pitchfork, she will always come back; inborn character is ineradicable.
ne cede malis, sed contra audentior ito, Do not yield to misfortunes; on the contrary, go more boldly to meet them.
necessitas non habet legem, Necessity knows no law.
nec mora, nec requies, Neither delay, nor rest; without intermission.
nec pluribus impar, No unequal match for many. The motto assumed by Louis XIV. when he planned the subjugation of Europe.
nec prece, nec pretio, Neither by entreaty nor bribery; neither by paying nor praying.
nec scire fas est omnia, We are not allowed to know all things.
nec temere, nec timide, Neither rashly nor timidly.
nefasti dies, Days on which judgment could not be pronounced nor public assemblies be held; hence, unlucky days.
ne fronti crede, Don't trust to appearances.
nemine contradicente, No one contradicting.
nemine dissentiente, No one dissenting.
nemo fuit repente turpissimus, No man becomes a villain all at once.
nemo me impune lacessit, No one provokes me with impunity. The motto of the Order of the Thistle.
nemo mortalium omnibus horis sapit, No man is wise at all times; the wisest may make mistakes.
nemo solus satis sapit, No man is sufficiently wise of himself.
ne (non) plus ultra, Nothing further; the uttermost point; perfection.
ne puero gladium, Do not intrust a sword to a boy.
ne quid detrimenti respublica capiat, Lest the state suffer any injury. The injunction given to the dictator when invested with supreme authority.
nervi belli pecunia, Money is the sinews of war.
ne sutor ultra crepidam, The shoemaker should not go beyond his last. (A Latin version of a rebuke said to have been addressed by Apelles to a shoemaker who pointed out some errors in the painting of a slipper in one of the artist's works, and then began to criticise other parts of the picture.)
ne tentes, aut perfice, Do not attempt, or carry it out thoroughly.
nihil tetigit quod non ornavit, He touched nothing without embellishing it.
nil admirari, To be astonished at nothing.
nil conscire sibi, nulla pallescere culpa, To be conscious of no fault, to turn pale at no accusation.
nil desperandum, There is no cause for despair; never despair.
nil nisi cruce, Nothing but by the cross; no reward without suffering.
nimium ne crede colori, Do not trust too much to your good looks.
nisi Dominus, frustra (Ps. cxxvii, 1, *Vulg.*), Unless the Lord is with us, our labor is vain.
nitor in adversum, I strive against opposition.
nobilitas sola est atque unica virtus, Virtue is the true and only nobility.
nolens volens, Whether willing or not.
noli me tangere, Touch me not.
non cuivis homini contingit adire Corinthum, It is not every man's lot to go to Corinth (the headquarters of luxury and refinement); hence—it is not every man's good fortune to be able to see great cities.
non deficiente crumena, While the money lasts.
non est inventus, He is not found.
non ignara mali, miseris succurrere disco, Not unacquainted with misfortune, I learn to succor the wretched.
non libet, It does not please me.
non multa, sed multum, Not many things, but much.
non nobis solum nati sumus, We are not born for ourselves alone.
non omne licitum honestum, Every lawful act is not necessarily honorable.
non omnia possumus omnes, We cannot, all of us, do everything.
non passibus æquis, Not with equal steps. (Sometimes applied to a person who has been outstripped by another in the race for fame, wealth, etc.)
non quis, sed quid, Not who, but what; measures, not men.
non sequitur, It does not follow; an unwarranted conclusion.
non sibi, sed patriæ, Not for himself, but for his native land.
non sum qualis eram, I am not what I once was.
nosce te ipsum, Know thyself.
noscitur e socii, A man is known by the company he keeps.
nota bene [*N. B.*], Mark well.
novus homo (lit., a new man), A mushroom, an upstart.
nudis verbis, In plain words.
nulla dies sine linea, No day without a line—*i. e.*, without something done.
nulli secundus, Second to none.
nunc aut nunquam, Now or never.
nunquam minus solus quam cum solus, Never less alone than when alone.
obiit, He (or she) died.
obiter dictum, A thing said incidentally; an unofficial expression of opinion.
obscurum per obscurius, Explaining an obscurity by something still more obscure.
oderint dum metuant, Let them hate so long as they fear. (A favorite saying of Caligula.)
odi profanum vulgus, et arceo, I hate the vulgar rabble, and drive them away.
odium theologicum, The hatred of theologians.
officina gentium, The workshop of the world.
o fortunatos nimium, sua si bona norint, O more than happy, if they only knew their advantages.
ohe! iam satis, Oh! there is now enough.
omne ignotum pro magnifico, Everything unknown is taken for magnificent.
omnem movere lapidem, To turn every stone; to make every exertion.
omne simile est dissimile, Every like is unlike; if there were not unlikeness there would be identity.
omne solum forti patria est, Every land is a brave man's home.
omne tulit punctum qui miscuit utile dulci, He has gained every point who has mixed the useful and the agreeable.
omnia ad Dei gloriam (1 Cor. x. 31. *Vulg.*), All things for the glory of God.
omnia mors æquat, Death levels all distinctions.
omnia mutantur, nos et mutamur in illis, All things are subject to change and we change with them.
omnia vincit amor, nos et cedamus amori, Love conquers all things, let us too yield to love.
omnia vincit labor, Labor conquers all things.
omnis amans amens, Every lover is demented.
operæ pretium est, It is worth while.
ora et labora, Pray and work.
ora pro nobis, Pray for us.
orate pro anima, Pray for the soul (of).
orator fit, poeta nascitur, The orator is made; the poet is born.
ore rotundo, With loud resounding voice.
o tempora, o mores, Alas for the times and the manners.
otiosa sedulitas, Laborious trifling.
otium cum dignitate, Ease with dignity.
otium sine dignitate, Ease without dignity.
pace, By leave of; with the consent of.
pace tua, By your leave.
pacta conventa, The conditions agreed on.
pallida mors æquo pulsat pede pauperum tabernas regumque turres, Pale Death, with impartial foot, knocks at the cottages of the poor and the palaces of kings.
palmam qui meruit ferat, Let him bear the palm who has deserved it.

par negotiis neque supra, Equal to, but not above his business.
par nobile fratrum, A noble pair of brothers; a well-matched pair.
pars pro toto, The part for the whole.
particeps criminis, A partaker in the crime; an accessory.
parturiunt montes, nascetur ridiculus mus, The mountains are in labor; a ridiculous mouse will be born.
parva componere magnis, To compare small things with great ones.
pater familias, The father of the family.
pater noster, Our father.
pater patriæ, The father of his country. A title bestowed by the Roman Senate on Cæsar Octavianus Augustus.
pathemata mathemata, One learns by suffering.
patres conscripti, The Conscript Fathers; the Roman Senate. (Often jocularly applied to the members of a town council.)
patris gar esti pas' hin an pratte tis en, Every land where a man is successful is his native land.
pax orbis terrarum, The sovereignty of the world. (A legend of frequent occurrence on Roman coins).
pax Romana, The Roman empire.
pax vobiscum, Peace be with you.
peithein dora kai theous logos, Gifts persuade even the gods, as the proverb says.
per, By, through, by means of.
per ambages, By circuitous ways; with circumlocution.
per angusta ad augusta, Through trial to triumph.
per aspera ad astra, Through rough ways to the stars; through suffering to renown.
per fas et nefas, Through right and wrong.
perfervidum ingenium Scotorum, The intensely earnest character of the Scotch.
per gradus, Gradually.
periculum in mora, There is danger in delay.
per interim, In the meantime.
per mare, per terras, By sea and land.
per saltum, By a leap; by fits and starts.
per se, In itself; for its own sake.
petitio principii, A begging of the question.
placet, It seems right, it is approved of. The formula by which the members of an Œcumenical Council or a University senate record affirmative votes. The negative formula is *non placet.*
poeta nascitur, non fit, The poet is born, not made.
pondere, non numero, By weight, not by number.
pons asinorum, The bridge of asses.
populus vult decipi, decipiatur, The people wish to be deceived; let them be deceived.
post bellum auxilium, Aid after the war.
post equitem sedet atra cura, Black care sits behind the rich man on horseback; riches and high position bring cares.
præmonitus, præmunitus, Forewarned, forearmed.
prima facie, At the first glance.
principia, non homines, Principles, not men.
principiis obsta, Resist the first advances.
prior tempore, prior jure, First in point of time, first by right; first come first served.
pro aris et focis, For our altars and hearths; for our homes.
probatum est, It is proved.
probitas laudatur et alget, Honesty is praised, and left to starve.
pro bono publico, For the public good.
pro Deo et ecclesia, For God and the church.
pro forma, As a matter of form.
proh pudor, For shame.
pro memoria, As a memorial.
pro rege, lege, grege, For the king, the law, and the people.
pugnis et calcibus, With fists and heels; with might and main.
punica fides, Punic faith; treachery.
quæ fuerunt vitia mores sunt, What were once vices are now in fashion.
quæ nocent, docent, Things which injure, instruct; we are taught by painful experience; what pains us, trains us.
qualis ab incepto processerit et sibi constet, As he begins, let him go on, and be consistent with himself.
qualis rex, talis grex, Like king, like people.
qualis vita, finis ita, As life is, so will its end be.
quamdiu se bene gesserit, As long as he behaves himself; during good behavior.
quandoque bonus dormitat Homerus, Even good Homer nods sometimes; the wisest make mistakes.
quanti est sapere, How valuable is wisdom.
quantum libet, As much as you like.
quantum meruit, As much as he deserved.
quantum mutatus ab illo, How changed from what he was.
quem di diligunt adolescens moritur, He whom the gods love dies young.
quid faciendum? What is to be done?
quid nunc? What now? what news?
quid pro quo, One thing for another; an equivalent.
quid rides? Why do you laugh?
qui nimium probat, nihil probat, He who proves too much, proves nothing.
qui non proficit, deficit, He who does not advance, loses ground.
quis custodiet ipsos custodes? Who shall keep the keepers?
qui tacet consentire videtur, He who keeps silent is assumed to consent; silence gives consent.
qui timide rogat docet negare, He who asks timidly courts denial.
quoad hoc, To this extent.
quo animo? With what intention?
quocunque jaceris stabit, Wherever you throw it, it will stand. (The motto of the Isle of Man.)
quocunque modo, In whatever manner.
quocunque nomine, Under whatever name.
quod avertat Deus! God forbid!
quod bene notandum, Which is to be especially noted.
quod erat demonstrandum, Which was to be proved. [*Q. E. D.*]
quod erat faciendum, Which was to be done. [*Q. E. F.*]
quod hoc sibi vult? What does this mean?
quod non opus est, asse carum est (a saying of Cato, quoted by Seneca), What is not necessary is dear at a penny.
quod vide [q. v.], Which see.
quo fata vocant, Whither the fates call.
quo fas et gloria ducunt, Where duty and glory lead.
quorum pars magna fui, Of whom I was an important part.
quos Deus vult perdere, prius dementat (probably altered from a passage in *Euripides*), Those whom God wills to destroy he first deprives of their senses.
quot homines, tot sententiæ, Many men, many minds.
rara avis in terris, nigroque simillima cygno, An extremely rare bird, and very like a black swan (supposed not to exist). The first four words are often used ironically.
ratione soli, According to the soil.
recte et suaviter, Justly and mildly.
rectus in curia, Upright in court, with clean hands.
redolet lucerna, It smells of the lamp. (Said of any labored literary production.)
re infecta, The business being unfinished.
relata refero, I tell the tale as I heard it.
religio loci, The spirit of the place.
remacu tetigisti, You have touched the matter with a needle; you have described it accurately.
remis velisque, With oars and sails; with all one's might.
requiescat in pace, May he rest in peace.
res angusta domi, Narrowed circumstances at home; limited means.
res est sacra miser, A man in distress is a sacred object.
res gestæ, Things done, exploits.
res judicata, A matter decided; a case already settled.
respice finem, Look to the end.
resurgam, I shall rise again.
ridere in stomacho, To laugh inwardly; to laugh in one's sleeve.
ride si sapis, Laugh if you are wise.
rixatur de lana sæpe caprina, He often quarrels about goat's wool—*i. e.,* trifles.
ruat cælum, Let the heavens fall.
rudis indigestaque moles, A rude and undigested mass.
rus in urbe, A residence in or near town, with many of the advantages of the country.
rusticus expectat dum defluat amnis, at ille labitur, et labetur in omne volubilis ævum, The peasant waits till the river shall cease to flow, but it glides on, and will glide on forever.
sal atticum, Attic salt—*i. e.,* wit.
salvo jure, Without prejudice.
salvo pudore, Without offense to modesty.
sapere aude, Dare to be wise.
sat cito, si sat bene, Quickly enough if well enough.
satis eloquentiæ, sapientiæ parum, Eloquence enough, but too little wisdom.
satis superque, Enough, and more than enough.
sat pulchra, si sat bona, Fair enough if good enough; handsome is that handsome does.
secundum artem, According to the rules of art.
semel abbas, semper abbas, Once an abbot, always an abbot.
semel insanivimus omnes, We have all been mad at some time.
semper avarus eget, The avaricious man is always in want.
semper fidelis, Always faithful.
semper idem, Always the same.
semper paratus, Always prepared.
semper timidum scelus, Crime is always fearful.
sequiturque patrem, non passibus æquis, He follows his father, but not with equal steps.
sero venientibus ossa, The bones for those who come late; those who come late get the leavings.
serus in cælum redeas, May it be long before you return to heaven; long life to you.
servare modum, To keep within bounds.
servus servorum Dei, The servant of the servants of God. (One of the titles of the pope.)
sic eunt fata hominum, Thus go the destinies of men.
sic itur ad astra, Thus do we reach the stars.
sic passim, So in various places.
sic semper tyrannis, Ever thus to tyrants.
sic transit gloria mundi, So the glory of this world passes away. (The first words of a sequence said to have been used at the installations of the popes.)
sicut ante, As before.
sicut patribus, sit Deus nobis, May God be with us, as he was with our fathers.
sic volo, sic jubeo, stat pro ratione voluntas, Thus I will, thus I command, my pleasure stands for a reason.
sic vos non vobis, Thus do ye, but not for yourselves. The commencement of each of four verses which Virgil wrote, but left incomplete, on the occasion when Bathyllus claimed some lines really written by the poet, who alone was able to complete the verses, and thus prove their authorship. Used of persons by whose labors others have unduly profited.
si Deus nobiscum, quis contra nos? If God be with us, who shall be against us?
sile et philosophus esto, Hold your tongue, and you will pass for a philosopher.
simile gaudet simili, Like shows like.
similia similibus curantur, Like things are cured by like. (The principle of homeopathy.)
si monumentum requiris, circumspice, If you seek my monument, look around. (The epitaph of Sir Christopher Wren in St. Paul's Cathedral, of which he was the architect.)
simplex munditiis, Simple, in neat attire; neat, not gaudy.
sine cura, Without care or change.
sine dubio, Without doubt.
sine mora, Without delay.
sine præjudicio, Without prejudice.
sine qua non, Without which, not; an indispensable condition.
si parva licet componere magnis, If it be lawful to compare small things with great.
sit tibi terra levis, May the earth lie light upon thee. (An inscription often found on Roman tombstones; frequently abbreviated to *S. T. T. L.*)
si vis pacem, para bellum, If you wish for peace, prepare for war.
skene pas ho bios, Life is a stage.
solitudinem faciunt, pacem appellant, They make a wilderness and call it peace.
sophen de miso, I hate a blue-stocking.
spes sibi quisque, Let each man's hope be in himself; let him trust to his own resources.
speude bradeos, Make haste slowly. A favorite saying of Augustus Cæsar.
splendide mendax, Nobly untruthful; untrue for a good object. (Often used ironically of an unblushing liar.)
sponte sua, Spontaneously; of one's (*or* its) own accord.
spretæ injuria formæ, The affront offered to her slighted beauty. (In allusion to the resentment of Juno because Paris gave the golden apple to Venus as the prize of beauty.)
stat magni nominis umbra, He stands in the shadow of a mighty name.
stat nominis umbra, An adaptation of the preceding, used by "Junius" as the motto of his *Letters.*
status quo, status in quo, statu quo, The state in which.
status quo ante bellum, The state in which the belligerents were before war commenced.
sta, viator, heroem calcas, Stop, traveler, thou treadest on a hero's dust. (The epitaph inscribed by Condé over the grave of his great opponent, Merci.)
stemmata quid faciunt? Of what value are pedigrees?
studium immane loquendi, An insatiable desire for talking.
sua cuique voluptas, Every man has his own pleasures.
suaviter in modo, fortiter in re, Gentle in manner, resolute in execution.
sub colore juris, Under color of law.
sublata causa, tollitur effectus, The effect ceases when the cause is removed.
sub pœna, Under a penalty.
sub rosa, Under the rose; secretly.
sub silentio, In silence; without formal notice being taken.
sub specie, Under the appearance of.
sub voce, Under such or such a word.
sui generis, Of its own kind; unique.
summum jus, summa injuria est, The rigor of the law is the height of oppression.
sumptibus publicis, At the public expense.
suo marte, By his own powers or skill.
suppressio veri, suggestio falsi, The suppression of the truth is the suggestion of a falsehood.
surgit amari aliquid, Something bitter arises.
suum cuique, Let each have his own.
suus cuique mos, Every one has his own particular habit.
tangere ulcus, To touch a sore; to reopen a wound.
tantæne animis cælestibus iræ? Can such anger dwell in heavenly minds?
telum imbelle sine ictu, A feeble dart, devoid of force; applied, figuratively to a weak argument.
tempori parendum, We must move with the times.
tempus edax rerum, Time the devourer of all things.
tempus fugit, Time flies.
tempus omnia revelat, Time reveals all things.
tenax propositi, Firm of purpose.
teres atque rotundus, A man polished and complete.
terra cotta, Baked clay.
terra firma, The firm land; the continent.
terra incognita, An unknown land.
tertium quid, A third something, produced by

the union of two different things, or the collision of two opposing forces.
teste, By the evidence of.
timeo Danaos et dona ferentes, I fear the Greeks even when they bring gifts. (Used of distrusting the kindness of a foe.)
to kalon, The beautiful.
to prepon, What is becoming or decorous.
tot homines, quot sententiæ, So many men, so many minds.
trahit sua quemque voluptas, Each man is led by his own taste.
transeat in exemplum, Let it pass into a precedent.
tria juncta in uno, Three joined in one (the motto of the Order of the Bath).
trium literarum homo, A man of three letters; a thief (*fur* being Latin for thief).
Troja fuit, Troy was; Troy has perished.
Tros Tyriusve mihi nullo discrimine agetur, Trojan or Tyrian shall have the same treatment from me.
truditur dies die, One day follows hard on another.
uberrima fides, Implicit faith.
ubi bene ibi patria, Where one is well off, there is his country.
ubi jus incertum, ibi jus nullum, Where the law is uncertain, there is no law.
ubi mel, ibi apes, Where the honey is, there are the bees.
ubi tres medici, duo athei, Where there are three physicians, there are two atheists.
ultima ratio regum, The last argument of kings (engraved on French cannon by order of Louis XIV.).
ultimus Romanorum, The last of the Romans; used by Brutus of Cassius.
unguibus et rostro, With claws and beak.
unguis in ulcere, A nail in the wound, to keep it open.
urbem lateritiam invenit, marmoream reliquit, He found the city (Rome) brick, but left it marble.
usque ad nauseam, To disgust.
usus loquendi, Usage in speaking.
ut infra, As stated or cited below.
uti possidetis, As you now possess. (A diplomatic phrase meaning that at the termination of hostilities the contending parties are to retain whatever territory they may have gained during the war.)
ut supra, As stated or cited above.
vade in pace, Go in peace.
væ victis, Woe to the conquered. (Said to have been the exclamation of Brennus, when he threatened to exterminate the Romans.)
valeat quantum valere potest, Let it pass for what it is worth.
Vare, legiones redde, Varus, give back my legions. (A frequent exclamation of Cæsar Augustus when he thought of the defeat and slaughter of Quinctilius Varus with three legions by the Germans. Often used of a commander who has recklessly sacrificed troops, or of a financier who has wasted funds.)
variæ lectiones, Various readings.
varium et mutabile semper femina, Woman is always a changeable and capricious thing.
veluti in speculum, As in a mirror.
venalis populus, venalis curia patrum, The people and the senators are equally venal.
vendidit hic auro patriam, He sold his country for gold.
venenum in auro bibitur, Poison is drunk out of gold; the rich run more risk of being poisoned than the poor.
venia necessitati datur, Pardon is granted to necessity; necessity has no law.
venienti occurrite morbo, Meet the coming disease; take it in time; prevention is better than cure.
venit summa dies et ineluctabile tempus, The last day has come, and the inevitable doom.
veni, vidi, vici, I came, I saw, I conquered. (The laconic dispatch in which Julius Cæsar announced to the Senate his victory over the Pharnaces.)
ventis secundis, With favorable winds.
vera incessu patuit dea, She stood revealed an undoubted goddess in her walk.
verbum sat sapienti, A word is sufficient for a wise man.
veritas odium parit, Truth begets hatred.
veritatis simplex oratio est, The language of truth is simple.
vestigia nulla retrorsum, No signs of any returning, usually Englished as, No stepping back.
vexata quæstio, A disputed question.
via media, A middle course.
via trita, via tutissima, The beaten path is safest.
victrix causa diis placuit, sed victa Catoni, The winning cause was pleasing to the gods, the conquered one to Cato.
video meliora proboque, deteriora sequor, I see and approve the better course, but I follow the worse.
vidit et erubuit lympha pudica Deum, The modest water saw its God and blushed. (On the miracle at Cana in Galilee.)
vi et armis, By main force.
vilius argentum est auro, virtutibus aurum, Silver is of less value than gold, gold than virtue.
vincet amor patriæ, The love of country will prevail.
vir bonus dicendi peritus, A good man skilled in the art of speaking. (The Roman definition of an orator.)
viresque acquirit eundo, She (Rumor) gains strength as she travels.
Virgilium vidi tantum, I only saw Vergil; I was not intimate with the great man.
virtute officii, By virtue of one's office.
virum volitare per ora, To hover on the lips of men; to be in everybody's mouth.
vis comica, Comic power or talent.
vis consilii expers mole ruit sua, Force, without judgment, falls by its own weight.
vita hominis sine literis mors est, The life of man, without literature, is death.
vitam impendere vero, To risk one's life for the truth.
vix ea nostra voco, I scarcely call these things our own.
vixere fortes ante Agamemnona, Brave men lived before Agamemnon.
volenti non fit injuria, No injury is done to a consenting party.
vox clamantis in deserto, The voice of one crying in the wilderness.
vox et præterea nihil, A voice and nothing more; a mere sound; hence, fine words without weight or meaning.
vox faucibus hæsit, His voice died in his throat; he was dumb with amazement.
vox populi, vox Dei (an old proverb quoted by William of Malmesbury in the twelfth century), The voice of the people is the voice of God.
vultus animi janua et tabula, The countenance is the portrait and picture of the mind.
zonam perdidit, He has lost his purse; he is in distressed circumstances.

II. FROM THE MODERN LANGUAGES

Key to Pronunciation

ä, as in farm, father; *á*, as in ask, fast; *ă*, as in at, fat; *ā*, as in day, fate; *ǟ*, as in care, fare; *e*, as in met, set; *ē*, as in me, see; *ē̆*, as in her, ermine; *ė*, as in pin, ill; *ī*, as in pine, ice. *o*, as in not, got; *ō*, as in note, old; *ô*, as in for, fought; *oo*, as in cook, look; *ōō*, as in moon, spoon; *u*, as in cup, duck; *ū*, as in use, amuse; *û*, as in fur, urge; *th*, as in the, though. *y*, as in yet, you. *ow*, as in cow, now. *ng*, as in sing, ring. *ch*, as in church, choose.

Foreign Sounds

ö cannot be exactly represented in English. The English sound of *u* in *burn* and *burnt* is perhaps the nearest equivalent to *ö*. *ü* cannot be exactly represented in English. The English sound of *u* in *luke* and *duke* resembles the original sound of *ü*. N represents the nasal tone (as in French) of the preceding vowel, as in encore (*äN-kôr'*). K represents *ch*, as in German *ich, ach*. *zh*, sound of *s* in *pleasure*. *j* and *g* before *i* or *e* in Spanish, strongly aspirated *h*.

Phrases not designated are from the French; those from other languages are distinguished thus: (Ger.)—German; (It.)—Italian; and (Sp.)—Spanish.

a bas (*á bä'*), down.
a bas le traître (*á bä' le tretr'*), down with the traitor.
a beau jeu beau retour (*á bō zhō' bō retōōr'*), one good turn deserves another.
a bon chat, bon rat (*á bôN rä'*), (to a good cat, a good rat), well matched; set a thief to catch a thief.
a bon marché (*á bôN mär shā'*), cheap.
abonnement (*á bôn män'*), subscription.
a bras ouverts (*á brázōō ver'*), with open arms.
abrégé (*á brā zhā'*), abridgment.
absence d'esprit (*áp sänS des prē'*), absence of mind.
a causa persa, parole assai (It.), (*á kä' ōō zä per'sa, pä rō'läsä' ē*), when the cause is lost, there is enough of words.
accueil (*á kö' ē*), reception; greeting; welcome.
à charge (*á shärzh'*), at expense.
à cheval, (*á she val'*), on horseback.
à compte, (*á kôNt'*), on account.
à corps perdu (*á kôr per dü'*), headlong; neck or nothing.
à coup sur (*á kōō sür'*), with certainty; surely.
à couvert (*á kōō ver'*), under cover, protected, sheltered.
acqua Tofana (It.), (*á kwä tō fa'nä*), a subtle poison.
à demi (*á de mi'*), by halves.
à dessein (*á de säN*), designedly.
à deux mains (*á dö mäN'*), (for both hands), having a double office or employment.
adieu (*á dēō'*), (I commit you to God), good-bye.
adieu, la voiture, adieu, la boutique (*á dēō', lá vwá tür', á dēō lá bōō tēk'*) (good-bye, carriage; good-bye, shop), all is over.
à discrétion (*á dēs krä sēôN'*), at discretion, unrestrictedly.
à droite (*á drwät'*), to the right.
affaire d'amour (*á fer dá mōōr'*), a love affair.
affaire d'honneur (*á fer dô nör'*), an affair of honor, a duel.
affaire du coeur (*á fer dü kör'*), an affair of the heart, a love affair.
affiche (*á fēsh'*), a placard.
affreux (*á frö'*), frightful.
à fin (*á fäN'*), to the end or object.
à fond (*á fôN'*), to the bottom; thoroughly.
à forfait (*á fôr fe'*), by contract, by the job.
à gauche (*á gōsh'*), to the left.
à genoux (*á zhe nōō*), on one's knees.
à grands frais (*á gräN fre'*), at great expense.
a haute voix (*á ōt vwá*), loudly: openly.
a huis clos (*á wē klō'*), (with closed doors), secretly; in camera.
aide-toi, et le Ciel t' aidera (*ed twá', á le sēel ted rá'*), help yourself, and Heaven will help you.
air distingué (*er dēs täN gā'*), a distinguished appearance.
air noble (*er nôbl'*), a distinguished, patrician air, manner, or presence.
à l'abandon (*á lá bäN dôN'*), disregarded, uncared for.
à la belle étoile (*á lá be lá twäl'*), under the canopy of Heaven; in the open air.
à la bonne heure (*á lá bô nör'*), well-timed, in good time; favorably.
à l'abri (*á lá brē'*), under shelter.
à la campagne (*á lá käN päny'*), in the country.
à la carte (*á lá kärt'*), by the card.
à la dérobée (*á lá dā rô bā'*), stealthily.
à la faveur (*á lá fá vör'*), by the favor of.
à la Française (*á lá fräN sez*), in French fashion.
à la Grecque (*á lá grek'*), after the Greek fashion.
à l'Américaine (*á lá mä rē ken'*), after the American fashion.
à la mode (*á lá môd'*), in the fashion; according to the custom or fashion.
à l'Anglaise (*á läN glez'*), after the English fashion.
à la Parisienne (*á lá pá rē zēen'*), after the Parisian fashion.
a la Sourdine (*á la sōōr dēn'*), silently; with bated breath.
à la Tartufe (*á lá tär tüf*), like Tartufe, the hypocritical hero of Molière's comedy, Tartufe, hence hypocritically.
albuon vino non bisogna frasca (It.), (*äl bwôn vē' nō nōn bē zō' nyä fräs' kä*), good wine needs no bush.
à l'envi (*á läN vē'*), with emulation.
a l'extremite (*á lek strā mē tā'*), at the point of death; without resource.
al fresco (It.), (*äl fräs'kō*), in the open air.
alguazil (Sp.), (*äl gwä zēl'*), a Spanish constable.
à l'improviste (*á läN prô vēst'*), unawares, on a sudden.
à l'Italienne (*á lē tá lēen'*), in the Italian mode.
all'alba (It.), (*äl läl'bä*), at daybreak.
alla Siciliana (It.), (*äl lä sē chē lē ä'nä*), in the Sicilian manner; in shepherd's dress.
allégresse (*á lā gres'*), liveliness; geniality.
allemande (*äl mäN d'*), a kind of German dance.
alles hat seine Zeit (Ger.), (*á les hät zīne tsīt'*), all in good time.
allez-vous en (*á lā vōō zäN'*), away with you, be off.
allons (*á lôN'*), come on.
allons done (*á lôN dôN*), nonsense.
allzuviel ist ungesund (Ger.), (*äl tsōō fēl'ist oon' ge zoont*), too much of a good thing.
al occorrenza (It.), (*äl lō kō ren'dzä*), according to circumstances.
à l'ordinaire (*á lôr dē ner'*), in the ordinary manner.
à l'outrance (*á lōō träNS'*), to the death.
al piu (It.), (*äl pyōō'*), at most.
alto rilievo (It.), (*äl tō rē lye'vō*), in high relief.
à main armée (*á mäN är mā'*), by force of arms.
am anfang (Ger.), (*äm än'fäng*), at the beginning.
amar y saber no puede ser (Sp.), (*á mär ē sä vär'nō pooāthä sēr'*), no one can love and be wise at the same time.
âme de boue (lit., soul of mud), (*äm de bōō'*), a base-minded person.
amende honorable (*á mäN dô nô ràbl'*), fit reparation; a satisfactory apology.
à merveille (*á mer vāy'*), marvelously, extraordinarily.
ami du cour (lit., a friend of the court), (*á mē dü kōōr*), a false friend; one who is not to be depended on.
ami du peuple (*á mē dü pöpl'*), friend of the people.
à moitié (*á mwá tēä'*), by halves.
amour propre (*á mōōr prôpr'*), vanity, self-love.

ncienne noblesse (*ăN sē en nôbles'*), (the old nobility), French families ennobled before the revolution of 1792.
ncien régime (*ăN sēăN rā zhēm*), (the former government or administration), the rulers of the ante-revolution period.
outrance (*à ōō trănS'*), to the last extremity.
pas de géant (*à pàd zhā ăN'*), with a giant's stride.
peindre (*à păNdr'*), worth painting.
perte de vue (*à pert de vü'*), till out of sight.
peu près (*à pö pre'*), nearly.
pezzi (It.), (*à ped'zē*), by the piece.
piacere (It.), (*à pyà'chā rā*), at pleasure.
pied (*à pēā'*), on foot.
plomb (*à plŏN'*), perpendicularly; firmly.
point (*à pwăN'*), just in time; exactly; exactly right.
ppui (*à pwē'*), point of support; prop.
prima vista (It.), (*à prē mà vēs'tà*), at the first sight.
prix d'or (*à prē dôr'*), (at price of gold), very costly; fetching a fancy price.
propos (*à prō pō'*), to the point.
propos de rien (*à prō pō de rēăN'*), apropos to nothing; not pertinently.
rc-en-ciel (*àr kăN sēel'*), rainbow.
rez de chaussée (*à rā d shō sā'*), even with the ground.
rgent comptant (*àr zhăN kŏN tăN'*), ready money.
rivederci (It.), (*à rē vā dār'chē*), adieu until we meet again.
Rome comme à Rome (*à rôm' kō má rôm'*), at Rome do as Rome does.
rrière pensée (*à rēer păN sā'*), mental reservation; unavowed purpose.
ssignat (*à sē nyà'*), French paper money issued after the revolution at the end of last century.
teller (*àt lēā'*), a work-shop; studio.
tort et à travers (*à tôr ā à trà ver'*), at random.
à toute outrance (*à tōō tōō trănS'*), desperately; tremendously; with a vengeance.
tout hasard (*à tōō tà zàr'*), at all hazards; at all events.
tout prix (*à tōō prē'*), at any price.
ttache (*à tàsh'*), an official belonging to an embassy.
u bon droit (*ō bŏN drwà'*), to the just right.
u bout de son Latin (*ō bōōd sŏN là tăN'*), at the end of his Latin; to the extent of his knowledge.
u contraire (*ō kŏN t-er'*), on the contrary.
u courant (*ō kōō răN'*), fully acquainted with matters.
u désespoir (*ō dā zes pwàr'*), in despair.
u fait (*ō fe'*), expert.
u fond (*ō fŏN'*), to the bottom.
uf wiedersehen (Ger.), (*owf vē'der zā en*), till we meet again.
u levant (*ō le văN'*), to the east; eastward.
u pis aller (*ō pē zà lā'*), at the very worst.
u reste (*ō rest'*), as for the rest.
u revoir (*ō re vwàr'*), till we meet again.
aussitôt dit, aussitôt fait (*ō sē tō dē', ō sē tō fe'*), no sooner said than done.
autant d'hommes, autant d'avis (*ō tăN dôm', ō tăN dà vē'*), many men, many minds.
auto da fe (Port.), (*a ōō tō dà fā'*), an act of faith; the burning of Jews and heretics.
autre droit (*ōtre drwà'*), another's right.
autre fois (*ōtre fwà'*), another time.
autre vie (*ōtre vē'*), another's life.
aut vincere aut mori (*owt vin'kārā owt mō'rē*), victory or death.
aux armes (*ō zàrm'*), to arms.
avant-propos (*à văN prô pō'*), preface; introductory matter.
avec permission (*à vek per mē sē ŏN'*), by consent.
à volonté (*à vŏ lŏN tā'*), at will; at pleasure.
à vostra salute (It.), (*à vōs trà sà lōō'tā*), to your health.
à votre sante (*à vōtre sănN tà'*), to your health.
à vuestra salud (Sp.) (*à vwes trà sà lōōth'*), to your health.
bal champetre (*bàl shăN petr'*), a country ball.
ballon d'essai (*bà lŏN de sā'*), a balloon sent up to test the direction of air currents; hence anything said or done to gauge public feeling on any question.
bas bleu (*bà blö'*), a blue-stocking; a woman who seeks a reputation for learning.
beau-idéal (*bō ē dā àl'*), a model of ideal perfection.
beau monde (*bō mônd'*), the fashionable world.
beaux esprits (*bō zes prē'*), men of wit, or genius.
beaux yeux (*bō zēö'*), handsome eyes; attractive looks.
bel esprit (*be les prē'*), a wit, a genius.
bel étage (*be lā tàzh'*), the second story of a house.
belles-lettres (*bel'letr'*), refined literature.
benedetto e quel male che vien solo (It.), (*bā nā det'tō ā kwāl mà'lā kā vyăn sō'lō*), blessed is the misfortune that comes alone.
ben-trovato (It.), (*bān trō vā'tō*), well invented.
bête noire (lit. a black beast,) (*bet nwàr'*), a bugbear.
bienséance (*bēăN sā ăNs'*), good manners; decorum.
bienvenue (*bēăN ve nü'*). welcome.
bijou (*be zhōō*), a jewel; a treasure.
bijouterie (*be zhōō trē*), jewelry.
billet doux, or **billet d'amour** (*bē ye dōō'*), a love letter.
billets-d'état (*bē ye dā tà'*), government paper; bank notes.
bizarre (*bē zàr'*), odd; quaint.
blasé (*blà zā'*), surfeited.
bon ami (*bŏ nà mi'*), good friend.
bon bon (*bŏN bŏN'*), a sweetmeat; confectionery.
bon diable (*bŏN dēābl'*), a jolly good fellow.
bon gré, mal gré (*bŏN'grā màl'grā*), with good or bad grace; willing or unwilling.
bonhomie (*bŏ nô mē'*), good nature; easy temper; credulity.
bon jour (*bŏN zhōōr'*), good day; good morning.
bon mot, (*bôn mō'*), a witticism.
bonne (*bŏn*), a nurse.
bonne-bouche (*bŏn bōōsh'*), a luscious morsel; a toothsome tit-bit.
bonne et belle (*bŏ nā bel'*), good and handsome (said of a woman).
bonne foi (*bŏn fwà'*), good faith.
bon soir (*bŏN swàr'*), good evening.
bon ton (*bŏN tŏN'*), high fashion; first-class society.
bon vivant (*bŏN vē văN'*), a good liver; a jolly companion.
bon voyage (*bŏN vwà yàzh'*), a pleasant journey.
boudoir (*bōō dwàr'*), a small private apartment.
bourgeoisie (*bōōr zhwà zē'*), the body of citizens; burgess; the shop-keeping class.
breveté (*brev tà'*), patented.
brusquerie (*brüs krē*), rudeness.
bureau de la guerre (*bü rō d'à ger'*), the war office.
cabaretier (*kà bāre tēā'*), an innkeeper.
cachot (*kà shō'*), a dungeon.
camaraderie (*kà mà rà dr-ē'*), good fellowship.
canaille (*kà nà'y*), the lowest class of people; the rabble.
canard (*kà nàr'*), a false story.
cap-à-pié (*kà pà pēā'*), from head to foot.
carbonari (It.), (*kàr bō nà'rē*), members of a secret political society in Italy.
carême (*kà rem'*), fast; Lent.
carte blanche (*kàrt blăNsh'*), full power.
carte de visite (*kàrt de vē zēt'*), a small photograph upon a card.
castello che da orecchia si vuol rendere (It.), (*kàs tel'lō kā dà ō rā'kyà sē vwôl rān dā'rā*), the fortress that parleys soon surrenders.
causeries (*kō zrē'*), a familiar talk.
cela va sans dire (that goes without saying), (*se là và săN dēr'*), that is understood.
ce n'est que le premier pas qui coute (*se ne kle pre mōā pà' kē k ōōt'*), it is only the first step that is difficult.
c'est a dire (*se tà dēr'*), that is to say.
c'est une autre chose (*se tü nō tre shōz'*), that is quite another thing.
chacun a son gout (*shà kŏN à sŏN g ōō'*), every one to his taste.
chacun tire de son côté (*shà kŏN tēr' de sŏN kō tà'*), every one inclines to his own side or party.
Champs Elysées (*shăN zà lē zà'*), Elysian Fields; a public park in Paris.
chanson (*shăN sŏN'*), a song.
chansons à boire (*shăN sŏN zà bwàr'*), drinking songs.
chapeau (*shà pō'*), a hat.
chapeaux bas (*shà pō bà'*), hats off.
chapeau de bras (*shà pō de brà'*), a military cocked hat.
chapelle ardente (*shà pe làr dăNt'*), the chamber where a dead body lies in state.
chargé d'affaires (*shàr zhā dà fer'*), one intrusted with state affairs at a foreign court.
château (*shà tō'*), a castle.
châteaux en Espagne (*shà tō zăN nes pàny'*), castles in Spain.
chauffeur (*shō fōr'*), driver of an automobile.
chef (*shef*), man cook.
chef de bataillon (*shef de bà tà yŏN'*), a major.
chef-d'œuvre (*shā dö vr'*), a masterpiece.
chemin de fer (lit., iron road), (*she mănt fer'*), a railway.
chemin faisant (*she măN fe zăN'*), by the way; in passing.
chère amie (*she rà mē'*), a dear (female) friend, a lover.
che sara, sara (It.), (*kā sà rà sà rà'*), what will be will be.
cheval de bataille (lit., a war-horse), (*she vàl de bà tà'y*), chief dependence or support; one's strong point.
chic (*shēk*), stylish, smart.
chi tace confessa (It.), (*kē tà'chā kōn fes'sà*), he who keeps silent admits his guilt.
ci git (*sē zhē'*), here lies. (A common inscription on tombstones.)
coiffeur (*kwà fōr'*), a hairdresser.
coiffure (*kwà fūr'*), a headdress.
comme il faut (*kō mēl fō'*), proper, as it should be.
comment vous portez vous? (*kō măN vōō pôr tā vōō'*), how are you?
commis voyageur (*kō mē vwà yà zhōr'*), a commercial traveler.
compagnon de voyage (*kŏN pà nyŏN de vwà yàzh'*), a traveling companion.
compte rendu (*kŏNt răN dü'*), an account rendered, a report.
comptoir (*kŏN twàr'*), a counting-house.
comte (*kŏNt*), count.
comtesse (*kŏN tes'*), countess.
con amore (It.), (*kō nà mō'rā*), with affection, very earnestly.
concierge (*kŏN s erzh'*), a door-keeper.
conciergerie (*kŏN sē er zhrē'*), a door-keeper's lodge; and a noted prison in Paris.
concours (*kŏN kōōr'*), competition for, or as for, a prize.
con diligenza (It.), (*kōn dē lē dshen'dzà*), with diligence.
con dolore (It.), (*kōn dō lō'rà*), with grief; sadly.
confrère (*kŏN frer'*), a colleague.
conoscente (It.), (*kō nō shen'tà*), a connoisseur.
conseil de famille (*kŏN se'y de fà mē'y*), a family council or consultation.
conseil d'état (*kŏN se'y dà tà'*), a council of state; a privy council.
consommé (*kŏN sô mā'*), a kind of soup.
contretemps (*kŏN tre tăN'*), an awkward mishap.
cordon sanitaire (*kôr dŏN sà nē ter'*), a line of sentries to prevent, as far as possible, the spread of contagion or pestilence. Used also of other precautionary measures.
corps diplomatique (*kor dē plō mà tēk'*), a dramatic body; a company of players.
cortège (*kor tezh*), a procession.
couleur de rose (*kōō lōr de rōz'*), rose color.
coup (*kōō*), a stroke.
coup de grace (*kōō d grās'*), a finishing-stroke. (Formerly applied to the fatal blow by which the executioner put an end to the torments of a culprit broken on the wheel.)
coup de main (*kōō d măN'*), a sudden attack, enterprise, or undertaking.
coup de maitre (*kōō d metr'*), a master-stroke; with consummate skill.
coup de pied (*kōō d pēā'*), a kick.
coup de plume (*kōō d plüm'*), a literary attack.
coup de soleil (*kōō d sô le'y*), a sunstroke.
coup d'essai (*kōō de sā'*), a first attempt.
coup d'état (*kōō dā tà'*), a stroke of policy; a sudden and decisive blow, usually inflicted by unconstitutional means.
coup de theatre (*kōō d tā ätr'*), a theatrical effect.
coup d'œil (*kōō dö'y*), a rapid glance.
courage sans peur (*kōō ràzh săN pör*), fearless courage.
coute qu'il coute (*kōōt kēl kōōt'*), cost what it may.
crève-cœur (*krev kör'*), deep sorrow; grief.
cuisine (*küē zēn'*), a kitchen; cookery.
cul-de-sac (*kül de sàk'*), the bottom of the bag; a blind alley.
d'accord (*dà kôr'*), agreed; in tune.
dame d'honneur (*dàm dŏ nör'*), a maid of honor.
das geht sie nichts an (Ger.), (*dàs gāt zē nikts àn'*), that does not concern you.
de bonne augure (*de bŏ nō gür'*), of good omen.
de bonne grace (*de bŏn grās'*), with good will, willingly.
debris (*de brē'*), refuse.
début (*dā bü'*), first appearance.
débutante (*dā bü tăNt'*), a young lady just entering society.
décolleté (*dā kôl tā'*), open-breasted.
dégagé (*dā gà zhā*), free, easy, without constraint.
de galeté de cœur (*de gà tà d kör'*), in sport, sportively.
de haute lutte (*de ōt lüt'*), by a violent struggle.
dehors (*dā ôr'*), without; out of; foreign; irrelevant.
déjeuner à la fourchette (*dā zhö nā à là fōōr shet'*), a cold breakfast.
de mal en pis (*de mà lăN pē'*), from bad to worse.
demeure (*de mör'*), dwelling; residence.
demi-jour (*de mē zhōōr'*), faint light.
demi-tasse (*de mē tàs*), a small cup.
dénouement (*dā nōō măN'*), an unraveling or winding up.
dépêche (*dā pesh'*), a dispatch; a message.
dernier cri (*der nēā krē'*), (the latest cry), the latest fashionable ad.
dernier ressort (*der nēā re sôr'*), the last resource.
désagrément (*dā zà grā măN'*), something disagreeable or unpleasant.
désorienté (*dā zō rēăN tà'*), confused.

détour (*dā t ōōr'*), a circuitous march.
de trop (*de trō'*), too much or too many; not wanted.
devoir (*de vwär'*), duty.
di buona volonta sta pieno l'inferno (It.), (*dē bwō nä vō lōn'tä stä pyä'nō lēn fer'nō*), hell is full of good intentions.
Dieu est toujours pour les plus gros bataillons (*dēö e t ōō zhoōr' pōōr lā plü grō bä tä yōN'*), God is always on the side of the largest battalions; the largest army has the best chance.
Dieu et mon droit (*dēö ā mōN drwä'*), God and my right.
Dieu vous garde (*dēö vōō gärd'*), God protect you.
di grado en grado (It.), (*dē grä'dō ān grä'dō*), step by step; gradually.
Dios me libre de hombre de un libro (Sp.), (*dē'ōs mā lē'vrā dā ōm'vrā dā ōōn lē'vrō*), God deliver me from a man of one book.
di salto (It.), (*dē säl'tō*), by leaps.
di tutti novello par bello (It.), (*dē t ōōt tē nō vel'lo pär bel'lō*), everything new seems beautiful.
divertissement (*dē ver tēs mäN'*), amusement; sport.
doctrinaire (*dok trē ner'*), a theorist.
dolce far niente (It.), (*dōl'chä fär nyen'tā*), sweet idleness.
domino (It.), (*dō'mē nō*), a mask robe.
dorer la pilule (*dō rā lä pē lül'*), to gild the pill.
double entente (*d ōō blāN tāNt'*), double meaning; a play on words.
douceur (*d ōō sör'*), a bribe.
doux yeux (*d ōō zēö'*), soft glances.
drap d'argent (*drä där zhäN*), silver lace.
drap d'or (*drä dōr'*), gold lace.
droit des gens (*drwä dā zhäN'*), the law of nations; international law.
drôle (*drōl*), droll; funny.
drole le corps (*drōl le kōr'*), a droll fellow; a punster.
durante vita (*d ōō rān'tä vē'tä*), during life.
eau de cologne (*ō d kō lōn'y*), Cologne water.
eau de vie (*ō d vē'*), the water of life—applied usually to brandy.
ébauche (*ā bōsh'*), a rough drawing; a sketch.
éclat (*ā klä'*), splendor; brilliancy.
école de droit (*ā kōl de drwä'*), law school.
école de médecine (*ā kōl de mād sēn'*), medical school.
école militaire (*ā kōl mē lē ter'*), military school.
école polytechnique (*ā kōl pō lē tek nēk'*), polytechnique school.
édition de luxe (*ā dē sēōn' de lüks'*), a splendid edition of a book, handsomely bound, and usually well illustrated.
égal (*ā gäl'*), equal.
égalité (*ā gä lē tā'*), equality.
égarement (*ā gär mäN'*), bewilderment.
ehrlich währt am längsten (Ger.), (*ār'lik vert äm leng'sten*), honesty is the best policy.
eile mit weile (Ger.), (*ī le mit vī'le*), the more haste, the less speed.
eine schwalbe macht keinen sommer (Ger.), (*ī ne shwäl'be mäkt kī nen zō'mer*), one swallow does not make a summer.
ein gebranntes kind scheut das feuer (Ger.), (*īn ge brän tes kint' zhöit däs fōi'er*), a burnt child dreads the fire.
el corazon manda las carnes (Sp.), (*äl kō rä thōn' mändä läs kär'näs*), the heart bears up the body.
élève (*ā lev'*), pupil.
élite (*ā lēt'*), a select body of persons.
éloge (*ā lōzh'*), a funeral oration.
éloignement (*ā lwän ye mäN*), estrangement.
embonpoint (*äN bōN pwäN'*), roundness, good condition.
émigré (*ā mē grā'*), an emigrant.
employé (*äN plwä yā'*), a person employed; a clerk.
empressement (*äN pres mäN'*), ardor; zeal; interest.
en ami (*äN nä mē'*), a friend.
en arriere (*äN nä rē er'*), in the rear; behind.
en attendant (*äN nä täN däN'*), in the meantime.
en avant (*äN nä väN'*), forward.
en badinant (*äN bä dē näN'*), in sport, jestingly.
en bagatelle (*äN bä gä tel'*), triflingly; contemptuously.
en bloc (*äN blōk'*), in the lump.
en cueros, en cueros vivos (Sp.), (*än k ōōā'rōs, än k ōōā'rōs vē vōs*), naked; without clothing.
ende gut, alles gut (Ger.), (*en'de g ōōt, ä'les g ōōt*), all's well that ends well.
en déshabillé (*äN dā zä bē yā'*), in undress; in one's true colors.
en Dieu est ma fiance (*äN dēö'e mä fēäNs'*), my trust is in God.
en Dieu est tout (*äN dēö e t ōō'*), in God are all things.
en échelon (*äN nā sh lōN'*), in steps; like stairs.
en effet (*äN ne fe'*), substantially, really, in effect.
en famille (*äN fä mē'y*), with one's family at home.
enfant gâté (*äN fäN gä tā'*), a spoiled child.
enfants perdus (lit., lost children), (*äN fäN per dü'*), a forlorn hope.
enfant terrible (*äN fäN te rēbl'*), (a terrible child), one that is apt to do or say something exceedingly ill-timed and embarrassing.
enfant trouvé (*äN fäN tr ōō vā'*), a foundling.
enfin (*äN fäN'*), in short, finally, at last.
en flute (*äN flüt'*), carrying guns on the upper deck only.
en foule (*äN f ōōl'*), in a crowd.
en grand (*äN gräN'*), of full size.
en grande tenue (*äN gräNd te nü'*), in full official, or evening, dress.
en grande toilette (*äN gräNd twä let'*), full-dressed; in full rig.
en haut (*äN ō'*), on high; above.
en masse (*äN mäs'*), in a body or mass.
ennui (*äN nüē'*), weariness.
en passant (*äN pä säN'*), in passing, by the way.
en plein jour (*äN plāN zh ōōr*), in open day.
en queue (*äN kö'*), immediately after; in the rear. Used specially of persons waiting in line, as at the door of a theater, at the ticket-office of a railway station, etc.
en rapport (*äN rä pōr'*), in harmony, relation, or agreement.
en regle (*äN regl'*), regular, regularly; in order.
en revanche (*äN re väN sh'*), in return; as a compensation for.
en route (*äN r ōōt'*), on the way.
ensemble (*äN säN bl'*), the whole.
en suite (*äN süēt'*), in company, in a set.
en tasse (*äN täs'*), in a cup.
entente cordiale (*äN täNt kōr dēäl'*), a good understanding, especially between two states.
entourage (*äN t ōō rázh'*), surroundings.
en tout (*äN t ōō'*), in all; wholly.
entre deux feux (*äN tre dö fö'*), between two fires.
entre deux vins (lit., between two wines), (*äN tre dö vāN'*), half-drunk.
entre nous (*äN tre n ōō'*), between ourselves; in confidence.
entrepot (*äN tre pō'*), a warehouse or magazine.
entreprenant (*äN tre pre näN'*), enterprising.
entrepreneur (*äN tre pre nör'*), a contractor; the chief director of an undertaking.
entre-sol (*äN tre sōl'*), a half story or mezzanine, especially one next above the ground floor.
en vérité (*äN vā rē tā'*), in truth, really.
en vigueur (*äN vē gör'*), in force.
envoyé (*äN vwä yā'*), an envoy or messenger.
es fehlt mir nichts (Ger.), (*es fält mēr nikts'*), nothing is the matter with me.
es freut mich sehr (Ger.), (*is frōit mik zār'*), I am very glad.
es ist nicht Alles Gold, was glänzt (Ger.), (*es ist nikt ä les gōlt' väs glentst'*), all is not gold that glitters.
Espagnol, (*es pä nyōl'*), Spanish; a Spaniard.
esprit de corps (*es prē d kōr'*), the spirit of honor, loyalty, or enthusiasm in an individual working for the good of a common body, society, or association, as a college class, a military company, fraternal or other association.
esprit des lois (*es prē dā lwä'*), spirit of the laws.
es thut mir sehr leid (Ger.), (*es t ōōt mēr zār līt'*), I am very sorry.
États-Généraux (*ā tä zhā nā rō'*), the States-General.
ewigkeit (Ger.), (*ā'vik kīt*), eternity.
exposé (*ek spō zā'*), an exposition; a recital.
façon de parler (*fä sōN de pär lā'*), manner of speaking; phrase, locution.
fade (*fäd*), flat; stale; insipid.
fainéant (*fe nā äN'*), idle.
faire bonne mine (*fer bōn mēn'*), to put a good face on the matter.
faire l'homme d'importance (*fer lōm dāN pōr tāNs'*), to give one's self airs.
faire sans dire (*fer säN dēr'*), to act without ostentation or boasting.
faire son devoir (*fer sōN de vwär'*), to do one's duty.
fait accompli (*fe tä kōN plē'*), a thing accomplished; an accomplished fact.
faubourg (*fō b ōōr'*), an outskirt of a town; a suburb.
fauteuil (*fō tö'y*), an easy chair.
faux pas (*fō pä'*), a false step; an act of indiscretion.
femme couverte (*fäm k ōō vert*), a married woman.
femme de chambre (*fäm de shäNbr'*), a chambermaid.
femme de charge (*fäm de sharzh*), a housekeeper.
femme galante (*fäm gä läNt'*), a gay woman; a prostitute.
femme sole (*fäm sōl'*), an unmarried woman.
fendre un cheveu en quatre (*fäN drōN she vö äN kätr'*), to split a hair in four; to make subtle distinctions.
fête (*fet*), a feast, festival; holiday.
fête champêtre (*fet shäN petr'*), a rural out-of-door feast; a festival in the fields.
fête Dieu (*fet dēö'*), the Corpus Christi festival in the Roman Catholic church.
feu de joie (*fö d zhwä*), a bonfire; a firing of guns in token of joy.
feuilleton (*fö y tōN'*), a small leaf; a part of a newspaper devoted to light, entertaining matter.
fille de chambre (*fē y de shäN br'*), a chambermaid.
fille d'honneur (*fē y dō nör'*), a maid of honor.
fils (*fēs*), son.
fin de siecle (*fäN d sēekl'*), the end of the century.
fleur-de-lis (*flör de lē'*), the flower of the lily.
fleur de terre (*flör de ter*), even with the surface of the ground.
flux de bouche (*flüks de b ōōsh'*), inordinate flow of talk; garrulity.
fra (It.), (*frä*), brother; friar.
frais (*fre*), cost; expense.
Fra Modesto non fu mai priore (It.), (*frä mō des tō nōn f ōō mä ē pryō'rā*), Friar Modest never became prior.
franco (It.), (*fräng'kō*), free from postage.
frisch begonnen, halb gewonnen (Ger.), (*frish be gō'nen, hälp ge vō'nen*), well begun is half done.
froides mains, chaude amour (*frwäd mäN' shō dä m ōōr'*), cold hands, warm heart.
frondeur (*frōN dör'*), a declaimer against the exisiting administration.
front à front (*frōN tä frōN'*), face to face.
fuyez les dangers de loisir (*füē yā lā däN zhäd lwäzēr'*), fly from the dangers of leisure.
gaieté de cœur (*gā tā d kör'*), gaiety of heart.
garage (*gä rázh'*), a place where automobiles are stored and kept in order.
garçon (*gär sōN'*), a lad; a waiter.
garde à cheval (*gär dä she val'*), a mounted guard.
garde du corps (*gärd dü kōr'*), a bodyguard.
garde mobile (*gärd mō bēl'*), a body of troops liable to be called out for general service.
garde royale (*gärd rwä yäl'*), royal guard.
gardez (*gär dā'*), take care; be on your guard.
gardez-bien (*gär dā bēāN'*), take good care; be very careful.
gardez la foi (*gär dā lä fwä'*), keep the faith.
gâteau (*gä tō'*), cake.
gaucherie (*gōsh rē'*), awkwardness.
gehen sie ihres weges (Ger.), (*gā'en zē ē res vā'ges*), go your way.
gendarmerie, (*zhäN där me rē'*), the armed police force.
gens d'armes (*shäN därm'*), men-at-arms; military police.
gens de condition (*zhäN de kōN dē sēōN'*), people of rank.
gens d'église (*zhäN dā glēz'*), the clergy; clerics.
gens de guerre (*zhäN d ger'*), military men.
gens de lettres (*zhäN d letr'*), literary men.
gens de loi (*zhäN d lwä'*), lawyers.
gens de même famille (*zhäN d mem fä mē'y*), people of the same family; birds of a feather.
gens de peu (*zhäN d pö'*), the lower classes.
gentilhomme (*zhäN tē yōm'*), a gentleman.
gibier de potence (*zhē bēā d pō täNs'*), a gallows-bird; one who deserves hanging.
giovine Italia (It.), (*dzhō vē'nā ē tä'lyä*), young Italy.
giovine santo, diavolo vecchio (It.), (*dzhō vē nā sän'tō dyä'vō lō vek'kyō*), a young saint, an old devil.
gitano (Sp.), (*hē tä'nō*), a gypsy.
glace (*glās*), anything iced.
gleich und gleich gesellt sich gern (Ger.), (*glik' oont glik' ge zelt sik gern'*), birds of a feather flock together.
gli assenti hanno torti (It.), (*lyē äs sen'tē än nō tōr'tē*), the absent are in the wrong.
goutte à goutte (*gōō tä gōōt'*), drop by drop.
gouvernante (*gōō ver näNt'*), governess.
grâce à Dieu (*grās ä dēö'*), thanks be to God.
grande chère et beau feu (*gräND sher' ā bō fö'*), good fare and a good fire; comfortable quarters.
grande parure (*gräND pä rür'*), full dress.
grande toilette (*gräND twä let'*), full dress.
grand merci (*gräN mer sē'*), many thanks.
grisette (*grē zet'*), dressed in gray. (Applied to French shop girls.)
grosse tête et peu de sens (*grōs tet' ā pö d säNs*), a big head and little sense.
guerra al cuchillo (Sp.), (*gā'rä äl kōō chē'lō*), war to the knife.
guerra cominciata, inferno scatenato (It.), (*ge ra kō mēn chyä'tä, ēn fär'nō skatän'tä*) war begun, hell unchained.
guerre à mort (*ge rä mōr'*), war to the death.
guerre à outrance (*ge rä ōō träNs'*), war to the uttermost.
habitué (*ä bē tüā'*), a frequenter.
hardiesse (*är dēes'*), boldness.

haut et bon (*ō tā bŏN*), great and good.
haut gout (*ō gōō′*), high favor; elegant taste.
hauteur (*ō tŏr′*), haughtiness and pride.
haut ton (*ō tŏN′*), highest fashion.
heureusement (*ō röz mäN′*), happily.
historiette (*ēs tō rēet′*), a short history; a tale.
homme d'affaires (*ŏm dä fer′*), a man of affairs.
homme d'état (*ŏm dā tä′*), a statesman.
homme de robe (*ŏm de rōb′*), a man in civil office.
homme de lettres (*ŏm de letr′*), a literary man.
homme d'esprit (*ŏm des prē′*), a man of intellect.
honi soit qui mal y pense (*ō nē swä′ kē mäl ē päNs′*), shame be to him who thinks evil of it. (The motto of the Order of the Garter.)
hors de combat (*ōr de kŏN bä′*), disabled; unfit to continue a contest.
hors de la loi (*ōr de lä lwä*), outlawed.
hors de propos (*ōr de prō po′*), wide of the point; inapplicable.
hors de saison (*ōr de se zŏN′*), out of season; unseasonable.
hors d'œuvre (*ōr dövr′*), out of course; out of accustomed place. (Used substantively of small appetizing dishes served between the soup and the second course.)
hôtel des invalides (*ō tel dā zäN vä lēd′*), hospital for old and disabled soldiers.
hôtel de ville (*ō tel de vēl′*), a town hall.
hôtel Dieu (*ō tel dēö′*), a house of God; a hospital.
hôtel garni (*ō tel gär nē′*), furnished lodgings.
hurtar para dar por Dios (Sp.), (*öōr tär′ pä rä där pōr dē′ ōs*), to steal in order to give to God.
ich diene (Ger.), (*ik dēne*), I serve.
idée fixe (*ē dā fēks′*), a fixed idea; intellectual monomania.
ignorance e crasse (*ē nyō räns′kräs′*), gross ignorance.
i gran dolori sono multi (It.), (*ē grän dō lo′rē sō nō möōl′tē*), great griefs are silent.
il a le diable au corps (*ē lä l dēäblō kôr′*), the devil is in him.
il faut de l'argent (*ēl fō d lär zhäN*), money is wanting.
il n'a ni bouche ni éperon (*ēl nä nē bōōsh nē ā prŏN′*), he has neither mouth nor spur; he has neither wit nor courage.
il ne faut jamais défier un fou (*ēl ne fō zhä me′ dāfēā ŏN fōō*), one should never provoke a fool.
il n'est sauce que d'appétit (*ēl ne sōs ke dä pā tē′*), hunger is the best sauce.
il penseroso (It.), (*ēl pän sā rō′sō*), the pensive man. (The title of one of Milton's poems.)
il sent le fagot (*ēl säN le fä gō′*), he smells of the faggot; he is suspected of heresy.
impoli (*äN pō lē′*), unpolished; rude.
impolitesse (*äN pō lē tes′*), coarseness; rudeness.
impromptu (*äN prŏNp tü′*), a prompt remark without study.
in blanco (It.), (*ēn byäng′kō*), in blank; in white.
in petto (It.), (*ēn pet′to*), within the breast; in reserve.
insouciance (*äN sōō sēäNs′*), indifference; carelessness.
in un giorno non si fe 'Roma (It.), (*ēn ōōn dzhōr′nō nōn sē fā rō′mä*), Rome was not built in a day.
ir por lana, y volver trasquilado (Sp.), (*ēr pōr lä′nä, ē vōl vär′ träs kē lä′thō*), to go for wool, and come back shorn.
jalousie (*zhä lōō zē′*), jealousy; a Venetian window blind.
jammais bon coureur ne fut pris (*zhä me′ bŏn kōō rör′ ne fü prē′*), a good runner is not to be taken; old birds are not to be caught with chaff.
Jardin des Plantes (*zhär däN dā plänt′*), the botanical garden in Paris.
je maintiendrai le droit (*zhe mäN tēäN drā le drwä′*), I will maintain the right.
je ne sais quoi (*zhe ne se kwä′*), I know not what.
je n'oublierai jamais (*zhe nōō blē rā zhä me′*), I will never forget.
je suis prêt (*zhe süē pre′*), I am ready.
jet d'eau (*zhe dō′*), a fountain; a jet of water.
jeu de mots (*zhō d mō′*), a play upon words; a pun.
jeu d'esprit (*zhō des prē′*), a witticism.
jeu de théâtre (*zhō d tā ätr′*), a stage trick; clap-trap.
jeunesse dorée (*zhō nes dō rā′*), the gilded youth.
je vis en espoir (*zhe vē zäN nes pwär′*), I live in hope.
joli (*zhō lē*), pretty; attractive.
juste-milieu (*zhüst mē lēö′*), the exact middle; the golden mean; the middle course is the safest.
kein kreuzer, kein Schweizer (Ger.), (*kīn krōi′tser, kīn shwī′tser*), no money no Swiss.
lâche (*läsh*), lax; relaxed.
la critique est aisée, l'art est difficile (*lä krē tēk′ e te zā′, lä′re dē fē sēl′*), criticism is easy, art is difficult.
lade nicht alles in ein schiff (Ger.), (*lä de nikt ä′les in īn′ shif′*), do not ship all in one vessel; do not put all your eggs in one basket.
l'adversité fait les hommes, et le bonheur les monstres (*läd ver zē tā′ fe lā zōm′; ā le bō nör′ lā mŏnstr′*), adversity makes men, and prosperity monsters.
la fortuna aiuta i pazzi (It.), (*lä fōr tōō′nä ä yōō′tä ē pä′dzē*), fortune passes everywhere; all men are subject to the vicissitudes of Fortune.
laguna (It.), (*lä gōō′nä*), a moor; a fen.
laissez faire (*le sā fer′*), to let alone.
laissez-nous faire (*le sā nōō fer′*), let us act for ourselves; let us alone.
la la (*lä lä′*), so so; indifferently.
l'allegro (It.), (*läl lä′grō*), the merry man. (The title of one of Milton's poems.)
l'amour et la fumée ne peuvent se cacher (*lä mōōr ′ā lä fü mā′ ne pöv se kä shā′*), love and smoke cannot be hidden.
langage des halles (*läN gäzh dā äl′*), the language of markets; Billingsgate.
la patience est amère, mais son fruit est doux (*lä pä sēäns e tä mer′, me sŏN früē′ e dōō′*), patience is bitter, but its reward is sweet.
la povertà e la madre di tutti le arti (It.), (*lä pō vär tä′ e lä mä′drä dē tōōt′ tē lä är′tē*), poverty is the mother of all the arts.
l'argent (*lär zhäN*), silver; money.
lasciate ogni speranza voi, che'ntrate (It.), (*lä shyä′tä ō nyē spä rän′dzä vōē, kän trä′ tä*), all hope abandon ye who enter here.
lassen sie mich gehen (Ger.) (*läs′ sen zē mik gā′en*), let me alone.
l'avenir (*läv nēr′*), the future.
la vertu est la seule noblesse (*lä ver tü′ e lä sōl nōbles′*), virtue is the sole nobility.
le beau monde (*le bō mŏNd′*), the world of fashion; society.
le bon temps viendra (*le bŏN täN′ vēäNdrä′*), there's a good time coming.
le cout en ôte le gout (*le kōō′täN nōt le gōō′*), the expense takes away the pleasure.
le demi-monde (*le de mē mŏNd′*), Bohemia.
légèreté (*lā zher tā*), lightness; levity.
le grand monarque (*le gräN mō närk′*), the grand monarch. A title applied to Louis XIV.
le grand œuvre (*le gräN tövr′*), the great work; the search for the philosopher's stone.
le jeu n'en vaut pas la chandelle (*le zhö′ näN vō pä lä shäN del′*), the game is not worth the candle (by the light of which it is played); the object is not worth the trouble.
le mot d'énigme (*le mō dā nēgm′*), the solution of the mystery.
l'empire des lettres (*läN pēr′ dā letr′*), the empire of letters.
le parole son feminine, e i fatti son maschi (It.) (*lā pä rō lā sōn fä mē nē′nä, ā ē fät′tē sōn mäs′kē*), words are feminine, and deeds are masculine.
le pas (*le pä′*), precedence.
le point de jour (*le pwäNd zhöōr*), daybreak.
le roi et l'état (*le rwä′ ā lā tä′*), the king and the state.
le roi le veut (*le rwä′ l vö′*), the king will it.
les absents ont toujours tort (*lā zäp säN′ ŏN tōō zhöōr tôr′*,) the absent are always wrong.
les bras croisés (*lā brä krwä zē′*), the arms crossed.
lèse majesté (*lez mä zhes tā*), high treason.
les extrêmes se touchent (*lā zek strem′ se tōōsh*), extremes meet.
les larmes aux yeux (*lā lärm′ zō zēö′*), tears in one's eyes.
les murailles ont des oreilles (*lā mü rä′ y zŏN dā zō re′ y*), walls have ears.
les plus sages ne le sont pas toujours (*lā plü säzh ne l sŏN pä tōō zhöōr*) the wisest are not always wise.
l'étoile du nord (*lā twäl dü nôr′*), the star of the north.
le tout ensemble (*le tōō täN säN bl′*), the whole taken together.
lettre de cachet (Fr. Hist.), (*letre de kä she′*), a secret letter sealed by the royal seal, containing orders for arrest and imprisonment without trial.
lettre de change (*letre d zhäN zh*), bill of exchange.
lettres de créance (*letre d krā äns′*), letters of credit.
lettre de marque (*letre d märk′*), a letter of marque or reprisal.
levée (*le vā′*), a morning reception.
le vrai n'est toujours vraisemblable (*le vrā ne tōō zöōr vre säN bläbl′*), truth is not always probable; truth is stranger than fiction.
l'homme propose, et Dieu dispose (*lŏm prō pōz′, ā dēö′ dēs pōz′*), man proposes and God disposes.
liaisons dangereuses (*lē e zŏN däN zhröz′*), dangerous alliances.
libraire (*lē brer′*), a bookseller.
l'inconnu (*läN kō nü′*), the unknown.
l'incroyable (*läN krwä yäbl′*), the incredible, the marvelous. (The word incroyable was applied substantively to the fops of the directory period in the great French revolution.)
lingerie (*läN zhrē*), linen goods; also, collectively, all the linen, cotton, and lace articles of a woman's wardrobe.
littérateur (*lē tā rä tör′*), a literary man.
lo barato es caro (Sp.), (*lō bä rä′tō ās kä′rō*), a bargain is dear.
l'occhio del padrone ingrassa il cavallo (It.), (*lō′kyō dāl pä drō nä ēn gräs′sä ēl kä väl′lō*), the master's eye fattens the horse.
loyauté m'oblige (*lwä yō tā′ mō blēzh′*), loyalty binds me.
ma chère (*mä sher′*), my dear (fem.).
mademoiselle (*mäd mwä zel′*), a young unmarried lady.
maestro di color che sanno (It.) (*mä es′trō dē kō lōr′ kā sän′no*), master of those that know. (Applied by Dante to Aristotle.)
ma foi (*mä fwä′*), upon my faith; upon my word.
maintien le droit (*mäN tēäN le drwä′*), maintain the right.
maison d'arrêt (*mä zŏN dä ret′*), house of custody; prison.
maison de campagne (*mä zŏN de käN pän′y*), a country house.
maison de force (*mä zŏN d fôrs′*), house of correction.; bridewell.
maison de santé (*mä zŏN d säN tä′*), lunatic asylum.
maison de ville (*mä zŏN d vēl′*), a town hall.
maitre des basses œuvres (*me′tre dā bäs zövr′*), a nightman.
maitre des hautes œuvres (*me′tre dā ōt zövr′*), an executioner; a hangman.
maitre d'hôtel (*me′tre dō tel′*), a house steward.
maitresse (*me tres′*), mistress.
malade (*mä läd′*), sick.
maladie du pays (*mä lä dē′ dü pā ē′*), homesickness.
maladresse (*mä lä dres′*), want of tact, awkwardness.
manège (*mä nezh′*), the art of horsemanship.
mal à propos (*mä lä prō pō′*), ill-timed.
mal de dents (*mäl de däN′*), toothache.
mal de mer (*mäl de mer′*), seasickness.
mal de tête (*mäl de tet′*), headache.
mal entendre (*mä läN täNdr′*), a misunderstanding; a mistake.
malgré nous (*mäl grā nōō′*), in spite of us.
malheur ne vient jamais seul (*mä lör′ ne vēäN zhä me söl′*), misfortunes never come singly.
mardi gras (*mär dē grä′*), Shrove Tuesday.
mariage de conscience (*mä rēäzh de kŏN sēäns′*), a private marriage.
mariage de convenance (*mä rēäzh de kŏN vnäNs′*), a marriage of convenience; or from interested motives.
matinée (*mä tē nä′*), a reception, or a musical or dramatic entertainment, held in the daytime.
mauvaise honte (*mō vez ŏnt′*), false modesty.
mauvais gout (*mō ve gōō′*), false taste.
mauvaise sujet (*mō ve sü zhe′*), a worthless fellow.
mauvais quart d'heure (*mō ve kär dör′*), a bad quarter of an hour; an uncomfortable time; a disagreeable experience.
mauvais ton (*mō ve tŏN′*), vulgarity.
médecin, gueris-toi-toi-même (*mäd säN′, gä rē twä′twä mem′*), physician, heal thyself.
mélange (*mā länzh*), a mixture. A light entertainment of a mixed character.
mêlée ((*me lā′*), a disorderly fight.
ménage (*mā nazh′*), household.
menu (*me nü′*), bill of fare.
mésalliance (*mā zä lēäns′*), marriage with one of lower station.
mir ist alles einerlei (Ger.) (*mēr′ ist ä′les ī ner lī′*), it's all the same to me.
mise-en-scène (*mē zäN sen′*), the staging of a play.
mon ami (*mō nä mē′*), my friend.
mon cher (*mŏN sher′*), my dear (fellow).
monde chic (*mŏNd shēk′*), world of taste; fashionable people.
monsieur (*me sēö′*), sir, master, gentleman.
mot de passe (*mō d pās′*), the watchword.
mot du guet (*mō dü ge′*), a watchword.
mot pour rire (*mō pöōr rēr′*), a witty saying; a joke.
mots d'usage (*mō dü zäzh*),words in common use.
mousseline de laine (*mōōs lēn de len′*), a thin woolen material.
muraglia bianca, carta di matto (It.) (*mōō rä′lyä byäng′kä, kär′tä dē mät′tō*), a white wall is the fool's paper.
naïve (*nä ēv′*), having unaffected simplicity.
naïveté (*nä ēv tā′*), native simplicity.
née (*nā′*), born.
négligé (*nā glē zhā′*), a morning dress.
neue besen kehren gut (Ger.), (*nōi e bā′zen kā ren gōōt′*), a new broom sweeps clean.
ni l'un ni l'autre (*nē lŏN′ nē lōtr′*), neither the one nor the other.
n'importe (*näN pōrt′*), it is of no consequence.
noblesse oblige (*nō ble sō blēzh′*), nobility imposes obligations; much is expected from persons of good position.
nom de guerre (*nŏN de ger′*), a war-name, an assumed name, a pseudonym.
nom de plume (*nŏN de plüm′*), an assumed title.
nonchalance (*nŏN shä läNs′*), coolness; easy indifference.

non mi ricordo (It.) (*nŏn mē rē kôr'dō*), I do not remember.
non obstant clameur de haro (*nŏn ôp stäN klä mör' de ä rō'*), despite the hue and cry.
non ogni fiore fa buon odore (It.) (*nŏn ō nyē fyō'rā fä bwô nō dō'rā*), it is not every flower that smells sweet.
nonpareil (*nôN pä re'y*), unequaled.
non vender la pelle dell 'orse prima di pigliarlo (It.) (*nŏn vän dār lä pel'lā dāl lōr' sä prē mä dē pē lyär'lō'*), don't sell the bearskin before you have caught the bear.
noth kennt kein gebot (Ger.) (*nōt' kent kīn ge bōt'*), necessity knows no law.
Notre Dame (*nô tre däm*), Our Lady, the Virgin Mary.
n'oubliez pas (*nōō blēä pä'*), do not forget.
nougat (*nōō gä'*), a mixture of almonds and sugar.
nous verrons (*nōō ve rôN'*), we shall see.
nouvelles (*nōō vel'*), news.
nouvellette (*nōō ve let'*), a short tale or novel.
nuance (*nü äNs'*), shade; gradation; tint.
nul bien sans peine (*nül bēäN' säN pen'*), no pains, no gains.
nulla nuova, buona nuova (It.) (*nōōl lä nwô vä, bwô'nä nwô'vä*), no news is good news.
octroi (*ôk trwä'*), a tax on articles (for sale) entering a town.
oeil de bœuf (*ö'ĕ d bœf'*), a bull's-eye.
olla podrida (It.) (*ōl'lä pō drē'dä*), a heterogeneous mixture.
on connait l'ami au besoin (*ôN kô ne lä mē' ō be zwäN'*), a friend is known in time of need.
on dit (*ôN dē'*), they say.
oro e che oro vale (It.) (*ô'rō e kā ô'rō vä'lā*), that is gold which is worth gold; all is not gold that glitters.
oublier je ne puis (*ōō blēä' zhe n pwē'*), I can never forget.
oui-dire (*wē dēr'*), hearsay.
outrance (*ōō träNs'*), excess; extremity.
outre (*ōōtr'*), eccentric.
ouvrage (*ōō vrázh*), work.
ouvrage de longue haleine (*ōō vrázh de lôNg ä len'*), a long-winded business.
ouvrier (*ōō vrē ä'*), a workman, an artisan.
padrone (It.) (*pä drō'nä*), master; employer; landlord.
papeterie (*pä pe trē'*), a case with writing materials.
par accord (*pä rä kôr'*), by agreement.
par avance (*pä rä väNs'*), in advance.
par ci, par là (*pär sē', pär lä'*), here and there.
par excellence (*pä rek se läNs'*), preëminently.
par exemple (*pä rāg zäNpl'*), for instance.
parfaitement bien (*pär fet mäN bēäN'*), perfectly well.
parole d'honneur (*pä rôl dô nör'*), word of honor.
partout (*pär tōō'*), everywhere.
parvenu (*pär ve nü'*), a person of low origin who has risen; upstart.
pas à pas (*pä zä pä'*), step by step.
passe (*päs*), worn out.
passe-partout (*päs pär tōō'*), a master key.
pasticcio (It.) (*päs tēch' chyō*), patchwork.
pâté de foie gras (*pä tä' de fwä grä'*), a pie made in Strasburg from the livers of geese.
patois (*pä twä'*), a dialect.
pays Latin (*pä ē lä läN'*), the Latin territory, district, region; the students of the Pays Latin, that is, of the University.
peine forte et dure (*pen fôr tä dür'*), very severe punishment; a kind of judicial torture.
penchant (*päN shäN'*). inclination; liking.
pensée (*päN sä'*), a thought expressed in terse, vigorous language.
per (It.) (*pär*), for, through, by.
per cantante (It.) (*pär kän tän'tä*), for cash.
per contra (It.) (*pär kōn'trä*), on the contrary.
père de famille (*per de fä mē'y*), the father of the family.
perdu (*per dü'*), lost.
per mese (It.) (*pär mä'sä*), by the month.
per piu strade si va a Roma (It.) (*pär pyōō strä'dä sē vä ä rō'mä*), there are many roads to Rome.
persiflage (*per sē fläzh*), chaff; banter.
personnel (*per sô nel'*), the staff of an establishment.
petit (*pe tē'*), small.
petit coup (*pe tē kōō'*), a small mask; a domino.
petites affiches (*pe tēt zä fēsh'*), advertisements.
petit maître (*pe tē metr'*), a little master; a fop.
peu-à-peu (*pö ä pö'*), little by little; by degrees.
peu de chose (*pö d shōz'*), a trifle.
pezzo (It.) (*ped'zō*), piece; piece of money; a coin.
piccolo (It.) (*pēk'kō lō*), small.
pièce de résistance (*pē es'tä rä zēs täNs'*), the principal dish.
pied à terre (*pēä tä ter'*), a temporary lodging.
pied poudreux (*pē ä pōō drö'*), a vagabond.
pigliar due colombi a una fava (It.) (*pē lyär dōō ä kō lōm'bē ä ōō nä fä'vä*), to catch two pigeons with one bean; to kill two birds with one stone.
pioupiou (*pē ōō pē ōō'*), a private soldier; a French "Tommy Atkins."
piquant (*pē käN'*), pointed; pungent.
pis aller (*pē zä lä'*), the worst or last shift.
poco á poco (It.) (*pô'kō ä pô'kō*), little by little; by degrees.
point d'appui (*pwäN dä pwē'*), prop; point of support.
porte-chaise (*porte shez'*), a sedan.
poste restante (*pôs tres täNt'*), to remain until called for; applied to letters in a post office.
pot-pourri (*pō pōō rē'*), a medley.
pour acquit (*pōō rä kē'*), paid, settled; the usual form of receipt.
pour faire rire (*pōōr fer rēr'*), to excite laughter.
pour faire visite (*pōōr fer vē zēt'*), to pay a visit.
pour passer le temps (*pōōr pä sä l täN'*), to while away the time.
pour prendre congé (*pōōr präNdre kôN zhä'*), to take leave. Usually abbreviated to *P. P. C.*
précis (*prā sē'*), a summary; an epitome.
prendre la clef des champs (*präN dre lä klā dā shäN'*), to take the key of the fields; to take French leave.
prendre la lune avec les dents (*präN dre lä lü' nä vek lā däN'*), to seize the moon in one's teeth; to aim at impossibilities.
presto maturo, presto marcio (It.) (*pres tō ma tōō'rō, pres tō mär'chyō*), soon ripe, soon rotten.
prêt d'accomplir (*pre dä kôN plēr'*), ready to accomplish.
prêt pour mon pays (*pre pōōr môN pä ē'*), ready for my country.
preux chevalier (*prö shvä lēä'*), a brave knight.
prima donna (*prē mä dôn'nä*), leading lady singer in opera.
procès verbal (*prô se ver bäl'*), a detailed statement.
propriétaire (*prô prēä ter'*), a proprietor.
protégé (*prô tä zhä'*), one protected by another.
quelque chose (*kel ke shōz'*), something; a trifle.
qui a bu boira (*kē ä bü' bwä rä'*), the tippler will go on tippling; it is hard to break off bad habits.
quien poco sabe, presto lo reza (Sp.) (*kyän pō kō sä'vā, prēs tō lō rä'thä*), he who knows little soon tells it.
quien sabe? (Sp.) (*kyän sä'vā*), who knows?
qu'il soit comme il est désiré (*kēl swä' kō mē le dā zē rā'*), let it be as desired.
qui m'amie aime mon chien (*kē mem' em môn shēäN'*), love me, love my dog.
qui n'a sante, n'a rien (*kē nä säN tä', nä rē äN'*), he who has not health, has nothing.
qui va la? (*kē vä lä'*), who goes there?
qui vive (*kē vēv'*), on the alert.
raconteur (*rä kôN tör'*), a relater; a teller.
raison d'état (*rä zôN dä tä'*), a state reason.
raison d'être (*rä zôN detr'*), the reason for a thing's existence.
rapprochement (*rä prôsh mäN'*), the act of bringing together, reconciliation.
recherche (*re shersh'*), elegant; attractive.
reçu (*re sü'*), received; receipt.
recueil choisi (*re kö y shwäzē'*), a choice collection.
rédacteur (enchef) (*rā dak tö räN shef'*), editor (of a newspaper).
régime (*rā zhēm'*), government; mode of living.
renaissance (*re ne säNs'*), regeneration, revival.
rendezvous (*räN dā vōō'*), a place of meeting.
rentes (*räNt'*), the funds; government stocks.
répondez s'il vous plait (*R. S. V. P.*) (*rā pôN dā sēl vōō ple'*), reply if you please.
répondre en Normand (*rā pôN dräN nôr mäN'*), to answer in Norman; to speak evasively.
restaurateur (*res tô rä tör'*), one who provides.
résumé (*rā zü mä'*), a summing up.
rete nuova non piglia uccello vecchio (It.) (*rā tä nwô'vä nôn pē lyä ōōch chel'lō vek'kyō*), a new net won't catch an old bird.
revenons à nos moutons (*rev nôN zä nō mōō tôN'*), let us return to our sheep, let us come back to our subject.
rien n'est beau que le vrai (*rēäN ne bô' ke l vrā'*), there is nothing beautiful but truth.
rira bien qui rira le dernier (*rē rä bēäN' kē rē rä l der nēä'*), he laughs well who laughs last.
rire entre cuir et chair, rire sous cape (*rē räN tre kwē' rā sher'. rēr sōō käp'*), to laugh in one's sleeve.
robe de chambre (*rôb de shäN br'*), a dressing-gown, a morning gown.
robe de nuit (*rôb de nwē'*), a night-dress.
rôle (*rōl'*), a part in a performance.
roue (*rōō*), a debauchee.
rouge (*rōōzh*), red coloring for the skin.
ruse de guerre (*rüz de ger'*), a military stratagem.
salle (*säl*), a hall.
salle à manger (*sä lä mäN zhä*), dining room.
sanan couchilladas, mas no malas palabras (Sp.) (*sä'nän kōō chē lä'thäs, mäs nō mä läs pä lä'vräs*), wounds from a knife will heal, but not those from an evil tongue.
sang-froid (*säN frwä'*), coolness; self-possession.
sans-culottes (*säN kü lôt'*), without breeches; a term applied to the rabble of the French revolution.
sans façon (*säN fä sôN'*), without form or trouble.
sans pareil (*säN pä re'y*), without equal.
sans peine (*säN pen'*), without difficulty.
sans peur et sans reproche (*säN pör' ä säN re prôsh'*), fearless and stainless.
sans rime et sans raison (*säN rēm' ä säN rä zôN'*), without rhyme or reason.
sans souci (*säN sōō sē'*), free from care.
sauve qui peut (*sōv kē pö'*), save yourself.
savant (*sä vän'*), a man of science.
savoir (*sä vwär'*), knowledge.
savoir faire (*sä vwär fer'*), tact.
savoir vivre (*sä vwär vēvr'*), good breeding.
savon (*sä vôN'*), soap.
scrutin d'arrondissement (*skrü tän' dä rôN dēs mäN'*), municipal ballot.
scrutin de liste (*skrü tän d lēst'*), voting by ballot; the voting for the departmental representatives.
sdegno d'amante poco dura (It.) (*zdä nyô dä män'tä pô kō dōō'rä*), a lover's anger is short-lived.
séance (*sā äNs'*), a sitting.
selon les regles (*se lôN lä reçl'*), according to rule.
sempre il mal non vien per nuocere (It.) (*sem'prä ēl mäl' nôn vyän' pär nwô'chä rä*), misfortune is not always an evil.
se non e vero e ben trovato (It.) (*sä nôn e vä'rō e bän trō vä'tō*), if it is not true, it is cleverly invented.
siècle (*sē ekl'*), an age.
siècle d'or (*sē ekle dôr'*), the golden age (of Louis XIV.).
siècles des ténèbres (*sē ekle dä tā nebr'*), the dark ages.
sie sehen gut aus (Ger.) (*zē zā en gōōt' ows*), you look well.
sobriquet (*sô brē ke'*), a nickname.
soi-disant (*swä dē zäN'*), self-styled; would-be; pretended.
soirée (*swä rā'*), an evening party.
soubrette (*sōō bret'*), on the stage a servant girl who acts in comedies the part of an intrigante.
souffler le chaud et le froid (*sōō flā l shō' ä l frwä'*), to blow hot and cold.
spirituel (*spē rē tü el'*), possessing wit, witty.
sturm und drang (Ger.) (*shloorm oont dräng'*), storm and stress.
tableau vivant (*tä blō vē väN'*), the representation of a picture by persons grouped together, silent and motionless.
table d'hôte (*tähle dôt'*), table according to the hostess.
tache sans tache (*tash säN tash'*), a work without a stain.
taille (*tä'y*), form; stature; shape.
tapis (*tä pē'*), the carpet.
tel maître, tel valet (*tel metr', tel vä le'*), like master, like man.
tendresse (*täN dres'*), passion; affection.
terra cotta (It.) (*ter'rä kôt'tä*), baked earth.
tête-à-tête (*te tä tet'*), a conversation between two parties.
tiens à la vérité (*tēäN zä lä vā rē tā'*), maintain the truth.
tiens ta foi (*tēäN tä fwä'*), keep thy faith.
timbre-poste (*tän bre pôst'*), postage stamp.
toujours perdrix (*tōō zhōōr per drē'*), always partridges; the same thing over and over again.
toujours prêt (*tōō zhōōr pre'*), always ready.
tour de force (*tōōr de fôrs'*), a feat of strength or skill.
tour d'expression (*tōōr dek spre sēôN'*), an idiom.
tourner casaque (*tōōr nā kä zäk'*), to turn one's coat; to change sides.
tout-à-fait (*tōō tä fe'*), wholly, entirely.
tout-à-l'heure (*tōō tä lör'*), instantly.
tout au contraire (*tōō tō kôn trer'*), on the contrary.
tout-à-vous (*tōō tä vōō'*), entirely yours.
tout bien ou rien (*tōō bēäN' oō rēäN'*), all or nothing.
tout-de-suite (*tōō d swēt'*), immediately.
tout ensemble (*tōō täN säNbl'*), the whole.

tout le monde est sage après coup (*tōō l môn de sàzh' à pre kōō'*), everybody is wise after the event.
traduttori, traditori (It.) (*trä dōōt tō'rē, trä dē tō'rē*), translators are traitors.
trottoir (*trô twär'*), sidewalk.
trousseau (*trōō sō'*), wedding outfit.
tutte le strade conducono a Roma (It.) (*tōōt'tä lä strä'dä kōn dōō'kō nō ä rō mä*), all roads lead to Rome.
Uebung macht den Meister (Ger.) (*ü'boong mäkt den mīs'ter*), practice makes perfect.
un bienfait n'est jamais perdu (*ŏn bēän fe' ne zhà me per dü'*), a kindness is never lost.
un sot à triple étage (*ŏn sō' à trē plä tàzh'*), a consummate fool.
un "tiens" vaut mieux que deux "tu l'auras," (*ŏn tēän vō mēō' ke dö tü lō rà'*), one "take it" is worth two "you shall have it"; a bird in the hand is worth two in the bush.
valet de chambre (*và le d shäN br'*), an attendant.
vaurien (*vō rēäN'*), a worthless fellow.
vedi Napoli e poi muori (It.) (*vä dē nä'pō lē ä pôē mwô'rē*), see Naples and then die.
vérité sans peur (*vā rē tā' säN pœr'*), truth without fear.
vers de société (*ver de sô sē ä tä'*), society verses; poetry dealing lightly with trifling subjects.
verve (*verv*), animation; spirit.
Viele Handmachen bald ein Ende (Ger.) (*fē le hent'mäken bält īn ent'*), many hands make quick work.
vi et armis (*vē'et är'mēs*), by force of arms; by violence.
vieux garçon (*vē ô gàr sŏN'*), old bachelor.
vigueur de dessus (*vē gœr' de de sü'*), strength from on high.
vino dentro, senno furore (It.) (*vē'nō den'trō, sän'no fōō rō'rä*), when the wine is in, the wit is out.
virtuoso (It.) (*vēr twō' sō*), one skilled in matters of taste or art.
vis à vis (*vē zà vē*), face to face.
vivat (*vē vät'*), a shout of "long live."
vive la bagatelle (*vēv là bà gà tel'*), success to trifles.
vive la république (*vēv là rā pü blēk'*), long live the republic.
vive l'empereur (*vēv lăN prœr'*), long live the emperor.
vive le roi (*vēv le rwà'*), long live the king.
voilà (*vwà là'*), see there; there is, there are.
voilà tout (*vwà là tōō'*), that is all.
voilà une autre chose (*vwà là ü nō tre shōz'*), that is quite another thing.
voiture (*vwà tür'*), a carriage.
wagon-lits (*và gôN lē*), sleeping cars.
Was fehlt Ihnen? (Ger.) (*vàs fält' ē nen*), what is the matter with you?
Wie die Arbeit, so der Lohn (Ger.) (*vē dē är'bīt, zō der lōn'*), as the labor, so the reward.
zeitgeist (Ger.) (*tsīt'gīst*), the spirit of the age.

III. CULINARY WORDS AND PHRASES

agneau (*ä-nyō*). Lamb.
à la (*à là*), **au** (*ō*), **aux** (*ō*). With; according to; after the manner of; as *huîtres aux champignons*, oysters with mushrooms.
If a dish is cooked, or served, or made, with anything as an ingredient or garnish, the dish may be said to be "*à la*" that substance. So it may be possible to ascertain the meaning of phrases not given below by looking elsewhere in the vocabulary under the word used with the words "*à la*."
à la béarnaise (*à là bā-är-nàz'*). With a sauce of tarragon vinegar in which shallots have been boiled till it is reduced, then combined with egg yolks and butter, and beaten in a bain marie, then seasoned with red pepper and lemon juice.
à la béchamel (*à là bā-shä-mel'*). After the fashion of Béchamel (a French gastronomer); said of a sauce (see Béchamel); also prepared or served with this sauce.
à la Bercy (*à là bâr-sē'*). Served with béarnaise sauce, stuffed green pepper and stuffed tomato.
à la bigarade (*à là bē-gà-ràd'*). Flavored with (Seville) orange juice or peel.
à la bonne femme (*à là bôn fàm*). Of, or in the style of, the housewife; specifically said of a kind of maigre soup made with fish, bouillon, legumes, and an assortment of vegetables.
à la bordelaise (*à là bôr-de-lāz'*). With Bordeaux wine; said of various preparations containing it; as of a sauce, with garlic, shallots, or onions, chopped mushrooms, and a piece of marrow; also with sauce à la bordelaise.
à la bourguignotte (*à là boor-gē-nyot*). Generally, prepared with the addition of red wine of Burgundy, or of Bordeaux, or of the Midi (*i. e.*, meridional provinces of France). At Bordeaux, or when made elsewhere with Gironde wine, the dish would be *à la bordelaise*.
à la caledo'nian (*à là*). Boiled slowly in plain water and then baked with dressing of butter, chopped parsley, and a little lemon juice; said of finnan haddie when so cooked.
à la Camerani (*à là kä-mä-rä'nē*). After the fashion of Camerani; said of a kind of rich chicken-liver soup.
à la Chateaubriand (*à là shä-tō-brē-äN'*). With maître d'hôtel butter.
à la chevreuil (*à là she-vrû'y'*). Served with a savory sauce; said of fillets of beef.
à la chipolata (*à là chē-pō-là'tä*). Containing an addition of the strongly flavored Italian sausages, or the mince with which they are filled.
à la chiffonade (*à là shē-fo-nàd'*). See chiffonade.
à la cocotte (*à là kō-kot'*). Baked (as eggs) in a cocotte, with butter and cream, or with cheese, or the like, and served in the cocotte.
à la crapaudine (*à là krà-pō-dēn'*). Like a crapaudine (the flat piece of iron on which a grate pivot rests); said of grilled chicken, pigeon, etc., when prepared by boning, removing the legs and wings, and pressing flat.
à la Créole (*à là krā-ōl*). With tomatoes.
à la Croissy (*à là krwà-sē'*). Containing carrots in quantity, or at least strongly flavored with them; said specifically of a purée of onions, carrots, turnips, and parsnips stewed in coulis. According to others, containing turnips in quantity, or strongly flavored with them.
à la daube (*à là dōb*). Stewed in daube; said specifically of dishes cooked with small square pieces of salt pork, the round slices of carrots, glaced onions, and turnips.
à la Dauphiné (*à là dō-fē-nā'*). With various vegetables, spinach, lettuce, leek, onions, sorrel, beets, etc.; said of a kind of soup.
à la Dauphinoise (*à là dō-fē-nwàz'*). Generally, sauced over with a thick sauce (or with egg yolk), bread-crumbed, and then fried.
à la diable (*à là dē-à'bl*). Deviled.
à la financière (*à là fē-nàN-syâr'*) With extract of truffles (literally, after the style of a financier); said of a variety of espagnole sauce, and of dishes served with it.
à la Flamande (*à là flà-mäNd'*). Containing cabbage, but more particularly Brussels sprouts, and, usually, turnips and carrots cut in big slices.
à la Florentine (*à là flō-räN-tēn'*). See à l'Italienne.
à la Génevoise (*à là zhà-ne-vwàz'*). Cooked with champagne; said of certain dishes of fish.
à la godiveau (*à là gō-dē-vō'*). With balls made of mincemeat, usually of veal.
à la Holstein (*à là hōl'stīn*). Fried, and served with a fried egg, sardelles, capers, pickled beets, and pickles, and sometimes scraped horse-radish.
à la jardinière (*à là zhàr-dē-nyâr'*). Made with a typical collection of cooked vegetables, as soups, ragoûts, and removes. See jardinère.
à la julienne (*à là zhü-lyen'*). With various vegetables sliced in strips, as carrots, turnips, leeks, onions, celery, lettuce, tarragon, sorrel; said especially of a kind of rich stock soup. Also said of potatoes cut in very slender strips and fried crisp floating in hot fat.
à l'Algérienne (*à làl-zhà-rē-en'*). Cooked with slices of raw ham; said of a preparation of fowl.
à la Languedoc (*à là läNg-dok'*). Cooked with or in olive oil; with olive oil.
à l'Allemande (*à làl-mäNd'*). Having a German provincial peculiarity of preparation, as a garnish of sauerkraut, prunes stewed in wine, quenelles of potatoes, etc.
à la Loren'zo (*à là*). Made of minced crab meat, put on toast spread with anchovy paste, then all covered with parmesan cheese and bread crumbs, buttered, browned in the oven, and served.
à l'Alsacienne (*à làl-sà-syen'*). With pork and frankfurters; also with onions and pork.
à la lyonnaise (*à là lē-ō-nàz'*). With flaked or sliced fried onions; as, potatoes *à la lyonnaise*, or lyonnaise potatoes; sauce *à la lyonnaise*, or Lyons sauce, that is, espagnole sauce with flaked onions fried in oil.
à la macedoine (*à là mä-sä-dwän'*). Made with or of a typical collection of *green* vegetables, mostly in white sauce; also applied to collections of ripe fruit imbedded in jellies, etc.
à la Maintenon (*à là maN-te-nôN'*). A term variously used to designate a mode of cooking mutton or lamb chops; as, (*a*) wrapped in caul; (*b*) garnished with cockscombs and truffles; (*c*) served with a soubise; (*d*) served with financière sauce; (*e*) served with d'Uxelles sauce, etc.
à la maître d'hôtel (*à là mā'tr dō-tel'*). Prepared by a substantial, but homely, modest sort of cooking. Also served with maître d'hôtel butter.
à la Marengo (*à là mà-ren'gō*). With some garlic and oil.
à la Marseillaise (*à là mär-se-lāz'*). With Marsala wine.
à la Ma'ryland (*à là*). With a sauce of butter and cream, with or without wine. It is like à la Newburgh, but less rich.
à la Meyerbeer (*à là mī-ûr-bâr'*). Shirred and served with broiled kidney and truffle sauce; said of eggs.
à la Milanaise (*à là mē-là-nàz'*). See à l'Italienne.
à la mode de Caën (*à là mōd de kàN*). A term used to designate tripe prepared with vegetables, leeks, wine, cognac, etc.
à la Napolitaine (*à là nà-pō-lē-tàn'*). See à l'Italienne.
à la neige (*à là nàzh'*). In some form that suggests snow, as with white-of-egg froth, or in balls of white boiled rice, or the like.
à la New'burgh (*à là*). With a sauce made of cream, egg yolks, Madeira or sherry wine, and butter shaken in a dish over a slow fire until they thicken. Said also of this sauce.
à la nivernaise (*à là nē-vâr-nàz'*). Containing a nivernaise; said of a kind of soup à la julienne. See nivernaise.
à la Normande (*à là nôr-mäNd'*). Generally, with apples in the composition of the dish in some shape or other.
à la Périgord (*à là pā-rē-gôr'*). Flavored with, or consisting of, truffles—alluding to the circumstance that these mushrooms grow of excellent size and quality in the province of Périgord.
à la Polonaise (*à là pō-lō-nàz'*). Having red beets or red cabbage, so as to have their juice, color, and taste; as Polish ragoût, or borsh, which is the type of dishes *à la Polonaise*.
à la poulette (*à là poo-let'*). With white velouté sauce.
à la printanière (*à là praN-tà-nyâr'*). Made with a typical collection of cooked *early* or *spring* vegetables; of a somewhat wider application than à la jardinière.
à la Provençale (*à là prō-vàN-sàl'*). Generally, prepared with more or less of olive oil, and flavored with garlic.
à la Reine (*à là rān*). Of, or after the style of, the queen; said specifically of a kind of chicken soup [*potage à la reine*, (*pō-tàzh' à là rān*)] containing white meat of chicken pounded and rubbed to a powder.
à la Ro'land (*à là*). Made of minced lobster meat in the same manner as *à la Lorenzo* dishes of crab meat. See à la Lorenzo.
à la Saint Cloud (*à là saN'kloo*). With sliced truffles; said of a kind of velouté sauce.
à la serviette (*à là ser-wyet*). Served in or on a napkin, as braised truffles.
à la Soubise (*à là soo-bēz'*). Generally containing onions in quantity; or, at least, strongly garnished and flavored with them; especially, served with a white onion sauce used with lamb or mutton.
à la tartare (*à là tär-tär'*). With tartare sauce, or a sauce of similar ingredients. Also, said of a steak chopped and garnished with onions, pickles, pickled beets, sardelles, and yolk of egg, to be eaten raw.
à la turque (*à là türk*). Shirred and served with chicken livers and mushrooms; said of eggs. Also boiled with rice and saffron; said of chicken.
à l'Aurore (*à lō-rôr'*). With a pink sauce made by coloring velouté sauce with lobster coral or Armenian bole. Also said of sliced hard-boiled eggs put in a dish, covered with velouté, sprinkled with grated egg yolk, and baked.
à la vert pré (*à là vâr prā*). Colored green with vegetables, as with a purée of spinach.
à la Viennoise (*à là vyà-nwàz'*). Applied to dishes usually and typically prepared in the Austrian capital, such as the dumplings termed nockerlin, quenelles of potatoes, and others.
à la Villeroi (*à là vēl-rwà'*). With atelets sauce. Also, said of a poached egg put in a thick white sauce, then covered with egg yolk and bread crumbs, and fried.
à la vinaigrette (*à là vē-nē-gret'*). With vinaigrette sauce.
à l'espagnole (*à là-spà-nyōl'*). Made savory with espangole sauce; specifically, served with a garnish of onions, garlic, green peppers, mushrooms, tomatoes, and minced ham cooked together, and bound with espagnole sauce.
à l'huile (*à-lwēl*). In olive oil; with olive oil dressing.
Alici (*à-lē'chē*). Anchovies, or a similar small fish preserved in oil according to the Italian fashion.
à l'imperatrice (*à laN-pà-rē-trēs'*) Said of shirred eggs served with a slice of paté de fois gras upon each egg.
à l'Irlandaise (*à lēr-làn-dez'*). Containing potatoes in some form, and often cabbage, etc., in mass or as a prevailing garnish.
à l'Italienne (*à lē-tà-lē-en'*). Generally made of, or garnished with, savory macaroni, or paste of that kind, or with ravioli; or made savory with Parma cheese.
Allemande sauce (*àl-mäNd'*). Velouté sauce, with the addition of essence of mushrooms, cream, and a leason, or binding, of yolk of eggs.
alose (*à-lōs'*) Shad.
aloyau (*à-lwà-yō'*). Loin of beef; short rib of beef.
Amontillado (*à-mōn-tēl-yà'dō*). A cheaper variety of wine classed as sherry, but in reality a wine from Sicily or other Mediterranean or Atlantic islands, mixed with a little real sherry.
ananas (*à-nà-nà'*). Pineapple.

anchois (*ăN-shwä'*). Anchovies.
anchovy (*an-chō'vi*). A small fish of the herring family caught in the Mediterranean, and pickled for exportation.
andouille (*ăn-doo'y*). Tripe.
anguilles (*ăn-gē'y*). Eels.
anguilles grillée (*ăn-gē'y grē-yā'*). Spitch-cocked, or grilled, eels.
anisette'. A cordial or liqueur flavored with anise seeds.
arroz à la Valencia'na (*ăr-rō'ä lä*). Valencia rice, a farinaceous substance in grains like rice.
artichaut (*ăr-tē-shō'*). Artichoke.
asperge (*ä-spârzh'*). Asparagus.
aspic (*ăs-pēk'*). A savory jelly made of calves' feet, etc., or with extract of meat, flavored to suit the fancy, and stiffened with gelatine.
au (*ō*). See *à la*.
au beurre roux (*ō bûr roo*). With browned butter.
au chingaras (*ō shaN-gä-rä'*). Sandwiched with ham and grilled; said of ox palates.
au four (*ō foor*). Baked in the oven, as a stuffed fish.
au fromage (*ō frō-mäzh'*). With cheese.
au gras (*ō grä*). Containing meat; said of soups so made.
au gratin (*ō grä-taN'*). With a crust made by browning in the oven; as spaghetti is often served *au gratin*.
au jus (*ō zhü*). In juice; in broth.
au kirsch (*ō kērsh*). With kirschwasser; as an omelet or a punch containing this liqueur is termed *au kirsch*.
aumelette (*ōm-let'*). Omelet.
au naturel (*ō nä-tü-rel'*). In the natural condition; as, anchovies *au naturel*—*i. e.*, without oil or seasoning.
au rhum (*ō rüm*). With rum.
auro'ra sauce. Sauce à l'aurore. See *à l'Aulore*.
au suprême (*ō sü-prām'*). With supreme sauce.
au vert pré (*ō vâr prā*). With sweet or fresh herbs, especially, when they give a green color to the dish.
au vin blanc (*ō vaN blăN'*). With white-wine sauce, as fillets of fish.
aux (*ō*). See *à la*.
aux cressons (*ō kres-sōN'*). With watercresses.
aux rognons (*ō rō-nyōN'*). With kidneys.
ballotine (*bä-lō-tēn'*). A shoulder of lamb, boned, stuffed, larded, and braised.
barbue (*bär-bü'*). A kind of fish.
bard (*bär*). Barbel, a kind of fish.
bardes de lard (*bärd de lär*). Fat slices of bacon for covering meat to be braised.
bar le duc (*bär le dük*). A kind of jam of white gooseberries.
Bava'rian cream. A cream jelly thickened with gelatine and set in a mold, and variously flavored and enriched; a Bavaroise; a kind of flummery.
Bava'rian dumplings. Boiled pudding, consisting of bread fried in fat, bread crumbs soaked in cream or milk, eggs, butter, flour, salt, and spice; or some other similar composition.
Bava'rian sauce. A modified Dutch sauce of vinegar, eggs, and butter flavored with crayfish butter.
Bavaroise (*bä-vä-rwäz'*). Bavarian. See *Bavarian cream*.
bécasse (*bā-käs'*). Woodcock.
Béchamel (*bā-shä-mel'*), or, more properly, **Béchamelle.** Velouté white sauce mixed with cream; named after Louis de Béchamel, a French gastronomer.
beignet (*bā-nyā'*). A fritter.
benedictine (*ben-ē-dik'tēn*). A cordial resembling chartreuse.
beurre (*bûr*). Butter.
beurre frais (*bûr frā*). Fresh (unsalted) butter.
beurre lié (*bûr lē-ā'*). Dutch sauce with less butter than usual.
beurre noir (*bûr nwär*). Butter browned without flour.
beurre roux (*bûr roo*). Butter browned with flour.
biscuit (*bē-skwē'*). French sponge cake.
bis'cuit à couper (*ä koo-pā'*). A form of sponge cake to be sliced and glaced with flavored sugar or sugar mixed with fruit juice.
bis'cuit à la Génoise (*ä lä zhä-nwäz'*). Sponge cake with anise-seed flavor, to be cut and toasted.
bis'cuit à l'Ursuline (*ä lür-sü-lēn'*). A sponge cake with rice and apple or apricot jam mixed into the paste, and grilled orange flower.
bisque (*bisk or bēsk*). A soup of crayfish, made by cooking them in broth with herbs, sliced roots, and seasoning; other similarly prepared shellfish soups or sauces are also called *bisques*.
blancmanger (*blăN-maN-zhä'*) or **blamange** (*blä-mänj'*). A jelly made with calves' feet, or gelatine, and milk of almonds; also, a jelly made of milk and starch, isinglass, or sea moss, with or without added chocolate, grenetine, or the like. This latter dish is more properly called *flummery*.
blanquette (*blăN-ket'*). A mince of white meat, as of chicken, warmed in velouté sauce, and pointed with butter and lemon juice. It often has added to it mushrooms, morels, or truffles.
blond (*blōN*). Concentrated juice or extract of some viand, used to add to certain sauces to give them body; as *blond de veau* (*de vō*), a rich broth of veal made by slowly stewing veal with accessories of ham, rabbit, or the like, with standard broth, shallots, cloves, etc.
bœuf de chasse (*bûf de shäs*). The sportsman's round of beef—the biggest joint of the animal.
bombe glacé (*bōnB glä-sā'*). A confection consisting of an ice casing frozen in the form of a truncated cone with cream of some kind, as Bavarian cream, inside.
Bordelaise sauce (*bōr-de-läz'*). Espagnole sauce with garlic, aromatic herbs, and Bordeaux wine.
bouillabasse (*boo-yä-bäs'*). A soup made of fish broiled and seasoned with onion, orange peel, saffron, oil, and other seasoning to suit the taste.
bouilli (*boo-yē'*). Beef stewed, generally in one piece, and served with sauce.
boulettes de hachis (*boo-let' de hä-shē'*). Forcemeat balls.
bouquet garni (*gär-nē'*). A tied bunch of parsley, onions, bay leaf, and thyme, used to boil in soup to flavor it.
bourguignonnes (*boor-gē-nyon'*). Snails baked with a dressing of shallots, garlic, lemon juice, and butter.
braise (*brāz*) or **braisé** (*brā-zā'*). A piece of braised meat, or a dish prepared by braising; also a preparation mixed and prepared of various ingredients in or with which dishes are braised.
braisé de Boulanger (*brā-zā' de boo-lăN-zhä'*). A compound sauce in which meat is smothered when being braised.
bretonne sauce (*brā-ton'*). Espagnole sauce characterized by juice of fried onions or purée of onions.
Brie cheese or **Brie** (*brē*). A soft, white cream cheese.
bris'ket or **brisquet** (*brē-skā'*). The breast; the part of the breast next to the ribs.
broccoli (*brok'kō-li*). A kind of cabbage resembling the cauliflower.
brochet (*brō-shä'*). Pike; luce—a kind of fish.
brocheton (*brō-she-tōN'*). Pickerel.
brut (*brü*). An effervescent wine.
bückling (*bük'ling*). Red herring.
buisson (*bwē-sōN'*). A dish disposed in a pyramid, and having a prickly [appearance.
bur'goo. Oatmeal porridge.
Burgun'dian sauce. Espagnole sauce flavored with shallots and red Burgundy wine.
cabillaud (*kä-bē-yō'*). A fresh cod.
café (*kä-fā*). Coffee.
café au lait (*kä-fā' ō lā*). Coffee with hot milk; coffee to which milk is added during the process of infusion or boiling.
café bavaroise (*kä-fā' bä-vä-rwäz'*). Coffee with whipped cream.
café noir (*kä-fā' nwär*). Black coffee; that is, coffee without milk.
café parfait (*kä-fā' pär-fā'*). A form of coffee ice cream.
café Turc (*türk*). Turkish coffee; that is, coffee prepared by pouring boiling water on very finely ground coffee in the cup.
caille (*kāl*). Quail.
calipash'. A part of turtle next to the upper shell, containing a dull greenish gelatinous substance, esteemed as a delicacy.
calipee. A part of a turtle attached to the lower shell. It contains a fatty, gelatinous substance of a light yellowish color, esteemed as a delicacy.
Camembert cheese (*kä-mäN-bär'*). A rich, sweet, cream cheese, of a yellowish color, made in the neighborhood of Camembert, in Normandy, France.
canard (*kä-när'*). A duck.
canellons (*kä-ne-lōn'*). Hollow sticks or rolls of baked puff paste.
canelons (*kä-ne-lōn'*). Rugosities of ox palate, or preparations of them, covered with farce, rolled, and gratinated.
caneton (*kä-ne-tōN*). Young duck; duckling.
cannelon of meat (*kä-ne-lōn'*). A baked roll of highly seasoned mincemeat.
ca'pers. The pungent, grayish green flower buds of a trailing shrub (*Capparis spinosa*) of southern Europe.
capilotade of chick'en (*kä-pē-lō-täd'*). A kind of ragoût made of remains of fowl or game and some simple brown sauce.
ca'pon. A castrated cock. It fattens better and is tenderer than the uncastrated ones.
car'dinal sauce. Velouté variously flavored and colored red, as with cochineal.
carnichons (*kär-ni-ē-shōN'*). Gherkins.
carré (*kä-rā*). Breast.
carrelet (*kär-lā'*). A fish, the sole or flounder.
cassareep'. A brown, slightly sweet, aromatic thick extract made from the juice of the manioc.
casserole (*kas'se-rōl*; French pron. *käs-rōl'*). Stewpan.
cas'serole of rice. An ornamental pie case made of paste of prepared rice.
cassis (*kä-sēs'*). Black currants; also, a kind of jelly, and a kind of liqueur or cordial, flavored with black currants.
caviare (*kä-vē-är'*) or **caviar** (*kav'-i-är*). Roe of sturgeon, and other large fish, prepared and salted, and used as a relish. They often resemble morning-glory seeds in appearance.
cèpes (*sāp*) or **ceps** (*sā*). An edible kind of mushroom.
champignons (*shäN-pē-nyōN'*). Mushrooms.
chapon (*shä-pōN'*). Capon.
chapon au gros sel (*shä-pōN ō grō sel*). Plain boiled capon; literally, capon served with a big lump of salt (placed upon it).
charlotte russe (*shär-lot' rüs*) or **charlotte à la russe** (*shär-lot' ä lä rüs*). A dish of custard or whipped cream inclosed in a cup of sponge cake.
chartreuse à la Parisienne (*shär-trûz' ä lä pä-rē-syen'*). A showy entrée, consisting chiefly of quenelles of forcemeat, containing ragoût and kebobs; an entrée de force; an entrée à surprise.
chasse café (*shäs kä-fā'*). A drink of liqueur served after the coffee at dinner.
chateaubriand sauce (*shä-tō-brē-äN'*). See *maître d'hôtel butter*.
chaufroid sauce (*shō-frwä'*). A white or brown jelly containing some sauce; a sauced jelly, or a gelatinized sauce.
cher'vil. A plant (*Anthriscus cerefolium*) with finely divided leaves. Two curly varieties are used in soups and salads.
chiffonade (*shē-fō-näd'*). A salad preparation of lettuce, chervil, sorrel, and scallions, with fresh butter, and some bouillon poured over it. When milk or fresh cream is added, it is called *potage à la chiffonade*; otherwise *potage de santé* (*pō-täzh' de säN-tā'*).
chil'i. A kind of red pepper or capsicum.
chil'i sauce. A sauce condiment made with chilis, tomatoes, etc.
Chinese' stur'geon soup. A soup of beef and veal, containing pieces of cartilage from the sturgeon's head boiled tender.
chive. A plant allied to the onion, of which the young leaves are used in omelets, etc.
choucroute (*shoo-kroot'*). French sauerkraut, or sauerkraut in general.
choufleur (*shoo-flür'*). Cauliflower.
choux (*shoo*). (*a*) Cabbages. (*b*) See *choux pâtissières*.
choux de Bruxelles (*shoo de brü-sel'*). Brussels sprouts.
choux de mer (*shoo de mär*). Sea kale, a kind of cruciferous pottage root.
choux pâtissières (*shoo pä-tē-syär'*). Soufflés in small molds; small cakes of baked batter.
civet (*sē-vā'*). A ragoût of hare [civet de lievre (lyä'vr)], deer [*civet de chevreuil* (*she-vrü'y*)], or other game, into which wine and onions enter as ingredients.
clare'mont sauce. Butter sauce flavored by frying onions in it. The onions are removed after frying.
cock'a-lee'kie. Capon soup, boiled with leeks and prunes—a favorite Scotch dish.
cock'tail of oysters or clams. A dish containing oysters or clams seasoned with ketchup, pepper, etc., and served in a tumbler or glass.
cocotte (*kō-ket'*). A kind of iron casserole with two loop handles and a cover.
cœurs d'artichauts (*kûr-där-tē-shō'*). Artichoke heads.
cognac (*kō-nyäk'*). A brandy distilled at Cognac, in France; hence, loosely, any French brandy.
coing (*kwaN*). Quince. A liqueur, or ratafia, is made flavored with quince; and a jelly of quinces is called *coing de tranches* (*de tränsh*).
collared. This term is loosely used with no apparent definite meaning in the names of various dishes.
col'lared beef. A thin piece of beef, usually from the flank, rolled into a round form.
col'lops. Small pieces or slices.
com'fit. A dry sweetmeat; fruit, seed, or the like, preserved in sugar and dried.
compiègne cake (*kōN-pyän'*). A kind of cake intended to be drenched with liqueur, sliced, and sandwiched with apricot jam.
com'pote (French pron. *kōN-pōt'*). Cooked fruit; fruit preserved with sugar so as to preserve its form. Also, a savory dish of pigeons, quails or larks, mixed with peas or mushrooms.
confit (*kōN-fē'*). A dry sweetmeat; fruit preserved in sugar and dried; a comfit.
confiture (*kōN-fē-tür'*). Preserves.
consommé *kōN-sō-mā'*). Strong broth of meat and vegetables, concentrated till slightly browned; in restaurants applied to thin soups such as would be made by this broth diluted.
cor'dial. A sweet and aromatic liquor. A *liqueur* is an alcoholic cordial.
côte (*kōt*). A rib.
côtelette (*kōt-let'*). A small rib; part of a rib; a piece of meat with the rib attached; a cutlet.

court bouillon (*boo-yŏn'*). A very rich bouillon made by braising bouillon vegetables in butter, evaporating down, and then boiling in wine. It is added to sauces.
crême (*krăm* or *krâm*). A cordial of the relatively thick or viscid kind, such as *crême* de la menth (cream of minth), *crême* de la moka (cream of mocha coffee), *crême* de cocoa (cream of cocoa), etc.
crême bachique (*krăm bă-shēk'*). A custard jelly with wine and egg-froth.
crême brulée (*krăm brū-lā'*). Brown sugar, or caramel, with cream.
crême fouettée à la paysanne (*foo-et-ta' à lā pā-zăn'*). Whipped cream.
créole (*krā-ōl'*). See *à la créole*.
crêpes (*krāp*). Small fried cakes; a form of French pancake.
cressons (*krā-sŏn'*). Cresses.
crevette (*krā-vet'*). Shrimp.
croquants (*krō-kăn'*). A piece of crisp pastry or confection which makes a crunching sound between the teeth, as a macaroon or a nougat.
crouton (*kroo-tŏn'*). Small pieces of bread fried in butter or oil, for use as a garnish to salmis, fricassees, etc., or to serve with soups.
croquembouches (*krō-kăn-boosh'*). Small mounted pieces of crisp pastry, such as macaroons, nougats, gimblettes, etc.
crum'pet. A kind of large, thin, light cake or muffin cooked on a griddle.
cuissot (*kwē-sō'*). Haunch.
cyg'net. A young swan.
dantesques (*dăn-tesk'*). Frozen custards.
darlole (*dä-rē-ōl'*). A piece of pastry consisting of a shallow cup of short paste, filled with a rich compound of cream or custard with macaroons, fruit, or the like.
darne (*därn*). Slice; cut.
de (*de*). Of.
demi-tasse (*dā-mē-tăs'*). A small cup for black coffee.
désossée (*dā-sō-sāL'*). Boned.
diablotins (*dē-ab-lō-tăn'*). (*a*) Frozen custards. (*b*) Neapolitan dragées. (*c*) Chocolate bonbons in paper.
dinde (*dănd*). Turkey.
dindonneau (*dăn-dō-nō'*). Young turkey; turkey pout.
di zara (*dē zä'rä*). A less common name for maraschino.
Dutch sauce. Butter emulged with yolk of egg, or a sauce with this as a basis; Hollandaise sauce.
éclanche (*ā klănsh'*). Shoulder of mutton.
écrevisse (*ā-kr-vēs'*). Crayfish.
empotage (*ăn-pō-tăzh'*). Consommé or gravy broth.
en ballon (*ăn bā-lŏn'*). Boned and stuffed with forcemeat, etc.—said of fowle' legs so cooked.
en brochette (*ăn brō-shet'*). On wooden skewers.
en caneton (*ăn kā-ne-tŏn'*). A term used to designate fowls' legs boned and stuffed with forcemeat, etc.
en casserole (*ăn kā-s-rōl'*). In a casserole.
en coquille (*ăn kō-kē'y*). (Served) in shells, as oysters prepared as if to be escalloped and then baked in shells and served.
en eracovie (*ăn krā-kō-vē'*). With salpicon wrapped in calf's udder or pig's caul—said of ox palates.
escargots (*ās-kär-gō'*). Snails.
escarole (*es-kā-rōl'*). A species of chicory used for salads; also, a variety of lettuce resembling this.
espagnole sauce (*es-pā-nyōl'*). Brown sauce made by boiling meat and flavoring vegetables and spices in normal broth to a glace, browning with roux, and removing the fat.
esturgeon (*es-tür-zhŏn'*). Sturgeon.
faisan (*fā-zăn'*). Pheasant.
fanchonettes (*făn-shō-net'*). Small cakes like tartlets covered with meringue froth, with jam, currants, etc.
farcie (*fär-sē'*). Stuffing of forcemeat.
farine de riz (*fä-rēn' de rē'*). Rice flour.
fausse tortue (*fōs tōr-tü*). Mock turtle.
fécule de pommes de terre (*fā-kül' de pum de târ'*). Potato starch, used especially in making Savoy cakes, and other gateaux.
feuilletage (*fû-ye-tăzh'*). Puff paste.
filet (*fē-lā'*). Eng. **fil'let.** (*a*) The under cut of the loin of beef and venison. (*b*) Breast of fowl or game when cut out [the inner muscles near the bone being the filet mignons (*fē-lā' mē-nyŏn'*)]. (*c*) Any longish strips of meat or vegetables.
filet du dedans (*fē-lā' dü dā-dăn'*). The under cut of the loin of beef; a filet.
fil'let. See *filet*. Fillet is the usual spelling in English culinary books.
Fin'nan had'die. Haddock cured in peat smoke, originally coming from Findon (pronounced *fin'an*) in Scotland; also, haddock smoked in other ways.
flageolets (*flä-zhō-lā'*). Beans.
flamms. Pancakes.
fleurons (*flû-rŏn'*). Punched-out ornaments of bread (crusted or fried), or of paste (baked), or of other materials.
Flor'ence cakes or Flor'entines. A kind of cake consisting of a thin shell of puff paste containing a composition of curds, butter, yolks, flour, bitter almonds, and lemon, or a very similar composition.
flum'mery. A cold, sweet dish chiefly of cereals, often with fruit in it, molded and to be eaten with wine, milk, or sauce.
foie (*fwä*). Liver.
fond (*fŏn*). The broth or juice from braised flesh or fish, usually served as a sauce.
fondue (*fŏn-dü'*). A preparation of cheese, eggs, and butter melted together.
fraise (*frāz*). Strawberry.
framboise (*frăn-bwäz'*). Raspberries.
frangipane (French pron. *frăn-zhē-pän'*). A kind of compound pastry cream flavored with almonds, with which pastry is garnished.
fromage (*frō-mäzh'*). Cheese.
fromage à la Chantilly (*ä lä shăn-tē-yē'*). **fromage de Chantilly** (*de shăn-tē-yē'*). Apricot jam.
fru'menty. A food prepared by boiling wheat in milk to a jelly, usually with the addition of currants, sugar, egg yolk, and spice.
fumet (*fü-mä'*). A high-flavored substance, such as extract of game, for flavoring dishes of food; also, less properly, a ragoût of partridge and rabbits braised in wine.
gal'atine. Boned fowl, veal, or the like, stuffed with pieces of meat and force, boiled, and served cold, with a garnish of jelly or aspic.
gal'imaufry or **galimafrée** (*gä-lē-mä-frā'*). A kind of ragoût of various kinds of meat highly flavored.
garbanças (*gär-băn-säs'*). Chick-peas.
garbure (*gär-bür'*). A soup of bacon and cabbage or other vegetables sometimes with cheese added.
Gas'cony sauce. Velouté with capers, truffles, and egg yolk.
gaspacho (*gäs-pä'chō*). A bread-and-vegetable salad, made by the Spanish, containing pimentoes, tomatoes, oil, and vinegar, and (in the richer form) fish, crayfish, piquant preserves, etc.
gâteaux (*gä-tō'*). Cakes of flour, butter, and eggs.
gâteaux de puits d'amour (*de pwē dä-moōr'*). Lovewells.
gauffres (*gō'fr*). Waffles.
gelée (*zhe-lā'*). Jelly.
Gene'va sauce. A coulis of fried onions with meat essence or espagnole, with anchovy butter, and usually port or claret wine. It is used especially with fresh water fish.
génoise sauce (*zhā-nwäz'*). Espagnole sauce flavored with fumet and red wine.
génoises (*zhā-nwäz'*). Glazed cakes of sugar, eggs, flour, and almonds.
gibelotte (*zhē-blot'*). Stewed rabbit; sometimes, stewed chicken or other white meat.
gibier (*zhē-byā'*). Game, as hare, deer, etc.
gigot (*zhē-gō'*). Leg of mutton.
gimblettes (*zhăn-blet'*). Small pastry preparations, such as croquignoles and croquembouches. Small pastry, or patés de petit four; they are used as ingredients of croquembouches.
glace (*glās*). A glaze, or broth, reduced by boiling to a gelatinous paste, so that when poured over meats it will give them a shiny appearance.
glacé (*glä-sā'*). Covered with glace.
glaced (*glāst*). Iced; having a shiny appearance produced by a coating of sugar, gelatine, or glace.
glaize or glase (*glāz*). A glace.
godiveau (*gō-dē-vō'*). A kind of mincemeat, usually of veal, made into balls, to garnish the interior of hot patés and vol-au-vents.
gold'en buck. A Welsh rarebit served with a poached egg on it.
goujon. (*goo-zhŏn'*). Gudgeon, a rather coarse fish.
goulash (*goo-lăsh'*). See *gulash*.
gratin (*grä-tăn'*). The brown crust formed upon a gratinated dish; also, the dish itself.
grat'inate. To cook, as macaroni, in a savory sauce or broth until the juice is absorbed and a brown crust forms.
gren'adine. A kind of fricandeau, with a basis of forcemeat.
grenouille (*gre-noo'y*). Frog.
grill. To broil.
grenadin (*grä-nä-dăn'*). A small fricandeau, or dish made with a basis of forcemeat.
groseille à maquereau (*grō-zā'y à mä-k'rō'*). Gooseberry.
gros rôti (*grō rō-tē'*). A large joint of roast meat.
Gruyère cheese (*grü-yär'*). A kind of salted cheese in thin cakes.
guava jel'ly (*gwä'vä*). An excellent jelly made from the slightly astringent fruit of either of two tropical trees.
gulash (*goo-läsh'*), or **Hunga'rian gulash.** A ragoût of rump steak flavored with paprika.
gum'bo. A soup thickened with the mucilaginous pods of the okra; also, the okra pods themselves.
hareng (*ä-răn'*). Herring.
haricot (*ä-rē-kō'*). A stew or ragoût of meat. Also, the common string bean.
haricots verts (*ä-rē-kō' vâr*). Green string beans.
Hollandaise sauce (*ō-lăn-dāz'*; Eng. pron. *hol'lan-dāz'*). See *Dutch sauce*.
homard (*ō-mär'*). The European lobster—larger than the American lobster, called *homard americaine* (*ō-mär'dä-mä-rē-kăn'*).
hors d'œuvres (*ôr dûv'r*). Relishes; dishes which, while not sufficient to constitute a substantial meal, are served by themselves; as patties, rissoles, and other hot, light entrées, and cold entrées, such as sardines, oysters, anchovies, etc. The latter (*cold hors d'œuvres*) are eaten directly after the soup.
huîtres (*wē'tr'*). Oysters.
huîtres au lit (*ō lē*). Same as pigs in blankets.
hure de sanglier (*ür de săn-glyā'*). Head of wild boar.
jambon (*zhăn-bŏn'*). Leg.
jardinière (*zhär-dē-nyär'*). A dish cooked à la jardinière. See *à la jardinière*. Jardinière soup has as many roots and green vegetables as can be; it differs from julienne soup by the prevalence of green vegetables in it.
julienne soup (*zhü-lyen'*). Soup à la julienne. See *à la julienne*.
jus (*zhü*). Broth; soup juice; gravy.
kip'pered her'ring. A herring split, salted, and smoked.
kirshwasser (*kĕrsh-väs'ûr*). A cordial distilled from the juice of the small black cherry.
klöse (*klû'ze*). Dumplings.
kumiss (*koo'mis*) or **kumys.** A beverage consisting of a liquor made by fermenting milk, originally mare's or camel's milk.
kummel (*koom'mel*). A liqueur made in Germany and Russia flavored with cumin, caraway, or fennel.
laitue (*lā-tü'*). Lettuce.
langouste (*lăn-goost'*). The crawfish.
langue (*lăng*). Tongue.
lapereau (*lä-p'-rō'*). Young rabbit; cony.
lapins en accolade (*lä pan à nä-kō-läd'*). A brace of rabbits on a dish.
lasagne (*lä-săn'y*). Ribbonlike strips of macaroni paste; also noodles.
leason (*lē'son*). Thickening, as flour, starch, egg yolk, etc.
lebkuchen (*lāp'koo'ken*). A cake of flour and honey, variously flavored; also, a similar cake of flour and sugar.
legumes (*lē-gümz'*). Peas, lentils, or beans; improperly, fruit or green vegetables.
lev'eret. A young hare.
levreau (*lä-vrō'*). A young hare. *Levreau au sang* (*ō săn*) is a dish of young hares cooked with added pigeon blood.
macarons (*mä-kä-rŏn'*). Macaroons.
macaro'ni. A paste of wheat flour and water dried in the form of long slender tubes. When prepared in still smaller tubes it is called spaghetti and vermicelli.
macaroon. A small cake composed chiefly of whites of eggs and sugar (meringue) with pounded almonds, or sometimes filberts, cocoanut, or the like.
macédoine of fruit (*mä-sä-dwăn'*). A sweet jelly with whole fruit in its substance.
macédoine of veg'etables. A mixture of several vegetables, cooked, with some white sauce added.
macédoine sal'ad. A salad of mixed vegetables.
macroon'. A macaroon.
madère (*mä-där'*). Madeira wine.
maigre (*mā'gr*). Lean meat; also, any food other than meat. Also, a kind of fish. *Maigre soups* are those without meat, such as those used in Lent.
maître d'hôtel but'ter (*mā'tr dō-tel'*). Butter mixed with parsley, lemon juice, salt, and nutmeg—cold *maître d'hôtel sauce*.
manchons de veau à la Gérard (*măn-shŏn' de vō à lä zhā-rär'*). A dish of slices of veal rolled and stuffed.
maraschino (*mä-rä-skē'nō*). A cherry cordial made in Dalmatia from a sour cherry called *marasca*; hence, a similar liqueur prepared elsewhere.
marasquin (*mä-rä-skan'*). French for maraschino.
marchand de vin (*mär-shăn' de van'*). Stewed with shallots, espagnole, and claret wine—said especially of kidneys.
march'pane. A cake of pounded almonds or pistachio nuts and sugar.
marsala (*mär'sä-lä*). A class of white Sicilian wines, of which the best kinds resemble Madeira, but are lighter.
mayonnaise sauce (*mä-y-nāz'*). A sauce of egg yolk and oil worked together, less properly with vinegar.

mennière (*me-nyâr'*). With brown butter, lemon juice, and parsley.
meringue (*mā-raNg'*). Icing of white of egg and sugar thoroughly beaten together, sometimes with starch added. Pure meringues are called *baisers* (*bā-zā'*) or Spanish foam.
meringue glacée (*glā-sā'*). A glazed meringue.
merluche (*mâr-lūsh'*). The haddock.
mirabelles (*mē-rā-bel'*). Plums of a certain superior variety.
morue (*mō-rū'*). Codfish.
moules (*mool*). Mussels.
moules à la bordelaise (*ä lä bôr-de-lāz'*). Mussels in forcemeat.
mousseron (*moo-srōN'*). Mushroom (the edible kind).
mouton (*moo-tōN'*). Mutton.
mulled (*muld*). Properly, heated and spiced; but often used to mean, made mild by sugar (acid wines), or by dilution (alcoholized wine).
mul'ligatawny or **mul'ligatunny.** A spiced or curried soup of hashed chicken and rice.
Na'ples biscuit. Lady fingers.
Na'ples ice, Na'ples ice cream. Same as Neapolitan ice; Neapolitan ice cream.
Neapol'itan ice, Neapol'itan ice cream. Ice or ice cream prepared in layers, especially when colored, as in white, red, and yellow.
Neapol'itan sauce. Espagnole flavored with grated horse-radish, and a sweet and savory wine fumet.
nec'tarine. A smooth skinned variety of peach. The *Spanish nectarine* is a plum-like West Indian fruit, which is made into a sweet conserve.
nesselrode pudding (*nes'sel-rō-de*). Iced or frozen chestnut-and-fruit pudding.
neufchatel cheese (*nûf-shä-tel'*). A cheese made by thickening cream by heat and pressing it in a small mold.
nivernaise (*nē-vâr-nāz'*). A ragoût-like dish of carrots stewed in consommé.
nougat (*noo-gä'*). A mixture of almonds, pistachios, filberts, or the like, and honey or sugar baked together.
nouilles (*noo'y'*). Noodles.
œufs (*ûf*). Eggs.
œufs à la farce (*ûf ä lä färs*). Hard boiled eggs with stewed sorrel.
œufs à la tripe (*ä lä trēp*). Hard boiled eggs with onion sauce.
œufs brouillés. Scrambled eggs.
ognon (*ō-nyōN'*). Onion.
ognon d'Egypte (*dā-zhēpt'*). The rocambole, a mild, sweet onion.
o'kra. A plant, the long green, mucilaginous pod of which are used in soups, stews, etc.
olla (*ōl'lä*). Ragoût.
omelette au thon (*ōm-let' ō tôN'*). Omelet with tunny, a kind of fish.
omelette aux confitures (*ō kōN-fē-tür'*). An omelet served with fruit jelly. Jams do not go well with omelets.
oreilles (*ō-rā'y*). Ears; as, *oreilles de veau* (*de vō*), calf's ears.
orgeade (*ôr-zhäd'*). Milk of almonds, made by stirring sirup of almonds in water; also, orgeat.
orgeat (*ôr-zhä'*). Sirup of almonds; also, orgeade.
Or'leans sauce. A mince of carrots, anchovies, hard-boiled eggs, and gherkins, with peppersauce.
pabrica (*pä'brē-kä*). Paprika.
pain (*paN*). Bread.
panais (*pä-nā'*). Parsnips.
panée (*pä-nā'*). Bread-crumbed (over egg yolk, sauce, butter, or fat) previous to frying.
panière (*pä-nyâr'*). A basket, as that for holding a wine bottle. Also, an entrée panée.
pannequets (*pän-kā'*). French pancakes.
paprika (*pä'prē-kä*). A mild kind of red-pepper condiment obtained from *Capsicum annum.*
Pari'sian loaves. Finger cakes ornamented with strips of currant jelly, green-gage jam, or the like.
Pari'sian sauce. Allemande flavored with truffles and tinted.
pas'caline. White mushroom sauce.
paté (*pä-tā'*). A pasty.
paté aux choux (*pä-tā' ō shoo'*). Cream-cake paste, which resembles a cabbage head when baked.
paté de foie gras (*pä-tā' de fwä-grä*). Pie of fat livers.
paté mollette (*pä-tā' mō-let'*). A Mecca cake.
patés (*pä-tā'*). Pasties.
patés chauds (*shō*). Hot pasties.
patés de petit four (*de pe-tē' foor*). Small pasties—literally, pasties of the little oven.
patés froids (*frwä*). Cold pasties.
perdreux (*pâr-drû'*). Partridges.
perdrix (*pâr-drē'*). A partridge.
persillade of fish (*pâr-sē-läd'*). Fish with parsley.
petit rôti (*pe-tē' rō-tē'*). A roast fowl.
petit salé (*sä-lā'*). Pickled pork in small pieces.
petits choux. Same as choux pâtissière.
petits fois (*pe-tē' fwä*). Peas.
pigeonnaux (*pē-zhō-nō'*). Squabs.
pigeons innocents (*pē-zhōN' ē-nō-sänN'*). Squabs.
pilau (*pi-law'*) or **pillau.** An oriental dish of rice stewed with mutton, lamb, or fowl, almonds, raisins, and saffron and other spices.
pimen'to. Allspice, or Jamaica pepper.
pimo'la. An olive stuffed with sweet peppers.
piquante sauce (*pē-käNt'*). Espagnole with pickles added and flavored with shallots.
plombière (*plōN-byâr'*). A kind of frozen fruit pudding.
poché (*pō-shä'*). Poached.
poisson *pwä-sōN'*). Fish.
poivrade (*pwä-vräd'*). Peppersauce.
polen'ta. Porridge.
polonaise cakes (*pō-lō-nāz'*). A kind of tart made of puff paste with jelly at the corners.
pomme (*pum*). Apple.
pomme d'api (*pum dä-pē'*). Small rosy apple.
pomme de terre (*de târ*). Common Irish potatoes.
pompa'no. A highly esteemed marine food fish.
potage (*pō-tāzh'*). Soup; pottage; broth.
potage à la Camerani (*ä lä kä-mä-rä'nē*). A rich kind of chicken-liver soup.
potage croute au pot (*kroot ō pō*). Plain broth with vegetables and crusts browned in gravy.
pot pourri (*pō poo-rē'*). A ragoût of various meats and vegetables cooked together.
printanière (*praN-tä-nyâr'*). A dish cooked à la printanière. See *à la printanière.* Printanière soup is the same as jardinière soup, essentially.
profiterolles (*prō-fē-trōl'*). Sweet entremets, a kind of cake filled with custard.
pumpernickel (*poom'per-nik'l*). Black bread made in Westphalia of unbolted rye. It is of an acid taste.
purée (*pü-rā'*). A pulpy maceration of meat, vegetables, fruit, or the like, passed through a sieve.
quartier (*kär-tyä'*). Quarter; especially forequarter.
quasi de veau (*kä-zē' de vō*). The thick end of a loin of veal.
quenelle (*ke-nel'*). A kind of delicate forcemeat ball or dumpling.
radis (*rä-dē'*). Radish.
ragout (*rä-goo'*). A rich compound consisting of quenelles, mushrooms, truffles, etc., mixed with a rich sauce, and used to garnish rich dishes; also, a dish garnished with this.
ramequin (*ram'ē-kin*; French pron. *rä-me-kaN'*). A pastry consisting of a preparation of cheese inclosed in or mixed with puff paste, and baked or browned. Cheese straws are thin ramequins of cheese mixed with puff paste.
ratafiä (*rä-tä-fē-ä'*). (*a*) Noyau, curacao, or other liqueur containing kernels of fruit, as of peaches, cherries, etc. (*b*) A small macaroon made mainly of bitter almonds.
réchauffé (*rā-shō-fā'*) or **réchauffée.** Warmed or heated over a second time.
relevés (*rä-l'-vä'*). Same as remove.
rémoulade (*rä-moo-läd'*). A purée of anchovies, capers, parsley, shallots, and hard-boiled eggs, dressed with spices, oil, and vinegar.
rémoulade à la provençale (*ä lä prō-väN-säl'*). Rémoulade not sieved and with more oil.
remove. A dish removed from the table to make room for another; applied generally to the roasts, joints, turkeys, fillets, etc., which follow the soup and fish at an ordinary dinner of several courses.
ris de veau (*rē de vō*). The sweetbread; pancreas.
rissole (*rē-sōl'*). A kind of pastry made of minced and spiced meat or vegetables, or fruit, wrapped in paste, and fried in fat—originally one containing rice as an ingredient.
rissolé (*rē-sō-lā'*). Browned by baking or frying.
rissolette (*rē-sō-let'*). A croutade, or bit of fried bread containing or holding a little portion of forcemeat.
rognons (*rō-nyōN'*). Kidneys; fries.
romaine salad (*rō-mān'*). A kind of mixed vegetable salad.
Ro'man punch. A water ice flavored, as with lemon, and mixed with rum or other spirits. Also, a complicated punch, similar in preparation to regency punch, with added frozen white of egg froth.
roquefort (*rōk-fôr'*). A French cheese made from the milk of ewes, cured in a cavern in the limestone rock at Roquefort, France.
rothe grütze (*rō'te grōōt'se*). A flummery of rice grits and fruit juice.
roulette (*roo-let'*). A dish consisting of a slice of meat spread with stuffing, rolled, and stewed or braised.
roux (*roo*). Browned by frying in butter or other grease.
roux blanc (*blänN*). Starch or flour fried in fat so as to be hardly colored.
roux brun (*brüN'*). Fried a dark brown.
Rus'sian sauce. A velouté with egg yolks and strong herbs.
Rus'sian soup. A gravy soup of veal, fowl, etc., with souchets of salmon, eel, perch, mullet, quenelles of whiting, lobster coral, and mushroom purée.
salad russe (*sä-läd'rüs*). A dish of chicken meat, ham, veal, etc., sliced, arranged separately and served with truffles, and tartar sauce, or caviare and sardelles, etc.
Sal'ly Lunn. An English tea cake.
salmagun'dy. A salad of cold chicken, veal, eggs, beets, anchovies, etc., finely minced and spiced.
salmis (*säl-mē'*). A ragoût of roast game or fowl in rich gravy or sauce.
sal'picon (French pron. *säl-pē-kōN'*). A ragoût or rich compound of chopped meat or fish and vegetables with savory sauce, used as a separate dish, as a garnish, to stuff meats, etc.
sauce beurrée à l'Anglaise (*bû-rā' ä läN-glāz'*). Butter sauce.
sauce blanche (*blänsh*). Butter sauce.
sauce Colbert (*kōl-bâr'*). Brown sauce with meat glace, lemon juice, parsley, and butter stirred in.
sauce de gourmets (*de goor-mä'*). A coulis with a purée of tomatoes and crayfish butter.
sauce en tortue (*äN tôr-tü'*). Espagnole sauce, a kind of sauce used for calf's head.
sauce Italienne rousse (*ē-tä-lyen' roos*). A sauce of espagnole, varied and flavored with shallots, mushrooms, and olive oil.
sauce piquante (*pē-käNt'*). An acid or sour sauce.
sauce Robert (French pron. *sōs rō-bâr'*). A full-flavored espagnole sauce, strongly flavored with onions, mustard, and zested with lemon juice or vinegar.
sauce rousse (*roos*). Brown sauce.
saumon (*sō-môN'*). Salmon.
sauté (*sō-tā'*). Lightly and quickly fried in little grease.
savoy' cakes. Lady fingers or other fancy cakes of sponge-cake paste.
scones (*skōnz*). Scotch cakes of oatmeal or flour.
selle (*sel*). Saddle.
soubise sauce (*soo-bēz'*). A purée of white onions or souchie.
souchet (*soo-shä'*) or **souchie** (*sōō-shē'*). A stew of fish in a soup-like savory broth.
soufflé (*soo-flä'*). A dish consisting of batter of starch or flour, eggs, milk or cream, and butter, beaten light and baked and served hot while light and spongy. Soufflés may be variously flavored, as with ginger, vanilla, chocolate, etc.
spaghetti (*spä-get'tē*). Hollow tubes of dried Italian paste, in size between macaroni and vermicelli.
Span'ish cream. Gelatine pudding containing custard, gelatine, and beaten white of eggs, set in a mold.
Span'ish puffs. Meringues.
suprême sauce (*soo-prām*). Velouté flavored with mushrooms and consommé of fowls.
tar'tare sauce. Mayonnaise sauce with vinegar and chopped green herbs, pickles, and capers.
tête (*tāt*). Head.
timbale (French pron. *taN-bäl'*). A drum-like case of macaroni or rice filled with some composition, as with forcemeat or ragoût.
truffes (*trüf*). Truffles.
truf'fle. A kind of edible mushroom that grows underground.
truite (*trwēt*). Trout.
Turk'ish cof'fee. Café au Turc.
tutti-frutti (*toot'tē-froot'tē*). A confection consisting of preserved fruits of various kinds.
valen'cia rice. Rice boiled till the grains are soft and then mixed with oil and tomatoes.
veau (*vō*). Veal.
vin (*vaN*). Wine.
vinaigre (*vē-nā'gr'*). Vinegar. *Vinaigre a l'éstragon* (*ä lās trä-gōN'*) is vinegar flavored with tarragon.
vinaigrette (*vē-nā-gret'*). A sauce made sour by acid wine or vinegar.
vin ordinaire (*vaN ôr-dē-nâr'*). Ordinary table wine; claret.
volaille (*vō-lāl'*). Poultry.
vol-au-vent (*vō-lō-väN'*). A light puff-paste case baked and then filled with a ragoût, fricassée, or the like.
Welsh rare'bit or **rab'bit.** A dish consisting essentially of toasted bread on which is served toasted or melted cheese. The cheese is variously prepared, as with the admixture of ale, or other flavoring material.
white sauce. Same as velouté, or similar sauce.
wiener schnitzel (*vē'ner shnits'el*). A cut of veal from the leg fried in batter, and seasoned with paprika, etc., after a style attributed to the Viennese.

LITERATURE

Literature, in its most extended significance, comprehends everything written in a given language which is colored by the temperament of the writer. A geometrical treatise should be colorless, though Euclid's *Elements* are marked by a sense of form and proportion peculiar to the Greek mind. A plain statement of fact is almost invariably colored by the sentiment of the narrator and his belief as to what is interesting and important. In a narrower sense, literature is restricted to writings to which the temperament of the writer has imparted charm, whether by reason of his earnestness and breadth of mind, his love of nature or of his fellow-men, or his peculiar power of embodying impressions in a verbal form of attractiveness and suggestion.

To the writer, literature is a method of expression and communication. Men naturally desire to express themselves, to put into form their ideas on some subject that appears to them of interest and importance. Matthew Arnold, influenced largely by his familiarity with the poetry of Wordsworth, defined literature to be a criticism (expression of judgment) of life. It would be nearer the truth to say that it contained a criticism of life. As man is essentially a "social animal," in the phrase of Aristotle, he desires to communicate his views to others. Even Milton, whose soul "like a star dwelt apart," sought an audience "fit though few." This desire to express and to communicate is the impelling force to the creation of literature, even when some peculiar perversity makes a writer use a cryptic or unintelligible style. The desire to produce something beautiful—the artistic impulse—which at first would seem to be strictly individualistic, is compounded with and modified by the desire to express thought and sentiment and to communicate them to others.

This being so, it is evident that a writer must use the language of his time and must embody the views and general principles of his age. Even when a man addresses a remnant who adhere to the ideas of the last generation, or the few progressives who have an intimation of the future or have caught sight of the new light which is soon to be the "light of a common day" to the next generation, he must deal with ideas which are somewhere in vogue in his own time. For this reason literature is representative of its own age, though as the temperament which makes the writer is usually one which sympathizes with progress and hates embodied injustice, it tends to express the advanced ideas of that age rather than the reactionary or stationary ones. "Write on my tomb," said the poet Heine, "that I was a soldier in the cause of freedom." The same words might be engraved on Shelley's monument. There are many, like Shakespeare and Tennyson, to whom the ordered civilization of the present seems most significant; to others, like Sir Walter Scott, the pathos or magnificence of the past appeals more strongly. But all write for a certain number of those who sympathize with them; each must have a living audience.

For this reason the literature of any time is a mirror of the thought of the time, and as there is a gradual evolution of thought, not merely an accumulation of knowledge, the tone of literature changes with advancing civilization. It is a peculiarity of this evolution that it is not a continuous process, but is an irregular movement with periods of quiescence and of advance. Nor is the movement, as far as we can see, always in one direction. It seems to follow the line of least resistance, even if the impelling force is forward. Consequently, there are periods in which the national spirit—reflected in national literature—is in quite distinct moods. The prevailing views on politics, religion, philosophy, society, duty, and even property are gradually modified. For a number of years one set of these ideas seems prevalent, then they weaken and change, sometimes with great rapidity, and another period is inaugurated.

ENGLISH LITERATURE.—As the English nation is continuous, so the literature of one period is bequeathed to the next. It may seem that an early period was more energetic or more spiritual or more artistic than a later one, still the influence of what was taught in one century is never entirely lost. The best literature survives, and continues to exercise an influence on many minds long after the termination of the period in which it appeared. The bible and some of the plays of Shakespeare are still living influences. Men build on the teachings of their fathers for many generations, and the mental condition of the Englishman of to-day is a composite of the mental condition of Englishmen of every century back at least as far as the Conquest. Even the uninspired periods have significance, for something from them survives. It is as in the individual life; certain strenuous years or years of grief and soul-searching experience stand in our memory as important. Nevertheless, not a day passed that did not contribute to making us what we are. And in national literature, the least productive periods gave birth to some ideas traceable in the literary life of 1910.

The Anglo-Saxon Period, 449-1066.—The first two periods—the Anglo-Saxon, during which Germanic invaders occupied the south and west of Great Britain; and the Norman-French, during which an army from France, under William the Conqueror, invaded the Saxon territory and established their leader as king of England—must be regarded from the literary point of view as strictly preparatory. The written languages were Anglo-Saxon, to read which requires as much study on the part of an English-speaking person as to learn German; Latin, the language of the church and of international communication; and the Norman-French. It is not till there is an English language that English literature can be said to exist; and the English language, formed by the simplification of Anglo-Saxon and the sinking into it of a large number of Norman-French and Latin words, came into use in a form in which we can understand it, slowly, and was not used as a literary vehicle much before 1360, the date at which the Norman-French period is assumed to terminate. But as both Norman-French and Latin brought not only words into the language but literary forms and modes of thought, the roots of English literature were spreading even before the language was formed. A brief reference to the works written in French, Latin and Anglo-Saxon properly finds a place in this review. The writings in Anglo-Saxon are the epic poem *Beowulf*, in the short, rhymeless, alliterative lines of the earliest times; the *Song of Widsith*; *The Traveler or Exile*; poems on religious subjects by Cædmon and Cynewulf, written after the conversion of the people to Christianity; King Alfred's translations of the legendary history of Orosius, of the ecclesiastical history of Bede, and of the *Consolations of Philosophy* by Boethius; the translations of the Gospels by the Venerable Bede, a monk of Yarrow; the Anglo-Saxon *Chronicle*, compiled at the court or at some monastery for many years; and various fragments of prose and verse which have escaped destruction. This body of the writings of our remote ancestors, though accessible only to scholars, testifies, especially in the case of Bede and Alfred, to their industry, sense of duty, responsibility and loyalty. Their writings in Latin are principally the *Ecclesiastical History of Britain* by Bede, and various fragments on kindred subjects valuable as "sources" for historians.

The Norman-French Period, 1066-1360.—The Saxon tongue assumed an inferior position after the Conquest, and passed through the stages called Early English and Middle English. For two centuries the language of literature was French and Latin, though the Anglo-Saxon *Chronicle* was kept up fitfully till it ends abruptly in 1154, marking the death of the old civilization. Nevertheless, the writings in Norman-French must be regarded as a constituent element of English literature; for they were translated later into Middle English, and the chivalric romances, both in prose and verse, have been drawn upon down to the day of Swinburne and Tennyson. Of these the most important was the Arthurian cycle, taken originally from Celtic sources. The Normans, too, brought the light touch from France, and satire and jesting verse as well as short humorous stories were written and collected, and, in time, translated. These do not seem to be native with the Germanic races, who are more marked by sincerity and seriousness than by humor and gayety. The Normans produced a large number of books which testified to their intellectual activity. Among those are Walter Map's *Court Triflings* and Latin rhyming songs of a bacchanalian cast, and the Launcelot legend in French, Wace's *Roman de Rou* and *Roman de Brut*, and a chronicle of the Norman dukes. Wace lived in France, in the part subject to the English kings. Geoffrey of Monmouth, a Welshman, wrote a long Latin history entitled *Chronicon, Sive Historia Britonum*, which, though largely fabulous, has proved a prolific source book for poets, and has been the foundation for a great number of histories down to Holinshed in Shakespeare's day. The principal writings in Middle English toward the close of the period were the *Ormulum*, a paraphrase of the daily gospel, with exhortations and homilies suggested by the subject, some of which have literary merit, and Layamon's long historical poem based on older books. The language of these is intelligible to us after a little practice. Robert of Gloucester also wrote a rhymed chronicle in English based largely on Geoffrey of Monmouth's book.

First English Period, 1360-1525.—In the reign of the great Edward III., when Chaucer was a boy, the national consciousness may be said to have become unified. France, no longer regarded as the mother country by the king and nobles, had become a foreign enemy. Into the stream of English speech had dropped a large number of French words like snowflakes into a river. Chaucer (1340-1400) and Wycliffe (1324-1384) are the great men of this day—the former through a large body of poetry full of sense, wit, and imagination, and the latter through his sermons and translation of the bible. Chaucer illustrates for us the age of chivalry in his longer poems, and the eager, inquiring spirit of man in almost everything. He is, therefore, an example of what was said before; that one literature embodies the spirit of the age and presents its "form and pressure." Wycliffe gave form to the underlying seriousness of the English people, and their impatience with any foreign interference. Printing was invented late in this age, and gave literature a powerful instrument of expansion. Literature in Scotland began to assume character as part of British expression. The popular English ballads were a minor literary form of the day, especially on the border. These were composed by unknown authors, handed down in memory, written and edited by various professional amusers, and chanted or sung aloud at all sorts of gatherings. From this intimate connection with the public, they came to have a peculiar representative character, a certain directness and naïveté impossible to counterfeit, though they may seem to us rough and incomplete.

Perhaps the most important literary work produced in this period was the collection and redaction in prose by Sir Thomas Malory of a large number of the Arthurian romances called the *Morte d'Arthur*. This is the immediate source of much modern verse, and is in many regards noble prose.

Chaucer's Contemporaries and Immediate Successors.—John Gower (1325-1408), John Lydgate (1370–1450), and Thomas Hoccleeve (1369-1450) were by no means his equals, but William Langland (1322 to 1400, approximately) was the first poet to express the sense of injustice and hopelessness induced in thoughtful and sympathetic minds by the artificial inequalities of society and the hard lot of the unfortunate poor.

A book of some influence in this period was the absurd *Travels of Sir John Mandeville*—if there was such a person. So strong is the love for the marvelous, and so late is the appreciation of the worth of accuracy in describing remote places, that this book was eagerly read, though evidently full of inventions, not to "use the uglier and shorter word." Imagination and reason, however, always try to intrude into one another's provinces, even in our veracious day. Sir Thomas More (1478-1535), a character of great worth and charm, chancellor of England, and beheaded by Henry VIII. because he would not render a legal decision in accordance with the views of that impetuous monarch, was the author of *Utopia*—written first in Latin. This is interesting as the first appearance in English of the imaginary commonwealth, the literary embodiment of the ideal toward which we are still blindly striving. It represents one of those compromises between individualism and altruism thus far possible only on paper.

The Renaissance Period, 1525 - 1634.—This period is called the "New Birth" because the mediæval spirit largely disappeared with the Reformation, the revival of classic (Greek) learning, the extension of printing, the circumnavigation of the globe, the defeat of Spain, the invention of firearms, and the general economic advance of the community. These things combined to give men an access of mental energy and zest in life. The drama developed wonderfully from its germ in the religious mystery and the morality—pageants rather than plays—to a form which in its culmination in Shakespeare has ever since commanded the enthusiastic admiration of mankind. There were great writers in this period: Hooker, Marlowe, Shakespeare, Bacon, Webster, Spenser, Sidney, Raleigh, and a host of the second class. It was an age of great translations: North's *Plutarch;* Florio's *Montaigne;* King James' *Bible;* Chapman's *Homer*, and others of less note—remarkable not so much for fidelity as for transmitting the spirit of the original and clothing it in idiomatic, nervous English. The lyric verse of the period has the true song-like inspiration—witness the Songs in Shakespeare's and Beaumont's plays. Robert Herrick's short lyrics (1594-1674) are wonderfully felicitous; as, for example, *Gather Ye Rosebuds While Ye May, No. 208;* and *To Daffodils, No. 316.* Michael Drayton's *Ballad of Agincourt* is a spirited war-song. Greene, Lodge and Dekker were lyric poets as well as dramatists, and so was Ben Jonson. To enumerate the names and works of the writers of this period would require almost as much space as to chronicle the writers of novels of to-day in England. The serious poetry of the period: Michael Drayton's *Poly-Olbion;* Norton and Sackville's *Mirror for Magistrates;* William Warner's *Albion's England*, a rhymed chronicle of English history with many lively interludes; and Samuel Daniel's *History of the Civil Wars* (York and Lancaster), are not superior to the similar poetry of other periods, but add their testimony to the intellectual activity of the age. The English unrhymed pentameter or blank verse was introduced by the earl of Surrey in a translation of the *Aeneid*, circ. 1545, and greatly improved by its handling by Marlowe in his plays. Shakespeare made it an instrument of wonderful flexibility, suitable for description, reflection, and all the multifarious phases of human emotion. Surrey and his friend Wyatt introduced from Italy the sonnet form, and this beautiful fourteen-line poem was used by many of the poets mentioned, in sonnet sequences of fifty or more, usually on some subject connected with the passion of love. The period gathered much inspiration in form and treatment from Italy, the home of the new learning, as is evident to any reader of Shakespeare. Richard Hakluyt, who died the same year as Shakespeare (1616), wrote *The Principal Navigations and Voyages—at any time within the compass of 1500 years.* This begins, like the *Poly-Olbion* with fabulous narratives, but consists principally of authentic records, and the historian Froude rightly calls it the "epic of the English nation."

This period is the beginning of modern civilization. New England was settled, the Reformation begun, and thought was emancipated in many spheres. In spirit it is nearer akin to us than is any earlier period and the mental energy of its leading writers and their zest in life show how much greater is the effect on the imaginations of men of an advance in the philosophy of life and the discovery of new realms of intellectual beauty and worth than of an advance in scientific knowledge and useful inventions which add to material resources and personal comfort without exciting in an equal degree the sense of wonder and intellectual curiosity which are the motive powers of great literature.

The Puritan Period, 1634-1660.—The freedom from interference in matters of religious doctrine and administration by the Church of Rome and from all fear of invasion by the kingdom of Spain which was achieved in the preceding period made Englishmen arrogant and impatient of any authority whatever in church matters. The spirit of individualism and the belief that the bible and the example of the early church furnished an all-sufficient rule for bodies of Christian worshipers led to a revolt against the church of England. At the same time men began to question the authority of the king, and actually revived the study of Anglo-Saxon to prove that the monarch was limited in power, and that the great council, or parliament, was supreme at least in all questions of taxation and control of the army. Charles I. was very jealous of his "prerogatives" or privileges, and believed that the authority of a king came direct from God. This belief, if carried out in practice, was evidently fraught with great danger to the liberty and self-respect of the subjects. It was intolerable to many Englishmen, who regarded it as directly contrary to inherited rights. The theories came to an issue on the question of taxation, and, as must always be the case where diametrically opposite theories of civil rights are held by nearly equal parts of the people, resulted in a civil war. This led to the beheading of the king, and the establishment of a protectorate by the general, Oliver Cromwell. England got along very well without a king for seven years, but after Cromwell's death the son of the executed king was restored. The monarchy of England has been strictly limited ever since. As a matter of course, these momentous political events filled men's minds to the exclusion, temporarily, of the cultivation of literature, or indeed of any of the arts, except here and there where some solitary scholar clung to the culture of the past. But after the brilliant Renaissance England became the serious, sober Puritan England. It was not a less England but a different England.

John Milton (1608-74) was trained in the Renaissance culture. His early poems are Elizabethan in spirit, though in *Comus* the disdain of earthly pleasure which characterized the Puritan view of life is the controlling motive. He belonged to the Puritan body by birth and temperament and on the outbreak of the armed conflict, became Latin secretary to the council of state. He devoted his life to defending the commonwealth, and treatises in Latin and English flowed from his pen. Though intemperate in controversial language—the mode of the time—these, especially the *Areopagitica*, in defense of a free press, are marked by great energy and elevation. A lucid prose style was not developed till the next century, so that his prose owes its reputation to fundamental qualities of thought, and not to elegance or clearness. During this time he wrote no poetry except some sixteen sonnets which justify his title of poet. Constant use of his eyes brought on total blindness. After the Restoration, he resided in London, and dictated *Paradise Lost, Paradise Re-*

gained and *Samson Agonistes*. The great Puritan epic contains passages of dignified musical sublimity, and remains a great monument of genius, though the sentiment which inspired it is far removed from us.

Edmund Waller (1605-87), who spent a long life writing poetry, was of a different type. He was an opportunist, and, being caught in a plot to aid the banished king, Charles I., was himself banished to France, from where Cromwell allowed him to return after ten years. He introduced the rhymed pentameter couplet, somewhat in the style Pope made so familiar. He is in reality best remembered for his graceful song, *Go, Lovely Rose*.

Abraham Cowley (1628-78) was a consistent royalist, and accompanied the queen-mother to France. He was the favorite poet after the Restoration, and was esteemed by Milton. He introduced the "Pindaric Ode" form, afterward cultivated by Gray. His epic, *The Davideis* has not much more than a historic interest. He was a man of fine character, great industry, and decided poetical gift.

Andrew Marvell (1620-78) was a consistent adherent of the commonwealth, and, like Cowley, a man of integrity and upright life. He introduced poetical satire. His ode on Cromwell is dignified and liberal, and contains the admirable verse on Charles I. on the scaffold, beginning:

He nothing common did or mean
Upon that memorable scene.

The royalist poets, Suckling and Richard Lovelace, have achieved immortality by the spirit and felicity of a few songs: *To Lucasta*, *To Althea* and *A Ballad on a Wedding*. The theologian Jeremy Taylor (1613-67) and Thomas Fuller (1608-61) belong in this period, as does Sir Thomas Browne, whose prose treatises, *Religio Medici*, and *The Urn Burial*, have become classics by reason of the sonorous dignity of some passages and their appeal to our sense of the contrast between time and eternity, man and the universe. The delightful Izaak Walton (1593-1683) lived in this period, and wrote his *Complete Angler* and his *Lives of The Worthies;* but of course neither he nor the others mentioned in this paragraph are Puritans except in uprightness of life. Jeremy Taylor, indeed, has all the luxuriance of an Elizabethan.

The Restoration Period, 1660-1702.—This is a transition period from the Puritan austerity of morals and manners to the respectable good sense of the eighteenth century. The court was under French influence. The gay laxity of the Frenchman grafted onto English character is apt to produce a cynical profligacy abhorrent to both nations and to humanity itself. The drama imitated in Dryden the neo-classicism of Racine without Racine's genius; and, in Wycherley, Congreve, Farquhar and Van-Brugh, the comedy of Molière without Molière's grasp of life. The literature of the period illustrates the period, but adds little or nothing to the world's great classics.

John Dryden (1631-1700) was a prolific writer and critic. His satirical political verse is full of wit and point, and his prose essays are not only good criticism but lucid and consecutive in style. Samuel Butler's (1612-80) *Hudibras* is rattling doggerel with flashes of wit. The true classic of the period is John Bunyan's (1628-88) *Pilgrim's Progress*. It was written when society was very corrupt but is a pure embodiment of evangelical Christianity and shows that a book to live in the affections of posterity, must be fundamentally moral and representative of human life and emotion.

The Augustan Period, 1702-1744.—The age of Queen Anne was marked by urbanity and rationalism. In fact, the eighteenth century was throughout a common-sense century. The great mathematical period of the seventeenth century began to bear fruit in interest in natural science. Joseph Addison (1672-1719) and Richard Steele (1672-1729) were charming essayists in the light style, treat ng with delicate satire some social or literary topic of the day. Jonathan Swift (1667-1745) was a satirist of great power, and *Gulliver's Travels* are extremely entertaining narratives even if the reader miss the satire. Daniel Defoe (1660-1731), though best remembered by *Robinson Crusoe*, was a vigorous and voluminous pamphleteer, with a genius for journalism, then in its infancy. Pope's verse (1688-1744) is representative of the age—pointed, witty, and epigrammatic, but never rising into enthusiasm, social or intellectual; neither passionate nor profound. His mode dominated English verse for nearly a century, and is on the whole the best style for narrative or reflective verse. William Collins (1721-59) wrote odes into which he sought to infuse passion. James Thomson's *Seasons* show a true love for nature, and Young's *Night Thoughts* embody a conventional piety. All of these partake, though in a less degree than Pope's poetry, of the artificiality of the period.

The Georgian Period, 1744-1800.—The Georgian period is a continuation of the preceding, the date of the death of Pope being taken as convenient for dividing the eighteenth century. The advance in natural science began to bear fruit in industrial inventions, and the eve of England's great prosperity was inaugurated by the coke blast furnace in 1735, and Watt's steam-engine, 1769. The central literary figure of the period is Dr. Samuel Johnson (1709-84), whose dictionary was the first comprehensive attempt to arrange and define all the words in the English language. His poetry is largely in the manner of Pope, and his prose, in the two periodicals he published, *The Rambler* and *The Idler*, and in the *Lives of the Poets*, *Journal of a Voyage to the Hebrides*, etc., was the model for the century. To us his style seems formal and self-conscious, but he was emphatically a great writer. It is easy to imitate his balanced sentences and Latinized diction, but the pith and wit of his phrases and the good sense of his thoughts are not so easily attained. Oliver Goldsmith (1728-74) had the gift of a less pretentious but more truly literary style. "He adorned everything he touched," Dr. Johnson said: and his two poems, *The Traveler* and *The Deserted Village*, are immortal by their melody and the kindliness of the sentiment expressed. Edmund Burke was also a great writer and philosophical statesman. Johnson and his friends owe much to Boswell's *Life*, for James Boswell has a genius for reporting. In this period the first philosophical histories were written: Hume's *England* and Gibbon's *Decline and Fall of the Roman Empire*. The dramatists were far cleaner than those of the preceding period, and two comedies of Sheridan's, *The Rivals* and *The School for Scandal*, and Goldsmith's *She Stoops to Conquer* are full of wit and humor, and remain a permanent possession of the stage. Thomas Gray (1716-71), the shy and scholarly poet of Cambridge, is best remembered by his *Elegy Written in a Country Churchyard*, a poem whose gentle pathos appeals to the common heart. He wrote, too, some spirited odes, the *Progress of Poetry* and *The Bard*, which, though very carefully constructed, have never captured the public. The poets Crabbe and Cowper, though very different, may be linked together in that they wrote of everyday subjects, with no effort at elevation or heroics, and so did something to break up the artificial dignity which Dr. Johnson considered "good form" on paper. The Scotch poet Robert Burns (1759-96), the great song-writer of his land, is more typical of the future than any of the more correct and academic writers of the age; for he was a voice of the people, a prophet of manly individualism and sturdy democracy, a genius in full sympathy with humanity and a powerful satirist of social shams. In this period, too, the novel begins to assume distinct form in the hands of Fielding, Smollett and Richardson. Laurence Sterne (1713-68), though a sentimentalist, and, as a writer, full of artifice and affectation, gave in *Tristram Shandy* a model of whimsical, half pathetic, half nonsensical treatment of ordinary life which has had great influence on subsequent authors.

Toward the end of the period, the American Revolution, and still more the French Revolution, agitated violently the social atmosphere. The effect of this excitement is evident in Burke's *Letters on a Regicide Peace* and *Reflections on the Revolution in France;* but it was, from the literary standpoint, more patent in the next period.

The Romantic Period, 1800-1837.—The general doctrine of the authority of the past received a rude shock when the head of the French king fell into a wicker basket in front of the guillotine. If there was no sacred character in the long established civil authority, why should there be any in the old literary standards? An emancipation based on individual rights is apt to spread from one department of human activity to another, and literature is but a reflection of life. Signs of rebellion against the standard of Pope and Johnson were not wanting in the close of the eighteenth century. Society is more than a well-ordered machine—it is a progressive and living organism. There is no one definite poetic form, nor are moderation and good sense the only literary virtues. Men are capable of enthusiasm, which to Dr. Johnson was a literary sin. They are capable of viewing things with wonder and excitement, of worshiping beauty blindly, and expressing themselves without the restraint of rules drawn from the practice of the past, which, guides to the fathers, become fetters to the children. Any revolt from conventionalism is really romantic, and in the nineteenth century such a revolt led to the disuse of the old literary fashions.

Two representative writers are William Wordsworth (1770-1850) and Samuel Taylor Coleridge (1772-1834). They felt that the spirit of the old ballads—partially represented in Percy's *Reliques* in 1765—was a true poetic spirit. They treated the life of men and women on every social plane, usually in the lyric form. The philosophical thought of Germany, transfused imperfectly through the mind of Coleridge, gave thinkers new intellectual conceptions. Walter Scott (1771-1832), in his ballads, songs and historical novels, viewed the past and its setting with the eye of a romanticist, though his tempera-

ment as an individual was conservative. In fact, admiration of nature in her wilder aspects—the mountain, the torrent, the storm—is a romantic motive akin to the recognition of ill-regulated human nature if only it be powerful and individualistic. This was the form romantic thought took in Byron (1788-1824). The enthusiastic Shelley (1792-1822) also disliked any form of social restraint. Pope and Johnson would have set him aside as a madman—we see in him a manifestation of generous traits, and admit his fundamental mistakes, but insist that:

> The light that led astray
> Was light from heaven.

John Keats (1796-1821), a passionate lover of beauty, an unsurpassed artist in words, while revolting from the old mechanical form, was not inspired as Shelley was by the enthusiasm for humanity. Charles Lamb (1775-1834), quaint and delightful essayist; William Hazlitt (1778-1830), a critic; Sydney Smith (1771-1845), wit and reviewer; Thomas DeQuincey (1785-1859), essayist and scholar; Thomas Moore (1779-1852), society poet and song-writer; and Thomas Campbell (1717-1844), author of some stirring war-lyrics, illustrate different phases of the intellectual life of this period. Thomas Hood (1798-1845) and Winthrop Mackworth Praed (1802-1839) were writers, the one of humorous, the other of society verse of fine quality. Jane Austen's (1775-1817) novels are admirable sketches of the life of upper middle-class people, depicted with truth and quiet humor.

The period was marked by economic and industrial progress, and the invention of the railway and locomotive initiated the great advance of the latter half of the century.

The Victorian Period, 1837 to 1901.—Though there is a marked distinction between early Victorian (to 1865) and late Victorian, it will be more convenient to consider them as continuous, the more so that they merge into one another and the poet Tennyson (1809-1892) belongs to the entire period. Thomas Macaulay (1800-1860) and Thomas Carlyle (1795-1881), though individually distinct, are markedly apart from historians of the later school; Gardiner, Stubbs, Lord Acton and the rest aimed at scientific accuracy rather than at a striking literary portraiture of the past. James Anthony Froude (1818-1894), however, perpetuated the old tradition that the historian must be an artist as well as a chronicler. Among the prose writers, John Henry Newman (1801-1890), John Ruskin (1819-1900), and, later, Walter Pater (1839-1894) take high rank as artists. The novel received early its highest development at the hands of William Makepeace Thackeray (1811-1863), Charles Dickens (1812-1870), George Eliot (1819-1880), and many minor masters. The number of good novels still produced in England is remarkable, though many of them seem to owe more to workmanship than to inspiration. Of the early Victorians, Anthony Trollope (1815-1892) is one of the most faithful depicters of social manners, and, of the late Victorians, Robert Louis Stevenson (1850-1894) is not only a charming stylist but a constructer of semiromantic tales of vivid interest. Rudyard Kipling, in his stories of India, viewed life from a novel imaginative standpoint, and though inclined to deify material power and the life of reckless adventure, makes a convincing picture of the quiescent native civilization. The contrast between the races is in his hands fruitful of humorous situations.

About the middle of the century (1859), Charles Robert Darwin (1809-1882) published his *Origin of Species*, and the general thesis, "things are not created, they grow," has modified very largely men's views of nature and society. Herbert Spencer (1820-1904), Thomas Henry Huxley (1825-1895) and John Tyndall (1820-1893) were among those who developed the central evolutionary concept in its applications to society and biology, and innumerable books have appeared in which the philosophy of development and growth is amplified.

The early Victorian age was an age of poetry, the later inclines to be an age of science. Alfred Tennyson (1809-1892) was devoted to the production of verse. His poetry is representative of the thought of his day, and is marked by finish and melody. Robert Browning (1812-1889) casts, it may be, a keener glance into the human soul, and attacks deeper psychical problems than his great contemporary; but the obscure nature of his subject-matter renders him less generally acceptable. His wife, Elizabeth Barrett Browning (1809-1861), was a favorite poet in her day. All these have a marked lyrical gift. Dante Gabriel Rossetti (1828-1882), though primarily a painter, was also a poet of highly imaginative quality. Charles Algernon Swinburne (1837-1908) wrote a great deal of highly melodious verse marked by sonorous energy. His meters, largely dactylic and anapestic, have disclosed new musical resources in our language. Matthew Arnold (1822-1888), though best known as a critic, was also a poet, and a few of his verses, though written in a minor key, will survive as an expression of the petulant depression which settles on thoughtful souls when the faith of their childhood is undermined and they lack intellectual force to build on the new foundations. George Meredith (1828) might be mentioned among the poets did not the obscurity of his style render his meaning so cryptic as to be incommunicable, and communication to the reader of something more than a vague impression is one function of style. Meredith is a great novelist, and were he readable would be, perhaps, the greatest; but his enigmatical style presents too many puzzles for any but a specialist in paradox. Therefore Thomas Hardy (1840) must be reckoned first among the late Victorian novelists.

The drama of this period did not rise much above the level of melodrama, in spite of the earnest efforts of Tennyson and Browning to infuse some poetry into it. Toward the end some of the "problem plays" satirized society without suggesting that it could ever be any better. The later plays which turn on some social question contain more earnestness. There is probably a time for the mocker like Shaw before the reformer, as Rabelais preceded Calvin. Since the opening of the twentieth century there seems to be an increase of seriousness almost painful in such a man as Galsworthy and the author of *The Servant in the House*. Without criticising in detail modern English literature, we can say that the tone is less flippant than it was ten years ago; that it appeals more to the genuine and broad emotions than it did; and that there seems to be a general recognition of the truth that satire and persiflage are not the only weapons for the writer, and that, to make a worthy work, he must base it on a worthy theme—some of the old questions of sin and sorrow and injustice—and not on the superficial aspects of society or humanity.

It may be that economically, politically, and socially England is entering on a new phase of development. If so, literature, the expression equally of reason and emotion, may take on a new form of imaginative life; especially in that popular form, the drama. It is certain that earnestness, social sympathy, stern love of justice, forward-looking hope and love have not perished among the people; and these, fused by the imagination, are elements of real literature, though a cynical, mocking, or hopeless feeling seems at present to deny them expression.

AMERICAN LITERATURE.—American literature is not readily or satisfactorily defined. It excludes all the literatures of this Western Hemisphere except that of the United States, and even in the United States is generally reckoned as exclusive of all languages except English.

Branch of English Literature.—Obviously American literature belongs to the generic class English literature, of which other subdivisions are British, Canadian, Australian, and so on, but the specific difference between these several classes is primarily geographical and, therefore, not of much practical value.

Provisional Definition.—If American literature be defined as that part of English literature produced by Americans, the definition does not minister materially to clear thinking.

Definition Discussed.—Literature in general may, for purposes of convenience, be defined as the expression of human interests in artistic prose or verse, and then American literature might be the expression of human interests in artistic American prose or verse.

But the prose or verse of America does not differ materially in form from that of Great Britain, though from time to time there is something distinctive, such as the *Leaves of Grass*, by Walt Whitman; or the *Marshes of Glynn*, by Sidney Lanier; or the *Songs of the Sierras*, by Joaquin Miller. Or, American literature may be defined as the expression of American interests in artistic prose or verse, with an intimation that not all human interests, but merely some of them, make an appeal to Americans. But it is at least questionable whether Americans are not as catholic in their interests as any other nation, and hence as much inclined to make avail of all literary themes that would serve any writer's purpose. A third and perhaps feasible variation of this definition would be that American literature is the American expression of human interests in artistic prose or verse.

Definition Accepted.—This form of the definition concedes similarity of interests and methods, but suggests that there is possibly a difference in point of view, in fundamental conceptions, and in essential emphasis between an Englishman's and an American's treatment of similar themes. Such a difference may be readily discerned in the treatment of political, social, and religious themes, but is hardly to be noted in the realm of pure art. Perhaps this is as far as we can go in making any distinction between British literature on the one hand and American on the other.

Beginning of American Literature.—Unlike most literatures, that of America did not have an independent origin, but was a continuance in America of a litera-

ture well developed in the mother country. It was the projection of the English spirit into a new territory, where its subsequent manifestations were conditioned by its new environment and its changed purpose. This accounts for the fact that the beginning of our American literature is well-nigh coincident with our earliest English settlement; for it was in 1607 that John Smith founded at Jamestown this first settlement, and in the next year (1608) that he wrote his *True Relation of Virginia*.

In many respects, this book is almost too thrillingly romantic in its adventures and hairbreadth escapes to be wholly accepted as true history; but it is certainly of sufficient literary significance to be classed as our first specimen of American literature. This was followed by Strachey's *Wracke and Redemption of Sir Thomas Gates;* and shortly after came the excellent translation of Ovid by George Sandys, begun in England and continued without loss of merit in this new land.

After 1620 there was a larger output in New England, for the Puritans began promptly to give expression to their supreme confidence in divine guidance and to their new-found freedom in religious thought and worship. Histories by Bradford and Winthrop evidence the hand of God in history, while Anne Bradstreet's poetry must have found its chief value in its religiousness. For literary style the *Voyage to Virginia* by Henry Norwood is perhaps the best book of this first period.

Waxing Colonialism, 1607-1676.— This period from 1607 to 1676 may be designated as the period of waxing colonialism, for in it the chief concern of the new colonists was to strengthen themselves and procure recruits from the home-land. This period came to an end in an incident so dramatic in its character and so far-reaching in its moral consequence as to be reckoned not a mere incident of history, but a vital link in the chain of cause and effect.

Bacon's Rebellion, 1676.—Bacon's rebellion, which was a protest against the arbitrary and tyrannical rule of a British governor, was in nearly every respect a prototype of that more significant protest just one hundred years later. This first Declaration was not written in words, but was elaborate in deeds wrought by that valiant young rebel, Nathaniel Bacon. At this very time, too, the New England colonists established their power to protect themselves by overcoming the Indians in King Philip's war. After these events the attitude of the colonists to the mother country could never be the same as before, though it was fully sixty years before this marked change in their relations was generally felt.

Fixed Colonialism, 1676-1736. — From 1676 to 1736, or thereabouts, our political life and our literary spirit might be characterized as that of fixed colonialism. This phrase signifies that the colonists had now become firmly established, with no thought of deserting their cause or surrendering their hard-earned territory; but, on the other hand, with no such supreme sense of loyal allegiance to England as had the earliest settlements. They were still dependent upon England, but this dependence had not become galling, for they had shown their power of independent action when necessary. Sermons and histories were the largest contributions of this period.

Contrast in Spirit.—In New England these histories and sermons alike were characterized by an overwhelming sense of obligation to divine power, while in the southern colonies they were enlivened by a fuller recognition of God's love as manifested in his dealings and exhibited in nature. This fresh, first-hand observation of nature gave rise to a new delight and enthusiasm in surprising scenery.

A comparison of Mather's sermons with Blair's, or of Bradford's history with Beverley's will illustrate this difference between the solidity and weight of the New England productions and the imagination and relative lightness of the Virginia books. William Byrd's *History of the Dividing Line*, with its sprightly comment on strange experiences and its irresistible humor, attests this literary quality even more pointedly. It was in this period that Penn gave in his life and letters a new meaning to colonization.

Waning Colonialism. 1736-1764.—From about 1736, when the first book was published in the south, to about 1764, which marks a dividing line in our developing life, comparatively little was actually achieved.

This period was marked rather by the birth of men who were to become distinguished than by occurrences or utterances of signal note.

While the literary production was limited it is impossible to believe that the outburst of independent and revolutionary thought about 1764 was not the result of long meditation and of brooding over injuries, real and fancied, and of a growing determination that one day they would be free. Jonathan Edwards is the preëminent figure in this period; but his mind turned more naturally to God's dealing with his people than to England's rule of her colonists. Ramsey, an interested and intelligent contemporary historian, is clear in his own mind that the year 1764 is a turning point in our history. With that date came that outburst of oratorical arraignment and denunciation from Samuel Adams, James Otis, and Patrick Henry.

Period of Nation-Making, 1764-1800.—These men were the prophets and forerunners of the proudest era of our history—that of nation-making. The vital and fascinating historical events of this period are the adoption of the Declaration of Independence; the Revolutionary war, which this declaration compelled; the provision of a constitution; the election to the presidency of the great leader who had brought this war to a successful conclusion; and finally, the peaceful transfer of power from a pronounced Federalist like Adams to a self-consistent Democrat like Jefferson.

Coincident with these political achievements were literary manifestations of hardly less significance. In fact, it would not be difficult to defend the thesis that the triumphant oratory of Otis and Henry, and others who came to their support, was as remarkable an event as the war itself; and certainly such papers as the Declaration of Independence and the constitution seem to be utterly inexplicable, unless one catch the full spirit of this new period of self-reliant ardor and determined zeal.

Revolutionary Poetry.—Closely akin to oratory is patriotic poetry, for the definitions of these two forms may be easily confounded. Anonymous songs, poems by Godfrey, Trumbull, Freneau, and others, give evidence that this emotional life uttered by some in speech and by others in warfare, was guiding for others still the poet's stylus.

There was little time or demand for fiction in these trying times, and the academic essay must await a quieter day; but for illumined state papers or the prudential wisdom of a Franklin, there was alike the crying demand and the consequent supply.

First Period of Nationalism, 1800-1850.—The year 1800 marks a peaceful transition from a decade in which men had dreaded a fancied imperialism, to an era frankly committed to an absolute trust in the people and a permanent democracy. It is, therefore, a convenient point from which to reckon our first truly national period. For the time, all difficulties had been overcome and differences adjusted and the dangers ahead hardly occurred to any but the sagest leaders.

Jefferson to Jackson, 1800-1829.—From 1800, when Jefferson was elected, to 1829, when Jackson became president, our country, passing through its era of expansion and of peace, pursued an even course; but when the new president took his chair a new tendency was observed. Up to 1829 our presidents had all been men of refinement and culture, bearing the stamp either of foreign training or of its best traditions. They were men of the social world, fit to meet on equal terms the world's sovereigns.

With the coming of Jackson, the rugged leader from the frontier, there were substituted for the polish and culture of the western European the training and self-confidence of the western pioneer. Nor was he much concerned with the affairs of western Europe. His mind turned instinctively to the land whence he had come; and his first thought was about strengthening the alliance, not between America and Europe, but between the several parts of his own country. It is not at all surprising that, with this new motive dominant in the capital, a new motif should run through our American literature and that the note of it should be independence and self-reliance. Perhaps this was best expressed at the time by Emerson's famous address, *The American Scholar*, which has been not unfittingly termed our literary declaration of independence.

This first period of our distinctive nationalism coincides with our first period of literary greatness, unless the preëminence of our Revolutionary orators be urged to the contrary, and is at once the cause and concomitant of it. National pride is almost an essential of a national literature, and obversely a national literature ministers materially to national pride. Almost every form of literature was produced in this period, except the successful epic. Poems, plays, orations, novels, essays, histories, biographies, and other types were produced before 1829, and became more abundant and more valuable after that date. Whether we turn to New England, the South, or the Middle states, this new interest in letters is noticeable.

New World and Old.—Great questions such as abolitionism, tariff agitation, internal improvement, etc., engaged the thought of party leaders like Clay, Calhoun, Webster; Longfellow was bringing the old world to the new by revealing its literary attainments; while Irving was showing to the old world that our own were not insignificant. Poe began and

ended in this period his career, that helped to give American literature an international value both in poetry and prose. Writers multiplied, magazines like the *Southern Literary Messenger* and *Graham's* were established and maintained, and the reading public grew rapidly. New England readily assumed the primacy; but the Middle states contested her claim, and, the Southern colonies showed no less versatility and native talent than these. It was especially in the period between 1829 and 1850 that literature flourished, and there was no diminution of its power when we reached its end.

Clay Compromise.—The Clay compromise in 1850 merely served to delay a disaster it could not avert, and produced no immediate effect upon literature.

Period of Division.—Even in the South, where the rumors and premonitions were thickest and loudest, the period of impending war was active in literary productivity.

Impending War, 1850-1860.—In fact, the greatest poetical succession our country has known, save that of Longfellow, Lowell, Whittier, in New England, was that line from the death of Poe (1849) to the death of Lanier (1881). A roll call of the names would include Hayne, Timrod, Ryan, Pike, Thompson, Mrs. Preston, and many others. Fiction was fashionable everywhere, and the academic essay ran side by side with the partisan paper, and the academic oration gave place to the political address. Feeling ran high; and heated men to fervid and often eloquent utterance.

War, 1860-1865.—Even the war, lasting until 1865, could not entirely hush the literary voice; though it was true, in the South especially, that there was little time and perhaps little inclination to indulge in literary pursuits. There were battle songs and isolated poems, patriotic appeals and fiery ejaculations, and now and then the calm and solemnized utterance of the most thoughtful, but in all very little worth recalling by name in a single paragraph.

Reconstruction, 1865-1876.—On the contrary the literary activity between 1865 and 1876, the period of reconstruction, was exceedingly striking. There were deeds of prowess to relate, memories of great men to be preserved, incidents and episodes to be recorded, and a pride of heroism to be glorified. Biographies followed fast upon each other, and called for others still, fixing in their rightful places the men of note; histories, too often *ex parte* in statement and partisan in spirit, were numerous, and no less readable because they defended a theory or a course of action; novels from which the antebellum antipathy had disappeared and short stories full of local color became fashionable; and poetry, sweetened and vitalized by sad experiences, became a daily solace. Back of this literary activity, however, loomed large and direful in the South the policies of reconstruction. To-day there are few, if any, apologists for this era of misguided zeal and humiliation that delayed and endangered a reunion which might well have come earlier.

A Significant Date, 1876.—This period ended in 1876, though its consequences could not cease so abruptly. This date does center in itself, however, certain very interesting signs that this period was practically at an end. In that year troops were withdrawn from Louisiana, the government of South Carolina passed from the hands of aliens into those of her own beloved chieftain, Wade Hampton. The people accepted not without murmur, but without violence, the decision of the electoral commission in Florida; and, as if all these signs of a reunion should be focused on one spectacular exhibition, the Centennial celebration assembled people from all parts of our common country in the city of Brotherly Love.

Second National Period, 1876.—With this date the second national period began, and more than a generation has passed full of vital activities, high ideals, and magnificent efforts. Perhaps the most significant development has been in education; and, of this in its higher reaches, Johns Hopkins, opened in 1876, may serve as a symbol. The growth of the literary spirit in our institutions may have not kept pace with the merely scholarly; but it is coming to its own, and in the meantime the whole country has felt the quickening power and enjoyed the self-sacrificing services of scholarship. Literature has found its course freer, and its rewards more alluring, and, therefore, her votaries more numerous. But behind these fleet aspirants for flying fame plod worthy students doing their tasks more slowly and reaching results of more lasting value.

Modern Types.—The short story of local color and the historical novel, the chivalrous romance with its chain of marvelous coincidences, and purpose stories throbbing with the pressing problems of the day, have had wide popularity, for we are a nation of high-school readers. Histories have regained aplomb and poise, and essays of marked acumen and delightful finish are not rare. Oratory has cut for itself other channels, but is no less intensive and effective than of yore. Indeed, the new themes have called for a new type and method that is different from the old, but not inferior to it. The magazines are hospitable to poetry too, and, if the supply seems lacking in originality and primal excellence, it is not because our poets lack mastery of form, but because they have had no profound experiences to record.

Promising Future.—But all is promising. Education is widespread, scholarship has high ideals, literature has ample rewards for those who can win them, and our national spirit and pride strengthen day by day. Our first national period was from 1800 to 1850, with its most fruitful years in the second quarter of the century. It would not run counter to our present trend if the largest literary achievements of this century should fall in corresponding years.

PARALLEL OUTLINES OF WORLD LITERATURE

In., Indian; Per., Persian; Arab., Arabian; Dan., Danish; Swed., Swedish; Ic., Icelandic; Nor., Norwegian; Sp., Spanish; It., Italian; Port., Portuguese; Russ., Russian.

TABLE I. FROM THE BEGINNING TO THE BIRTH OF CHRIST

Date	Egyptian	Babylonian and Assyrian	Hebrew	Indian and Persian	Chinese	Historical Events
4000 to 3000 B. C.	*Moral Precepts* of Ptah-hotep. Hieroglyphic records on tombs.	**King Sargon** (3800 B. C.)—*Early Tablets.*—Earliest record of a Semitic line of kings ruling in North Babylonia.				Civilization in Egypt and Babylonia.
3000 to 2000	Inscription of Una. *Book of the Dead*—A collection of prayers, mythical in character, dealing with the future state of the soul. *Song of the Harper*—Oldest version of a funereal drinking song.	Inscriptions. **Hammurabi** (c. 2300). — *Code* — Great statesman-ruler. His reign called the Golden Age of Babylon.				2700, Chaldean literature already voluminous. 2234, Astronomical observation in Babylonia.
2000 to 1000	*Pentaur*—A prose poem descriptive of battle. The nearest approach to the epic in Egyptian literature. *Papyrus Ebers* (c. 1550)—An extensive medical treatise found by G. M. Ebers. *Amarna Letters*—Clay tablets. The official archives of two kings of Egypt. Show evidence of advanced literary activity.		*Oldest Songs of the Old Testament.*—The Song of Deborah. Many of the psalms.	*The Vedas* (In.)—The collective designation of the ancient sacred literature of India. Prayers, sacrificial formulas, legends, rules for conduct. *Mahabharato* (In.)—A great epic narrative, containing about 100,000 stanzas.	*Oldest Songs of Shi-King Book of Changes*—A book of poetry, chiefly religious.	2000, Chaldean rule over Syria. Mycenæan civilization. 1380, Rameses II. 1040, King David.
	Greek					
1000 to 500	**Homer.**—*Iliad* and *Odyssey*—Epic poems containing the story of the siege of Troy and the wanderings of Ulysses. The greatest epic of all literatures. **Hesiod.**—*Works and Days*—Poet of humble descent and occupation, his work a collection of reflections and precepts relating to a rural household.	668-608, Golden age of Assyrian literature. *Descent of Ishtar Into Hades*, etc.—Ishtar was the chief goddess in the religion of the Babylonians and Assyrians.	*Joel, Amos, Hosea*—Minor prophets. *Psalms*—Sacred poems. *Jeremiah*—The book of lament over Israel's humiliation.	**Zoroaster.**—*Avesta* (Per.)—The bible of Zoroastrianism. *Ramayana* (In.)—The second of the two great epic poems of mediæval India.	**Lao-Tse.**—The reputed founder of the philosophy of Taoism. **Confucius.** — The most famous of all the sages of China. His doctrines were ethical and political.	1000, Zoroaster. 776, First Olympiad. 753, Founding of Rome.

TABLE I. FROM THE BEGINNING TO THE BIRTH OF CHRIST—Continued

Date	Greek	Latin	Hebrew	Indian and Persian	Chinese	Historical Events
1000 to 500 B.C. Cont.	**Sappho.**—One of the two greatest leaders of the Æolian school of lyric poetry. Passion, sincerity and grace in her work. **Anacreon.**—A graceful, lyric poet who sang of wine, love, and merry company.		*Songs of Solomon*—Hebrew pastoral poems.	*Laws of Manu* (In.)—A law-book and system of cosmogony. *Brahmanas* (In.)—Writings relating to prayer and sacrifice. *Upanishads*—Speculations on the nature of the world and man.		586, Babylonian captivity.
500 to 400	**Pindar.**—The greatest of the Greek lyric poets. **Æschylus, Sophocles, Euripides.**—Writers of tragedies. Their works are so full of deep human content that they belong to the world's greatest treasures. **Aristophanes.**—The greatest writer of Greek comedy. **Plato.**—The most important of the Athenian philosophers.		*Job*—A drama of the soul. *Ruth*—An idyl of Jewish life in the period of the judges.		**Mencius.**—Second in rank among Chinese sages. Taught that man by nature is good.	492, Persian war. 490, Marathon; age of Pericles. 438, Parthenon. 431-404, Peloponnesian war.
400 to 300	**Isocrates.**—The fourth among the ten Attic orators. **Demosthenes.**—A celebrated Athenian orator. **Æschines.**—An Athenian orator. **Aristotle.**—The founder of the Peripatetic school of philosophy. **Xenophon.**—An Athenian historian.		*Malachi*—A minor prophet. *Daniel*—The apocalyptic prophet.	**Panini's** *Sanskrit Grammar*—The greatest of India's grammarians. His is the oldest preserved Sanskrit grammar. Cuneiform inscriptions near Persepolis.		399, Execution of Socrates. 390, Gauls sack Rome. 336-323, Alexander the Great.
300 to 200	**Theocritus.**—The creator of bucolic poetry in Greek. **Eratosthenes.**—Famous for astronomical, geographical and mathematical labors. **Apollonius.**—A Greek scholar and epic poet. *Septuagint version of Hebrew Scriptures*—A translation made at Alexandria by seventy Greek scholars.		*Ecclesiasticus*, or *Jesus, Son of Sirach*—Practical moral reflections.	*The Puranas* (In.)—The name of a class of poetic Hindu works of mixed cosmogonic, epic, and didactic character. Beginning of the Indian drama.		264-241, First Punic war. c. 229, Achæan league. 218-201, Second Punic war.
200 to 100	**Bion.**—A Greek bucolic poet noted for his sharp and incisive sayings. **Moschus.**—Author of eight bucolic poems elegant in expression. **Polybius.**—One of the most important Greek historians.	**Plautus.**—*Comedies: Aulularia, Captivi, Pseudolus*, etc.—Rich in humor and invention, his comic art rivals that of Shakespeare. Our modern drama owes much to him. **Pacuvius.**—A learned and able imitator of Greek literature. **Ennius.**—*Annals, Thyestes*, etc.—The writer of the first great Roman historic epic. He made the Latin language suitable for lofty poetry. **Terence.**—*Comedies; Andria, Phormio*, etc.—His comedies are almost modern in their elegance, and have been widely copied by French and English dramatists. **Lucilius.**—*Satires*—A daring satirist who spoke out his full meaning in language that was sometimes lofty and sometimes half-Greek and full of slang. **Cato the Elder.**—*Concerning Agriculture*—At once a fine writer and a writer of strong works in prose. "The father of Latin prose." **Varro.**—*On Agriculture, On Languages*—"The most learned of the Romans." A great encyclopædist who wrote on various subjects with authority. **Cæsar, Julius.**—*Commentaries*—At once a great statesman, writer, and historian. His work on the Gallic war is read in modern schools for its perfect style. **Cicero.**—*Orations, Essays, Letters*—Rome's finest writer. The model of prose style for all time, ranging from lofty and powerful declamations to urbane and rhythmically beautiful passages. **Lucretius.**—*Concerning Nature*—The most original philosopher-poet in Latin. He expounded the Epicurean philosophy with an intensity of feeling that was almost madness. Tradition makes him to have died insane. **Catullus.**—*Lyrics*—In his strong passionate language the model of the modern Italian poet, d'Annunzio. **Sallust.**—*Histories: Catiline Conspiracy, War with Jugurtha, Memoirs*—An accurate historian who wrote with clearness and vigor. **Nepos.**—*History, Biographies*—Style is colloquial, but biographies are fair, sympathetic and well arranged. **Vergil.**—*Georgics, Æneid*—The greatest of the Roman epic writers. His *Æneid*, partly imitated from Homer, is remarkable for its pathos and deep feeling. **Horace.**—*Odes, Satires, Letters*—The most polished and the most quoted of all the lyric writers. No Roman poet is so long remembered as he, for he seems to exercise a personal influence over all who read him and came to him.			**Sudraka.**—An Indian dramatist.		146, Greece became Roman territory. 113-102, Invasion by Teutons. 63, Cicero consul. 49-45, Civil war. 44, Cæsar killed. 31, Battle of Actium. 27, Augustus emperor. 4, Birth of Jesus?
100 to A.D.	*The Anthology* compiled. Contains poems from forty-seven Greek poets.					

TABLE II. FROM JESUS TO MOHAMMED, 1-600 A. D.

Date	Latin	Early Christian Literature—Greek and Latin	Greek	Oriental	Historical Events
A. D. 1 to 100	**Livy** (59 B. C.-17 A. D.).—*History of Rome*—A florid, fluent historian, whose history of Rome was so long that part of it has been lost. Inaccurate but very readable. **Seneca** (3 B. C.-65 A. D.).—*Tragedies, Moralistic Essays, Satires*—Epigrammatic, wise, rhetorical; he created a new and florid style.		**Josephus, Flavius** (37-100).—*History of the Jewish War, Jewish Antiquities*—A Jewish historian who wrote in Greek in such pleasing style as to win the title of "the Greek Livy." His history gives a detailed account of the fatal war with Rome. **Plutarch** (c. 46-125), *Lives, Morals, Table Talk*—Master in sketching character. His work is permeated by lofty enthusiasm and a warmth of portraiture.		14, Death of Augustus. 68, Death of Nero.

TABLE II. FROM JESUS TO MOHAMMED—Continued

Date	Latin		Greek	Oriental	Historical Events
1 to 100	**Ovid** (43 B. C.-18 A. D.) *Metamorphoses, Heroides*, etc. A court poet who wrote much that is beautiful and much that is indecent. He died in exile. **Pliny the Elder** (23-79).—*Natural History.* An encyclopædist who has left us a large work drawn from the writings of a multitude of other men. He died in the eruption of Pompeii. **Lucan** (39-65 A. D.).—*Pharsalia.* The author of this third important Roman epic. He dared the displeasure of Nero and lost his life. **Petronius** (—66).—*Satire*—The first writer of realistic literature. His work is remarkable for its knowledge of the world, brilliant criticisms, and its pictures of low life in Italy.		**Epictetus** (c. 50).—*Discourses.* — An eminent philosopher, born a slave, who led a life exemplary of the pure morals which he taught.		70, Destruction of Jerusalem by Titus. 79, Destruction of Pompeii by Vesuvius.
100 to 200	**Juvenal** (40-120), *Satires.*—A vigorous satirist of Roman life, depicting hideous vices and cauterizing them with words of fire. **Quintilian** (42-118).—*Rhetoric and Criticism*—A genial writer on practical education, abounding in anecdotes and examples. **Martial** (43-104).—*Epigrams*—Very witty but obscene epigrammatist. **Tacitus** (55-117)—*Germany, History, Annals*, etc.—A scientific, historical writer, though prejudiced against the emperor. His style is obscure yet terse and vigorous. **Pliny the Younger** (61-115).—*Epistles*—A rather self-conscious personage whose letters are written with one eye on the public at large. The facts he gives regarding his time make his epistles attractive reading. **Suetonius** (72-c. 160).—*Lives of the Cæsars, Lives of Eminent Grammarians*—A voluminous writer, from whom we have the lives of the first twelve Cæsars. His style is dry but precise. **Apuleius, Lucius** (c. 130).—*Golden Ass, Concerning Magic*—Writer of romance who protrayed conditions of his time with much humor and in life-like colors.	Early Christian Literature *New Testament.* **Justin Martyr.**—*Apologies for the Christians.*—Important as defender of Christian religion. Was an ardent student of philosophy. Said to have been beheaded in 165 because he refused to offer sacrifice to heathen gods. **Clement of Alexandria.**—*Exhortation to the Greeks.*—A defense of the faith, designed to win converts. **Tertullian** (c. 150-230).—*Apology, Tracts.* The creator of Christian Latinity. His works imprinted on Western theology a legalistic character which it never lost. Sharply attacked moral laxities of his time. **Origen.**—The greatest theologian of the third century. He developed the allegorical interpretation of scripture.	**Dion Chrysostomus** (c.50-117).—*Orations.*—Though his writings have but little inherent value he is famous on account of the beauty of his style. **Lucian** (c. 120-200).—*Dialogues of the Dead, Satires.*—A bold satirist who, fertile in invention and racy in humor, ridiculed the religion, philosophy and literature of his people. **Applan** (c. 150).—*History of Rome.*—His point of view is purely Roman but the work is invaluable for the history of the civil wars.	**Kalidasa** (In).—*Dramas*—The most illustrious name in the second epoch of Sanskrit literature. This is the period of artificial poetry. Kalidasa is rich in creative fancy and strong in powers of description. His fame rests on his dramas, but he is also an epic and lyric poet. *Talmud* begun. This great work is the encyclopædia of Jewish civilization.	98-117, Trajan. 117-138, Hadrian. 138-161, A. Pius. 161-180, Marcus Aurelius.
200 to 400	**Ausonius** (310-390).—*Mosella.*—A Latin poet of Gaul in whom we first find the modern love of nature predominant. His best known poem is called *Mosella*, from the river Mosella; but he also dwelt on many subjects. **Claudian** (c. 365-408).—*Rape of Proserpine, Epigrams*, etc.—The last of the classical Latin poets. His poetical gifts were considerable, especially in the mastery of language and meter.	**Athanasius** (c. 293-373).—*Discourses, Histories.*—The father of Greek orthodoxy. **Chrysostom.** — *Homilies, Commentaries, Epistles.* — An eloquent expounder of Christian doctrine. **St. Ambrose** (c. 340-397).—A learned bishop noted for his mild and gentle, but inflexible character. **Jerome** (c. 340-420).—*Latin Bible* (vulgate).—This translation was destined to become the Bible of the occident. **Prudentius** (c. 348-405).—*Hymns.*—The greatest of the early Latin Church. The *Hymns* were designed for devotional use. **St. Augustine** (354-430).—*Confessions.*—Greatest of the Latin fathers. Taught that outside of the true church there could be no salvation.	**Galen** (c. 130-170).—A celebrated physician and prolific writer. Nearly every phase of medical science is indebted to him. **Dio Cassius** (c. 150-235).—*History of Rome.*—Though a Roman senator he adopted Greek in his writings. The work is a model of diligence. **Ptolemy, Claudius.**—*Syntaxis, Almagest.*—A famous mathematician, astronomer, and geographer. The last work still of interest, as it contains a catalogue of the stars. **Herodian** (c. 170-c. 240).—*History of the Roman Empire.*—A sober, accurate and impartial historian. **Plotinus** (c. 204-270).—*Enneads.*—A Greek philosopher characterized by depth of thought and pithy language. **Longinus** (213-273).—A rhetorician so learned that he was called "a living library and a walking museum." **Longus.** — *Daphnis and Chloe.*—This pastoral romance is considered the best of all ancient romances on account of its graceful narrative and deep, natural feeling. **Musæus.**—*Hero and Leander*—A short epic of love. In its warmth of feeling it has touches that are almost modern.	Completion of Palestine *Talmud.* GOTHIC **Bishop Ulfilas** (c. 311-381).—*Gothic Bible*—The earliest literary monument in Germanic speech, translated by the bishop of the Visigoths, and formed the basis of Arian Christianity for two centuries. One manuscript is preserved in the *Codex Argenteus* in Upsala.	Hau dynasty in China. 226, New Persian empire. 272, Defeat of Zenobia. 273, Death of Plotinus. 284, Reorganization by Diocletian. 313, Edict of Milan by Constantine. 361-363, Julian. 376, Visigoths admitted. 395, Death of Theodosius.
400 to 500					410, Alaric sacks Rome. 449, Saxons invade Britain. 455, Vandals sack Rome.
500 to 600	**Boethius** (470-525).—*Consolations of Philosophy, Translations.*—Almost the last Latin prose writer who also knew Greek. He ends the Roman period of literature with his philosophic treatises.	**Fortunatus, Venantius** (c. 530-600).—*Hymns, Epitaphs, Epistles.* The chief Latin poet of his time. *The Royal Banners Forward Go*, is his most famous hymn. **Gregory the Great** (540-604.—*Exposition of Job, Dialogues.*—As a pontiff he was the great organizer of the ritual and public services of the Roman Church. One of the four greatest teachers of the Western church.		*Moallakat* (Arab.)—A collection of seven prize poems by as many authors. ANGLO-SAXON *Beowulf*—An epic poem, one of the most interesting literary monuments among Germanic peoples. Its mythological elements show great antiquity.	527-565, Justinian. 571, Birth of Mohammed. 590, Gregory becomes pope. 593, Books printed in China.

TABLE III. FROM MOHAMMED TO DANTE, 600-1300

Date	English	German	Scandinavian	Arabian, Persian	Historical Events
600 to 700	**Bede** or **Baede** (673-735).—*Ecclesiastical History, Poems*—Inspired by early Christian sentiment. **Cædmon** (675?).—*Paraphrase of Scripture*—Showing how strong an appeal the bible story made to the reverence of the race.	This is the period of the infiltration of Roman civilization and Roman ideas.	400-1000, *Hundreds of Runic Inscriptions* (Dan.) — Very brief. Some in verse. Generally commemorate the dead. Very important for history, language, mythology. 400-1500, *About 2000 Runic Inscriptions* (Swed.) — Some authors known, as Ubir, Bali, Asmundr, Karasun. About 160 are in poetic form. Important for history, language, art.	**Mohammed's** *Koran*, the sacred book of Islam, collected shortly after his death. Many odes and lyrics in Arabic. *Bundahish* (Per.)—Date very uncertain. A work on cosmogony and theology.	622, Flight of Mohammed from Mecca, the Hegira. 632, Death of Mohammed. Rapid spread of Mohammedanism. 687, Battle of Testry.
700 to 800	*Traveler's Song* (700?)—Illustrates the sentiment of a wandering singer and the Anglo-Saxon's love of home. **Alcuin** (735-804).—*Letters, Biographies, Crist, Elene, Andreas*—Friend of Charlemagne, wrote a comparatively pure Latin. **Cynewulf** (c. 750-825).—*Poems*—Serious poems of moral simplicity and power.	*Lay of Hildebrand, Wessobrunn Prayer, Muspilli*—All are in the old Germanic alliterative verse. Authors are unknown. The *Lay of Hildebrand* is an example of the rough, uncouth ballad out of which the German national epic was, later, to be constructed.		In the latter half of this century Arabia enjoyed a glorious reputation in science and literature under the patronage of Haroun-al-Raschid. **Abu Hanifah** (702-772).—*Code of Laws*—Still in force in many parts of the Ottoman empire. **El-Asinai.**—*Romance of Antar* (Arab.)—A long poem upon the poet Antara.	711, The Arabs enter Spain. 732, Arabs repelled at Tanes. 751, Pepin the Short, king of Franks.
800 to 900	**Alfred the Great** (c. 849-901).— *Translations* — Some original matter interpolated, *e. g.*, narrative of others; versified by Longfellow.	**Orfrid** (c. 800-870).—*Gospel Book*— A poetic version of the life of Christ, and, like the *Heliand*, doubtless intended to supplant the old heathen epic. *Heliand* (c. 830)—An alliterative epic in Old Saxon speech, treating the gospel account of the life of Christ. Numerous religious writings, visions of judgment, lives of saints, epic gospel narratives, harmonies, and a few political compositions fill up the tenth century.	**Skalds** (800-1100). — *Drapas* (Ic.)—Vivid laudatory poems describing feats and battles of contemporary Scandinavian and English rulers. Traveled from court to court. **Anonymous** (850-1200).—*Elder* (*or poetic*) *Edda* (Ic.)— About 35 poems in alliterative verse dealing with myths (Odin, Thor, Frey) and hero legend (Sigfrid story). Composed in Iceland, Norway, Greenland; vivid, dramatic, terse.	**Al-Kindi** (c. 800).—*Medicine, Astrology* (Arab.)—Remains of 200 works on science and philosophy. **Abu Ubaidah** (824), (Arab.).—*History*, in 105 monographs including histories of Mecca and Medina.	800, Charlemagne crowned emperor of the west. 809, Death of Haroun-al-Raschid. 814, Death of Charlemagne. 843, Treaty of Verdun. 878, Treaty of Wedmore.
900 to 1000	**Alfric** (955-1020).—*Homilies, Grammar*—Writings in Latin. A man of power and sincerity. During the tenth and eleventh centuries the Anglo-Saxon or English language was undergoing radical grammatical changes. The great authors of these two centuries wrote in Latin, it being intelligible to the learned, for whom they wrote.	**Ekkehard.**—*Lay of Walther of Aquitaine* (c. 930)—*Waltharius manu fortis* is a short epic in Latin hexameters describing the adventures of Hildegunde of Burgundy and of Waltharius as hostages at the court of Attila. **Roswitha** or **Hrotswith.**—*Dramas*—A nun of Gandersheim who wrote six dramas in Latin in the Christian spirit of her time to take the place of the pagan plays of Terence.	**Egil Skallagrimsson** (Ic.), (900 - 983). — *Höfudlausn* (Head-ransom); *Sonatorrek*, (Son-Loss)—Daring, straightforward, original in expression. **Eyvind Skáldaspillir** (Nor.), (c. 910-995).—*Poem on King Hákon, Háleygjatal*—Is a fine poet and excellent man, but imitator of predecessors, whence his nickname "destroyer of skalds." **King Harald Harfagre** (Nor.), (933).—*Snaefridardrapa*—Encouraged skaldic poetry and is said to have been a poet himself. **Thorbjörn Hornklofi** (Nor.).—*Poem on Harold Harfagre, Wardin.* **Einar Helgason Skalaglam** (Ic.), (c. 945).—*Vellekla* (Goldwant)—Powerful and exalted. Fine diction. Melodious verse. **Hallfred Vandraedaskald** (Ic.), (c. 970).—*Poems on Various Chiefs*—Faithful, upright, but a bitter enemy. Fluent poet. Master of language and verse.	**Rudagi** (——954), (Pers.).—*Divan*—Graceful, fluent lyrics. The first great poet of Mohammedan Persia. **Ebu-Alrumi** (905), (Arab.).—*Poems*—Lyrics and other types of verse. **Firdusi** (c. 940-1025), (Pers.).—*Book of Kings*—One of the foremost poets of all literature. A great epic dealing with the Persian monarchs. **Mutanabbi** (965), (Arab.).—*Divan*—A series of poems. **Avicenna** (980-1037), (Arab.). *Medicine, Philosophy*—Philosophical and scientific works. His work on philosophy has been a text-book for European universities.	912, Treaty with Rollo. 962, Restoration of Holy Roman empire. 981, Greenland discovered.
1000 to 1100	**English:** **William of Malmesbury** (1095-1142).—*History of Kings of England*—Of some value as an original. **Geoffrey of Monmouth** (1154——).—*History of English Kings*—Largely legendary. **French:** *Song of Roland.* The greatest of the old French epics relating the adventures and death of Roland, a nephew of the Emperor Charlemagne. Probably composed at the end of the eleventh century.	**Notker III.**—*Translations*—A monk of St. Gall, the forerunner of the Renaissance. He translated into German Boethius' *Consolations of Philosophy*, the *Psalter*; Aristotle's *Categories*, etc. *Ruodlieb* (c. 1030)—A Latin epic with novelistic features, describing the life of the time. **Williram.**—*Song of Solomon*—William Abbot of Ebersberg in Bavaria, translated the *Song of Solomon* into German. **Ezzo.**—*Lay of Ezzo*—A scholastic of Bamberg whose *Lay* was to be sung as an anthem on the last great pilgrimage to the Holy Sepulchre before the crusades.	**Sigvat Thordarson** (Ic.), (995-1045)—*Vikingarvisur* (Viking lays), *Bersöglisvisur* (Lays of Frankness)—Greatest poet of days of Olaf the Holy. Tactful, discreet, honest, ease and elegance. *Runic Inscriptions* (Nor.), (1050-1350)—Some in verse. About 150, and of no great importance. Some older than 1050.	**Hariri** (c. 1054-1122), (Arab.).—*Mohamat*—Moral and satirical prose and verse. **Al-Hasan al-Nisaburi** (died 1015), (Arab.).—*Commentary on the Koran.*	1054, The great schism. 1066, Normans conquer England. 1096, First crusade.

TABLE III. MOHAMMED TO DANTE—Continued

Date	English	German	French	Scandinavian	Spanish	Arabian, Persian	Historical Events
1100 to 1200		*The Lay of the Nibelungs*—It is the Iliad of Germany.	**Villehardouin** (1150-1212). *Conquest of Constantinople*—The most valuable French prose of the Middle Ages.	**Snorre Sturlason** (Ic.), (1178-1241).—*Heimskringla* — History of kings of Norway from prehistoric times to 1177. *Younger* (or prose) *Edda.* Scientific handbook on Norse mythology poetic diction and versification.	**Unknown,** twelfth century (Sp.).—*Poem of the Cid*—Great narrative poem on the national hero.	**Omar** (-1123), (Pers.).—*Quatrains*—Philosophic and meditative stanzas. **Averrohes** (1126-1198), (Arab.).—*Science, Philosophy*—Important works on criticism, astronomy, medicine.	1118. Order of Knight Templars founded. 1138. Battle of the Standards. 1163. Notre Dame of Paris founded.
1200 to 1300	**Roger Bacon** (1214-1294).—*Natural Science, Philosophy*—A man in advance of his age.	**Wolfram von Eschenbach** (c.1170-1220).—*Parzival*—The greatest epic of its time. A phychological treatment of the story of the spotless Percival in his search for the Holy Grail. **Gottfried von Strassburg** (c. 1200).—*Tristan and Isolde*—His great court epic is naturalistic, breathing the spirit of French poetry. Gottfried was the master poet of passion. **Berthold von Regensburg** (1247-1272).—*Sermons*—The greatest German preacher of the middle ages. His language is direct, dramatic, sincere. **Master Eckart** (1260-1327).—*Sermons*—The first of the mystics.	**Jean, Sire de Joinville** (1224-1317).—*Life of St. Louis*—A friend of Louis IX., whom he accompanied in the first crusade. **Marie de France.**—*Lays, Fables*—Peculiar charm from their elegant conciseness and their personal note. *Aucassin et Nicolette*—An excellent example of the chanter fable of the twelfth century. **Lorris** and **Meung.**—Joint authors of the *Romance of the Rose,* a poem on the "Art of Loving."				1196. Observatory at Seville. 1206. Franciscan order founded. 1215. Magna Charta signed. 1229. University of Toulouse founded. 1248. Cathedral at Cologne begun.

TABLE IV. FROM DANTE TO THE PRE-REFORMATION PERIOD, 1300-1600

Date	English	German	French	Persian	Italian, Spanish, Portuguese	Scandinavian	Historical Events
1300 to 1400	**Sir John Mandeville** (1300-1371). *Travels*—Possibly a pen name. His travels are an extraordinary medley of invention and report. **John Wycliffe** (1324-1384).—*Translation of Bible*—A man of great power and sincerity. A dialectician and scholar. **William Langland** (1330-1400).—*Piers the Plowman*—Extraordinary man of broad humanity. First expression of the voice of the poor. **Geoffrey Chaucer** (1340-1400).—*Canterbury Tales, Short Poems*—A scholar, a poet of chivalry and a witty narrator of stories in verse.	**Tauler** (1300-1361—*Sermons*—A great preacher of Strassburg, and the forerunner of Luther.	**Jean Froissart** (1337-1410). *Chronicles*—A vivid and striking account of the events which took place in his days.	**Hafiz** (c.1390), (Pers.)—*Poems*—Lyrics of a very high order.	**Dante Alighieri** (It.), (1265-1321).—*Divine Comedy*—Great epic, written in the first person. **Francesco Petrarch** (It.), (1304-1374).—*Sonnets and Songs*—Lyrics mostly concerning Laura. **Giovanni Boccaccio** (It.), (1313-1375).—*Decameron*—A series of 100 tales in prose. **Iñigo López de Mendoza** (Sp.), (1398-1458).—*Sonnets*—The first in Spain to compose sonnets in imitation of Petrarch.	Collections of old provincial laws (Dan.),(c. 1300).—Fine picture of life of early times in all its phases. **St. Birgitta** (Swed.), (1303-1373).—*Revelations*—Mystical, conversations between Christ, Mary and Saints. **Eystein Asgrimsson** (Ic.),(1350).—*Lily*—Artfully wrought, popular religious poem.	1295. Marco Polo returned to Venice. 1309. Popes in Avignon. 1348. University of Prague founded. 1386. University of Heidelberg founded.
1400 to 1500	**Sir Thomas Malory** (1430- —).—*Morte d'Arthur*—Worked over a large part of the Arthurian legends in prose. The original for Tennyson's *Idylls of the King.* **Sir Thomas More** (1478-1535).—*Utopia, Life of Edward V.*—A man of fine character. Plan suggested perhaps by Plato's *Republic.*	**Geiler von Kaisersberg** (1445-1510).—*Sermons*—The representative preacher of the century. **Johann Reuchlin, Erasmus of Rotterdam**—Famous humanistic scholars. **Thomas Murner** (1475-1537).—*Satires, History*—Famous for attacks on Luther. Witty, ironical pulpit-orator.	**Charles of Orleans** (1391-1468).—*Poems*—Called the last of the Trouvères. His poetry in which art takes too often the place of thought, reaches a perfection of form in which we see already the approach of the Renaissance. **François Villon** (1431-1485).—*Ballads*—The most remarkable poet of the fifteenth century. His *Testaments* are among the masterpieces of French poetry. **Philipe de Commines** (1445-1509). — *Memoirs*—Give the best accounts we have of the reigns of Louis XI. and Charles VIII.		**Matteo M. Boiardo** (It.), (1430-1494).—*Orlando Inamorato*—A long romantic poem. **Girolamo Savonarola** (It.), (1452-1498). — *Sermons, Poems*—Political and theological writings. **Niccoló Machiavelli** (It.), (1469-1527).—*History, The Prince*—Profound but not too scrupulous. **Ludovico Ariosto** (It.), (1474 - 1533). —*Orlando Furioso*—A romantic poem of chivalry.	**Christian Pedersen** (Dan.),(1480-1554)—*Translation of Luther's Bible* (1550)—Father of modern Danish literary language.	1409. University of Leipzig founded. 1453. Fall of Constantinople.

TABLE IV. DANTE TO THE PRE-REFORMATION PERIOD—Continued

Date	English	German	French	Italian, Spanish, Portuguese	Scandinavian	Historical Events
1500 to 1600 Con.	**William Tyndale** (1484-1536).—*Translation of Bible*—On his translation of the scriptures later versions are founded.	**Martin Luther** (1483-1546).—*Translation of the Bible, Treatises, Hymns*—Inaugurator of the Reformation.	**Francois Rabelais** (1483-1553).—*Philosophy, Satire*—Scholar, philosopher, satirist, and innovator. Rabelais has left to posterity in the *Life of Gargantua and Pantagruel* a compendium of his vast knowledge.	**Francesco Guicciardini** (It.), (1483-1540).—*History, Politics.*—Cool, observant *Recollections*; masterly *History of Italy.*	**Brodr Niels** (Dan.), (1495).—*Rimkrönikel* (rhymed chronicle).—Each king tells his own life and deeds. First Danish book printed.	
	Hugh Latimer (1485-1555).—*Sermons*—One of the most distinguished of British reformers. **Andrew Wyntoun.**—*Chronicle of Scotland*—Story of Wallace. Much admired by Walter Scott.	**Ulrich von Hutten** (1488-1523).—*Poems, Songs*—Humanist and soldier, he supported the work of Luther.		**Gil Vicente** (Port.), (c. 1485-1536). — *Dramas* — Founder of the Portuguese drama. **Vittoria Colonna** (It.), (1490-1547).—*Poems*—Sonnets on the death of her husband. **Juan Boscán** (Sp.), (1493-1543).—*Poems*—Introduced Italian measures into Spain.	**Olaus Petri** (Swed.), (1493-1552).—*Religious Works, History, Hymns*—Unbiased historian. Luther of Sweden. Father of modern Swedish literary language.	1492. Discovery of America.
		Hans Sachs (1494-1576).—*Shrove Tuesday Plays, Poems*—Prolific cobbler mastersinger of Nuremberg.			**Hans Tausen** (Dan.), (1494-1561).—*Religion*—Age of Reformation. Polemical.	
	Sir Thomas Wyatt (1503-1542).—*Sonnets, Lyrics*—Introduced with Howard the Italian forms, sonnet and madrigal; made Italian literature a new force in England.	**Philipp Melanchthon** (1497-1560).—*Treatises, Text-Books*—Colleague of Luther.	**Clément Marot** (1495-1544). — *Poems*—Excelled in the lighter forms of poetry, such as the madrigal, the rondeau, the ballad, etc. Boileau calls his poems "elegant badinage."	**Jacopo Nardi** (It.), (1496-1556).—*History of Florence*—Animated history with the faults of a contemporary. **Benvenuto Cellini** (It.), (1500-1571).—*Autobiography*—A remarkable picture of his times. **Garcilaso de la Vega** (Sp.), (1503-1536).—*Poems*—Refined but lacking in originality. **Hurtado de Mendoza** (Sp.), (1503-1575).—*History, Fiction*—*War of Granada*, a comic novel, *El Lazarillo de Tormes.*	*Morality and Mystery Plays* (Dan.), (1500-1600)—Same origin and fate as in other countries.	1498. Martyrdom of Savonarola. The Reformation Raphael and Michelangelo in art. 1509-1547. Henri VIII. king of England.
	Henry Howard (earl of Surrey), (1517-1547).—*Translation of the Æneid, Songs, Sonnets*—Introduced Italian forms and blank verse. **John Fox** (1517-1587).—*Book of Martyrs*—His book had great influence in strengthening the reformers and was one of the literary influences on the Puritans who came to America.	*Till Eulenspiegel*, oldest version (1515)—A large collection of witty, popular anecdotes, the hero of which was the prince of rogues, Till Eulenspiegel.	**John Calvin** (1509-1564).—*Institutes of Religion*, etc. The second head of the reform. His *Institutes of the Christian Religion* is a statement of the doctrine of the religious innovators, and, like his other works, shows a remarkable erudition. **Jacques Amyot** (1513-1593). — *Translations From the Greek.* These translations, especially those from the works of Plutarch, stand as a model of the best language of the sixteenth century. **Pierre de Ronsard** (1524-1585).—*Sonnets, Odes*, etc.—As a poet Ronsard enjoyed in his time a celebrity second to none. **Etienne Jodelle** (1532-1573).—*Cléopâtre, Eugène*—His *Cléopâtre* may be said to mark one of the epochs of the French theater. **Michel E. de Montaigne** (1533-1592).—*Essays*—The work of the sixteenth century the most read to-day. Writing without order or plan he reaches the knowledge of mankind through the study "in good faith," of himself.	**Giorgio Vasari** (It.), (1512-1574).—*Lives of Celebrated Artists*—A gossipy book of information and anecdote about artists. **Luiz de Camoens** (Port.), (1524-1579).— *Lusiad, Poems*—Greatest poet of Portugal. *Lusiad* a celebrated historical epic. **Ponce de León** (Sp.), (1528-1591).—*Lyrics*—Original poems; translations from classics; translations from Hebrew poets.		1531. College de France
	Thomas Sackville (1536-1608).—*Mirror for Magistrates.* A poet of force and imagination. Afterward, as Lord Buckhurst, a courtier and politician. Worked in collaboration with others and had a hand in the first English tragedy.			**Ercilla** (Sp.), (1533-1595).—*Aruacana*—An epic poem on the revolt in Chili. **Fernando Herrera** (Sp.), (1534-1597). — *Lyrics*—Erratic and patriotic poems; author called the Divine. **Torquato Tasso** (It.), (1544-1595).— *Aminta, Jerusalem Delivered*—The latter a great epic on the capture of Jerusalem in 1099. **Miguel de Cervantes Saavedra** (Sp.), (1547-1616).—*Don Quixote, Poems in Galatea*—The first is the great masterpiece of Spanish literature. *Galatea*, a prolix pastoral romance in prose, with verses.	**Tycho Brahe** (Dan.), (1546-1601).—*Astronomy*—Made regular and careful observations of the movements of the planets.	
	Edmund Spenser (1552-1599.)—*Faërie Queene, Shepherd's Calendar.* Called the "poet's poet." Great in romantic allegory, the ode, and the sonnet. **Sir Walter Raleigh** (1552-1618).—*History of the World*—A politician and adventurer; friend of Spenser. Some fine passages in his work.	**Johann Fischart** (1550-1590).—*Treatises, Epic and Satire*—The master of German satire in the later sixteenth century. Achieved fame in 1577 by *The Fortunate Ship of Zürich*, treating the friendship between the cities of Zürich and Strassburg. Toward the end of the sixteenth century English comedians introduced English plays into Germany.				

TABLE IV. DANTE TO THE PRE-REFORMATION PERIOD—Continued

Date	English	German	Italian, Spanish, Portuguese	Scandinavian	Historical Events
1500 to 1600 Cont.	**Richard Hooker** (1553-1600).—*Ecclesiastical Polity*—His prose has dignity and force. His book is the authority for the Church of England. **Sir Philip Sidney** (1554-1586).—*Arcadia, Poems*—Singular beauty of character. *Arcadia* is a pastoral romance of great merit. **Francis Bacon** (1561-1626). —*Essays, Philosophy* — Many beautiful and acute things in his essays and his philosophical works. **Christopher Marlowe** (1564-1593).—*Dramas*—Most important of Shakespeare's predecessors. His tragedies, although full of horrors, are sublime in tone. **William Shakespeare** (1564-1616).—*Dramas* (37 plays), *Sonnets*—The best of all writers, compounded; wit, humor, characterization, philosophy, musical and phrase power, and construction.		**Pietro Sarpi** (It.), (1552-1623).—*History of Council of Trent* — Philosophical and historical.	**Gudbrand Thorlaksson** (Ic.), (1584).—*Translation of Bible*—Unwearied author and translator of religious works.	

TABLE V. SEVENTEENTH CENTURY, 1600-1700

English	German	French	Scandinavian	Italian, Spanish, Portuguese		Historical Events
	Jacob Ayrer (1605).—*Dramas*—Constructed under the influence of the English comedians, a new German drama, based on the art of Hans Sachs. He popularized the operetta. Sixty-six plays were published in 1618 under the title *Opus Theatricum.*	*L'Avocat Patelin*—Is the masterpiece of the French theater in the middle ages and it remains to-day as one of the best examples of the comic play and of the Gallic wit. **François de Malherbe** (1555-1628).—*Poems*—Brought into poetry a harmony and a purity of style unknown before him. There is more work than genius in his poems.		**Lope de Vega** (Sp.), (1562-1635).—*Dramas, Lyrics*—Dramas of unusual number, variety, and power. **Galileo Galilei** (It.), (1564-1642).—*Scientific*—Physical and astronomical discussions. **Tassoni** (It.), (1565-1638).—*Rape of the Bucket*—A mock heroic poem. **Tommaso Campanella** (It.), (1568-1639).—*Philosophy*—Philosophical and political. **Guillen de Castro** (Sp.) (1569-1631). — *Dramas* — His *Youth of the Cid* furnished the basis for Corneille's *Cid.*		
		St. François de Sales (1567-1622).—*Religious Works*—Preacher and writer of religious works whose influence was felt and is still felt by pious minds.	**Arngrim Jonsson** (Ic.), (1568-1648).—*History of Iceland*—Revived study of Icelandic antiquities. **Johannes Thomae Bureus** (Swed.), (1568-1652). — *Book on Runes*—Founder of runology. Grammatical works. Busy with old Scandinavian manuscripts.			
Ben Jonson (1574-1637). — *Dramas*—A scholar and man of letters. A learned constructor of plays, had also the true lyrical faculty. **John Fletcher** (1576-1625); **Francis Beaumont** (1586-1616). — *Dramas*—Well constructed plays, but of a low moral tone. **Robert Burton** (1577-1640).— *Anatomy of Melancholy*—Full of out-of-the-way learning and quotations bearing on the subject.	**Jacob Boehme** (1573-1624).—*Mysticism, Theosophy*—The founder of the mystical theosophy of the century.	**Mathurin Régnier** (1573-1613).—*Satires*—His poems, few in number, are imitated from the ancients. He borrowed also considerably from the Italian satirists.	**Magnus Olafsson** (Ic.), (1573-1636).—*Dictionary* — First Icelandic dictionary.			1572. Massacre of St. Bartholomew.
	Georg Weckherlin (1584-1653). — *Odes* and *Songs*—One of the first German poets to write sonnets and Alexandrines.	**Hugo Grotius** (Dutch), (1583-1645). — *Law, Philosophy, Translation*—Famous scholar and statesman. Modest, pious, gentle, generous.	**Anders Arrebo** (Dan.) (1587-1637).—*Poetic version of David's Psalms, Hexaemeron*—Florid language. Good description of nature, Alexandrines, mythological references	**Gomez de Quevedo** (Sp.), (1580-1645).—*Theology, Satires, Poems*—Political and religious prose; humorous and satirical works.	**John Smith** (1580-1631).—*A True Relation of Virginia*—A romantic recital of thrilling adventures. **William Bradford** (1588-1657).—*History of Plymouth Plantation*—A full and clearly written account to 1649. **John Winthrop** (1590-1649).—*History of New England*—A simple, personal narrative, with occasional freshness of style.	1588. Defeat of the Spanish armada.
Robert Herrick, (1591-1674).—*Poems*—Lyrics, many of them of charming quality and ingenuous construction. **George Herbert** (1593-1633).—*The Temple*, etc.—Animated by a devotional spirit and an æsthetic spiritualism.	**Johann Lauremberg** (1590-1658).—*Satirical Poems* — A patriotic satirist of the customs, language and dress of his time, especially of imitation of the French. **Friederich von Spee** (1591-1635).—*Lyrics*—Von Spee and Johann Scheffler were exponents of the Catholic religious lyric.	**Racan** (1589-1670).— *Pastoral Poems*—A poet full of a melancholy charm, highly appreciated by his contemporaries.				

TABLE V. SEVENTEENTH CENTURY—Continued

English	German	French	Scandinavian	Italian, Spanish, Portuguese	American	Historical Events
Izaak Walton (1593-1683).—*The Complete Angler*—Prose of a delightful character, full of simple piety and love of outdoor nature.		**Guez de Balzac** (1594-1654).—*Eloquent Prose*—His somewhat oratorical but elegant and harmonious style had an excellent influence on the progress of the anguage. **René Descartes** (1596-1650).—*Philosophy*—The founder of the school of philosophy, based upon reason, known under the name of *Cartesianism.* Besides being a great philosopher, Descartes made remarkable scientific discoveries.	**Gustavus Adolphus** (Swed.),(1594-1632).—*Speeches, History, Hymns*—Hero of Thirty Years' war. Intended to write also about his own life and reign, but did not get beyond Karl IX.			
	Martin Opitz (1597-1639).—*Criticism, Translations, Poems*—Translated from Greek, Latin and Italian, and set up fixed principles of poetic art. He has been called "the father of German poetry"	**Vincent Voiture** (1598-1648).—*Letters.*—Enjoyed during his lifetime the reputation of a wit and his letters had a prodigious success. **Jean de Mairet** (1604-1686).—*Tragedies*—His *Sophonisbe* and *Cleopatra* are the first tragedies adhering strictly to the unities.	**Georg Stiernhielm** (Swed.),(1598-1672).—*Works on Language and Mathematics, Poems*—Introduces new period in literature. Earliest Swedish sonnets. Great linguist, greater poet.	**Calderón Barca** (Sp.), (1600-1681).—*Dramas*—Dramas with love, jealousy and honor as motives.		1600. Martyrdom Giordano Bruno.
Sir Thomas Browne (1605-1682).—*Philosophy, Theology*—One of the most learned men of his time. His style exerted a great influence on Charles Lamb.	**H. M. Moscherosch** (1601-1669).—*Novels, Poems*—Represents the beginning of the transition from satire to novel under Spanish influence. **Friederich von Logau** (1605-1655).—*Epigrams*—This great epigrammatist wrote 3000 German epigrams. Some were translated by Longfellow.	**Pierre Corneille** (1606-1684).—*Tragedy, Comedy*—Called the "Father of French tragedy." Among his tragedies four are ranked among the masterpieces of the world's literature: *Le Cid, Horace, Cinna* and *Polyeucte.* He was also the author of the best comedy written until then (1642): *Le Menteur.*	**Lars Wivallius** (Swed.),(1605-1669).—*Lyrics*—Love of liberty and nature. Long imprisoned.			1603, England and Scotland united under James I.
Thomas Fuller (1608-1661).—*Church History of England*—A chronicle, with passages of wit or natural pathos. **John Milton** (1608-1674), *Areopagitica, L'Allegro, Il Penseroso, Comus, Paradise Lost, Paradise Regained,* etc.—A poet, grave, learned, of mental dignity but gifted with musical power as much as Shakespeare. **Samuel Butler** (1612-1680).—*Hudibras*—A rhyming jingle, destitute of elevation but with here and there a witty couplet. Anti-Puritan throughout. A favorite book of Charles II.	**Paul Gerhardt** (1607-1676).—*Hymns and Poems*—After Luther the greatest hymn-writer of the Lutheran church, and like Luther modeled his hymns on the popular ballads.	**Mlle. de Scudéry** (1607-1701).—*Novels*—One of the leaders of the "Précieuses" and called by them the "Tenth Muse." She published a number of voluminous novels which contain many interesting allusions to the events of her days. The best known of these novels is *Artamène, ou le grand Cyrus.* **Paul Scarron** (1610-1660).—*Comic Plays, Poems*—Author of a number of witty, burlesque poems. His widow became the famous Madame de Maintenon.		**Antonio de Solis** (Sp.), (1610-1686), —*Conquest of Mexico*—An eloquent spirited account of Cortes in Mexico.		1607, Jamestown, Va., founded. 1610, Galileo discovered Satellites of Jupiter.
Jeremy Taylor (1613-1667).—*Holy Living,* etc.—The "Shakespeare of Divines." Passages of rare poetic beauty and organ-like volume. **Richard Baxter** (1615-1691).—*Saint's Rest*—One of the *Vade mecums* of the later Puritans, earnest and sincere.	**Andreas Gryphius** (1616-1664).—*Dramas*—The German Shakespeare of the seventeenth century. His best work is in his comedies.	**François de la Rochefoucauld** (1613-1680).—*Maxims, Memoirs*—His maxims, full of bold paradoxes, give him a lasting reputation. He asserts that the love of self is the only motive for all human actions.	**Hallgrim Pjetturssoń** (Ic.),(1614-1674).—*Psalms*—Printed about 40 times. Clearest revelations in a northern tongue of the spirit of reformation.		**Anne Bradstreet** (1613-1672).—*The Tenth Muse*—An affected and cumbersome didactic poem.	
John Evelyn (1620-1706).—*Diary*—Of inestimable value, as it covers seventy years of dramatic English history.	**Philip von Zesen** (1619-1689).—*Novels*—Showed original talent as translator of the novel of gallant adventure.		**Stefan Olafsson** (Ic.), (1620-1688).—*Poems*—Lyric, ironic, satirical, moralizing.			1618-38, Thirty Years' war.
	Christoffel von Grimmelshausen (1624-1676).—*Novels*—The most important novelist of the period. *Simplicissimus,* the first great rogue novel in German literature, deals with the vicissitudes of the Thirty Years' war.	**Jean de la Fontaine** (1621-1695).—*Fables, Contes,* etc.—The *Contes,* inspired by Ariosto and Boccaccio, although full of wit are too often indecent. The reputation of the poet rests on his remarkable *Fables* which won for him the surname of "The Inimitable." **Molière (Jean B. Poquelin),** (1622-1673).—*Comedies; Le Misanthrope,* etc.—The greatest writer of comedies not only of his time but of all times. He has not been equaled in France, perhaps not in any country, and he is placed by common consent among the great men of genius who belong to the world. **Blaise Pascal** (1623-1662).—*Philosophy, Mathematics*—Not only a great mathematician but also a thinker and a philosopher. His *Pensées* (Thoughts), fragments of a religious work which he did not live long enough to finish, and his *Letters* remain as models of French literature.				

TABLE V. SEVENTEENTH CENTURY—Continued

English	German	French	Scandinavian	Italian	American	Historical Events
		Mme. de Sévigné (1626-1696).—*Letters*—Her charming familiar letters written to her daughter give interesting information on the court life of her time. **Jacques Bossuet** (1627-1704).—*Sermons*, etc.—The greatest orator and the greatest writer of his time. In his funeral orations especially he reached absolute perfection of oratorical style.				1625. Charles I., king of England.
John Bunyan (1628-1688).—*Pilgrim's Progress, Holy War*—Simple, idiomatic, with passages of rare beauty. Animated by simple, natural piety. A classic too much neglected. **John Dryden** (1631-1700).—*Virgil Translated, St. Cecelia's Day*, etc.—A fine critic. The father of fluent prose. Many energetic lines of verse, especially in his satires. A man of fine talent but limited genius. **John Locke** (1632-1704).—*Essay on Human Understanding, Thoughts on Education*, etc.—A sound, practical thinker, whose works illustrate the common sense and unspiritual tone of his age.		**Charles Perrault** (1628-1703).—*Stories for Children*—His stories are known all over the world and have immortalized his name. **Louis Bourdaloue** (1632-1704).—*Sermons*—A severe and austere preacher. The strength of his reasoning has made his sermons famous.	**Olof Rudbeck** (Swed.) (1630-1702).—*Atlantika, Works on Botany and Anatomy*—Very famous in anatomy. *Atlantika*, fanciful, represents the north as cradle of civilization. **Peder Syv** (Dan.), (1631-1712).—*Collection of Proverbs*—Promoted study and use of Danish instead of Latin. Wrote first Danish grammar.		**Henry Norwood** (1628-1670?)—*A Voyage to Virginia*—Surprisingly well written in parts, and informative. **Michael Wigglesworth** (1631-1705).—*The Day of Doom*—A poem on the day of judgment, according to the views of the time.	1628. Gustavus Adolphus killed at battle of Lützen.
Samuel Pepys (1633-1703).—*Diary* — His *Diary*, not intended to be public, throws light on the life and habits of a capable business man of the eighteenth century.	**Caspar von Lohenstein** (1635-1683).—*Dramas, Novels*—Represents the decline of German Renaissance. Reveled in themes of blood, incest, and cruelty.	**Mme. de La Fayette** (1634-1693).—*Novels*—Replaces the bombastic style of the pastorals of the time by a real language. **Nicolas Boileau** (1636-1711).—*Epistles, Art, Poëtique, Satires*—These works stamp him as a real poet and as a great critic. He did much to elevate the literature of the century. **Malebranche** (1638 - 1715).—*Philosophy*—Whatever may be the opinion of his theology, his rich and poetical style cannot be denied, and he is considered a great writer. **Jean Racine** (1639 - 1699).—*Tragedy*—Brought the French classic tragedy to its perfection. He understood men better than Corneille and consequently his tragedies are more human. It has been said that Racine painted men as they are, and Corneille as they should be.	**Thomas Kingo** (Dan.), (1634-1703).—*Hymns*—Denmark's most favorite hymn-writer and one of the world's best. **Thormod Torfason** (Ic.), (1636-1719).—*History of Norway*—A revolutionizing history. **Niels Stensen** (Dan.), (1638-1686).—*Mineralogy*—Finest work on subject ever written. Great student of astronomy. **Lars Johansson** (Swed.), (1638-1674).—*Lyrics*—Drinking songs, songs of love, casual poems.			1634. Wallenstein assassinated.
Sir Isaac Newton (1642-1727).—*Principia*, etc.—A great mathematician, he laid the foundation of our understanding of the mechanical structure of the universe.	**Christian Weise** (1642-1708).—*Plays, Novels*—Schoolmaster poet of Zittau, wrote after the manner of the Latin school dramas. He marks an advance by introducing fresh characters from the life about him and employing an unstilted style. **G. W. Leibnitz** (1646-1716).—*Philosophic Writings*—The first great scientific German philosopher of the modern type, sought to reconcile spirit and matter. Chief works deal with the goodness of God, the liberty of man, the origin of evil, and his theory of monads, or atoms. **Christian Thomasius** (1655-1728).—*First German Monthly*—Sought to bring universities into close touch with national life. Delivered the first of university lectures ever given in the German tongue.	**Jean de La Bruyère** (1645-1696).—*Character Studies*—Above all a moralist who in his *Charactères* satirized without mercy his surroundings. **François de la Motte Fénelon** (1651-1715).—*Télémaque*, etc.—Was not equaled in his century for the charm of his style. Less vigorous than his rival Bossuet, the influence of his sermons and his religious works was not less great. **Jean François Regnard** (1655-1709).—*Comedies in Verse*—His comedies, especially *Le Joueur*, show a decided comic talent.	**Samuel Columbus** (Swed.), (1642-1679).—*Works on Grammar, Poems, Hymns*—Unusually melodious poetry. **Harvin Spegel** (Swed.), (1645-1714).—*Glossarium Swedogothicum, Poems, Hymns*—Wrote *Guds Verk och Hvila*, religious, didactic poem. Best as writer of hymns. **G. E. Dahlstierna** (Swed.), (1661-1709).—*Poems*—Affected and bombastic, Patriotic. **Jon Thorkelsson Vidalin** (Ic.), (1666-1720).—(*Postille Family Book of Sermons*)—Bold eloquence.	**Vincenzo da Filicaja** (It.) (1642-1707).—*Lyrics*—Purely academic poet. Odes in lofty style.	**William Penn** (1644-1718).—*Brief Account of Pennsylvania*—Confidently religious and philanthropic in tone.	1642. English civil war. 1649. Charles I. of England beheaded. 1660. Restoration of the Stuarts.

TABLE VI. EIGHTEENTH CENTURY, 1700-1800

English	German	French	American	Italian, Spanish, Scandinavian	Historical Events
Daniel Defoe (1661-1731).—*Robinson Crusoe*—A born story-teller and pamphleteer.			**James Blair** (1656-1742).—*Sermons, No Cross No Crown*—Comparatively modern prose, written with pious zeal.		
Jonathan Swift (1667-1745).—*Tale of a Tub, Gulliver's Travels*—Unequaled as a satirist and writer of allegories in simple, nervous, idiomatic English.		**Jean Massillon** (1663-1742).—*Orations*—One of the great French sacred orators. He lives in his *Petit Carême*.	**Cotton Mather** (1663-1728).—*Elegy of Rev. Nathaniel Collins, Sermons*, etc.—Voluminous ecclesiastical writings of "pedantic and fantastic quaintness."		1666. Great fire of London.
Joseph Addison (1672-1719)—*Essays*—Originator of the social essay, marked by kindly, gentlemanlike humor in the urbane style.		**Alain René Le Sage** (1668-1747).—*Gil Blas, Comedies*—Best known as the author of *Gil Blas*, a satirical novel, and the first one to depict truly the manners of society.		**G. Battista Vico** (It.), (1668-1744).—*Scienza Nouva*—Metaphysical and scientific.	
Sir Richard Steele (1672-1729).—*Essays*—Established the *Tatler*. A good second to Addison.			**William Byrd** (1674-1744).—*The Dividing Line* and *other tracts*—Full of fresh humorous observations on life.		
		Duc de Saint Simon (1675-1755).—*Memoirs*—An original and powerful writer whose memoirs are a rich mine for those who study the period in which he lived.	**Robert Beverly** (1675-1716).—*History of Virginia*—A straightforward narrative of slightly polemic purpose.	**Scipione Maffei** (It.), (1675-1755).—*Dramas*—His *Merope* is the first classic Italian tragedy.	1675. Greenwich observatory founded.
	Christian von Wolff (1679-1754).—*Philosophical Writings*—The modern scholastic who popularized philosophy and brought rationalism to bear upon theology.				
Bishop Berkeley (1684-1753).—*Philosophy*—A very acute thinker, English founder of one form of idealism.		**Philippe Destouches** (1680-1754).—*Comedies in Verse*—His *Le Glorieux* is an excellent comedy of manners and the best of his plays.		**Ludvig Holberg** (Dan.), (1684-1754).—*Comedies, Historical Works, Philosophy, Comic Poetry*—Founder of Danish drama. Satirical comedy. Natural language of daily life. Fine picture of Copenhagen life.	
Alexander Pope (1688-1744).—*Poems*—The model poet of his time and century. Imparted to the couplet vigor, pungency, and some variety.				**Emanuel Swedenborg** (Swed.), (1688-1772).—*Philosophy*—Prominent scientist. Founder of religious sect with adherents chiefly in England and America.	1688. English revolution.
Samuel Richardson (1689-1761).—*Novels; Clarissa Harlowe, Pamela, Sir Chas. Grandison*—Founder of the sentimental moral novel, and gifted with the story-telling faculty.		**Alexis Piron** (1689-1773).—*Comedies in Verse*—The many superior qualities displayed in his poetical works are spoiled by the licentious nature of some of them. His best comedy *La Métromanie*, is one of the masterpieces of the French theater.			
Bishop Butler (1692-1752).—*Natural and Revealed Religion*—The orthodox moralist of his day, ponderous in style and common-place in method.	**J. C. Guenther** (1695-1723).—*Lyrics*—A lyric poet of personal feeling, modeling his lyrics upon the ballad, and thus the forerunner of Goethe.	**Voltaire (François Marie Arouet)** (1694-1778).—*History, Letters, Philosophy, Poems, Dramas*, etc.—The greatest literary genius of the eighteenth century. Poet, historian, political and satirical writer, philosopher, writer of tragedies, he excelled in every branch of literature. His works fill from 75 to 80 volumes.		**H. A. Brorson** (Dan.), (1694-1764).—*Hymns*—Wrote some of the best Danish hymns.	
	J. Bodmer (1698-1783).—*Criticisms, Translations*—Attacked Gottsched for subordinating the poet's imagination to the understanding, and finally wrought the latter's downfall.			**Pietro Metastasio** (It.), (1698-1782).—*Musical Dramas*—Lyric smoothness of melody.	1697. Peace of Ryswick.
Henry Carey (1700-1743). *Poems; Sally in Our Alley*, etc.—A light gift of doggerel satire.	**J. C. Gottsched**, (1700-1766).—*Dramas, Criticisms*—For twenty years literary dictator in Leipzig, sought to reform the German drama on the model of the French, but insisted upon historic costume, and banished the clown from tragedy.				
James Thomson (1700-1748).—*The Seasons*, etc.—A delicate feeling for the quieter aspects of nature, harmoniously expressed.			**Jonathan Edwards** (1703-1758).—*Sermons, Surprising Conversions*, etc.—Strong and highly imaginative proclamations of Calvinism.	**Ignacio de Luzan** (Sp.), (1702-1754).—*Art of Poetry, Poems*—Helped introduce French influence in Spanish.	
			Benjamin Franklin (1706-1790).—*Poor Richard's Almanac, Autobiography*—Wise and sagacious utterances of a fair, avowed utilitarian.	**Finn Jonsson** (Ic.), (1704-1789).—*Ecclesiastical History of Iceland*—List of royal decrees. History up to 1740.	1704. Boston *News Letter* established.

TABLE VI. EIGHTEENTH CENTURY—1700 to 1800—Continued

English	German	French	Scandinavian	Italian, Russian	Historical Events
Henry Fielding (1707-1754).—*Tom Jones, Amelia, Jonathan Wild*, etc.—The first great realistic novelist. Depicts life broadly and faithfully.		**Comte de Buffon** (1707-1788).—*Natural History* — A great naturalist and a writer whose style still serves as a model.	**Karl von Linné** (Swed.) (1707-1778).—*Botany, Travels* — Founder of science of botany. Language is naïve, expressive, simple, clear. **Johan Ihre** (Swed.), (1707-1780).—*Swedish Dictionary* — Founder of modern Swedish philology. His dictionary was epoch-making. **Sven Lagerbring** (Swed.), (1707-1787).—*History of Sweden*—Opposed fantastic historical writing of Rudbeck and other predecessors.	**Carlo Goldoni** (It.), (1707-1793).—*Comedies*—Animated character comedy, mostly in prose.	
Samuel Johnson (1709-1784). — *Dictionary, Rasselas, Lives of the Poets, Vanity of Human Wishes*—A man great in eighteenth century learning and letters. The critical authority of his day. **David Hume** (1711-1776).—*History of England*—The first learned historian of England. A philosopher of acumen.	**Friederich von Hagedorn** (1708-1754).—*Anacreontic Lyrics, Fables*—Essentially a social poet. He gave the dominant tone to the German lyric for twenty-five years. **Albrecht von Haller** (1708-1777).—*Science, The Alps*—Great Swiss anatomist and physiologist. Came under the influence of English poets and wrote *The Alps* in the spirit of the English nature poetry.	**Louis Gresset** (1709-1777).—*Poems, Comedies—Vert-Vert*, a jocular poem, and *Le Méchant*, a comedy, are the best known of his works. **Jean Jacques Rousseau** (1712-1778).—*Fiction, Education*—The world-wide influence of the works of this man cannot be measured.	**Olof von Dalin** (Swed.), (1708-1763).—*Journalism, History, Comedy, Tragedy, Poems*—Represents beginning of era of French influence. Shows influence of Pope, Addison, Swift, Voltaire.	**Prince Antioch Kantemir** (Russ.), (1708-1744).—*Poems*—Bold satirist of the social life of his own people. Verse form under French influence. **Michail Lomonossow** (Russ.), (1711-1765).—*Lyrics*—Scholar and poet Founder of Russian metrics. Grounded in Russian folk-song.	1708. Battle of Oudenarde. 1710. St. Paul's cathedral, London, completed.
Laurence Sterne (1713-1768).—*Tristram Shandy, Sentimental Journey*—A writer in whom affectation becomes an art. Some pathetic passages have become classic. **Thomas Gray** (1716-1771).—*Elegy in a Country Churchyard*, etc.—A scholar-poet, Production limited but of fine workmanship.	**C. F. Gellert** (1715-1769).—*Novels, Letters, Fables, Poems*—A poet of the people. Great stylist as letter writer. His *Swedish Countess of G.* is the first social novel in Germany. **Ewald von Kleist** (1715-1759). — *Nature Poetry, War Odes* — A Prussian military officer. Influenced in his poetry by Thomson. A spirit of melancholy unites with his passionate love for nature. **J. J. Winckelmann** (1717-1768).— *History of Ancient Art*—His work opened a new epoch in the history of art, and marked the beginning of modern archæology as a branch of science.	**Denis Diderot** (1713-1784).—*Fiction, Encyclopedie* (Ed). One of the most powerful exponents of the ideas and philosophy of the eighteenth century. **Etienne de Condillac** (1715-1780). — *Metaphysics*—A friend of Rousseau and Diderot, and, as a philosopher, for a long time a disciple of Locke. His *Treatise on Sensations* put him at the head of the "Sensualiste" school.			1717. Alliance between France, England and Holland.
Tobias Smollett (1721-1771).—*Humphrey Clinker, Roderick Random*, etc.—Originator of the sea-story. Inclined to vulgar coarseness. **Sir William Blackstone** (1723-1780). — *Commentaries on the Laws of England*—Learned and careful, with a conception of the dignity of law. **Adam Smith** (1723-1790).—*Wealth of Nations*—The first great economist. The moderns hardly equal to him in natural keenness of insight. **Oliver Goldsmith** (1728-1774).—*Vicar of Wakefield, Essays, Deserted Village, She Stoops to Conquer*, etc.—A true and graceful touch both in prose and poetry. Supposed to be the original compiler of *Mother Goose Melodies*. **Edmund Burke** (1729-1797).—*Essays, Orations*—Prose, sometimes musical and poetical, and, at the same time, a statesman's grasp of principle.	**J. W. L. Gleim** (1717-1803).—*Anacreontic Lyrics, Grenadier Songs*—A mediocre poet of love and wine and of war-songs, best known as a generous patron of needy poets. **F. G. Klopstock** (1724-1803).—*Messiah, Lyrics, Odes*—The first genuine poet of the eighteenth century. Inspired by Milton's *Paradise Lost*, he wrote his *Messiah*. He was also a great lyric poet. **G. E. Lessing** (1729-1781).—*Criticisms, Plays*—The greatest critic of Germany. Turned the minds of the Germans from the French stage to Shakespeare and German folk-drama, introduced the English comedy of common life, developed a new type of national German tragedy, and preached the evangel of brotherhood and religious toleration.	**Jean François Marmontel** (1723-1799).—*Novels, Tragedies*—Also a noted encyclopedist.	**Gerhard Suhm** (Nor.), (1722-1780).— *History of Norway*—Wrote a work on the north to 1400 in 14 volumes. **Bjorn Haldorsson** (Ic.) (1724-1794).—*Dictionary*—Originally an Icelandic-Latin dictionary, but published for the first time in 1814 with Danish meanings by R. Rask. **P. F. Suhm** (Dan.), (1728-1798).— *History of Denmark*—In 14 volumes ending with the year 1400. Characteristic ponderousness of age. **C. B. Tullin** (Nor.), (1728-1780).—*Poems*—Poems describing nature and didactic poems. Influenced by Thomson and Pope. Too much detail in description.	**Carlo Gozzi** (1722-1806).—Italian dramatist. **Guiseppe Parini** (It.), (1729-1799), *Poems, Odes*—His *Giorno* is one of the best works in Italy in the eighteenth century.	1727. George II., king of England.

TABLE VI. EIGHTEENTH CENTURY—Continued

English	German	French	Scandinavian	Italian, Spanish, Russian, American	Historical Events
William Cowper (1731-1800).—*The Task, John Gilpin*, etc.—Divests poetry of the affectations of Pope. Writes on simple themes.	**Solomon Gessner** (1730-1788).—*Idyls, Pastorals*—His *Idyls* the most popular German book in Europe before the appearance of *Werther*. His prose is delicately balanced, but very artificial. **C. M. Wieland** (1733-1813).—*Oberon, Novels*—Best known as author of the novels *Don Sylvio of Rosalva*, describing his transition from pietism to nature poetry; *Agathon*, giving his views of the antique; and the metrical romance *Oberon*, treating of the adventures of Huon of Bordeaux.	**A. de Beaumarchais** (1732-1799).—*Comedies*—Celebrated especially for his two witty and well constructed plays, *Le Barbier de Séville* and *Le Mariage de Figaro*, in which we find much of the spirit that is coming with the French revolution.	**Gustav Filip Crentz** (Swed.), (1731-1785).—*Poems*—Idyllic poetry. Tender in personality and expression. Delights of nature and of love. **Gustav Fredrik Gyllenborg** (Swed.), (1731-1808).—*Poems*—Best in didactic and satirical poetry. Wrote also fables and an epic.	**Girolamo Tiraboschi** (It.), (1731-1794).—*Literary History*—A valuable history of Italian literature. **Ramonde Cella Zrug** (Sp.), (1731-1799).—*Dramas*—Short farces of everyday life. **George Washington** (1732-1799).—*Farewell Address, State Papers*, etc.—Broadly patriotic and well-considered.	
	Immanuel Kant (1724-1804).—*Critical Philosophy*—The greatest German philosopher. Substituted critical philosophy for the old dogmatic metaphysics, demanded obedience to the moral law, laid the foundations of modern æsthetics. He was the founder of the transcendental philosophy.			**Thomas Godrey, Jr.** (1736-1763).—*The Prince of Parthia, Poems*—Imitative but original in imagination and marked by color. **Patrick Henry** (1736-1799).—*Speeches, Letters*, etc.—Eloquent, ardent, and profoundly impressive. **Thomas Paine** (1737-1809).—*The Crisis, Common Sense, Rights of Man, Age of Reason*, etc.—Journalistic and talented, and generally effective.	1734. University of Göttingen founded.
Edward Gibbon (1737-1794).—*Decline and Fall of the Roman Empire*—A painstaking and learned historian. Constructive powers of broad scope.		**Bernardin de St. Pierre** (1737-1814).—*Paul and Virginia*. This popular work brings into French literature the taste for "nature" as it is. St. Pierre was in literature a disciple of J. J. Rousseau.			
James Boswell (1740-1795).—*Life of Samuel Johnson*—Shows the true reporter's instinct for the point of a story. The book is otherwise that of a toady, though an unusual biography.			**Karl Mikael Bellman** (Swed.), (1740-1795).—*Songs, Lyrics*—Bubbling joy of life. Fluent writer. Wrote just to amuse. Musical. Very popular.		1740. Reign of Frederick the Great begins.
William Paley (1743-1805)—*Evidence of Christianity, Natural Theology*—A cogent reasoner on the old premises.			**J. H. Wessel** (Nor.), (1742-1785).—*Poems, Plays*—Effective parody of dramas of the day, which were written in French style. Elegant language. *Love Without Stockings* is his best known work.	**Gabriel Derschawin** (Russ.) (1743-1816).—*Lyrics, Odes*, etc.—His ode *To God* translated into all European languages. Rhetorical but a strong poetic vein.	
Hannah More (1745-1833).—*Coelebs in Search of a Wife, Sacred Dramas*—Something of a minor poet, something of a dramatist and story-teller.	**J. G. von Herder** (1744-1803).—*Criticisms, History*—The chief factor in the literary revolution known as "storm and stress." His work in history sets forth the evolution of human institutions.		**Klaus Fasting** (Nor.), (1746-1791).—*Poems*—Famous for critical essays and spirited epigrams. Admirer of French literature.		
Jeremy Bentham, (1748-1832), *Philosophy, Essays*—Greatest critic of legislation and government in his day.	**Johann Wolfgang von Goethe** (1749-1832).—*Dramas, Lyrics, Elegies, Sonnets, Epigrams*—The greatest German poet. A universal genius. Before 1800 he had imitated Shakespeare, Ossian, Goldsmith and the ballad poetry, sung odes in the manner of Pindar and Klopstock, lived his story of *Werther*, and created a new German classicism in *Iphigenie, Tasso*, and *Hermann and Dorothea*. His life poem, *Faust*, is based upon the doctrine of redemption by ceaseless striving, and typifies the philosophical struggle of the poet's own life.	**Comte Mirabeau** (1749-1791).—*Orations*—The greatest orator of the French revolution. His speeches have been published and are his principal title to literary distinction.	**Edw. Storm** (Nor.), (1749-1794).—*Poems*—Author of splendid heroic ballads.	**Vittorio Alfieri** (It.), (1749-1803).—*Tragedies* Classical in spirit, observing the unities.	
Richard B. Sheridan, (1751-1816), *The Rivals, School for Scandal, Speeches*, etc.—Writer of witty dialogue and constructor of telling stage situations. Comedies still acted.			**Johan Henrik Kellgren** (Swed.), (1751-1795).—*Journalism, Poems*—Lyric and satiric poetry. Most prominent of the literary men who were intimate with Gustaf III.	**Tomás de Yrlarte** (Sp.), (1750-1791).—*Literary Fables*—Original fables directed toward literary subjects.	
William Blake, (1757-1827), *Songs of Innocence, Songs of Experience*—"The single Englishman of supreme and simple poetic genius of his time."			**Enevold Falsen** (1755-1808).—*Dramas*—His *Dragedukhen* enjoyed great popularity.		1755. Earthquake at Lisbon. 1756-1763. Seven Years' war. 1759. Battle of Quebec
Robert Burns, (1759-1796), *Poems*—Lyrics, songs and satires in Scotch dialect, marked by music, pathos and wit.	**Friederich von Schiller** (1759-1805).—*Dramas, Lyrics, History*—The great associate of Goethe. Reflects the ideal yearnings of his time. Aimed to lead men to consecrate their gifts to *the good, the beautiful, and the true*. He is the best-loved poet among the Germans. **A. von Kotzebue** (1761-1819).—*Plays*—Now almost forgotten, he was the most popular dramatist of his time. His plays are very numerous, and catered to the public taste.	**Claude Rouget de Lisle** (1760-1836).—*Marseillaise*—The immortal national hymn of France. **André Chénier** (1762-1794).—*Lyrics*—A model in purity of form. His style in the lyrics is passionate, but not personal.			

TABLE VII. NINETEENTH

English	American	French
	Thomas Jefferson (1743-1826).—*Notes in Virginia, Declaration of Independence*—Full of wise foresight and keen acumen. **John Marshall** (1755-1835).—*Life of Washington, Decisions*, etc.—Profound and wise, but rather heavy. **Alexander Hamilton** (1757-1804).—*Contributions to the Federalist*—Keen and ingenious, full of information.	
		Xavier de Maistre (1763-1852).—*Novels, Essays*—Models of vigorous narration. Deserves prominent place among French novelists.
	Alexander Wilson (1766-1813).—*American Ornithology*—Pioneer investigations of a shrewd observer.	**Mme. de Staël** (1766-1817).—*L'Allemagne, Delphine, Corinne*, etc.—The first to set forth the principles of the Romantic school. Her book on Germany did much to bring the thought of that country into France. **Benjamin Constant** (1767-1830).—*Politics, Religion*—His works, both on politics and religion, are skeptical in tone. He also wrote *Adolphe*, a novel of some value. **Jean François Michaud** (1767-1839).—*History of the Crusades*, etc.—The founder of the universal biography.
Maria Edgeworth (1767-1849).—*Popular Tales*—Stories of middle-class domestic life, of excellent moral tone and some power of characterization.		
		François de Chateaubriand (1768-1848).—*René, Genius of Christianity, Atala*, etc.—Undoubtedly the greatest writer of his century, and his influence on the literature of the first half of the nineteenth century is considerable.
		Baron de Cuvier (1769-1832).—*Natural History*—One of the best known French naturalists. **Napoleon I.** (1769-1821).—*Proclamations, Letters, Memoirs*—His letters and his memoirs bear the stamp of the great genius whose characterization cannot be given in this restricted space.
William Wordsworth (1770-1850).—*The Excursion, Poems.*—Nature poems and descriptive poems. Many fine sonnets. First expression of modern feeling for nature. **James Hogg** (1770-1835).—*Pastorals, Shepherd's Calendar*—Scotch verses. One or two lyrics of sweetness and simplicity. **Sir Walter Scott** (1771-1832).—*Novels, Lady of the Lake, Poems*—Originator of the historical novel. Tone natural and wholesome. Secure in the estimation of posterity. **Sidney Smith** (1771-1845).—*Sermons, Essays*—The witty divine. Master of the expository style. **James Montgomery** (1771-1854).—*Hymns, Poems*—A man universally esteemed; best remembered now for his hymns, of which some hundred are found in our hymnals.	**Charles Brockden Brown** (1771-1810).—*Wieland, Ormond*, etc.—Weird and sensational, of the Godwin type.	
Samuel T. Coleridge (1772-1834).—*Essays, Rhyme of Ancient Mariner, Translation*, etc.—A man of remarkable gifts, intellectual and poetic; a keen critic; a natural master of verbal melody.	**William Wirt** (1772-1834).—*Life of Patrick Henry, Letters of a British Spy*—Interesting and informative, but also imaginative.	**Charles Fourier** (1772-1839).—*Socialism*—A socialist whose system did not prove practical although it had many followers.
Robert Southey (1774-1843).—*Biographies of Nelson, Wesley*, etc., *Poems*—A man of industry and worth. Better as a prose stylist than a poet. **Charles Lamb** (1775-1834).—*Essays of Elia*, etc.—A quaint and delicate essayist; a friend of Coleridge. **Walter Savage Landor** (1775-1864).—*Imaginary Conversations, Count Julian, Heroic Idyls*, etc.—Classic scholar and writer. Reactionary and old-fashioned in his thought but a remarkable stylist. **Jane Austen** (1775-1817).—*Novels; Pride and Prejudice, Emma*, etc.—Her novels depicting upper middle-class life are delightfully realistic and full of quiet humor.	**Robert Treat Paine** (1773-1811).—*Adams and Liberty, Poems*—Superficial, but of noticeable metrical facility.	**Jean Baptiste Biot** (1774-1862).—Philosopher and mathematician.
Thomas Campbell (1777-1844).—*Pleasures of Hope, Lyrics*, etc.—Something of a critic. His lyrics have much vigor and verve. **Henry Hallam** (1777-1859).—*Europe During the Middle Ages, Constitutional History of England*—Strong, vigorous, historical writing from a standpoint now antiquated. **William Hazlitt** (1778-1830).—*Table Talk, English Poets*, etc.—Critical essays; contain some true eloquence, and many powerful phrases **Thomas Moore** (1779-1852).—*Biographies, Lalla Rookh, Irish Melodies*, etc.—Songs of much melody but of an unreal sentimentality.	**Henry Clay** (1777-1852).—*Speeches, Letters*, etc.—Attractive because of personality and power. **Washington Allston** (1779-1843).—*Art Lectures, Poems*—Highly artistic in intent and achievement. **James Kirk Paulding** (1779-1860).—*Novels*—Romances of little present interest. **Francis Scott Key** (1780-1843).—*Poems, Star Spangled Banner*, etc.—The chief poem is a national song of patriotic ardor. **William E. Channing** (1780-1842).—*Addresses, Sermons*—Social papers, clear, tolerant, thoughtful. **John James Audubon** (1780-1851).—*Birds of America, Quadrupeds of America*—Marked by keen observation and wide interest.	**Pierre de Béranger** (1780-1857).—*Lyrics*—His songs, which have great lyric qualities, were very popular in his day and are still valued.

ENTURY, 1800-1900

German	Scandinavian	Italian, Spanish, Russian	Historical Events
	Anna Maria Lenngren (Swed.), (1755-1817).—*Poems*—Satiric and idyllic, but realities depicted in natural and simple colors. Her poetic career rather too late to show extreme traits of this period.		
J. G. Fichte (1762-1814).—*Philosophic Writings, Orations*—The philosopher of the Romantic school and the exponent of the philosophy of individualism. His great work *Addresses to the German Nation* helped arouse the revolt against Napoleon. **Jean Paul Friederich Richter** (1763-1825).—*Novels, Esthetics*—United elements of "storm and stress" with Fichte's philosophy. Often represents the idealist in conflict with real life.	**J. T. Baggesen** (Dan.), (1764-1826).—*Novels, Essays, Travels, Lyrics, Rhymed Letters*—Clothed his sparkling wit in most elegant language. Restless nature.	**Carlo G. Botta** (It.)—(1766-1837).—*Histories*—Dignified histories of the American war of independence and of Italy.	1763. *Georgia Gazette* established at Savannah.
Wilhelm and **Alexander von Humboldt** (1767-1825 and 1769-1859).—*Criticism, Science, Travels*—Great scientists and travelers. Wilhelm, virtual founder of the University of Berlin, was a great classical scholar. Alexander wrote the great masterpiece *Cosmos*. **A. W. von Schlegel** (1767-1845).—*Criticism, Poems*—The great critic of the Romantic school. Gave the Germans his famous lectures on *Dramatic Art and Literature*, and contributed to their classical translation of Shakespeare, 1797-1810. **Zacharias Werner** (1768-1823).—*Plays, Sonnets*—Next to Tieck, the greatest dramatist of the Romantic school. **F. E. D. Schleiermacher** (1768-1834).—*Addresses, Criticisms*—The preacher of the Romantic school, famous for his *Addresses on Religion*, his *Monologues*, and his *Letters* on *Lucinde*. **Ernst Moritz Arndt** (1769-1860).—*Warsongs, Lyrics*—A sturdy patriot. An earnest, religious spirit prevades his work. Most effective in stirring his nation to revolt against Napoleon. **Friederich Hölderlin** (1770-1843).—*Hyperion, Lyrics*—Devoted to Greek culture. Poetic activity early cut off by insanity. Was the most gifted lyric genius at the close of the century. **G. W. F. Hegel** (1770-1831).—*Philosophy*—The philosopher of collectivism and of evolution in history.	**Jon Espolin** (Ic.), (1769-1836).—*History of Iceland 1262-1832*—Twelve large quartos in annalistic form. Valuable as source, but often uncritical.	**Quan Krylow** (Russ.), (1768-1844).—*Fables, Odes, Epistles, Tragedies*—Full of wit and humor. His fables very popular with the Russian people.	
Heinrich Zschokke (1771-1848).—*Novels*—Prolific novelist, social and political reformer. His best novels are written in the spirit of Scott's *Waverley Novels*.	**Hans Christian Oersted** (Dan.), (1777-1851).—*Science*—Discovered electric magnetism.		
Novalis (Friederich von Hardenberg) (1772-1801).—*Novels, Lyrics, Criticism*—The sentimental poet of the Romantic school. His *Hymns to the Night* contain some of the most spiritual poetry in the German tongue. **Friederich von Schlegel** (1772-1829).—*Criticism, Novels*—Both critic and poet and wrote the greatest novel of the Romantic school, entitled *Lucinde*, dealing with the limitations of conventional society.	**Franz Mikael Franzén** (Swed.), (1772-1847).—*Poems, Hymns*—Exquisite lyric poems. Tender in feeling, clear in form.		1772. Partition of Poland.
J. L. Tieck (1773-1853).—*Novels, Lyrics*—The most prolific writer of the Romantic school. His *Puss in Boots* is the best satirical German drama. He is unrivaled in the world of phantasy.	**Countess Gyllembourg** (Dan.), (1773-1856).—*Novels* — Pseudonym. J. L. Heiberg's mother. Describes everyday life in all classes of society.	**Jean Charles Sismondi** (It.), (1773-1842), *Histories*—Extensive history of the literature of the south of Europe.	
F. N. J. Schelling (1775-1854).—*Philosophy*—A disciple of Spinoza, taught the identity of spirit and nature, and published *Philosophy of Nature* (1797), *The World Soul*, (1798) and *System of Transcendental Idealism* (1800).	**Malte Bruun** (Dan.), (1775-1826).—*Geography*. **J. P. Mynster**, (Dan.), (1775-1850), *Theology*—One of Denmark's greatest theologians.	**Alberto Lista** (Sp.), (1775-1848).—*Criticism*—Literary criticism of a wholesome nature.	1775. Battle of Bunker Hill.
			1776. American independence.
Heinrich von Kleist (1777-1811).—*Dramas, Novels*—Poet of a tragic life. The most original dramatist of North Germany. His *Prince von Homburg* is Prussia's greatest historical drama. **F. de la Motte Fouqué** (1777-1843).—*Tales, Lyrics*—A later Romanticist, popularly known for his charming *Undine* (1811), the story of a water sprite without a soul. **Clemens Brentano** (1778-1842).—*Novels, Ballads*—Best known for his work on *The Boys' Wonder Horn*, the first extensive collection of German ballads.	**Jons Jakob Berzelius** (Swed.), (1779-1848).—*Chemistry*. Enjoys world-wide fame. **Adam Gottlob Oehlenschlaeger** (Dan.), (1779-1850).—*Poems, Tragedies*—Very prolific and brilliant writer. Material chiefly from Scandinavia. Wholesomely human. His *Helge* was model for Tegnér's *Frithiofs Saga*.	**Ugo Foscolo** (It.), (1778-1827).—*Poems, Dramas*—Serious, often melancholy.	
Friedrich von Raumer (1781-1873).—*Historian*—A voluminous writer.			

TABLE VII. NINETEENTH

English	American	French
	John C. Calhoun (1782-1850).—*Speeches, Papers*, etc.—Forceful in logical thinking and clear exposition. **Daniel Webster** (1782-1852).—*Orations*—Elevated in thought and eloquent. **Thomas Hart Benton** (1782-1858).—*Thirty Years' View*—Rich and racy observations of wide experience.	
Leigh Hunt (1784-1859).—*Essays, Sketches, Memoirs, Poems*—A minor poet. A *littérateur* of appreciation rather than of creative power. **Thomas De Quincey** (1785-1859).—*Confessions of an Opium Eater*, etc.—Passages of magnificent color. A learned man, lacking in sound realistic judgment.	**Washington Irving** (1783-1859).—*Knickerbocker's History of New York, Sketch Book*, etc.—Humorous, with delicate sentiment and grace.	**Henri Beyle** (Stendhal), (1783-1842).—*Novels*—His novels *Le Rouge et le Noir* and *La Chartreuse de Parme* bring into literature an analysis of one's self more true than the self-presentation of the Romantic school in general.
Lord Byron (1788-1824).—*Poems*—Vigorous, eloquent, sardonic, iconoclastic. A great satirist and in many respects a great poet.	**Richard Henry Dana** (1787-1879).—*Poems: The Buccaneer*, etc.—Overambitious and not wholly successful. **Alexander Campbell** (1788-1866).—*Religious Debates, Editorials, Sermons*, etc.—Incisive in thought, tolerant in spirit, vigorous.	**François Guizot** (1787-1874).—*Histories*—His remarkable historical works have founded the school of philosophical history.
	James Fenimore Cooper (1789-1851).—*Leather Stocking Tales, The Spy*, etc.—Romantic and overfortunate in coincidence, but readable. **Jared Sparks** (1789-1866).—*American Biographies*—Commendable efforts of a pioneer biographer. **Fitz Greene Halleck** (1790-1867).—*Poems, Marco Bozzaris*, etc.—Spirited but overwrought; sometimes graceful. **Augustus B. Longstreet** (1790-1870).—*Georgia Scenes*—Frankly humorous and delightfully fresh.	**Alphonse de Lamartine** (1790-1869).—*Poems, History of the Girondists*, etc.—The first, in date, of the great poets of the Romantic school. An idealist whose harmonious verses and high ideals have continued to grow in favor.
	George Ticknor (1791-1871).—*History of Spanish Literature*—Scholarly and authentic.	**Eugène Scribe** (1791-1861).—*Comedies*—The author of a large number of plays which show more dramatic skill than study of manners or character.
Percy B. Shelley (1792-1822).—*Queen Mab, Adonais, The Sky Lark*, etc.—A remarkable gift of lyrical melody. Full of generous impulse and the unbalanced judgment of youth. A genius. **Capt. Fred Marryat** (1792-1848).—*Peter Simple, Jacob Faithful*, etc.—Boys' stories, but evincing considerable narrative skill. **Felicia Hemans** (1793-1835).—*Lyrics*—A minor poet of grace, sweetness and tenderness.	**John Howard Payne** (1792-1852).—*Home Sweet Home*—Universal in appeal and satisfying in form.	**Victor Cousin** (1792-1867).—*Philosophy, Metaphysics*—The chief of a school of philosophers called the Eclectics.
	Samuel G. Goodrich (1793-1860).—*Peter Parley Books*—Popular introductions with a flavor of fiction.	**Casimir Delavigne** (1793-1843).—*Dramas, Elegies*—Author of popular elegies, but especially remembered as a dramatic writer.
George Grote (1794-1871).—*History of Greece*—A learned and sound historian, but superseded by modern exact research.	**William Cullen Bryant** (1794-1878).—*Addresses, Letters, Poems: Thanatopsis*, etc.—Dignified and poised, serious and helpful.	**Augustin Thierry** (1795-1856).—*History of France*, etc.—Historian of the Romantic school.
John Keats (1795-1821).—*Endymion, Hyperion*, etc.—A true poet, dying too young to reach full fruition of his remarkable artistic powers. **Thomas Arnold** (1795-1842).—*Roman History, Sermons, Essays*—A man of wide influence as headmaster of Rugby. An historian of the old school. **Thomas Carlyle** (1795-1881).—*French Revolution, Cromwell, Sartor Resartus, Essays*, etc.—A very great though one-sided man. A prose poet, an historian of insight and industry, impatient of shams.	**Joseph Rodman Drake** (1795-1820).—*The Culprit Fay*—Cleverly executed, but ingeniously fanciful. **James G. Percival** (1795-1856).—*Poems: Prometheus*, etc.—Unsustained, though not without positive merits. **John Pendleton Kennedy** (1795-1870).—*Swallow Barn, Horse Shoe Robinson*, etc.—Old-fashioned but interesting pictures of southern life. **William H. Prescott** (1796-1859).—*Conquest of Peru, Ferdinand and Isabella*, etc.—Excellent history, very interestingly told. **Thomas C. Haliburton** (1796-1865).—*Sam Slick*—Humorous with the raciness of the soil.	**François Auguste Marie Mignet** (1796-1884).—*Histories*—Like that of Guizot his history is founded upon a philosophical basis.
Samuel Lover (1797-1868).—*Songs, Ballads*—A writer of slap-dash Irish stories and some good songs.	**Hugh Swintose Legaré** (1797-1843).—*Addresses, Articles, Letters*—Academic, stilted and in good form.	**Louis Adolphe Thiers** (1797-1877).—*French Revolution, History of the Empire*, etc.—A great historian and statesman. His histories are realistic and scientific.

CENTURY—Continued

German	Scandinavian	Italian, Spanish	Historical Events
Achim von Arnim (1781-1831).—*Novels, Poems*—Like Brentano, a Heidelberg Romanticist, and assisted with the *Wonder Horn*. **Adelbert von Chamisso** (1781-1838).—*Peter Schlemihl, Poems*—A later Romantic lyrist, wrote ballads and *Peter Schlemihl*, the story of a man who sells his shadow, and finds his way through the world with seven league boots, a romantic treatment of the poet's own life.	**Finn Magnusson** (Ic.), (1781-1847).—*Mythology*—Thorough student of northern antiquities. **N. M. Petersen** (Dan.), (1781-1862).—*History, Mythology*—Wrote a work on Scandinavian mythology and a history of Danish literature. **Esaias Tegnér** (Swed.), (1782-1846).—*Speeches, Poems, Frithiofs Saga*—World-wide renown. Great personality and original poet. Brilliant figures, clear expression. Musical lyric verse. Influenced by German and Greek. Emphasizes Scandinavian mythology. **Erik Gustaf Geijer** (Swed.), (1783-1847).—*History, Philosophy, Poems*—Very great both as historian and poet. A scholar. His poetry appeals to the people. **Christopher Hansteen** (Nor.), (1784-1873).—*Astronomy*—Became widely known by his study of the earth's magnetism.		
Jacob Grimm (1785-1863).—*Fairy Tales, Dictionary*—With his brother Wilhelm, founder of modern German philology, and compiler of the great German dictionary; known in literature for his large collection of *Fairy Tales*. **Ludwig Börne** (1786-1837).—*Letters from Paris*—A Jew from the Frankfort ghetto. Famous for his *Letters*, written as a protest against narrowing social limitations. **Wilhelm Grimm** (1786-1859).—*Critical Writings*—See Jacob Grimm mentioned above. **A. Justinus Kerner** (1786-1862).—*Lyrics, Soothsayer of Prevorst*—Famous lyric poet and Romantic mystic. His *Soothsayer* is a collection mysterious sayings and doings. **Ludwig Uhland** (1787-1862).—*Criticism, Ballads*—Poet of Romantic type, wrote ballads, historical plays, patriotic poems, and treatises on German legends. **J. von Eichendorff** (1788-1857).—*Lyrics, Life of a Good-for-Nothing*—The greatest lyric poet of the Romantic movement. Essentially a poet of nature, and the ideal of a free "Wanderleben" is the recurring theme. **Arthur Schopenhauer** (1788-1860).—*Philosophy*—The philosopher of pessimism. His *World as Will and Idea* left a deep impression. **Friedrich Rückert** (1788-1866).—*Sonnets in Armor, Poems*—Poet of the war of Liberation. His *Sonnets in Armor* resound with the clank of arms. Also a great interpreter of oriental life and poetry.	**Bjarne Thorenson** (Ic.), (1786-1841).—*Poems*—Unique poems of love and patriotism. Excellent poems on deceased friends. **Rasmus Rask** (Dan.), (1787-1832).—*Grammatical Works*—Great scholar in comparative philology. Was the first to publish the so-called Grimm's law. **B. S. Ingemann** (Dan.), (1789-1862).—*Novels, Lyrics, Hymns*—The Walter Scott of Denmark. Romantic idealization of middle ages. **Gustaf W. Gumaelius** (Swed.), (1789-1877).—*Historical Novels*—In spirit of Walter Scott. **J. C. Hauch** (Dan.), (1790-1872).—*Novels, Dramas, Lyrics*—A genuine Romanticist of deep moral earnestness. Not very popular. Best are his lyric poems.	**Alessandro Manzoni** (1785-1873).—*Novel, Dramas*—*The Betrothed*, the greatest Italian novel. **Silvio Pellico** (1789-1854).—Italian dramatist, poet, novelist.	1786. Swedish academy founded. 1789. Beginning of French Revolution.
Theodor Körner (1791-1813).—*Lyre and Sword*—The young hero-poet, who fell in Lützow's corps in the war of Liberation, immortalized his poetic gift in his *Lyre and Sword*, a collection of patriotic lyrics. **Franz Grillparzer** (1791-1872).—*Dramas, Lyrics*—The greatest Austrian dramatist. He has neither contemporaries nor successors who can be compared to him for classic beauty and depth of human experience. His *Waves of the Sea and of Love* is a great modern love-tragedy. **Wilhelm Müller** (1794-1827).—*Lyrics*—Master of the popular lyric. Poet of the German people in a higher degree than any other Romantic singer. His *Songs of the Greeks* are full of sentimental patriotism for Greek independence. **August von Platen** (1796-1835).—*Venetian Sonnets, Poems, Stories*—A romantic poet and master among the German sonnetists. His drama *The Fateful Fork* ridiculed the fate tragedy of the time. **K. L. Immermann** (1796-1840).—*Novels*—A late Romantic writer best known as the author of *The Epigons*, foreshadowing the tragedy of his own life, and *Munchhausen* distinguished for its description of Westphalian peasant life. **Heinrich Heine** (1797-1856).—*Lyrics, Short Stories*—The greatest lyric poet after Goethe, strongly imbued with Romanticism. Best known as the author of *The Journey to the Harz Mountains* (1826), and the *Book of Songs* (1827).	**K. F. Dahlgren** (Swed.), (1791-1844).—*Novels, Short Stories, Poems*—At first allegorical and mystical. Later became leading humorist. **J. L. Heiberg** (Dan.), (1791-1860).—*Dramas, Poems*—Humorous. Son of P. A. Heiberg. Very popular. One of the best writers. Sharp critic. Musical comedies and other romantic plays. **Karl J. L. Almqvist** (Swed.), (1793-1866).—*Novels, Essays, Poems*—Unique, imaginative, mystical. Fine characterization. **H. N. Clausen** (Dan.), (1793-1877).—*Criticism*—A clear critic in the domain of theology. **Poul Möller** (Dan.), (1794-1838).—*Novels, Poems, Student Songs*—Spiritually sound and original in thought and expression. Influence on later realism. **M. C. Hansen** (Nor.), (1794-1842).—*Novels*—Romantic. His stories are bright, but not national. **Christian Winther** (Dan.), (1796-1876).—*Tales, Poems*—A master of style. Thoroughly and naturally Danish. Emphasizes nature of Denmark. **K. J. Böstrom** (Swed.), (1797-1866).—*Philosophy*—Created an independent philosophic system. **Henrik Hertz** (Dan.), (1797-1870).—*Dramas, Epics, Satires*—Founder of the new comedy in Denmark. Elegant and correct in style. Most original in his lyric poetry.	**Gino Capponi** (1792-1876).—Italian historian. **Cecilia Bohl von Faber** (Fernan Caballero), (1797-1877).—Spanish *novels*.	1792. French republic declared. 1796. Washington issues his "Farewell Address."

TABLE VII. NINETEENTH

English	American	French
Robert Pollock (1798-1827).—*Course of Time*—A sound, serious, and heavy poet; suits Scotch theologians. **Thomas Hood** (1798-1845).—*Poems*—A humorous poet of the first rank: some pathetic verses of high quality.		**Auguste Comte** (1798-1857).—*Positive Philosophy*—His course on positive philosophy is one of the important works of the nineteenth century. **Jules Michelet** (1798-1874).—*History of France*—Has given a new conception of history. According to him it is a resurrection of the life of the people studied in its material and in its spiritual aspect. His style is admirably adapted to his conception of history.
	Amos Bronson Alcott (1799-1888).—*Concord Days, Table Talks, Sonnets and Canzonets*—Suggestingly idealistic, but lacking in general interest.	**Honoré de Balzac** (1799-1850).—*Novels*—The author of the *Comédie Humaine*, a collection of novels which embraces the whole of society. Balzac is considered as the chief of the "realistic school," although there is great share of idealism in his novels, in which many of the heroes are mere symbols.
Thomas B. Macauley (1800-1859).—*Essays, History of England, Lays of Ancient Rome*—He makes history alive and readable. A partisan, but on the right side.	**George Bancroft** (1800-1891).—*History of the United States*—Faithfully prepared and honestly presented.	**Alfred de Vigny** (1799-1863).—*Cinq Mars*, etc.—One of the great poets of the Romantic school. His distinguishing features are an extreme delicacy and a subtle melancholy. His *Cinq Mars*, in which history is often arranged to suit his views, is recommended on account of its style.
Harriet Martineau (1802-1876).—*Political Economy*, etc.—A woman of remarkably strong intellect. Her positions well argued but perhaps too radical.	**Horace Bushnell** (1802-1876).—*Nature and the Supernatural, Work and Play*—Serious, didactic efforts with spiritual purpose. **George D. Prentice** (1802-1870).—*Editor Louisville* (Ky.) *Journal*—Witty, sarcastic, daring and effective.	**Victor Hugo** (1802-1885).—*Novels, Lyrics*—One of the world-poets. In the field of epic poetry he has no rival and as a lyricist but very few. His dramas are valued more as admirable lyric pieces than as plays.
Sir Edward Bulwer Lytton (1803-1873)—*Last Days of Pompeii, Last of the Barons*, etc.—A versatile and successful *littérateur* in several forms of the novel, but preëminent in none.	**Ralph Waldo Emerson** (1803-1882).—*Conduct of Life, Representative Men, Essays, Poems*—The prophet of American culture. Coalesces oriental conceptions and occidental individualism. **Jacob Abbott** (1803-1879).—*Rollo Books*—Popular favorites of unsophisticated youth.	**Alexandre Dumas** (1803-1870).—*Novels, Dramas*—The author of a large number of popular novels based upon history and remarkable for their easy style and the excessive fertility with which they abound. His dramas have a place in the history of the French theater. **Prosper Mérimée** (1803-1870).—*Stories, Novels*—His stories alone give him a place among the authors of the nineteenth century. They are little masterpieces.
Benjamin Disraeli (1804-1881).—*Lothair, Vivian Grey*, etc.—Society novels eminently readable but thoroughly artificial.	**Nathaniel Hawthorne** (1804-1864).—*Twice Told Tales, Scarlet Letter, Marble Faun*, etc.—Marked by a subtle mastery and the touch of genius.	**Eugène Sue** (1804-1857).—*Mysteries of Paris, Wandering Jew*, etc.—His popular novels, in which imagination plays the principal part, were enjoyed in his time. **C. A. de Sainte-Beuve** (1804-1869).—*Criticisms*, etc.—Is the incomparable master of criticism. **George Sand** (Mme. Dudevant), (1804-1876).—*Novels*—Her literary career can be divided into four periods. She wrote romantic novels, then philosophical or socialistic novels, before reaching the rustic idyls in which she excelled.
James Martineau (1805-1900).—*Philosophy*—A philosophical thinker of insight and honesty.	**John S. C. Abbott** (1805-1877).—*Biographies, Histories*, etc.—Ephemeral in interest or easily eclipsed. **Charles E. A. Gayarré** (1805-1895).—*History of Louisiana, Fernando de Lemos*, etc.—Entertaining and scholarly bilingual productions.	**Alexis de Tocqueville** (1805-1859).—*Political Science, Histories*—The author of *Democracy in America*, in which the institutions and customs of America are keenly observed.
Elizabeth Barrett Browning (1806-1861).—*Aurora Leigh, Poems*—A pleasing lyrical gift and warm, human sympathy made her a favorite poetess in the Victorian era. **John Stuart Mill** (1806-1873).—*Political Economy*—Of thorough intellectual honesty and diamond-clear intellect, he furthered the cause of political justice and personal freedom.	**Nathaniel P. Willis** (1806-1867).—*Poems, Sketches, Editorials*, etc.—Skillfully elaborated but diminishing in fame. **William Gilmore Simms** (1806-1870).—*Poems, Novels, Biography*, etc.—Versatile, original and artistic. **Henry W. Longfellow** (1807-1882).—*Outre Mer, Hyperion, Poems, Hiawatha*, etc.—Popular in appeal and simple in form. **John G. Whittier** (1807-1892).—*Editorials, Household Poems*—With Burns' love of nature and human nature.	
Charles Darwin (1809-1882).—*Origin of Species, Descent of Man*—Lucid and attractive in style and an unflinching lover of truth, he has had a greater influence on thought than any man of his time. **Alfred Tennyson** (1809-1892).—*In Memoriam, Idylls of the King, Poems*—The national poet of the late nineteenth century; a painstaking artist and master of verbal melody. **Elizabeth Gaskell** (1810-1865).—*Cranford, Mary Barton*, etc.—A writer of charming feminine humor. One of the first to make the economic problems the basis of a story.	**Edgar Allan Poe** (1809-1849).—*Tales, Poems; Raven, Annabel Lee*, etc.—Excellent in artistic "totality of effect." **Albert Pike** (1809-1891).—*Hymns to the Gods, Poems*, etc.—Of recognized interest and merit. **Oliver Wendell Holmes** (1809-1894).—*Autocrat of the Breakfast Table, Novels, Poems*—Clever, witty, versatile, and skillful. **Margaret Fuller Ossoli** (1810-1850).—*Summer on the Lakes, Papers on Literature and Art*—Notable in transcendental aim and in merit of achievement.	
William M. Thackeray (1811-1863).—*Vanity Fair, The Newcomes, Henry Esmond*—Satirist and humorist, but with great powers of characterization, expecially of the everyday social elements.	**Harriet Beecher Stowe** (1811-1896).—*Uncle Tom's Cabin*, etc.—Far-reaching in its influence.	**Alfred de Musset** (1810-1857).—*Tales, Poems, Dramas*—Some of his poems—*Les Nuits, le Souvenir*, etc.—are among the most beautiful in French literature. They express the sufferings of love as they have never been expressed before or after. His comedies are an exquisite blending of dream and reality. **Henri Martin** (1810-1883).—*History of France*—One of the best reference works we have. **Theophile Gautier** (1811-1872).—*Criticism, Novels, Poems*—Poet and prose writer who regarded plastic beauty as the supreme aim of art. His constant preoccupation was to suppress all emotions which might interfere with the composition in his writings. **J. Sandeau** (1811-1883).—*Novels*—A painstaking writer whose novels have enjoyed a certain popularity. **Victor Duruy** (1811-1894).—*History*—His *History of Rome* is especially valuable. He was the originator of many reforms made in public instruction in France.
Charles Dickens (1812-1870).—*Novels; David Copperfield, Oliver Twist*, etc.—A broader humorist than Thackeray, appealing to the common human sympathies and the ordinary sense of the ridiculous. **Robert Browning** (1812-1889).—*Dramatic Lyrics, Poems, The Ring and the Book*—A powerful poet, intent more on subtle analysis of character than lucidity. His interest lay "in the development of a soul."		

CENTURY—Continued

German	Scandinavian	Italian, Spanish, Russian	Historical Events
Wilhelm Häring (W. Alexis), (1798-1871).—*Patriotic Novels*—One of the first and the ablest of the German imitators of Walter Scott, wrote a series of patriotic novels treating of German history. **Hoffmann von Fallersleben** (1798-1874).—*Poems*—Philologist and poet, best known for his lyrics in the style of the ballad.		**Giacomo Leopardi** (It.), (1798-1837).—*Poems*—Permeated with "the infinite vanity of all things."	
		Alexander Pushkin (Russ.) (1799-1837).—*Poems, Stories, Novels, Dramas*—A great poet. Romantic at first. Later emphasized national feeling in Russian literature. Greatly influenced by Byron.	1799. Death of Washington.
C. D. Grabbe (1801-1836).—*Dramas*—Deeply pessimistic and romantically unbalanced, but often masterful in dramatic characterization. **Wilhelm Hauff** (1802-1827).—*Lichtenstein, Man in the Moon, Short Stories*—An eminent novelist, greatly influenced by Walter Scott. *Lichtenstein* is a story of Württemberg in the sixteenth century.	**Fredrika Bremer** (Swed.), (1801-1865).—*Novels*—Describes family life of middle classes realistically. Worked for emancipation of woman. Was popular in America and England.	**Manuel Breton de los Herreros** (Sp.), (1800-1873).—*Dramas*—Popular modern Spanish poet. Gives a good picture of Spanish social life.	1801. Discovery of first asteroid by Piozzi.
	R. Keyser (Nor.), (1803-1864).—*History*—Wrote a learned work on the Catholic church in Norway.		
Eduard Mörike (1804-1875).—*Lyrics, Stories*—The greatest lyric poet of Suabia. There is a peculiar charm in his delicacy of touch and his simplicity.	**Johan Ludvig Runeberg** (Swed.), (1804-1877).—*Poems, Dramas*—Born in Finland. Describes realistically Finnish home-life. Idyllic, epic, and lyric poetry. Fine characterization. Most popular are *Fänrik Ståls Sägner*, dealing with Finnish-Russian war of 1808-1809. **J. N. Madvig** (Dan.), (1804-1886).—*Latin Grammar*—Great linguist and Latin scholar.		1804. Napoleonic code adopted in France.
	Hans Christian Andersen (Dan.), (1805-1875).—*Fairy Tales, Novels, Dramas, Poems*—Used language of the people and of childhood. Next to bible, his *Fairy Tales* have been translated into the most foreign languages.		1805. Battle of Trafalgar.
Heinrich Laube (1806-1884).—*Novels, Plays*—Witty, declamatory and sententious, but seldom a delicate poet. His chief works are novels or dramas of purpose in the spirit of radical Young Germany.			
	Jonas Hallgrimsson (Ic.), (1807-1845).—*Island Gunnarsholmi*—Popular patriotic songs. Excellent power over language. One of the best poets of modern Icelandic. **J. S. C. Welhaven** (Nor.), (1807-1873).—*Poems*—Polemic sonnets, lyric and descriptive. Opposed bitterly the hyper-patriotism of Wergeland. **H. A. Wergeland** (Nor.), (1808-1845), *Poems*—Poet, patriot, and hater of Denmark. Brilliant, original, and imaginative.		1807. Fulton's steamboat on the Hudson.
	Fred. Paludan-Müller (Dan.), (1809-1876).—*Poems, Mythological Plays*—Subjects from Greek mythology, Bible and from life. *Adam Homo* is his greatest work. Satire of life. A monumental work.	**Alexei Kolzow** (Russ.), (1809-1842).—*Lyrics*—Deep feeling. The Russian Burns. **Nikolai Gogol** (Russ.), (1809-1852), *Plays, Tales, Novels*—The greatest of Russian humorists. Satirizes all classes of society.	1809. Battle of Wagram.
Fritz Reuter (1810-1874).—*Poems, Novels*—A Mecklenburg poet who wrote in his own dialect. A born story-teller, with broad realistic humor. **H. Ferdinand Freiligrath** (1810-1876).—*Poems, Translations*—Poet of the Revolution and friend of Longfellow. Some of his finest translations are from Robert Burns.	**P. A. Munch** (Nor.), (1810-1866).—*History*—His great history of Norway is in eight short volumes. Brilliant and industrious. Both Munch and Keyser were overpatriotic in believing Norway the hearth of Scandinavianism from the historic point of view.	**W. G. Belinsky** (Russ.), (1810-1848).—*Criticism*—In spite of the censorship of the press he exerted a powerful uplifting influence on society by his literary criticisms.	
Karl Gutzkow (1811-1878).—*Novels, Plays*—For a time the most influential writer in Germany. Combated the misuse of political and clerical power. *Uriel Acosta*, his best drama, is a strong plea for freedom of thought.	**A. Munch** (Nor.), (1811-1884).—*Lyric Poems*—His chief work is *Pigen fra Norge*, taken from Norwegian history. **August Blanche** (Swed), (1811-1868).—*Comedy, Novels, Short Stories, Sketches*—Was very popular. Comedy deals with lower classes. Novels sensational. Stories and sketches realistic.		
Berthold Auerbach (1812-1882).—*Novels, Short Stories*—The poet of the Suabian Black Forest. His stories of village life, though not realistic, charm by their naive elements.	**P. C. Asbjörnsen** (Nor.), (1812-1885).—*Folk Tales*—The Grimm of Norway.	**Alexander Herzen** (Russ.), (1812-1870).—*Journalism*—Greatest journalist of his time. Devoted to pleas for liberal institutions.	1812. U. S. and English war.
Friederich Hebbel (1813-1863).—*Dramas*—The chief German dramatist of the century. A great innovator. His best works represent the clash of new epochs with those passing away.	**S. A. Kierkegaard** (Dan.), (1813-1855).—*Philosophy*—Denmark's greatest religious thinker. Strong imagination. Wrote a beautiful poetic prose.		

TABLE VII. NINETEENTH

English	American	French
Charles Reade (1814-1884).—*Peg Woffington, Cloister and Hearth*, etc.—A vigorous narrator, animated by hatred of injustice. **Anthony Trollope** (1815-1882).—*Barchester Towers*, etc.—Admirably realistic presentation of English society, political and ecclesiastical. **George Rawlinson** (1815-1902).—*Five Great Monarchies*—A learned Assyrian and Oriental scholar. **Charlotte Brontë** (1816-1855).—*Jane Eyre, The Professor*, etc.—Great power in novels based on narrow experience.	**John Lothrop Motley** (1814-1877).—*Dutch Republic, United Netherlands*—A rapid, easy style in presenting results of research. **Rufus W. Griswold** (1815-1857).—*Christian Ballads, Poets and Poetry of America, Famous Poets*—Valuable critical studies marred by partisanry. **John G. Saxe** (1816-1887).—*The Money King, New Rape of the Lock*, etc.—Humorous and sprightly. **Samuel A. Allibone** (1816-1889).—*Literature and Authors*, etc.—Laborious and valuable. **Henry D. Thoreau** (1817-1862).—*Walden, Excursions*—Redolent of nature love, and cultured scholarship. **John Bigelow** (1817-).—*Life of Benjamin Franklin*—Sympathetic and sage.	**Eugene Labiche** (1815-1888).—*Comedies*—A master in the art of writing many light comedies or vaudevilles.
James Anthony Froude (1818-1894).—*History of England*—A brilliant prose-writer, makes history human and interesting and suggestive. **George Eliot** (1819-1880).—*Silas Marner, Spanish Gypsy, Poems*—The greatest woman novelist. A realist with insight. Powers of wit and characterization; construction not remarkable. **Charles Kingsley** (1819-1875).—*Hypatia, Poems*—His novels, in spite of slight affectations and a taint of sentimentality, are vigorous and wholesome. **John Ruskin** (1819-1900).—*Stones of Venice, Modern Painters*, etc.—A great stylist. As art critic, subjective and governed by the moral suggestiveness of the object. As economist, an idealist.	**J. G. Holland** (1819-1881).—*Timothy Titcomb's Letters, Kalvina*—Enjoyed a large popularity. **Edwin P. Whipple** (1819-1886).—*Essays and Reviews, American Literature*—Of very distinct cultural value. **James Russell Lowell** (1819-1891).—*Among My Books, My Study Windows, Bigelow Papers, Poems: Sir Launfal*, etc.—Keen, sparkling, scholarly, and artistic. **Walt Whitman** (1819-1892).—*Poems: Leaves of Grass, My Captain*, etc.—Unique in claim and form. **Julia Ward Howe** (1819-1910).—*Social and Philosophical Papers, Battle Hymn of the Republic*—Representative of the spirit of the times.	**Leconte de Lisle** (1818-1894).—*Poems*—One of the greatest poets of the second half of the nineteenth century. He was the head of the group of poets called the Parnassians who sought above all technical perfection in poetry. He is a pessimist and in all his poems we see an aspiration toward death as the final rest.
John Tyndall (1820-1893).—*Scientific Papers*—Unsurpassed, unless it be by Huxley, as a popularizer of Darwin's ideas. **Hebert Spencer** (1820-1903).—*First Principles*, etc.—A deep thinker but ponderous in style. Applied principle of evolution to sociology, history, etc.	**Margaret J. Preston** (1820-1897).—*Beechenbrook, Cartoons, Colonial Ballads*—Cultured and of human interest. **Richard Grant White** (1821-1885).—*Words and Their Uses, Everyday English*—Scholarly and suggestive.	**Emile Augier** (1820-1889).—*Dramas*—One of the masters of the modern French drama. Less aggressive than his contemporary Dumas the Son, his influence in some respects was greater. **Gustav Flaubert** (1821-1880).—*Novels*—Wrote the most perfect novel of the century, *Madame Bovary*. One the other side his *Salammbô* is purely romantic. **Octave Feuillet** (1821-1890).—*Novels, Dramas*—All his novels describe society.
Matthew Arnold (1822-1888).—*Essays and Criticisms, Sohrab and Rustum, Poems*—Liberal in thought, but dominated by aristocratic prejudice on the literary side. As a poet inclined to despairing pessimism; weak in the power of verbal melody. **Edward A. Freeman** (1823-1892).—*Histories*—A conscientious, honest, painstaking historian. **Thomas Hughes** (1823-1896).—*Tom Brown at Oxford*, etc.—A manly, breezy person, who wrote one good book for boys.	**Thomas Buchanan Read** (1822-1872).—*Poems, Drifting, Sheridan's Ride*, etc.—Commendable, especially in form. **James Parton** (1822-1891).—*Biographies*—Serviceable, but not satisfying. **Edward Everett Hale** (1822-1909).—*The Man Without a Country, His Level Best*—Vigorous and pointed, but provincial. **Donald G. Mitchell** (1822-1909).—*Dream Life, Reveries of a Bachelor*—Attractive in meditation and grace. **George H. Boker** (1823-1890).—*Plays, Poems of the War*—Inadequately appreciated. **Francis Parkman** (1823-1893).—*Oregon Trail, Montcalm and Wolfe*, etc.—Romantic, picturesque and of real interest.	**Henri Murger** (1822-1861).—*Novels*—His *Scenes of Bohemian Life*, in which he depicts the bohemian life of a certain class of students, is still enjoyed. **Edmond de Goncourt** (1822-1896).—*Novels*—He and his brother Jules de Goncourt claim to be the first to paint true life. They are the apostles of "modernism." **Emile Erckmann** (1822-1899).—*Novels*—With Alexandre Chatrian he wrote a large number of novels in which are painted in a free and simple style the customs and thoughts of the Alsatians especially during the wars of the first empire. **J. Ernest Renan** (1823-1892).—*Life of Jesus*, etc.—Critic and historian but above all a marvelous artist, he greatly influenced the thought of his day. With Taine, but in a different way, he contributed to the triumph of positivism.
Thomas Henry Huxley (1825-1895).—*Man's Place in Nature*, etc.—A master of exposition and, with Tyndall, very effective in presenting the idea of evolution. **R. D. Blackmore** (1825-1900).—*Novels: Lorna Doone*, etc.—Infused an element of romance into the modern novel, *Lorna Doone*. **Dinah Maria Mulock** (1826-1887).—*John Halifax*, etc., *Poems*—Author of some twenty novels of which *John Halifax* is the best. Also of pleasing minor verse.	**George W. Curtis** (1824-1892).—*Potiphar Papers, Prue and I*, etc.—Widely popular and effective. **Bayard Taylor** (1825-1878).—*Northern Travel, Greece and Russia, Poems of the Orient, Translation of Faust*—Too good at many things to be best at any. **Stephen Collins Foster** (1826-1864).—*Old Folks at Home, Old Uncle Ned*, etc.—Popular in vein and melody.	**Alexandre Dumas the Son** (1824-1895.)—*Novels, Dramas*—Marvelously clear and concise style. Dramas full of wit but lack in kindliness. **Alexandre Chatrian** (1826-1890).—*Novels*—See Erckmann (1822-1896).
Dante Gabriel Rossetti (1828-1882).—*Poems: The Blessed Damozel*, etc.—A highly imaginative poet, a master of color in verse and on canvas.	**Lew Wallace** (1827-1905).—*The Fair God, Prince of India, Ben Hur*—Uneven, but at times highly successful.	**Francisque Sarcey** (1827-1899).—*Criticism*—A recognized authority on the drama, his criticism bears especially on the theater. **H. A. Taine** (1828-1893).—*History of Literature*, etc.—*Origins of Contemporary France*, his most powerful work, shows his genius as a critic and as historian. He belongs to the same school as Renan but he is more aggressive.

CENTURY—Continued

German	Scandinavian	Russian, Spanish, Hungarian	Historical Events
Otto Ludwig (1813-1865).—*Dramas, Shakespeare Studies, Novels*—Master of detail-painting in his novels. His novel *Between Heaven and Earth* has become a classic. His dramatic work suffered under critical acuteness. **Richard Wagner** (1813-1883).—*Operas*—Creator of the music-drama. Insisted that German drama must be national and so drew for themes on older Germanic myths.	**J. Moe** (Nor.), (1813-1880).—*Poems*—Lyrics. Assisted Asbjörnsen in collecting the popular tales of Norway.	**Iwan Gontscharoff** (Russ.), (1813-1891).—*Novels*—At first romantic then realistic. His great work *Oblomoff* represents strongly that inertia which renders the hero incapable of action.	
Emanuel Geibel (1815-1884).—*Poems, Voices of the Time*—Successful writer of popular songs. *Voices of the Time* treats political events in a conciliatory tone.		**Michail Lermontow** (Russ.), (1814-1841).—*Poems, Novels*—Powerful prose. Strongly attacked the government and the prevailing tone in society.	1814. Stephenson's locomotive. 1815. Battle of New Orleans.
Gustav Freytag (1816-1895).—*Novels, Dramas*—His *Ancestors* is a cycle of the greatest modern German novels, awaking the national consciousness of the German people.		**José de Espronceda** (Sp.), (1816-1842).—*Lyric Poetry*—Imbued with the manner and spirit of Byron.	1815. Napoleon defeated at Waterloo.
Theodor Storm (1817-1888).—*Lyrics, Novels*—Masterful writer of the novel of reminiscence. The lyric note is prominent in his prose.		**Alexis Tolstoi** (Russ.), (1817-1875).—*Dramas*—Excellent historical dramatist. Fine artistic sense.	
Gottfried Keller (1819-1890).—*Novels, Short Stories*—Master of the "novelle," or short story. Strong independence of spirit reflected in this Swiss poet.	**J. C. Hostrup** (Dan.), (1818-1892).—*Comedies, Popular Songs*—A great favorite. Adapts language to characters. Vivid picture of student life and life of middle classes. **Meir Goldschmidt** (Dan.), (1819-1887).—*Journalism, Novels, Short Stories*—Good stylist. Felt keenly his Jewish origin, but was not ashamed of it.	**Iwan Turgenieff** (Russ.), (1818-1883).—*Stories, Novels*—Great prose-artist. Melancholy pessimism. Faithful reflection of the inner development of Russian society.	
Salomon Mosenthal (1821-1877).—*Novels*—Chiefly historical, including *Leah the Forsaken, The Queen of Sheba*, etc.		**Feodor Dostoveysky** (Russ.), (1821-1881).—*Novels*—Great power of psychological analysis. Even claimed by Russian criminologists as their colleague. **Nikolai Nekrassoff** (Russ.), (1821-1888).—*Lyrics*—Depth of feeling. Rare impassioned lyric power.	1821. Greek war of independence against Turkey.
		Alex. Petöfi (Hung.), (1823-1849).—*Lyrics, Translations*—One of the greatest lyric poets of the nineteenth century. Truth and naturalness. Full of the passion, melancholy, and humor of the Hungarian.	1824. National gallery in London opened.
Conrad Ferdinand Meyer (1825-1898).—*Short Stories, Novels*—Countryman of Keller, and one of the best story writers of the century. Particularly happy in giving true historical coloring to his novels.			
J. V. von Scheffel (1826-1886).—A late successor of Walter Scott. *Ekkehard*, one of the greatest German historical novels. *The Trumpeter of Säkkingen*, an epic in the Romantic spirit.		**Michail Saltykow** (Russ.), (1826-1889).—*Satiric Tales*—Written with his heart's blood. Keen wit, original in invention. **Juan Valera** (Sp.), (1827-).—*Novels*—Combines elegance of language with depth of thought.	
	Victor Rydberg (Swed.), (1828-1895).—*Philosophy, History, Mythology, Novels, Poems*—Great scholar, poet, and philosopher. Extreme purist in language.		

TABLE VII. NINETEENTH

English	American	French
George Meredith (1828-1909).—*The Egoist, Diana of the Crossways*, etc.—Novels of extraordinary power. Style epigrammatic and not attractive. **Samuel R. Gardiner** (1829-1902).—*Histories*—A happy combination of attractive narrative and scholarly thoroughness.	**Henry Timrod** (1829-1867).—*Poems*—Admirable in poetic instinct and manner. **Chas. Dudley Warner** (1829-1900).—*My Summer in a Garden, Little Journey*, etc.—Catholic in interests and attainments.	**Jules Verne** (1828-1905).—*Twenty Thousand Leagues Under the Sea, Around the World in Eighty Days*, etc.—His novels have done much to popularize several branches of science. Interesting and instructive, they have been widely read all over the civilized world by both young and old.
Jean Ingelow (1820-1897).—*Poems*—A charming lyrical talent, of limited productive power. **Justin McCarthy** (1830-) —*History of Our Own Times, Novels*—A prolific journalist, novelist, and historian of modern times. **Edward Lord Lytton, (Owen Meredith)**, (1831-1891).—*Biography of Bulwer Lytton, Lucile*, etc.—Fluent writer of light verse and society verse.	**John Esten Cooke** (1830-1886).—*Novels: Survey of Eagle's Nest*, etc. *Lives of Lee and Jackson*—Prime favorites with romantic youth.	**Jules de Goncourt** (1830-1870).—*Novels*—See Edmond de Goncourt (1822-1896).
Edwin Arnold (1832-1904).—*Light of Asia, Poems*—An able journalist and prolific minor poet.	**Paul Hamilton Hayne** (1831-1886).—*Sonnets, Legends, Lyrics*—In sonnets excellent, in other poems too prolific.	**Victorien Sardou** (1831-1908).—*Dramas*—Although the theater of Sardou is generally superficial this author has a remarkable talent for showing exterior life and many of his vaudevilles, comedies and historical dramas met with pronounced success. **Henri Meilhac** (1832-1897), **Ludovic Halévy** (1834-1908).—*Comedies*—Wrote together a number of very successful light comedies. They created the "operetta."
William Morris (1834-1896).—*Essays on Art*, etc., *Poems, Earthly Paradise*—Prolific as a narrative poet, fond of classic and mediæval legends. **George du Maurier** (1834-1896).—*Peter Ibbetson, Trilby*—Artist and poet. *Peter Ibbetson* is a fanciful romance of dream life. *Trilby*, scene in Latin quarter of Paris, a masterful study of character.	**Louise May Alcott** (1832-1888).—*Little Women, Little Men*—Influential in their popular appeal. **Edmund C. Stedman** (1833-1908).—*Victorian Poets, Poets of America, Alice of Monmouth, Panic in Wall Street*—Showing creative power and critical ability. **Chas. Farrar Browne** (Artemus Ward) (1834-1867).—*Artemus Ward, His Book*, etc.—Humorous in exaggeration and perversion. **Frank R. Stockton** (1834-1902).—*Rudder Grange, The Lady or the Tiger*—Ingenious in plot, straightforward in style. **Moses Coit Tyler** (1835-1900).—*History of American Literature*—Accurate and exhaustive. **Samuel L. Clemens** (1835-1910).—*Innocents Abroad, Huckleberry Finn*, etc.—Thoroughly representative of American humor.	**Edouard Pailleron** (1834-1899).—*Comedies*—His light comedies are full of graceful and delicate touches. In the *Monde ou l'on s'Ennuie* his tone is considerably raised.
John Richard Green (1837-1883).—*History of the English People*—Industrious and conscientious. His work more than a record of war and politics. Clear and simple style. **Algernon Chas. Swinburne** (1837-1909).—*Poems*—A poet of remarkable musical power, master of headlong but involved prose, a critic of enthusiasm and eloquence. **John Morley** (1838-).—*Criticisms, English Men of Letters*, (Ed.).—A sound literary historian and critic and a thinker of force and scope.	**Thomas Bailey Aldrich** (1836-1907).—*Novels: Marjorie Daw*, etc.—Cultivated and of literary talent. **William Dean Howells** (1837-).—*Venetian Life, Rise of Silas Lapham*, etc.—Realistic and entertainingly descriptive. **John Burroughs** (1837-).—*Wake Robin, Winter Sunshine*—Strongly uttering the charms of nature. **Mary Mapes Dodge** (1838-1905).—*Hans Brinker*—In high favor with children. **Albion W. Tourgée** (1838-1905), *A Fool's Errand, Bricks Without Straw*—Valuable for the point of view. **Thomas R. Lounsbury** (1838-).—*Life of Cooper, Studies in Chaucer*, etc.—Of recognized scholarship and ability. **Francis Bret Harte** (1839-1902).—*Luck of Roaring Camp, Gabriel Convoy, Poems*—Of international fame. Faithful and skillful character portrayal.	**Henri Becque** (1837-1899).—*Dramas*—With the "Corbeaux" (Crows) a new school of drama was inaugurated: The naturalistic play. In spite of his exaggerations dramatic art owes a great deal to Becque.
Walter H. Pater (1839-1894).—*Marius the Epicurean*, etc.—A wonderfully finished prose style, which sometimes diverts attention from the justness and beauty of the thought.		**Sully-Prudhomme** (1839-1907).—*Poems*—One of the greatest poets of the nineteenth century. From the "Parnassians" he took their respect for form. He was not only an artist but a thinker and a moralist. In him positivism and idealism are perfectly blended. **Gaston Paris** (1839-1903.)—*Philology*—Greatest literary critic of France since Sainte-Beuve, especially on early French literature.
Henry Austin Dobson (1840-).—*Vignettes in Rhyme, Proverbs in Porcelain*—The English Horace. An authority on eighteenth century social and literary life. Charming light verses. **Thomas Hardy** (1840-).—*Novels: Tess of d'Urbervilles*, etc.—Novels depicting country life. A writer of broad humanity. His books possess at once wit, realism, and an idyllic quality. **William Black** (1841-1898).—*Novels: In Silk Attire*, etc.—His stories have considerable charm but not much force. Gaelic Scotland depicted pleasantly but unconvincingly. **Robert W. Buchanan** (1841-1901).—*Alone in London, Poems*—A minor poet and dramatist of considerable output. Known for his attack on Rossetti in *The Fleshly School of Poetry*.	**Joaquin Miller** (1841-).—*The Danites in the Sierras, Surge of the Sierras*—With the sweep and breadth of the prairies.	**Alphonse Daudet** (1840-1897).—*Novels*—In most of his works Daudet is a painter of rare ability of manners and customs; in two or three he shows a very keen psychological insight. He is one of the great prose writers of the century. **Emile Zola** (1840-1902).—*Novels*—Called the head of the naturalistic school because he defined the theories of the school. His twenty volumes of the Rougon-Macquart series are a grand epopee of "human animality." In his later works materialism becomes idealism and his intense pessimism an exaggerated optimism. He is in literature a great painter of immense crowds.
	Sidney Lanier (1842-1881).—*The Boy's Froissart, Tiger-Lilies, Poems*—Artistic to a high degree. **John Fiske** (1842-1901).—*Myths and Myth-Makers, Histories*—Scholarly and fair-minded.	**Albert Sorel** (1842-1906).—*Histories*—A brilliant writer. His history of *Europe and the French Revolution* is much esteemed. **Ernest Lavisse** (1842-).—*Histories*—Is a moralist as well as an historian. He draws from the history of the past examples and lessons. **François Coppée** (1842-1908).—*Poems, Dramas*—The poet of the humble, as he called himself, has excelled in pictures of real life and the study of interiors. Wrote also a number of plays which deserve praise. **José de Hérédia** (1842-).—*Poems*—The most impersonal and impassive of the Parnassian poets. His poems are on a small scale but perfect in form.
	Henry James (1843-).—*Daisy Miller, Portrait of a Lady*, etc.—Of characteristic conception and style. **George W. Cable** (1844-) —*Old Creole Days*, etc.—Successful in achievement of purpose. **Elizabeth S. Phelps Ward** (1844-1911) *Gates Ajar*, etc. Widely read for religious sentiment.	**Paul Verlaine** (1844-1896).—*Poems*—A unique poet. Without discipline or method he produced among a large number of imperfect and meaningless poems a few masterpieces which have made of him the imitator of a certain kind of modern poetry. **Anatole France** (1844-).—*Novels*—His novels are really "frames in which he puts the adventures of his soul." In *Sylvestre Barnard* and other works we find the author himself and his philosophy, which derives from Montaigne and Renan. His style is inimitable and by many he is considered the greatest writer of our times.

CENTURY—Continued

German	Scandinavian	Italian, Spanish, Russian	Historical Events
	Henrik Ibsen (Nor.), (1828-1906).—*Dramas, Poems*—Most masterful dramatic genius of the nineteenth century. Sharp satire, terse and vivid dialogue. Attacked conventional hypocrisy.	**Leo Tolstoi** (Russ.), (1828-1910).—*Novels, Essays, Criticisms*—Strong individualism paired with the doctrine of non-resistance. Powerful appeal to simple life of the people as a standard of civilization.	
Friederich Spielhagen (1829-).—*Novels*—The novelist of German social conditions. *Problematic Characters* and *In Rank and File* are two novels attempting to reconcile the clash of the classes. **Paul Heyse** (1830-).—*Novels, Short Stories, Poems*—Long the central figure of the Munich school of poets. **Marie von Ebner-Eschenbach** (1830-).—*Tales, Novelettes*—The most venerable among the women writers of Germany.			1831. Death of Mrs. Siddons.
	B. Björnson (Nor.), (1832-1910).—*Novels, Dramas, Poems*—Very popular. Forceful, deeply in earnest. Author of Norway's favorite national song. Active in public questions. **Jonas Lie** (Nor.), (1833-1908).—*Stories, Dramas*—Sketches of nature and popular life in the north of Norway.	**José Eschegaray** (Sp.), (1833-).—*Dramas* — Most prominent representative of the modern Spanish dramatists. Romantic in tone.	1832. Cholera in Europe and America.
Felix Dahn (1834-) —*History, Novels*—Noted historian and historical novelist, famous as author of *A Struggle for Rome*, dealing with the conflict between the Goths and Romans.	**Mathias Jochumsson** (Ic.), (1835-).—*Poems, Dramas*—Lyric and tragic. Translator of Shakespeare, Byron.		1835. Morse's model electrical telegraph.
Georg Ebers (1837-1898).—*Egyptology, Novels*—An Egyptologist. Wrote novels dealing with Egyptian life.		**Giosué Carducci** (It.), (1836-1907).—*Poems*—Progressive, liberty-loving lyrics.	
Ludwig Anzengruber (1839-1889).—*Dramas, Prose Tales, Poems*—Highly endowed Austrian dramatist. A pioneer of realism.		**Giovanni Verga** (It.), (1840), —*Novels*—Tales of Sicilian peasantry.	1839. Daguerre's perfected photographic process.
	Karl Snoilsky (Swed.), (1841-1903).—*Poems*—Clear elegant form.		1844. Electrical telegraph between Baltimore and Washington.
Karl Robert Eduard Hartmann (1842-1906).—*Philosophy, criticism.*	**Georg Brandes** (Dan.), (1842-).—*Literary Essays*—A piercing literary critic. Splendid use of language. Has had a hard career.		
Friedrich Nietzsche (1844-1900).—*Philosophy, Criticisms*—Prophet of individualism. His greatest work, *Thus Spake Zarathustra*, left an indelible impression on the literature of his time. **Detlev von Liliencron** (1844-1910).—*Epics, Poems*—The chief lyric poet of the epoch.			

TABLE VII. NINETEENTH CENTURY—Continued

English	American	French	German	Scandinavian	Russian, Polish, Hungarian, Italian, Spanish, Portuguese	Historical Events
			Ernst von Wildenbruch (1845-1909).—*Dramas, Short Stories, Poems*—The greatest historical dramatist of his time.		**B. Pérez Galdós** (Sp.) (1845).—*Novels, Dramas*—Studies of Spanish political and religious life.	
				Holger Drachmann (Dan.), (1846-1908).—*Novels, Lyrics, Dramas*—His lyric poems and lyric dramas rank among the best.	**Henryk Sienkiewicz** (Polish), (1846-).—*Novels*—Very attractive historical novels. Keen at exploiting remarkable epochs of history.	1846. Mexican war.
	Arthur S. Hardy (1847-).—*Passe Rose*, etc.—Of trained literary ability.	**Emile Faguet** (1847-).—*Criticism*—One of the great critics of our days.				
		Frédéric Masson (1847-).—*Histories*—His best known histories are on the private life of Napoleon.				
		Henri Houssaye (1848-).—*Histories*—He has admirably depicted the reign of Napoleon I.				
	James Lane Allen (1849-).—*Flute and Violin, The Choir Invisible*, etc.—Reaching a high standard of excellence.	**Ferdinand Brunetière** (1849-1906). *Criticism*—Occupies a high rank among the modern critics.		**August Strindberg** (Swed.), (1849-).—*Novels, Dramas, Short Stories, Lyrics*—Greatest writer of to-day in Sweden. Superb dramatist.		
		Jean Richepin (1849-).—*Dramas*—A poet of great talent and power. His drama *The Tramp* is one of the good plays of our times.				
Robert Louis Stevenson (1850-1894).—*Essays, Novels, Child's Garden of Verses*, etc.—Careful and finished as a stylist, an excellent storyteller. *Treasure Island* and his *Scottish Tales* are true classics.		**Pierre Loti** (1850-).—*Novels, Travels*—Painter and a poet who gives us an image of his impressions of life and of the countries through which he passes.				1850. Clayton-Bulwer treaty.
		Paul Bourget (1852-).—*Novels*—He is a scientific psychologist who has used his great power of analysis in the study of society people.				
		Jules Lemâitre (1853-).—*Dramas, Criticism*—The impressionist critic par excellence.				1853. Louis Napoleon installed.
	Francis Marion Crawford (1854-1909)—*Novels*—Best known for his *Saracinesca* series, the scenes of which are laid in modern Rome.	**Edouard Rod** (1857-1910).—*Novels*—The problem of human destiny.	**Hermann Sudermann** (1857-).—*Plays, Novels*—Poet of the realistic school. His great novel is *Dame Care*, reflecting the struggles of the author's own life.	**Henrik Pontoppidan** (Dan.) (1857-).—*Novels*—Greatest prose writer of to-day. Ironical.	**Wessewolod Garschin** (Russ.), (1855-1888).—*Novels*—Spirited fantasy. Unfortunately marred by detailed psychological analysis.	1854. Treaty between United States and Japan.
		Paul Hervieu (1857-).—*Dramas*—Power and logic, but very little human indulgence.				
		Eugene Brieux (1858-).—*Dramas*—A vigorous playwright who faithfully depicts and attacks some of the bad sides of our modern civilization.		**Selma Lagerlöf** (Swed.).—(1858-).—*Novels, Short Stories*—World-wide renown. Original, romantic, imaginative, charming.		1858. First Atlantic cable.
				Verner von Heidenstam (Swed.), (1859-).—*Novels, Short Stories, Poems*—Chiefly historical prose.		1859. Darwin's *Origin of Species*.
		Réné Doumic (1860-).—*Criticism*—History of French literature and several volumes of literary criticism.		**Gustaf Froöding** (Swed.), (1860-).—*Lyrics*—Harmonic mixture of elegant language of poetry with natural language of everyday life.		1861-5. Civil war in United States.
		Marcel Prévost (1862-).—*Novels*—One of the most successful of the younger generation of novelists.	**Gerhard Hauptmann** (1862-).—*Dramas*—Chief German dramatist of our day. His symbolistic drama, *The Sunken Bell* is one of the most popular works of our time.	**Oskar Levertin** (Swed.), (1862-1906)—*Short Stories, Sketches, Literary Essays, Poems*.—Artistic and elegant use of the language. Perhaps Sweden's greatest literary critic.		
		Maurice Barrès (1862-).—*Novels*—Penetrating psychology in his novels.			**G. d'Annunzio** (It.). (1863).—*Novels, Poems, Tragedies*—Realistic novels; powerful poetic tragedies.	
Israel Zangwill (1864-).—*Novels, Dramas, Essays*—As Jew, an exponent of the Zionistic movement. Successful in the essay and especially in the novels depicting Jewish scenes and characters.		**Henri de Règnier** (1864-).—*Novels, Poems*—A symbolist poet of shadows and dreams.				
Rudyard Kipling (1865-).—*Stories, Novels, Poems*—A vigorous, audacious, efficient writer. The most original genius among English literary men of today.				**Per Hallström** (Swed.), (1866-).—*Novels, Short Stories, Lyrics, Dramas*—Imaginative. Good in psychological analysis.		1867. Alaska purchased by the United States.
						1870. Franco-Prussian war.
						1873. Republic proclaimed in Spain.
Stephen Phillips (1868-).—*Ulysses, Paolo* and *Francesca*—Lyric tragedies in blank verse, akin in spirit to the French classic drama.		**Edmond Rostand** (1868-).—*Dramas*—With his *Cyrano de Bergerac* came the prediction of a revival of the Romantic drama.			**Maxim Gorki** (Russ.), (1868-).—*Tales, Novels*—Masterful presentation of the life of those cast out by society.	1876. Centennial exposition at Philadelphia.
		Henri Bernstein (1876-).—*Dramas*—A dramatic author of powerful works.				

CHIEF FOREIGN LITERATURES OF THE WORLD.

HEBREW LITERATURE—The Jews have been producing books for nearly three thousand years; but not all these books are entitled to rank as literature, and not all of them are distinctively Jewish. The creative and influential literary period extends from about the ninth to the first century B. C., when the people constituted a nation, and a national spirit existed. During this period were produced the books of the *Old Testament* and a few others of permanent value, and to these the present article will be devoted. The lines of thought changed from time to time, following the changes in the political and social situation and the general intellectual and ethical growth. Broadly speaking, the nation was occupied at first with fixing its theistic beliefs and recording its historical experiences; next with organizing its worship; then with working out its general view of life; and finally with expressing its hope for the future and codifying its laws. We may take these sub-periods in the order named, noting that they overlap one another, and blend into a unity of thought.

The Prophets.—The first literary output of the Hebrews was in the form of an attack on the bad features of the popular worship. David had unified the country politically; Solomon built a royal chapel (the temple) in Jerusalem; then came the split, Jeroboam set up bull-figures in Bethel and Dan as representative of the national deity, Yahweh (Jehovah), the people generally adopted the worship of the Canaanite local deities, (Baals and Ashtarts).

Amos.—The reform movement began in the Northern Kingdom, the larger and more important section of the land, but the first preacher whose utterances have come down to us was a Judean, Amos (about 760 B. C.). In a series of eloquent addresses he denounced the superficiality of the popular religion, the oppression of the poor by the rich, and the ignorant fancy that Yahweh would not punish his own people for its sins; "What Yahweh desires," he said, "is not sacrifices but righteousness." Amos struck the keynote of the Prophetic teaching—inward purity against dependence on outward forms.

Hosea.—He was followed by Hosea (about 745), a Northerner, who, with tender and passionate appeals for good conduct, dwells on the love of Yahweh for his people, denounces foreign alliances, and attacks the national bull-cult. His book (chs. iv.-xiv.) is made up of a great number of detached paragraphs, the only unity being that of idea and tone. A protest, by a different writer, against the worship of the local Canaanite gods (ii.) was prefixed to the book by an editor, and out of this some one constructed an imaginary allegorical story of Hosea's life (i.-iii.). With Hosea the literary activity of the North ceases; the Northern Kingdom fell in 721-2 B. C., and the religious leadership passed to the South.

Isaiah.—The ethical reform ideas of Amos and Hosea were repeated and enforced by Isaiah (740-700), a well-to-do citizen of Jerusalem, whose discourses are given in chs. iii., v.-x., xvii., xviii., xx., xxii., xxviii., xxxi. (with a few interpolations) of the book that bears his name; the rest of the book is from other writers, mostly later than Isaiah. He emphasizes the separateness (sacredness, holiness) of Yahweh. His style is characterized by sustained force and dignity. His efforts were seconded by the rural prophet Micah (about 730-725) who inveighed sharply against the social oppression in Jerusalem, and denounced the time-serving and corrupting prophets, seers and diviners, in whom the people trusted (Mic. i.-iii.—the rest of the book is later).

Nahum and Zephaniah.—For more than half a century after the year 700 there was a lull in Prophetic activity. The kingdom of Judah became tributary to Assyria, Assyrian ideas and customs were adopted, and time was required to assimilate the new material. A vigorous protest against the moral corruption of the seventh century (about 650) is perhaps to be recognized in Mic. vi., vii.: 1-6. An attack on Assyria called forth the short pieces that constitute the book of Nahum—an exultant cry over the anticipated destruction of the hated city Nineveh (an expectation not then fulfilled), fine from a literary point of view, but without the true Prophetic ethical element. About this time we must place the main part of the book of Zephaniah (omitting iii.: 8-20, which is later), famous for its description (i.: 15-16) of the day of Yahweh's wrathful intervention, on which the hymn "*Dies iræ*" is based.

Jeremiah and Ezekiel.—In the latter part of the seventh century the increasing seriousness of the political situation, especially the advance of the Chaldeans after the fall of Nineveh (608) gave a fresh impulse to Prophetic thought, and we have records of the discourses of two powerful preachers, Jeremiah (625-580) and Ezekiel (593-570), original and influential thinkers. To the existing ethical theories they added insistence on the principle of individual responsibility. Both favored submission to the Chaldeans, both were priests, the first unfriendly, the second friendly to the sacrificial cult. In literary style they differed notably. Jeremiah (in the book of Jeremiah iii.: 16-25, x.: 1-16, xii.: 1-13, xlvi.-li. are probably not from him) is introspective and pathetic; he pleads his cause with an eloquence born of affection. Ezekiel is a master of invective, bold and unsparing; he produces a powerful effect by a skilful and elaborate array of particulars. He also drew up a scheme of ritual organization x.-xlviii.

Habakuk and Obadiah.—Habakuk offers nothing new, but a fine poem has been appended to his book. The book of Obadiah is a variant recension of Jer. xlix.: 7-22. To the age of Jeremiah belongs also the finely constructed discourse Deut. v.-xi. (omit x.: 6-9 and transfer x.: 1-5 to follow ix.: 21). The broad and genial style and the noble conception of religion as loving obedience to God give it a singular charm. It represents the best prose of the seventh century as well as the highest conception of worship.

Later Prophets.—With Jeremiah and Ezekiel the line of the older prophets, the rebukers of national sins, ends. National independence was destroyed in 586. The victorious approach of Cyrus, 545-540 excited hopes that are expounded in glowing language by the anonymous author (or authors) of Isa. xl.-lv., and writers contributed the brilliant passages found in Isa. lvi.-lxvi. A considerable number of detached pieces, such as Isa. xiii., xiv.: 1-23, xxxv., Jer. i., li. are to be referred to the time when the fall of Babylon was looked for. The creative spirit of prophecy did not survive the loss of national independence. Haggai and Zech. i.-viii. (520-518) show little literary power. Malachi (about 450) has a certain charm of simple directness. The Greek period (after 330) produced Joel, with its fine description of a plague of locusts, and parts of Zech. ix.-xiv. Other discourses, such as Isa. xix., may belong in this period. But the national thought was turning in other directions, and new literary styles appeared.

Prophetic Style.—The Prophetic discourses are written for the most part in a sort of balanced prose, often with vowel-accordances in the ending of clauses, and with an approach in some cases to the parallelism of poetry. The dignity of the thought and the intensity of feeling in the writers give elevation and impressiveness to the style. As to methods of composition and publication we have little information. Jeremiah caused his discourses to be written out under his eye (Jer. xxxvi.: 4. 32); how far this method was practiced by other prophets is uncertain. The discourses are not casual talks—they are literary productions, and in many cases have been put into shape and expanded by later scribes. This editorial work does not detract from the value of the thought.

History.—The Hebrews, like all the ancient Semitic peoples, were weak in the construction of historical narrative proper. For the period before the accession of David (about 1000 B. C.) they had, it would seem, only oral traditions and some poetical pieces contained in two lost works, the Book of Jashar and the Book of the Wars of Yahweh, and perhaps in other collections. From David's time onward there were probably official recorders (2 Sam. viii.: 16) who set down the principal military events of every reign.

Judges, Samuel and Kings.—From such records together with oral traditions, biographies and anecdotes, it is evident, our books of Judges, Samuel and Kings were edited about the middle of the sixth century, some additions being made to them later. They omit much that the historian would like to know. They give no clear account of the social and political condition that determined such important events as the division of the Kingdom (1 Kgs. xii.), and the relations with foreign powers are only vaguely described; for the sequel of the war with Moab, for example (2 Kgs. iii.) we are dependent on the recently discovered inscription of the Moabite king Mesha. The interest of the editors was religious, and they pass over occurrences that did not affect the character of the national worship. The kings are judged not by their military and administrative ability, but by their loyalty to the sole worship of Yahweh.

Chronicles.—This subordination of historical fact to religious interest comes out most plainly in the book of Chronicles (about 300-250), which is an imaginative history of Judah, the object being to show (in defiance of the facts given in the book of Kings) that the late elaborate sacrificial cultus had been observed in Jerusalem from the beginning (the Northern Kingdom is ignored). In Ezra and Nehemiah (of the same period as Chronicles) we have plain historical narration in Neh. i.-vi., elsewhere much legendary material. The book of Joshua is a late construction of the conquest from the theocratic point of view. Outside

of the Old Testament, First Maccabees is a work of great historical value, and Second Maccabees is not wholly without value. Josephus, of course, is authority for the final war with the Romans.

Stories.—The charm of Hebrew narrative is found in the stories and anecdotes contained particularly in Genesis, Exodus, Judges, Samuel and Kings. For dramatic power and simple human interest the stories of the patriarchs (first committed to writing about the ninth century) have seldom been equalled. The anecdotes of Moses, Jephthah, David, Elijah, Elisha and others are often picturesque as well as morally impressive.

At a later period romances were produced—perhaps the first examples of the "short story" in the Western world. Ruth (fifth century B. C.) is an exquisite idyl of country life—the daughter-in-law, changing her country out of love for her mother-in-law, changes her religion as a matter of course. Esther (perhaps second century) an imaginary account, morally crude and without a religious element, of the origin of a Jewish festival, has a most skilfully and dramatically constructed plot. The two non-canonical books, Tobit and Judith, are no less interesting: the former is a picture of devout family life, with a fine moral code and a bit of Persian demonology (Asmodeus); the latter reflects the national struggle against Syrian-Greek oppression.

Poetry.—Hebrew poetry (like all ancient Semitic poetry) is characterized formally not by rhyme but by parallelism of clauses, the rhythmical movement being marked by beats of voice and not by length or number of syllables. It is always lyric, never technically epic or dramatic. Even the earliest examples, as the story of Deborah (Judg. v., before the time of David) and the Balaam pieces (Numb. xxiii., ninth or eighth century) exhibit formal correctness together with attractive melody and felicity of expression. The Songs of Moses (Deut. xxxii., seventh century, and Ex. xv., probably later) show similar qualities.

Elaborate poems were not produced till during and after the sixth century. The hymns used in the worship of the Second Temple (which was completed 516 B. C.) were gradually gathered into books, and these together constitute our books of Psalms; the traditional fame of David as a musician led to the ascription of many psalms to him, but it is highly improbable that he wrote a single one. Some of them are poetically very fine; most have literary merit; in moral and religious value they differ considerably—some exhibit deep religious experience and a high ethical standard, others national and individual hatred and bitterness. The Song of Songs (Canticles), a late production traditionally ascribed to Solomon, is a collection of wedding-songs, of exquisite beauty, but without religious feeling, and sometimes, according to modern taste, too free in its descriptions. The book of Job (fifth or fourth century) contains passages of extraordinary poetical splendor, and the pathos of the odes in Lamentations (sixth century) is no less noteworthy.

Philosophy of Life.—When the Jews came into contact with the great Persian and Greek worlds, larger problems of human life opened up before them, and they produced reflective (quasi-philosophical) and ethical works. The colloquies of the book of Job discuss the question of the justice of the divine government of the world. Job is doubtful and perturbed—why, he asks, do the righteous suffer and the wicked prosper? The three friends deny that this is the case; a later writer puts a solution into the mouth of Elihu; finally, Yahweh is represented as demanding, in a series of magnificent discourses, that man shall trust his administrative power without presuming to understand his methods.

Ecclesiastes.—About the year 200 B. C. an anonymous writer (Koheleth, Ecclesiastes, the speaker) described life in a thoroughly pessimistic way, vigorous and attractive; editors endeavor to set aside its pessimism by orthodox additions. Various ethical manuals were collected to form the book of Proverbs (from the fifth or fourth to the second century)—a work full of acute and wise observations. With it should be read the non-canonical "Wisdom of the Son of Sirach" (180 B. C.) commonly called Ecclesiasticus. None of the works just mentioned attach importance to the future life. It is in the non-canonical "Wisdom of Solomon" (about 50 B. C.) that the doctrine of ethical immortality first appears among the Jews—developed under Egyptian and Greek influence; for sustained eloquence and nobility of thought the book has few equals.

Apocalypses.—The distressful time of the later foreign domination, particularly under the Syrian Greek princes and after, gave rise to a new literary form, the apocalypse. The prophets, from the fifth century onward, had looked hopefully for a native king who should secure the independence of the nation and renew its ancient glories. It now became a custom to put predictions into the mouth of some ancient worthy who was represented as describing the future in the form of a vision. The earliest extant work of this sort is the book of Daniel, whose second part, chs. vii.-xii. (165 B. C.) giving a sketch of the history from the time of Cyrus, ends with the Maccabean struggle and the prediction of the death of the great enemy, Antiochus Epiphanes; it is to this point that each of the four visions (vii.; viii.; ix.; x.-xii.) comes down. The stories of the first part (of an earlier date) have the old dramatic power together with moral and religious vigor. Similar visions make up the collection of pieces that bears the name of Enoch, whose striking feature is its portraiture of a pre-existent heavenly Man (in Hebrew phrase "Son of Man") destined to appear on earth and save his people. Many other works of this sort as for example, the Jewish Sibylline (Oracles) were afterward produced.

The necessity of explaining the ritual and other laws of the Pentateuch (formulated from the ninth to the fourth century B. C.) called forth a class of lawyers or doctors of law (scribes, rabbis) whose discussions of the written and oral legal material constitute the *Talmud* (fourth and fifth centuries of our era). The writings of the Jews since that time have been mainly rabbinical. In Spain (from the ninth to the thirteenth century) under Arabian influence and the study of Greek philosophy (in Arabic translations) they produced notable poetry and philosophy. Since the sixteenth century many Jewish writers have adopted the spirit and methods of modern European thought.

GREEK LITERATURE is for Europeans the one original literature of the world, all others being imitations.

Homeric Period.—It is exceptionally peculiar in that it begins with two finished masterpieces, the *Iliad*, or story of the wrath of Achilles, an episode in the siege of Troy, and the *Odyssey*, the tale of the ten years' wanderings of Odysseus and his return to his home after the siege. The perfection of these poems and of the hexameter meter in which they are composed implies a long preceding development of hymn and ballad poetry which is lost. The relation of this Homeric and pre-Homeric culture to the "Mycenæan" civilization discovered by Schliemann at Troy and Mycenæ and the earlier Cretan or "Minoan" civilization revealed by the excavations of Arthur Evans and others is one of the most interesting problems of recent historical investigation and conjecture.

The *Iliad* and *Odyssey* were chiefly chanted by minstrels in the palaces of princes. Hesiod, perhaps a generation or two later, speaks for the common people. His *Works and Days* (about 800 lines) is a sort of moralizing farmers' calendar in hexameter verse. His *Theogony, or Birth of the Gods*, is a systematic mythology or theology, including the great Homeric deities and many minor personifications.

The Homeric poems are only a small portion of a vast epic literature now lost in which the entire tale of Troy and many other legends of gods, heroes, and men were narrated. The "cycle of Troy," of which the *Iliad* is an episode, was told by the so-called "cyclic poets," whose personality is as doubtful as that of Homer, Stasinus (the Cypria), Arctinus (Aithiopis and Taking of Troy) Lesches (the Little Iliad), Agias (the Returns), Eugammon (the Lay of Telegonus, son of Odysseus and Circe).

Andrew Lang's pretty poem *Helen of Troy* may give some idea of how the *Iliad* and *Odyssey* fitted into this larger story. There were other cycles, a Theban cycle, recounting the legends of Thebes, and poems on the Argonautic expedition, or Quest of the Golden Fleece, of which a notion may be obtained from the Alexandrian epic of Apollonius of Rhodes (200 B. C), the Latin epic of Valerius Flaccus, and William Morris' *Life and Death of Jason*. To Homer were also attributed such later skits as *The Battle of the Frogs and Mice, Batrachomyomachia*, and the *Margites* (or *Jack of All Trades*), as well as the Homeric Hymns to various deities.

Literary Forms.—The different forms of literature were epic, lyric, elegy, drama, history, philosophy, oratory. The Greeks invented them, clearly defined their limits and developed each to its perfection in regular historical sequence. The older epic, which was at once poetry, religion, genealogy, history, and philosophy, was cultivated for three or four centuries after Homer. But between the years 700 and 500 B. C. its vogue declined in favor of the more personal and passionate lyric poetry, or, to adopt the more precise terminology of the Greeks, elegiac, iambic, and melic (song) poetry. This change corresponded broadly to the social evolution, the extension of commerce, the rise of oligarchies, tyrannies and democracies, and the conflicts between them, and the development of reflective thought, emotion, and personality. The extant fragments of the earlier lyric fill a small volume of three or four hundred pages. Elegiac poetry is in form longs and shorts, that is, an alternation of the hexameter with the shorter pentameter. "In the hexameter rises the fountain's silvery column. In the pentameter aye falling in melody back." It is adapted to the expression of sentiment, oratorical appeal, or reflection, rather than of continuous narration.

We have in this kind the war chants of Callinus (680?) and Tyrtæus (640?), fragments of Archilochus (650?), the sensuous pessimism of Mimnernus (630?) the political pamphlets in verse of Solon (600), the philosophy and social satire of Xenophanes (500), the epigrammatic gnomic sayings of Phocylides (540), and the politico-ethical reflections and banquet songs of Theognis (500?), which every educated Greek knew by heart.

Iambic poetry was composed in the meter of Milton's *Paradise Lost* with one added foot, making six instead of five. Allowing one measure or strong beat to every two feet, the Greeks called it "iambic trimeter." It later became the meter of the dialogue in tragedy and comedy. In the earlier literature it is mainly employed in satire. It is so used by Archilochus, by Semonides of Amorgos (625?), in a humorous satire in which women are compared to animals; Solon also wrote iambics.

In the extant remains, personal or individual lyric precedes choral lyric. Its first representative is Archilochus, whom we have already met as an elegiac and iambic poet. He also wrote lyric and songs in a great variety of meters telling of his loves and hates and his experience in war, politics and travel. He was regarded by the later Greeks as a poetical inventor second only to Homer.

The Aeolian School is represented, after the bare name of Terpander, (676?) by Alcæus (612?) of Lesbos and by Sappho (580?), whose untranslatable love poems are, in the original, among the most beautiful things in the world. The Ionian Anacreon (540?) is now best known by modern imitations of the pretty little Anacreonteia forged much later in his supposed manner.

Dorian School.—The chief names are Aleman of Sardis and Sparta (630?), Arion of Lesbos and Corinth (625?), Stesichorus of Sicily (625?), and Ibycus of Magna Grecia (540?). These also wrote choral lyrics, that is, poems intended to be chanted by a trained chorus of youths, maidens or men on various religious and festal occasions. The conditions of Greek life stimulated an immense production of this kind of poetry, especially in the two centuries from 650 to 450 B. C. It is chiefly known to us now from the fragments of Simonides (556-468) and the epinikian hymns of Pindar (518-442), of which a volume is preserved, and those of Bacchylides (480?) recovered from an Egyptian papyrus in the year 1896.

Pindar's hymns of victory were composed and chanted in honor of the athletes and princely owners of racing steeds victorious in the four great Grecian games, the Olympian, the Pythian, the Isthmian, and the Nemean. Metrically they are the most elaborate and beautiful poems in the world. Their sublime moral reflections and bold imagery are of general literary interest. But special study is required to appreciate their minute treatment of the myths and their local and genealogical allusions. Bacchylides is, as a writer, a milder, easier, less sublime, and simpler Pindar.

The Drama.—In the evolution of Greek literature, dramatic poetry succeeds lyric. The drama arose out of the dramatic elements latent in the dithyramb or choral hymn and dance in honor of the wine-god Dionysus. A simple, rude drama results when the leader of the chorus or a single actor discourses with the chorus about the adventures of Dionysus or some other god or hero. Arion is said to have first constituted the dithyramb as a regular cyclic or circular chorus around the altar. To Thespis (535) of Attica is attributed the step that made it a drama, the introduction of an actor. Æschylus introduced a second actor, and Sophocles a third. Several names of practitioners of the Thespian art are mentioned between Thespis and Æschylus, but Æschylus (524-456?) is the founder of tragedy, as we know it, and perhaps the most sublime of European poets except Shakespeare. Of his ninety tragedies, seven are extant: the *Suppliants*, the *Persae* (472), the *Prometheus*, the *Seven Against Thebes* (467), the *Oresteia*, a trilogy consisting of the *Agamemnon*, the *Choephori* and the *Eumenides* (459).

Next in the tragic triad of immortal names comes Sophocles (496-406), the most perfect and most distinctively Greek of poets, who "saw life steadily and saw it whole." Of his hundred plays, seven are extant: the *Ajax*, *Electra*, *Oedipus the King*, *Antigone* (440) *Trachiniae*, *Philoctetes* (409), and *Oedipus at Colonus*. Of Euripides, the third great tragedian (480-406), eighteen plays survive, among them the *Alcestis* (438), *Medea* (431), *Hippolytus* (428), *Ion* (424), *Phoenissae* (411), *Electra* (410), *Bacchae* (407?). The fifth century was the great age of Attic tragedy, but the successors of Euripides wrote plays throughout the next century, of which only fragments remain.

The Old Comedy, developing somewhat later than tragedy, is known to us chiefly in the eleven extant plays of Aristophanes, the *Acharnians* (425), *Knights* (424), *Clouds* (423), *Wasps* (422), *Peace* (421), *Birds* (414), *Lysistrata* and *Thesmophoriazusae* (411), *Frogs* (405), *Ecclesiazusae* (392), *Plutus* (388). This older comedy was a wild mixture of farce and Midsummer-Night's-Dream poetic fancies with political satire and literary parody. It was followed in the next century by a quieter comedy in which the main interest was mythological and literary burlesque, and this in turn, under the influence of the realism of the Euripidean form of tragedy, developed into the so-called New Comedy of Philemon (340) and Menander (342-291) which portrayed contemporary life, and which through Plautus, Terence, and Molière is the source of modern comedy.

While the drama was the dominant art of the two great Athenian centuries, choral lyric still maintained itself, chiefly in the form of the dithyramb and the nome. The loss of this libretto poetry, dominated by the music, is probably not a great one, if we may judge by the fragments of Philoxenus and the strained, euphuistic style of the *Persae* of Timotheus, recently recovered from an Egyptian papyrus.

Prose Literature.—Begins with the pre-Socratic philosophers Anaximander, Anaximenes, and Anaxagoras, and the logographi who narrated in prose the legends and genealogies which the later epopoii had told in hexameters. Hecatæus of Miletus and Herodotus (484-425?), the father of history, are a superior kind of logographs. Herodotus' nine books of histories or inquiries tell the tale of the Persian wars as the great conflict between East and West, prefaced by a long history of both contestants, into which is woven an enormous amount of travelers' tales, geography, and folk-lore. Thucydides (471-396?) is a critical and philosophical historian whose history of the first twenty years of the Peloponnesian war (431-411) is based on a careful study of documents and wide interrogation of eye-witnesses. Xenophon's (430-355?) *Hellenica* continues his history to the year 362. Xenophon also wrote the *Anabasis*, or story of his going up to Asia with the expedition of Cyrus the Younger; the *Memorabilia* of Socrates, and the historic educational romance the *Cyropaedeia*, or education of Cyrus the Elder The essay on the Athenian polity found among his minor works is not by Xenophon, but is interesting as the oldest extant specimen of Attic literary prose (420?). Among the lost historians of the fourth century are the pupils of the orator Isocrates, Theopompus, author of the *Philippica* and as many think of a recently discovered historical fragment, the *Hellenica Oxyrhynchia*, and Ephorus, author of the first universal history of Greece.

Oratory is already an art in Homer, but became a recognized branch of prose literature a little later than history. The so-called sophists (460-400) professed to teach rhetoric and the "art of words," and the Athenian courts and assemblies developed a regular forensic and political eloquence, represented for us by the speeches in Thucydides' history, and by the ten extant Attic orators of the so-called canon: Antiphon (480-411), Andocides (440-380?), Lysias (440-380?), Isocrates (436-338), through Cicero the European model of smooth periodic prose; Isæus (360?), Demosthenes (384-322), Æschines (389-320?), Lycurgus (390-), Hyperides (389-322), Dinarchus (360-).

Philosophy, as the third branch of prose literature, begins with those pre-Socratic philosophers who wrote in prose, and the writings of the Sophists, Gorgias, Protagoras, Hippias, Prodicus, etc., represented now by fragments. It culminates in the Socratic dialogues of Plato (428-347), the supreme prose masterpieces of the world in which Socrates (468-399), who wrote nothing himself, is represented in conversation with all the brilliant personages of the age of Pericles, or expounding the subtlest distinctions and the sublimest imaginations of the Platonic philosophy. In Aristotle (384-322), the pupil of Plato, philosophic prose becomes the exact instrument of sober, scientific, encyclopædic thought, set forth no longer in brilliant dialogues, but in systematic treatises.

The deaths of Aristotle and Demosthenes (322) mark the end of the great original creative literature of Greece. But a modern Athenian would be partially justified in the claim that the Greek language and the Greek literature have lived an uninterrupted life from that day to this. The Palatine anthology, for example, a collection of epigrams named from the library where the manuscript was found, contains poems of Simonides and pretty verses written by Byzantine poets contemporary with Chaucer. This post-Classical Greek literature may be subdivided into the Alexandrian period (300-30 B. C.), the Roman period (30 B.C. to 300 or 400 A.D.), the Byzantine period (300 A.D. to 1452), and the modern Greek period (1452 to the present day). The Alexandrian period would include the beautiful idylls of Theocritus (300), the learned poetry of Callimachus (300), and Apollonius of Rhodes (300), the newly discovered mines of Herondas (275), the history of later Greek science and of the post-Aristotelian philosophic schools, Epi-

curean, Stoic, Peripatetic, Platonic, and such historians as Polybius and Diodorus Siculus. The historian of the Roman period would chronicle a revival of oratorical and artistic prose essayists and moralists such as Plutarch, Dio Chrysostomus, Epictetus, Marcus Aurelius, and that most modern of the ancients, the witty and entertaining Lucian; historians such as Appian, Arrian and Dio Cassius, the Geographer Strabo, the traveller Pausonias and lastly the vast literature of neo-Platonism, Plotinus, Porphyry, Iamblichus, the Emperor Julian, Damascius.

Into the succeeding but, except to the specialists, not very interesting Byzantine, literature it is needless to enter here.

LATIN LITERATURE comprises whatever is written in the Latin language. At first, the language was only a dialect, and those who wrote it were the rude, untaught peasants of Latium. In time, it grew harmonious and splendid as the language developed, and at last it became the favorite reading of the whole civilized world (about 400 A.D.). In modern times Latin literature has been revived and modern Latinity is cultivated throughout the western part of Europe and in the United States. The character of this literature is strong, concise, and masculine. It is less pliant, and in some respects less brilliant, than the Greek; yet on the whole, it stands among the first of the great literatures of the world, because never since its origin, has there been a time when it was not widely read and imitated and admired. One may divide the history of Latin literature into six periods:

I. The Native Period (before 250 B. C.).
II. The Ante-Classical Period (from about 250 B. C. to 80 B. C.).
III. The Golden Age or Classical Period (from Lucretius to the death of Augustus, A. D. 14).
IV. The Spanish Period (from the death of Augustus to the accession of Hadrian, 117 A. D.).
V. The African Period (from the accession of Hadrian to the beginning of the fourth century).
VI. The Period of Decline (from the beginning of the fourth century to the downfall of Rome, 476 A. D.).

The Native Period.—Before Rome came into contact with Grecian civilization, its people were lacking in imagination because of their environment. They were surrounded on all sides by hostile tribes. They made their living by agriculture and cattle-breeding. In this respect they were a good deal like the early Puritans in New England, having little time to cultivate anything that resembled a definite literature. Nevertheless, throughout these centuries, we can detect the germs of several kinds of art. Lyric poetry is found in the quaint lullabies and rhymed nursery songs of the children, and also in the rude incantation of the farmers who tried to ward off evil from their flocks by charms which they chanted while they either spat or stamped upon the ground. In religion, their ritual was largely composed in verse, such as the "Song of the Arval Brethren" which is still preserved. Most of all, the early Romans were extremely fond of extemporized plays, rough farces, and unmannerly fun perpetrated by country yokels with painted faces and to the accompaniment of the *tibia* or flute.

This comedy was native to the Roman people. They never evolved tragedy, but subsequently borrowed it from the Greeks, and this is why in Roman dramatic literature, comedy has survived in larger measure than tragic verse, while its merit is much greater. The school children in early Rome were taught to memorize the simple laws of the small community, especially the *Laws of the Twelve Tables*, which were to them what the catechism is to many people in England and America. It showed that the Romans were destined to become a great law-giving people; and even in our own times the Roman law is at the foundation of the jurisprudence of many countries.

The Ante-Classical Period.—The Romans were not long to be left in so isolated a condition. They came into conflict with the Greeks under Pyrrhus and defeated them. They fought and conquered the great African power, Carthage. Thus, they became acquainted with the luxury and splendor of these foreign peoples from whom they took not only magnificent spoils, but likewise instructors in the arts. A Greek prisoner named Livius Andronicus who was brought to Rome as a child, taught the younger Romans his native language and how to read the great poems and plays and histories that were written in Greek. Livius had no unusual gifts. Roman poetry began really with Gænus Nævius (about 199 B. C.), who was an Italian Greek. He wrote tragedies and comedies which were borrowed from Hellenic sources; but he also composed plays relating to Roman history, and an epic poem in Latin, describing the events of the First Punic War in so spirited a way and with so much natural genius that for a long time this poem (known as the Bellum Punicum) continued to be read.

Following Nævius came two very great writers who made Latin literature brilliant and possessing a character of its own. The first of these was Titus Maccius Plautus (commonly called Plautus) who was of immense importance in the advancement of Roman literature. He is a close analogue to Shakespeare, since like Shakespeare he was born in humble circumstances, made his way to the capital by his evident gifts, and finally, secured a fame which has preserved twenty-one of his comedies which are full of wit and humor and have been translated and imitated ever since his death.

Side by side with Plautus we must consider Quintus Ennius (239-169 B.C.), who came to be styled "The Father of Roman Poetry." Unlike Plautus, he was the friend and companion of the great, and played a different part in the construction of Roman literature. The cultivated set at Rome made a favorite of him, and helped him in his literary pursuits which comprised tragedies, comedies, miscellanies, and one fine epic poem called the *Annales*, which treated of Roman history and tradition from the beginning down to his own time.

If Ennius was the Father of Roman Poetry, Marcus Porcius Cato may well be styled the Father of Roman Prose. Besides oratory, he composed a book on the sources of Roman history in seven books entitled *Orgines*.

Other writers of this same period who deserve mention were Fabius Pictor, who also wrote Roman history; Marcus Pacuvius, the nephew of Ennius and famous in his time for his comedies; and Lucius Attius whose tragedies were popular though his style was affected, being full of puns, old-fashioned words, and alliteration.

The greatest name, however, in the latter part of this period is that of P. Terentius Afer (usually known as Terence). He died before he was thirty years of age, yet the six plays which he wrote and all of which survived may be read today with unfailing pleasure. Terence and Plautus are the chief names in Latin comedy. Plautus was more unrestrained, willing to descend to burlesque and even farce at times; Terence wrote beautiful and exquisite Latin, while his plays are very different from those of the rollicking Plautus.

The last important name to be recorded in this period is that of the satirist Gaius Lucilius (180-103 B. C.).

The Golden Age.—Following the Ante-Classical Period there comes in Roman literature a great sunburst of literary achievement, remarkable for its originality, variety, harmonious expression and style. Within the brief space of ninety years there are crowded the records of a literature so splendid as to have affected all the literatures of modern time. Both poetry and prose and philosophical writing and oratory and history attained to a perfection that is remarkable and that in their deeper notes are not Greek, but Latin to the core. Thus we have first the prolific Varro who lived to be ninety years of age and published six hundred and forty volumes, some of them on history, some satirical, some grammatical, and some on education and likewise on agriculture. Of him it has been said that "It is wonderful that any man could have written so much; and it is quite as wonderful that anyone could read everything that Varro wrote." He was styled in his own time "the most learned of the Romans"; and for two or three centuries his books were standard works.

The most brilliant contemporaries of Varro were M. Tullius Cicero (106-43 B. C.) and Caius Julius Cæsar (100-44 B. C.). Both were statesmen, and both were orators and writers, while Cæsar was also one of the five great soldiers of the world. But Cicero's statesmanship was weak and timid compared with Cæsar's, though the careers of the two men ended equally in a bloody death. Cicero was a great master of prose style, and has moulded all prose style from his day to our own. He could be light and playful when he chose or he could rise to a pitch of magnificent eloquence in which every word thrilled his listeners. Besides the fifty-seven orations of his which we possess, we have also treatises on philosophy written with great charm, and also a voluminous correspondence which he never intended to be published, but which throws a vivid light on his own life and that of his time. Julius Cæsar is known in literature by his account of the war which he waged in Gaul. The other works that bear his name are spurious. The treatise on the *Gallic War* is still studied in every school, and is the first book which students of Latin begin to read. During this period there flourished T. Lucretius Carus (96-55 B. C.) who in his work *On the Nature of Things* combines in a marvellous way philosophy and poetry.

Following him came the finest lyric poet in Latin literature—Valerius Catullus (87-54 B.C.), a young man of good family and wealth, but driven by passions which led him to write not only intensely but even furiously. He was governed by his emotions, and may be compared to the modern Italian writer, Gabriele d'Annunzio. Somewhat younger was Vergil (70-19 B. C.) a poet

of the new-born Empire who wrote pastoral poetry in his *Eclogues* and *Georgics*, and the greatest of all Roman epics, the *Aeneid*, in twelve books though he did not live to finish it. The *Aeneid* is a glorification of Rome and deals with the legend which makes the Romans to have descended from ancient Troy. Personally he was a timid, retiring man; and his finest passages are those which are marked by tenderness and grace. One of his intimate friends was Q. Horatius Flaccus (65-8 B. C.), who, though less impetuous than Catullus and less profound than Vergil, has remained the most popular Roman poet who ever lived. His *Odes* are exquisitely finished and full of pointed lines. His *Satires* and *Epistles* are written in a genial, conversational style, and they are read with delight as representing the philosophy of life which Horace himself characterized as "the golden mean" (aurea mediocritas). These poets and also the minor ones—Tibullus and Propertius—were patronized by the prime minister, Mæcenas, whose name they have preserved. Almost contemporary was P. Ovidius (usually called Ovid) who died in 17 A. D. He wrote many love poems, and also poems of mythology; but in the midst of his brilliant career, he was, for some unknown reason, banished by the Emperor to a rude, wintry village on the Black Sea, where he died of a broken heart.

The historians of this era were Cornelius Nepos (99-24 B. C.), Gaius Sallustius (Sallust), Cæsar and Cicero, already mentioned, and, greatest of all, Titus Livius (59 B. C.-17 A. D.). His history of Rome was originally in 142 books, but he died before finishing it, and only about a quarter of what he actually wrote is now known to exist. He was not a philosophical historian, but one whose narrative style is very fascinating. Sallust was less attractive but more accurate than Livy.

he Spanish Period.—Rome had now ceased to be Roman, but was cosmopolitan. This is seen by the fact that so many writers in the first century B. C. were of Spanish birth. Among them are the Elder Seneca, who taught oratory, the Younger Seneca who wrote tragedies and philosophy, Mela, a writer on geography, Columella, an authority on agriculture, and Quintilian and Martial. Quintilian is one of the greatest writers on education who ever lived, and his treatise on the subject of oratorical study is strikingly modern in its easy style and sound, good sense. Martial wrote the most brilliant epigrams that any writer has yet composed, and they have been imitated, especially in French and English, with considerable success. Gaius Petronius (died 66 A. D.) wrote the first realistic novel that is known to exist—the Satira or Satyricon. The Empire, however, became more and more unfavorable to literary art. Cornelius Tacitus to be sure, wrote two splendid histories in the new style which was terse and epigrammatic, and Pliny the Elder composed a vast encyclopædia; while his nephew, Pliny the Younger, has left us a collection of letters intended for publication. Poets of this period who are now little read are the epic writers, Silius Italicus, and Papinius Statius. They were little thought of compared with the brilliant Spaniard Lucan whose epic, called *Pharsalia*, is notable for its fiery declamation. A. Persius Flaccus and D. Junius Juvenalis end this period with their satires, those of Persius being largely imitated from Horace, while Juvenal writes savagely against the vices of his time. Among scientific men we may mention Julius Frontinus who wrote manuals on aqueducts and on military art.

The African Period.—There came a time when Christianity won the Roman world and was hostile to the writings of the pagans. Hence we find only a few secular writers in the Fifth Period who deserve mention. Among them is the biographer, Suetonius, who wrote the *Lives of the Twelve Caesars*, full of gossip and scandal; Aulus Gellius, who compiled an extensive encyclopædia called by him *The Attic Nights*; the energetic Tertullian of Carthage who defended Christianity, just as his contemporary, Minucius Felix, opposed it. One must also mention the romance by the African Apuleius entitled by him *The Golden Ass*, which has been praised most widely for the dainty episode of "Cupid and Psyche" which occurs in it. Fronto, also an African, has left us a large collection of letters, which, however, are seldom read and are of less importance than the legal works of Gaius and Papinian.

The Period of Decline.— During the third century there was produced not much literature worthy of remembrance. The rhetorician, Arnobius, wrote a defense of Christianity as did his pupil Lactantius. A number of minor historians practically collaborated accounts of the later emperors in the so-called Augustan History. Almost the last of the Roman poets is Magnus Ausonius, who shows in his writings, especially in his *Mosella*, a love of nature which is the first breathing of the modern spirit. After him come theological writers such as St. Ambrose, and St. Jerome, who translated the Bible into Latin, and St. Augustine, Bishop of Hippo in Africa. There is also the Spanish priest Orosius, author of a history of the world from the creation; and the great jurist Ulpian, and such little read writers as Apollonaris Sidonius and Dracontius. By this time the Latin language had become corrupt and was gradually shading off into the modern tongues such as Italian, French, Spanish, Roumanian and Sardinian. Rome itself had ceased to be the capital of the Empire. Its territories were overrun by Gauls and Germans; and finally, in 476, the ancient line of rulers ended and Odoacer, the barbarian, stormed the city and made himself master and king of Italy.

ITALIAN LITERATURE.—Although the Italian language is a direct descendant of the Latin, the break between the close of Latin literature and the beginning of Italian literature is quite long. In fact Dante may be considered the creator of both the Italian language and the Italian literature. For the purposes of a brief sketch like this we may pass by the lyric poets who preceded him.

The Age of Dante.—Dante Alighieri was born in Florence in 1265; first saw Beatrice Portinari at the age of nine; studied at various universities; had the poet Guido Cavalcanti for his friend and Brunetto Latini for his preceptor; married Gemma in 1291; was banished from his native city in 1302; and died in exile in Ravenna in 1321. Dante's principal works are the *Vita Nuova* (*New Life*) written partly in prose and partly in verse and giving an account of the poet's ethereal love for Beatrice; the *Convito* (*Banquet*), written after the death of Beatrice when the poet sought consolation in philosophy; and the *Divina Commedia* (*Divine Comedy*), his great epic. The *Divine Comedy* is divided into three parts, Hell, Purgatory, and Heaven. Through the first and second of these realms the poet wanders with Vergil as his guide; through the third the glorified Beatrice conducts him. The *Divine Comedy* is the great epic of Catholicism as the *Paradise Lost* is the great epic of Protestantism.

What Beatrice was to Dante, Laura was to Petrarch, the personification of ideal womanhood and the inspiration of his song. The Latin works of Francesco Petrarca (1304–1374), through which he hoped to gain immortality, are long since forgotten but the Italian lyrics are treasured as a world heritage. He composed many sonnets and songs in honor of his beloved; these he divided into two groups, *To Laura in Life* and *To Laura in Death*. He also wrote a series of six allegorical poems called *Trionfi* in the *terza rima* with Laura as the theme; these are the *Triumph of Love, of Chastity, of Death, of Fame, of Time*, and *of Eternity*.

Boccaccio (1313–1375) developed Italian prose as Dante and Petrarch had developed Italian verse. A lecturer on Dante, of whom he wrote a *Life*, and a friend of Petrarch, Boccaccio was familiar with the best literary traditions of his time; unfortunately his reverence for woman did not approach that of the two great poets. His greatest work is the *Decameron*, a collection of one hundred prose stories, ten stories for each of ten days. In the art of story-telling he was a master, and his book became both the store-house and the model for many a future story-teller.

From Boccaccio to Tasso.—The century which followed Petrarch and Boccaccio was not prolific in literary genius. However the beginnings of the great chivalric epics which are to follow make their appearance in the verse romances of Pulci (1432–1487), *Morgante Maggiore* and Boiardo (1430–1494), *Orlando Innamorato*.

In the sixteenth century history and politics furnished themes for Machiavelli (1469–1528), Guicciardini (1482–1540), and Nardi (1496–c. 1556), fiction was produced by Samnazzaro (1458–1530) and Baudello (1480–1562); satirical poetry by Berni; serious lyrics by Vittoria Colona; and art histories by Benvenuto Cellini in his *Autobiography* and Vasari in the *Lives of Eminent Artists*. The greatest works of the century however were the epics of Ariosto and Tasso.

Ariosto took up the poem of Boiardo *Orlando in Love*, and showed the world *Orlando Furioso* (1516), that is *Orlando Mad* through love of Angelica. It is a vast romantic poem of nearly forty thousand lines, rich in invention and description and full of chivalry and adventure.

A greater poet than Ariosto was Tasso. He was born at Sorrento, passed through many bitter experiences, and spent his closing years with the increasing shadow of madness settling down upon him. His beautiful pastoral poem the *Aminta* (1572) may be compared with Guarini's *Pastor Fido* which appeared a few years later. His fame rests on his great epic *Jerusalem Delivered* (c. 1574). The theme is the capture of Jerusalem by the crusaders under Godfrey of Bouillon in 1099, the memorable struggle between Christian and Saracen. The *Gerusalemme Liberata* is a noble epic of twenty cantos, of thrilling interest, elevated in tone, dignified and melodious in language.

The Latter Period.—After Tasso there is another great lull in Italian literature. The scientific and philosophical labors of

Giordano Bruno, Galileo, and Campanella in the seventeenth century do not belong to literature proper. Tassoni's mock-herioc poem, *The Rape of the Bucket*, satirizing the wars of Modena and Bologna, is the predecessor of Boileau's *Le Lutrian* and Pope's *Rape of the Lock*.

The musical dramas of Metastasio in the eighteenth century are far above the ordinary opera text in both plot and poetry. The real drama of the century however is seen in the comedies of Goldoni and the tragedies of Alfieri. Goldoni (1707–1793) reformed the Italian comedy, replacing the old masked comedies with plays formed on the art of Molière. Most of his plays are in prose. Alfieri (1749-1803) created modern Italian tragedy on classical models; he observed the Greek unities, introduced but few characters, and had but little action; many, indeed of his subjects are classical, as: *Antigone, Virginia, Agamemnon, Orestes, Brutus, Myrrha;* however, *Saul* is usually considered his best work.

Tragedy was carried on less successfully in the nineteenth century by Ugo Foscolo and Manzoni; but Foscolo was greater in his poem on *Sepulchers* (1807), and Manzoni in his novel *The Betrothed* (*I Promessi Sposi*, 1825).

The greatest poet of the early nineteenth century was Giacomo Leopardi (1798–1837), pessimistic, melancholy, who like the Preacher dwelt upon *l'infinita vanita del tutto*. Other poets of the century are Silvio Pellico (1789–1854), better known however for the thrilling story of his imprisonment *My Prisons*, Giusti (1809–1850), Aleardo Aleardi (1812–1878), Carducci (1836–1907), and D'Annunzio (1863——), the latter more celebrated for his realistic novels and tragedies.

FRENCH LITERATURE.—Modern France is smaller than ancient Gaul, which was conquered by Caesar, from 58 to 51 B. C., and became a Roman province. The greater part of the Gauls were Kelts, but after the Roman conquest they spoke the language of their conquerors, popular Latin (*lingua romana rustica*) which had two forms in Gaul, the *langue d'oil* in the North and the *langue d'oc* in the South. French, which was a dialect of the *langue d'oil*, became gradually the language of the whole country, after the accession to the throne of Hugh Capet, Count of Paris, in 987. The earliest written monument of the *langue d'oil* is the oaths of Strasburg in 842, between Louis the German and Charles the Bald, grandsons of Charlemagne. The Franks and other Germanic tribes which invaded Gaul in the fourth and fifth centuries, exerted little influence on the language of the Gallo-Romans, which remained Latin and was called Romance or Romanic. The country, however, took the name of the Franks and was called France.

The Middle Ages.—The literature of the middle ages is interesting and important, but we do not find in that period as many great works as in later times. The epic poems were very popular and comprised three cycles, subjects, or matters: of France, of Brittany, and of Rome. The *Song of Roland* (*la Chanson de Roland*) is the most important of the French epics of the middle ages. The name of the author is unknown, and the poem was written in the second half of the eleventh century. It is a noble and inspiring work, thoroughly Christian in spirit, in which appear Charlemagne, his supposed nephew Roland and his betrothed Aude, Oliver and the other peers, and the traitor Ganelon. The French cycle represents feudalism whilst the Breton cycle represents chivalry. The principal personages of the latter are Arthur and the Knights of the Round Table, and there are charming stories of love and adventure. Marie de France wrote in the twelfth century short love poems called lays, of which that of the *Honeysuckle* is the most important. Chrétien de Troyes was the principal author of the Breton romances, and his *Knight with the Lion*, *Cliges*, *Perceval* and other works were very popular and were imitated by the great German poet Wolfram von Eschenbach. The cycle of Rome or of Antiquity related the fabulous deeds of Aeneas, of Alexander, and of Caesar.

The French Drama originated in the church, and the first play in French literature is the *Representation of Adam*, of the twelfth century. In the thirteenth century there are the *Game of St. Nicholas* by Bodel, and the *Miracle of Théophile*, by Rutebeuf. The miracles and mysteries formed the serious drama of the middle ages, although comic scenes were generally inserted in the most religious plays. The miracles related some wonderful deeds of the Virgin or of the saints, while the mysteries were taken from the Scriptures and from the lives of the saints. The principal subject was the *Passion of Christ* which was immensely popular. In regard to the comic drama we should mention the *Game of the Foliage* (*le Jeu de la Feuillée*) and *Robin and Marion* by Adam de la Halle, of the thirteenth century. The latter work has been called the first comic opera in French. Forming part of the comic drama are the moralities, didactic and often serious; the *sotties*, satirical and generally political; the monologues, the burlesque sermons, and the farces, of which *l'Avocat Pathelin* is the masterpiece. The play is of the fifteenth century and is anonymous. There were no regular troupes of actors in the middle ages, and the plays were acted by societies, such as the *Brotherhood of the Passion* for the serious drama, and the *Clercs de la Basoche* and the *Enfants sans Souci* for the comic drama.

The Fabliau are usually tales in verse, which are witty and gay, but generally very coarse. They inspired the *Decameron* of the reign of Louis XI., and the *Heptameron* of Margaret of Navarre in the sixteenth century. The *Roman de Renard*, of the twelfth century, is an extensive animal epic, in which we see many interesting folk-lore stories. *Aucassin* and *Nicolète* (thirteenth century) is a charming and poetic love story, and the *Romance of the Rose*, also of the thirteenth century, was the most popular allegorical poem of the middle ages. The first part (4,670 verses) was written by Guillaume de Lorris and is a charming and graceful allegory. The second part (18,147 verses) was the work of Jean de Meung, and is forceful and learned. Lyric poetry flourished in the thirteenth century, and among the principal poets was Thibaut de Champagne, who lived in the time of St. Louis and became King of Navarre. Poetry in the fourteenth century was not as important as in the thirteenth, but in the fifteenth century we see Christine de Pisan, Alain Chartier, and Charles of Orleans and Villon. Charles was taken prisoner at Agincourt and remained in captivity in England for twenty-five years. His poems have little force, but they are graceful. Villon was a great poet, lyrical and forceful at the same time. He was scholarly but led the life of a vagabond. His *Ballad of the Ladies of Former Times*, and his *Testaments* are celebrated.

History.—The writers of history were Villehardouin, who related the fourth Crusade; Joinville, who wrote an interesting and naïve account of the "saintly words and good deeds" of St. Louis; Froissart, whose chronicles of the Hundred Years war are most interesting; Christine de Pisan, who wrote the biography of Charles V., the Wise; and Philippe de Comines, who is no longer a chronicler but a real historian, when he speaks of Louis XI., and of Charles the Bold. The two great theologians of the twelfth century were St. Bernard, and Abélard, the unfortunate lover of Héloise. The principal novel of the fifteenth century is *Le Petit Jehan de Saintré*, attributed, on fairly good authority, to Antoine de La Salle.

The Sixteenth Century.—The principal causes of the Renaissance or revival in literature and in arts were the wars in Italy which put the French in contact with Italian and Greek civilization, the invention of printing, the discovery of America, and the Reformation. Francis I. encouraged greatly men of letters and artists, and so did his sister, Margaret of Navarre, who wrote graceful poetry.

Poetry.—The greatest poet of the first part of the sixteenth century was Clément Marot, born in 1497, died at Turin in 1544, a victim of religious persecution. Marot's works are elegant and harmonious, but are rarely as forceful as those of Ronsard (1524-1585) who was considered the greatest poet of his time, and who was the chief of the Pléiade, composed of Ronsard, Du Bellay, Remi Belleau, Baif, Jodelle, Ponthus de Thyard, and Dorat. In 1549 Du Bellay had written his *Defense and Illustration of the French Language*, which was the manifesto of the new school. He claimed that in French could be written epics, odes, tragedies, and comedies. From 1549 may be said to begin French classic literature, which was inspired by Greek and Latin models.

Ronsard was a poet of merit, and his works have both energy and grace. Some of his poems are pedantic, but his *Sonnets to Helen* and his *Amours* are really charming. Du Bartas and Agrippa d' Aubigné were Huguenot poets. The former wrote *The Week*, which inspired Milton, and the latter, a bitter and energetic work, *The Tragics*. Other poets of that time are Le Maire de Belges, Melin de Saint-Gelais, Desportes, Bertaut, Vauquelin de la Fresnay, Pibrac, and Mathurin Régnier, who was a great satirist.

Prose.—The *Christian Institute* of John Calvin is the first work of religious controversy written in French. The style is firm and concise. St. Francis of Sales wrote religious treatises with firmness and elegance and preached admirable sermons. Among the political writers were Jean Bodin, who favored royal despotism, and Etienne de la Boétie who, at the age of eighteen, wrote his *Voluntary Servitude*, in which he condemned the autocracy of the King. In 1594 appeared the *Satire Ménippée*, which is an admirable political pamphlet written in favor of Henry IV. The authors of memoirs are La Noue, the huguenot; Montluc, the catholic; Agrippa d'Aubigné, Brantome, Margaret of Valois, wife of Henry IV., and Sully, the great minister. The greatest prose writers of the sixteenth

century are Amyot, who wrote an excellent translation of Plutarch's *Lives* and of *Daphnis and Chloé* of Longus; Rabelais, and Montaigne. Francois Rabelais (1495-1553) wrote *Pantagruel and Gargantura.* It is an extraordinary book, in which the author gives wise advice in regard to education and to affairs social and political. The style is often buffoon and coarse but also strong, and the ideas are sensible. Michel de Montaigne (1533-1592) produced his *Essays*, which are a keen, though somewhat skeptical, study of the human mind and heart. His chapter on the education of children is excellent. The other moralists are Du Vair and Charron, and other prose writers are Pasquier and Fauchet, erudite historians; Henri Estienne, the philologist; Ambroise Paré, the surgeon; Bernard Palissy, the great potter; and Oliver de Serres the agronomist.

Drama.—Religious dramas disappeared after 1548, when the Parliament of Paris forbade the representation of the mysteries. In 1552 Etienne Jodelle wrote *Cléopâtre*, a play in which he introduced a regular plan, acts and scenes, the unities of time, place, and action, a chorus and a study of character. *Cléopâtre* (1552) is the first classic French tragedy, and Jodelle's *Eugene* (1552) is the first classic comedy. Superior to Jodelle as dramatists are Robert Garnier and Antoine de Monchrestien. Other authors of tragedies are la Péruse, Grévin, Jacques and Jean de la Taille, and of comedies Grévin, Remi Belleau, and Pierre de Larivey who imitated the Italian comedy.

The Seventeenth Century.—Malherbe (1555-1628) was a disciple of Ronsard and gave discipline to classicism. He reformed French verse and produced elegant and correct poems. Guez de Balzac (1597-1654) gave eloquence and nobility to prose, but it was the Hotel de Rambouillet which made it graceful. The marquise de Rambouillet received at her house men and women of letters, and her influence and that of her daughter Julie were great on literature, which became decent and refined, although Mme. de Rambouillet and her friends were accused of being pedantic and *précieuses* in their exaggeration of refinement. There *bourgeois*, nobles, and princes met together, and we see Voiture, the elegant sonnetist; Racan, the pastoral poet; Chapelain, whose verse was heavy but whose critical judgment was good; Mlle. de Scudéry, whose long novels were very popular and who composed the celebrated *Carte du Tendre;* Mme. de la Fayette, whose *Princesse de Clèves* is a charming analysis of a woman's heart, the first novel of real love in French literature; Mme de Sévigné (1626-1696) whose *Letters* are models of prose and give a correct picture of the court of Louis XIV. The Great Condé and his sister Mme. de Longueville visited also the Hotel de Rambouillet.

The Great Dramatists.—In 1636 Pierre Corneille (1606-1684) produced his admirable tragedy, *Le Cid.* Before Corneille we may mention Alexandre Hardy, who had no genius, but "dramatic instinct," and Jean de Mairet whose *Sophonisbe* (1629) combines nearly all the essential traits of French classic tragedy, which are, the exclusion of the comic, a forceful psychological analysis, nobility of style, and a logical and simple plot. Corneille wrote several interesting comedies before *Le Cid*, and produced afterward *Horace, Cinna*, and *Polyeucte*, in which we see will power always triumphant and the sublime in thought and in expression. His comedy, *Le Menteur*, is witty and amusing, and others of his tragedies have great merit, although they do not equal the four mentioned above.

Jean Racine (1639-1699) carried the style of tragedy to perfection; his characters are more human than Corneille's, and his verse is always harmonious. His first great tragedy, *Andromaque*, appeared in 1667, and his other Greek plays are *Iphigénie* and *Phèdre.* His historical plays are *Britannicus, Bérénice, Bajazet*, and *Mithridate*; and his religious plays are *Esther* and *Athalie.* He wrote but one comedy, *Les Plaideurs.* Corneille and Racine carried French tragedy to its highest point and have no equals in French literature. Rotrou and Thomas Corneille may be named among their contemporaries.

Jean Baptiste Poquelin, (1622-1673) better known as Molière, is the greatest comic writer in the history of the world. He represented men and women as they are at all times, and his works are always true to nature, and often profound in their study of human character, although witty and amusing. Molière was an actor, and for twelve years was the director of a troupe of strolling comedians. His *Précieuses Ridicules* was played in Paris in 1659, and he obtained the favor and support of Louis XIV. His greatest plays in verse are *Le Tartuffe*, in which he attacks religious hypocrisy; *Le Misanthrope*, which is an admirable picture of the society of his time, and indeed, of all times; and *Les Femmes Savantes*, which criticises pedantry and gives the author's opinion about the education of women. In prose the greatest works are *L'Avare* and *Le Bourgeois Gentilhomme*, and among the other comedies of Molière we may mention *L'Ecole des Maris, L'Ecole des Femmes, Le Médecin malgré lui* and *Le Malade Imaginaire.*

The Philosophers and Moralists of the seventeenth century are Descartes; Pascal, whose *Lettres Provinciales* and *Pensées* are admirable in style and in thought; La Rochefoucauld, whose *Maxims* are striking in originality and conciseness; La Bruyère, the author of the *Characters*, and Malebranche. Boileau was the arbiter of taste, a judicious critic, and wrote *Satires* and *Epistles*, and *Le Lutrin*, a mock-heroic poem. La Fontaine wrote inimitable Fables in charming verse. Bossuet delivered beautiful funeral orations and wrote a noble *Discourse on Universal History.* Fénelon was the author of *Télémaque*, which although in prose, may be compared with the *Odyssey* for its poetic style. Bossuet and Fénelon were also great preachers, and so were Fléchier, Bourdaloue, Mascaron, and Massillon. Mme. de La Fayette and Mme. de Sévigné, already mentioned, are the greatest women writers of the seventeenth century, but Mme. de Maintenon should also be named for her letters on education. Scarron's *Roman Comique* gives an excellent idea of the life of strolling comedians. Charles Perrault wrote charming *Mother Goose* stories; Saint Evremont and Bayle were literary critics. Mézeray wrote a *History of France*, Hamilton, the *Memoirs of the Chevalier de Grammont*, and Cardinal de Retz and Saint Simon, historical *Memoirs.* The work of Saint Simon is probably the greatest of its kind in French literature. Louis XIV. exerted a great influence on the literature of his age by his excellent taste and by the protection he gave to men of letters.

The Eighteenth Century.—The universal writer of the eighteenth century is Francois Marie Arouet, known as Voltaire (1694-1778). His prose is a model of clearness, as seen in his historical works, such as *Charles XII.*, and the *Age of Louis XIV.;* in his novels, *Zadig, Candide*, and others; in his immense correspondence. His skepticism is seen in his *Philosophical Letters* and his *Philosophical Dictionary.* He wrote many tragedies, of which one, *Zaire*, imitated from *Othello*, is interesting and pathetic. His *Henriade* is a somewhat cold epic poem, and his satires and his fugitive pieces are elegant and witty. Montesquieu was more profound than Voltaire, and his *Esprit des Lois* is a great work. Buffoon wrote a grand *Natural History.* It was he who said: "Style is man himself." The so-called "Encyclopedists" wished to reform the church and the state. Diderot and d'Alembert were the principal contributors to the *Encyclopedia* and among the other philosophers were Turgot, Condorcet, Helvetius, d'Holbach and Condillac. Vauvenargues was a celebrated moralist. Jean-Jacques Rousseau (1712-1778), born at Geneva, exerted more influence in his age or the following than Voltaire. He admired nature and described it beautifully, and his style is eloquent and poetic. His *Emile* is a most fruitful treatise on education; his *Nou elle Héloise* is a passionate novel, and his *Contract Social* is an attack against the society and government of his time, and probably hastened the Revolution.

André Chénier is the only great poet of the eighteenth century. His muse is essentially Greek. The Revolutionary period inspired Rouget de l'Isle who wrote the *Marseillaise* in 1792. Tragedy is inferior, but comedy is interesting and witty. The principal comic writers were Regnard, whose *Joueur* is written in excellent verse; Marivaux, the author of the charming *Jeu de l'Amour et du Hasard*; Le Sage, who wrote *Turcaret*; Piron, *la Mitromanie*; Gresset, *le Méchant*; Destouche, *Le Philosophe Glorieux*; and Beaumarchais, *le Barbier de Séville* and *le Mariage de Figaro.* The novelists were Le Sage, whose *Gil Blas* may almost be compared with *Don Quixote*; l'Abbé Prévost, whose *Manon Lescaut* is a masterpiece of true passion; Bernardin de Saint-Pierre, author of the graceful idyll, *Paul et Virginie*, and Marivaux, who wrote *Marianne*, as keen a psychological study as his comedies. In the eighteenth century flourished the literary *salons*, and the influence of women was great. Great also was the parliamentary eloquence of Mirabeau, Barnave, Vergniaud and many others.

The Nineteenth Century.—Napoleon, the soldier, the statesman, and the legislator, was also a writer. His proclamations have a fervid eloquence, and his letters, and his memoirs dictated at St. Helena, have force, conciseness and clearness. The great authors of his time, however, were opposed to him, such as Joseph de Maistre, a passionate and strong political writer; Xavier de Maistre, who wrote charming and simple novelettes; and Mme. de Staël and Chateaubriand. The latter is one of the greatest writers of France, and is said to have "renovated French imagination." His descriptions of nature are splendid, and his style is wonderfully poetic. His principal works are *The Genius of Christianity*, with the charming episodes *Atala* and *René, The Martyrs, The Natchez* and *Memories from beyond the Tomb.*

The French Romantic School.—Chateaubriand exerted an immense influence on the writers of the Romantic school, although it was Mme. de Staël who, in her celebrated work, *Germany*, had explained the meaning of the word *romantic*, saying that it was chivalric literature, as opposed to the classic or ancient, and indigenous to France. *Delphine* and *Corinne*, Mme. de Staël's novels, are now little read, but her work on *Literature* has merit. She had more depth of thought than Chateaubriand, and her influence on the Romantic school was very great.

Béranger was the most popular song writer; Casimir Delavigne wrote patriotic odes, and tragedies and comedies of some merit, which are a compromise between classicism and romanticism. The greatest poet, however, of the early part of the century was Alphonse de Lamartine (1790-1869). With him poetry is wholly subjective, and his lyrics and elegies are of the highest order. He wrote the *Poetic Meditations* and the *Poetic Harmonies* and two long poems *Jocelyn* and the *Fall of an Angel*. He was also an admirable prose writer in his *Confidences*, *Raphael*, and *History of the Girondists*.

Victor Hugo (1802-1885) was the most powerful poet of the nineteenth century. He is one of the greatest lyric poets and the greatest epic poet in French literature. His collections of poems comprise the *Odes and Ballads*, the *Orientals*, the *Leaves of Autumn*, the *Songs of Twilight*, the *Interior Voices*, the *Beams and Shadows*, the *Chastisements*, the *Contemplations*, the *Legend of the Centuries* (admirable epics), the *Terrible Year*, the *Art of being a Grandfather*. As a dramatist Hugo gave the manifesto of the Romantic school in the preface of his *Cromwell* (1827). He then produced *Hernani*, *Ruy Blas*, and other dramas which are more lyric than dramatic, but which have considerable force. As a novelist Hugo is best known by his *Notre Dame de Paris* and his *Misérables*.

The two greatest poets of the century after Lamartine and Hugo are Alfred de Vigny (1797-1863) and Alfred de Musset (1810-1857). They were both also distinguished prose writers and dramatists. Musset especially wrote charming comedies, and a powerful drama, *Lorenzaccico*. His *Nights* are unsurpassed in any literature. Théophile Gautier was a disciple of Hugo and a great admirer of form, of art in poetry. He wrote also many novels.

The Parnassian school succeeded the Romantic, and its chief poets were Leconte de Lisle, Sully Prudhomme, and Francois Coppée, who was also a dramatist. Other dramatists were Alexandre Dumas, better known as a novelist; Scribe, Emile Augier, Eugéne Labiehe, Alexandre Dumas fils, Victorien Sardou, Meilhac and Halévy, Henri de Bornier, and Pailleron.

Novelists.—We may mention Benjamin Constant, Beyle (Stendahl), Prosper Mérimée, a master of prose; George Sand, the greatest woman writer of the century after Mme. de Staël; Honoré de Balzac, the most powerful novelist in French literature; Jules Sandeau, Eugene Sue, Edmond and Jules de Goncourt, Henri Murger; Flaubert, almost perfect in style; Guy de Maupassant, whose short stories are masterpieces; Emile Zola, of the naturalist school, coarse but forceful; Alphonse Daudet, considered by many critics as great as Balzac and Flaubert; Julien Viaud (Pierre Loti), whose descriptive and subjective force are of the highest; Octave Feuillet, Jules Verne, author of wonderful and interesting stories, and Edmond About.

Sainte-Beuve is the master critic of French literature. After him we may mention Sarcey, and Brunetière; and Jules Lemaitre, Emile Faguet, René Doumic, Gustave Lanson, and Georges Pellissier, who are still living. The philologists are Gaston Paris, Paul Meyer, Joseph Bédier and Emile Lefranc. The religious writers are Lamennais and Lacordaire. The philosophers are Cousin, Auguste Conte and Janet. Littré was a great lexicographer; Renan, an admirable prose writer whose works deal principally with Biblical history. The principal historians of the nineteenth century were Augustin Thierry, Francois Guizot, Adolphe Thiers, Mignet, de Barante, Michelet, Henri Martin, de Tocqueville, Quinet, Victor Duruy, Taine, the duke d'Aumale, and Albert Sorel. Among the living historians are Frédéric Masson, Gabriel Hanotaux, Pierre de la Gorce, Albert Vandal, Henri Houssaye, and Emile Lavisse. After the Parnassian school there were the Symbolists, of whom the chiefs are Paul Verlaine, and Henri de Régnier. Heredia wrote admirable sonnets, and Baudelaire strong and weird poems inspired by Edgar Allen Poe.

Contemporary Writers.—The principal of these, besides those already mentioned, are novelists: Anatole France, René Bazin, Paul Bourget, Maurice Barrès, Melchior de Vogué, Paul and Victor Margueritte, Paul Hervieu, Marcel Prévost, Edouard Rod, Maurice Maindron and Mme. Marcelle Tinayre; poets: Théodore de Banville, Jean Richepin, Gabriel Vicaire, Maurice Bouchor, Auguste Dorchain, André Rivoire, Jean Aicard, Fernand Gregh, Viellé-Griffin (an American by birth), Catulle Mendès, and two poetesses, Mme. de Noailles, and Mme. Henri de Régnier, (Gérard d'Houville); dramatists: Henry Becque, Francois de Curel, Henri Lavedan, Maurice Donnay, Alfred Capus, Abel Hermant, Jules Renard, Robert de Flers and A. de Caillavet, Richepin, Paul Hervieu, Henry Bataille, Octave Mirbeau, Henry Bernstein, Georges de Porto-Riche, Tristan Bernard, and Eugène Brieux. The most widely known of the French dramatists is Edmond Rostand, whose *Cyrano de Bergerac*, *l'Aiglon*, and *Chantecler* are written in admirable verse.

French literature may be compared with the greatest in the history of the world; it is marked by wonderful clearness, by a constant regard for the æsthetic, and it is the most sociable of all literatures.

GERMAN LITERATURE.—German literature falls into three periods. First, from the earliest times to the beginning of the Reformation, 1517*; second, from 1517 to 1700, including the Reformation and the Thirty Year's war; third, the eighteenth and nineteenth centuries.

First Period.—The Gothic Bible, the earliest monument in Germanic speech, was translated by Ulfilas (or Wulfila) Bishop of the Visigoths, and formed the basis of Arian Christianity for two centuries. The *Lay of Hildebrand*, *Wessobrunn Prayer*, *Muspilli*, and *Merseburg Charms*, all in the old Germanic alliterative verse, are survivals of the time of Charles the Great. The *Heliand* is an alliterative epic in Old Saxon speech, treating the Gospel account of the Life of Christ. Orfrid's *Gospel Book* (*Krist*) is a poetic version of the Life of Christ, and like the *Heliand* doubtless intended to supplant the old heathen epic. *Waltharius* is a short epic in Latin hexameters describing the adventures of Waltharius of Aquitania and Hildegund of Burgundy as hostages at the Court of Attila.

Rothswitha, a nun of Gandersheim, wrote six dramas in Latin in the Christian spirit of her time, to take the place of the pagan plays of Terence. *Ruodlieb* is a Latin epic with novelistic features, describing the life of the time. Willeram, abbot of Ebersberg in Bavaria, translated the *Song of Solomon* into German. Ezzo, a scholastic of Bamberg, wrote the *Lay of Ezzo* to be sung possibly on the last great pilgrimage to the Holy Sepulchre before the Crusades.

The *Lay of the Nibelungs*, dating in its present form from about 1200, probably took the extended epic form in the epic period of the middle of the twelfth century. The epic is a fusion of the legend of Sigfried, the overthrow of the Burgundians by the Huns, and later events from the life of Theoderic of Verona, and Bishop Pilgrim of Passau.

The *Gudrun* epic dates in its present form from about 1215, but originated probably much earlier. It combines a number of Northern Sea legends, belonging probably to the cycle to which Beowulf is related, and presents a graphic picture of the life of northern sea rovers, or early Vikings.

The *Minnesong* appears soon after 1150 in Germany. It is in part a survival of the earlier German love lyric (Winileod) and in part borrowed from the love poetry of the Provence, just as the court epic in Germany is derived from Romanic sources.

Wolfram von Eschenbach, minnesinger and epic poet, although unable to read and write, was a close observer of nature. His master poem is the epic *Parzival* based on the *Perceval le Galloys* of Crestien de Troyes, and a Provencal minstrel, Kyot, otherwise unknown. Wolfram's *Parzival* is a psychological epic treating the story of the spotless Percival, the Count of the Grail. It is best known in the form of Wagner's great opera of the same name.

Gottfried von Strassburg known chiefly through his works, was not of noble origin, but versed in Latin and French. His great work is the court epic *Tristan*, based upon the lost *Tristan* of "Thomas von Britanje." It is not mystic, like *Parzival*, but naturalistic, breathing the spirit of French poetry. *Tristan* is familiar in Wagner's opera "*Tristan und Isolde*." Gottfried was the master poet of passion.

Walther von der Vogelweide is the master of the German *Minnesong*. He sang in the Bavarian Austrian dialect at the court of Duke Leopold V. in Vienna, of Duke Phillip of Suabia, of Emperor Otto IV., and the Landgrave Hermann of Thuringia. Walther was national in his song, singing of winter and spring, praising German woman, and championing church and Emperor.

Master Eckhart, the first of the Mystics studied in Paris and preached in Strassburg and Cologne. His sermons set forth the mystical relations of the soul to God, and God's oneness with nature. Suso, a Swiss mystic, represents the imaginative, poetic side of mysticism. Tauler, the great preacher of Strassburg, was the

*This period is also frequently divided into: (1) Old German period, 800-1100; Middle German period, 1100-1400.

practical exponent of the mystical movement and the forerunner of Luther. The Mystics gave us the first complete German Bible, translated from the Vulgate and printed in Strassburg in 1466.

The period from 1300-1500 gave rise to the popular ballad, Passion Play, Shrove Tuesday Play and to popular prose literature.

The rise of Humanism in Germany was represented by Wimpheling, Celtes, Pirkheimer, and particularly by Erasmus of Rotterdam and Reuchlin of Pfortzheim, and prepared the way for the Reformation.

Second Period.—Martin Luther, the reformer, joined the fervor of Mysticism with the learning of Humanism, and posted his theses against indulgences on the door of the Castle Church of Wittenberg in 1517, inaugurating the Reformation. This protest was followed by the *Address to the Nobility of the German Nation, The Babylonian Captivity of the Church, The Liberty of the Christian*, the translation of the New Testament (1522) and of the entire Bible (1534). In his translation of the Bible, Luther laid the foundation of the German literary speech of today.

Ulrich von Hutten, a knight of Franconia, Humanist and soldier, supported the reform of Luther with pen and sword. Melanchthon, the Hellenist and colleague of Luther at Wittenberg, reformed the instruction in the German schools, turning Humanism to the service of the Reformation. Murner, a Franciscan monk of Strassburg, wrote a history, *Germania Nova* (1502), satires, and made himself famous by attacking Luther in his bitter pro-Catholic satire *On The Great Lutheran Fool* (1522).

Hans Sachs, the cobbler Mastersinger of Nuremberg, developed the Shrove Tuesday Play, cultivated by Hans Rosenplüt and Hans Folz, writing 427 Master songs and 1773 other poems in doggerel rhyme, reflecting the learning of the time. He heralded Luther and the Reformation in *The Nightingale of Wittenberg* (1523).

Johann Fischart, the satirist, was the pupil of Caspar Scheidt, who translated the Latin *Grobianus* of Dedekind into German. Fischart defended the Reformation and achieved fame by *The Fortunate Ship of Zurich* (1577), treating the friendship between the cities of Zurich and Strassburg.

Toward the end of the sixteenth century English comedians introduced English plays into Germany. Jacob Ayer, under the influence of the English comedians, constructed a new German drama, based on the art of Hans Sachs. He wrote 66 plays (*Opus Theatricum*) and popularized the operetta.

Martin Opitz, a Silesian, edited the *Lay of Anno*, translated Seneca and Sophocles, and Rinuccini's *Dafne* the first Italian opera, Sidney's *Arcadia*, wrote the pastoral *Hercine* (1630) and *Poems of Consolation* (1633), which were published by Zincgref.

Simon Dach, of Koenigsberg, and Paul Fleming, the Saxon, cultivated the poetry of occasion. Fredrich von Spee and Johann Scheffler were exponents of the Catholic religious lyric. Moscherosch, of Spanish extraction, wrote *History of Philander Mannerwood* (1642-43) in imitation of the *Visions* of Quevedo. Logau, the great epigrammatist, wrote *Three Thousand German epigrams* (1654). Paul Gerhardt, the great preacher, was the hymn writer of the Lutheran church, and like Luther modeled his hymns on the popular ballads. His *Spiritual Songs* appeared in 1667.

Jacob Boehme, the shoemaker philosopher of Goerlitz, revived mysticism in a new form in his *Aurora* (1612), Scheffler continued it in his *Holy Joy of the Soul* (1657), later entitled *The Cherubimic Wanderer*, thus becoming the founder of the mystical theosophy of that century.

Andreas Gryphius of Glogau, the German Shakespeare of the seventeenth century, wrote under the influence of the Dutch poets Hooft and Vondel, of the Italians, of the English drama, employing in his tragedies five acts and the Alexandrine verse. His best known tragedies are *Leo Armenius* (1646), *Cardenio and Celinde*, and *Carolus Stuardus;* his chief comedy is *Herr Peter Squenz*, modeled on the *Midsummer Night's Dream*.

Hoffmannswaldau and Caspar V. Lohenstein are the chief representatives of the Second Silesian School which, borrowed the euphuistic style of Marino from Italy. Hoffmann is best known for his *Heroides* (1680), and Lohenstein for his novel *Magnanimous Arminius* (1689-90), Philip von Zesen wrote novels also in the euphuistic style, the most important being *The Adriatic Rosamund* (1645).

Grimmelshausen was the most important novelist of the period, and wrote under the influence of the Spanish the first great rogue novel in German literature, *The Adventurous Simplicissimus* (1669), dealing with the vicissitudes of the Thirty Years' War.

Christian Weise, the schoolmaster poet of Zittau, wrote novels and plays, the latter after the manner of the Latin school dramas, notably *The Peasant Machiavellus*. Weise marked an advance by introducing fresh characters from the life about him and employing an unstilted style.

Leibnitz, the first great scientific German philosopher of the modern type, sought to reconcile spirit and matter and to counteract Descartes' doctrine of dualism in nature. His chief works are the *Theodicy* in French, dealing with the goodness of God, the liberty of man, and the origin of evil, and the *Monadology*, setting forth his theory of monads or atoms.

Third Period.—Wolff was the modern scholastic, who popularized philosophy and brought Rationalism to bear upon theology.

Brockes, as poet, likewise tried to reconcile the new rationalistic philosophy of nature with religion by setting forth the religious charms of nature in his *Earthly Pleasure in Got*. Guenther was a lyric poet of personal feeling, modeling his lyrics upon the ballad, and thus a forerunner of Goethe.

Gottsched, for twenty years literary dictator in Leipzig, sought to reform the German drama on the model of the French, but insisted upon historic costume, and banished the clown from tragedy. His *Critical Art of Poesy* (1730) set up new standards of poetry, and his *German Stage* (1740-45) furnished a repertoire of German plays. His theory that the poet's imagination must be subordinated to the understanding brought about a literary feud between him and the Swiss poet Bodmer, and finally wrought his downfall.

Hagedorn the greatest of the German anacreontic poets, spent three years as secretary to the Danish embassy in London and wrote lyrics after the manner of Horace and Anacreon and fables in the style of Lafontaine.

Haller, the great Swiss anatomist and physiologist, like Hagedorn, came under the influence of Thompson and other English poets, and wrote among other things *The Alps*, describing the mountains in the spirit of the English nature poetry.

Gellert was professor of philosophy at the University of Leipzig, and a poet of the people. He wrote comedies and under the influence of Richardson's *Pamela*, produced the first social novel in Germany, entitled the *Swedish Countess of G.* (1747-48). Gellert was also a great stylist and letter writer, as may be seen in his *Letters* (1757), to which was appended a practical essay on epistolary style.

Kleist, a Prussian military officer, came under the influence of Thompson's *Seasons* and wrote *Spring* (1749). He later went to Leipzig and wrote under the influence of Klopstock and Lessing his *Ode to the Prussian Army* (1757).

Winckelmann, a poor shoemaker's son, opened a new epoch in the history of art by his *History of Antique Art* (1774), which marks the beginning of modern archeology as a branch of science. He was assassinated in Trieste, in 1778, in the midst of his studies.

Gleim, known as Father Gleim, published *Prussian War Songs by a Grenadier* (1768) and imitated the fables of Gellert and the minnesingers.

Klopstock, having come under the influence of Milton's *Paradise Lost*, wrote his great epic *Messias*. The *Messias* is much more than an imitation of *Paradise Lost*. The narrative begins with Christ's ascent of the Mount of Olives and is interspersed with lofty descriptions of awe-inspiring nature. The entire epic contains 20,000 verses in twenty cantos, of which the first three cantos are the best. Klopstock was also a great lyric poet.

Gessner, a native of Zurich, came to Berlin as a bookseller. He began his literary career by writing Anacreontic verses, but turned to prose, and wrote his famous *Idyls* (1756) in that form; he wrote also the pastoral romance *Daphnis* and the *Death of Abel* (1758). He has been called the Swiss Theocritus.

Lessing, the greatest critic of Germany, was a native of Oberlausitz, and studied first theology and then medicine. He was editor, critic, and dramatist all in one. He cleared away the confusions of Gottsched, turned the minds of the Germans from the French stage to Shakespeare and German folk-drama, by publishing his *Literary Letters* (1759), introduced the English comedy of common life in *Miss Sara Sampson* (1755), founded a new criticism of art in his *Laocoon* (1766), gave to the Germans a new ideal of domestic comedy in his *Minna von Barnhelm* (1767), laid down new rules for the German stage in his *Hamburg Dramaturgy* (1767-68); presented a new type of national German tragedy in *Emilia Galotti* (1772), and preached his imperishable evangel of brotherhood and religious toleration in *Nathan the Wise* (1779).

Wieland began his literary career as a pietist under the influence of Richardson and Klopstock, but under the patronage of Count von Stadion, came under the influence of the French, Italian and English poets, translating Shakespeare into German. Wieland is best known as author of the novels *Don Sylvio of Rosalva* (1764), describing his own transition from pietism to nature poetry; *Agathon* (1766-67), giving his views of the antique, the *Abderites* (1774), a satire of his own times; *Aristipus* (1800-02), a didactic novel. He wrote also a metrical romance *Oberon* (1780), treating of the adventures of Huon of Bordeaux.

Kant, the greatest German philosopher, was professor at the University of his native city of Koenigsberg. He published the *Critique of Pure Reason* (1781) substituting critical philosophy for the old dogmatic metaphysics; *Critique of Practical Reason,* setting forth the categorical imperative, demanding obedience to the moral law (1788); and *Critique of the Judgment* (1790) laying the foundations of modern æsthetics. Kant was the founder of the Transcendental philosophy.

Herder was the chief factor in the literary revolution known as Storm and Stress. His most important works are his *Fragments* (1767), supplementing Lessing's *Literary Letters; Sylvan Essays* (1769), *Folk Songs* (1778-79), collected and translated from various languages, and *Ideas on the Philosophy of the History of Man* (1784-91), setting forth the evolution of human institutions.

Bürger was a poet with an unhappy affinity for his wife's sister, who appears as Molly in his songs. He introduced the ballad into German literature, under the stimulus of Percy's *Reliques.* His greatest ballad, *Lenore,* dealing with an episode in the Thirty Years' War, was extensively translated, particularly into English.

Goethe, the greatest German poet, wrote Anacreontic lyrics to Kätchen in Leipzig, imitated Shakespeare, Ossian, Goldsmith and the ballad poetry in Strassburg, sang odes in the manner of Theocritus, Pindar and Klopstock in Frankfurt, lived the story of *Werther* with Lotte in Wetzlar, under the spell of Frau von Stein approached the antique, and as a result of his Italian journey, created a new German classicism in *Iphegenie, Tasso, the Roman Elegies, Venetian Epigrams, and Hermann and Dorothea.* With Schiller he returned to the ballad, and after Schiller's death wrote sonnets to Minna Herzlieb, and during the war with Napoleon wrote his *Divan* in the oriental manner. His life poem was *Faust,* begun in the '70s and finished just before his death, based upon the doctrine of redemption by ceaseless striving, and typifying the philosophical struggle of the poet's own life.

Voss, the chief of the Göttingen School of poets, translated the *Odyssey* and *Iliad* and plays of Shakespeare, wrote his *Idyls* after the manner of Theocritus, portraying in classic form German rural life of his time. The best known of his *Idyls* is *Luise* which served as a model for Goethe's *Idyls,* particularly for *Hermann and Dorothea.*

Schiller, born at Marbach, wrote *The Robbers* (1781) a drama full of "Storm and Stress," strongly influenced by Shakespeare; *Cabal and Love* a tragedy of common life, scoring the extravagances of the Court; *Don Carlos,* finished 1787, an anticipation of the spirit of the French Revolution; *The Gods of Greece,* 1788, and other poems under the influence of the Weimar poets; formed a new æsthetic method from Kant's philosophy, came into personal touch with Goethe, and as professor at Weimar, wrote his *History of the Thirty Years' War.* He closed his career at Weimar, writing *Wallenstein* (1788-9), *Maria Stuart* (1800), *Maid of Orleans,* a romantic tragedy (1801), *The Bride of Messina* (1803), reviving the antique chorus, and *William Tell* (1804), dramatizing the hero of Swiss liberty.

Kotzebue, born at Weimar, had a life full of vicissitudes, and wrote many plays, of which *Hate and Remorse* (1789) was the most popular drama of the time throughout Europe and America. Among his other well-known plays were *The Indians in England* (1789), *The Spaniard in Peru* (1795) and *The German Villagers* (1803).

Fichte, the great disciple of Kant, was preëminently the philosopher of the Romantic school and the exponent of the philosophy of individualism, based upon his doctrine of the Ego. His great literary work was his *Addresses to the German Nation* (1808), which aroused the German national consciousness and revolt against Napoleon. He was the first Rector of the University of Berlin.

Richter, or "Jean Paul," united elements of the storm and stress with Fichte's subjective idealism, and has well been called "The Unique." Among his works are *Hesperus* (1795), representing the idealist in conflict with real life, *Siebenkäs* (1796-7), portraying a sensitive, poetic soul in conflict with his practical wife; *Titan,* a "problematical character" of the "storm and stress" type; *Wild Oats* (1804-5), *Æsthetics* (1804), and *Levana,* a treatise on education (1807).

Wilhelm von Humboldt and his brother Alexander were great scientists and travelers. Wilhelm, virtual founder of the University of Berlin, was a great classical scholar, translated *Agamemnon* and wrote æsthetic criticisms of Goethe's *Hermann and Dorothea.* Alexander wrote the great philosophic masterpiece *Cosmos.*

A. W. Schlegel, the great critic of the Romantic school, gave to the Germans their classical translation of Shakespeare (1797-1810), and his famous lectures on *Dramatic Art and Literature,* 1809-11.

Werner was, next to Tieck, the greatest dramatist of the Romantic school. His best plays are *Martin Luther* (1807), and his fate drama *The Twenty-Fourth of February* (1810). He wrote sonnets also.

Schleiermacher, the preacher of the Romantic school, was famous for his *Addresses on Religion* (1799), his *Monologues* (1800), and his *Letters* on F. Schlegel's *Lucinde.*

Hegel, the philosopher of collectivism and of evolution in history, is best known for his *Phenomonology* (1807) and his *Philosophy of Law* (1820).

Hölderlin was devoted to the antique and wrote *Hyperion, or the Hermit in Greece* (1797-99), the story of a young Greek in the struggle against the Turks in 1770, and also excellent lyrics.

Zschokke is the author of *Aballino, the Great Bandit* (1794), a novel in the spirit of storm and stress.

Novalis is the sentimental poet of the Romantic school, and wrote *Hymns to Night* (1800), expressing his grief for his lost bride, and *Henry of Ofterdingen,* a novel representing the poet in quest of the Blue Flower.

Friedrich Schlegel was both critic and poet and wrote the greatest novel of the Romantic school, entitled *Lucinde,* dealing with the limitations of conventional society.

Tieck, the most prolific writer of the Romantic school, wrote *William Lovell* (1795-6), a romance influenced by Wieland; *Puss in Boots* (1797), a play satirizing German writers; *Phantasies on Art* (1799), furnishing a kind of Romantic æsthetics; *Franz Sternbald's Wanderings* (1798), the story of a pupil of Albrecht Duerer, and a number of fairy stories and plays.

Schelling, as disciple of Spinoza, taught the identity of spirit and nature, and published *Philosophy of Nature* (1797), *The World Soul* (1798), and *System of Transcendental Idealism* (1800).

Hoffmann, a later Romanticist, wrote the *Elixirs of the Devil* (1815), a tale of terror in the manner of Lewis' *Monk; Tomcat Moor* (1821-22), a fantastical romance, full of humor and satire.

H. von Kleist, poet of a tragic life, is best known as dramatist. He wrote *The Family Schroffenstein* (1803), dealing with his own doubts as to destiny and Providence; *Penthesilea* (1808), dealing with the classic theme of Achilles and the queen of the Amazons; *Kätchen of Heilbronn* (1810), an echo of Goethe's *Goetz,* professing to be historical; *The Battle of Hermann,* the conflict between Varus and Arminius, breathing the German patriotism of 1808; *The Prince of Homburg* (1810), a historical drama.

Fouqué, later Romanticist, is popularly known for his *Undine* (1811), the story of a water sprite without a soul. Brentano wrote *Godwi,* a novel, but is best known for his work on *The Boy's Wonder Horn,* a collection of German ballads, and particularly for his ballad, *The Lorelei.* Arnim, like Brentano, a Heidelberg Romanticist wrote a novel entitled *Countess Dolores,* and assisted with the *Wonder Horn.* Chamisso, a later Romantic lyrist, wrote ballads and *Peter Schlemihl's Strange History,* the story of a man who sells his shadow, and finds his way through the world with seven-league boots, a romantic treatment of the poet's own life.

J. Grimm, with his brother founder of modern German philology, and compiler of the great German Dictionary, is known in literature for his *Fairy Tales.* Boerne, a Jew from the Frankfurt ghetto, is famous as the author of *Letters from Paris* (1830-33), written in the interest of Young Germany. Kerner, lyric poet and Romantic mystic, wrote *The Soothsayer of Prevorst,* a collection of mysterious sayings and doings. Uhland, a Tübingen poet of Romantic type, wrote ballads, historical plays, *Duke Ernst of Suabia* (1818) and *Ludwig the Bavarian* (1819) and patriotic poems and treatises on German legends. Etchendorff, later Romanticist, wrote lyric poems *Wanderlieder,* and a novel entitled *The Life of a Good-for-nothing* (1826), describing the wanderings of a fiddler, who falls in love with a countess, and passes as a highwayman.

Schopenhauer, the philosopher of pessimism, left a deep impression by *The World as Will and Idea* (1819).

Rückert, a poet of the War of Liberation, wrote *Sonnets in Armor* (1814), actually written in 1812, breathing revolt against Napoleon. Koerner, the hero-poet who fell in Lützow's corps in the War of Liberation, immortalized his poetic gift in his *Lyre and Sword,* a collection of patriotic lyrics.

Grillparzer, born in Vienna, the greatest Austrian dramatist, wrote the *Ancestress* (1817), a tragedy closely akin to the fate drama of Werner and Müllner; *Sapho* (1818), modeled on Goethe's *Iphegenie* and *Tasso,* treating Sappho's renunciation of Phaon, because he is in love with Sappho's slave Melitta, a drama in classic style; *The Golden Fleece* (1820), a trilogy in imitation of the antique, consisting of three plays, *The Guest, The Argonauts* and *Medea;* a series of historical dramas including *King Ottokar's Rise and Fall* (1825), covering Ottokar's struggle against the Hapsburgs, typifying Napoleon; and *A Faithful Vassal of His Lord* (1828), magnifying the duty of self-effacement in the spirit

of Kant's *Ethics*. Among other plays of Grillparzer are *The Waves of the Sea and of Love*, dramatizing the story of Hero and Leander, and *Life a Dream*, after the manner of the Spanish drama.

W. Müller, the Romantic singer of Greek independence, is best known as the author of *Songs of the Greeks* (1821-24), full of sentimental patriotism for the Hellenic Cause. Platen-Hallermünde, a Romantic poet and master among the German sonnetists, wrote *Venetian Sonnets* and the drama *The Fateful Fork*, which ridiculed the fate tragedy of the time. Immermann, a later Romantic poet, wrote tragedies, but is best known as the author of *The Epigons* (1836), foreshadowing the tragedy of his own life, and *Munchhausen*, a novel distinguished for its description of Westphalian peasant life; the most original of Immermann's works.

Heine, the greatest lyric poet after Goethe, was strongly imbued with Romanticism, and is best known as the author of *The Journey to the Harz Mountains* (1826), *Book of Songs* (1827), *Atta Troll*, the story of a dancing bear in a Pyronese village, "the last Wood Song of Romanticism," and his *North Sea Pictures*, written in free rhythms.

Häring, one of the first German imitators of Walter Scott, wrote a series of patriotic novels treating of the history of Brandenburg; *Roland of Berlin*, treating of the struggle of the Hohenzollerns with the Brandenburg burghers of the fifteenth century, *Waldemar the Faithless*, dealing with the fourteenth century; *The Breeches of Sir Bredow* (1846-48), a romance of the Reformation; *Order is the Burgher's First Duty* (1852), a story of the French invasion before the battle of Jena; *Isegrimm* (1852) and *Dorothe* (1856).

Fallersleben, philologist and poet, best known for his lyrics in the style of the ballad. Grabbe, the pessimistic dramatist, wrote among other plays *Don Juan and Faust* (1829) under the influence of Goethe and Mozart; *Emperor Frederick Barbarossa* (1829) and *Emperor Henry VI.* (1830), tragedies of the Hohenstauffen; *Napoleon* (1831); *Hannibal* (1835) and *The Battle of Hermann* (1838). Hauff, an imitator of Scott, wrote *Lichtenstein* (1826), a story of Würtemberg in the sixteenth century; *Communications from the Memoirs of Satan* (1826-27), and *Phantasies in the Bremen Ratskeller* (1827). Mörike, is best known as lyric poet in his collections *Peregrina* (1824), *The Abandoned Maid* (1829), *The Soldiers' Bride* (1837), and his *Fairy Tales*, and *Idyl of the Lake of Constance*.

Laube, a poet of the Young German school, wrote *Young Europe* (1833-37), one of a series of novels of purpose in the spirit of the school; *The German War* (1865-66), a story dealing with the Thirty Years' War, and a number of plays, among them *The Pupils of the Karl School*, with Schiller as hero, and *Count Essex* (1856), with Queen Elizabeth as heroine.

Reuter, a Mecklenburg poet, wrote in the dialect of Platt Deutsch short stories and novels. His chief works are *From the Time of the French Occupation* (1860), *From my Prison Days* (1863), *From my Farmer Days* (1862-64). Freiligrath, the poet of the Revolution, the author of *A Confession of Faith*, political in character; *Ca ira* (1846), and *New Political and Social Poems* (1849-50). Gutzkow, a poet of the Young German school, wrote also *The Doubting Wally*, a novel in the spirit of Strauss' *Life of Jesus; The Knights of the Spirit* (1850), combating the misuses of political power; and dramas *Queue and Sword* (1843), a historical comedy; *The King's Lieutenant* (1849), dramatizing an episode in Goethe's life, and *Uriel Acosta* (1847), a plea for freedom of thought.

Auerbach, the poet of the Suabian Black Forest, wrote *Village Tales of the Black Forest* (1843-54), and the novels *On The Heights* (1865) and *A Country House on the Rhine* (1869), the latter dealing with an episode of the Civil War in America.

Hebbel wrote *Judith* (1840), a drama in the spirit of the storm and stress; *Maria Magdelena* (1846); *Agnes Bernauer* (1852), a metrical historical drama; *Gyges and his Ring* (1856), considered his master drama; and *The Niebelungs*, a trilogy after the manner of *Wallenstein*. Geibel, a lyric poet, wrote *Poems* (1840) and *Voices of the Time*, treating political events in a conciliatory spirit.

Freytag began as dramatist with *The Bridal Journey* (1841), and *The Journalists* (1852), one of the best modern German comedies, but is best known as novelist. His best novels are *Debit and Credit* (1855), setting forth the virtues of the German merchant class as contrasted with the nobility, and *The Ancestors*, a cycle of the greatest modern German novels, awakening the national consciousness of the German people.

Keller, Swiss poet, wrote *Green Henry* (1854-55), a novel treating his own life, and *The Folk of Seldwyla* (1856), and short stories dealing with Swiss life. C. F. Meyer, one of the best novelists of the last century, wrote among other things, *The Saint* (1880), a novel on Thomas à Becket; *The Amulet*, dealing with the massacre of St. Bartholomew; and *The Page of Gustavus Adolphus*, a charming story of the Thirty Years' War. Spielhagen, the novelist of German social conditions, wrote *Problematic Characters* (1860), taking his theme from Goethe; *In Rank and File* (1866), and *Hammer and Anvil* (1869), two novels attempting to reconcile the clash of the classes.

Scheffel, a late successor of Walter Scott, wrote *The Trumpeter of Säkkingen*, an epic in the Romantic spirit; *Ekkehard* (1857), one of the greatest German historical novels, with the author of the *Waltharius Lay* as its hero and Hedwig, duchess of Suabia, as heroine, giving a splendid picture of German life in the tenth century.

Heyse, long the central figure of the Munich school of poets, wrote short stories portraying Italian peasant life, and novels: *Children of the World* (1873), a novel treating the conflict between the children of the world and the children of God; *In Paradise*, describing artist life in Munich; and *Merlin*, and *Above the Tree-tops*, directed against the modern school of poets.

Marie Von Ebner-Eschenbach, the most venerable among the women writers of Germany, is well known as the author of *Village and Castle Tales*, and *The Child of the Community*. Dahn, noted as historian and historical novelist, is the author of *A Struggle for Rome*, dealing with the conflict between Goths and Romans for the mastery of the Eternal City. Ebers, the Egyptologist, wrote *An Egyptian Princess*, *Uarda*, and other novels dealing with Egyptian life.

Nietzsche, a disciple of Schopenhauer, wrote *The Birth of Tragedy* (1872), directed against philological methods of criticism, and *Thus Spake Zarathustra*, his greatest book in prose, which has left an indelible impression on the literature of his time.

Liliencron, a native of Kiel, wrote *Adjutant Rides* and other poems (1883).

Wildenbruch, the greatest contemporary historical dramatist wrote the *Carolingians* (1881), and *The Quitzows*, both dealing with Prussian history; *Henry and Henry's House*, dealing with Emperor Henry IV.; and other important historical plays.

Sudermann, poet and dramatist of the modern school of Berlin, has written both novels and plays. His most important novel is *Dame Care* (1887), reflecting the struggles of the author's own life. His best dramas in the naturalistic vein are *Honor* (1889), distinguishing between empty convention and the virtue honor itself; *Home* (*Magda*), suggested perhaps by the author's own outgrowth of his home conditions, is a graphic portrayal of the contrast between the life of the stage artist and the rigorous patriarchal régime of the German home; *Long Live Life* (Joy of Living) (1902), a drama of social life, suggested probably by the French drama, *The Joy of Living*.

Hauptmann, likewise a poet of the Naturalistic school, has written among other plays, *Before Sunrise* (1889), dealing with alchoholism; *The Weavers* (1892), originally written in the poet's Silesian dialect and treating the uprising of the Silesian weavers in 1844; *Hannele's Ascent to Heaven*, a blending of Naturalistic and Romantic elements, and *The Sunken Bell* (1897), a symbolistic drama reflecting the influence of Böcklin, Germany's great modern painter. The bell founder, the hero of the play, is tempted away from his wife and home by the elf Rautenlein, to found his bell up in the mountain away from care; but the bell is hurled into the lake at the climax of a family tragedy.

SPANISH LITERATURE.—The Latin language was early carried to the Spanish Peninsula; in fact several of the well-known Latin writers were in reality Spaniards, namely, Seneca, Lucan, Martial, Quintillian, and the Christian poet, Prudentius. From the Latin tongue is descended the present Spanish or Castilian language, one of the most sonorous and beautiful in the world.

For the purposes of this brief sketch Spanish literature may be divided into three periods: (1) The earlier period, extending to the birth of Cervantes; (2) the Golden Age, from Cervantes to Calderon inclusive; (3) the modern period, including the last two centuries.

The Earlier Period.—Much of the earlier Spanish literature, as indeed much of the mediæval European literature in general, was devoid of imagination and possessed of little permanent value. Passing over the poetry of Juan Lorenzo Sequra and of Gonzalo de Berceo of the twelfth century, we may mention briefly the *Poema del Cid*, the first great monument of Spanish poetry.

The Poem of the Cid is to Spain what the *Song of Roland* is to France, what the *Song of the Nibelungs* is to Germany, what in a way the *Beowulf* is to England. Written in a crude age the poem depicts in rugged Homeric simplicity and vividness the life and manners of that chivalrous but turbulent age. The poem is epic in form and spirit, setting forth the great undertakings and mighty achievements of the early national hero of Spain, Ruy Diaz de Bivar, known in story as the Cid. In the imperfect form in which we have

the poem it is about equal in length to the *Chanson de Roland* and to the *Beowulf*.

In the fourteenth century must be mentioned the *Count Lucanor* or *Book of Examples* of Don Juan Manuel, a collection of about fifty prose tales, fables, and anecdotes, with morals in verse; and the poetry of Juan Ruiz de Hita and Lopez de Ayala.

Tedious pedantic allegory is a form of the didacticism of the fifteenth century, as exemplified in the *Labors of Hercules* by Enrique de Villena and the *Labyrinth* by Juan de Mena, the former in prose, the latter in verse.

In the sixteenth century the interest in the New World was manifested by such historical writings as Lopez de Gomara's *Chronicle of New Spain*, glorifying the deeds of Cortes, Las Casas' *Account of the Ruin of the Indies*, and Oviedo's *General and Natural History of the Indies*. The poetry of the century is best represented by Juan Boscan, Garcilaso de la Vega, Fernando Herrera, Luis Ponce de Leon, and by the epic effort of Ercilla, *La Araucana*.

Alonzo de Ercilla y Zuniga was born in Madrid in 1533, journeyed in Italy and the Netherlands, sojourned in London, and from London went to Chili to help quell an insurrection. There he endured many hardships, being at one time condemned to death and actually mounting the scaffold. The subject of his narrative poem is the expedition against Aracuo, hence the name *La Araucana*. The poem does not reach the dignity of the greatest epics; in fact it falls beneath its contemporaries in Italy and Portugal, the *Jerusalem Delivered* of Tasso and the *Lusiad* of Camoëns.

The Age of Gold.—The period which produced Cervantes, Lope de Vega, and Calderon may well be called the *Siglo de oro*.

Miguel de Cervantes Saavedra was born in 1547 and died in April, 1616, the greatest genius of Spanish literature thus passing away at nearly the same time as Shakespeare the greatest genius of English literature. His works consist of the pastoral romance *Galatea*, of numerous plays, of twelve *Exemplary Tales* including the well-known *Little Gipsy*, and of his novel *Don Quixote*. It is the latter masterpiece of humor that has put him at the head of Spanish letters and made his name a household word throughout the world. Less bitter than Swift, less gross than Rabelais, he has laughed himself into the hearts of mankind.

Next in glory after *Don Quixote* was the drama of the golden age. Under Lope de Vega, Calderon, and the lesser dramatists Spain blossomed forth with a dramatic literature more voluminous if scarcely less brilliant than that of the Elizabethan age in England. Like the Shakespearean drama it cast aside the narrow rules of Greek tragedy and assumed for itself greater liberty.

The marvelous activity of Felix Lope de Vega Carpio (1562-1635) has perhaps never been equaled in the annals of literature; he produced about two thousand two hundred plays (tragedies, comedies, histories, and *autos sacramentales*) in addition to numerous epics, lyrics, romances, and tales. He re-created Spanish drama, fixing the type for his successors. Yet great as he is, his drama is national rather than universal. Among his plays may be mentioned *The Star of Seville* (*La Estrella de Sevilla*); *Saint John's Eve; The Perfect Prince; Punishment, not Revenge; The Birth of Christ; The Return from Egypt; The Wolf Turned Shepherd.*

Other writers of drama in this age were Guillen de Castro, whose *Mocedades del Cid* (*Youth of the Cid*) inspired Corneille's great tragedy of the Cid; Tirso de Molina, who in his *Mocker of Seville* created the character of Don Juan and passed it on to Molière, Thomas Corneille, Byron, Zorilla, Mozart, and others; Ruiz de Alarcon, whose *Truth Suspected* formed the basis of Corneille's comedy *Le Menteur*; and far greater than these Calderon, who takes his place by the side of Lope de Vega and completes the glory of Spanish drama.

Pedro Calderon de la Barca (1600–1681) was born in Madrid of the old Spanish nobility, and unlike many of his literary contemporaries led a tranquil life, devoting his energies to literature and religion. He produced in all about two hundred dramas and *autos sacramentales*. The former have for their ruling passions love, jealousy, and honor; the latter are of a deeply religious nature, dealing with the mystery of the sacrament and being often extravagant and even fanatical. The very titles will give some idea of the nature of his work: *Life Is a Dream; The Conotant Prince; The Wonder-working Magician; The Physician of his Own Honor; The Painter of his Own Dishonor; No Monster Like Jealousy; Love the Greatest Enchantment; Love After Death; Devotion of the Cross; Origin, Loss, and Restoration of the Virgin of the Sanctuary; Sorceries of Sin.*

The Modern Period.—During the last two centuries Spanish literature has been largely under the influence of French literature and thought. Luzan's *Art of Poetry* (1737) did much to fasten French and other foreign ideas upon Spanish poetry. Yriarte translated some French plays and Horace's *Art of Poetry*, wrote a didactic poem on *Music* (1780), but is best remembered by his original *Literary Fables*.

The drama of the eighteenth century was at a very low ebb; perhaps the best representatives were the farces and short pieces of Ramon de la Cruz, who chose his subjects among the lower and middle classes. The best of the early nineteenth century drama is that of Leandro Fernandez de Moratin, a translator and follower of Molière. *The Young Maid's Consent* (*El Si de las Ninas*), 1806, is his most successful comedy. Further activity is shown during the nineteenth century in the drama by Zorilla, Echegaray, Nunez de Arce, and Gildos; in poetry by Quintana Esproncida, Zorilla, and Becquer; in fiction by Valera, Galdos and others.

SCANDINAVIAN LITERATURE. — The literature known as Scandinavian comprises those of Iceland, Denmark, Norway, and Sweden.

Icelandic Literature.—Icelandic literature is to the north what Greek is to the south of Europe. It may be divided into six periods as follows: (1) From the year 800 to 1100. (2) From 1100 to 1300. (3) From 1300 to 1550. (4) From 1550 to 1780. (5) From 1780 to 1830. (6) From 1830 to the present.

First Period.—The so-called Old Norse literature found its real home in Iceland. The lays of the Elder Edda had for the most part their origin in Norway, but they were put in writing and preserved in Iceland. The first important poet known by name is Egil Skallagrimsson. Hallfred Vandraedeskald became Olaf Trygvason's skald. Tormod Kolbrunarskald was attached to St. Olaf. The most famous of all the Icelandic skalds is Sigvat Thordarson, who was attached to the courts of St. Olaf and Magnus the Good.

Second Period.—The skaldic poetry which extends back into prehistoric time continued until the close of the 14th century.

The world-renowned saga or history writing begins in this period. The first saga is the history of Iceland written by Are Torgilsson, the Herodotus of Iceland. He also wrote the *Landnamabok*, which contains an account of the settlement of Iceland. Then comes the long series of family sagas. The crown of Icelandic history writing is Snorre Sturlasson's *Heimskringla* which towers above all other histories like a splendid tree over the low brushwood. It contains a history of the kings of Norway from the earliest time down to 1177.

Third Period.—Poetry is dead. It is an age of darkness, but in the midst of this darkness and literary inactivity there shines a single star, the religious poem *Lilja* (the Lily) by the monk Eystein Asgrimsson. It is a kind of messiad, written in an original meter, which from that time was called the Lily meter. It belongs to the second half of the 14th century. With Eystein the harp of the skald ceased to reverberate and *Lilia* is a dignified finale. Saga writing is also dead and its place is taken by dry annals.

Fourth Period.—Literature continued to decline throughout this period. In 1530 the first printing press was introduced by Iceland's last Catholic bishop Jon Arason. It was the purpose of this strong willed man to use the press as a weapon against the reformation, but it became the most potent agent for promoting the cause. Jon Arason was executed in 1550. The most of the literature produced during this period is of a religious character.

Fifth Period.—This is the age of enlightenment and rationalism. Its most typical representative was Magnus Stephensen. He wrote a number of works on practical and economic questions. The dean Jon Thorlaksson did great service to his country as a translator of foreign authors such as Milton, Klopstock, Baggesen and others. Benedikt Gröndal translated a large amount of English literature into Icelandic. Sveinbjörn Egilsson translated Homer and wrote an Icelandic-Latin dictionary. The chief poet of this epoch was Bjarni Thorarensen. Jon Espolin wrote the history of Iceland in twelve quarto volumes, a monument to his scholarship and industry.

Sixth Period.—With the year 1830 begins a genuine regeneration of Icelandic literature. The new birth was heralded by the periodical "Fjolnir" edited by the theologian Thomas Saemundsson, the linguist Konrad Gislason, the scientist Jonas Hallgrimsson and the jurist Brynjulf Pjetursson. The purpose of this periodical was to purify the language, elevate the literature and awaken patriotism. The program of this movement was expressed in Jonas Hallgrimsson's poem, *Island*, which depicts the decadence of the present against the background of a brilliant antiquity. Lyrical poetry predominates in modern Icelandic literature. The most prominent poets are Jon Thoroddsen, Benedikt Gröndal, Jr., Steingrimur Thorsteinsson, Mattias Jochumsson, Grimur Thomsen, Valdimar Briem, Hannes Hafstein, Jon Olafsson,

Thorstein Erlingsson and Einar Benediktsson. A few novels and stories have been written by Jon Thoroddsen, Gestur Pallsson, Jonas Jonasson, Einar Hjörleifsson, Jon Stefansson, Gudmund Magnusson and Torfhildur Holm. Conditions are not favorable in Iceland for dramatic production on account of the paucity of the population, and still attempts have been made in this field by Sigurd Pjetursson, Mattias Jochumsson and Endridi Einarson. Among writers of history in this last period we may mention Jon Sigurdsson, Thorkell Bjarnason, Gisle Konradsson, Björn Olson, Bogi Melsted, Jon Jonsson and Valtyr Gudmundsson. Finnur Jonsson and Gudbrandur Vigfusson are eminent literary critics and Jon Arnason has collected the Icelandic Folk-tales. Vilhjalmur Finsen and Pjetur Pjetursson have written valuable works on jurisprudence. Björn Gunnlaugsson is the geographer and Thorvaldur Thoroddsen the geologist of Iceland.

Danish Literature.—Danish Literature naturally divides itself into three periods. (1) The ancient or pre-christian, from the earliest times to about the year 1000. (2) The middle age, from the year 1000 to about the year 1500. (3) Modern literature, from the year 1500 down to the present.

First Period.—The bulk of what remains from the pre-christian period consists of runic inscriptions. It is however fair to presume that there must have existed a large amount of literature both in prose and in poetry, not put in writing, but handed down from generation to generation by oral tradition. In this way the knowledge of the mythology was preserved.

Second Period.—Its first half, until 1250, was a period of great literary activity, which culminated in the Valdemars. The second half of the middle age may be described as an age of decline. The national northern quality disappeared and was replaced mainly by religious books imported from abroad.

The oldest written literature excepting the runic inscriptions, is in Latin. The great promoters of literature from 1157 were Archbishop Absalon and his successor Anders Suneson. From their time we have Svend Aageson's *Compendiosa Historia Regum Daniae*, the first attempt at a connected presentation of the history of Denmark, and *Historia Danica* by Saxo Grammaticus, the greatest intellectual effort of Denmark in the middle age. Archbishop Absalon also encouraged the committing of the laws of the land to writing. These oldest law-books are in Danish. From his period we have Anders Suneson's didactic poem *Hexaemeron* and a large number of popular ballads, which may be regarded as a continuation of the old Norse popular poetry as found in the mythic and heroic songs of the *Elder Edda*. From the last part of the middle age we have the famous *Rhyme Chronicle*, a work of purely Danish origin, which describes the career of the Danish kings from Humble to Christian I. Each king relates his own story and tells not only of his life but also of his death and burial. To this may be added the *Euphemia Songs*, which owe their name to the fact that the Norwegian queen Euphemia, the wife of Haakon Magnusson introduced them in Norway about the year 1300; the *Karlamagnussaga*, an adaptation of the numerous poems belonging to the Charlemagne circle of legends; and the collection of proverbs by Peder Laale, a work in which poetry and prose, Latin and Danish are mingled together in strange fashion.

The Third Period made its appearance gradually, and the most productive of all the writers of the time of the reformation, Cristiern Pedersen belongs to the end of the middle age as well as to the beginning of the modern. He began as a Catholic and ended as a Lutheran, and to him belongs the honor of translating the bible of Christian III. (1550). From this time on Danish gains the ascendency over Latin. Names conspicuous in the time of the reformation are Peder Plade (Visitatsbog), Hans Tausen and Paul Eliesen. The end of the 16th and the whole of the 17th century produced a number of brilliant names in science, such as Tycho Brahe, Thomas Bartholin, Niels Stensen, Ole Rmer and several others. Among historians we have Anders Sörensen Vedel, who translated Saxo and became the first editor of Danish ballads, and Arild Hvitfeld. The greatest of all poets in this epoch of Danish literature was Thomas Kingo the celebrated hymn-writer.

The first half of the 18th century is called the Holberg period in Danish literature. Vigorous efforts to establish a national literature had from time to time been made in various directions and important results had been attained, but the really decisive impulse was given when Ludvig Holberg appeared. He not only cleared the ground and winnowed away a vast amount of rubbish, which had hindered the development of intellectual life, but what was of chief importance, the barriers were thrown down, which had for centuries separated the people from the learned class, and which other activities had not been able to remove, but which yielded to Holberg's powerful attacks never to rise again. The whole generation coöperated, but the first mighty impulse was given by Holberg, who is properly regarded as the father of modern Danish literature. Other writers belonging to Holberg's time are: the linguist Christian Falster, the satirist Jörgen Sorterup, the poet Ambrosius Stub, the able linguist Jens Hysgaard, the theologian, scientist and novelist Erik Pontoppidan, the learned Icelander Arne Magnusson and the historians Hans Gram, Jakob Langebek and Gerhard Schoning.

The last half of the 18th century is called the age of enlightenment. The struggle carried on throughout Europe between free thought and the old orthodoxy, and which finally led to a compromise between the contending parties under the designation of rationalism, also left traces in the Danish religious and philosophical literature of that period. One of the most prominent freethinkers was Otto Horrebov, editor of the journal "Jesus og Fornuften," while the most eminent representatives of rationalism or rational Christianity were Christian Bastholm and Tycho Rothe. The most zealous champion of orthodoxy was Bishop Nicolai Edinger Balle. Among the conspicuous writers of this period we mention Jens Kraft, Andreas Schytte and Jens Sneedorf. On account of his splendid style Schytte gained the reputation of being Denmark's most classical writer. The periodical press conducted by Pram and Rahbek became one of the most efficient means of diffusing culture. Kristen Henriksen Pram combined vast knowledge with indefatigible activity and his productiveness in several departments was simply extraordinary. Hardly less fertile was Knud Lyne Rahbek. Heiberg early became known by his satirical songs and his comedies. On account of his attacks on existing institutions he was sentenced to exile. Malte Bruun was as combative and reckless as Heiberg. He escaped a severe sentence by flight to France. This age produced a large number of poets but only one of great prominence. This was Johannes Ewald, the author of *King Christian stood by the lofty mast*, which is still the favorite national song of Denmark. He is one of the greatest lyrical poets of the Scandinavian North and certainly the greatest in Danish literature.

With the beginning of the 19th century dawns the age of romanticism in Denmark and it continued until the year 1870. The foremost representative of this school is Adam Gottlob Oehlenschläger. No one thought in his time of reverting to the people's historical past for literary material. Ewald made the first step in this direction, but he stood alone. Scholars had begun to study the antiquities of the grand old North and Oehlenschläger unlocked its treasures in poems for the people. The shades from the old grave-mounds were conjured up by Oehlenschläger in such a manner that the whole nation could see and recognize them. In Nicolai Frederik Severin Grundtvig we have a nature widely different from Oehlenschläger's and yet he exercised in many respects an equally important influence on the intellectual life of Denmark. No one in all Danish history has contributed more with tongue and pen toward awakening a vigorous popular life than Grundtvig. Other poets belonging to this period of romanticism are Bernhard Severin Ingemann, called the Walter Scott of Denmark, Johannes Carsten Hauch, Christian Hvid Bredahl, Steen Steensen Blicher, Paul Morten Möller, Christian Winther, Hans Christian Andersen, Johan Ludvig Heiberg, Frederik Paludan Muller, Thomasine Christine Gyllembourg Ehrensværd, Nicolai de Saint Aubain, Carl Bagger, Hans Peter Holst, Emil Aarestrup, Ludvig Bödtcher, Jens Christian Hostrup, Christian Richardt, Hans Wilhelm Kaalund, Erik Bogh, Christian Molbeck, Meyer Aaron Goldschmidt, Herman Frederik Ewald and Wilhelm Bergsöe. They are all conspicuous writers of this school and epoch.

In 1871 realism in literature began to make its appearance in Denmark and may be said to have dominated the field almost exclusively ever since, though there are signs that this special literary tendency is now losing its hold upon the people. The father of the realistic school in Denmark is the eminent writer of Jewish descent Georg Brandes. This school includes such names as Holger Drachmann, Sophus Schandorph, J. P. Jacobsen, H. Bang, Carl Gjellerup, Henrik Pontoppidan, G. Wied and Karl Larsen.

Among scholars of the 19th century some of the most eminent are: The great theologians Jacob Peter Mynster, Henrik Nicolai Clausen and Hans Lassen Martensen. Among eminent philosophers we may mention Soren Aaby Kjerkegaard, Frederik Christian Sibbern and Rasmus Nielsen. In the domain of natural science we must above all mention Hans Christian Oersted, the discoverer of electro-magnetism. Then there are the botanist J. F. Schouw, the geologist and chemist Joh Georg Forchhammer, the zoölogist Japetus Steenstrup and the archæologists C. Thomsen and Jens Worsaae. In philology the 19th century produced the dis-

tinguished scholars Rasmus Christian Rask and Johan Nicolai Madvig.

Norwegian Literature.—While there was a remarkable literary activity in Iceland during the centuries following the introduction of Christianity in the year 1000, there was a great lack of literary interest in Norway. Norwegian literature proper begins about the year 1100 and the bulk of what was produced during the middle age consists of legends, fragmentary chronicles and brief annals mostly written in Latin. King Sverre was a patron of literature and wrote some things himself, but his own saga was written by the Icelandic abbott Karl Jonsson. During Sverre's time appeared *The King's Mirror* by an unknown author. It is a remarkable work on ethics.

In 1380 Norway became united with Denmark and from this time on until the dissolution of this union Norwegian literature is merged in the Danish and we may add that Norway contributed her share. A number of Norwegian writers became conspicuous in Danish Literature during this period (1380 to 1814). Thus the poets Petter Dass, Dorthe Engelbrektsdatter, Wessel, I. Fasting, the brothers Frimann, the brothers Vibe, Tullin and above all the founder of modern Danish Literature the eminent dramatist, poet and scholar Johan Ludvig Holberg were all Norwegians.

Modern Norwegian literature easily divides itself into three periods, the first from 1814 to 1830, the second from 1830 to 1857 and the third from 1857 to the present.

First Period.—In the first period we find the novelist M. C. Hansen and the poets C. N. Schwach and H. A. Bjerregaard. The poets Lyder Sagen, J. Storm Munch, H. Foss and S. O. Wolff also belong to this period.

Second Period.—The second period is called the Wergeland and Welhaven period. Henrik Arnold Wergeland was born in 1808 and Johan Sebastian Cammermeyer Welhaven in 1807. Both were highly gifted and either one of them and particularly Wergeland would be an ornament in the literature of any age or country. He may be said to be a Burns and Byron in one. Besides his lyric poems Welhaven wrote a number of valuable essays on literature. A sort of spiritual kinsman of Welhaven was Andreas Munch (born 1811). His poetry is most graceful and his cycle of romances "Kongedatterens Brudefærd" is one of the finest gems in all Norwegian literature.

During this period extensive efforts were made to penetrate into the very heart of the national life and gather the folklore, folk-melodies, proverbs, ballads and legends of the common people. The popular tales were collected by Peter Christian Asbjrnsen and Jrgen Moe, the ballads by M. B. Landstad and the melodies by L. M. Lindeman. The distinguished violinist Ole Bull established the first national theater in Bergen in 1850. In this period began the study of the various Norwegian dialects and an attempt to found on them and the Old Norse tongue a written language to take the place of Danish. This work of making a dictionary of the dialects and a grammar for the new language was done mainly by the great linguist Ivar Aasen. This genuine Norwegian language is represented by a larger group of writers in both prose and poetry, foremost among whom are Ivar Aasen, Aasmund Olafson, Vinje, Arne Garborg, Christoffer Janson, Henrik Krohn, Vetle Visli, Ivar Mortenson, E. Blix, Sven Moren, Anders Hovden, Halfdan Koht, Steinar Schjött, Marius Heggstad and the new language (landsmaal) has been recognized by the law of the land.

The Third Period is called the Björnson-Ibsen period and Björnstjerne Björnson and Henrik Ibsen are its two chief representatives. The former is eminent as poet, novelist, dramatist and agitator, the latter became perhaps the world's most eminent dramatic writer of his time.

In the field of elegant literature partly belonging to the second and partly to the third period the following writers are yet to be mentioned: H. Schulze, N. R. Ostgaard, H. Meltzer, Henrik Wergeland's sister, Jacobine Camilla Collett, Jonas Lie, Marie Colban, Anna Magdalena Thoresen, Laura Kieler and J. A. Friis.

Since the separation from Denmark, Norway has contributed much to the advancement of science. We will here mention the great mathematician Niels Henrik Abel, the naturalist Christopher Hansteen. S. A. Sexe, Michael Sars, Ossian Sars and M. N. Blytt have all achieved splendid results in various departments of natural science. Niels Treschow and Marcus Monrad are Norway's only two writers on philosophy. The 19th century produced several prominent theologians, among whom we mention S. J. Stenersen, W. A. Wexels, C. P. Caspari, Gisle Johnson, Bishop Heuch and A. Chr. Bang. In philology a long list of names might be given. Besides Ivar Aasen there are Sophus Bugge, Johan Fritzner, K. Knudsen, C. R. Unger, Johan Storm and several others. History has particularly been cultivated by Norwegian scholars. Peter Andreas Munch and Rudolph Keyser especially did much toward laying a solid foundation. Both published works on Norwegian history. Keyser also wrote a history of the Norwegian church during the catholic period. After them Johan Ernst Sars is the most distinguished historian in Norway. The rejuvenated Norway has given the world the arctic explorer Fritjof Nansen, the great musical composer Edward Grieg, and the eminent sculptor Stephan Sinding. The above gives only the most important names from the history of modern Norwegian literature, but it shows that there has been great activity in every direction and much work of lasting value has been done.

Swedish Literature.—Swedish literature easily divides itself into the following periods: (1) The middle age, from the earliest time to 1526. (2) The reformation period from 1526 to 1640. (3) The Stjernhjelm period, from 1640 to 1732. (4) The Dalin period, from 1732 to 1780. (5) The Gustavian period, from 1780 to 1809. (6) The nineteenth century, from 1809 to the present.

Sweden did not produce much literature of permanent value during the middle age. The most of it consists of theological and religious works produced in the convents. The first university was established in Upsala in 1477, but this institution accomplished but little during the first decades of its existence. Legends monopolized everything and the noble Roman tongue degenerated into monkish Latin. A few historical works were produced.

The Reformation Period.—The first impulse to the reformation was given by Olaus Petri, who for three years had been a pupil of Luther and Melanchthon and who after his return in 1519 supported by his brother Laurentius Petri and by W. Laurentius Andreæ began the work of proclaiming the new doctrine. Intellectual life was awakened by the struggle between the old and the new. Printing had been introduced in the second half of the 15th century and in 1520 there were three printing presses in the country. The whole Bible was translated mostly by Laurentius Petri and published in 1540-41. Laurentius Petri also wrote a series of theological works but in this field was greatly surpassed by his brother Olai, whose *Liten Postilla* became widely circulated. History also flourished in this period. The writing of dramas in Sweden began in the 16th century. The first were school comedies, the plots taken from the Bible and the first writer of such a play was Olaus Petri. In the beginning of the 17th century these dramatized biblical tales were succeeded by secular plays. Authors of secular plays were Magnus Olai Asteropherus, Holgeri Catonius and Jacobus Petri Rondeletius. Among the successors of Messenius Andreas Prytz is the most prominent. Upon the whole the poetical literature of the reformation period was of little account and purely scientific study eked out a poor existence. The number of learned writers was small. Johan Bure is a solitary exception. He wrote meritoriously on northern antiquities especially on runes and he was the teacher of those who in the 17th century raised Sweden to her pinnacle of fame.

The Stjernhjelm Period.—This is Sweden's golden age. It produced Gustavus Adolphus and Charles XII., both patrons of art, literature and science. Georg Stjernhjelm, the father of Swedish poetry, was the central figure of the intellectual life of the period. The most notable among his followers were Samuel Columbus the writer of odes and Peter Lagerlöf the writer of erotic songs. Other poets of the period are:—Gustav Rosenhane, G. E. Dahlstjerna, Christopher Lejonkrona, Carl Grippenhjelm, Torsten Ruden, Lasse Lucidor, Isreal Holmström, Samuel Triewald and the Finlander Jacob Frese. Writers of dramas in this period were Urban Hjærne and Isak Bork. Among the historians we find Olof Rudbeck the Elder the author of the fabulous Atlantika and besides him the more sober writers Jonas Werwing, Johan Widikindi, Johan Peringskjold, Johan Hadorph and Haquin Spegel. Johan Svedberg wrote a compendius grammar and dictionary and Nils Tjælmann the first Swedish grammar. They established the present orthography of the Swedish language. In scientific branches the period produced Urban Hjærne in medicine and mining, Johan Stjernhöök on the principles of ancient northern laws, the famous Anders Celsius in physics, Johan Terserus in theology and Anders Rydelius in philosophy. One of the most marked and widely known characters was the mathematician and mysticist, the great scholar and founder of a religious sect that still bears his name, Emanuel Swedenborg.

The Dalin Age.—This was the age of enlightment in Sweden and its most prominent figure was Olof von Dalin after whom it takes its name. He published *Den svenska Argus*, which like Addison's *Spectator* in England discusses the questions of the day. He wrote poems and dramas and was made court poet to the queen. In this period several societies of scholars and poets were founded. Of

these Vitterhets-Akademien attained the greatest celebrity. Fru Hedvig Charlotta Nordenflycht ranked high in the literature of that period and to her circle belonged the Finlander Count Gustav Philip Creutz and Count G. F. Gyllenborg, called the dioskuri of the sky of Swedish poetry. To these should be added Olof Bergklint and Anders Odel. In Jacob Henrik Mörk Sweden obtained in this period her first novelist. His novels have a tendency to teach moral lessons but are masterpieces in style. Jacob Wallenberg was Sweden's next novelist. With his rollicking humor he is a decided contrast to the half pietistic and didactic Mörk. This period became famous in science and in other departments of literature. Its greatest scientific name is Karl von Linné, the father of modern botany. Karl de Geer acquired great reputation by his work on insects. Olof Bergmann wrote his famous physical description of the globe, a work translated into many languages and Wilhelm Scheele became a world-renowned chemist. Among historians Sven Lagerbring stands first in the period.

The Gustavian Period.—This period takes its name after King Gustav III. In it what may be called the Dalin style of poetry reached its climax. The period produced two schools or groups of poets, the academic, or French, and the national. In the academic, the chief and at the same time the only really conspicuous representatives were Johan Henrik Kellgren and Karl Gustav af Leopold, J. G. Oxenstjerna, G. G. Adlerbeth, J. D. Valerius and the Finlander, Michael Choræus, being the only others worthy of mention. Kellgren was preëminently a lyric poet, while Leopold was didactic, witty and sarcastic in the extreme. In the national group Karl Michael Bellman towers above all the rest. He is the most original of all Swedish poets and for that matter is without a parallel in all Europe. He was poet and musical composer and performer all in one. Other poets more or less identified with the Bellman or national group of this period are Olof Kexel, Karl Israel Hallman, J. M. Lannerstjerna and Karl Enevallson. Of poets who did not belong to either school we may mention the talented Bengt Lidner, Thomas Thorild and Anna Marie Lenngren one of the most interesting figures in this motley period of Swedish literature. In this period poetry predominated to such a degree that there was not much room for scientific work. A renowned writer on æsthetics was Karl August Ehrensvard, but the best prose writer was Nels von Rosenstein, the tutor of Gustav III. He wrote on æsthetics and philosophy. The professor Daniel Boethius became famous as a philosopher of the Kant school.

The Nineteenth Century.—The French academical school predominated at the dawn of the century though its ablest writers were dead. The desire for an independent national poetry had grown but there was no leader to fight its battles. The banner was first raised by Lorenzo Hammarskold and he soon gathered around him a band of enthusiastic poets. They founded a magazine called *Phosphoros* and were called Phosphorists. They were romanticists of the extreme German type. But side by side with this hyperidealistic tendency there sprang up another movement also romantic but more national. The new group was called the Gothic school because it took its themes from old Norse mythology, traditions and history. Then there was a third group that affiliated neither with the Phosphorists nor with the Gothic school nor with the Academy. The two most eminent among these neutrals were Franz Michael Franzen a Finlander, and Johan Olof Wallin, called "The David's Harp of the North." The pioneer Phosphorist, Hammarskold, was not a great poet but he was an influential critic and leader. The greatest of the Phosphorist poets was Peter Daniel Amadeus Atterbom. Another champion of the Phosphorists was W. F. Palmblad.

The Gothic school undertook a regeneration of the memories of the past. The chief standard bearer was the great poet and historian Erik Gustav Gesjer. He founded the "Gothic Union." This union founded the magazine *Iduna*. A. A. Afzelius translated the *Elder Edda* and wrote *Svenska Folkets Sagohafder* and in this manner he contributed his share to the development of the national element in Swedish literature. Per Henrik Ling represented the extreme tendency of the Gothic school. But the greatest representative of this school was the famous poet Esaias Tegner, the author of *Frithjofs Saga*. He silenced all literary controversies since he united in his poetical talent all that had been aimed at by the different schools. In his works he satisfied not only the national element but also the requirements of art. He became the idol of the whole nation. Bernhardt von Beskow was one of the most remarkable writers of the Gothic school. Karl August Nicander is to be classed with the Phosphorists. Assar Lindeblad is the most conspicuous of the legion of poets who became imitators of Tegner but lacked his great genius.

Christian Fahlcrantz is chiefly known as the author of *Noah's Ark*, Sweden's most celebrated humoristic poem. One of the strongest characters in all Swedish literature is J. L. Almquist. His life as well as his writings are a mystery. He alternately pursued the loftiest and the basest objects in both. He produced a large library of books some of which might be called celestial and others that deserve no better description than demoniac, then fled from the country and died in exile. No novels had been produced since Mörk wrote in the Dalin period. But this form of literature revives in the first half of the nineteenth century. Frederik Cederborgh wrote comical novels. Then came Fredrika Bremer with sketches from every day life. Her contemporary Sofia Margareta von Knorring depicts life among the higher classes of society. Emelie Carlen, Karl Anton Wetterberg (Onkel Adam) and August Blanche are novelists of high rank. No contemporary stands higher than Selma Lagerlöf in the realm of fiction.

This period is particularly rich in historical novels and in this field G. W. Gumælius, Per Georg Sparre, K. S. F. von Zeipel, Henrik Mellin, K. A. Kullberg, N. J. Crusenstolpe, K. F. Ridderstad, the Finlander, Zachris Topelius, and Victor Rydberg are magnificent representatives. Rydberg also wrote many other works of lasting value, among which his *Researches in Teutonic Mythology* is especially to be noted.

The development which had begun with the struggle between the old and the new schools closed with J. L. Runeberg. When Tegner died, Runeberg ascended the poetical throne of Sweden. He was a Finlander. His *Stories of Ensign Stal* and his poem *Our land, our land, our native land*, the gem of all patriotic songs, will live as long as literature survives. Among poets of the nineteenth century the kings Charles XV. and Oscar II. must not be forgotten. August Strindberg, poet and dramatist; Selma Lagerlöf, novelist; and Heidenstam, historical writer, are the chief contemporary names.

The national movement of the century had a fruitful influence on literature and research in other fields. In the domain of history we find A. M. Strinnholm, Anders Fryxell, F. F. Carlson, K. G. Malmström, K. T. Odner. Antiquarian research found able scholars in Dybeck, Holmberg, Hildebrand, Montelius and others. B. K. H. Hoijer is one of the great Swedish philosophers of the century, but K. J. Boström is the only Swede who has created an independent system of philosophy. Among his pupils C. T. Clæson and J. A. Nyblæus are the most eminent. In other branches of science the nineteenth century produced many names of immortal fame. Among these are the chemist J. J. Berzelius, the botanists Elias Fries and K. A. Agardh, the geologist and antiquarian Sven Nilsson, the great anatomist A. A. Retzius and the explorer Adolf Nordenskjöld.

RUSSIAN LITERATURE practically dates from the introduction of Christianity in the last quarter of the tenth century, though there are fragmentary remains of traditionary tales in rhythmic verse, which have a certain similarity to the English, Spanish, and Scandinavian ballads. Among the earliest works reduced to writing is a book of the Gospels dating from 1056 or 1057 The Tartar invasion arrested the progress of literature, and Russia fell back more than two centuries.

The first Russian book was printed in 1564. Russia saw two remarkable writers in the next century—Kotoshikhin and Krizhanich—who have left interesting accounts of the condition of the country. Simeon Polotski must also be mentioned, as bringing to the Russians some of the culture of the West.

Stimulus of Peter the Great. But a great change came over the country owing to the reforming labors of Peter the Great. Russia abandoned her Byzantine models, which came to her together with her religion, and looked to the West, where pseudo-classicism under French influence reigned. The new era begins with Kantemir (1708-44), who successfully imitated Boileau. Lomonosov (1711-65) wrote on natural science, grammar, and history. He composed some poetry, but it is artificial and imitated from the German. Tatistchev (1686-1750) attempted Russian history in something like the modern sense of the word. Sumarokov (1718-77) wrote plays on the French model, and Kheraskov (1733-1807) published two huge epics.

The Age of Catherine gave a great stimulus to Russian composition. Bogdanovich (1743-1803) wrote his graceful poem *Dushenka*, and Denis von Wisin, sprung from a German family, gave the Russians two original comedies: The fables of Quan Krylow (1768-1844) were celebrated among all classes and ages, and are still among the first books read by Russian children. Gabriel Derschawin (1743-1816) distinguished himself highly in lyrical and other poetry; and since then many writers have gained fame in all departments.

It is, however, principally to Nicholas Karamsin (1765-1826) the historian, that Russia owes the more general spread of literary taste. The foundation of the Russian Academy in 1783, and the issue

of its great dictionary, also contributed toward it. The same perfection which Karamsin gave to prose, Ivan Dimitrieff (1760-1837) gave to poetry. He was soon eclipsed by Alexander Pushkin (1799-1837), up to the present time the greatest poet produced by Russia. Besides many narrative pieces and lyrics of considerable merit, he produced *Eugene Onegin*—his masterpiece—and a drama, *Boris Godunov*, on the model of Shakespeare. In his other works we can frequently trace the influence of Byron. The next poet of eminence was Michail Lermontow (1814-41), who was also influenced by Byronism, but reflects in his poetry the scenery and traditions of Georgia.

Historical novels in imitation of Scott were written by Zagoskin and Lazhechnikov; but Russia was destined to show real strength in the novel of everyday life. The novelists of this group may be said to begin with Nicholas Gogol (1809-52), in whom is seen the vigorous realism of Dickens in juxtaposition with the weird imagination of Edgar Allen Poe. His greatest work was *Miortvia Dushi* ("The Dead Souls"). After Gogol followed Dostoveysky (1821-81), a writer of extraordinary power, whose works are well known in English. Turgenieff (1818-83) began his splendid career with *The Memories of a Sportsman*, which did a great deal to bring on the emancipation of the serfs. His last great work was *Nov* ("Virgin Soil").

Contemporaries.—Tolstoy (1828-1910), the greatest name in Russian fiction, in latter years, sank the novelist in the socialist and philanthropist; but his two romances, *Voina i Mir* ("War and Peace") and *Anna Karenina*, are immortal. Prominent writers of tales are A. Chekhov, and Gorki which latter has written some masterful tales of everyday life. In history Kostomarov was the author of many valuable monographs, and Soloviev (d. 1879) wrote a colossal *History of Russia*. Nor must we omit Ustrialov, author, among other works, of a valuable book on Peter the Great.

Since the death of Lermontow many poets have appeared, but the most widely popular has been Nekrasoff (1821-88), who completely deserted the old path of Russian poetry. With him poetry became extremely realistic, and looked to peasant life for its subjects. Something of the kind had been essayed before in the charmingly national poems of Koltsov, who died in 1842, and in a less degree in those of Nikitin. A host of minor poets have arisen, among whom have towered Polonski and Apollo Maikov. At the present time we have Balmont, Fofanow, Korinfski, and Mme. Lokhvitskaya and Mme. Gippius. The drama has not shown much progress since the days of Pushkin.

The Russians of the present day have shown striking ability in historical research, and in science. It is only necessary to name Pirogov, the anatomist; Mendelieff, the chemist; Metchnikoff, the bacteriologist, who now carries on the work of Pasteur in Paris; and Lobachevski of Kiev, the mathematician. The Russians are particularly distinguished in Oriental languages, and the University of St. Petersburg is the most complete in the world in this department of study.

PERSIAN LITERATURE.—Ancient Period.—The ancient Persians were Aryans and spoke an Aryan or Indo European tongue. Their literature, so much as has come down to us, was largely religious. The *Avesta* was the great literary monument of this ancient people and the Bible of their faith, called Zoroastrianism from its supposed founder Zoroaster (Zarathustra). "Ahura-Mazda spake to the holy Zarathustra," thus begins the law. Whether Zoroaster lived 600 years or 1000 years before the founder of Christianity we are unable to say.

The *Avesta* is a collection or compilation of religious laws, liturgies, invocations, prayers, and hymns. Ahura-Mazda is the great Jehovah, Zeus, Jupiter, God, Allah; opposed to him is Anro-Mainyus, Ahriman, the enemy; and the world is the scene of conflict between these powers of good and evil. The *Avesta* is valuable alike to the student of religion, as being the bible of one of the world's great religious systems; to the student of anthropology and history, as giving a picture of the life, customs and beliefs of an ancient people; and to the student of philology as giving the earliest example of one of the Indo-European languages.

Middle Period.—The Sassanian empire (c. 226 A.D.-c. 652 A.D.), though great in some respects, can scarcely be called great in literature. The most noteworthy book of the period is the *Bundahish*, a work on cosmogony and theology, written in Pahlavi.

Modern Period.—About the middle of the seventeenth century the Mohammedans conquered Persia and the *Koran* supplanted the *Avesta*. The language, hereto-fore pure Aryan, received a large admixture of Semitic words and came to be written in Arabic characters.

The first great poet of Mohammedan Persia was Rudagi who sang and harped in the first half of the tenth century and was held in the highest estimation by his contemporaries.

The great epic poet of Persia was Abul Kasim Mansur, called Firdusi or Firdausi, from the word *Firdaus*, "Paradise." Firdusi was born near Tus in Khorasan about 940 or 950 A.D. His most celebrated work was his epic called the *Shah Nameh* or *Book of Kings*, a heroic poem in 60,000 couplets, singing the deeds of the Persian monarchs from the beginning down to the Mohammedan occupation. In the poem he gives unstinted praise to the Sultan Mahmud but the Sultan had the ill-fortune to incur the poet's displeasure and Firdusi added a stinging *Satire on Mahmud* to the epic and fled the country. While at Bagdad he wrote his *Yusuf and Salikha*. Later he returned to Tus and died there about 1020 or 1025. His tomb in his own garden is much frequented. Firdusi, like Horace, Ovid, Milton and many another western poet was sure of his own renown; he wrote:

"Centuries may pass away but still my page will be the boast of each succeeding age."

Of all the Persian poets Omar Khayyam is perhaps best known to the English-speaking world. Indeed he is better known relatively to the English-speaking world than to the Persians themselves. Omar was born in Nishapur, was by profession an astronomer and was the author of mathematical and astronomical works. To us he is known by his *Rubaiyat* or *Quatrains*. Many of these philosophic quatrains are thought to be the work of other poets, but as they stand grouped together and interpreted by Edward Fitzgerald they make a wonderfully interesting poem, furnishing food for much reflection.

Anwari, whom an old quatrain places in a class with Firdusi and Sadi, is not so highly valued by European critics.

In the same century Nizami of Ganga (1141–1203) produced his *Five Treasures*, a quintet consisting of the mystical poem *Store-house of Mysteries* (1165–6) and four romantic poems, *Khosran and Shirin* (1175–6), *Laila and Majnun* (1188–9), *Alexander* (1191), *Seven Fair Faces* (1198–9).

Of Faridud-Din Atlar and Jalalud-Din-Rumi the Sufic mystical poets, mere mention here is sufficient.

Greater than these was Sadi, "the nightingale of the groves of Shiraz". Sadi was born at Shiraz about the year 1184 and according to the accounts lived to be more than a hundred years old. For his time and nation he was a man of broad travel and experience. He studied in Bagdad; made many pilgrimages to Mecca; and was captured by crusaders near Jerusalem; he knew many tongues and dialects and wrote in Persian, Arabic, Turkish and even, it is said, Hindustani. He returned in 1256 to Shiraz, where his grave is still an object of veneration. His two most famous works are the *Bustan* or *Tree-Garden* (1257), and the *Gulistan* or *Rose-garden* (1258), the former a serious work in verse, the latter an ornate and finished work of an ethical nature written in both prose and verse, and containing stories, anecdotes, maxims and moral observations. In addition to these he wrote many "ghazals" or odes. His work is characterized by catholicity of interest and taste, and elegance and simplicity of treatment.

Hafiz, the greatest lyric poet of Persia and a great poet judged by any standard, was born at Shiraz, spent his life there, and gave back his dust to his native city when his peaceful life was over. His verses were as peaceful as his life, for the storms and battles of the times in which he lived scarcely left a trace in his poetry. He sang of birds and flowers, wine and women, beauty and gladness.

When Jami was laid to rest at Herat in the year of the discovery of America there passed away the last great poet of Persia. His *Seven Thrones* is a series of narrative poems, including *Solomon and Alsal*, *Laila and Majnun*, *Yusuf and Zulaiska*. The *Abode of Spring* is also a favorite poem.

ARABIAN LITERATURE.—The Arabs are Semites. Before the coming of Mohammed they were a rude, idolatrous people. The century preceding the Prophet produced the *Moallakat*, a collection of seven ancient prize poems by seven different authors, the Arabian Pleiades. To this period belong also some of the poems collected in the *Hamasah*, to be mentioned later on.

Mohammed was born about 570 A. D. at Mecca. He led a simple life and spent much time in solitude. Few followers honored him at first. The Meccans were about to kill him because of his religious teaching when he fled to Medina. This flight, in 622, is known as the Hegira, and from it dates the Mohammedan era. Within the next ten years his influence becomes so great that at his death in 632 practically all Arabia was Mohammedan. The rapidity with which Islam spread during the following century has never been equalled in the history of any other religion.

The doctrines of the Prophet are contained in the *Koran*, the sacred book of

Islam. The contents were "revealed" to Mohammed by the angel Gabriel in visions and recited by the Prophet to his disciples. Shortly after his death the various *suras* or chapters were collected and put into permanent form. The teachings of the *Koran* are largely from the Jewish and Christian scriptures and the legends largely from the Old Testament and the Talmuds. "There is no God but Allah, and Mohammed is his prophet;" Moses and Jesus are recognized as true prophets but Mohammed is the greatest.

The *Kalilah and Dimnah* (c. 760) is the Arabic version of the Sanskrit *Fables of Bilpai*. To a somewhat later date (c. 790) belongs *The Romance of Antar*, an account of the soldier and poet Antara, one of the Pleiades mentioned above.

In the next century Abu Teman (806–845) made his collection of old poetry, partly at least pre-Islamic, known as the *Hamasah*. The *Divan* of Mutanabbi in the next century may also be mentioned. Later still is the *Mokamat* of Hariri (c. 1054—c. 1122), a popular group of fifty moral and satirical discourses in verse and prose, which is valued very highly by the Arabs.

At the time when Christian Europe was sunk in the darkness and ignorance of the Middle Ages, it was the Mohammedan empire which kept aflame the torch of learning. Philosophy, rhetoric, grammar, medicine, botany, astronomy, mathematics were all cultivated with remarkable assiduity. Mention may be made of Avicenna (980–1037) who wrote a *System of Medicine* and various other works, and of Averrohes (1126–1198) who wrote a celebrated commentary on Aristotle as well as treatises on medicine, philosophy, natural history, astronomy, and mathematics.

Best-known to the Western World of all Arabic books, certainly best-known after the *Koran*, is the *Thousand Nights and a Night*, often called the *Arabian Nights' Entertainment*. It is a collection of long romances, short stories, tales, anecdotes, and fables, full of oriental fancy and mystery, picturing men in all conditions of life from caliph to cobbler. Although most of the stories are much older, the collection assumed its final form about 1450, most probably in Egypt.

CHINESE LITERATURE.—Chinese literature is a true mirror of the evolution, history and life of the oldest and largest nation on earth. It is expressed in a script that mirrors images and ideas. The three possible methods of making thought visible, ideographic, syllabic, or phonetic, are seen in China, Japan and Korea. When for stylus and bamboo, the brush pen, ink and paper were substituted, characters took on conventional forms for easy use in penmanship. From a few hundred primitive or radicals have been developed over eighty thousand characters, the more complex ones being veritable mosaics united in one.

Sound, Tones and Writing.—China is a land of books. Here printing was invented. Civil Service examinations for office were based on knowledge and skill with the pen, and the only permanent nobility consists of the descendants of Confucius. Yet there is a great gulf in pronunciation, idiom, and form between the spoken and the written language; the former, being very early fixed, and its structural growth retarded by written forms, is far from uniform within the empire. Its poverty in sounds is made up for by a system of tones. Eight great dialects with many local variations are in use, some as different from each other as are Russian and Spanish. The bond of vocal unity in an empire wherein dwell one fourth of the human race, is the mandarin, or official dialect. The solvent of all social elements is general education, based on a literature which, speaking to the eye, has given both geographical and chronological unity, during three milleniums.

Divisions of Literature.—The native divisions of the literature are usually denominated: Classics, History, Philosophy and Belles-lettres. Little is definitely known of the patriarchal age B. C. 2852–1154, but society was based on land and labor, with mutual moral obligations. Actual history, reflected in the literature formulated by Confucius, begins about 800 B.C. The Chinese had then well-built houses, silk, leather shoes, umbrellas, chairs, tables, wheeled vehicles, pottery, the sun dial, archives, and many other proofs of a comparatively high civilization, in addition to the written language, which in form was substantially that of to-day. Of the feudal system succeeding, we have a mirror in the *Book of Odes* (She King), showing wonderful variety of objects of nature and art known and used, and a realm lying mostly within the Hoang-ho valley.

Confucius a Transmitter.—Northern China, which produced Confucius, a transmitter, not a creator, is intensely communal, Confucian to the core, given to form and ritual, and loving dry and prosy maxims. In southern China which gave in the same century Laotsze, a bold speculator and daring thinker, the fires of imagination burn more brightly, and men assert freedom and selfhood. Confucius (B. C. 551–479) fixed in imperishable form the lore of the ancients in the *Five Classics*, China's canonical scriptures; one, his only original work, being a book of annals.

Phases of Confucianism.—The literary history of China is in the main the story of the triumph, vicissitudes and modification of Confucianism. This was fixed in power through Mencius (B. C. 372–289) who vindicated and expounded the master's system of thought. Introductory to the study of *Five Classics* are the *Four Books*. The first, called the *Analects*, or *Sayings*, gathered by his own pupils, tells us all we know about the Sage, whose literary treasures furnish a simple code of morals and ritual. Overlaid by a stupendous mass of exposition, commentary and controversy, Confucianism in the middle ages, after a millenial struggle with Taoism and Buddhism, issued in a re-statement by Chu Hi (A.D. 1130–1200), becoming a philosophy and virtually the creed of all educated men in eastern Asia and forming the basis of popular education and extended culture in both the Middle Kingdom and the neighbor nations.

Effects of Buddhism.—Buddhism entered China from India A.D. 68, and after twelve centuries of rivalry and many battles of wits, Hindoo and Mongol ideals were blended in both the neo-Confucianism and the popular Buddhism which has a vast literature in Chinese. The ethics of the Sage are maintained, but later writers have changed vastly their views of Nature, the cosmos and theories of government. In effect Chinese literature is ethical, democratic, and opposed to absolutism.

The Five Rules of Conduct.—The system of Confucius is summed up in the five relations, which being stated, the correlative duties follow—ruler and ruled; husband and wife; parent and child; elder and younger brother; friend and friend. The elision of the first or the sixth great relation, God and man, may account for the comparative rigidity of Chinese thought and its lack of literary development from the circle within which it is confined, though the too early use of writing, limiting the growth of speech, may have much to do with the matter. Personification is almost wholly absent.

The amazingly voluminous history written by the Chinese forms rather a collection of annals, than a philosophical narrative of cause and effect. Extremely valuable, both as records and reflection of the external life of the times, as manifested in events, it has little of the spirit and glow which we look for in Western history. Historians rarely rise to generalizations except to enforce morals. In topographical writing, the Chinese are unexcelled, every province and city having its descriptive work. Encyclopædias, vast in extent are numerous. In bibliography and categories, native authors show their fine powers of analysis. The typical Chinese sentence is extremely terse and sparkles with literary allusion and suggestion.

Basis of Philosophy.—In philosophy all ideas proceed from the starting point of the two principles, the In and the Yo. These, variously interpreted, as positive and negative, male and female, light and darkness, heaven and earth, by their constant interaction, produce the phenomena of the universe. Their application to the affairs of human life, structures of human society, and the paths of thought furnish the form by which all speculative literature in China is guided. So far from being a thing dead or stereotyped, or in wholly arrested development, as many Occidentals imagine,

Modern Literature.—The modern contact of Western civilization has revolutionized education, flooded China with translations, made the modern language a vehicle for new ideas, ushered in the newspaper, and is slowly turning the mind of China to face the facts of science, and of contemporaneous world life and to make new adjustments, both local and international. There is impending a complete revolution of thought, expression, and mental outlook.

JAPANESE LITERATURE.—Chinese literature is ethical, Japanese literature is æsthetical. The burden of one is duty; of the other beauty. The keynote of Chinese civilization is filial piety; of Japanese, loyalty. Native bibliographers divide the subject into sixteen divisions—history, lawgiography, poetry, classic romances, miscellanies, diaries, travels, dramas, dictionaries and philosophical works, topography, the literatures of Shinto and Buddhism, modern fiction and miscellaneous literature, to which we may add Westernized literature. Before writing (A.D. 552) there were odes, poems, and liturgies orally recited. The initial works deal with the creation of the world, the early legends and national history. With Buddhism grew up folk lore and fiction. The women made Japanese a literary language.

First Documents.—The *Kojiki*, or *Records of Ancient Things*, a simple artless narrative, rich in mythology and reflecting the beliefs of the time, was written in 712 A. D. in the native dialect, without Chinese phraseology or philosophical conceptions.

The *Nihongi*, or *Chronicles of Japan*, 720 A. D. give cosmogony and history in a framework of Chinese thought, with man phrases from Chinese books and is more pretentious. Chinese, the Latin scholars, has been the writing of the learned, though it is about as easy to write English and other languages with Chinese characters, since the ideographs stand for things; not sounds, native particles, the "hooks and eyes" of speech, being added to complete the sense. The collection called *Manyoshiu* (Ten Thousand Leaves of Poetry) A. D. 760, contains less than five thousand short poems, rich in fact and allusion and is valuable to the historian and philologist. Besides these three fundamental documents, there are scores of works of imagination and hundreds of historic works reckoned as standard.

Modern Historiography.—The *Dai Nahonshi*, or *History of Great Japan*, in 100 volumes, composed after the revival of learning in the 17th century by the Mito scholars, crowns all; though the work which furnished the political opinions of the men who in 1868-71 destroyed feudalism and established modern government was the unofficial *History of Japan* by Rai-Sanyo (1827). In recent years creditable historical work on western critical methods has been done. Miscellaneous historical writings, being unofficial, are deemed less valuable, though often in many respects more useful to the alien century.

Feudalism and its Literature.—The history of Japan, out of which its literature, dramatic, romantic, philosophical, has sprung, may be thus outlined—primeval occupation by various tribes, Aryan, Semitic, Malay, and Tartar; whose monuments are dolmens, shell heaps, stone and bronze relics; then the formation of government and army, on models borrowed from China, and the conquest of the "rebels". This conflict, lasting for many centuries, the outgrowths of which were feudalism and an order of knights, or samurai, whose ethical and social code is *Bushido, the Warrior's Path*, gave birth to a varied literature. Around their costume, sword, armor, habitations, sports, rivalries, struggles, ethics and philosophy, a vast library, poetic, dramatic and artistic has gathered. In the division of biography nothing need here be mentioned, but in poetry we have the richest and most original product of the Japanese pen, it being free, or nearly so, from Chinese elements. The poems are brief, in alternate lines of five and seven syllables, or thirty-one in all. With these tiny odes a vast range of allusion and description is possible, since the categories of nature, art, literary association and references to a land, which with the people is part of their life, are numerous [illegible] apprehended.

Poetry and Classic Romance.—Classic romance, picturing the brilliant court life of Kyoto sparkles with wit and satire. The *Toso Nikki*, or diary, is charming for its style. Historical plays and comedies of manners, besides exhibiting Japan's wealth of dramatic literature, still afford on the stage a living picture of a civilization that is passing away. Topographic and philological literature is voluminous. In the exposition of Shinto (the god-way, or primitive religion), as against Chinese and Buddhist influences, native scholars created a literature that besides being striking and original issued in the modern revival of pure Shinto.

Modern Fiction.—Modern fiction after A. D. 1650, bulks largely, the master being Bakin (1767–1848) whose great work, *Hakkenden* (Story of eight dogs) pictures heroes in many adventures. The *Forty-Seven Ronins* is a stirring novel by Tamenaga, illustrating the fierce loyalty of clan retainers to their master and the primal duty of revenge taught by Bushido, or the *Knight's Path*. An exposition of the latter is given in Dr. Nitobe's monograph. Most entertaining to foreign readers is Ikku, whose *Hiza-Kurige* (leg hair, or shank's mare) tells of two pedestrian's adventures on the highway from Yedo to Kyoto. As in most of the old style literature, the plentiful coarseness and obscenity were not considered blemishes. Under literary miscellanies, we have popular moral treaties, sermons, works on antiquities and a great variety of subjects.

Style and Matter.—The writings of Kaibara and Arai Hakuseki are considered models of style as well as mirrors of society and the ideas that ruled until Western thought and manner began modern revolution. The native canons of taste, requiring severe classicism and orthodoxy in matter and manner prevail even yet in the higher circles, but since the Restoration in 1868, when the old literary world of Japan went into the museum, the fertilizing streams of thought have flown from Occidental fountains. These writings of the modern reformers, though of slight interest to Western readers, because of unfamiliarity with the original have recreated every department of thought. Such men as Fukuzawa, Kato, Toyama, Shimada, and members of the Iei Roku Sha [Society of the Sixth Year (1873) of Meiji (1868–)] of which the writer of this article was a member, translating, adapting, imitating, have written books printed by the million that have transformed Japan. Even the oral story-tellers and romance-writers now draw upon the classic stories and plots and the modern fiction of the West. Yet the style of the most popular romances is often on the classic model.

The Christian Infusion.—Space forbids us to detail either the vast mass of historical, philosophical and political literature suffused with European and American thought or of the bulky body of translations. There is already a respectable library of Christian literature in Japanese. While as yet the old culture holds its own, in that the Yamato Damashii (spirit of unconquerable Japan) flames forth to unify the nation, the outlook is away from China and the past and toward Christendom, the Japanese being true pupils of the Anglo-Saxon nations.

DUTCH LITERATURE, which really belongs to the Low German group, dates from the last quarter of the 16th century. The chief names of the early period are those of Coornhert, Von Marnix, Spiegel, and Visscher, who produced good examples of both prose and verse. Pieter Corneliszoon Hooft (1581–1647) brought the prose style to a high degree of excellence; and Joost van den Vondel (1587–1679), the greatest of Dutch dramatists, performed the same service for the language of poetry. Jacob Cats, familiarly known in Holland as "Father Cats" (1577–1660), on the other hand, confined himself to the sphere of every-day life. He was distinctively the poet of the people, and his writings are still popular. Among other leading names in pure literature are those of Constantyn Huygens (1596–1686), a satirist, epigrammatist, and didactic poet; and Dirk Kamphuisen (1586–1627), a noted hymn-writer. The principal writer of comedies was Bredero (1585–1618).

Dutch poetry declined toward the end of the 17th century, partly through French influence, but a revival set in with Jacob Bellamy (1757–86). Willem Bilderdijk (1756–1831) shone in all departments of poetry. J. F. Helmers (1767–1813) won great applause by the descriptive poem *The Dutch Nation*. Hendrik Tollens (1780–1856) was as a lyrist the avowed favorite of the country. An important service was rendered to the literature of his country by Jacob van Lennep (1802–68), who, incited by the example of Scott and Byron, introduced romanticism, and successfully repressed French classicism by his masterly treatment of native tales and historical subjects in narrative poems. The novelists who rank next to Van Lennep are Oltmans, Mrs. Bosboom-Toussaint, and Douwes Dekker.

The list of recent Dutch prose writers also includes Schimmel, N. Beets, W. A. van Rees, Weitzel, Lange, J. ten Brink, Opzoomer, Limburg-Brouwer, Maarten Maartens, and the historians Fruin (called the Dutch Motley) and Hofdijk. Dutch names famous in classical learning include those of Erasmus, Lipsius, Grotius, Gronovius; in science, Christian Huygens, Leeuwenhoek; in philosophy, Spinoza; in biblical criticism, Kuenen; and in medicine, Boerhaave.

Modern Belgian literature is best represented by Hendrik Conscience (1812–83), novelist; and Maurice Maeterlinck (1862–) dramatist and essayist.

POLISH LITERATURE reaches back to a more remote period than that of any other Slavonic language except the Bohemian. The oldest monuments consist of warlike, historical, political, and religious poems, more especially the last; but the Latin language, fostered by the church, was used exclusively by Polish writers for several centuries.

The "golden age" of Polish literature was from 1521 to 1621. To this period belong Nicolas Rej (1505–69) and Jan Kochanowski (1530–84), who both attained eminence as poets, the former in satire, allegory, didactic poetry, etc., the latter as a lyrist of the highest rank. Among the other poets of the century were Szarzynski (died 1581), and Szymonowicz (Simonides), author of *Polish Idylls*. It was in the 16th century also that the first histories in the language of the people were written. This flourishing period of Polish literature was followed by a period of Jesuit supremacy and literary decline, which lasted till about the middle of the 18th century. About that time the influence of the French civilization was widely felt in Poland, and prepared the way for the revival of letters. The most distinguished authors of the latter part of the 18th century are Naruszewicz, who wrote odes, idylls, and satires, and Krasicki (1734–1801), who also distinguished himself in various fields. Among modern Polish poets may be noted Mickiewicz (1798–1855), greatest of all Polish poets, Krasinski (1812–59), Slowacki (1809–49), and Zaleski (1802–86). Kraszewski (1812–87), novelist and political and historical writer, was one of the most prolific of Polish authors. Most departments of literature have been successfully cultivated by modern Polish writers, but comparatively few have attained a wide reputation outside of the powerful novels of Madame Orgaszo and Henrik Sienkiewicz.

DICTIONARY OF FAMOUS BOOKS, POEMS, DRAMAS

SIR JOHN LUBBOCK'S HUNDRED BEST BOOKS

This list was the result of the interest aroused by a lecture on the subject of books and reading delivered by Sir John Lubbock at the opening, in 1886, of the Working Men's College, London. The list was first published in an incomplete form by the *Pall Mall Gazette*, and caused much discussion, participated in by eminent British and American scholars. Later the complete list, as finally revised by Sir John Lubbock, was published in the *Contemporary Review*. Here are the books which that noted scholar, after careful deliberation, pronounced the "best worth reading."

RELIGION AND DEVOTION.
The Bible.
Writings of Apostolic Fathers—Wake's collection.
St. Augustine—*Confessions.*
Thomas à Kempis—*Imitation of Christ.*
Pascal—*Pensées.*
Spinoza—*Tractatus Theologico-Politicus.*
Compte—*Catechism of Positive Philosophy* (Congreve).
Butler—*Analogy.*
Jeremy Taylor—*Holy Living and Holy Dying.*
Bunyan—*Pilgrim's Progress.*
Keble—*Christian Year.*

NONCHRISTIAN MORALISTS.
Marcus Aurelius—*Meditations.*
Epictetus.
Confucius—*Analects.*
St. Hilaire—*Le Bouddha et sa Religion.*
Aristotle—*Ethics.*
Mohammed—*Koran.*

CLASSICS.
Aristotle—*Politics.*
Plato's *Dialogues Phædo Republic.*
Demosthenes—*De Corona.*
Lucretius—*De Rerum Natura.*
Plutarch—*Lives.*
Horace—*Odes and Epistles.*
Cicero—*De Officiis; De Amicitia; De Senectute.*

EPIC POETRY.
Homer—*Iliad* and *Odyssey.*
Vergil—*Æneid.*
Malory—*Morte d'Arthur.*
Hesiod—*Poems.*
Nibelungen Lied.

EASTERN POETRY.
Maha-bharata, Ramayana, epitomized by Talboys Wheeler.
Firdusi—*Shah-Nameh* (trans. by Atkinson).
She-King (Chinese odes).

GREEK DRAMATISTS.
Æschylus—*Prometheus; House of Atreus; Trilogy*, or *Persæ.*
Sophocles—*Œdipus; Trilogy.*
Euripides—*Medea.*
Aristophanes—*The Knights.*

HISTORY.
Herodotus—*History.*
Thucydides—*History.*
Tacitus—*Germania.*
Gibbon—*Decline and Fall.*
Grote—*Greece.*
Green—*Short History of the English People.*
Xenophon—*Anabasis.*
Tacitus—*Histories.*
Livy—*History.*
Hume—*England.*
Carlyle—*French Revolution.*

PHILOSOPHY.
Bacon—*Novum Organum.*
Mill—*Logic* and *Political Economy.*
Darwin—*Origin of Species.*
Smith—*Wealth of Nations.*
Berkeley—*Human Knowledge.*
Descartes—*Discours sur la Methode.*
Locke—*Conduct of the Understanding.*
Lewes—*History of Philosophy.*

TRAVELS.
Cook—*Voyages.*
Darwin—*Naturalist in the Beagle.*
Humboldt—*Travels.*

POETRY AND GENERAL LITERATURE.
Shakespeare—*Dramas and Poems.*
Milton—*Paradise Lost* and shorter poems.
Dante—*Divina Commedia.*
Spenser—*Faërie Queene.*
Dryden—*Poems.*
Chaucer—*Poems* (Morris' edition).
Gray—*Poems.*
Burns—*Poems.*
Scott—*Poems.*
Wordsworth—*Poems* (Arnold's selection).
Heine—*Poems.*
Pope—*Poems.*
Southey—*Poems.*
Goldsmith—*Vicar of Wakefield.*
Swift—*Gulliver's Travels.*
Defoe—*Robinson Crusoe.*
The Arabian Nights.
Cervantes—*Don Quixote.*
Boswell—*Samuel Johnson.*
Burke—*Works* (Selected by Payne).
Essays of Bacon, Addison, Hume, Montaigne, Macaulay and Emerson.
Molière—*Dramas.*
Sheridan—*Dramas.*
Voltaire—*Zadig.*
Carlyle—*Past and Present.*
Goethe—*Faust, Wilhelm Meister.*
White—*Natural History of Selbourne.*
Smiles—*Self-Help.*

MODERN FICTION.
Jane Austen—*Emma*, or *Pride and Prejudice.*
Thackeray—*Vanity Fair, Pendennis.*
Dickens—*Pickwick; David Copperfield.*
George Eliot—*Adam Bede.*
Kingsley—*Westward Ho!*
Bulwer-Lytton—*Last Days of Pompeii.*
Scott—*Novels.*

ROOSEVELT'S PIGSKIN LIBRARY

The following list of books was selected by Ex-President Roosevelt for his famous African trip:

The Bible; Apocrypha.
Borrow—*Bible in Spain; Zingali; Lavengro; Wild Wales; The Romany Rye.*
Shakespeare—*Dramas.*
Spenser—*Faërie Queene.*
Marlowe—*Dramas.*
Mahan—*Sea Power.*
Macaulay—History; Essays; Poems.
Homer—*Iliad; Odyssey.*
La Chanson de Roland; Nibelungenlied.
Carlyle—*Frederick the Great.*
Bacon—*Essays.*
Shelley—*Poems.*
Lowell—*Literary Papers; Biglow Papers.*
Emerson—*Poems.*
Longfellow—*Poems.*
Tennyson—*Poems.*
Poe—*Tales; Poems.*
Keats—*Poems.*
Milton—*Paradise Lost.*
Dante—*Inferno* (Carlyle's trans)
Holmes—*Autocrat; Over the Teacups.*
Bret Harte—*Poems; Tales of the Argonauts; Luck of Roaring Camp.*
Browning—*Selections.*
Crothers—*Gentle Reader.*
Twain—*Huckleberry Finn; Tom Sawyer.*
Bunyan—*Pilgrim's Progress.*
Euripides—*Hippolytus; Bacchal.*
The Federalist.
Gregorovius—*Rome.*
Scott—*Legend of Montrose; Guy Mannering; Waverley; Rob Roy; Antiquary.*
Cooper—*Pilot; Two Admirals.*
Froissart—*Chronicles.*
Percy—*Reliques.*
Thackeray—*Vanity Fair; Pendennis.*
Dickens—*Mutual Friend; Pickwick.*

Absalom and Achitophel, a satirical poem by Dryden, in which the names in the title are given to the duke of Monmouth and the earl of Shaftesbury. Like Absalom, the son of David, Monmouth was remarkable for his personal beauty, his popularity, and his undutifulness to his father.

Adam Bede. A novel by George Eliot, the chief character of which is a young carpenter, a keen and clever workman, somewhat sharp-tempered and with a knowledge of some good books. He has an alert conscience, good common sense and "well-balanced shares of susceptibility and self-control." He loves Hetty Sorrel, but finally marries Dinah Morris.

Advancement of Learning, The. A prose treatise by Francis, Lord Bacon, which contains not only the germ of his Latin work, *De Augmentis Scientiarum*, but really the pith and marrow of the Baconian philosophy, if taken in connection with the second book of the *Novum Scientiarum Organum.* An analysis of the work may be read in Hazlitt's *Lectures on the Literature of the Age of Elizabeth.*

Æneid. Vergil introduces into his poem the outlines of the Roman history, and a number of interesting episodes. The three first books are not arranged in the order of time. The second book, which relates the downfall of Troy, and is the basis of the poem, is the first in time. The third, which relates the voyage of Æneas, till after his departure from Sicily for Italy, follows. The first, which relates the dispersion of his fleet, and his arrival in Africa, with his kind reception by Dido, succeeds the third. By this change the hero relates the downfall of his country, and the fortunes of his long and eventful voyage. Vergil's *Æneid* is an epic of national life. The idea which underlies the whole action of the poem is the great part played by Rome in the history of the world.

Agamemnon (*ag-ä-mem'non*). The greatest of the tragedies of Æschylus. The scene is laid in Argos, in the palace of Agamemnon, at the time of the king's return from the capture of Troy; the catastrophe is the murder (behind the scenes) of Agamemnon and Cassandra (whom he has brought captive with him) by the queen Clytemnestra, urged on by her paramour Ægisthus.

Agnes, The Eve of St. A poem by John Keats. It is characterised by Leigh Hunt as "the most delightful and complete specimen of his genius; . . . exquisitely loving; . . . young but full-grown poetry of the rarest description; graceful as the beardless Apollo; glowing and gorgeous with the colors of romance." St. Agnes was a Roman virgin who suffered martyrdom in the reign of Diocletian.

Alhambra, The. A volume of legends and descriptive sketches by Washington Irving. "The account of my midnight rambles about the old place," says the author, "literally true, yet gives but a feeble idea of my feelings and impressions, and of the singular haunts I was exploring. Everything in the work relating to myself and to the actual inhabitants of the Alhambra is unexaggerated fact; it was only in the legends that I indulged in romancing, and these were founded on material picked up about the place."

Alice's Adventures in Wonderland. A fairy story for the young, published in 1869, under the *nom de plume* of Lewis Carrol. It has been translated into several European languages. A continuation, entitled, *Through the Looking-Glass, and What Alice Found There,* was published in 1871.

All's Well That Ends Well. A comedy by Shakespeare. The hero and heroine are Bertram, Count of Roussillon, and Helena, a physician's daughter, who are married by the command of the king of France, but part because Bertram thought the lady not sufficiently well-born for him. Bertram flees to Florence, but, ultimately, Helena wins his love and all ends well.

Ancient Mariner, The. A poem by Samuel Taylor Coleridge. The hero, an ancient mariner "with a long grey beard and glittering eye," suffers terrible evils, and likewise inflicts them on his companions, from having shot an albatross, a bird of good omen. All his comrades perish of hunger, but, as he repents, he is permitted to regain the land. At intervals his agony returns, and he is driven from place to place to ease his soul by confessing his crime and sufferings to his fellows, and enforcing upon them a lesson of love for "all things, both great and small."

"*The Ancient Mariner,*" says Swinburne, "is perhaps the most wonderful of all poems. In reading it we seem rapt into that paradise revealed by Swedenborg, where music and color and perfume were one, where you could see the hues and hear the harmonies of heaven. For absolute melody and splendor it were hardly rash to call it the first poem in the language."

Anna Karénina (*än'nä kä-rä'nē-nä*). A novel of Tolstoy, perhaps the most representative of his works. It first appeared serially, but with long intervals, in a Moscow review, and was published in 1877.

Antony and Cleopatra. Historical tragedy by Shakespeare which may be considered as a continuation of *Julius Cæsar.* In the opening scene of *Julius Cæsar* absolute power is lodged in one man. In the conclusion of *Antony and Cleopatra* a second Cæsar is again in possession of absolute power, and the entire Roman world is limited under one imperial ruler. There are four prominent characters in this play: Cleopatra, voluptuous, fascinating, gross in her faults, but great in the power of her affections; Octavius Cæsar, cool, prudent, calculating, avaricious; Antony, quick, brave, reckless, prodigal; Enobarbus, a friend of Antony, at first jocular and blunt, but transformed by penitence into a grief-stricken man who dies in the bitterness of despair.

Apocalypse. The Greek name of the last book of the New Testament, termed in English *Revelation.* It has been generally attributed to the Apostle St. John, but some wholly reject it as spurious. In the first centuries many churches disowned it, and in the fourth century it was excluded from the sacred canon by the council of Laodicea, but was again received by other councils, and confirmed by that of Trent, held in the year 1545. Most commentators suppose it to have been written after the destruction of Jerusalem, about A. D. 96; while others assign it an earlier date. Its figures and symbols are impressive.

Apocrypha. The word originally meant secret or hidden, and it is said that the books of the *Apocrypha* are not found in either the Chaldean or the Hebrew language. These books were not in the Jewish canon, but they were received as canonical by the Catholic church, by the council of Trent. The apocryphal writings are ten in number: *Baruch, Ecclesiasticus, Wisdom of Solomon, Tobit, Judith,* two books of the *Maccabees, Song of the*

Three Children, Susannah, and *Bell and the Dragon*. Their style proves that they were a part of the Jewish-Greek literature of Alexandria, within three hundred years before Christ; and as the Septuagint Greek version of the Hebrew bible came from the same quarter, it was often accompanied by these Greek writings, and they gained a general circulation. No trace of them is found in the Talmud; they are mostly of legendary character, but some of them are of value for their historic information, their moral and maxims, and for the illustrations they give of ancient life.

Apologia pro Vita Sua: "Being a History of His Religious Opinions," published by John Henry Newman. The *Apologia* will probably never be equaled as a specimen of acute self-analysis. The only subsequent work of a similar nature with which it can be compared or associated is Mr. Gladstone's *Chapter of Autobiography*, which was designed to defend the consistency of his action in reference to the Irish church.

Arabian Nights Entertainments, consisting of one thousand and one stories, told by the sultana of the Indies to divert the sultan from the execution of a bloody vow he made to marry a lady every day and have her head cut off next morning, to avenge himself for the disloyalty of the first sultana. The story on which all the others hang is familiar. Scheherezade, the generous, beautiful young daughter of the vizier, like another Esther, resolves to risk her life in order to save the poor maidens of her city, whom the sultan is marrying and beheading at the rate of one a day. She plans to tell an interesting story each night to the sultan, breaking off in a very exciting place in order that the sultan may be tempted to spare her life so that he may hear the sequel.

Aram, Eugene.—A romance by Lord Lytton, founded on the story of the Knaresborough schoolmaster who committed a murder under peculiar circumstances.

Arden, Enoch.—A poem by Alfred Tennyson, narrating the adventures of a seaman who, shipwrecked on an uninhabited island in the tropical seas, spends many years in solitude, and when rescued, returns home to find his wife married to another, with whom she lives in happiness. Arden proves his nobility of spirit by refusing to reveal to her the fact of his existence, suffers in silence, and dies broken-hearted. Arden is a true hero after the highest conception of a hero. He is as great as King Arthur—by his unconquerable will, and by a conscious and deliberate bowing before love and duty.

Areopagitica; or, *Speech for the Liberty of Unlicenc'd Printing.* A prose work by John Milton, characterized by Prescott as "perhaps the most splendid argument the world had then witnessed in behalf of intellectual liberty." Chateaubriand declared it to be "the best English prose work" Milton ever wrote, and said: "The liberty of the press ought to deem it a high honor to have for its patron the author of *Paradise Lost*."

Arthurian Romances, The.—These may be divided into six parts: (1) The romance of the *San Graal*. (2) *The Merlin*, which celebrates the birth and exploits of King Arthur. (3) *The Launcelot*. (4) The search or *Quest of the San Graal*. (5) The *Morte d'Arthur*, or death of Arthur. (6) *Sundry Tales*. Every generation of poets has added something to these until the Arthur of modern romance is the Christian gentleman as Tennyson pictures him in his *Idylls of the King* surrounded by his chivalrous knights, all bound together in one quest, the Holy Grail.

As You Like It.—A comedy by Shakespeare. A French duke, driven from his dukedom by his brother, sought a refuge in the forest of Arden with a few of his followers. Rosalind, the daughter of the banished duke, fell in love with Orlando, was also banished from the court, and with her cousin Celia resolved to go to Arden, Rosalind in boy's clothes, and Celia as a rustic maiden. Orlando being driven from home also went to Arden, and was taken under the duke's protection. Here he met the ladies, and a double marriage was the result—Orlando married Rosalind, and his elder brother Oliver married Celia. The usurper retired to a religious house, and the deposed duke was restored to his dominions.

Athalie (*a-tà-lē'*).—A tragedy composed by Racine for the scholars of Saint-Cyr, but not performed there. The subject was from sacred history, and it was his last dramatic work. It was written at the instigation of Madame de Maintenon, was first performed in 1690 (printed in 1691) at Versailles with choruses, and has since been produced from time to time with music by various great composers. Athalie was one of Mdlle. Rachel's greatest parts.

Attila, one of the tragedies of Pierre Corneille. This king of the Huns, usually called "The Scourge of God," must not be confounded with Athalie, daughter of Jezebel and wife of Joram, the subject and title of Racine's masterpiece and Mdlle. Rachel's chief character.

Autocrat of the Breakfast Table, The.—Oliver Wendell Holmes. "The *Autocrat*," says Dr. Robert Shelton Mackenzie, "is as genial and gentle, and, withal, as philosophical, an essayist as any of modern times. He is, however, somewhat more than an essayist; he is contemplative, discursive, poetical, thoughtful, philosophical, amusing, imaginative, tender—never didactic. This is the secret of his marked success. He interests variously-constituted minds, and various moods of mind. It needed not the introduction of lyrical pieces (which we are glad to have) to show that the *Autocrat* is essentially a poet."

Babes in the Wood.—According to some authorities, this old story in verse was founded on the deed of King Richard III., of England, who made his two young nephews prisoners in the Tower of London from which they disappeared. It was believed that they were murdered by his orders. A common tale, much liked by English children, in its many forms, grew from this ballad. Perhaps the best known was the one in which the lost babes were covered with leaves by the birds in the woods.

Barber of Seville [*Le Barbier de Séville* (*lu bär-bē-ā' de sā-vēl'*)].—A comedy by Beaumarchais, first composed in 1772 as a comic opera. It is in this play that Figaro makes his first appearance.

Barons, The Last of the.—An historical romance by Edward, Lord Lytton. The scene is laid in England during the Wars of the Roses, and the hero is Richard Neville, Earl of Warwick, the famous "Kingmaker," whose fall is the main action of the story. "It is a great epic," says Senior, "grand in its conception, and vigorous in its execution;" in which the author "has given us a picture of mediæval life as graphic as if it had been painted by Scott."

Barons' Wars, The.—An historical poem, in six books, by Michael Drayton. "In some historic sketches," says Campbell, "he reaches a manner beyond himself. The pictures of Mortimer and the queen, and of Edward's entrance into the castle, are splendid and spirited."

Bartholomew Fair.—A comedy by Ben Jonson, valuable for its lively pictures of the manners of the times. It is chiefly remarkable for the exhibition of odd humors and tumblers' tricks.

Beauty and the Beast.—Fairy tale by Mme Villeneuve. Oft repeated in stories for children, *Beauty and the Beast* are known in many forms. In the original tale young and lovely Beauty saved the life of her father by putting herself in the power of a frightful but kind-hearted monster, whose respectful affection and deep melancholy finally overcame her aversion to his hideousness, and induced her to consent to marry him. By her love Beast was set free from enchantment and allowed to assume his own form, a handsome and graceful young prince.

Beggar's Opera, The, by John Gay, first acted at Lincoln's Inn Fields, in 1727, is the first, and perhaps the best, specimen of English ballad opera. It was acted in London amid unprecedented applause, and obtained scarcely less popularity through the provinces. It was said that it made Rich, the manager, gay; and Gay, the poet, rich. Hazlitt says of the *Opera*, that "it is indeed a masterpiece of wit and genius, not to say of morality."

Ben Hur.—A novel by General Lew Wallace. Messala, the Roman playmate and young friend of Ben Hur, afterward became his remorseless enemy. Ambitious, hard, and cruel, when he came into power he made Ben Hur a galley slave, confiscated his property and imprisoned the mother and sister. Ben Hur escaped, returned later as a wealthy Roman, and entered in the famous chariot race against Messala, who had put up enormous sums in wagers. Messala recognized Ben Hur, and hoped to win the race and bring him to final ruin; but Messala himself was thrown and seriously injured. His cruelties were made known, and he was at last slain by his wife, Iras, the daughter of Balthasar.

Beowulf.—The name of an Anglo-Saxon epic poem of the sixth century. It received its name from Beowulf, who delivered Hrothgar, King of Denmark, from the monster Grendel. This Grendel was half monster and half man, and night after night stole into the king's palace, called Heorot, and slew sometimes as many as thirty of the sleepers at a time. Beowulf put himself at the head of a mixed band of warriors, went against the monster and slew it. This epic is very Ossianic in style, full of beauties, and most interesting.

Biglow Papers, The.—A series of satirical poems, in the quaint Yankee dialect, ascribed to a certain Hosea Biglow, but really written by the American poet, James Russell Lowell.

Bleak House.—A novel by Charles Dickens, the title of which was suggested, it is said, by the situation of a certain tall brick house at Broadstairs, which stands high above and far away from the remainder of the town, and in which the author resided for several seasons.

Blithedale Romance, The.—A story by Nathaniel Hawthorne, founded on the author's experience as a member of the Brook Farm community. "Its predominant idea," says R. H. Hutton, "is to delineate the deranging effect of an absorbing philanthropic idea on a powerful mind; the unscrupulous sacrifices of personal claims which it induces, and the misery in which it ends. There is scarcely one *incident* in the tale properly so called except the catastrophe."

Bourgeois Gentilhomme, Le (*bōōr-zhwà' zhon-tē-yōm'lu*).—A comedy by Molière, with music by Lulli, produced in 1670. The hero is a tradesman, M. Jourdain, who is ambitious to marry his daughter to a titled husband.

Boz, Sketches by.—By Charles Dickens. They were the first of their class. Dickens was the first to unite the delicately playful thread of Charles Lamb's street musings—half experiences, half bookish fantasies—with the vigorous wit and humor and observation of Goldsmith's *Citizen of the World*, his *Indigent Philosopher*, and *Man in Black*, and twine them together in the golden cord of essay, which combines literature with philosophy, humor with morality, amusement with instruction. The most powerful and popular of the sketches are probably those entitled, *A Visit to Newgate, The Drunkard's Death, Election for Beadle, Greenwich Fair*, and *Miss Evans at the Eagle*.

Bracebridge Hall, or *The Humorists.*—Miscellaneous sketches, in fiction and essay, by Washington Irving, published in 1822.

Bride of Abydos, The.—A Turkish tale, told in octo-syllabic verse by Lord Byron, and published in 1813. It is in two cantos, and opens with the well-known song imitated from Goethe, beginning: "Know ye the land where the cypress and myrtle." The name of the "bride" is Zuleika, and that of her lover, Selim.

Bride of Lammermoor, The.—A romance by Sir Walter Scott, published in 1819, and characterized as a tragedy of the highest order, uniting excellence of plot with Scott's usual merits of character and description.

Candide (*kàn-dēd'*), **ou l'Optimisme** (*ōō lop-tē-mēzm'*).—A philosophical novel by Voltaire, published in 1759. It is named from its hero, who bears all the worst ills of life with a cool, philosophical indifference, laughing at its miseries. Written ostensibly to ridicule philosophical optimism, and on the spur given to pessimist theories by the Lisbon earthquake, *Candide* is really as comprehensive as it is desultory. Religion, political government, national peculiarities, human weakness, ambition, love, loyalty—all come in for the unfailing sneer. The moral, wherever there is a moral, is, "Be tolerant, and *cultivez vôtre jardin*;" that is to say, Do whatsoever work you have to do diligently.

Canterbury Tales, The, by Geoffrey Chaucer, consist of a *Prologue* and twenty-four narratives, of which two only, *Chaucer's Tales of Melibœus* and *The Parson's Tale*, are in prose, the remainder being written in couplets of ten syllables, which have laid the foundation for the most popular form of English verse.

The plan of the poem is as follows: The author supposes that, on the evening before he starts on a pilgrimage to the shrine of St. Thomas-à-Becket, at Canterbury, he stops at the Tabard Inn, in Southwark, where he finds himself in the midst of a company of twenty-one, of all ranks and ages and both sexes, who are also bound for the same destination. After supper, the host of the Tabard, Harry Baillie by name, proposes that, to beguile the journey there and back, the pilgrims shall each of them tell two tales as they come and go; and that he who by the general voice shall have told his story best, shall, on their return to the hostelry, be treated to a supper at the common cost. This is agreed to with acclamation; and, accordingly, the pilgrims start next morning on their way, listening, as they ride, to the heroic tale of the brave and gentle knight who has been chosen to narrate the first tale.

It will be understood that Chaucer does not profess to give to the world all the stories told. As a matter of fact, he gives only twenty-four, of which two have been already named, the remainder being those told by the Knight, the Miller, the Reeve, the Cook, the Man of Law, the Wife of Bath, the Friar, the Sompnour, the Clerk, the Squire, the Franklin, the Doctor, the Pardoner, the Shipman, the Prioress, the Monk, the Nun's Priest, the second Nun, the Canon's Yeoman, the Manciple, and Chaucer himself (Sir Topas). Unfinished as it is, however, the poem was immensely popular, even in the author's time; and it was one of the first books that was issued from the press of Caxton, probably in 1475.

Childe Harold's Pilgrimage.—A poem, in the Spenserian stanza, by Lord Byron. It consists of four cantos, of which the first and second were published in 1812, the third in 1816, and the fourth in 1818; and the preface to the first two cantos contained the following explanation of the origin and purpose of the poem.

"It was written," says Lord Byron, for the most part, amid the scenes which it attempts to describe. It was begun in Albania; and the parts relative to Spain and Portugal were composed from the author's observations in those countries. . . . The scenes attempted to be sketched are in Spain, Portugal, Epirus, Acarnania, and Greece (the third canto describes scenes in Belgium, Switzerland, and the Valley of the Rhine; and canto four is chiefly occupied with Rome) . . . A fictitious character is introduced for the sake of giving some connection to the piece, which, however, makes no pretensions to regularity. It has been suggested to me by friends, on whose opinion I set a high value, that in this fictitious character, Childe Harold, I may incur the suspicion of having intended some real personage; this I beg leave, once for all, to disclaim. Harold is the creation of imagination, for the purpose I have stated. In some trivial particulars, and those merely local, there might be grounds for such a notion; but in the main points, I should hope, none whatever. It is almost superfluous to mention that the ap-

peflation 'Childe' is used as more consonant with the old structure of versification which I have adopted."

Chillon, The Prisoner of.—A poem by Lord Byron, founded on the story of Francois de Bonnivard, the hero of Genevan independence, and published in 1816. Bonnivard was born in 1496, and died in 1571. An account of his life, in French, is prefixed to the poem.

Christmas Carol, A.—A ghost story of Christmas, by Charles Dickens, published in 1843, with illustrations by John Leech. "We are all charmed," wrote Lord Jeffrey to the author, "with your *Carol*, chiefly, I think, for the genuine goodness which breathes all through it, and is the true inspiring angel by which its genius has been awakened. The whole scene of the Cratchits is like the dream of a benevolent angel, in spite of its broad reality, and little Tiny Tim in life and death almost as sweet and touching as Nelly."

Christmas Eve.—A poem by Robert Browning, in which, "after following through a long course of reflection the successive phases of religious belief, he arrives at the certainty that, however confused be the vision of Christ, where His love is, there is the Life; and that, the more direct the revelation of that love, the deeper and more vital is its power."

Chuzzlewit, Martin.—A story of American life and manners, by Charles Dickens the first monthly number of which appeared on January 1, 1843. It is remarkable for the attention it directed to the system of ship-hospitals and to the workhouse nurses whose prototype in Sarah Gamp has become famous all over the world.

Clinker, Humphrey.—A novel by Smollett. The hero, by the same name, a philosophic youth, meets many adventures. Brought up in the workhouse, put out by the parish as apprentice to a blacksmith, he was afterward employed as a hostler's assistant. Having been dismissed from the stable, and reduced to great want, he at length attracts the notice of Mr. Bramble, who takes him into his family as a servant. He becomes the accepted lover of Winifred Jenkins, and at length turns out to be a natural son of Mr. Bramble.

Clouds, The.—A famous comedy by Aristophanes. Strepsiades ("Turncoat") sends his spendthrift son Phidippides to the phrontistery ("thinking-shop") of Socrates, who appears as a sophist, to be reformed by training in rhetoric. Phidippides refuses to go; so Strepsiades goes himself, and finds Socrates swinging in a basket observing the sun and ether. Socrates summons the Clouds, his new deities, and undertakes to make a sophist of him and free him from the religion of his fathers. Unfortunate results of his new knowledge show Strepsiades his error, and he abandons Socrates and sets the phrontistery on fire.

Comedy of Errors.—A comedy by Shakespeare. Twin brothers of exact likeness named Antipholus are served by attendant slaves named Dromio, also of striking resemblance. The humor of the play lies in the complications that arise. The two brothers are lost at sea with their servants and are picked up by different vessels. After long separation they all reappear in Ephesus. There is great entanglement of plot until both brothers face each other in a trial before the duke and all is explained.

Complete Angler, The (or, *The Contemplative Man's Recreation*. "A discourse, of Fish and Fishing, not unworthy the Perusal of most Anglers"). —A famous treatise by Izaak Walton, published in 1653. "Whether," says Sir John Hawkins, "we consider the elegant simplicity of the style, the ease and unaffected humor of the dialogue, the lovely scenes which it delineates, the enchanting pastoral poetry which it contains, or the fine morality it so sweetly inculcates, it has hardly its fellow in any of the modern languages."

Comus.—A masque, or dramatic poem, by John Milton, published in 1637. It was written for the earl of Bridgewater, and acted at his residence, Castle Ludlow, in Shropshire, on Michaelmas night, 1634. The music is by Henry Lawes. Comus (a revel) was the Roman god of banqueting and festive amusements; but in Milton's poems he appears as a lewd enchanter, whose pleasure it is to deceive and ruin the chaste and innocent.

Coningsby.—A novel by B. Disraeli. The characters are meant for portraits: thus, "Rigby" represents Croker; "Monmouth," Lord Hertford; "Eskdale," Lowther; "Ormsby," Irving; "Lucretia" Mme. Zichy; "Countess Colonna," Lady Strachan; "Sidonia," Baron A. de Rothschild; "Henry Sidney," Lord John Manners; "Belvoir," duke of Rutland, second son of Beaumanoir.

Consuelo (*kŏn-sū-ā-lō'*).—A noted novel by George Sand. The heroine has the same name, and is an impersonation of noble purity sustained amidst great temptations.

Copperfield, David.—A novel by Charles Dickens. David is Dickens himself, and Micawber is Dickens' father. According to the tale, David's mother was nursery governess in a family where Mr. Copperfield visited. At the death of Mr. Copperfield, the widow married Edward Murdstone, a hard, tyrannical man, who made the home of David a dread and terror to the boy. When his mother died, Murdstone sent David to lodge with the Micawbers, and bound him apprentice to Messrs. Murdstone and Grinby, by whom he was put into the warehouse, and set to paste labels upon wine and spirit bottles. David soon became tired of this dreary work, and ran away to Dover, where he was kindly received by his [great-]aunt Betsy Trotwood, who clothed him, and sent him as day-boy to Dr. Strong, but placed him to board with Mr. Wickfield, a lawyer, father of Agnes, between whom and David a mutual attachment sprang up. David's first wife was Dora Spenlow, but at the death of this pretty little "child-wife," he married Agnes Wickfield.

Coriolanus.—An historical play by William Shakespeare. In the plot, and in many of the speeches, Shakespeare has followed Sir Thomas North's *Life of Coriolanus*, included in his translation of Amyot's *Plutarch*. "The subject of *Coriolanus*," says Prof. Dowden, "is the ruin of a noble life through the sin of pride. If duty be the dominant ideal with Brutus, and pleasure of a magnificent kind be the ideal of Antony and Cleopatra, that which gives tone and color to Coriolanus is an ideal of self-centered power. The greatness of Brutus is altogether that of the moral conscience; his external figure does not dilate upon the world through a golden haze like that of Antony, nor bulk massively and tower like that of Coriolanus. A haughty and passionate personal feeling, a superb egoism, are with Coriolanus the sources of weakness and of strength."

Corsair, The.—A poem, in three cantos, by Lord Byron, published in 1814. The hero is called Conrad, and is described, in a well-known passage, as leaving

"a Corsair's name to other times,
Link'd with one virtue, and a thousand crimes."

The heroines are Medora, whom Conrad loves, and Gulnare, "the Haram queen," whose love is given to Conrad, and who kills her master, Seyd, in order that Conrad may be free.

Cotter's Saturday Night, The.—A poem by Robert Burns of which his brother remarks: "Robert had frequently remarked to me that there was something particularly venerable in the phrase, 'Let us worship God,' used by a decent, sober head of a family introducing family worship. To this sentiment of the author, the world is indebted for the *Cotter's Saturday Night*. The hint of the plan and title of the poem are taken from Ferguson's *Farmer's Ingle*."

Count of Monte Cristo.—A celebrated romance by Alexander Dumas, in which Edmond Dantes, the hero suffers unjust imprisonment for many years. He finally escapes, only to be apprised of the death of his father and the marriage of his former sweetheart. From information derived from a fellow prisoner, he then comes into possession of great riches through the successful discovery of hoards of treasure in the island of Monte Cristo. His remaining years are given over to a vindication of his former life.

Coverley (papers by Steele and Addison), **Sir Roger de,** was a member of a hypothetical club, and was noted for his modesty, generosity, hospitality, and eccentric whims. He was most courteous to his neighbors, most affectionate to his family, most amiable to his domestics. Sir Roger, who figures in thirty papers of the *Spectator*, is the very beau-ideal of an amiable country gentleman of Queen Anne's time.

Crusoe, Robinson.—Title and hero of a novel by Daniel Defoe. Robinson Crusoe is a shipwrecked sailor, who leads a solitary life for many years on a desert island, and relieves the tedium of life by ingenious contrivances (1719). The story is based on the adventures of Alexander Selkirk, a Scotch sailor, who in 1704 was left by Captain Stradding on the uninhabited island of Juan Fernandez. Here he remained for four years and four months, when he was rescued by Captain Woodes Rogers and brought to England.

Cymbeline.—Title and hero of Shakespeare's play. Imogen, daughter of Cymbeline, king of Britain, married clandestinely Posthumus Leonatus; and Posthumus, being banished for the offense, retired to Rome. One day, in the house of Philario, the conversation turned on the merits of wives, and Posthumus bet his diamond ring that nothing could tempt the fidelity of Imogen. Through the villainy of Iachimo, Cymbeline was forced to believe Imogen untrue. The villainy was in time disclosed, and the beautiful character of Imogen revealed.

Daphnis and Chloe.—A prose-pastoral love story in Greek, by Longus, a Byzantine. Gessner has imitated the Greek romance in his idyl called *Daphnis*. In this love story Longus says he was hunting in Lesbos, and saw in a grove consecrated to the nymphs a beautiful picture of children exposed, lovers plighting their faith, and the incursions of pirates, which he now expresses and dedicates to Pan, Cupid, and the nymphs. Daphnis, of course, is the lover of Chloe.

Darby and Joan.—This ballad is frequently called *The Happy Old Couple*. The words are sometimes attributed to Prior. Darby and Joan are an old-fashioned, loving couple, who are wholly averse to change of any sort. It is generally said that Henry Woodfall was the author of the ballad, and that the originals were John Darby (printer, of Bartholomew Close, who died 1730) and his wife Joan. Woodfall served his apprenticeship with John Darby.

Decameron, The.—A collection of romances by Giovanni Boccaccio. It derives its name from its framework. Seven gentlemen and three ladies retire from Florence, during the plague, to a pleasant garden retreat, where they beguile the time by narrating various stories of love adventure.

Deerslayer, The.—The title of a novel by J. F. Cooper, and the nickname of its hero, Natty, or Nathaniel, Bumppo. He is a model uncivilized man, honorable, truthful, and brave, pure of heart and without reproach. He is introduced in five of Cooper's novels: *The Deerslayer*, *The Pathfinder*, *The Last of the Mohicans*, *The Pioneers*, and *The Prairie*. He is called "Hawk-Eye" in *The Last of the Mohicans;* "Leather-Stocking" in *The Pioneers;* and "The Trapper" in *The Prairie*, in which last book he dies.

Deserted Village, The.—A poem by Oliver Goldsmith. It was "instantaneously popular. Two new editions of it were called for in the following month, and a fourth in August, and passages from the poem were in every mouth, and the topics which it suggested, of depopulation, luxury, and landlordism, were discussed in connection with it."

The Deserted Village has been identified with Lissoy, a quaint Irish village in the parish of Kilkenny West, of which Goldsmith's father was the pastor, and whose natural features are accurately described in the poem.

Divina Commedia (or, *Divine Comedy*).—The first poem of note ever written in the Italian language. It is an epic by Danté Alighieri, and is divided into three parts: Hell, Purgatory, and Paradise. Danté called it a *comedy*, because the ending is happy; and his countrymen added the word *divine* from admiration of the poem. The poet depicts a vision, in which he is conducted, first by Vergil (*human reason*) through hell and purgatory; and then by Beatrice (*revelation*), and finally by St. Bernard through the several heavens, where he beholds the Triune God.

"Hell" is represented as a funnel-shaped hollow, formed of gradually contracting circles, the lowest and smallest of which is the earth's center. "Purgatory" is a mountain rising solitary from the ocean on that side of the earth which is opposite to us. It is divided into terraces, and its top is the terrestrial paradise. From this "top" the poet ascends through the seven planetary heavens, the fixed stars, and the "primum mobile."

In all parts of the regions thus traversed there arise conversations with noted personages. The deepest questions of philosophy and theology are discussed and solved; and the social and moral condition of Italy, with the corruptions of church and state, are depicted with indignation. Fifty-two years after the poet's death the republic of Florence set apart an annual sum for public lectures to explain the *Divine Comedy* to the people in one of the churches, and Boccaccio himself was appointed first lecturer.

Dombey and Son.—A novel by Dickens. Mr. Dombey is a self-sufficient, purse-proud, frigid merchant, who feels satisfied there is but one Dombey in the world, and that is himself. When Paul was born, his ambition was attained, his whole heart was in the boy, and the loss of the mother was but a small matter. The boy's death turned his heart to stone.

Domesday Book (or, *Doomsday Book*).—The name of one of the oldest and most valuable records of England, containing the results of a statistical survey of that country made by William the Conqueror, and completed in the year 1086. The origin of the name—which seems to have been given to other records of the same kind—is somewhat uncertain; but it has obvious reference to the supreme authority of the book in doom or judgment on the matters contained in it.

Don Quixote (*dŏn kē-hō'tā*).—A celebrated Spanish romance by Cervantes. Don Quixote is represented as "a gaunt country gentleman of La Mancha, full of genuine Castilian honor and enthusiasm, gentle and dignified in his character, trusted by his friends, and loved by his dependents," but "so completely crazed by long reading the most famous books of chivalry that he believes them to be true, and feels himself called on to become the impossible knight-errant they describe, and actually goes forth into the world to defend the oppressed and avenge the injured, like the heroes of his romances." The fame of Cervantes will always rest upon this incomparable satire.

Dorrit, see *Little Dorrit*.

Durward, Quentin.—A novel by Scott. Quentin Durward is a young archer of the Scottish guard in the service of Louis XI. of France. When Liège is assaulted, Quentin Durward and the Countess Isabelle, who has been put into his charge, escape on horseback. The countess publicly refuses to marry the Duc d'Orléans, to whom she has been promised, and ultimately marries the young Scotchman.

Dwarf, The Black.—A novel by Sir Walter Scott. The black dwarf is a fairy of the most malignant character; a genuine northern Duergar, and once held by the dalesmen of the border as the author of all the mischief that befell their flocks and herds. In Scott's novel the black dwarf is introduced under the aliases of Sir Edward Mauley; Elshander, the recluse; Cannie Elshie; and the Wise Wight of Mucklestane Moor.

Ecce Homo.—The title of a semitheological work, attributed to Professor Seeley, and published in 1865, in which the humanity of Christ is considered and enforced, apart from his divinity. The phrase, "The enthusiasm of humanity," was originated in this work; to which, it may be mentioned, Dr. Joseph Parker replied in his *Ecce Deus*, published in 1866.

Elegy Written in a Country Churchyard.—By Thomas Gray. Dr. Johnson gives 1750 as the date of publication; and declares that the piece "abounds with images which find a mirror in every mind, and with sentiments to which every bosom returns an echo." The churchyard was that of Stoke Pogis, near Eton.

Emile (*ā-mēl'*).—A philosophical romance on education by Jean Jacques Rousseau (1762). Emile, the chief character, is the author's ideal of a young man perfectly educated, every bias but that of nature having been carefully withheld.

Endymion.—(1) A poem by John Keats, published in 1818. Shelley pronounced it "full of some of the highest and the finest gleams of poetry."

(2) A lyric by Henry Wadsworth Longfellow, founded on the old mythic story of the mortal youth who was beloved by Diana, and received her kiss—

When, sleeping in the grove,
He dreamed not of her love.

Esmond.—A novel by W. M. Thackeray, published in 1852. Its most striking feature is its elaborate imitation of the style and even the manner of thought of the time of Queen Anne's reign, in which its scenes are laid.

Esprit des Lois [*es-prē' dā lwa* (or, *Spirit of the Laws*)].—A celebrated philosophical work by Montesquieu, published at Geneva in 1748. The author begins somewhat formally with the old division of politics into democracy, aristocracy, and monarchy. He discusses the principles of each, and their bearings on education, on positive law, on social conditions, on military strength (offensive and defensive) on individual liberty, on taxation and finance. Then an abrupt return is made from the effects to the causes of constitutions and polity. The theory of the influence of physical conditions, and especially of climate, on political and social institutions—a theory which is perhaps more than any other identified with the book—receives special attention, and a somewhat disproportionate space is given to the question of slavery in this connection. From climate Montesquieu passes to the nature of the soil, as in its turn affecting civil polity. He then attacks the subject of manners and customs as distinct from laws of trade and commerce, of the family, of jurisprudence, of religion. The book concludes with an elaborate examination of the feudal system in France.

Essay on Man.—A poem by Alexander Pope, in four epistles: *Of the Nature and State of Man With Respect to the Universe; Of the Nature and State of Man With Respect to Himself as an Individual; Of the Nature and State of Man With Respect to Society;* and *Of the Nature and State of Man With Respect to Happiness.* Its fundamental idea is to the effect that the system of the universe is "a benevolent system, in which every virtue, as well as every passion, has its object and end."

"If," says Professor Ward, "the *Essay on Man* were shivered into fragments, it would not lose its value; for it is precisely its details which constitute its moral as well as literary beauties. Nowhere has Pope so abundantly displayed his incomparable talent of elevating truisms into proverbs, in his mastery over language and poetic form."

Essays (or, *Counsels Civil and Moral*).—By Francis, Lord Bacon. In the dedication to his brother Anthony, the author says he published the *Essays* "because many of them had been stolen abroad in writing," and he desired to give the world a correct version of his work. The word *Essays*, he says, "is late; but the thing is ancient, for Seneca's Epistles to Lucilius, if you mark them well, are but essays, that is, dispersed meditations, though conveyed in the form of epistles." "The transcendent strength of Bacon's mind is visible," says Hallam, "in the whole tenor of these *Essays*, unequal as they must be, from the very nature of such compositions. They are deeper and more discriminating than any earlier, or almost any later, work, in the English language; full of recondite observations, long matured, and carefully sifted."

Eugénie Grandet (*u-zhā-nē' gron-dā'*).—A novel by Balzac, written in 1833, published in 1834. The heroine, Eugénie, is sacrificed to the cold-blooded avariciousness of her father. This is one of Balzac's best novels.

Evangeline.—The title and heroine of a tale in hexameter verse by Longfellow, in two parts. Evangeline was the daughter of Benedict Bellefontaine, the richest farmer of Acadia (now Nova Scotia). At the age of 17 she was legally betrothed by the notary-public to Gabriel, son of Basil the blacksmith; but next day all the colony was exiled by the order of George II., and their houses, cattle, and lands were confiscated. Gabriel and Evangeline were parted, and now, sustained by the brightness of hope, she wandered from place to place to find her betrothed. Basil had settled in Louisiana; but when Evangeline reached that distant land, Gabriel had gone. She sought him on the prairies, and, again far north, in Michigan, but ever a few days, a few weeks, too late. At length, grown old in this hopeless quest, she came to Philadelphia and became a sister of mercy. The plague broke out; and, as she visited the almshouse in ministration, she saw an old man who had been smitten with the pestilence. It was Gabriel. He tried to whisper her name; but death closed his lips. "All was ended now," and "Side by side, in nameless graves, the lovers are sleeping."

Excursion, The.—A poem, in blank verse, by William Wordsworth, published in 1814, and forming the second part of a poem in three parts, to be entitled *The Recluse*, which the author had at one time contemplated. It consists of nine books, respectively entitled *The Wanderer, The Solitary, Despondency, Despondency Corrected, The Pastor, The Churchyard Among the Mountains, The Same Subject Continued, The Parsonage, Discourse of the Wanderer*, and *An Evening Visit to the Lake.*

Eyre, Jane.—A novel by Charlotte Brontë, published in 1847, with a dedication to William Makepeace Thackeray, as "the first social regenerator of the day." The early scenes are laid in the Lowood Institution, which has been identified with a school established by the Rev. W. Carus Wilson, at Cowen's Bridge, near Leeds, and which is described with stern but unpleasing realism. Much of the book was derived from the author's own personal experience.

Faërie Queene, The.—A poem by Edmund Spenser, published in 1590. This great allegorical epic is divided into six books, of which the first contains the Legend of the Knight of the Red Cross, or Holiness; the second the Legend of Sir Guyon, or Temperance; the third the Legend of Britomartis, or Chastity; the fourth the Legend of Cambal and Telamond, or Friendship; the fifth the Legend of Artegall, or Justice; and the sixth the Legend of Sir Calidore, or Courtesy. There originally existed twelve books, but the last six, excepting two cantos on Mutability, were lost by the poet's servant in crossing from Ireland to England—a circumstance to be deeply regretted by every lover of true poetry. The finest things in Spenser are the character of Una, in the first book, the House of Pride, the Cave of Mammoth, and the Cave of Despair; the account of Memory; the description of Belphœbe; the story of Florimel and the Witch's Son; the gardens of Adonis and the Bower of Bliss; the Mask of Cupid; and Colin Clout's Vision, in the last book.

Faust.—A celebrated tragedy by Goethe, the materials of which are drawn in part from the popular legends of Dr. Faustus, a famous magician of the sixteenth century. A rich uncle having left him a fortune, Faust ran to every excess, and, when his fortune was exhausted, made a pact with the devil (who assumed the name of Mephistopheles, and the appearance of a little gray monk), that, if he might indulge his propensities freely for twenty-four years, he would at the end of that period consign to the devil both body and soul. The compact terminated in 1550, when Faust disappeared. His sweetheart was Margherita whom he seduced, and his faithful servant was Wagner.

Faustus.—A tragedy name; represented as a vulgar sorcerer tempted to sell his soul to the Devil (Mephistopheles), on condition of having a familiar spirit at his command, the possession of earthly power and glory, and unlimited gratification of his sensual appetites, for twenty-four years; at the end of which time, when the forfeit comes to be exacted, he shrinks and shudders in agony and remorse, imploring yet despairing of the mercy of heaven. This has been the theme of many writers. It is the subject of an opera by Gounod.

Femmes Savantes (*fam sá-vāN'*), **Les** (or, *The Learned Women*).—Comedy by Molière. These women go in for women's rights, science, and philosophy, to the neglect of domestic duties and wifely amenities. The "blue-stockings" are (1) Philaminte, the mother of Henriette, who discharges one of her servants because she speaks bad grammar; (2) Armande, sister of Henriette, who advocates platonic love and science; and (3) Bélise, sister of Philaminte, who sides with her in all things, but imagines that every one is in love with her. Henriette, who has no sympathy with these "lofty flights," is in love with Clitandre; but Philaminte wants her to marry Trissotin, a *bel esprit.* However, the father loses his property through the "savant" proclivities of his wife, Trissotin retires, and Clitandre marries Henriette, the "perfect" or thorough woman.

Francesca da Rimini (*frán-ches'kà dà rē'mē-nē*).—A dramatic poem by James Henry Leigh Hunt published in 1816. Francesca was the daughter of Guido da Polenta, Lord of Ravenna, in the latter part of the thirteenth century, and was married to Lanciotto, son of Malatesta da Rimini, who, discovering her criminal intercourse with his brother, revenged himself by putting them both to death. Her story forms an episode in Dante's *Inferno.*

Frankenstein (or, the *Modern Prometheus*).—A novel by Mrs. Shelley, published in 1818. It was commenced in the summer of 1816, when Byron and the Shelleys were residing on the banks of the Lake of Geneva, and when, "during a week of rain, having amused themselves with reading German ghost stories, they agreed at last to write something in imitation of them. 'You and I,' said Lord Byron to Mrs. Shelley, 'will publish ours together.' He then began his tale of the *Vampire;*" but "the most memorable result," writes Moore, "of their story-telling compact, was Mrs. Shelley's wild and powerful romance of *Frankenstein*, one of those original conceptions that take hold of the public mind at once and forever."

The hero of the book, a native of Geneva, and a student constructs a monster of grewsome human remains and gives it life by galvanism. The monster feels that he is unlike all other human beings, and in revenge for the injury inflicted upon him by his creator, murders his friend, his brother, and his bride, and finally seeks out Frankenstein himself, with a view to wreaking a similar revenge on him. The hero, however, happily escapes his enemy, who retires to the utmost extremity of the globe, in order to put an end to his miserable life; and Frankenstein himself falls ill and dies on his way home after his last final flight from the monstrosity whom he has himself brought into the world.

French Revolution, The.—A history, in three parts, by Thomas Carlyle, published in 1837, and described by Lowell as "a series of word-pictures, unmatched for vehement power, in which the figures of such sons of earth as Mirabeau and Danton loom gigantic and terrible as in the glare of an eruption; their shadows swaying far and wide, grotesquely awful. But all is painted by eruptive flashes in violent light and shade. There are no half tints, no gradations, and we find it impossible to account for the continuance in power of less Titanic actors in the tragedy, like Robespierre, on any theory, whether of human nature or of individual character, supplied by Mr. Carlyle."

Froissart (*froi'sàrt*).—*The Cronicles of England, Fraunce, Spayne, Portyugale, Scotlande, Bretayne, Flanders, and other places adjoynynge, translated out of Frenche into our maternalle Englysche Tonge*, by "John Bourchier, knight, Lord Berners." Printed in 1523. The history extends from 1326 to 1400. Froissart resided in England as secretary to Queen Philippa from 1361 to 1366, and visited it again in 1395, when he paid a visit to Scotland.

Gargantua.—Rabelais' celebrated romance, the hero of which is a gigantic personage, about whom many wonderful stories are related. He lived for several centuries, and at last begot a son, Pantagruel, as wonderful as himself. The *Pleasant Story of the Giant Gargantua and of his Son Pantagruel*, so satirized the monastic orders of his time that it was denounced by the spiritual authorities. Francis I., however, protected the author, and allowed him to print the third part of it in 1545.

Gesta Romanorum.—A collection of old romances compiled by Pierre Bercheure, prior of the Benedictine convent of St. Eloi, Paris. Shakespeare, Spenser, Gower, and many later writers have gone to this source. It took its present form in England about the beginning of the fourteenth century, the foundation coming from Roman writers, to which were added moralizing paragraphs and sometimes other religious and mystical tales.

Gil Blas (*zhēl blàs*).—A romance by Le Sage. The hero is the son of Blas of Santillané, squire or "escudero" to a lady, and brought up by his uncle, Canon Gil Perès. Gil Blas went to Dr. Godinez's school, of Oviedo, and obtained the reputation of being a great scholar. He had fair abilities, a kind heart, and good inclinations, but was easily led astray by his vanity. Full of wit and humor, he was lax in his morals. Duped by others at first, he afterward played the same devices on those less experienced. As he grew in years, however, his conduct improved, and when his fortune was made, he became an honest, steady man.

Godiva.—A poem by Alfred Tennyson. The story of the lady and *Peeping Tom of Coventry* is told in full by Dugdale. Godiva was the wife of Leofric, earl of Mercia, and undertook to ride naked through the town if he would remit a tax under which the people groaned. The earl consented and the lady kept her word.

Golden Ass, The.—A romance in Latin by Apuleius. It is the adventures of Lucian, a young man who had been transformed into an ass, but still retained his human consciousness. It tells us the miseries which he suffered at the hands of robbers, eunuchs, magistrates, and so on, till the time came for him to resume his proper form. It is full of wit, racy humor, and rich fancy, and contains the exquisite episode of Cupid and Psyche.

Golden Legend, The.—The title of an ecclesiastical work in 177 sections, dating from the thirteenth century, written by one James de Voragine, a Dominican monk, and descriptive of the various saints' days in the Roman calendar. It is deserving of study as a literary monument of the period, and as illustrating the religious habits and views of the Christians of that time.

Guy Mannering.—The second of Scott's historical novels, published in 1815, just seven months after *Waverley.* The interest of the tale is well sustained; but the love scenes, female characters, and Guy Mannering himself are quite worthless. Not so the character of Dandy Dinmont, the shrewd and witty counselor Pleydell, the desperate, sea-beaten villainy of Hatteraick, the uncouth devotion of that gentlest of all pedants, poor Dominie Sampson, and the savage, crazed superstition of the gypsy-dweller in Derncleugh.

Hamlet.—A tragedy by Shakespeare. The chief character is Hamlet, prince of Denmark. The ghost of his father appears to him, and urges him to avenge his murder upon his uncle. But the prince feigns madness, and puts off his revenge from day to day by "thinking too precisely on the event." Hamlet's mother had married Claudius

ing of Denmark, after the death of her former husband. Claudius prepared poisoned wine, which he intended for Hamlet; but the queen, not knowing it, drank it, was poisoned and died. Hamlet, seeing his mother fall dead, rushed on the king and killed him almost by accident, and is killed himself by a poisoned rapier in the hands of Laertes.

rd Times.—A novel by Dickens. Bounderby, a street Arab, raised himself to banker and cotton prince. When past fifty years of age he married Louisa, daughter of Thomas Gradgrind. The bank was robbed, and Bounderby believed Stephen Blackpool to be the thief, because he had dismissed him from his employ. The culprit was Tom Gradgrind, the banker's brother-in-law, who escaped out of the country. In the dramatized version, the bank was not robbed, but Tom removed the money to another drawer for safety.

art of Midlothian, The.—A novel by Sir Walter Scott, published in 1818. It has for heroines Jeanie and Effie Deans. Among the other characters are Dumbiedykes and Madge Wildfire. It has often been dramatized. "The Heart of Midlothian" was the popular name for the tollbooth at Edinburgh, the capital of the county of Midlothian.

awatha, The Song of.—A poem by Henry Wadsworth Longfellow, written in the following peculiar measure:

Should you ask me, "Whence these stories?"
. . . . . .
I should answer, I should tell you,
. . . . . .
"I repeat them as I heard them
From the lips of Nawadaha,
The musician, the sweet singer."

The poem is entirely devoted to a description of life among the aboriginal tribes of America. It was published in 1855. Hiawatha is a mythical person believed by some of the North American Indians to have been sent among them to clear their rivers, forests, and fishing-grounds, and to teach them the arts of peace. When the white man came, then Hiawatha knew that the time of his departure was at hand, when he must go

To the kingdom of Ponemah,
The land of the Hereafter.

ghland Mary.—A song by Robert Burns, which Burns himself thought was in his happiest manner, and which refers, he says, to one of the most interesting passages of his youthful days. By this he means his attachment to Mary, a servant in the family of Mr. Hamilton, "who will be remembered," says Alexander Smith, "with Dante's Beatrice and Petrarch's Laura." It was arranged that the lovers sh uld become man and wife, and that Mary should go to her friends to prepare for the wedding. But before her departure came the farewell scene so touchingly described in the poem:

Our parting was fu' tender;
And, pledging aft to meet again,
We tore ourselves asunder:
But oh! fell death's untimely frost
That nipt my flower sae early!
Now green's the sod, and cauld's the clay,
That wraps my Highland Mary!

ohenlinden.—A poem by Thomas Campbell, published in 1802, celebrating the battle of Hohenlinden, gained by Moreau and the French over the Austrians. The poet visited the battlefield on December 3, 1800.

ome, Sweet Home.—A popular lyric contained in the drama of *Clari, the Maid of Milan*, by John Howard Payne. The beautiful melody to which it has been wedded is said to be of Italian or Sicilian origin, though by some it is attributed to Sir Henry Rowley Bishop. Perhaps the latter merely arranged and harmonized it.

ouse of the Seven Gables, The.—A romance by Nathaniel Hawthorne, published in 1851. "In *The House of the Seven Gables*," says R. H. Hutton, "we have a picture studied to impress on us that both personal character and the malign influences of evil action are transmitted, sometimes with accumulating force, even through centuries, blighting every generation through which they pass. The subject would apparently involve a series of sketches, but only two are introduced from the past, and the family characteristics are so anxiously preserved as to make even these seem like slight modifications of some of the living group. The only incident in the tale is the light thrown upon a crime—which had been committed thirty years before the story opens—by the sudden death of the principal representative of a family from the same disease, in the same chair, and under the same circumstances, as those of the old ancestor and founder of the family, whose picture hangs above the chair."

ypatia.—A novel by the Rev. Charles Kingsley, the scene of which is laid in Alexandria, at a time when Christianity was gaining ground against Paganism and the neo-Platonism of the schools. Hypatia herself was born about the year 370, and, after attracting to her lectures on philosophy a large and brilliant auditory, was torn to pieces by the rabble of her native city in 415. *Hypatia* appeared in 1853.

yperion.—A romance in four books, by Henry Wadsworth Longfellow. This work, which was the result of an extensive tour in Germany, was published in 1839, and, with much that is purely fanciful and imaginative, contains much that came within the actual experience of the author, who is represented, idealized, in the character of Paul Flemming. The episode with Mary Ashburton is supposed to have reference to a real occurrence. The book is full of description and of eloquent discussion, besides being interspersed with snatches of legend and of song.

Idylls of the King.—A series of poems by Tennyson. Taken together they form a parable of the life of man. Each idyll taken as a separate picture represents the war between sense and soul. In *Lancelot and Guinevere* the lower nature leads them astray and there is intense struggle before the higher nature prevails. In *Vivien*, *Tristram*, and *Modred* the base and sensual triumph. In *Arthur*, *Sir Galahad* and *Percivale*, it is the victory of the spiritual.

Iliad.—A famous Greek epic poem by Homer. It is the tale of the siege of Troy, in twenty-four books. It is written in Greek hexameters, and commemorates the deeds of Achilles and other Greek heroes at the siege of Troy. Books one, two, and three are introductory to the war. Paris proposes to decide the contest by single combat, and Menelaus accepts the challenge. Paris, being overthrown, is carried off by Venus, and Agamemnon demands that the Trojans shall give up Troy in fulfillment of the compact, and the siege follows. The gods take part, and frightful slaughter ensues. At length Achilles slays Hector, and the battle is at an end. Old Priam, going to the tent of Achilles, craves the body of his son Hector; Achilles gives it up, and the poem concludes with the funeral rites of the Trojan hero. Vergil continues the tale from this point, shows how the city was taken and burnt, and then continues with the adventures of Æneas, who escapes from the burning city, and makes his way to Italy.

Ingoldsby Legends, The.—A collection of legends in prose and verse, supposed to have been found in the family chest of the Ingoldsby family, and related by Thomas Ingoldsby. Of the poetical pieces it is not too much to say that, for originality of design and diction, for quaint illustration and musical verse, they are not surpassed in the English language. From the days of Hudibras to our time, the drollery invested in rhyme has never been so amply or so felicitously exemplified; and if derision has been unsparingly applied, it has been to lash knavery and imposture.

In Memoriam.—A poem by Alfred Tennyson, published in 1850, and consisting of one hundred and thirty "short swallow-flights of song," in a measure which Tennyson has made his own. It is well known that these "brief lays, of sorrow born," were written in memory of the author's friend, Arthur Henry Hallam, who died in 1833. They are characterized by George MacDonald as forming "the poem of the hoping doubters, the poem of our age—the grand minor organ-fugue of *In Memoriam*. It is the cry of the bereaved Psyche into the dark infinite after the vanished love. His friend is nowhere in his sight, and God is silent. Death, God's final compulsion to prayer, in its dread, its gloom, its utter stillness, its apparent nothingness, urges the cry. Moanings over the dead are mingled with the profoundest questionings of philosophy, the signs of nature, and the story of Jesus, while now and then the star of the morning, bright Phosphor, flashes a few rays through the shifting cloudy dark. And if the sun has not arisen on the close of the book, yet the aurora of the coming dawn gives light enough to make the onward journey possible and hopeful."

Innocents Abroad.—By Mark Twain. Travelers seeing Europe without any illusions. The fun consists in an irreverent application of modern common sense to historic associations, ridiculing sentimental humbug. An air of innocence and surprise adds to the drolleries of their adventures.

Instauratio Magna.—The title (*The Great Restoration*) which Bacon gave to his *Magnum Opus*, the design of which was for six divisions:—(1) *The Advancement of Learning;* (2) the *Novum Organum;* (3) the *Experimental History of Nature;* (4) the *Scala Intellectus*, which leads from experience to science (5) the *Bodronic*, or anticipations of the second philosophy; and (6) *Active Science*, or experiment. Of these, only the first two, and a portion of the third (*Sylva Sylvarum*), were published. The idea that was to run through the *Instauratio* was that invention must be based upon experience, and experience upon experiment.

Ivanhoe.—A novel by Sir Walter Scott. The hero, also Ivanhoe, figures as Cedric of Rotherwood's disinherited son, the favorite of King Richard I., and the lover of the Lady Rowena, whom, in the end, he marries. The scene is laid in England in the reign of Richard I., and we are introduced to Robin Hood in Sherwood forest, banquets in Saxon halls, tournaments, and all the pomp of ancient chivalry. Rowena, the heroine, is quite thrown into the shade by the gentle, meek, yet high-souled Rebecca.

Jekyll, Doctor, and Mr. Hyde.—A singular romance by Robert Louis Stevenson. The hero is a duplex character—Dr. Jekyll and Mr. Hyde. Doctor Jekyll is a benevolent and upright physician, who by means of a potion is able to transform himself for a time into a second personality, Mr. Hyde, of a brutal and animal nature.

Jerusalem Delivered.—An epic in twenty books, by Torquato Tasso. The crusaders, encamped on the plains of Tortosa, chose Godfrey for their chief, and Alandine, king of Jerusalem, made preparations for defense. The Christian army having reached Jerusalem, the king of Damascus sent Armida to beguile the Christians. It was found that Jerusalem could never be taken without the aid of Rinaldo. Godfrey, being informed that the hero was dallying with Armida in the enchanted island, sent to invite him back to the army; he returned, and Jerusalem was taken. Armida fled into Egypt, and offered to marry any knight who slew Rinaldo. The love of Rinaldo returned, he pursued her and she relented. The poem concludes with the triumphant entry of the Christian army into the Holy City, and their devotions at the tomb of the Redeemer. The two chief episodes are the loves of Olindo and Sofronia, and of Tancred and Clorinda.

Julius Cæsar.—An historical tragedy by William Shakespeare. The poet was in this, as in other plays, materially assisted by North's translation of Plutarch. "Shakespeare's *Julius Cæsar*," says Hazlitt, "is not equal, as a whole, to either of his other plays taken from the Roman history. It is inferior in interest to *Coriolanus*, and both in interest and power to *Antony and Cleopatra*. It, however, abounds in admirable and affecting passages, and is remarkable for the profound knowledge of character, in which Shakespeare could hardly fail."

Kenilworth.—A novel by Sir Walter Scott. This is very superior to *The Abbot* and *The Monastery*. For interest it comes next to *Ivanhoe*, and the portrait of Queen Elizabeth is lifelike and correct. That of Queen Mary is given in *The Abbot*. Full of courtly gayeties and splendor, the novel contains the unhappy tale of the beautiful Amy Robsart, which cannot fail to excite our sympathy and pity.

King Lear.—A tragedy by Shakespeare whose hero is a fabulous or legendary king of Britain. He had three daughters, and when four score years old, wishing to retire from the active duties of sovereignty, resolved to divide his kingdom between them, but was persuaded to disinherit Cordelia. The beauty of the play is the exquisite character Cordelia, who is a "perfect woman."

Lady of Lyons, The.—A drama, by Lord Lytton, in which Pauline Deschappelles, daughter of a Lyonese merchant, rejects the suits of Beauseant, Glavis, and Claude Melnotte, who therefore combined. Claude, who was a gardener's son, aided by the other two, passed himself off as Prince Como, married Pauline, and brought her home to his mother's cottage. The proud beauty was very indignant, and Claude left her to join the French army. He became a colonel, and returned to Lyons. He found his father-in-law on the eve of bankruptcy, and that Beauseant had promised to satisfy the creditors if Pauline would consent to marry him. Pauline was heartbroken; Claude revealed himself, paid the money required, and carried home the bride.

Lady of Shalott, The.—A poem by Alfred Tennyson, founded on an incident in *King Arthur*. It is descriptive of "a being whose existence p without emotion, without changes, without ligible motive for living on, without hope o here or hereafter."

Lady of the Lake, The.—A poem in six by Sir Walter Scott, published in 1810. ured even by the standard of the *Minstr Marmion*, the *Lady of the Lake* possessed Palgrave, "merits of its own, which rai reputation still higher. Jeffrey's predict been perfectly fulfilled, that the *Lady of t* would be 'oftener read than either of the and it is generally acknowledged to be, i hart's words, 'the most interesting, ro picturesque, and graceful of his great p The descriptions of scenery, which f of the chief charms of the poem, render now, one of the most minute and faithf books to the region in which the drama and the Knight of Snowdon is laid.

Lalla Rookh.—An oriental romance by Moore, consisting of four tales in verse, *The Veiled Prophet of Khorassan*, *Para the Peri*, *The Fire-Worshippers*, and *T of the Harem*, and connected by a shor narrative, in which it is described how Rookh, daughter of the Emperor Aurun journeys toward Bucharia to meet her enga husband, and how the prince gains her love on way, in the guise of a cashmerian minstrel. *Lal Rookh* was published in 1817.

L'Allegro.—A descriptive poem by John Milton, probably written during his college life.

L'Amour Médecin (*la-moor' mād-sax'*), (or, *The Love Doctor*).—A comedy by Molière, written about the year 1665. Lucinde, the daughter of Sganarelle, is in love, and the father calls in four doctors to consult upon the nature of her malady. They see the patient, and retire to consult together, but talk about Paris, about their visits, about the topics of the day; and when the father enters to know what opinion they have formed, they all prescribe different remedies, and pronounce different opinions. Lisette then calls in a "quack" doctor (Clitandre, the lover), who says that he must act on the imagination, and proposes a seeming marriage, to which Sganarelle assents. The assistant being a notary, Clitandre and Lucinde are married.

Last Days of Pompeii, The.—A novel by Bulwer-Lytton, Edward George, Baron Lytton, which was published in 1834. The interest of the book is one of

situation and of action rather than of character. The scenes which linger on our memories longest are the noonday excursion on the Campanian seas, the temple of Isis, with its hidden machinery; the funeral pomp and dirge of the murdered Apæcides, Lydon perishing in the unequal struggle; the price which was to have been paid for a father's liberty; and lastly, the grand catastrophe, a subject which called forth all Lord Lytton's brilliant powers.

Leviathan (or, the *Matter, Form, and Power of a Commonwealth, Ecclesiastical and Civil*).—A work by Thomas Hobbes, published in 1651. In *Leviathan*, Hobbes' peculiar theories in politics received their fullest and ablest expression. They found an illustrious opponent in Lord Clarendon, who, in 1676, published *A Brief View and Survey of the Dangerous and Pernicious Errors to Church and State in Mr. Hobbes' book Entitled Leviathan.*

Little Dorrit.—The heroine and title of a novel by Charles Dickens. Little Dorrit was born and brought up in the Marshalsea prison, Bermondsey, where her father was confined for debt; and when about 14 years of age she used to do needlework, to earn a subsistence for herself and her father. The child had a pale, transparent face; was quick in expression, though not beautiful in feature. Her eyes were a soft hazel, and her figure slight. The little dove of the prison was idolized by the prisoners, and when she walked out, every man in Bermondsey who passed her, touched or took off his hat out of respect to her good works and active benevolence. Her father, coming into a property, was set free at length, and Little Dorrit married Arthur Clennam, the marriage service being celebrated in the Marshalsea, by the prison chaplain.

Locksley Hall.—A poem by Tennyson, in which the hero, the lord of Locksley Hall, having been jilted by his cousin Amy for a rich boor, pours forth his feelings in a flood of scorn and indignation. The poem is understood to have been occasioned by a similar incident in the poet's own life, but this has been questioned.

Lorna Doone.—A novel by R. D. Blackmore, published in 1869, the scene of which is laid in Exmoor. The Doones are a family of robbers and freebooters from which Lorna, otherwise Lady Lorna Dugal, is rescued by John Ridd, a young man. Ridd finally broke up the band, drove them from Doone valley, and married Lorna.

Love's Labor's Lost.—A comedy by Shakespeare. Ferdinand, king of Navarre, with three lords named Biron, Dumain, and Longaville, agree to spend three years in study, during which time no woman was to approach the court. The compact signed, all went well until the princess of France, attended by Rosaline, Maria, and Katharine, besought an interview respecting certain debts said to be due from the king of France to the king of Navarre. The four gentlemen fell in love with the four ladies. The love of the king sought the princess, by right, Biron loved Rosaline, Longaville admired Maria, and Dumain adored Katharine. In order to carry their suits, the four gentlemen, disguised as Muscovites, presented themselves before the ladies; but the ladies, having warned of the masquerade, disguised themselves also, so that the gentlemen in every case addressed the wrong lady. A mutual arrangement was made that the suits should be deferred for twelve months and a day; and if, at the expiration of that time, they remained of the same mind, the matter should be taken into serious consider-

, The.—A Portuguese poem by Luis de Camões, in 1572. *The Lusiad* celebrates the events in the history of Portugal, and is reckonable as the only modern epic poem which is invaded by anything approaching the national popular spirit of ancient epic poems. Bacchus the guardian power of the Mohammedans, Venus, or Divine Love, of the Lusians. The first sailed to Mozambique, then to Melinda (Africa), where the adventurers were hospitably received and provided with a pilot to conduct them to India. In the Indian Ocean, Bacchus raises a tempest to destroy the fleet; Venus, however, calmed the sea, and Gama arrived in India in safety. Having accomplished his object, he returned to Lisbon. Among the most famous passages are the tragical story of Inez de Castro, and the apparition of the giant Adamastor, who appears as the spirit of the storm to Vasco da Gama, when crossing the cape. The versification of *The Lusiad* is extremely charming.

Macbeth.—One of Shakespeare's most celebrated tragedies, whose chief characters are Macbeth, king of Scotland, and Lady Macbeth, his murderously ambitious wife. Urged by the latter he kills Duncan, the rightful king, and in turn is himself slain by Macduff. The tale of Macbeth and Banquo was borrowed from the legendary history of Scotland, but the interest of the play is not historical. It is a tragedy of human life, intensely real, the soul, with all its powers for good or evil, deliberately choosing evil. The three witches in the desert place, in thunder, lightning, storm, strike the keynote of evil suggestion. The awfulness of soul destruction is felt in Macbeth and Lady Macbeth as in no other of Shakespeare's dramas.

Madoc.—A poem by Southey, founded on one of the legends connected with the early history of America. Madoc, a Welsh prince of the twelfth century, is represented as making the discovery of the western world. His contests with the Mexicans form the subject.

Malade Imaginaire, Le (or, *The Imaginary Invalid*).—A comedy by Molière. Mons. Argan, who took seven mixtures and twelve lavements in one month instead of twelve mixtures with twenty lavements, as he had hitherto done. "No wonder," he says, "I am not so well." He fancies his wife loves him dearly, and that his daughter is undutiful, because she declines to marry a young medical prig instead of Cleante, whom she loves. His brother persuades "the malade" to counterfeit death, in order to test the sincerity of his wife and daughter. The wife rejoices greatly at his death, and proceeds to filch his property, when Argan starts up and puts an end to her pillage. Next comes the daughter's turn. When she hears of her father's death, she bewails him with great grief, says she has lost her best friend, and that she will devote her whole life in prayer for the repose of his soul. Argan is delighted, starts up in a frenzy of joy, declares she is a darling, and shall marry the man of her choice freely, and receive a father's blessing.

Manfred.—A poem by Byron. Manfred sold himself to the prince of darkness, and received from him seven spirits to do his bidding. They were the spirits of "earth, ocean, air, night, mountains, winds, and the star of his own destiny." Wholly without human sympathies, the count dwelt in splendid solitude among the Alpine mountains. He loved Astarte, and was visited by her spirit after her death. In spirit form she told Manfred that he would die the following day; and, when asked if she loved him, she sighed "Manfred," and vanished.

Manon l'Escaut (*mā-non' les-kō*).—A French novel by A. F. Prévost. Manon is the "fair mischief" of the story. Her charms seduce and ruin the chevalier des Grieux, who marries her. After marriage, the selfish mistress becomes converted into the faithful wife, who follows her husband into disgrace and banishment, and dies by his side in the wilds of America. The object of this novel, like that of *La Dame aux Camélias*, by Dumas *fils*, is to show how true-hearted, how self-sacrificing, how attractive, a *fille de joie* may be.

Marble Faun, The.—A romance by Hawthorne, published in 1860. The English edition, published in the same year, is called *Transformation, or the Romance of Monte Beni.* See *Donatello.* The sole idea of the *Marble Faun* is to illustrate the intellectually and morally awakening power of a sudden impulsive sin, committed by a simple, joyous, instinctive, "natural" man. The whole group of characters is imagined solely with a view to the development of this idea.

Mazeppa.—A poem by Byron. Mazeppa was a Cossack of noble family who became a page in the court of the king of Poland, and while in this capacity intrigued with Theresia, the young wife of a count, who discovered the amour, and had the young page lashed to a wild horse, and turned adrift.

Measure for Measure.—A comedy by Shakespeare. There was a law in Vienna that made it death for a man to live with a woman not his wife; but the law was so little enforced that the mothers of Vienna complained to the duke of its neglect. So the duke deputed Angelo to enforce it; and, assuming the dress of a friar, absented himself awhile, to watch the result. Scarcely was the duke gone, when Claudio was sentenced to death for violating the law. His sister Isabel went to intercede on his behalf, and Angelo told her he would spare her brother if she would become his Phryne. Isabel told her brother he must prepare to die, as the conditions proposed by Angelo were out of the question. The duke, disguised as a friar, heard the whole story, and persuaded Isabel to "assent in words," but to send Mariana (the divorced wife of Angelo) to take her place. This was done; but Angelo sent the provost to behead Claudio, a crime which "the friar" contrived to avert. Next day the duke returned to the city, and Isabel told her tale. Finally the duke married Isabel, Angelo took back his wife, and Claudio married Juliet.

Medea.—A play by Euripides. The *Medea* came out in 431 B. C. along with the poet's *Philoctetes, Dictys,* and the satiric *Reapers* (the last was early lost). It was based upon a play of Neophron's, and only obtained the third prize, Euphorion being first, and Sophocles second. It may accordingly be regarded as a failure in its day—an opinion apparently confirmed by the faults (viz., Ægeus and the winged chariot) selected from it as specimens in Aristotle's *Poetica.* There is considerable evidence of there being a second edition of the play, and many of the variants, or so-called interpolations, seem to arise from both versions being preserved and confused. Nevertheless, there was no play of Euripides more praised and imitated by both Romans and moderns.

Médecine Malgré Lui, Le (*mād-sazn' mal-grā' lwēlu*), (or, *The Doctor in Spite of Himself*).—A comedy by Molière. The "enforced doctor" is Sganarelle, a fagot-maker, who is called in by Géronte to cure his daughter of dumbness. Sganarelle soon perceives that the malady is assumed in order to prevent a hateful marriage, and introduces her lover as an apothecary. The dumb spirit is at once exorcised, and the lovers made happy wit "pills matrimonial."

In 1733 Fielding produced a farce called *Th Mock Doctor*, which was based on this comed The doctor he calls "Gregory," and Géront "Sir Jasper." Lucinde, the dumb girl, he cal "Charlotte;" and Anglicizes her lover's nam Léandre, into "Leander."

Merchant of Venice.—A comedy by Shakespear Antonio, the merchant, signs a bond in order t borrow money from Shylock, a Jew, for Bassani the lover of Portia. If the loan was repaid withi three months, only the principal would be require if not, the Jew should be at liberty to claim pound of flesh from Antonio's body. The shi of Antonio being delayed by contrary winds, th merchant was unable to meet his bill, and the Je claimed the forfeiture. Portia, in the dress a law doctor, conducted the defense, and save Antonio by reminding the Jew that a pound flesh gave him no drop of blood.

Merry Wives of Windsor, The.—A comedy b Shakespeare. It is said that Queen Elizabe was so pleased with the Falstaff of Henry I that she commanded Shakespeare to show how l conducted himself when in love. For the pl he was probably but little indebted to oth writers. *The Two Lovers of Pisa* from Straparol in Tarleton's *News Out of Purgatory*, and a sto from *Il Pecorone* which suggests the hiding Falstaff in the soiled linen, may possibly ha suggested some of the incidents. John Denn wrote a play, *The Comical Gallant, or the Amou of Sir John Falstaff*, in 1702, in which *The Mer Wives* may be recognized.

Messiah, The.—An epic poem in fifteen books, b F. G. Klopstock. The subject is the last da of Jesus, his crucifixion and resurrection.

Middlemarch (*A Study of Provincial Life*).—A nove by George Eliot, published in 1872, and chara terized by *The Quarterly Review* "as the mo remarkable work of the ablest of living novelist and, considered as a study of character, unique The heroine is Dorothea Brooke, first marri to Mr. Casaubon, afterward to Will Ladisla Among the other characters are Mr. Lydgat Rosamond Vincy, Mary Garth, and Mrs. Ca wallader.

Midlothian, The Heart of.—A tale by Scott, the Porteous riot, in which the incidents Effie and Jeanie Deans are of absorbing intere Effie was seduced by Geordie Robertson (*al* George Staunton), while in the service of M. Saddletree. She murdered her infant, and w condemned to death; but her half-sister Jea went to London, pleaded her cause before t queen, and obtained her pardon. Jeanie, on h return to Scotland, married Reuben Butler; a Geordie Robertson (then Sir George Staunto married Effie. Sir George being shot by a gyp boy, Effie (*i. e.*, Lady Staunton) retired to a co vent on the continent.

Midsummer Night's Dream.—A comedy Shakespeare. The author says there was a l in Athens that if a daughter refused to mar the husband selected for her by her father, s might be put to death. Ægeus, an Atheni promised to give his daughter Hermia in marri to Demetrius; but, as the lady loved Lysand she refused to marry the man selected by h father, and fled from Athens with her lov Demetrius went in pursuit of her, followed Helena, who doted on him. All four came to forest, and fell asleep. In their dreams a visi of fairies passed before them, and, on awaki Demetrius resolved to forego Hermia, who d liked him, and to take to wife Helena, who s cerely loved him. When Ægeus was inform thereof, he readily agreed to give his daugh to Lysander, and the force of the law was n called into action (1592).

Miles Standish (or, *Courtship of Miles Standish*) A poem by H. W. Longfellow. From this po the robust figures of the Puritan captain in haps and mishaps, and of John Alden and P cilla, are now part of our national treasures.

Miller, Daisy.—Title and heroine of a story Henry James. An American girl traveling Europe, where her innocence, ignorance, s disregard of European customs and standard propriety put her in compromising situatio and frequently expose her conduct to misc struction.

Mill on the Floss.—A novel by George Eliot, p lished in 1860 There is a simplicity about *Mill on the Floss* which reminds us of the cla tragedy. The vast power of nature over the car and fate of a family, is figured forth in the ri beside which the child Maggie played, filling mother's heart with gloomy and not unveraci presentiments, and down which she passed w Stephen in her hour of temptation, with Tom her last moments; the whole strength of associat and of the ties and instinct of blood breaking at every critical point in the story, like the v of a Greek chorus, full of traditionary war and stern common sense, but speaking in dialect of English rusticity, and by the mou of Mr. Tulliver and his wife's relations.

Minna von Barnhelm (*min'd fon bärn'helm*).— comedy by Lessing, published in 1767. It the first German national drama which d with contemporary events.

anthrope, Le (*mi-zăn-trop', u*).—A comedy y Molière, produced in 1666. This play is an lmost inexhaustible source of allusions, quotations, roverbial sayings, etc. Its principal interest es in the development of various pairs of opposng characters in even their lightest shades. It is he ideal of classic comedy. Alceste, the impatient, ut not cynical, hero, Célimène the coquette, Oronte the fop, Éliante the reasonable woman, Arsinoe the mischief-maker, are all immortal ypes.

érables, Les [(*mi-zā-rabl', lā*); or, *The Unforanates*].—A novel by Victor Hugo, in five parts: *antine, Cosette, Marius, L'Idylle Rue Plumet*, and *ean Valjean*. It was published in 1862.

rte d'Arthur.—(1) Compilation of Arthurian ales, called on the title-page *The History of Prince rthur*, compiled from the French by Sir Thomas Malory, and printed by William Caxton in 1470. t is divided into three parts. The first part ontains the birth of King Arthur, the establishnent of the Round Table, the romance of Balin nd Balan, and the beautiful allegory of Gareth nd Linet. The second part is mainly the romance f Sir Tristram. The third part is the romance f Sir Launcelot, the quest of the holy grail, and he death of Arthur, Guinevere, Tristram, Lamorke, and Launcelot.

(2) An idyll by Tennyson, called *The Passing f Arthur*, in the *Idylls of the King*. The poet upposes Arthur (wounded in the great battle of he west) to be borne off the field by Sir Bedivere. The wounded monarch directed Sir Bedivere to ast Excalibur into the mere. Sir Bedivere then arried the dying king to a barge, in which were hree queens, who conveyed him to the islandalley of Avilion.

ch Ado About Nothing.—A comedy by Shakepeare. It was first printed in 1600. The play vas known as *Benedict and Bettris* in 1613, and is robably the same as *Love's Labor's Won*. The tory of Hero is taken with some variations from ne of Bandello's tales, which probably was borowed from the story of Geneura and Ariodantes n the *Orlando Furioso* of Ariosto. This part of he play, however, is subordinated by Shakespeare o the loves of Benedick and Beatrice.

tual Friend, Our.—A novel by Charles Dickns. The "mutual friend" is Mr. Boffin, the olden dustman, who was the mutual friend of ohn Harmon and of Bella Wilfer. The tale is his; John Harmon was supposed to have been urdered by Julius Handford; but it was Ratford, vho was murdered by Rogue Riderhood, and the nistake arose from a resemblance between the wo persons. By his father's will, John Harmon vas to marry Bella Wilfer; but John Harmon new not the person destined by his father for is wife, and made up his mind to dislike her. After his supposed murder, he assumed the name f John Rokesmith, and became the secretary f Mr. Boffin, "the golden dustman," residuary egatee of old John Harmon, by which he became ossessor of $100,000. Boffin knew Rokesmith, ut concealed his knowledge for a time. At Bofn's house, John Harmon (as Rokesmith) met Bella Wilfer, and fell in love with her. Mr. Boffin, in order to test Bella's love, pretended to e angry with Rokesmith for presuming to love Bella; and, as Bella married him, he cast them oth off "for a time," to live on John's earnings. A babe was born, and then the husband took the young mother to a beautiful house, and told her he was John Harmon, that the house was their house, that he was the possessor of $500,000 through the disinterested conduct of their "mutual friend," Mr. Boffin; and the young couple live happily with Mr. and Mrs. Boffin, in wealth and luxury.

Novel.—A work of fiction by Edward, Lord Lytton, published in 1853. It is described as the "great work which marks the culminating point n Lodr Lytton's genius, the work to which, with a rare estimate of his own powers, he has given he singularly appropriate title of *My Novel*. . . If we except one or two melodramatic scenes, it is throughout an admirable work. . . . The plot is complex, but it is unfolded with marvelous directness and ingenuity, and, notwithstanding the digressions, the interest never for a moment lags." Among the characters are Squire Hazlelean, Mr. Dale, Dick Avenel, Leonard Fairfield, and Harley L'Estrange.

than the Wise [*Nathan der Wise* (*nā'tăn der vī'ze*)].—A drama by G. E. Lessing, so called from the name of its principal character. Its tendency is toward religious tolerance, especially in the episode of the three rings, which was taken from Boccaccio. Nathan is a persecuted but noble Jew, an ideal character resembling Moses Mendelssohn.

wcomes, The.—*Memoirs of a Most Respectable Family*, by William Makepeace Thackeray. The hero is Clive Newcome, a young artist, son of Colonel Newcome, and cousin of Ethel Newcome, whom he marries after the death of his first wife, Rosa Mackenzie. Among the other characters are Comte de Florac, Charles Honeyman, "J. J." Fred Bayham, Lady Kew, Jack Belsize, Dr. Goodenough, and others.

Colonel Newcome, is "the finest portrait," says Hannay, "that has been added to the gallery of English fiction since Sir Walter's time. The pathos, at once manly and delicate, with which his ruin and death are treated, places Thackeray in a high rank in poetic sentiment."

Nibelungenlied (*nē'be-loong-en-lēd*).—An historic poem, generally called the German *Iliad*. It is the only great national epic that European writers have produced since antiquity; and belongs to every country that has been peopled by Germanic tribes, as it includes the hero traditions of the Franks, the Burgundians and the Goths, with memorials of the ancient myths carried with them from Asia. The poem is divided into two parts, and thirty-two lieds, or cantos. The first part ends with the death of Siegfried, and the second part with the death of Kriemhild. The death of Siegfried and the revenge of Kriemhild have been celebrated in popular songs dating back to the lyric chants now a thousand years old. These are the foundation of the great poem.

Nicholas Nickleby.—A novel by Dickens. The mother of the hero, Nicholas, is a widow fond of talking and of telling long stories with no connection. She imagined her neighbor, a mildly insane man, was in love with her because he tossed cabbages and other articles over the garden wall. She had a habit of introducing, in conversation, topics wholly irrelevant to the subject under consideration, and of always declaring, when anything unanticipated occurred, that she had expected it all along, and had prophesied to that precise effect on divers (unknown) occasions. Nicholas Nickleby has to make his own way in the world. He first goes as usher to Mr. Squeers, schoolmaster at Dotheboys Hall; but leaves in disgust with the tyranny of Squeers and his wife, especially to a poor boy named Smike. Smike runs away from the school to follow Nicholas, and remains his humble follower till death. At Portsmouth, Nicholas joins the theatrical company of Mr. Crummles, but leaves the profession for other adventures. He falls in with the Brothers Cheeryble, who make him their clerk; and in this post he rises to become a merchant, and finally marries Madeline Bray.

Nightingale, Ode to a.—Poem by John Keats, which "was written," says Leigh Hunt, "in a house at the foot of Highgate Hill, on the border of the fields looking toward Hampstead. The poet had then his mortal illness upon him, and knew it; never was the voice of death sweeter.

Thou wast not born for death, immortal Bird!
No hungry generations tread thee down;
The voice I hear this passing night was heard
In ancient days by emperor and clown;
Perhaps the selfsame song that found a path
Through the sad heart of Ruth, when, sick for home,
She stood in tears amid the alien corn;
The same that ofttimes hath
Charm'd magic casements, opening on the foam
Of perilous seas, in faëry lands forlorn.

Notre Dame de Paris.—A prose romance by Victor Hugo, published in 1831. The scene is laid in Paris at the end of the reign of Louis XI. It is a vigorous but somber picture of mediæval manners.

Odyssey (*od'i-si*).—Homer's epic poem recording the adventures of Odysseus (Ulysses) in his voyage home from Troy. The poem opens in the island of Calypso, with a complaint against Neptune and Calypso for preventing the return of Odysseus to Ithaca. Telemachos, the son of Odysseus, starts in search of his father, accompanied by Pallas in the guise of Mentor. He goes to Pylos to consult old Nestor, and is sent by him to Sparta, where he is told by Menelaus that Odysseus is detained in the island of Calypso. In the meantime, Odysseus leaves the island, and, being shipwrecked, is cast on the shore of Phæacia. After twenty years' absence Odysseus returns to his home. Penelope is tormented by suitors. To excuse herself, Penelope tells her suitors he only shall be her husband who can bend Odysseus' bow. None can do so but the stranger, who bends it with ease. Odysseus is recognized by his wife, and the false suitors are all slain, and peace is restored to Ithaca.

Œdipus Coloneus [(*kō-lō-nē'us*); or, *Œdipus at Colonus* (*kō-lō'nus*)].—A tragedy of Sophocles, which was not exhibited till four years after his death, and was said to be the last he wrote. In it, Œdipus, driven from Thebes by Creon, with his daughters Antigone and Ismene, seeks asylum with Theseus at Athens, and there obtains pardon from the gods, and peace.

Œdipus Tyrannus (*ti-ran'us*).—A tragedy by Sophocles, of uncertain date, "placed by the scholiasts, and by most modern critics, at the very summit of Greek tragic art."

Old Curiosity Shop, The.—A tale by Charles Dickens. An old man, having run through his fortune, opened a curiosity shop in order to earn a living, and brought up a granddaughter, named Nell [Trent], 14 years of age. The child was the darling of the old man, but, deluding himself with the hope of making a fortune by gaming, he lost everything, and went forth, with the child, a beggar. Their wanderings and adventures are recounted till they reach a quiet country village, where the old clergyman gives them a cottage to live in. Here Nell soon dies, and the grandfather is found dead upon her grave. The main character, next to Nell, is that of a lad named Kit [Nubbles], employed in the curiosity shop, who adored Nell as "an angel." This boy gets in the service of Mr. Garland, a genial, benevolent, well-to-do man, in the suburbs of London; but Quilp hates the lad, and induces Brass, a solicitor of Bevis Marks, to put a £5 banknote in the boy's hat, and then accuse him of theft. Kit is tried, and condemned to transportation; but, the villainy being exposed by a girl-of-all-work nicknamed "The Marchioness," Kit is liberated and restored to his place, and Quilp drowns himself.

Old Mortality, the best of Scott's historical novels. Morton is the best of his young heroes, and serves as an excellent foil to the fanatical and gloomy Burley. The two classes of actors, *viz.*, the brave and dissolute cavaliers, and the resolute oppressed covenanters, are drawn in bold relief. The most striking incidents are the terrible encounter with Burley in his rocky fastness; the dejection and anxiety of Morton on his return from Holland; and the rural comfort of Cuddie Headrigg's cottage on the banks of the Clyde, with its thin blue smoke among the trees, "showing that the evening meal was being made ready." Old Mortality is an itinerant antiquary, whose craze is to clean the moss from gravestones, and keep their letters and effigies in good condition.

Oliver Twist.—A novel by Charles Dickens. Thackeray, writing of this novel, in the character of "Ikey Solomons," says: "The power of the writer is so amazing that the reader at once becomes his captive, and must follow him whithersoever he leads: and to what are we led? Breathless to watch all the crimes of Fagin, tenderly to deplore the errors of Nancy, to have for Bill Sikes a kind of pity and admiration, and an absolute love for the society of the Dodger. All these heroes stepped from the novel on to the stage; and the whole London public, from peers to chimney sweeps, were interested about a set of ruffians whose occupations are thievery, murder, and prostitution." A remarkable feature of the work, and one which, on its publication, brought considerable odium on the writer, was its unsparing exposure of the poor-law and the workhouse system, which led to its representation on the stage being forbidden for a time.

Organon.—The name given to the first work on logic by Aristotle. He is said to have created the science of logic. The *Organon* has been enlarged and recast by some modern authors, especially by Mr. John Stuart Mill in his *System of Logic*, into a structure commensurate with the vast increase of knowledge and extension of positive method belonging to the present day.

Origin of Species, The.—A work by Charles Robert Darwin, in which he put forward his theory of "natural selection." It was published in 1859, and by many is regarded as the most important scientific work of the nineteenth century.

Orlando Furioso.—An epic poem in forty-six cantos, by Ariosto, which occupied his leisure for eleven years, and was published in 1516. This poem, which celebrates the semimythical achievements of the paladins of Charlemagne, in the wars between the Christians and the Moors, became immediately popular, and has since been translated into all European languages, and passed through innumerable editions.

Ormulum.—The *Ormulum* is a collection of metrical homilies, one for each day of the year; but the single existing copy gives the homilies for thirty-two days only. There are very few French words in the poem, but Scandinavian words and constructions abound. The writer, Orm, or Ormin, belonged to the East of England, and he and his brother Walter were Augustinian monks. He makes no use of rhyme, but his verses are smooth and regular.

Othello.—A tragedy by Shakespeare. The chief character is a Moor of Venice, who marries Desdemona, the daughter of a Venetian senator, and is led by his ensign, Iago, a consummate villain, to distrust her fidelity and virtue. Iago hated the Moor both because Cassio, a Florentine, was preferred to the lieutenancy instead of himself, and also from a suspicion that the Moor had tampered with his wife; but he concealed his hatred so well that Othello wholly trusted him. Iago persuaded Othello that Desdemona intrigued with Cassio, and urged him on till he murdered his bride.

Outre-Mer (*A Pilgrimage Beyond the Sea*).—A series of prose tales and sketches by Henry Wadsworth Longfellow, published in 1835. "The Pays d'Outre-Mer," says the writer, "is a name by which the pilgrims and crusaders of old designated the Holy Land. I, too, in a certain sense, have been a pilgrim of Outre-Mer; for to my youthful imagination the Old World was a kind of Holy Land, lying afar off beyond the blue horizon of the ocean. In this my pilgrimage, I have traversed France from Normandy to Navarre; smoked my pipe in a Flemish inn; floated through Holland in a Trekschuit; trimmed my midnight lamp in a German university; wandered and mused amid the classic scenes of Italy; and listened to the gay guitar and merry castanet on the borders of the blue Guadalquivir."

Paracelsus.—A dramatic poem by Robert Browning, published in 1835. It is a work of singular beauty, and is replete with lofty and solemn thoughts on the fate of genius and the chance and change of life. The Paracelsus of the poem is a very different person from the Paracelsus of history—the brilliant and daring quack who professed to have discovered the philosopher's stone

but who, by the introduction of opium among the remedies of the *Pharmacopœia*, in some wise made amends for his absurd extravagance.

Paradise and the Peri.—The second tale in Moore's poetical romance of *Lalla Rookh*. The Peri laments her expulsion from heaven, and is told that she will be readmitted if she will bring to the gate of heaven the "gift most dear to the Almighty." After several failures the Peri offered the "Repentant Tear," and the gates flew open to receive the gift.

Paradise Lost.—An epic poem by Milton. The poem opens with the awaking of the rebel angels in hell after their fall from heaven, the consultation of their chiefs how best to carry on the war with God, and the resolve of Satan to go forth and tempt newly created man to fall. Satan reaches Eden, and finds Adam and Eve in their innocence. This is told in the first four books. The next four books contain the Archangel Raphael's story of the war in heaven, the fall of Satan, and the creation of the world. The last four books describe the temptation and the fall of man, and tell of the redemption of man by Christ, and the expulsion from paradise.

Paradise Regained.—An epic by Milton on the Redemption of man. In this poem the author tells of the journey of Christ into the wilderness after his baptism, and its four books describe the temptation of Christ by Satan.

Parallel Lives of Greeks and Romans.—A celebrated biographical work by Plutarch, consisting of forty-six comparisons. In spite of all exceptions on the score of inaccuracy, want of information, or prejudice, *Plutarch's Lives* must remain one of the most valuable relics of Greek literature, not only because they stand in the place of many volumes of lost history, but also because they are written with a graphic and dramatic vivacity such as we find in few biographies, ancient or modern; because they are replete with reflections which, if not profound, are always moderate and sensible; and because the author's aim throughout is to enforce the highest standard of morality of which a heathen was capable. As one of his most enthusiastic admirers has said, "He stands before us as the legate, the ambassador, and the orator on behalf of those institutions whereby the old-time men were rendered wise and virtuous."

Paul and Virginia.—A popular romance by Bernardin de St. Pierre. According to a tradition, or version, Paul and Virginia are brought up in the belief that they are brother and sister. Don Antonio is sent to bring her to Spain, and make her his bride. She is taken by force on board ship, but scarcely has the ship started, when a hurricane dashes it on the rocks, and it is wrecked. Alhambra, a runaway slave, whom Paul and Virginia had befriended, rescues Virginia, who is brought to shore and married to Paul. Antonio is drowned.

Peau de Chagrin (*The Ass' Skin*).—A story by Balzac. The hero becomes possessed of a magical wild ass' skin, which yields him the means of gratifying every wish; but for every wish thus gratified the skin shrank somewhat, and at last vanished, having been wished entirely away. Life is a *peau d'âne*, for every vital act diminishes its force, and when all its force is gone, life is spent.

Pendennis, The History of.—By William Makepeace Thackeray. The hero, Arthur Pendennis, reappears in the author's *Adventures of Philip*, and is represented as telling the story of *The Newcomes*. Among the characters are Major Foker; Jack Costigan; Miss Fotheringay; Laura Bell, whom Arthur eventually marries; Blanche Amory; Warrington; Jack Finucane; Captain Shandon; Bungay and Fanny Bolton.

Penseroso, Il.—A poem by John Milton, written as a companion to *L'Allegro*. The latter is composed in the character of a cheerful, the former in that of a melancholy, man, and the whole tone of each poem is regulated accordingly. The one begins with the dawn, the other with evening. The one opens with the lark, the other with the nightingale, and so on.

Pepys' Diary.—A book by Samuel Pepys, written in shorthand, and deciphered and published in 1825. It extends over the nine years from 1660 to 1669, and is the gossipy chronicle of that gay and profligate time. We have no other book which gives so lifelike a picture of that extraordinary state of society.

Peregrine Pickle.—The title of a novel by Smollett. Peregrine Pickle is a savage, ungrateful spendthrift, fond of practical jokes, and suffering with evil temper the misfortunes brought on himself by his own willfulness.

Peter Bell.—A tale in verse, by Wordsworth. A wandering tinker, subject of Wordsworth's poem, whose hard heart was touched by the fidelity of an ass to its dead master. Shelley wrote a burlesque of this poem, entitled *Peter Bell the Third*, intended to ridicule the ludicrous puerility of language and sentiment which Wordsworth often affected. This burlesque was given the name of the *Third* because it followed a parody already published as *Peter the Second*.

Phædo.—An ancient and well-known work by Plato, in which the doctrine of the immortality of the soul is most fully set forth. It is in the form of a dialogue, which combines, with the abstract philosophical discussion, a graphic narrative of the last hours of Socrates, which, for pathos and dignity, is unsurpassed.

Phèdre (*fā'dr*).—A tragedy by Racine, produced Jan. 1, 1677. It was founded on the story of Phædra, daughter of Minos, king of Crete, and wife of Theseus. She conceived a criminal love for Hippolytus, her stepson, and, being repulsed by him, accused him to her husband of attempting to dishonor her. Hippolytus was put to death, and Phædra, wrung with remorse, strangled herself. *Phèdre* was the great part of Mdlle. Rachel; she first appeared in this character in 1838. It is unquestionably the most remarkable of Racine's regular tragedies. By it the style must stand or fall, and a reader need hardly go farther to appreciate it. For excellence of construction, artful beauty of verse, skillful use of the limited means of appeal at the command of the dramatist, no play can surpass *Phèdre*.

Philippics (*fi-lip'iks*), **The.**—A group of nine orations of Demosthenes, directed against Philip of Macedon. The real adversary in all these famous speeches is not so much the king of Macedon as the sloth and supineness of the Athenians, and the influence of the peace party, whether honest or bribed by Philip. They are the first Philippic, urging the sending of a military force to Thrace, delivered 351 B. C.; three orations in behalf of the city of Olynthus (destroyed by Philip), delivered in 349-348; the oration *On the Peace*, 346; the second Philippic, 344; the oration *On the Embassy*, 344; the speech *On the Chersonese*, 341; and the third Philippic, 341.

The name is also given to a series of fourteen orations of Cicero against Mark Antony, delivered 44-43 B. C.

Pickwick, Mr. Samuel.—The hero of the *Pickwick Papers*, by Charles Dickens. He is a simple-minded, benevolent old gentleman, who wears spectacles and short black gaiters. He founds a club, and travels with its members over England, each member being under his guardianship. They meet many laughable adventures.

Piers Plowman.—A satirical poem of the fourteenth century. The hero falls asleep, like John Bunyan, on the Malvern hills, and has different visions, which he describes, and in which he exposes the corruptions of society, the dissoluteness of the clergy, and the allurements to sin. The author is supposed to be Robert or William Langland. No other writings so faithfully reflect the popular feeling during the great social and religious movements of that century as the bitterly satirical poem, *The Vision of Piers Plowman*. In its allegory, the discontent of the commons with the course of affairs in church and state found a voice.

Pilgrim's Progress.—A celebrated allegory by Bunyan. It recounts the adventures of the hero, Christian, from his conversion to his death. He wanders from the way to Doubting Castle, and is held there by Giant Despair. His sins are a pack; his Bible is a chart, his minister Evangelist, his conversion a flight from the City of Destruction, his struggle with besetting sins a fight with Apollyon, his death a toilsome passage over a deep stream which flows between him and heaven.

Pilot, The.—Title of a sea-story by Cooper, which was called the "first sea-novel of the English language." It was published in the year 1823, and soon translated into Italian, German, and French. It is founded on the adventures of John Paul Jones.

Pippa Passes.—A drama, Italian in scene and character, by Robert Browning. "It is," says Stedman, "a cluster of four scenes, with prologue, epilogue, and interludes, half prose, half poetry, varying with the refinement of the dialogue. Pippa is a delicately pure, good, blithesome peasant maid. It is New Year's Day at Ardo. She springs from bed at sunrise, resolved to enjoy to the full her sole holiday. Others may be happy throughout the year; haughty Ottima and Sebald, the lovers on the hill; Jules and Phene, the artist and his bride; Luigi and his mother; Monsignor, the bishop; but Pippa has only this one day to enjoy. Now, it so happens that she passes, this day, each of the groups or persons we have named, at an important crisis in their lives, and they hear her various carols as she trills them forth in the innocent gladness of her heart. *Pippa Passes* is a work of pure art, and has a wealth of original fancy and romance, apart from its wisdom." It appeared in 1842.

Poor Richard's Almanac.—An almanac published by Benjamin Franklin 1732-57, noted for its maxims. He made it the medium for teaching thrift, temperance, order, cleanliness, chastity, forgiveness, and so on. The maxims or precepts of these almanacs generally end with the words, "as poor Richard says."

Précieuses Ridicules (*prā-syuz' ri-di-kul'*), **Les.**—A comedy by Molière, in ridicule of the *Précieuses*, as they were styled, forming the coterie of the Hotel de Rambouillet in the seventeenth century. The *soirées* held in this hotel were a great improvement on the licentious assemblies of the period; but many imitators made the thing ridiculous, because they lacked the same presiding talent and good taste.

The two girls of Molière's comedy are Madelon and Cathos, the daughter and niece of Gargibus, a bourgeois. They change their names to Polixène and Aminte, which they think more genteel, and look on the affectations of two flunkies as far more *distingués* than the simple, gentlemanly manners of their masters. However, they are cured of their folly, and no harm comes of it.

Prelude, The (or, *The Growth of a Poet's Mind*).—An autobiographical poem, in blank verse, b William Wordsworth. It was intended as a introduction to "a philosophical poem, containi views of Man, Nature, and Society; and to b entitled *The Recluse*, as having for its princip subject the sensations and opinions of a po living in retirement." This poem was to hav consisted of three parts, of which the secon only, *The Excursion*, was completed and publishe *The Prelude* consists of fourteen books: Book on *Childhood and Schooltime;* book two, *School Tim* continued; book three, *Residence at Cambridge;* bo four, *Summer Vacation;* book five, *Books;* book si *Cambridge and the Alps;* book seven, *Residence London;* book eight, *Retrospect—Love of Natu Leading to Love of Man;* book nine, *Residence France;* book ten, *Residence in France*, continue book eleven, *France*, concluded; book twelve. *Ima ination and Taste, How Impaired and Restore* book thirteen, the same subject continued ar concluded; and book fourteen, *Conclusion*.

Princess, The (*a Medley*).—A poem by Alfre Tennyson. "It is," says Stedman, "as he entitl it, a medley, constructed of ancient and mode materials—a show of mediæval pomp and mov ment, observed through an atmosphere of latte day thought and emotion. The poet, in h prelude, anticipates every stricture, and to n the anachronisms and impossibilities of the sto seem not only lawful, but attractive. Tennyson special gift of reducing incongruous details to common structure and tone is fully illustrat in a poem made—

"'To suit with time and place,
A Gothic ruin and a Grecian house,
A talk at college and of ladies' rights,
A feudal knight in silken masquerade."

Other works of our poet are greater, but none so fascinating. Some of the author's most del cately musical lines are herein contained. T tournament scene is the most vehement and rap passage in the whole range of Tennyson's poetr The songs reach the high water mark of lyric compositions. The five melodies—*As Thro' t Land, Sweet and Low, The Splendor Falls, Hor They Brought* and *Ask Me No More*—constitu the finest group of songs produced in our centur and the third seems to many the most perfe English lyric since the time of Shakespeare The name of the Princess is Ida.

Prometheus Bound.—A tragedy of Æschylu of uncertain date. Prometheus, is fabled to ha made men of clay, and to have imparted life them by means of fire brought from heaven. was said that for this he was bound to the roc by order of Zeus, that he resisted all efforts subdue his will and purpose, bade defiance to t father of the gods, and disappeared in an appalli tempest. Mrs. Browning published a poetic translation in 1833.

Pygmalion and Galatea.—A mythological comed by W. S. Gilbert, embodying the fable of t Athenian sculptor who prayed the gods to p life into the statue of Galatea which he had fas ioned. In the comedy, Galatea evokes the je ousy of the sculptor's wife Cynisca; and, aft causing great misery by her very innocen voluntarily returns to the original stone.

Quentin Durward.—A novel by Sir Walter Sco A story of French history. The delineations Louis XI. and Charles the Bold of Burgundy w stand comparison with any in the whole range fiction or history.

Ramayana [(*rä-mä'yä-nä*); *Rāma-ayana*, the g ings or doings of Rama]. One of the two gre epics of India, the other being the Mahabhara It is ascribed to a poet, Valmiki, and consists present of about 24,000 stanzas, divided into sev books. It is the production of one man, thou many parts are later additions, such as those which Rama is represented as an incarnati of Vishnu, all the episodes in the first book, a the whole of the seventh. It was at first hand down orally, and variously modified in transm sion, and afterward when reduced to writing.

Ramona.—Title of a romance by Helen Hu Jackson. Ramona saw the American Indi followed by "civilization" while retreating slow but surely toward his own extinction, and h herself a share in the tragedy. Ramona is co sidered the great romance of Indian life.

Rasselas.—An imaginary romance by Dr. Johns According to the custom of his country, Abyssir Rasselas was confined in paradise, with the r of the royal family. This paradise was in valley of Amhara, surrounded by high mountai It had only one entrance, a cavern concealed woods, and closed by iron gates. He escap with his sister Nekayah and Imlac the poet, wandered about to find what condition or r of life was the most happy. After careful in tigation, he found no lot without its drawbac and resolved to return to the "happy valley."

Raven, The.—A poem by Edgar Allan Poe, p lished in 1845, which has attained a world-w popularity. For the author's account of mode of its construction, see *The Philosoph Composition*, an essay, in the collected edit of his works. The last verse runs:

And the Raven, never flitting, still is sitting, is sitting,
On the pallid bust of Pallas, just above chamber door;

And his eyes have all the seeming of a demon's
that is dreaming,
And the lamplight o'er him streaming throws
his shadow on the floor;
And my soul from out that shadow that lies floating on the floor
Shall be lifted—Nevermore!

Religio Medici.—A prose work by Sir Thomas Browne. "*The Religio Medici*," says the elder Lytton, "is one of the most beautiful prose poems in the language; its power of diction, its subtlety and largeness of thought, its exquisite conceits and images, have no parallel out of the writers of that brilliant age when Poetry and Prose had not yet divided their domain, and the Lyceum of Philosophy was watered by the mixing of the wine!"

Representative Men.—A work by Emerson which more nearly than any of his other works, gives expression to his system as a whole. The topics are: (1) Plato, the Philosopher; (2) Swedenborg, the Mystic; (3) Montaigne, the Skeptic; (4) Shakespeare, the Poet; (5) Napoleon, the Man of the World; (6) Goethe, the Writer. The mental portraits sketched under these six heads give us Emerson himself, so far as he is capable of being formulated at all.

Republic, The.—A work composed by Plato 400 years before Christ. *The Republic* is not, as the title would suggest, a political work, like the *Politics* of Aristotle. The principles and government of an ideal moral organism, of which the rulers shall be types of fully developed and perfectly educated men, is the real subject. In the *Republic* we find the necessity of virtue to the very idea of social life proved in the first book; then the whole process of a complete moral and scientific education is set forth. It has been said that the most complete record of the beliefs or opinions of Plato are found in this work.

Reveries of a Bachelor.—By D. G. Mitchell. The *Reveries* is a collection of sketches of life and character, painted in such a dreamlike, delicate manner as to make the reader lose for the time being the full consciousness of his surroundings. It has called forth a number of imitators more or less successful, no one of whom, however, is comparable to the original.

Reynard the Fox.—A beast-epic, so called. This prose poem is a satire on the state of Germany in the middle ages. Reynard represents the Church; Isengrin the wolf (his uncle) typifies the baronial element; and Nodel the lion stands for the regal power. The plot turns on the struggle for supremacy between Reynard and Isengrin. Reynard uses all his endeavors to victimize every one, especially his uncle Isengrin, and generally succeeds.

Richelieu (or, *The Conspiracy*).—A drama in five acts, by Edward, Lord Lytton; produced in 1839, the part of the hero being played by Macready. For some of the incidents the author confesses himself indebted to the authors of *Cinq Mars* and *Picciola*. Among the characters are Baradas, the favorite; De Mauprat, in love with Julie; Julie de Mortemar herself; Marion de Lorme, mistress of Orleans; Orleans himself; Louis XIII., and others.

Rights of Man, The.—"Being an answer to Mr. Burke's Attack on the French Revolution," by Thomas Paine. This work, which was published in 1791-2, procured for the writer the distinction of a trial for sedition, which he escaped by flying to France.

Ring and the Book, The.—A poem by Robert Browning, published in 1869. It is the story of a tragedy which took place at Rome in 1698. The versified narrative of the child Pompilia's sale to Count Guido, of his cruelty and violence, of her rescue by a young priest, the pursuit, the lawful separation, the murder by Guido of the girl and her putative parents, the trial and condemnation of the murderer, and the affirmation of his sentence by the pope—all this is made to fill out a poem of 21,000 lines; but these include ten different versions of the tale, besides the poet's prelude, in which latter he gives a general outline of it. The chapters which contain the statements of the priest-lover and Pompilia are full of tragic beauty and emotion. The pope's soliloquy, though too prolonged, is a wonderful piece of literary metempsychosis.

Rip Van Winkle.—A tale by Washington Irving, adapted from the old German legend of Peter Klaus, a goatherd, who drank a miraculous draught of wine in a dell of the Harz mountains, which brought on sleep from which he did not wake until twenty years after, when he returned to his native village to find everything changed, and no one who knew him. In Irving's tale the hero is a Dutchman living in America, and the scene is the Catskill mountains. The story is most picturesquely told, and has been effectively dramatized, the leading personage being illustrated by the genius of Jefferson.

Rivals, The.—A comedy by Richard Brinsley Sheridan, produced at Covent Garden, London, in 1775, and described by Hazlitt as "a play of even more action and incident, but of less wit and satire, than *The School for Scandal*. It is as good as a novel in the reading, and has the broadest and most palpable effect upon the stage."

Roaring Camp, The Luck of.—A prose sketch by Francis Bret Harte, an American poet, in which the softening effects of the presence of a little child in a camp of ruffians are very touchingly described. It has been dramatized for the New York stage.

Rob Roy.—A romance by Sir Walter Scott, which is founded on some passages in the career of the famous Highlander, Robert MacGregor, who was popularly called Rob Roy. The nominal hero of *Rob Roy* is Francis Osbaldistone; the heroine, Diana Vernon. Among the other characters are Baillie Nicol Jarvie, "The Dougal Cratur" Andrew Fairservice, Helen MacGregor, Sir Frederick Vernon, and Rashleigh Osbaldistone. The novel has been dramatized in a version which still holds the stage in Scotland. Scott speaks of Rob as "the Robin Hood of Scotland—the dread of the wealthy, but the friend of the poor, and possessed of many qualities, both of head and heart, which would have graced a less equivocal profession than that to which his fate condemned him."

Romance of the Rose.—A poetical allegory, begun by Guillaume de Lorris in the latter part of the thirteenth century, and continued by Jean Meung in the former half of the fourteenth century. The poet dreams that Dame Idleness conducts him to the palace of Pleasure, where he meets many adventures among the attendant maidens, Youth, Joy, Courtesy, and others, by whom he is conducted to a bed of roses. He singles out one, when an arrow from Love's bow stretches him fainting on the ground. Fear, Slander, and Jealousy are afterward introduced.

Romeo and Juliet.—A tragedy by William Shakespeare. Romeo, a son of Montague, in love with Juliet, the daughter of Capulet; but between the houses of Montague and Capulet there existed a deadly feud. As the families were irreconcilable, Juliet took a sleeping draught, that she might get away from her parents and elope with Romeo. Romeo, thinking her to be dead, killed himself; and when Juliet awoke and found her lover dead, she also killed herself.

Romola.—A novel of Italian life and character by George Eliot. *Romola* is a marvelously able story of the revival of the taste and beauty and freedom of Hellenic manners and letters, under Lorenzo de' Medici and the scholars of his court, side by side with the revival of Roman virtue, and more than the ancient austerity and piety, under the great Dominican Savonarola. This period of history is one which of all others may well have engrossing interest for George Eliot. Treasures of learning and discipline, amassed for mankind ages before, for ages stored and hidden away, see again the sun, are recognized and put to use. What use they will be put to, with what new and fruitful effects on the state and the citizen, with what momentary and with what lasting consequences, this she strives to discover; this she follows through the public history of Italy during the modern invasion of Charles VIII., and the events which succeed his invasion, and through the private fortunes of her admirably chosen group of characters, some of them drawn from life, all of them true to nature.

Sagas.—Title of the ancient traditions which form the substance of the history and mythology of the Scandinavian races. The language in which they are written is supposed to be the old Icelandic. In the *Edda* there are numerous sagas. As our bible contains the history of the Jews, religious songs, moral proverbs, and religious stories, so the *Edda* contains the history of Norway, religious songs, a book of proverbs, and numerous stories. The original *Edda* was compiled and edited by Sæmund Sigfusson, an Icelandic priest and scald, in the eleventh century. It contains twenty-eight parts or books, all of which are in verse. Two hundred years later, Snorri Sturleson, of Iceland, abridged, rearranged, and reduced to prose the *Edda*, and his work was called *The Younger Edda*. In this we find the famous story called by the Germans the *Nibelungenlied*. Besides the sagas contained in the *Eddas*, there are numerous others, and the whole saga literature makes over 200 volumes. Among them are the *Völsunga Saga*, which is a collection of lays about the early Teutonic heroes. The *Saga of St. Olaf* is the history of this Norwegian king. *Frithjof's Saga* contains the life and adventures of Frithjof of Iceland. Snorri Sturleson, at the close of the twelfth century, made the second great collection of chronicles in verse, called the *Heimskringla Saga*. This is a most valuable record of the laws, customs and manners of the ancient Scandinavians.

Sakuntala.—A famous drama by Kâlidasa. The daughter of Viswamita and a water-nymph, abandoned by her parents, and brought up by a hermit. One day, King Dushyanta came to the hermitage, and persuaded Sakuntala to marry him. In due time a son was born, but Dushyanta left his bride at the hermitage. When the boy was six years old, his mother took him to the king, and Dushyanta recognized his wife by a ring which he had given her. Sakuntala was now publicly proclaimed queen, and the boy (whose name was Bhârata) became the founder of the glorious race of the Bhâratas.

Samson Agonistes.—A sacred drama by Milton. Samson, blind and bound, triumphs over his enemies. As in the bible story, he grasps two of the supporting pillars, and perishes in the general ruin.

Sartor Resartus (*i. e., The Tailor Patched*).—The title of an old Scottish ballad, being *The Life and Opinions of Herr Teufelsdröckh, in Three books*, by Thomas Carlyle. It may be described as a kind of philosophical romance, in which the author gives us, in the form of a review of a supposed German work on dress, and a notice of the writer, his opinions on things in general. The hero, it has been said, seems to be intended for a portraiture of human nature as affected by the moral influence to which a cultivated mind would be exposed by acquaintance with the transcendental philosophy of Fichte.

Scarlet Letter, The.—A romance by Nathaniel Hawthorne, published in 1850. The heroine, Hester Prynne, was condemned to wear conspicuously the letter "A" in scarlet, token of her sin as mother of her child, Pearl, whose father was not known. She was first exposed in disgrace on a raised scaffold, then served a term in prison, and afterward gained a moderate support for herself and child by embroidering. She refused to reveal the name of the father, although she might then be allowed to lay aside the letter. He was always near, held an important position, and lived a life of wearing remorse. After his death Hester Prynne took her child to another country, but returned to spend her old age in seclusion and comfort in the same place that had witnessed her punishment. She always bore herself proudly, but not defiantly, and brought to herself such love and respect that the scarlet letter became a badge of honor. Roger Chillingworth, Hester's husband, appeared as a learned foreign physician, visited her in prison, but promised not to reveal his relation to her, and devoted his life to learning her secret. The characters in the story are intense, and the analysis of motives subtle.

Schlemihl, Peter.—The title of a little work by Chamisso, and the name of its hero, a man who sells his shadow to an old man in gray (the devil) who meets him just after he has been disappointed in an application for assistance to a nobleman. The name has become a byword for any poor, silly, and unfortunate fellow.

School for Scandal, The.—A comedy by Richard Brinsley Sheridan, produced at Covent Garden, London, in 1777, and characterized by Hazlitt as, "if not the most original, perhaps the most finished and faultless comedy which we have. The scene in which Charles Surface sells all the old family pictures but his uncle's, who is the purchaser in disguise, and that of the discovery of Lady Teazle when the screen falls, are among the happiest and most highly wrought that comedy, in its wide and brilliant range, can boast. Besides the art and ingenuity of this play, there is a genial spirit of frankness and generosity, that relieves the heart as well as clears the lungs. While it strips off the mask of hypocrisy, it inspires a confidence between man and man."

School for Wives [*L'Ecole des Femmes* (training for wives)].—A comedy by Molière. Arnolph has a crotchet about the proper training of girls to make good wives, and tries his scheme upon Agnes, whom he adopts from a peasant's cottage, and designs in due time to make his wife. He sends her from early childhood to a convent, where difference of sex and the conventions of society are wholly ignored. When removed from the convent, she treats men as if they were schoolgirls, kisses them, plays with them, and treats them with girlish familiarity. The consequence is, a young man named Horace falls in love with her, and makes her his wife, and Arnolph loses his painstaking.

School of Husbands [*L'Ecole des Maris* (wives trained by men)].—A comedy by Molière. Ariste and Sganarelle, two brothers, bring up Léonor and Isabelle, two orphan sisters, according to their systems for making them in time their model wives. Sganarelle's system was to make the woman dress plainly, live retired, attend to domestic duties, and have few indulgences. Ariste's system was to give the woman great liberty, and trust to her honor. Isabelle, brought up by Sganarelle, deceived him and married another; but Léonor, brought up by Ariste, made him a fond and faithful wife.

Scottish Chiefs, The.—A romantic story by Jane Porter, published in 1810, and counting among its heroes Robert Bruce and Sir William Wallace.

Seasons, The.—A series of poems by James Thomson, which appeared in the following order: *Winter; Summer; Spring;* and *Autumn;* the whole being republished, with the famous *Hymn*. Horace Walpole said that he would rather have written the most absurd lines by Lee than *The Seasons;* but Wordsworth, on the other hand, speaks of it as "a work of inspiration; much of it," he says, "is written from himself, and nobly from himself."

Sentimental Journey Through France and Italy.—By Laurence Sterne, published in 1768. Sterne describes this work as follows: "It is a subject which works well, and suits the frame of mind in which I have been for some time past. I told you my design in it was to teach us to love

the world and our fellow-creatures better than we do—so it runs most upon those gentler passions and affections which aid so much to it."

Seven Lamps of Architecture, The.—A treatise on architecture by Ruskin, published in 1849. The "seven lamps" are those of Sacrifice, Truth, Power, Beauty, Life, Memory, and Obedience. These are symbolic rules for the guidance of the student.

Shepherd's Calendar, The.—Twelve eclogues in various meters, by Spenser, one for each month. January: Colin Clout (Spenser) bewails that Rosalind does not return his love. February: Cuddy, a lad, complains of the cold, and Thenot laments the degeneracy of pastoral life. March: Willie and Thomalin discourse of love. April: Hobbinol sings a song on Eliza. May: Palinode exhorts Piers to join the festivities of May, but Piers replies that good shepherds who seek their own indulgence expose their flocks to the wolves. June: Hobbinol exhorts Colin to greater cheerfulness. July: Morrel, a goatherd, invites Thomalin to come with him to the uplands. August: Perigot and Willie contend in song, and Cuddy is appointed arbiter. September: Diggon Davie complains to Hobbinol of clerical abuses. October: On poetry. November: Colin, being asked by Thenot to sing, excuses himself because of his grief for Dido, but finally sings her elegy. December: Colin again complains that his heart is desolate. Thenot is an old shepherd bent with age, who tells Cuddy, the herdsman's boy, the fable of the oak and the brier, one of the best-known fables included in the calendar.

Sheridan's Ride.—A lyric by T. B. Read, one of the few things written during the heat of the Civil War that is likely to survive.

She Stoops to Conquer.—A comedy by Oliver Goldsmith, said to have been founded on an incident which actually occurred to its author. When Goldsmith was sixteen years of age, a wag residing at Ardagh directed him, when passing through that village, to Squire Fetherstone's house as the village inn. The mistake was not discovered for some time, but all concerned enjoyed the joke. *She Stoops to Conquer* is one of the gayest, pleasantest, and most amusing pieces of English comedy.

Silas Marner.—A novel by George Eliot, published in 1861. This novel is one of the authoress' most beautiful stories, the most poetical of them all—the tale of Silas Marner, who deems himself deserted and rejected utterly of God and man, and to whom, in his deepest misery, in place of lost gold, a little foundling girl is sent. This tale is the most hopeful of all her books. The contemplation of the renewal of enterprise and energy, which comes with little children, and of the promise with which each new generation gilds the crown of honor for its sires, is pleasant and grateful to her. She writes upon her title page the lines of Wordsworth:

A child, more than all other gifts
That earth can offer to declining man,
Brings hope with it and forward-looking thoughts.

The weaver of Raveloe and Eppie are creations after Wordsworth's own heart.

Skeleton in Armor, The.—A lyric by Henry Wadsworth Longfellow, suggested to him while riding on the seashore at Newport. A year or two previous a skeleton had been dug up at Fall River, clad in broken and corroded armor; and the idea occurred to him of connecting it with the Round Tower at Newport, generally known hitherto as the Old Windmill, though now claimed by the Danes as a work of their early ancestors.

Sketch-Book, The.—A series of short tales, sketches, and essays, published by Washington Irving, in 1820. They are chiefly descriptive of English manners and scenery, and have often been reprinted.

Skylark, Ode to the.—By Percy Bysshe Shelley, written in 1820. "In sweetness," says Leigh Hunt, "and not even there in passages, the *Ode to the Skylark* is inferior only to Coleridge—in rapturous passion to no man. It is like the bird it sings—enchanting, profuse, continuous, and alone; small, but filling the heavens."

Hail to thee, blithe spirit!
Bird thou never wert,
That, from heaven, or near it,
Pourest thy full heart
In profuse strains of unpremeditated art.

Sohrab and Rustum.—An episode, or narrative in verse, by Matthew Arnold. The story is told in prose in Sir John Malcolm's *History of Persia*. "The powerful conception of the relations between the two chieftains, and the slaying of the son by the father, are," says Stedman, "tragical and heroic. The descriptive passage at the close beginning—

But the majestic river floated on],

for diction and breadth of tone would do honour to any living poet."

Song of Roland.—An ancient song recounting the deeds of Roland, the renowned nephew of Charlemagne, slain in the pass of Roncesvalles. At the battle of Hastings, Taillefer advanced on horseback before the invading army, and gave the signal for onset by singing this famous song.

Tale of Two Cities, A.—A novel, by Charles Dickens, originally produced in *All the Year Round* for 1859, and afterward republished in complete form. The author says he first conceived the main idea of the story when acting, with his children and friends, in Wilkie Collins' drama of *The Frozen Deep*. His narrative is drawn from the scenes of the French revolution of 1789; and it was one of Dickens' hopes, he says, to add something to the popular and picturesque means of understanding that terrible time; "though no one," he continues, "can hope to add anything to the philosophy of Carlyle's wonderful book."

Tales of a Wayside Inn.—Name given by Longfellow to a collection of short poems arranged by himself and collected together much in the same form as Chaucer's *Canterbury Tales*. These "tales" were mostly gathered from old literatures and translated into Longfellow's own verse, only one, *The Birds of Killingworth*, being said to be entirely original. Seven narrators are represented: the Landlord, the Student, the Spanish Cavalier, the Jew, the Sicilian, the Musician, and the Theologian. Four colonial tales are included in the work: *Paul Revere's Ride*, *Elizabeth*, *Lady Wentworth*, and *The Rhyme of Sir Christopher*.

Taming of the Shrew, The.—A comedy by Shakespeare. The incident of Vincentio's personation by the pedant was borrowed by Shakespeare from George Gascoigne's *Supposes*. The chief characters are Petruchio and his wife Katharine, the shrew.

Tam O'Shanter.—The title of a poem by Burns, and the name of its hero, a farmer, who, riding home very late and very drunk from Ayr, in a stormy night, had to pass by the kirk of Alloway, a place reputed to be a favorite haunt of the devil and his friends and emissaries. On approaching the kirk, he perceived a light gleaming through the windows; but, having got courageously drunk, he ventured on till he could look into the edifice, when he saw a dance of witches. His presence became known, and in an instant all was dark; and Tam, recollecting himself, turned and spurred his horse to the top of her speed, chased by the whole fiendish crew. It is a current belief that witches, or any evil spirits, have no power to follow a poor wight any farther than the middle of the next running stream. Fortunately for Tam, the River Doon was near, and he escaped, while the witches held only the tail of his mare Maggie. It has been said of *Tam O'Shanter* that in no other poem of the same length can there be found so much brilliant description, pathos, and quaint humor, nor such a combination of the terrific and the ludicrous.

Tartuffe (*tär-tuf'*).—One of Molière's best known comedies. Tartuffe is a religious hypocrite and impostor, who uses "religion" as the means of gaining money, covering deceit, and promoting self-indulgence. He is taken up by one Orgon, a man of property, who promises him his daughter in marriage; but, his true character being exposed, he is not only turned out of the house, but is lodged in jail for felony.

Isaac Bickerstaff adapted Molière's comedy to the English stage, under the title of *The Hypocrite*. Tartuffe he calls "Dr. Cantwell," and Orgon "Sir John Lambert." It is thought that "Tartuffe" is a caricature of Père la Chaise, the confessor of Louis XIV., who was very fond of truffles (French, *truffes*), and that this suggested the name to the dramatist.

Task, The.—A poem by William Cowper. "*The Task*, says Southey, "was at once descriptive, moral," and satirical. The descriptive parts everywhere bore evidence of a thoughtful mind and a gentle spirit, as well as of an observant eye; and the moral sentiment which pervaded them gave a charm in which descriptive poetry is often found wanting. The best didactic poems, when compared with *The Task*, are like formal gardens in comparison with woodland scenery." "*The Task*," says Hazlitt, "has fewer blemishes than *The Seasons;* but it has not the same capital excellence, the 'unbought grace' of poetry, the power of moving and infusing the warmth of the author's mind into that of the reader."

Télémaque (*tā-lā-mäk'*), **Les Aventures de** (*Adventures of Telemachus*).—A romance by Fenelon, published in 1699. It is founded on the legendary history of Telemachus, and is one of the classics of French literature. Though the beautiful fiction of *Telemachus*, which has much in common with, and was doubtless suggested to Fenelon by the *Argenis*, be rather an epic poem in prose than a romance, it seems to have led the way to several political romances, or, at least, to have nourished a state for this species of composition.

Tell, William.—Title of a drama by Schiller. The hero is chief of the confederates of the forest cantons of Switzerland, and son-in-law of Walter Fürst. Having refused to salute the Austrian cap which Gessler, the Austrian governor, had set up in the market-place of Altorf, he was condemned to shoot an apple from the head of his own son. He succeeded in this perilous task, but, letting fall a concealed arrow, was asked by Gessler with what object he had secreted it. "To kill thee, tyrant," he replied, "if I had failed." The governor now ordered him to be carried in chains across the Lake Lucerne to Küssnacht Castle, "there to be devoured alive by reptiles; but, a violent storm having arisen on the lake, he was unchained, that he might take the helm. Gessler was on board; and, when the vessel neared the castle, Tell leapt ashore, gave the boat a push into the lake, and shot the governor. After this he liberated his country from the Austrian yoke.

Tempest, The.—One of Shakespeare's fairy plays. The story runs: Prospero, duke of Milan, was dethroned by his brother Antonio, and left on the open sea with his three-year-old daughter, Miranda, in "a rotten carcass of a boat." In this they were carried to an enchanted island, uninhabited except by a hideous creature, Caliban, the son of a witch. Prospero was a powerful enchanter, and soon had not only Caliban, but all the spirits of the region under his control, including Ariel, chief of the spirits of the air. Years afterward Antonio, Alfonso, Sebastian and other friends of the usurper came near the island. Prospero, by his magic, raises a storm which casts their ship on the shore and the whole party are spellbound and brought to Prospero. Plots and counterplots follow, bringing in Caliban and clowns; but all are made ridiculous and are defeated by Prospero and Ariel.

Tom Sawyer, Adventures of.—By Mark Twain. An "elastic" youth whose performances delight both old and young readers. Queer enterprises, influenced by the old superstitions among slaves and children in the Western states, give reliable pictures of boy-life in the middle of the nineteenth century.

Three Musketeers [*Trois Mousquetaires* (*trwä mōs-ke-tar'*), *Les*].—A novel by Alexandre Dumas *père*, published in 1844. The scene is laid in the time of Richelieu. The three musketeers are Athos, Porthos, and Aramis, but D'Artagnan is the principal character. He is a young Gascon of an adventurous yet practical nature, with a genius for intrigue, who goes up to Paris to seek his fortune with an old horse, a box of miraculous salve given to him by his mother, and his father's counsels. His career is one of hairbreadth escapes (with death, in the end, on the field of battle) in the society of the three musketeers.

Twelfth Night.—A drama by Shakespeare. The story is said to have come from a novelette written early in the sixteenth century. A brother and sister, twins, are shipwrecked. Viola dressed like her brother, becomes page to the duke Orsino. The duke was in love with Olivia, and, as the lady looked coldly on his suit, he sent Viola to advance it; but the willful Olivia, instead of melting toward the duke, fell in love with his beautiful page. Sebastian, the twin-brother of Viola, was attacked in a street brawl before Olivia, and, thinking him to be the page, she invited him in. The result was the marriage of Sebastian to Olivia, and of the duke to Viola.

Twice-Told Tales.—A collection of tales by Nathaniel Hawthorne, some of which had been already published in the *Token*, and other periodicals. They are mystical, and, though in prose form, are the work of a poet. The tales are nearly all American in subject, but are treated from the spiritual rather than the practical side.

Two Gentlemen of Verona.—A drama by Shakespeare, the story of which is taken from the *Diana* of Montemayor (sixteenth century). The plot resembles that of *Twelfth Night*, as Julia, disguised as a page, is a prominent figure.

Uarda (*ū-är'da*).—A novel by Ebers, published in 1877. The scene is laid chiefly in Egypt at the time of the reign of Rameses II.

Uncle Tom's Cabin.—A work of fiction by Mrs. Harriet Beecher Stowe. It had an enormous sale, and at once made the author famous. As a picture of slave life as it once obtained in the Southern states of America it is certainly unsurpassed. The scenes described in it are so terrible that Mrs. Stowe deemed it advisable to publish in 1853 a *Key* to the work, showing the large extent to which it is founded upon fact. The hero is, of course, Uncle Tom; the figure next in interest being Legree, the brutal slave-owner. Every one, also, will remember Eva and Topsy.

Utopia.—The name of an imaginary island described in the celebrated work of Sir Thomas More, in which was found the utmost perfection in laws, politics, and social arrangements. More's romance obtained a wide popularity, and the epithet *Utopian* has since been applied to schemes for the improvement of society which are deemed not practicable.

Vanity Fair.—A novel without a hero, by Thackeray. "There are scenes of all sorts," says the author in his preface to the work, "some dreadful combats, some grand and lofty horse-riding, some scenes of high life and some of very middling indeed, some lovemaking for the sentimental, and some light comic business; the whole accompanied by appropriate scenery, and brilliantly illuminated by the author's own candle."

Vathek.—By Beckford. Originally written in French. "It was composed," says the author, "at twenty-two years of age. It took me three days and two nights of hard labor. I never took off my clothes the whole time." The description of the Hall of Eblis, which is often quoted, was taken, it appears, from the old hall at Fonthill, Beckford's residence, probably the largest in any private house in England. "It was from that hall I worked, magnifying and coloring it with Eastern character. All the female characters were portraits drawn

from the domestic establishment of old Fonthill, their good or evil qualities ideally exaggerated to suit my purpose," *Vathek* was translated into English, it is not known by whom, immediately on its appearance. "It was one of the tales," says Byron, "I had a very early admiration of. For correctness of costume, beauty of description, and power of imagination, it far surpasses all European imitations, and bears such marks of originality that those who have visited the East will find some difficulty in believing it to be more than a translation."

car of Wakefield.—A novel by Goldsmith. The hero is Dr. Primrose, a simple-minded, pious clergyman, with six children. He begins life with a good fortune, a handsome house, and wealthy friends, but is reduced to poverty without any fault of his own, and, being reduced like Job, like Job he is restored.

olpone (or, the *Fox*).—A comedy by Ben Jonson, written in 1605. Hazlitt calls it his best play; prolix and improbable, but intense and powerful. It seems formed on the model of Plautus in unity of plot and interest. The principal character is represented as a wealthy sensualist, who tests the character of his friends and kinsmen by a variety of stratagems, obtains from them a large addition to his riches by the success of his impostures, and finally falls under the vengeance of the law. "*Volpone*," says Campbell, "is not, like the common misers of comedy, a mere money-loving dotard, a hard, shriveled old mummy, with no other spice than his avarice to preserve him—he is a happy villain, a jolly misanthrope, a little god in his own selfishness; and Mosca is his priest and prophet. Vigorous and healthy, though past the prime of life, he hugs himself in his harsh humor, his successful knavery and imposture, his sensuality and his wealth, with an unhallowed relish of selfish existence."

allenstein (*vāl'len-stīn*).—A trilogy by Schiller, comprising *Wallensteins Lager*, *Die Piccolomini*, and *Wallensteins Tod*. Schiller conceives his hero in these dramas as the type of the practical realist, serious, solitary, and reserved.

Wandering Jew, The.—(F. *Le Juif Errant*). A novel by Eugene Sue. The chief character is an imaginary person in a legend connected with the history of Christ's passion. As the Saviour was on the way to the place of execution, overcome with the weight of the cross, he wished to rest on a stone before the house of a Jew, who drove him away with curses. Driven by fear and remorse, he has since wandered, according to the command of the Lord, from place to place, and has never yet been able to find a grave.

War and Peace.—An historical novel by Tolstoi, published 1865-68. The scene is laid in the time of the Czar Alexander I., and the novel is a picture of Russian society during the Russo-French wars.

Wayside Inn, Tales of a.—Poems in various meters by Henry Wadsworth Longfellow. The first series includes a Prelude (*The Wayside Inn*), the Landlord's Tale (*Paul Revere's Ride*), the Student's Tale (*The Falcon of Ser Federigo*), the Spanish Jew's Tale (*The Legend of Rabbi Ben Levi*), the Sicilian's Tale (*King Robert of Sicily*), the Musician's Tale (*The Saga of King Olaf*), the Theologian's Tale (*Torquemada*), the Poet's Tale (*The Birds of Killingworth*), several Interludes, and Finale.

Westward Ho!—A novel by the Rev. Charles Kingsley, the scene of which is laid in "the spacious times of great Elizabeth," when the safety of England was threatened by the Spanish armada. Several historical personages figure in the story, such as Sir Walter Raleigh, Sir Richard Grenville, Admiral Hawkins, and Sir Francis Drake; and the narrative carries the reader from Bideford to London, and from thence to Ireland, to the Spanish main, and the South American continent, back again to Bideford and Plymouth, whence the hero, Amyas Leigh, sails to take part in the famous sea-fight.

Wilhelm Meister.—Title of a philosophic novel by Goethe. The object is to show that man, despite his errors and shortcomings, is led by a guiding hand, and reaches some higher aim at last. This is considered to be the first true German novel.

Winter's Tale, The.—A play by Shakespeare. Leontês, King of Sicily, invites his friend Polixenês to visit him, becomes jealous, and commands Camillo to poison him. Camillo warns Polixenês, and flees with him to Bohemia. Leontês casts his queen, Hermionê, into prison, where she gives birth to a daughter. Hermionê is reported dead and the child is brought up by a shepherd, who calls it Perdita. Florizel sees Perdita and falls in love with her; but Polixenês, his father, tells her that she and the shepherd shall be put to death if she encourages the suit. Florizel and Perdita flee to Sicily, and being introduced to Leontês, it is soon discovered that Perdita is his lost daughter. Polixenês tracks his son to Sicily, and consents to the union. The party are invited to inspect a statue of Hermionê, and the statue turns out to be the living queen.

Wives of Windsor, The Merry.—A comedy by William Shakespeare, said to have been written by desire of Queen Elizabeth, who wished to see Falstaff represented as in love. It was afterward revised and much improved by the author. The plot is founded upon more than one Italian story. The comedy itself is described by Warton as "the most complete specimen of its author's comic power."

Zadig.—The title of a novel by Voltaire. Zadig is a wealthy young Babylonian, and the object of the novel is to show that the events of life are beyond human control.

Zara.—(In French *Zaire*), a tragedy by Voltaire. Zara is the daughter of Lusignan d Outremer king of Jerusalem and brother of Nerestan. For twenty years Lusignan and his two children were captives at the court of the sultan, Osman. The latter loves Zara, and was jealous of Nerestan, of whose relationship he was ignorant, and stabbed her to the heart. Nerestan being brought before the sultan, told him he had slain his sister. Osman then stabbed himself out of remorse.

DICTIONARY OF LITERARY CHARACTERS AND ALLUSIONS

ron.—A Moor, beloved by Tamora, queen of the Goths, in Shakespeare's *Titus Andronicus*. The character shows originality of conception, but is otherwise repellant.

baddon. The Hebrew name of an evil spirit or destroying angel called Apollyon in Greek. In mediæval literature he is regarded as the chief of the demons of the seventh hierarchy and the one who causes wars and uproars. Klopstock introduced him in his *Messiah* under the name of Abbadona. He represents him as a fallen angel still bearing traces of his former dignity and repenting of his part in the rebellion against God. In Bunyan's *Pilgrim's Progress* he meets and fights with Pilgrim.

acedarian Hymns. Hymns which began with the first letter of the alphabet, the succeeding lines or verses commencing with the other letters in regular succession.

bdalla. (1) One of sir Brian de Bois Guilbert's slaves, in Scott's *Ivanhoe*. (2) Brother and predecessor of Giaffer, pasha of Abydos, by whom he was murdered, in Byron's *Bride of Abydos*.

bdalla el Hadgi. Saladin's envoy, in Scott's *The Talisman*.

bdallah. Irving, in his *Life of Mohammed*, repeats the Mohammedan legend to the effect that Abdallah, the father of Mohammed, was so beautiful that, when he married Amina, 200 virgins broke their hearts from disappointed love.

bdiel. In Milton's *Paradise Lost* is the name of the seraph who, when Satan stirred up a revolt, boldly withstood him.

bonde. A character in French literature that corresponds to our Santa Claus, the good fairy who comes at night, especially New Year's night, to bring toys to children while they sleep.

bou Hassan. As related in the *Arabian Nights*, Abou Hassan is a merchant of Bagdad who is carried in his sleep to the bed of the Caliph Haroun-al-Raschid and on awaking is made to believe himself the caliph. Twice in this way he was made to believe himself caliph and afterward became in reality the caliph's favorite and companion.

bsalom. A name given by Dryden, in his satirical poem *Absalom and Achitophel*, to the duke of Monmouth, a natural son of Charles II. Like Absalom, the son of David, Monmouth was remarkable for his personal beauty, his popularity, and his undutifulness to his father.

bsolute, Captain. A character in Sheridan's comedy, *The Rivals*. He is distinguished for his gallant, determined spirit, his quickness of speech, and dry humor.

bsolute, Sir Anthony. An amusing character in Sheridan's *Rivals*. He is represented as testy, positive, impatient, and overbearing, but yet of a warm and generous disposition.

adia. The name is said to be derived from Shubenacadie, the name of one of the principal rivers of Nova Scotia: in old grants called *L'Acadie*, and *La Cadie*. The original, and now the poetic, name of Nova Scotia. In 1755, the French inhabitants were seized, forcibly removed and dispersed among the English colonists on the Atlantic coast. Longfellow has made this event the subject of his poem *Evangeline*.

Achitophel. A nickname given to the first earl of Shaftesbury by his contemporaries, and made use of by Dryden in his poem *Absalom and Achitophel*, a satire designed as a defense of Charles II. against the Whig party. There is said to be a striking resemblance between the character and career of Shaftesbury and those of Achitophel, or Ahitophel, the treacherous friend and counselor of David, and the fellow-conspirator of Absalom.

Acrasia. In Spenser's *Faërie Queene*, a witch represented as a lovely and charming woman, whose dwelling is the Bower of Bliss, which is situated on an island floating in a lake or gulf, and is adorned with everything in nature that can delight the senses. The word signifies intemperance. She is the personification of sensuous indulgence and intoxication. Sir Guyon, who illustrates the opposite virtue, is commissioned by the fairy queen to bring her into subjection, and to destroy her residence.

Acres, Bob. A character in Sheridan's *The Rivals*, celebrated for his cowardice and his peculiar method of allegorical swearing.

Adam. (1) Adam is a character frequently alluded to in the *Talmud*. Many strange legends are related of him. He was buried, so Arabian tradition says, on Aboncais, a mountain of Arabia. (2) In *As You Like It*, Shakespeare, he is an aged servant to Orlando and offers to accompany Orlando in his flight and to share with him his carefully-hoarded savings of 500 pounds. (3) In Shakespeare's *Comedy of Errors*, Adam is an officer known by his dress, a skin-coat.

Adamastor. (1) A hideous phantom described by Camoens in his *Lusiad* as the spirit of the stormy cape (Cape of Good Hope). (2) Adamastor is described as one of the giants who invaded heaven.

Adams, Parson. A character in Fielding's story of *Joseph Andrews*, distinguished for his goodness of heart, poverty, learning, and ignorance of the world, combined with courage, modesty, and a thousand oddities.

Ademar or **Ademaro**; in Tasso's *Jerusalem Delivered*, is an ecclesiastical warrior who besought the pope that he might be sent on the crusades. He was slain in an attack on Antioch, but in the final attack on Jerusalem his spirit came with three squadrons of angels to aid the besiegers.

Adolpha. In Knowles' *Maid of Mariendorft*, Adolpha, the daughter of General Kleiner, governor of Prague, and wife of Idemstein, is known for her "excess of too sweet nature," which Knowles in his romance pictures as a fault.

Adonais. A poetical name given by Shelley to the poet Keats, on whose untimely death he wrote an elegy bearing this name for its title. The name was coined by Shelley probably to hint an analogy between Keats' fate and that of Adonis.

Adrastus. In Tasso's *Jerusalem Delivered*, an Indian prince from the banks of the Ganges, who aided the king of Egypt against the crusaders. He was distinguished by his garment, a serpent's skin. Adrastus was slain by Rinaldo.

Agnes. (1) A young girl in Molière's *L'Ecole des Femmes*, who affects to be remarkably simple and ingenuous. The name has passed into popular use, and is applied to any young woman unsophisticated in affairs. (2) A strong womanly character in *David Copperfield* who proves a true friend to David's "child-wife," Dora, and to David himself. Later Dora dies and David marries Agnes.

Agapida, Fray Antonio. The imaginary chronicler of the *Conquest of Granada*, written by Washington Irving.

Agib. *Arabian Night's Entertainment*. The third Calendar in the story of "The Three Calendars."

Agramante or **Agramant.** King of the Moors in Ariosto's poem of *Orlando Furioso*.

Aguecheek, Sir Andrew. A simpleton in Shakespeare's *Twelfth Night*, to whom life consists only of eating and drinking. He is stupid even to silliness, but so devoid of self-love or self-conceit that he is delightful in his simplicity.

Ahasuerus, chief character in Sue's *A Wandering Jew*, the cobbler who pushed away Jesus when, on the way to execution, He rested a moment or two at his door. "Get off! Away with you!" cried the cobbler. "Truly, I go away," returned Jesus, "and that quickly; but tarry thou till I come." And from that time Ahasuerus became the "wandering Jew," who still roams the earth, and will continue so to do till the "second coming of the Lord."

Ahmed, Prince. In the *Arabian Nights*, noted for a magic tent he possessed which would cover a whole army but might be carried in the pocket. He also possessed a magic apple which would cure all diseases.

Aladdin. One of the best known characters in the *Arabian Nights*. Aladdin becomes possessed of a wonderful lamp and ring. On rubbing them, two genii appear, who are the slaves of any one who possesses the lamp and ring. They obey Aladdin and perform most incredible deeds by their magic.

Al Araf. The Mohammedan limbo, between paradise and jehennam, for those who die without sufficient merit to deserve the former, and without sufficient demerit to deserve the latter. Here lunatics, idiots, and infants go at death, according to the Koran. The subject of an uncompleted poem by Edgar A. Poe.

Alasnam. The hero of a story in the *Arabian Nights* entitled "The History of Prince Zeyn Alasnam and the Sultan of the Genii." Alasnam has eight diamond statues, but had to go in quest of a ninth more precious still, to fill the vacant pedestal. The prize was found in the lady who became his wife, at once the most beautiful and the most perfect of her race.

Albracca. In Bojardo's *Orlando Innamorato*, a castle of Cathay to which Angelica retires in grief at being scorned and shunned by Rinaldo, with whom she is deeply in love. Here she is besieged by Agricane, King of Tartary, who resolves to win her, notwithstanding her indifference to his suit.

Alceste. A noble but misanthropic man, the hero of Molière's comedy *Le Misanthrope*.

Alcina. A fairy represented as carrying off Astolfo. she reappears in great splendor in Ariosto's *Orlando Furioso.*

Aldiborontiphoscophornio.—A character in Henry Carey's burlesque tragedy *Chrononhotonthologos.*

Aldingar, Sir.—A character in Percy's *Reliques.* This ballad relates how the honor of Queen Elianor, wife of Henry Plantagenet, impeached by Sir Aldingar, her steward, was submitted to the chance of a duel, and how an angel, in the form of a little child, appeared as her champion, and established her innocence.

Ali Baba.—A poor Persian woodcarrier of the *Arabian Nights,* who accidentally learns the magic words, "Open Sesamê!" "Shut Sesamê!" by which he gains entrance into a vast cavern, the repository of stolen wealth and the lair of forty thieves. He makes himself rich by plundering from these stores; and by the shrewd cunning of Morgiana, his female slave, the captain and his whole band of thieves are extirpated. In reward of these services, Ali Baba gives Morgiana her freedom, and marries her to his own son.

Alice Brand.—In Scott's *Lady of the Lake,* Alice signed Urgan the dwarf thrice with the sign of the cross, and he became "the fairest knight in all Scotland"; when Alice recognized in him her own brother.

Allan-a-Dale.—A friend of Robin Hood's in the ballad. He is introduced into Sir Walter Scott's *Ivanhoe* as Robin Hood's mnistrel.

Allworthy, Mr.—In Fielding's novel of *Tom Jones,* a man of amiable and benevolent character; intended for Mr. Ralph Allen, who was also celebrated by Pope.

Almighty Dollar.—A personification of American worship. Washington Irving originated the phrase in *The Creole Village.*

Alp.—*Siege of Corinth,* Byron. The hero of this poem.

Amadis de Gaul.—The hero of an ancient and celebrated Portuguese romance. A French version was printed in 1555.

Amanda.—A young woman who impersonates spring in Thomson's *Seasons.*

Amaryllis.—In Spenser's pastoral *Colin Clout's Come Home Again,* is the countess of Derby. Her name was Alice, and she was the youngest of the six daughters of Sir John Spenser, of Althorpe, ancestor of the noble houses of Spenser and Marlborough. After the death of the earl, the widow married Sir Thomas Egerton, keeper of the great seal (afterward baron of Ellesmere and viscount Brackley). It was for this very lady, during her widowhood, that Milton wrote his *Arcades.*

Ambrose.—A sharper in Lesage's *Gil Blas,* who assumed in the presence of Gil Blas the character of a devotee. He was in league with a fellow who assumed the name of Don Raphael, and a young woman who called herself Camilla, cousin of Donna Mencia. These three sharpers allure Gil Blas to a house which Camilla says is hers, fleece him of his ring, his portmanteau, and his money, decamp, and leave him to find out that the house is only a hired lodging.

Amelia.—The title of one of Fielding's novels, and the name of its heroine, who is distinguished for her tenderness and affection. The character of Amelia is said to have been drawn from Fielding's wife.

Amine.—In *Arabian Nights* a female character who leads her three sisters by her side as a leash of hounds.

Aminte.—*Les Précieuses Ridicules,* Molière. A contradictory character in this comedy. She dismisses her admirers for proposing to marry her, scolds her uncle for not carrying himself as a gentleman, and marries a valet whom she believes to be a nobleman.

Amlet, Richard.—The name of a gamester in Vanbrugh's *Confederacy.*

Amoret.—(1) The name of a lady married to Sir Scudamore, in Spenser's *Faerie Queene.* She is the type of a devoted, loving wife. (2) The heroine of Fletcher's pastoral drama, *The Faithful Shepherdess.*

Amys and Amylion.—Two faithful friends. The Pylades and Orestes of the feudal ages. Their adventures are the subjects of ancient romances.

Ancient Mariner.—The chief character in Coleridge's *Rime of the Ancient Mariner.* (See under Famous Books, Poems, etc.)

Ancient Man.—In Tennyson's *Idylls of the King,* means Merlin, the old magician, King Arthur's protector and teacher.

Andrews, Joseph.—The hero in Fielding's novel by the same name, written to ridicule Richardson's *Pamela.* Fielding presents Joseph Andrews as a brother to the modest and prudish Pamela, and pictures him as a model young man.

Angelica.—In Bojardo's *Orlando Innamorato,* is daughter of Galaphron, king of Cathay. She goes to Paris, and Orlando falls in love with her, forgetful of wife, sovereign, country, and glory. Angelica, on the other hand, disregards Orlando, but passionately loves Rinaldo, who positively dislikes her. Angelica and Rinaldo drink of certain fountains, when opposite effects are produced in their hearts, for then Rinaldo loves Angelica, while Angelica loses all love for Rinaldo. (2) The heroine of Congreve's comedy of *Love for Love;* in love with Valentine, but the ward of Sir Sampson Legend, who seeks to marry her. She jilts the old man, however, and marries the younger lover. Angelica is supposed to represent Mrs. Bracegirdle; Valentine, the author himself, who was enamoured of the actress, and was the rival of the dramatist, Rowe, in her affections. (3) The heroine of Ariosto's *Orlando Furioso.* She was beloved by Orlando, but married Medoro. Also the name of the heroine of Farquhar's plays of the *Constant Couple,* and *Sir Harry Wildair.*

Angelic Doctor.—A name bestowed upon Thomas Aquinas, because he discussed the knotty point of "how many angels can dance on the point of a needle." He was also called the Angel of the Schools.

Angelo.—A character in Shakespeare's *Measure for Measure;* also the name of a goldsmith in the *Comedy of Errors.*

Angiolina.—The wife of the doge of Venice, in Byron's *Marino Faliero.*

Annabel Lee.—The title and subject of a poem by Edgar Allan Poe, which begins—

It was many and many a year ago,
In a kingdom by the sea,
That a maiden there lived whom you may know
By the name of Annabel Lee.

Anne.—Perrault's *La Barbe Bleue,* the sister of Fatima, the seventh and last wife of Bluebeard. Fatima, having disobeyed her lord by looking into the locked chamber, is allowed a short respite before execution. Sister Anne ascends the high tower of the castle, with the hope of seeing her brothers, who were expected to arrive every moment. Fatima, in her agony, keeps asking "sister Anne" if she can see them, and Bluebeard keeps crying out for Fatima to use greater dispatch. As the patience of both is exhausted, the brothers arrive, and Fatima is rescued from death.

Annie Laurie, eldest of the three daughters of Sir Robert Laurie, of Maxwelton. In 1709 she married James Fergusson, of Craigdarroch, and was the mother of Alexander Fergusson, the hero of Burns' song *The Whistle.* The song of *Annie Laurie* was written by William Douglas, of Fingland, in the stewardy of Kirkcudbright, hero of the song *Willie Was a Wanton Wag.*

Antipholus of Ephesus, Antipholus of Syracuse.—Twin brothers, sons to Ægeon and Æmilia, in Shakespeare's *Comedy of Errors.*

Antonio.—(1) The merchant of Venice in Shakespeare's play of that name, the friend to Bassanio, and the object of Shylock's hatred. (2) The usurping Duke of Milan, and brother to Prospero, in Shakespeare's *Tempest.* (3) The father of Proteus, in Shakespeare's *Two Gentlemen of Verona.* (4) A minor character in Shakespeare's *Much Ado About Nothing.* (5) A sea-captain, friend to Sebastian, in Shakespeare's *Twelfth Night.*

Archimago or **Archimage.**—A character in Spenser's *Faërie Queene,* a hypocrite or deceiver. He is opposed to holiness embodied in the Red Cross Knight, wins the confidence of the knight in the disguise of a reverend hermit, and by the help of Duessa, or Deceit, separates him from Una, or Truth.

Arcite.—*Palamon and Arcite* is the first story told by Chaucer in his *Canterbury Tales.* Chaucer borrowed this story from Boccaccio, who, in his turn, borrowed it from a more ancient mediæval tale. Arcite, a young Theban knight, made prisoner by Duke Theseus, is shut up in a prison in Athens with Palamon. Both the captives fall in love with Emily, the duke's sister-in-law. Both gain their liberty and Emily is promised by the duke to the one who wins in a tournament. Arcite wins but is killed by a fall from a horse and Emily marries Palamon. This story is better known through Dryden's *Palamon and Arcite.*

Arden, Enoch.—The hero of Tennyson's poem of the same name, a seaman who is wrecked on an uninhabited tropical island, where he spends many years, and who returns home at last only to find that his wife, believing him to be dead, has married his old playfellow and rival, and is prosperous and happy. In a spirit of heroic self-sacrifice, he determines not to undeceive her, and soon dies of a broken heart.

Arethusa.—The name of a sylph in Pope's *Rape of the Lock.*

Argalia.—In Bojardo's *Orlando Innamorato.* A brother to Angelica in this romantic poem. He is celebrated as the possessor of an enchanted lance which threw whomsoever it touched. Ferrau eventually killed him, and Astolfo obtained the lance.

Argalus.—An unhappy lover in Sir Philip Sidney's *Arcadia.*

Argan.—The hero of Molière's comedy *Le Malade Imaginaire.*

Arnolphe.—In Molière's *L'Ecole des Femmes,* a selfish and morose cynic.

Armida.—In Tasso's *Jerusalem Delivered,* a beautiful sorceress with whom Rinaldo fell in love. By a talisman he is disenchanted. Not being able to allure him back, Armida rushes into the midst of a combat and is slain.

Arsinoe.—A prudish character in Molière's *Le Misanthrope.*

Artegal., also written **Artegall, Arthegal,** and **Artegale.**—(1) A legendary king of Briton mentioned by Geoffrey of Monmouth in his chronicles and by Milton in his *History of Britain.* (2) A character in Spenser's *Faërie Queene,* representing Justice. (3) The hero in a poem by William Wordsworth, entitled *Artegal and Elidore.*

Arthur, King.—A poetical character, based on historical traditions. The Arthur of the old Welsh bards was a warrior chieftain ruling over fierce and warlike tribes. Every generation of poets has added something to this picture until the Arthur of modern romance is the Christian gentleman as Tennyson pictures him in his *Idylls of the King* surrounded by his chivalrous knights, all bound together in one quest, the Holy Grail.

Arthur's Sword.—Escalibur or Excaliber. Geoffrey calls it Caliburn, and says it was made in the isle of Avallon, by Merlin.

Arthur's Round Table.—It contained seats for 150 knights. Three were reserved, two for honor, and one (called the "siege perilous") for Sir Galahad, destined to achieve the quest of the Holy Grail.

Ashton, Sir William.—The Lord keeper of Scotland; a prominent character in Scott's *Bride of Lammermoor.*

Asmodeus.—In the Jewish demonology, an evil spirit, the demon of vanity, or dress. In modern times he has been spoken of as the destroying demon of matrimonial happiness.

Aspatia.—The unfortunate heroine of Beaumont and Fletcher's play *The Maid's Tragedy.*

Astolot.—The home of Elaine in Tennyson's *Idylls of the King.*

Astolfo or **Astolpho.**—A celebrated character in the romantic tales and poems founded upon the supposed adventures of Charlemagne and his Paladins. (See also *Orlando Furioso.*)

Athalie.—*Athalie,* Racine. Daughter of Ahab and Jezebel in Racine's famous tragedy by this name.

Auburn.—The name of a village immortalized by Oliver Goldsmith in his *Deserted Village;* it has been identified with Lissoy, in Ireland, near Athlone.

Audrey.—A country wench, in Shakespeare's *As You Like It.*

Autolycus.—The craftiest of thieves. He stole the flocks of his neighbors, and changed their marks. Sisyphus outwitted him by marking his sheep under their feet. Shakespeare introduces him in *The Winter's Tale,* as a peddler, and says he was called the son of Mercury.

Avalon, or **Avillon.**—The earthly paradise of the Britains. In middle-age romance, the name of an ocean island, and of a castle. It is represented as the abode of Arthur and Oberon and Morgan le Fay. It is most fully described in the old French romance of *Ogier le Danois.* It is the island kingdom to which King Arthur is finally borne by the mysterious barge in Tennyson's *Passing of Arthur.* Some identify Avalon with the modern Glastonbury.

Avernus.—A lake in Campania so called from the belief that its vapors would kill all life. Poets call it the entrance to the infernal regions.

Aymer, Prior.—A Benedictine monk, prior of Jorvaulx abbey, in Sir Walter Scott's *Ivanhoe.*

Aymon.—A semimythical personage who figures in romances.

Azazil.—*Paradise Lost,* Milton. Represented in this poem as Satan's standard bearer. According to the Koran, when God commanded the angels to worship Adam, Azazil replied, "Why should the sons of fire fall down before a son of clay?" and God cast him out of heaven.

Azo.—The name given by Byron to the Prince of Este, in his poem of *Parisina.*

Azrafil.—In the Koran the archangel commissioned to blow the trumpet of the resurrection.

Bab, Lady.—A waiting maid in Townley's *High Life Below Stairs,* who assumes the airs with the name and address of her mistress. Her fellow-servants and other servants address her as "Lady Bab," or "Your ladyship."

Baillie, Harry.—*Canterbury Tales,* Chaucer. The jolly landlord at Tabard Inn, where the Canterbury Pilgrims gathered in making ready for their journey.

Balafre.—*Quentin Durward,* Scott. Name given to an old archer belonging to the Scottish Guards.

Balderstone, Caleb.—*Bride of Lammermoor,* Scott. A bore and an intrusive buffoon who tries to appear rich but lives in discomfort and often in hunger and want. His pretensions have often been laughingly quoted.

Baldwin.—*Jerusalem Delivered,* Tasso. The brother of Godfrey of Bouillon. In the tale of *Reynard the Fox* the name Baldwin is given to one of the beasts.

Balmawhapple.—*Waverley,* Scott. An obstinate stupid-faced blundering Scotch laird.

Balthazar.—*Comedy of Errors,* Shakespeare. A merchant ordered to furnish impossible merchandise. In *Much Ado About Nothing* Balthazar appears as servant to Don Pedro. Balthazar is also the name of one of the Wise Men who followed the star to Bethlehem.

Balwhidder.—*Annals of the Parish,* Galt. A sincere, kind, talkative Scotch Presbyterian clergyman. With natural prejudices and old-fashioned ways he is too "easy" to carry on his parish work with zeal. His friends enjoy Balwhidder's jokes.

Banquo.—*Macbeth,* Shakespeare. A thane of Scotland said to belong to the Eleventh Century and ancestor of the Stuarts. In fiction made immortal as the innocent laird murdered by Macbeth. Banquo's ghost is more famous than Banquo himself.

Barabas.—*The Jew of Malta,* Marlowe. A monster, the hero of the tragedy, who wears a big nose and invents infernal machines.

rdell, Mrs.—*Pickwick Papers*, Dickens. The landlady, a widow, who sues Mr. Pickwick for breach of promise to marry her.

rdolph.—*Merry Wives of Windsor*, Shakespeare. A follower of Falstaff, known as "the knight of the burning lamp," from his red nose. He is a poor, lowbred drunkard.

rkis.—*David Copperfield*, Dickens. Remembered by the much-quoted "Barkis is willin'," his form of proposing marriage to his beloved Clara Peggotty.

rleycorn, Sir John.—*Tam O'Shanter*, Burns. Name given to the personification of a malt liquor made from barley. Sir Barleycorn has also been noticed by the authors Scott and Hawthorne. The name comes down to us from an old English pamphlet of uncertain date in which Sir John Barleycorn is arraigned in court, tried by jury and acquitted.

sillisco.—*Soliman and Perseda*, old play. A boasting knight who became so popular with his foolish bragging that his name grew into a proverb.

ssanio.—*Merchant of Venice*, Shakespeare. The lover of Portia who won her when he chose a leaden casket in which her portrait was hidden.

th, Major.—*Amelia*, Henry Fielding. A noble-minded gentleman, pompous in spite of poverty, and striving to live according to the "dignity and honor of man." He tries to hide his poverty under bold speech even when found doing menial service.

ttle, Sarah.—*Essays of Elia*, Lamb. Sarah considered whist the business of life and literature one of the relaxations. When a young gentleman, of a literary turn, said to her he had no objection to unbend his mind for a little time by taking a hand with her, Sarah declared "Whist was her life business; her duty; the thing she came into the world to do. She unbent her mind afterward over a book."

atrice.—*Divine Comedy*. Dante. Daughter of an illustrious family of Florence for whom Dante had a great love. In his poem she is represented as being his guide through paradise. Beatrice is also the name of the heroine of Shakespeare's *Much Ado About Nothing*.

de, Adam.—*Adam Bede*, George Eliot. An ideal workman, hero of the novel.

divere.—*Tales of the Round Table*. Bedivere was the last knight of King Arthur's Round Table.

larius.—A nobleman and soldier in the army of Cymbeline, king of Britain.

lch, Sir Toby.—*Twelfth Night*, Shakespeare. Uncle to Olivia, a jolly, care-free fellow, type of the roisterers of Queen Elizabeth's days.

linda.—*Rape of the Lock*, Pope. Poetical name of the heroine, whose real name was said to be Arabella Fermor. In a frolic Lord Petre cut a lock from the lady's hair. This was so much resented that it broke the great friendship between the two families. The poem, *Rape of the Lock*, was written to bring the people into a better temper and lead to reconciliation. Belinda is also the name of the heroine in a novel written by Maria Edgeworth.

ll, Adam.—*Old Ballad*. A famous wild outlaw belonging to the north country and celebrated for his skill as an archer.

ll, Laura.—*Pendennis*, Thackeray. One of the sweetest heroines in English literature.

llman.—*L'Allegro*, Milton. The watchman who patrolled the streets and called out the hour of night. Sometimes he repeated scraps of pious poetry in order to charm away danger.

ll-the-Cat.—Name given to a nobleman at Lauder, Scotland, early in the sixteenth century. King James II. called an assembly of Scottish barons to resist a threatened invasion of his realm by Edward IV. of England. After long discussion one of the barons related the nursery tale of a convention of mice in which it was proposed to hang a bell on the cat's neck, to give warning of her presence. No one would serve on the mouse committee. To the story Archibald Douglas responded by saying "I will bell the cat" and was afterward known by the name, Bell-the-cat.

lphœbe.—*Faerie Queene*, Spenser. A delicate and graceful flattery offered to Queen Elizabeth through the huntress, Belphœbe, intended as a likeness of the queen. The name taken from belle, meaning beautiful, and Phœbe, a name sometimes bestowed on Diana.

lvawney, Miss.—*Nicholas Nickleby*, Dickens. She belonged to the wonderful Portsmouth theater, always took the part of a page and gloried in silk stockings.

lvidera.—*Venice Preserved*, Otway. The beautiful heroine of the almost forgotten tragedy. Sir Walter Scott said "more tears have been shed, probably, for the sorrows of Belvidera and Monimia than for those of Juliet and Desdemona."

nedick.—*Much Ado About Nothing*, Shakespeare. A young lord of Padua who is gentleman, wit, and soldier. He was a pronounced bachelor, but after a courtship full of witty sayings and coquetry he marries the lovely Beatrice. From this gentleman comes the name Benedick or Benedict, applied to married men who were not going to marry.

nengeli, Cid Hamet.—*Don Quixote*, Cervantes. Supposed to be a writer of chronicles among the Moors and claimed as authority for the tales of adventure recorded by Cervantes. The name, Cid Hamet, has been often quoted by writers.

Bennet, Mrs.—*Amelia*, Fielding. An improper character.

Benvolio.—*Romeo and Juliet*, Shakespeare. One of Romeo's friends who would "quarrel with a man that had a hair more or a hair less in his beard than he had." Mercutio says to him, "Thou hast quarreled with a man for coughing in the street."

Bertram.—*Guy Mannering*, Scott. The character was suggested by James Annesley, Esq., rightful heir of the earldom of Anglesey, of which he was dispossessed by his uncle Richard. He died in 1743. Bertram was also the name of the haughty and dissolute count, husband of Helena in Shakespere's comedy *All's Well That Ends Well*.

Bianca.—(1) the younger daughter of Baptista of Padua, as gentle and meek as her sister Katherine was violent and irritable. (2) The sweetheart, "almost" wife of Cassio, in Shakespeare's *Othello*.

Birch, Harvey.—*The Spy*, Cooper. The chief character of the novel.

Biron.—*Love's Labor's Lost*, Shakespeare. A merry madcap young lord, in attendance on Ferdinand, king of Navarre.

Black-eyed Susan.—*Ballad*, John Gay. The heroine of the popular sea-song.

Black Knight of the Black Lands.—Sir Peread. Called by Tennyson *Night* or *Nox*. He was one of the four brothers who kept the passages of Castle Dangerous, and was overthrown by Sir Gareth. *Idylls* (*Gareth and Lynette*).

Blatant Beast.—*Faerie Queene*, Spenser. A bellowing monster typical of slander; or, an impersonation of what we now call *Vox Populi*, or the *Voice of the People*.

Blimber, Miss Cornelia.—*Dombey and Son*, Dickens. The daughter of Dr. Blimber, the head of a first-class educational establishment conducted on the forcing, or cramming, principle. She is a very learned, grave, and precise young lady, "no light nonsense about her," who has become "dry and sandy with working in the graves of deceased languages."

Blouzalinda.—*Shepherd's Week*, John Gay. The country girl, heroine of this pastoral poem, written more than one hundred and fifty years ago, but quoted as a picture of the poverty and rudeness of rural life at that time.

Bobadil, Captain.—*Every Man in His Humor*, Jonson. A boasting coward, who passes himself off with young and simple people for a Hector.

Bœuf, Front de.—*Ivanhoe*, Scott. One of King John's followers. A ferocious scoundrel.

Bois Guilbert, Brian de.—*Ivanhoe*, Scott. A brave but cruel, crafty, and dissolute commander of the Knights Templar.

Boniface.—*The Beaux's Stratagem*, Farquhar. A fine representation of an English landlord. Hence applied to landlords generally.

Bontemps, Roger.—*Song*, Beranger. Known in France as the personification of care-free leisure. The equivalent, among the French peasantry, for the English proverb, "There's a good time coming," is *Roger Bontemps*. This one of Beranger's most celebrated songs was written in 1814.

Bottom, Nick.—*A Midsummer Night's Dream*, Shakespeare. A man who fancies he can do everything, and do it better than any one else. Shakespeare has drawn him as profoundly ignorant and with an overflow of self-conceit. Oberon, the fairy king, desiring to punish Titania, his queen, commissioned Puck to watch her till she fell asleep, and then to anoint her eyelids with the juice of a plant called "love-in-idleness," the effect of which, when she awoke, was to make her dote upon Bottom, upon whom Puck had fixed an ass' head.

Bowling, Tom.—*Roderick Random*, Smollett. A name made almost famous as hero of the novel. Critics have said "The character of Tom Bowling, in *Roderick Random* will be regarded in all ages as a happy exhibition of those naval heroes to whom Britain is indebted for so much of her happiness and glory." The Tom Bowling referred to in Dibdin's famous sea-song was Captain Thomas Dibdin, brother of Charles Dibdin, who wrote the song.

Brag, Jack.—*Jack Brag*, Theodore Hook. Hero of the novel and a spirited embodiment of the arts employed by a vulgar pretender to creep into aristocratic society, and of his ultimate discomfiture. General Burgoyne figures in an old ballad known as *Sir Jack Brag*.

Bramble, Matthew.—*Humphrey Clinker*, Smollett. Noted character in the novel described as "an odd kind of humorist," afflicted with the gout, and "always on the fret," but full of generosity and benevolence.

Brass, Sally, and Sampson.—*Old Curiosity Shop*, Dickens. Brother and sister, well mated, he a shystering lawyer and she getting ahead of him in villainy. Sampson was dishonest, sentimental, and affected in manner, and both are interesting characters to read about.

Brentford, The Two Kings of.—*The Rehearsal*, Villiers. Much question has been raised as to who was to be ridiculed under these characters. The royal brothers, Charles II. and James II., have been suggested; others say the fighting kings of Granada. In the farce the two kings are represented as walking hand in hand, as dancing together and singing in concert.

Briana.—Spenser's *Faerie Queene*. The lady of a castle who demanded for toll the locks of every lady and the beard of every knight that passed. This toll was established because Sir Crudor, with whom she was in love, refused to marry her till she had provided him with human hair sufficient to purfle a mantle with. Sir Crudor, having been overthrown in knightly combat by Sir Calidore, who refused to give the passage pay, is made to release Briana from the condition imposed on her, and Briana swears to discontinue the discourteous toll.

Brick, Jefferson.—In Dickens' *Martin Chuzzlewit*. A very weak, pale young man, the war correspondent of the *New York Rowdy Journal*, of which Colonel Diver was editor.

Brook Farm.—The full name was "Brook Farm Institute of Agriculture and Education," a stock company of nearly 70 members, located on a farm of 200 acres at West Roxbury, Mass. Among the members were George Ripley, Charles A. Dana, George William Curtis, Margaret Fuller and Nathaniel Hawthorne. Among their frequent visitors were Ralph Waldo Emerson, Theodore Parker, Bronson Alcott. This idyllic life lasted about five years, from 1841 to 1846. Brook Farm was a financial failure but it was important in intellectual results. Hawthorne has written the story of the experiment in *Blithedale Romance*.

Brown, Tom.—*Tom Brown's School Days* and *Tom Brown at Oxford*, Thomas Hughes. The hero of these stories of school days, a typical English schoolboy and undergraduate.

Brunehild.—*Nibelungenlied*. The story of Brunehild holds large place in ancient German romance. She was, herself, a warrior, proud and skillful, and she promised to be the bride of the man who could conquer her in three trials, in hurling the lance, in throwing the stone, and in leaping after the stone when thrown. By the arts and bravery of Siegfried, she was deluded into marrying Gunther, king of Burgundy; but, discovering the trick, she planned and accomplished the destruction of Siegfried, and the humiliation of Chriemhild, his wife.

Bumble, Mr.—*Oliver Twist*, Dickens. A pompous, disagreeable beadle, who figures largely in the beginning of the story. The name Bumble has since attached itself to the office.

Bunsby, Jack.—*Dombey and Son*, Dickens. A commander of a ship looked up to as an oracle by his friend Captain Cuttle. He is described as wearing a "rapt and imperturbable manner," and seeming to be "always on the lookout for something in the extremest distance."

Bunthorne.—*Patience*, Sullivan. A gloomy poet, showing most distinctly in his gloom surrounded by the characters of a comic opera. He was inserted as a satire on the æsthetic craze, turning into ridicule the imitators of Rossetti.

Burchell, Mr.—*Vicar of Wakefield*, Goldsmith. A prominent character who passes himself off as a poor man, but is really a baronet in disguise. He is noted for his habit of crying out "Fudge!" by way of expressing his strong contempt for the opinions of others.

Burd Helen.—*Scotch Ballad*. A traditional name standing for constancy. She was carried to England by fairies and imprisoned in a castle. The youngest brother of the fair Burd Helen was guided by the enchanter Merlin and accomplished the perilous task of rescuing his sister. This is recited in the line "Childe Rowland to the dark tower came," quoted by Shakespeare. Only a fragment of the old ballad has been preserved.

Buskin.—Tragedy. The Greek tragic actors used to wear a sandal some two or three inches thick, to elevate their stature. To this sole was attached a very elegant buskin.

Buzfuz, Serjeant.—*Pickwick Papers*, Dickens. A pompous, chaffing lawyer, who bullies Mr. Pickwick and the witnesses in the famous breach of promise suit, Bardell vs. Pickwick.

Byfield.—A New England parish, the scene of an historical novel by John Lewis Ewell. Here lived the ancestor of Longfellow to whom the poet dedicated *The Village Blacksmith*, himself a blacksmith, keeping his accounts in peculiar orthography. According to the deed of sale in 1631, the Byfield Indians got a larger price from the first English settlers than was paid for Manhattan island.

Caius, Doctor.—*Merry Wives of Windsor*, Shakespeare. A physician in the comedy who adds a touch of humor. He is most conspicuous as the lover of Anne Page.

Calandrino.—A simpleton frequently introduced in Boccaccio's *Decameron*; expressly made to be befooled and played upon. His mishaps, as Macaulay states, "have made all Europe merry for more than four centuries."

Caleb. (1) The enchantress who carried off St. George in infancy. (2) A character in Dryden's satire of *Absalom and Achitophel*, meant for Lord Grey, one of the adherents of the duke of Monmouth.

Caleb Quotem.—A parish clerk or jack-of-all-trades, in Coleman's play *The Review, or Ways of Windsor*. Coleman borrowed the character from *Throw Physic to the Dogs*, an old farce.

Caliban.—A savage and deformed slave of Prospero in Shakespeare's *Tempest*. He is represented as being the "freckled whelp" of Sycorax, a foul hag, who was banished from Argier (or Algiers) to the desert island afterward inhabited by Prospero. From his rude, uncouth language we get

the phrase "Caliban style," "Caliban speech," meaning the coarsest possible use of words.

Calidore.—A knight in Spenser's *Faërie Queene*, typical of courtesy, and said to be intended for a portrait of Sir Philip Sidney.

Calista.—The name of a celebrated character in Rowe's *Fair Penitent*.

Callipolis.—*Battle of Alcazar*, George Peele. A character in the *Battle of Alcazar*, used by Sir Walter Scott and others as a synonym for lady-love, sweetheart, charmer. Sir Walter always spells the word Callipolis, but Peele calls it Calipolis.

Calydon.—A forest celebrated in the romances relating to King Arthur and Merlin.

Camaralzaman, Prince.—*Arabian Nights*. One of the stories of the *Arabian Nights* and the name of a prince who fell in love with Badoura, princess of China, the moment he saw her.

Camacho.—*Don Quixote*, Cervantes. A character in an episode in *Don Quixote*, who gets cheated out of his bride after having made great preparations for their wedding.

Cambalo, or **Cambel.**—*Faërie Queene*, Spenser. A brother of Candace. He challenged every suitor to his sister's hand, and overthrew all except Triamond, who married the lady.

Cambalu.—In the *Voyages* of Marco Polo the chief city of the province of Cathay.

Cambuscan.—A Tartar king identical with Genghis Khan. The king of the far east sent Cambuscan a "steed of brass, which, between sunrise and sunset, would carry its rider to any spot on the earth." All that was required was to whisper the name of the place in the horse's ear, mount upon his back, and turn a pin set in his ear. When the rider had arrived at the place required, he had to turn another pin, and the horse instantly descended, and, with another screw of the pin, vanished till it was again required. This story is begun by Chaucer in the *Squire's Tale*, but was never finished.

Camelot.—A parish in Somersetshire, England (now called Queen's Camel), where King Arthur is said to have held his court. In this place there are still to be seen vast intrenchments of an ancient town or station—called by the inhabitants "King Arthur's Palace."

Camilla.—(1) The virgin queen of the Volscians, famous for her fleetness of foot. She aided Turnus against Æneas. (2) Wife of Anselmo of Florence in *Don Quixote*. Anselmo, in order to rejoice in her incorruptible fidelity, induced his friend Lothario to try to corrupt her. This he did, and Camilla was not trial-proof, but fell. Anselmo for a time was kept in the dark, but at the end Camilla eloped with Lothario. Anselmo died of grief, Lothario was slain in battle, and Camilla died in a convent.

Camille.—(1) In Corneille's tragedy of *Les Horaces*. When her brother meets her and bids her congratulate him for his victory over the three curiatii, she gives utterance to her grief for the death of her lover. Horace says, "What! can you prefer a man to the interests of Rome?" Whereupon Camille denounces Rome, and concludes with these words: "Oh, that it were my lot!" (2) Whitehead dramatized the subject and called it *The Roman Father*.

Canace.—*Faërie Queene*, Spenser. A paragon among women, the daughter of King Cambuscan to whom the king of the East sent as a present a mirror and a ring. The mirror would tell the lady if any man on whom she set her heart would prove true or false, and the ring (which was to be worn on her thumb) would enable her to understand the language of birds and to converse with them. Canace was courted by a crowd of suitors, but her brother gave out that any one who pretended to her hand must encounter him in single combat and overthrow him. She ultimately married Triamond, son of the fairy Agapë.

Candide.—The hero of Voltaire's novel so called. All sorts of misfortunes are heaped upon him, and he bears them all with philosophical indifference.

Candor, Mrs.—A most energetic slanderer in Sheridan's *School for Scandal*.

Caora.—*Description of Guiana*, Raleigh. A river, on the banks of which are a people whose heads grow beneath their shoulders. Their eyes are in their shoulders, and their mouths in the middle of their breasts. The original picture is found in Hakluyt's *Voyages*, 1598.

Capulet.—The head of a noble Veronese house in Shakespeare's tragedy of *Romeo and Juliet*, hostile to the house of Montague. He is at times self-willed and tyrannical, but a jovial and testy old man.

Capulet, Lady.—The proud and stately wife of Capulet, and mother of Juliet.

Caradoc.—A knight of the Round Table. Also in history, the British chief whom the Romans called Caractacus. Caradoc is the hero of an old ballad entitled *The Boy and the Mantle*.

Carker.—A scoundrelly clerk in Dickens' *Dombey and Son*.

Carton, Sidney.—A hero transformed by unselfish love in Dickens' *Tale of Two Cities*. He voluntarily goes to the guillotine to save his successful rival in love.

Casca.—*Julius Cæsar*, Shakespeare. A blunt-witted Roman, one of the conspirators against Julius Cæsar.

Cassandra.—A daughter of Priam, king of Troy, gifted with the power of prophecy; but Apollo, whom she had offended, brought it to pass that no one believed her predictions. Shakespeare makes use of this character in *Troilus and Cressida*.

Cassibelan.—Great-uncle to Cymbeline, in Shakespeare's play by that name.

Cassio.—A Florentine, and lieutenant of Othello, and a tool of Iago, in Shakespeare's tragedy of *Othello*. Iago made Cassio drunk, and then set on Roderigo to quarrel with him. Cassio wounded Roderigo. Othello suspended Cassio, but Iago induced Desdemona to plead for his restoration. This interest in Cassio confirmed the jealous rage of Othello to murder Desdemona and kill himself. After the death of Othello, Cassio was appointed governor of Cypreus.

Castle Dangerous.—A keep belonging to the Douglas family, which gives its name to one of Sir Walter Scott's *Tales of My Landlord*. It was so called by the English because it was always retaken from them by the Douglas.

Castle of Indolence.—The title of a poem by Thomson, and the name of a castle described in it as situated in a pleasing land of drowsiness, where every sense was steeped in the most luxurious and enervating delights.

Castlewood, Beatrix.—The heroine of Thackeray's novel *Henry Esmond*, a picture of splendid, lustrous physical beauty.

Caudle, Mrs. Margaret.—The feigned author of a series of curtain lectures by Douglas Jerrold, published in *Punch*, purporting to be the lectures delivered by Mrs. Margaret Caudle to her patient husband, Job Caudle, between the hours of ten at night and seven in the morning.

Cauline, Sir.—A knight in Percy's *Reliques*, who served the wine to the king of Ireland. He fell in love with Christabelle, the king's daughter, and she became his troth-plight wife, without her father's knowledge. When the king knew of it, he banished Sir Cauline. After a time the soldain asked the lady in marriage, but Sir Cauline challenged his rival and slew him. He himself, however, died of the wounds he had received, and the Lady Christabelle, out of grief, "burst her gentle hearte in twayne."

Cecilia, St.—A patron saint of the blind, also patroness of musicians, and "inventor of the organ." According to tradition, an angel fell in love with her for her musical skill, and used nightly to visit her.

Celadon and Amelia.—Lovers of matchless beauty and most devoted to each other. Being overtaken by a thunderstorm, Amelia became alarmed, but Celadon, folding his arm about her, said, "'Tis safety to be near thee, sure"; but while he spoke Amelia was struck by lightning and fell dead in his arms.

Celia.—*Faërie Queene*, Spenser. (1) Mother of Faith, Hope, and Charity. She was herself known as Heavenliness and lived in the hospices Holiness. (2) Celia, cousin to Rosalind in Shakespeare's Comedy *As You Like It*. Celia is a common poetical name for a lady or a lady-love.

Chadband, The Rev.—A clerical character in Dickens' *Bleak House*. He will always stand as a type of hypocritical piety.

Chanticleer.—The cock, in the tale of *Reynard the Fox*, and in Chaucer's *Nonne Prestes Tale*.

Charlemagne.—The romance of Charlemagne and his paladins is of French origin, as the romances of King Arthur and the Knights of the Round Table is of Celtic or Welsh origin. According to one tradition Charlemagne is not dead, but waits crowned and armed, in Odenberg, near Saltzburg, till the time of antichrist, when he will wake up and deliver Christendom. According to another tradition, Charlemagne appears in seasons of plenty. He crosses the Rhine on a golden bridge, and blesses both cornfields and vineyards.

Charmian.—A kind-hearted but simple-minded female attendant on Cleopatra in Shakespeare's play of *Antony and Cleopatra*.

Chery and Fair-Star.—*Countess d'Aulnoy's Fairy Tales*. Two children of royal birth, whom their father's brothers and their mother's sisters cast out to sea; they are found and brought up by a corsair and his wife. Ultimately they are told of their birth by a green bird and marry each other. A similar tale is found in *The Arabian Nights*.

Cheeryble Brothers, The.—A firm of benevolent London merchants in Dickens' *Nicholas Nickleby*.

Chibiabos.—The musician in Longfellow's *Hiawatha*, personifying harmony in nature.

Children in the Wood.—Two characters in an ancient and well-known ballad entitled *The Children in the Wood*, or *The Norfolk Gent's Last Will and Testament*. This is said to be a disguised recital of the alleged murder of his nephews by Richard III.

Chillingly, Kenelm.—The hero in a novel by this name by Bulwer.

Chingachgook.—A sagamore of the Mohicans, and father of Uncas, in Cooper's *Leather-Stocking Tales*.

Chloe.—*Daphnis and Chloe*, Longus. (1) The shepherdess loved by Daphne. (2) *Paul and Virginia* by St. Pierre is founded on this romance. (3) Chloe is also a shepherdess in Shakespeare's *As You Like It*.

Chœreas.—The lover of Callirrhoë, in Chariton's Greek romance.

Chriemhild or **Chriemhilde.**—The heroine of the German epic poem, the *Nibelungenlied*. She is represented as a woman of the rarest grace and beauty, and rich beyond conception. By the treacherous murder of her husband she is transformed into a furious creature of revenge. For plot of this epic cycle, see Kriemhild.

Christabel.—(1) The subject and heroine of an old romance by Sir Eglamour of Artois. (2) The heroine of an ancient ballad *Sir Cauline*. (3) The lady in Coleridge's poem *Christabel*.

Christian.—The hero of John Bunyan's allegory *Pilgrim's Progress*. He flees from the "City of Destruction," and journeys to the "Celestial City." He starts with a heavy burden on his back, but it falls off when he stands at the foot of the cross. All his trials on the way are depicted.

Christiana.—The wife of Christian, who started with her children and Mercy from the "City of Destruction" forms the subject of Bunyan's *Pilgrim's Progress*, part II. She was placed under the guidance of Mr. Great-Heart, and met her husband at the Celestial City.

Christopher, St.—The giant that carried a child over a brook, and said, "Chylde, thou hast put me in grete peryll, I might bere no greater burden." The Chylde was the Christ and the burden was the "Sin of the World." This has been a favorite theme for painters.

Chrysalde.—A character in Molière's *L'Ecole des Femmes*; a friend of Arnolphe.

Chrysale.—An honest, simple-minded, henpecked tradesman, in the same comedy by Molière.

Chuzzlewit, Martin.—The hero of Dickens' novel of the same name.

Chuzzlewit, Jonas.—A miser and a murderer, the opposite type of character from Martin.

Cimmerians.—A people described by Homer dwelling "beyond the ocean-stream," in a land where the sun never shines.

Cinderella.—Heroine of a fairy tale. She is the drudge of the house, while her elder sisters go to fine balls. At length a fairy enables her to go to the prince's ball; the prince falls in love with her, and she is discovered by means of a glass slipper which she drops, and which will fit no foot but her own. She is represented as returning good for evil and heaping upon her half-sisters every kindness a princess can show.

Cipango.—A marvelous island, described in the *Voyages* of Marco Polo, the Venetian traveler. It is represented as lying in the eastern seas, some 1,500 miles from land, and of its beauty and wealth many stories are related. Columbus and early navigators made a diligent search for this island.

Clarchen.—A female character in Goethe's *Egmont*, noted for her constancy and devotion.

Clare, Ada.—The wife of Carstone, and one of the most important characters in Dickens' *Bleak House*.

Clavileno Aligero.—The wooden horse on which Don Quixote got astride in order to disenchant the Infanta Antonomasia, her husband, and the Countess Trifaldi. It was "the very horse on which Peter of Provence carried off the fair Magalona, and was constructed by Merlin." This horse was called Clavileno, or Wooden Peg, because it was governed by a wooden pin in the forehead.

Cleante.—Brother-in-law of Orgon in Molière's *Tartuffe*. He is distinguished for his genuine piety, and is both high-minded and compassionate. The same name occurs in two other plays by Molière.

Cleishbotham, Jedediah.—Schoolmaster and parish clerk of Gandercleuch, who employed his assistant teacher to arrange and edit the tales told by the landlord of the Wallace inn of the same parish. These tales the editor disposed in three series, called by the general title of *The Tales of My Landlord*. Of course the real author is Sir Walter Scott.

Clementina, Lady.—A beautiful and accomplished woman, deeply in love with Sir Charles Grandison in Richardson's novel of this name.

Cleon.—(1) In Shakespeare's *Pericles*, governor of Tarsus, burned to death with his wife Dionysia by the enraged citizens, to revenge the supposed murder of Marina, daughter of Pericles, prince of Tyre. (2) The personification of glory in Spenser's *Faërie Queene*.

Clifford, Paul.—An attractive highwayman and an interesting hero in Bulwer's novel by the same name. He is familiar with the haunts of low vice and dissipation, but afterward is reformed and elevated by the power of love.

Cloten.—A rejected lover of Imogen, in Shakespeare's play of *Cymbeline*.

Clorinda.—*Jerusalem Delivered*, Tasso. Clorinda, the heroine of this poem, is represented as an Amazon inspiring the most tender affection in others, especially in the Christian chief Tancred, yet she is herself susceptible of no passion but the love of military fame.

Clout, Colin.—A name that Spenser applies to himself in the *Faërie Queene* and *Shepherd's Calendar*. Colin Clout also is introduced into Gay's pastorals.

Cock, The.—A famous tavern in Fleet street, London, opposite the Temple. Tennyson has immortalized it in his *Will Waterproof's Lyrical Monologue*.

Coelebs.—The hero of a novel by Hannah More, *Coelebs in Search of a Wife*.

lada.—The sword taken by the Cid from Ramon Berenger, count of Barcelona. This sword had two hilts of solid gold.

olin Clout.—A name that Spenser applies to himself in the *Faërie Queene* and *Shepherd's Calendar*. Colin Clout also is introduced into Gay's pastorals.

ologne, The Three Kings of.—The three magi who visited the infant Savior, and whose bodies are said to have been brought by the Empress Helena from the east to Constantinople, whence they were transferred to Milan. Afterward they were removed to Cologne and placed in the principal church of the city. Their names are commonly said to be Jaspar, Melchior, and Blathazar.

ophetua.—An imaginary African king, of whom a legendary ballad told that he fell in love with a beggar maid and married her. This ballad is found in Percy's *Reliques*. Tennyson has given us a modern version in *The Beggar Maid*.

ordelia.—*King Lear*, Shakespeare. The youngest of Lear's three daughters, and the one that truly loved him.

orinne.—The heroine of a novel, of the same name, by Madame de Staël.

orydon.—A shepherd in one of the *Idyls of Theocritus*, and one of the *Eclogues* of Vergil. Used by Shakespeare and later poets to designate a rustic swain.

orypheus.—A model man or leader, from the Koruphaios or leader of the chorus in the Greek drama. Aristarchos is called *The Corypheus of Grammarians*.

ostard.—A clown, in Shakespeare's *Love's Labor's Lost*, who apes the display of wit and misapplies, in the most ridiculous manner, the phrases and modes of combination in argument that were then in vogue.

overley, Sir Roger.—One of the members of the imaginary club under whose direction the *Spectator* was professedly edited. He was a kind-hearted, simple-minded type of an English squire in the time of Queen Anne. He figures in thirty papers of the *Spectator*.

rabtree.—A character in Smollett's novel, *The Adventures of Peregrine Pickle*.

rane, Ichabod.—The name of a Yankee schoolmaster, whose adventures are related in the *Legend of Sleepy Hollow*, in Irving's *Sketch-Book*.

rawley, Rawdon.—The husband of Becky Sharp in *Vanity Fair*, Thackeray's novel without a hero.

reakle, Mr.—A tyrannical and cruel schoolmaster in Dickens' *David Copperfield*.

ressida.—The heroine of Shakespeare's play, *Troilus and Cressida*, also the heroine of one of Chaucer's *Canterbury Tales*.

roaker.—A character in Goldsmith's comedy, *The Good-Natured Man*.

rummles, Vincent.—A theatrical head of a theatrical family in Dickens' *Nicholas Nickleby*.

uttle, Captain.—A character in Dickens' *Dombey and Son*, good-humored, eccentric, pathetic in his simple credulity.

algetty, Bittmaster Dugald.—A soldier of fortune in Sir Walter Scott's *Legend of Montrose*, distinguished for his pedantry, conceit, valor, vulgar assurance, knowledge of the world, greediness, and a hundred other qualities, making him one of the most amusing, admirable, and natural characters ever drawn by the hand of genius.

amocles.—A flatterer in the court of Dionysius of Syracuse. By way of answer to his constant praises of the happiness of kings, Dionysius seated him at a royal banquet, with a sword hung over his head by a single horsehair. In the midst of his magnificent banquet, Damocles, chancing to look upward, saw a sharp and naked sword suspended over his head. A sight so alarming instantly changed his views of the felicity of kings. The phrase signifies now evil foreboding or dread, a tantalizing torment.

amon and Pythias, or Phintias.—Two noble Pythagoreans of Syracuse, who have been remembered as models of faithful friendship. Pythias having been condemned to death by Dionysius, the tyrant of Syracuse, begged to be allowed to go home, for the purpose of arranging his affairs, Damon pledging his own life for the reappearance of his friend. Dionysius consented, and Pythias returned just in time to save Damon from death. Struck by so noble an example of mutual affection, the tyrant pardoned Pythias, and desired to be admitted into their sacred fellowship.

andie Dinmont.—A jovial, true-hearted store-farmer, in Sir Walter Scott's *Guy Mannering*.

aphnis and Chloe.—A pair of lovers in the pastoral romance of the same name written by Longus in Greek prose in the fourth century.

arby and Joan.—A married couple said to have lived, more than a century ago, in the village of Healaugh, in the West Riding of Yorkshire, and celebrated for their long life and conjugal felicity. They are the hero and heroine of a ballad called *The Happy Old Couple*, which has been attributed to Prior, but is of uncertain authorship.

ares.—One of the competitors at the funeral games of Anchises in Sicily, described in the fifth book of Vergil's *Æneid*.

avid.—(1) He was the uncle of King Arthur. St. David first embraced the ascetic life in the Isle of Wight, but subsequently removed to Menevia, in Pembrokeshire, where he founded twelve convents. (2) One of the Israelite kings. (3) In Dryden's satire called *Absalom and Achitophel*, represents Charles II.; Absalom, his beautiful but rebellious son, represents the duke of Monmouth.

Davy.—*Henry IV.*, Shakespeare. The varlet of Justice Shallow, who so identifies himself with his master that he considers himself half host half varlet. Thus when he seats Bardolph and Page at table, he tells them they must take "his" good will for their assurance of welcome.

Dawfyd.—*The Betrothed*, Scott. The one-eyed freebooter chief.

Dawkins.—*Oliver Twist*, Dickens. Known by the sobriquet of the *Artful Dodger*. He is one of Fagin's tools. Jack Dawkins is a scamp, but of a cheery, buoyant temper.

Dayonet, Sir.—In the romance *Le Morte d'Arthur* he is called the fool of King Arthur.

Deans, Douce Davie.—A poor herdsman at Edinburgh, and the father of Effie and Jeanie Deans, in Sir Walter Scott's novel, *The Heart of Midlothian*.

Deans, Effie.—A beautiful but unfortunate character in Sir Walter Scott's *Heart of Midlothian*.

Deans, Jeanie.—The heroine of Sir Walter Scott's *Heart of Midlothian*, described as a perfect model of sober heroism, of the union of good sense and strong affections, firm principles, and perfect disinterestedness; and of calm superiority to misfortune, danger, and difficulty which such a union must create.

Dedlock, Lady.—Wife of Sir Leicester, beautiful, and apparently cold and heartless, but suffering constant remorse. The daughter's name is Esther Summerson, the heroine of the novel.

Dedlock, Sir Leicester.—A character in *Bleak House*, by Charles Dickens. An honorable and truthful man, but of such fixed ideas that no man could shake his prejudices. He had an idea that the one thing of greatest importance to the world was a certain family by the name of Dedlock. He loved his wife, Lady Dedlock, and believed in her implicitly. His pride had a terrible fall when he learned the secret of her life before her marriage and knew the terrible fact she had been hiding from him that she had a daughter.

Dedlock, Volumnia.—Cousin of Sir Leicester, a young lady of sixty, who had the disagreeable habit of entering into other people's business.

Deerslayer.—The hero of a novel by the same name, by James Fenimore Cooper. A strong fine character, honorable, truthful, brave, without cultivation but without reproach. This character appears under different names in five of Cooper's novels. *The Deerslayer*, *The Pathfinder*, *The Last of the Mohicans*, *The Pioneers*, and *The Prairie*.

Defarge, Mde.—Wife of the following, a dangerous woman, everlastingly knitting.

Defarge, Mons.—*Tale of Two Cities*, Dickens. Keeper of a wine shop in the Faubourge St. Antoine in Paris. He is a bull-necked, implacable-looking man.

Della Crusca School.—Applied in England to a brotherhood of poets, at the close of the eighteenth century, under the leadership of Mrs. Piozzi. This school was conspicuous for affectation and high-flown panegyrics on each other. It was stamped out by Gifford, in *The Baviad*, in 1794, and *The Mœviad*, in 1796. Robert Merry, who signed himself *Della Crusca*, James Cobb, a farce-writer, James Boswell, biographer of Dr. Johnson, O'Keefe, Morton, Reynolds, Holcroft, Sheridan, Colman the Younger, Mrs. H. Cowley, and Mrs. Robinson were its best exponents.

Delphin Classics.—For the use of the dauphin, son of Louis XIV., the writings of thirty-nine Latin authors were collected and published in sixty volumes. Notes and an index were added to each work. An edition of the *Delphin Classics* was published in London in the year 1818.

Delphine, Madame.—*Old Creole Days*, George W. Cable. A free quadroon connected with the splendor of Lafitte, the smuggler and patriot. Madame Delphine disowned her beautiful daughter Olive in order to assure to her the rights of a white woman.

Demetrius.—*Midsummer Night's Dream*, Shakespeare. The young Athenian to whom Egeno promised his daughter Hermia in marriage.

Dempster, Janet.—A character from George Eliot's *Scenes From Clerical Life*. She was a woman of generous impulse, succumbed to drink through the brutality of her husband, but was restored by a clergyman to a life of nobility.

De Profundis.—*Out of the Depths*. The 130th Psalm is so called from the first two words in the Latin version. In the Catholic liturgy it is sung when the dead are committed to the grave.

Deronda, Daniel.—One of George Eliot's strongest character sketches in her novel by the same name.

Desmas.—The repentant thief is so called in *The Story of Joseph of Arimathea*. Longfellow, in *The Golden Legend*, calls him Dumachus. The impenitent thief is called Gestas, but Longfellow calls him Titus.

Dhu, Roderick.—A highland chieftain and outlaw in Scott's poem *Lady of the Lake*, cousin of Ellen Douglas, and also her suitor. He is slain by James Fitz-James.

Diana.—In Shakespeare's *All's Well That Ends Well*, daughter of the widow of Florence with whom Helena lodged on her way to the shrine of St. Jacques le Grand. Count Bertram wantonly loved Diana, but she brought about a reconciliation between Bertram and his wife Helena.

Diggon, Davie.—A shepherd in the *Shepherd's Calendar*, by Spenser. He drove his sheep into foreign lands, hoping to find better pasture; but was amazed at the luxury and profligacy of the shepherds whom he saw there.

Diggory.—In Goldsmith's *She Stoops to Conquer*, a barn laborer, employed on state occasions for butler and footman by Mr. and Mrs. Hardcastle. He is both awkward and familiar, laughs at his master's jokes and talks to his master's guests while serving.

Dimmesdale, Arthur.—In Hawthorne's romance, *The Scarlet Letter*, a Puritan minister of great eloquence, whose conscience compels him to make a public confession of sin.

Dinah.—(1) *St. Ronan's Well*, Scott. Daughter of Sandie Lawson, landlord of the Spa hotel. (2) A character in Mrs. Stowe's *Uncle Tom's Cabin*.

Dinah, Aunt.—In Sterne's *Tristram Shandy*. She leaves Mr. Walter Shandy 1,000 pounds, which he fancies will enable him to carry out all the schemes that enter into his head.

Dinah, Friendly.—*The Bashful Man*, Moncrieff. Daughter of Sir Thomas Friendly.

Dingley Hall.—*Pickwick Papers*, Dickens. The home of Mr. Wardle and his family.

Doctor Syntax.—The hero of a work entitled *The Tour of Dr. Syntax in Search of the Picturesque*. Doctor Syntax is a simple-minded, pious, henpecked clergyman, but of excellent taste and scholarship, who left home in search of the picturesque. His adventures are told in eight-syllable verse by William Combe.

Dods.—The old landlady in Scott's novel called *St. Ronan's Well*. An excellent character, a mosaic of oddities, all fitting together and forming an admirable whole. She was so good a housewife that a cookery book of great repute bears her name.

Dodson and Fogg.—The lawyers employed by the plaintiff in the famous case of "Bardell vs. Pickwick," in the *Pickwick Papers*, by Charles Dickens.

Doeg.—*Absalom and Achitophel*, Dryden. Doeg was Saul's herdsman, who had charge of his mules and asses. He told Saul that the priests of Nob had provided David with food; whereupon Saul sent him to put them to death, and eighty-five were ruthlessly massacred.

Dogberry and Verges.—Two ignorant conceited constables, in Shakespeare's *Much Ado About Nothing*.

Dolla Murrey.—A character in Crabbe's *Borough* who was devoted to playing cards. She died at the card table.

Dolly Varden.—*Barnaby Rudge*, Dickens. Daughter of Gabriel Varden, locksmith. Dolly dressed in the Watteau style, and was lively, pretty, and bewitching.

Dombey, Florence.—A motherless child, hungering and thirsting to be loved, but regarded with indifference by her father, who thinks that sons alone are worthy of regard.

Dombey, Little Paul.—A pathetic child in Dickens' novel *Dombey and Son*. He is a delicate, thoughtful boy, the only son of a rich and pompous London merchant.

Dominie, Sampson.—*Guy Mannering*, Scott. A village schoolmaster and scholar, poor as a church mouse, and modest as a girl. He cites Latin like a *porcus literarum* and exclaims "prodigious!" He is no uncommon personage in a country where a certain portion of learning is easily attained by those who are willing to suffer hunger and thirst in exchange for acquiring Greek and Latin.

Don Adriano de Armado.—A pompous, fantastical Spaniard in Shakespeare's *Love's Labor's Lost*, who had a mint of phrases in his brain.

Donatello.—The hero of Hawthorne's romance *The Marble Faun*. He is a young Italian with a singular likeness to the Faun of Praxiteles. He leads an innocent but purely animal existence, until a sudden crime awakens his conscience and transforms his whole nature.

Don Cherubim.—The *Bachelor of Salamanca*, in Le Sage's novel of this name; a man placed in different situations of life, and made to associate with all classes of society, in order to give the author the greatest possible scope for satire.

Donegild.—*Man of Law' Tale*, Chaucer. The mother of Alla, king of Northumberland, hating Constance, the wife of Alla, because she was a Christian, she put her on a raft with her infant son and turned her adrift. When Alla returned from Scotland and discovered this cruelty of his mother, he put her to death. The tradition of St. Mungo resembles the *Man of Law's Tale* in many respects.

Don Juan.—Typifies in literature a profligate. He gives himself up so entirely to the gratification of sense, especially to the most powerful of all the impulses, that of love, that he acknowledges no higher consideration, and proceeds to murder the man that stands between him and his wish, fancying that in so doing he had annihilated his very existence. He then defies that Spirit to prove to his senses his existence. The Spirit returns and compels Don Juan to acknowledge the supremacy of spirit, and the worthlessness of a merely sensuous existence. The traditions concerning Don Juan have been dramatized by Tirso de Molina. Glück has a musical ballet, *Don Juan* and Mozart has immortalized the character in his opera, *Don Giovanni*; and Byron in a half-finished poem.

Doorm.—*Idylls of the King* (*Enid*), Tennyson. An earl called "the Bull," who tried to make Enid his handmaid; but, when she would neither eat, drink, nor array herself in bravery at his bidding, "he smote her on the cheek"; whereupon Geraint slew the "russet-bearded earl" in his own hall.

Dora.—*David Copperfield*, Dickens. The child-wife to David, affectionate and tender-hearted. She was always playing with her poodle and saying simple things to her "Dody." She could never be his helper, but she looked on her husband with idolatrous love. When quite young she died.

Dorastus.—The hero of an old popular "history" or romance, upon which Shakespeare founded his *Winter's Tale*. It was written by Robert Greene, and was first published in 1588, under the title of *Pandosto, the Triumph of Time*.

Dorothea.—The heroine of Goethe's celebrated poem of *Hermann und Dorothea*.

Dory, John.—A character in *Wild Oats* or *The Strolling Gentleman*, a comedy by John O'Keefe.

Dotheboys Hall.—*Nicholas Nickleby*, Dickens. A school for boys kept by a Mr. Squeers, a puffing, ignorant, overbearing brute, whose system of education consisted of alternately beating and starving.

Doubting Castle.—The castle of the giant Despair, in which Christian and Hopeful were incarcerated, but from which they escaped by means of the key called "Promise," which was able to open any lock in the castle.

Dousterswivel, Herman.—Scott, *The Antiquary*. A German schemer, who obtains money under the promise of finding hidden wealth by a divining rod.

Drawcansir.—A bragging, blustering bully, in George Villiers, duke of Buckingham's *The Rehearsal*, who took part in a battle, and killed every one on both sides, "sparing neither friend nor foe."

Driver.—*Guy Mannering*, Scott. Clerk to Mr. Pleydell, advocate, Edinburgh.

Dromio.—*The Brothers Dromio*. Twin brothers exactly alike, who serve two brothers exactly alike, in Shakespeare's *Comedy of Errors*, based on the *Menæchmi* of Plautus.

Dry-as-Dust, The Rev.—An imaginary personage who serves to introduce Scott's novels to the public.

Dudu.—One of the three beauties of the harem, into which Juan, by the sultana's order, had been admitted in female attire.

Duessa.—A foul witch, in Spenser's *Faërie Queene*, who under the assumed name of Fidessa, and the assumed character of a distressed and lovely woman, entices the Red-cross Knight into the House of Pride.

Duff, Jamie.—*Guy Mannering*, Scott. The idiot boy attending Mrs. Bertram's funeral.

Dulcinea del Toboso.—A country girl whom Don Quixote courts as his lady love.

Dumaine.—A lord attending on the king of Navarre in Shakespeare's *Love's Labor's Lost*.

Duncan.—(1) A king of Scotland immortalized in Shakespeare's tragedy of *Macbeth*. Shakespeare represents him as murdered by Macbeth, who succeeds to the Scottish throne, but according to history he fell in battle. (2) A highland hero in Scott's *Lady of the Lake*.

Dunder, Sir David, of Dunder Hall.—A conceited, whimsical old gentleman, who forever interrupts a speaker with "Yes, yes, I know it," or "Be quiet, I know it." *Ways and Means*, by Colman.

Dundreary, Lord.—A grotesque character in Taylor's comedy, *Our American Cousin*, noted for his aristocratic haughtiness of manner. The character is said to have been created by the actor Sothern.

Durandal, also **Durandart, Durindana.**—The name of the marvelous sword of Orlando, the renowned hero of romance, said to have been wrought by the fairies, who endued it with such power that its owner was able to cleave the Pyrenees with it at a blow.

Durandarte.—A fabulous hero of Spain. Cervantes has introduced him, in *Don Quixote* in the celebrated adventure of the knight in the cave of Montesinos.

Durden, Dame.—(1) The heroine of a popular English song. She is described as a notable housewife, and the mistress of five serving-girls and five laboring men. The five men loved the five maids. (2) A sobriquet playfully applied to Esther Summerson, the heroine of Dickens' *Bleak House*.

Dwarf, Alberich.—In the *Nibelungenlied* the dwarf "Alberich" is the guardian of the famous "hoard" won by Siegfried from the Nibelungs. The dwarf is twice vanquished by the hero, who gets possession of his "Tarn-kappe" (cloak of invisibility).

Eckhardt, The Faithful.—A legendary hero of Germany, represented as an old man with a white staff, who, in Eisleben, appears on the evening of Maundy Thursday, and drives all the people into their houses, to save them from being harmed by a terrible procession of dead men, headless bodies, and two-legged horses, which immediately after passes by. Other traditions represent him as the companion of the knight, Tannhäuser, and as warning travelers from the Venusberg, the mountain of fatal delights in the old mythology of Germany. Tieck has founded a story upon this legend, which has been translated into English by Carlyle, in which Eckhardt is described as the good servant who perishes to save his master's children from the seducing fiends of the mountain. The German proverb, "Thou art the faithful Eckhardt; thou warnest every one," is founded upon this tradition.

Eclecta.—The "Elect" personified in *The Purple Island*, by Phineas Fletcher. She is the daughter of Intellect and Voletta (free-will).

Ector, Sir.—The foster-father of King Arthur, and lord of many parts of England and Wales. Father of Sir Kay, seneschal to King Arthur.

Edenhall, The Luck of.—A painted goblet in the possession of the Musgrave family of Edenhall, Cumberland, said to have been left by the fairies on St. Cuthbert's Well. The tradition runs that the luck of the family is dependent on the safe keeping of this goblet. The German poet Uhland embodied the legend in a ballad, translated into English by Longfellow.

Edgar.—Son to Gloucester, in Shakespeare's tragedy of *Lear*. He was disinherited for his half-brother, Edmund.

Edgar or **Edgardo.**—Master of Ravenswood, in love with Lucy Ashton in Scott's *Bride of Lammermoor*.

Edith.—The *Maid of Lorn* in Scott's *Lord of the Isles*, who married Ronald when peace was restored after the battle of Bannockburn.

Edith, The Lady.—*Ivanhoe*, Scott. [Mother of Athelstane "the Unready" (thane of Coningsburgh).

Edith Granger.—Daughter of the Hon. Mrs. Skewton, married to Colonel Granger of Ours, who died within two years. Edith became Mr. Dombey's second wife, but the marriage was altogether unhappy.

Edith Plantagenet, The Lady.—*The Talisman*, Scott. Called "The Fair Maid of Anjou," a kinswoman of Richard I., and attendant on Queen Berengaria.

Edmund.—A bastard son of Gloucester in Shakespeare's tragedy of *King Lear*.

Edward, Sir.—*The Iron Chest*, Colman. He commits a murder, and keeps a narrative of the transaction in an iron chest. Later, he trusts the secret to his secretary, Wilfred, and the whole transaction now becomes public.

Edward.—*Count Robert of Paris*, Scott. Brother of Hereward, the Varangian guard. He was slain in battle.

Edwin.—(1) The hero of Goldsmith's ballad entitled *The Hermit*. (2) The hero of Mallet's ballad *Edwin and Emma*. (3) The hero of Beattie's *Minstrel*.

Edyrn.—*Idylls of the King* (*Enid*), Tennyson. Son of Nudd. A suitor for the hand of Enid and an evil genius of her father, who opposed him. Later, Edyrn went to the court of King Arthur and became quite a changed man—from a malicious "sparrow-hawk" he was converted into a courteous gentleman.

Egeus.—Father of Hermia in Shakespeare's *Midsummer Night's Dream*.

Eglamour.—A character in Shakespeare's *Two Gentlemen of Verona*, who is an agent of Silvia in her escape.

Eglamour, Sir.—A valiant knight of the Round Table, celebrated in the romances of chivalry, and in an old ballad.

Eglantine, Madame.—The prioress in Chaucer's *Canterbury Tales*, who was "full pleasant and amiable of port." She was distinguished for the ladylike delicacy of her manners at table, and for her partiality to "small hounds," and a peculiar mixture in her manner and dress of feminine vanity and slight worldliness, together with an ignorance of the world.

Egyptian Thief.—A personage alluded to by the Duke in Shakespeare's *Twelfth Night*. The reference is to the story of Thyamis, a robber-chief and native of Memphis.

Elvir.—*Harold the Dauntless*, Scott. A Danish maid, who assumes boy's clothing, and waits on Harold "the Dauntless," as his page.

Elaine.—A mythical lady in the romances of King Arthur's court. She is called "the lily maid of Astolat" in Tennyson's *Idylls of the King*. She died for love of Sir Launcelot, and then at her request was borne on a barge to the castle of King Arthur, holding a lily in one hand and a letter to Launcelot in the other.

Elbow.—A constable, in Shakespeare's *Measure for Measure*, modest and well-meaning, though of simple mind and the object of wit among those who are wiser but not better.

El Dorado.—A name given by the Spaniards to an imaginary country, supposed, in the sixteenth Century, to be situated in the interior of South America, and abounding in gold and all manner of precious stones.

Electra.—The daughter of Agamemnon and Clytemnestra, and the heroine of a tragedy by Sophocles and of another by Euripides.

Elim.—*The Messiah*, Klopstock. The guardian angel of Libbeus the Apostle. Libbeus, the tenderest and most gentle of the apostles, at the death of Jesus also died from grief.

Elissa.—Step-sister of Medina and Perissa, in Spenser's *Faërie Queene*. They could never agree upon any subject.

Elliott, Hobbie.—There are seven by this name in the *Black Dwarf*, by Sir Walter Scott. The farmer Elliott himself and his bride-elect, Grace Armstrong; Mrs. Elliott, Hobbie's grandmother; John and Harry, Hobbie's brothers; Lilias, Jean, and Arnot, Hobbie's sisters.

Elops.—Milton gives this name to the dumb se pent which gives no warning of its approach.

Elspeth.—(1) A character in Sir Walter Scott *Antiquary*. (2) An old servant to Dandie Dinmo in Scott's *Guy Mannering*.

Elsie.—The daughter of Gottlieb, a farm tenant Prince Henry of Hoheneck, who offered her li as a substitute for the prince. She was rescue as she was about to make the sacrifice. Lon fellow has told this story in *The Golden Legend*.

Elvira.—(1) in Cibber's *Love Makes a Man*, sist of Don Duart, and niece of the governor of Lisbo She marries Clodio, the coxcomb son of Do Antonio. (2) The young wife of Gomez, a ric old banker, in Dryden's *The Spanish Fryer*. Sh carries on a liaison with Colonel Lorenzo, by th aid of her father-confessor Dominick, but always checkmated, and it turns out that Loren is her brother.

Emelye.—The sister-in-law of "Duke Theseus, beloved by the two knights, Palamon and Arcyt

Emile.—The hero of Jean Jacques Rousseau novel of the same name, in which he has depicte his ideal of a perfectly educated young man.

Emilia.—(1) A lady attending Hermione in Shak speare's *Winter's Tale*. (2) Wife to Iago, ar waiting woman to Desdemona, in the traged of *Othello*, a woman of thorough vulgarity and loo principles, united to a high degree of spirit, ene getic feeling, strong sense, and low cunning. (the sweetheart of Peregrine Pickle in Smollett novel *The Adventures of Peregrine Pickle*.

Em'ly, Little.—*David Copperfield*, Dickens. Daught of Tom, the brother-in-law of Dan'el Peggott a Yarmouth fisherman, by whom the orphe child was brought up. David Copperfield ar Em'ly were at one time playfellows. Whi engaged to Ham Peggotty (Dan'el's nephew) Litt Em'ly runs away with Steerforth, a friend David's, who was a handsome but unprincipl gentleman. Being subsequently reclaimed, sl emigrates to Australia with Dan'el Peggotty ar old Mrs. Gummidge.

Empyrean.—According to Ptolemy, there are fi heavens, the last of which is pure elemental fi and the seat of Deity; this fifth heaven is call the empyrean.

Endell, Martha.—*David Copperfield*, Dicken A poor girl, to whom Em'ly goes when Steerfor deserts her.

Endymion.—A beautiful shepherd boy who Diana kissed while he lay asleep on Mou Latmus. The story was made the subject of English poem by Keats, in memory of his muc loved friend, the poet Shelley.

Enid.—A mythical lady mentioned in a Welsh tri as one of the three celebrated ladies of Arthu court—a beautiful picture of conjugal patien and affection. Her story is told in the *Mabinogi* and in Tennyson's *Idylls of the King*. In t midst of an impure court she is the personificati of purity.

Eolian Harp.—Baruch. There is a rabbinic story of the aërial harmony of the harp of Davi which, when hung up at night, was played up by the north wind.

Epigram.—A short pointed or antithetical poe or any short composition happily or antithetical expressed.

Epithalamium.—Was a species of poem which was the custom among the Greeks and Roma to sing in chorus near the bridal-chamber of newly married couple. Anacreon, Stesichoru and Pindar composed poems of this kind, b only scanty fragments have been preserve Spenser's *Epithalamium* written on the occasi of his marriage, is one of the finest specime of this kind of verse.

Eppie.—(1) *St. Ronan's Well*, Scott. One of t servants of the Rev. Josiah Cargill. In the san novel is Eppie Anderson, one of the servants the Mowbray Arms, Old St. Ronan's, held by M Dods. (2) In George Eliot's *Silas Marner* the chi of Godfrey Cass, brought up and adopted Silas Marner, whose love transformed him fro a miser into a tender, loving father.

Ermangarde of Baldringham, Lady.—*The B trothed*, Scott. Aunt of the Lady Eveline Bere ger, "the Betrothed."

Ermeline.—The wife of Reynard, in the tale *Reynard the Fox*.

Ermina.—The heroine of Tasso's *Jerusalem Deli ered*, who fell in love with Tancred. When t Christian army besieged Jerusalem, she dress herself in Clorinda's armor to go to Tancred, bu being discovered, fled, and lived awhile with son shepherds on the banks of the Jordan. Meetir with Vafrino, sent as a secret spy by the crusade she revealed to him the design against the life Godfrey, and, returning with him to the Christi camp, found Tancred wounded. She cured h wounds, so that he was able to take part in t last great day of the siege.

Ernest, Duke.—A poetical romance by Henry Veldig (Waldeck), contemporary with Frederi Barbarossa. It is a mixture of Greek and orient myths and hero adventures of the crusader.

Error.—*Faërie Queene*, Spenser. A monster wh lived in a den in "Wandering Wood," and with who the Red-cross Knight had his first adventur She had a brood of 1,000 young ones of sund shapes, and these cubs crept into their mothe mouth when alarmed, as young kangaroos cre

nto their mother's pouch. The knight was early killed by the stench which issued from the oul fiend, but he succeeded in "rafting" her head ff, whereupon the brood lapped up the blood, nd burst with satiety.

calus.—An ancient and kind hearted lord, in Shakespeare's *Measure for Measure*, whom Vincentio, the duke of Vienna, joins with Angelo s his deputy during a pretended absence on a listant journey.

canes.—A lord of Tyre, in Shakespeare's *Pericles*.

meralda.—*Notre Dame de Paris*, Victor Hugo. A beautiful gypsy girl, who, with tambourine and oat, dances in the "place" before Notre Dame.

mond, Henry.—A cavalier and fine-spirited entleman in the reign of Queen Anne. Hero of Thackeray's novel by same name.

tella.—The heroine of Dickens' novel of *Great Expectations*.

totiland or **Estotilandia.**—An imaginary region n America, near the arctic circle, referred to by Milton as "cold Estotiland," and variously fabled o have been discovered by Frisian fishermen in he fourteenth century, and by a Pole named ohn Scalve, in 1477.

zel, *i. e.*, **Attila.**—King of the Huns, a monarch uling over three kingdoms and more than thirty rincipalities; being a widower, he married Kriemild, the widow of Siegfried. In the *Nibelungenied*, where he is introduced, he is made very nsignificant.

lalie, St.—In the calendar of saints there is a irgin martyr called Eulalie. She was martyred y torture February 12, 308. Longfellow calls Evangeline the *Sunshine of St. Eulalie*.

lenspiegel.—The hero of a German tale, which elates the pranks and drolleries of a wandering ottager of Brunswick.

phrasy.—*Paradise Lost*, Milton. The herb ye-bright, so called because it was once supposed o be efficacious in clearing the organs of sight. Hence, the Archangel Michael purged the eyes of Adam with it, to enable him to see into the distant uture.

an Dhu M'Combich.—*Waverley*, Scott. The oster-brother of M'Ivor.

an Dhu of Lochiel.—*Legend of Montrose*, Scott. A Highland chief in the army of Montrose.

angelist.—In Bunyan's *Pilgrim's Progress*, represents the effectual preacher of the gospel who pens the gate of life to Christian.

ans, Sir Hugh.—In Shakespeare's *Merry Wives of Windsor*, a Welsh parson and school-teacher, gnorant but pedantic, who has a ludicrous quarel with Dr. Caius.

calibur (*eks-kal'i-bĕr*), or **Excalibar,** or **Escalibor.**—The sword of the mythical King Arthur. Arthur received it from the hands of the Lady of he Lake. It had a scabbard the wearer of which ould lose no blood. There seems, however, to ave been also another sword called Excalibur in he early part of the story. This was the sword, plunged deep into a stone, which could be drawn orth only by the man who was to be king. After wo hundred knights had failed, Arthur drew it ut without difficulty.

zelin, Sir.—*Lara*, Byron. The gentleman who ecognizes Lara at the table of Lord Otho, and harges him with being Conrad the Corsair. A uel ensues, and Ezzelin is never heard of more. A serf used to say that he saw a huntsman one vening cast a dead body into the river which ivided the lands of Otho and Lara, and that here was a star of knighthood on the breast of he corpse.

a, Gabriel.—*Guy Mannering*, Scott. Nephew f Meg Merrilies. One of the huntsmen at Liddesdale.

dladeen.—The hypercritical grand chamberlain n Moore's poem *Lalla Rookh*. Fadladeen's criticism upon the several tales which make up the romance are very racy and full of humor; and his restfallen conceit when he finds out that the poet was the prince in disguise is well conceived.

g.—A lying servant to Captain Absolute in Sheridan's *Rivals*.

gin.—An old Jew in Dickens' *Oliver Twist*, who mploys young persons of both sexes to carry on systematic trade of robbery.

inall, Mr. and Mrs.—Noted characters in Congreve's comedy *The Way of the World*.

ineant, Le Noir (*The Black Idler*).—In Sir Walter Scott's *Ivanhoe*, a name applied to Richard Cœur de Lion in disguise, by the spectators of tournament, on account of his indifference uring a great part of the action, in which, however, he was finally victorious.

r Maid of Perth.—The title of a novel by Sir Walter Scott, and the name of the heroine.

r Rosamond.—Prototype of many heroines of ction, a daughter of Walter de Clifford. According to a popular legend, which has no foundaion in fact, Henry II. built a labryinth or maze to onceal her from Queen Eleanor, who discovered er by means of a silken clew and put her to death. he is commonly, though erroneously, stated to ave been the mother of William Longsword and Geoffrey, archbishop of York.

rservice, Andrew.—A shrewd Scotch gardener t Osbaldistone Hall in *Rob Roy*, Sir Walter Scott.

ry of the Mine.—A malevolent being, supposed o live in mines, busying itself with cutting ore, urning the windlass, etc., and yet effecting noth ng.

Faithful.—One of the allegorical personages in Bunyan's *Pilgrim's Progress*, who dies a martyr before completing his journey.

Faithful, Jacob.—The title and hero of a sea tale, by Captain Marryat (1835).

Fakenham Ghost.—A ballad by Robert Bloomfield, author of *The Farmer's Boy*. The ghost was a donkey.

Fakreddin's Valley.—Over the several portals of bronze were these inscriptions: (1) *The Asylum of Pilgrims;* (2) *The Traveler's Refuge;* (3) *The Depository of the Secrets of All the World*.

Falkland.—In Godwin's novel called *Caleb Williams*. He commits murder, and keeps a narrative of the transaction in an iron chest. Williams, a lad in his employ, opens the chest, and is caught in the act by Falkland. The lad runs away, but is hunted down. This tale, dramatized by Colman is entitled *The Iron Chest*.

Falstaff, Sir John.—A famous character in Shakespeare's comedy of the *Merry Wives of Windsor*, and in the first and second parts of his historical drama of *Henry IV*. He is as perfect a comic portrait as was ever sketched. In the former play he is represented as in love with Mrs. Ford and Mrs. Page, who make a butt and a dupe of him; in the latter he figures as a soldier and a wit; in both he is exhibited as a monster of fat—sensual, mendacious, boastful, and cowardly. In *Henry V.* his death is described by Mrs. Quickly.

Fang.—(1) A sheriff's officer, in the second part of Shakespeare's *King Henry IV*. (2) *Oliver Twist*, Charles Dickens. A bullying insolent magistrate, who would have sent Oliver Twist to prison, on suspicion of theft, if Mr. Brownlow had not interposed.

Fata Alcina.—*Orlando Innamorato*, Bojardo. Sister of Fata Morgana. She carried off Astolfo on the back of a whale to her isle, but turned him into a myrtle tree when she tired of him.

Fata Morgana.—The name of a potent fairy, celebrated in the tales of chivalry, and in the romantic poems of Italy. She was a pupil of the enchanter Merlin, and the sister of Arthur, to whom she discovered the intrigue of his queen, Geneura, or Guinever, with Lancelot of the Lake. In the *Orlando Innamorato* of Bojardo, she appears at first as a personification of fortune, inhabiting a splendid residence at the bottom of a lake, and dispensing all the treasures of the earth, but she is afterward found in her proper station subject to the all potent Demogorgon. Also, as sister to King Arthur and pupil of Merlin. She lived at the bottom of the lake and dispensed good fortune as she liked.

Fat Boy, The.—A laughable character in Dickens' *Pickwick Papers;* a youth of astonishing obesity, whose employment consists in alternate eating and sleeping.

Fathom, Ferdinand, Count.—The title of a novel by Smollett, and the name of its principal character, a complete villain, who proceeds step by step to rob his benefactors and finally dies in misery and despair.

Fatima.—(1) A female worker, in the story of *Aladdin*, in the *Arabian Nights' Entertainments*. (2) The last of the wives of Bluebeard, and the only one who escaped being murdered by him.

Felton, Septimius.—Septimius Felton is the mystical hero in Hawthorne's novel by the same name.

Fenella.—A fairy-like creature, a deaf and dumb attendant on the countess of Derby, in Sir Walter Scott's *Peveril of the Peak*.

Fenton.—A character in Shakespeare's *Merry Wives of Windsor*, who wooes the rich Anne Page for her money, but soon discovers inward treasures in her which quite transform him.

Fer Amorz.—*Lalla Rookh*, Thomas Moore. Fer Amorz in *Lalla Rookh* is the young Cashmerian poet, who relates poetical tales to Lalla Rookh, in her journey from Delhi to Lesser Bucharia. Lalla Rookh is going to be married to the young sultan, but falls in love with the poet. On the wedding morn she is led to her future husband, and finds that the poet is the sultan himself, who had gallantly taken this course to win the heart of his bride and beguile her journey.

Ferdinand.—(1) A character in Shakespeare's *Tempest*. He is a son of the king of Naples, and falls in love with Miranda, the daughter of Prospero, a banished duke of Milan. (2) King of Navarre, a character in *Love's Labor's Lost*.

Ferrers.—*Endymion*.—The hero of Benjamin Disraeli's novel *Endymion*.

Ferrex and Porrex.—Two sons of Gorboduc, a mythical British king. Porrex drove his brother from Britain, and when Ferrex returned with an army he was slain, but Porrex was shortly after put to death by his mother. One of the first, if not the very first, historical plays in the English language was *Ferrex and Porrex*, by Thomas Norton and Thomas Sackville.

Fib.—*Nymphidia*, Drayton. One of the fairy attendents to Queen Mab.

Fidele.—Subject of an elegy by Collins.

Fidelle.—*Cymbeline*, Shakespeare. The name assumed by Imogen, when, attired in boy's clothes, she started for Milford Haven to meet her husband Posthumus.

Fidessa.—*Faërie Queene*, Spenser. The companion of Sansfoy; but when the Red-cross Knight slew that "faithless Saracen," Fidessa turned out to be Duessa, the daughter of Falsehood and Shame. See Duessa.

Figaro (*fē'gä-rō*). A character introduced by Beaumarchais in his plays *Le Barbier de Seville*, *Le Mariage de Figaro* ,and *La Mère Coupable*, used later by Mozart, Paisiello, and Rossini in operas. In the *Barbier* he is a barber; in the *Mariage* he is a valet. In both he is gay, lively, and courageous; his stratagems are always original, his lies witty, and his shrewdness proverbial. In the *Mère Coupable* he has become virtuous and has lost his nerve. He also appears in Holcroft's *Follies of a Day*, taken from Beaumarchis' *Mariage de Figaro*.

Finetta.—*The Cinder Girl*. A fairy tale by the Comtesse d'Aulnoy. This is merely the old tale of Cinderella slightly altered.

Fingal.—A mythical hero, whose name occurs in Gaelic ballads and traditions, and in Macpherson's *Poems of Ossian*.

Fleance.—A son of Banquo, in Shakespeare's tragedy of *Macbeth*. The legend relates that after the assassination of his father he escaped to Wales, where he married the daughter of the reigning prince, and had a son named Walter. This Walter afterward became lord high steward of Scotland, and called himself Walter the Steward. From him proceeded in a direct line the Stuarts of Scotland, a royal line which gave James VI. of Scotland, James I. of England. This myth has been seriously accepted by some as fact.

Fledgeby.—*Our Mutual Friend*, Dickens. An overreaching, cowardly sneak who pretends to do a decent business under the trade name of Pubsey & Co.

Florentius.—A knight whose story is related in the first book of Gower's *Confessio Amantis*. He bound himself to marry a deformed hag, provided she taught him the solution of a riddle on which his life depended.

Florian.—*The Foundling of the Forest*, W. Dimond. Discovered in infancy by the Count de Valmont, and adopted as his own son. Florian is light-hearted and volatile, but with deep affection, very grave, and the delight of all who know him.

Florimel.—A female character in Spenser's *Faërie Queene*, of great beauty, but so timid that she feared the "smallest monstrous mouse that creeps on floor," and was abused by every one. She was noted for sweetness of temper amid great trials. The word Florimel signifies "honey-flower."

Florizel.—A prince of Bohemia, in Shakespeare's *Winter's Tale*, in love with Perdita.

Fluellen.—A Welsh captain, who is an amusing pedant, in Shakespeare's *Henry V*.

Flying Dutchman.—A spectral ship, seen in stormy weather off the Cape of Good Hope, and considered ominous of ill-luck. Captain Marryat has taken this theme for his novel *The Phantom Ship*.

Folk.—Fairies, also called "people," "neighbors," "wights." The Germans have their kleine volk (little folk), the Swiss their hill people and earth people. See *Fairies*.

Ford.—Mr. and Mrs. Ford are characters in *The Merry Wives of Windsor*. Mrs. Ford pretends to accept Sir John Falstaff's protestations of love, in order to punish him by her devices.

Fortinbras.—Prince of Norway, in Shakespeare's tragedy *Hamlet*.

Fortunatus.—The hero in one of Straparolla's fairy tales. The nursery tale of Fortunatus records that he had an inexhaustible purse. It is from the Italian fairy tales.

Fortunio's Horse.—Comrade, not only possessed incredible speed, but knew all things, and was gifted with human speech.

Francesco.—The Iago of Massinger's *Duke of Milan*.

Freeport, Sir Andrew.—The name of one of the members of the imaginary club under whose direction the *Spectator* was professedly published. He is represented as a London merchant of great eminence and experience, industrious, sensible, and generous.

Friar Lawrence.—The Franciscan monk who attempted to befriend the lovers in *Romeo and Juliet*.

Friar Tuck.—Chaplain and steward of Robin Hood. Introduced by Sir Walter Scott in *Ivanhoe*. He is a self-indulgent, combative Falstaff, a jolly companion to the outlaws in Sherwood forest.

Friday.—Robinson Crusoe's faithful man Friday pictured by Defoe.

Frollo, Archdeacon Claude.—A noted character in Victor Hugo's *Notre Dame de Paris*, absorbed in a bewildering search for the philosopher's stone.

Front de Bœuf.—*Ivanhoe*, Sir Walter Scott. A follower of Prince John of Anjou, and one of the knight's challengers.

Froth, Master.—A foolish gentleman in Shakespeare's *Measure for Measure*. His name explains his character.

Fusbos.—*Utopia*, Sir Thomas More. Minister of state to Artaxaminous, king of Utopia.

Fyrapel, Sir.—The Leopard, the nearest kinsman of King Lion, in the beast epic of *Reynard the Fox*.

Gadshill.—A companion of Sir John Falstaff, in the first part of Shakespeare's *King Henry IV*.

Galahad, Sir.—A celebrated knight of the Round Table who achieved the quest of the Holy Grail. Tennyson has made him the subject of one of his idylls. In Malory he is also represented as the perfect knight, clad in wonderful armor. "He was the only knight who could sit in the "Siege Perilous" a seat reserved for the "knight without a flaw," who achieved the quest of the Holy Grail."

Galapas.—A giant of marvelous height in the army of Lucius, king of Rome. He was slain by King Arthur.

Galaphrone or **Galafron.**—A king of Cathay and father of Angelica in Bojardo's *Orlando Innamorato* and Ariosto's *Furioso.*

Gamp, Mrs.—A nurse who is a prominent character in Dickens' novel of *Martin Chuzzlewit.* She is celebrated for her constant reference to a certain Mrs. Harris, a purely imaginary person, for whose feigned opinions and utterances she professes the greatest respect, in order to give the more weight to her own.

Gan, Ganelone, Ganelon or **Gano.** The character of Sir Ganelon was marked with spite, dissimulation, and intrigue, but he was patient, obstinate, and enduring. He loved solitude, disbelieved in the existence of moral good, and has become a byword for a false and faithless friend. Dante has placed him in his *Inferno.*

Gander-Cleugh.—"Folly-Cliff," that mysterious place where a person makes a goose of himself, in *Tales of My Landlord,* Sir Walter Scott.

Garcia, Pedro.—A mythical personage, of whom mention is made in the preface to Gil Blas, in which is related how two scholars of Salamanca discovered a tombstone with the inscription "Here lies interred the soul of the Licentiate Pedro Garcia," and how, on digging beneath the stone, was found a leathern purse containing a hundred ducats.

Gareth.—In *Arthurian Romance* a knight of the Round Table, who was first a scullion in King Arthur's kitchen, but afterward became champion of the Lady Linet, or Lynette, whose sister Lionès, or Lyonors, he delivered from Castle Perilous.

Gargamelle.—The mother of Gargantua in Rabelais' celebrated romance of this name.

Gargery, Mrs. Joe.—*Great Expectations,* Dickens. Pip's sister. A virago, who kept her husband and Pip in constant awe. Joe Gargery, a blacksmith, married to Pip's sister. A noble-hearted, simple-minded young man, who loved Pip sincerely. Joe Gargery was one of nature's gentlemen.

Gaspar or **Caspar.**—(The white one), one of the three magi or kings of Cologne. His offering to the infant Jesus was frankincense, in token of divinity.

Gaunt, Griffith.—Hero of a novel by Charles Reade, of same title.

Gavotte.—Name given to a certain dance common among people in the upper Alps.

Gawain, Sir.—A nephew of King Arthur, and one of the most celebrated knights of the Round Table; noted for his sagacity and wonderful strength. He was surnamed "the courteous." His brothers were Agravaine, Gaheris, and Gareth.

Gebir.—A legendary eastern prince, said to have invaded Africa and to have given his name to Gibraltar. He is the subject of a poem of the same name by Walter Savage Landor.

Gellatley, Davie.—The name of a poor fool in Sir Walter Scott's novel of *Waverley.*

Genevieve.—(1) The heroine of a ballad by Coleridge. (2) Under the form *Genovefa,* the name occurs in a German myth as that of the wife of the Count Palatine Siegfried, in the time of Charles Martel. Upon false accusations her husband gave orders to put her to death, but the servant intrusted with the commission suffered her to escape into the forest of Ardennes, where she lay concealed, until by accident her husband discovered her retreat, and recognized her innocence.

Genevra.—A lady in Ariosto's *Orlando Furioso.* Her honor is impeached, and she is condemned to die unless a champion appears to do combat for her. Her lover, Ariodantes, answers the challenge, kills the false accuser, and weds the dame. Spenser has a similar story in the *FaërieQueene,* and Shakespeare availed himself of the main incident in his comedy of *Much Ado About Nothing.*

Geraint, Sir.—One of the knights of the Round Table. His story is told in Tennyson's *Idylls of the King* under *Geraint and Enid.*

Geraldine.—A name frequently found in romantic poetry, especially Scott's *Lay of the Last Minstrel.* The name is said to have been adopted from the heroine, connected with Surrey, whose praises are celebrated in a famous sonnet.

Gertrude of Wyoming.—Heroine of a poem by Thomas Campbell.

Giaour.—Byron's tale called *The Giaour* is represented as told by a fisherman, a Turk, who had committed a crime which haunted him all his life. See *Hassan.*

Gibble, Goose.—A half-witted boy in Scott's *Old Mortality.*

Gibbie, Sir.—A simple-hearted, fine character in George Macdonald's novel by the same name.

Giant Despair.—*Pilgrim's Progress,* Bunyan. A giant who is the owner of Doubting Castle, and who, finding Christian and Hopeful asleep upon his grounds, takes them prisoners, and thrusts them into a dungeon.

Giant Grim.—*Pilgrim's Progress,* Bunyan. A giant who seeks to stop the march of the pilgrims to the Celestial City, but is slain in a duel by Mr. Great-heart, their guide.

Giant Slay-good.—*Pilgrim's Progress,* Bunyan. A giant slain in a duel by Mr. Great-heart.

Glaucus.—A fisherman of Bœotia who has become the fisherman's patron deity.

Glaucus.—Son of Hippolytus. Being smothered in a tub of honey, he was restored to life by Æsculapius.

Gloriana.—In Spenser's *Faërie Queene,* the "greatest glorious queen of Faëry land."

Glumdalca.—*Tom Thumb,* Fielding. Queen of the giants, captive in the court of King Arthur.

Glumdalclitch.—*Gulliver's Travels,* Swift. A girl nine years old "and only forty feet high." Being such a "little thing," the charge of Gulliver was committed to her during his sojourn in Brobdingnag.

Glumms.—*Peter Wilkins,* Robert Pullock. The male population of the imaginary country Nosmubdsgrsutt, visited by Peter Wilkins. Both males and females had wings which served both for flying and for clothes.

Goneril.—The oldest of the three daughters to King Lear, in Shakespeare's tragedy. Having received her moiety of Lear's kingdom, the unnatural daughter first abridged the old man's retinue, then gave him to understand that his company was not wanted and sent him out a despairing old man to seek refuge where he could find it. Her name is proverbial for filial ingratitude.

Gonzalo.—An honest old counselor in Shakespeare's *Tempest,* a true friend to Prospero.

Goody Blake.—A character in Wordsworth's poem entitled *Goody Blake and Harry Gill.* A farmer forbids old Goody Blake to carry home a few sticks, which she had picked up from his land, and in revenge she invokes upon him the curse that he may "never more be warm"; and ever after "his teeth they chatter, chatter still."

Goody Two-Shoes.—The name of a well-known character in a nursery tale by Oliver Goldsmith. Goody Two-Shoes was a very poor child, whose delight at having a pair of shoes was unbounded. She called constant attention to her "two-shoes" which gave her the name.

Gradgrind.—A hardware merchant in Dickens' *Hard Times.* He is a man of hard facts and cultivates the practical. His constant demand in conversation is for "facts." He allows nothing for the weakness of human nature, and deals with men and women as a mathematician with his figures.

Gradgrind, Mrs.—Wife of Thomas Gradgrind. A little thin woman, always taking physic, without receiving from it any benefit.

Gradgrind, Tom.—Son of the above, a sullen young man, much loved by his sister.

Gradgrind, Louise.—A faithful daughter and sister.

Grandison, Sir Charles.—The hero of Richardson's novel *The History of Sir Charles Grandison.* Designed to represent his ideal of a perfect hero—a union of the good Christian and the perfect English gentleman.

Gratiano.—A friend to Antonio and Bassanio in Shakespeare's *Merchant of Venice.* He "talks an infinite deal of nothing, more than any man in Venice." (2) Brother to Brabantio, in Shakespeare's tragedy of *Othello.* (3) A character in the Italian popular theater called *Commedia dell' Arte.* He is represented as a Bolognese doctor, and has a mask with a black nose and forehead and red cheeks.

Great-heart, Mr.—In Bunyan's *Pilgrim's Progress,* the guide of Christian's wife and children upon their journey to the Celestial City.

Gremio.—In Shakespeare's *Taming of the Shrew,* an old man who wishes to wed Bianca.

Griffin-feet.—*Fairy Tales,* Comtesse d'Aulnoy. The mark by which the Desert Fairy was known in all her metamorphoses.

Grimalkin.—A cat, the spirit of a witch. Any witch was permitted to assume the body of a cat nine times.

Grimwig.—*Oliver Twist,* Dickens. An irascible old gentleman, who hid a very kind heart under a rough exterior. He was always declaring himself ready to "eat his head" if he was mistaken on any point on which he passed an opinion.

Griselda, The Patient. A lady in Chaucer's *Clerk of Oxenford's Tales,* immortalized by her virtue and her patience. The model of womanly and wifely obedience, she comes victoriously out of cruel and repeated ordeals. The story of Griselda is first told in the Decameron. Boccaccio derived the incidents from Petrarch, who seems to have communicated them also to Chaucer, as the latter refers to Petrarch as his authority.

Grub Street, London, is thus described in Dr. Johnson's Dictionary: "Originally the name of a street near Moorfields, in London, much inhabited by writers of small histories, dictionaries, and temporary poems, whence any production is called Grub street." The name in its appropriate sense, was freely used by Pope, Swift, and others.

Grundy.—"What will Mrs. Grundy say?" (What will our rivals or neighbors say?) The phrase is from Tom Morton's *Speed the Plough,* but "Mrs. Grundy" is not introduced into the comedy as one of the *dramatis personæ.* The solicitude of Dame Ashfield, in this play, as to "what will Mrs. Grundy say?" has given the latter great celebrity, the interrogatory having acquired a proverbial currency.

Gudrun.—*Edda,* Sæmund Sigfusson. A lady married to Sigurd by the magical arts of her mother and on the death of Sigurd to Atli (Attila), whom she hated for his cruelty, and murdered. She then cast herself into the sea, and the waves bore her to the castle of King Jonakur, who became her third husband.

Gudrun.—North-Saxon poem. A model of heroic fortitude and pious resignation. She was the daughter of King Hettel (Attila), and the betrothed of Herwig, king of Heligoland.

Guendolen.—A fairy whose mother was a human being.

Guildenstern.—The name of a courtier in Shakespeare's tragedy *Hamlet.*

Guinevere or **Guenever.**—A corrupt form of *Guanhumara,* daughter of King Leodegrance of the land of Camelyard. She was the most beautiful of women, was the wife of King Arthur, but entertained a *liaison* with Sir Launcelot du Lac. Arthur, when informed of the conduct of Launcelot, went with an army to Brittany to punish him. Mordred, left as regent, usurped the crown, proclaimed that Arthur was dead, and tried to marry Guinevere; but she shut herself up in the Tower of London, resolved to die rather than marry the usurper. When she heard of the death of Arthur she stole away to Almesbury, and became a nun.

Gulliver, Lemuel.—The imaginary hero of Swift's celebrated satirical romance known as *Gulliver's Travels.* He is represented as being first a surgeon in London, and then a captain of several ships. After having followed the sea for some years he makes in succession four extraordinary voyages.

Gummidge, Mrs.—In Dickens' novel of *David Copperfield,* describes herself as a "lone, lorn creetur, and everythink that reminds me of creeturs that ain't lone and lorn goes contrairy with me."

Gurton, Gammer.—The heroine of an old English comedy, long supposed to be the earliest in the language.

Guyon.—The impersonation of Temperance or Self-government in Spenser's *Faërie Queene.* He destroyed the witch Acrasia, and her bower called the "Bower of Bliss." His companion was Prudence. Sir Guyon represents the quality of temperance in the largest sense: meaning the virtuous self-government which holds in check not only the inferior sensual appetites but also the impulses of passion and revenge.

Guy, Sir, Earl of Warwick.—The hero of a famous English legend, which celebrates the wonderful achievements by which he obtained the hand of his lady-love, the Fair Felice, as well as the adventures he subsequently met with in a pilgrimage to the Holy Land. He is reputed to have lived in the reign of the Saxon King Athelstan. The romance of Sir Guy, mentioned by Chaucer in the *Canterbury Tales,* cannot be traced further back than the earlier part of the fourteenth century. His existence at any period is very doubtful.

Hadad.—One of the six wise men led by the guiding star to Jesus.

Hagen.—The murderer of Siegfried, in the German epic, the *Nibelungenlied.* He is a pale-faced dwarf who knows everything and whose sole desire is mischief. After the death of Siegfried he seized the "Nibelung hoard," and buried it in the Rhine intending to appropriate it. Kriemhild invited him to the court and had him slain.

Haidee.—A beautiful young Greek girl in Byron's poem, *Don Juan.* She is called the beauty of the Cyclades."

Hakim.—*The Talisman,* Scott. Saladin, in the disguise of a physician, visited Richard Cœur de Lion in sickness; gave him a medicine in which the "talisman" had been dipped, and the sick king recovered.

Hanswurst.—A pantomimic character formerly introduced into German comedies. It corresponds to the Italian *Macaroni,* the French *Jean Potage,* and the English *Jack Pudding.*

Hardcastle, Mr.—A character in Goldsmith's comedy of *She Stoops to Conquer,* represented as prosy and hospitable.

Hardcastle, Mrs.—A very "genteel" lady indeed. Tony Lumpkin is her son by a former husband.

Harlequin.—The name of a well-known character in the popular extemporized Italian comedy.

Harlowe, Clarissa.—The heroine of Richardson's novel entitled *The History of Clarissa Harlowe.* In order to avoid a marriage urged upon her by her parents, she casts herself on the protection of Lovelace, who grossly abuses the confidence thus reposed in him. He subsequently proposes to marry her, but Clarissa rejects the offer.

Haroun-al-Raschid.—Caliph of the Abbasside race, contemporary with Charlemagne, and, like him, a patron of literature and the arts. Many of the tales in the *Arabian Nights* are placed in the caliphate of Haroun-al-Raschid.

Harpagon.—The hero of Moliere's comedy of *L'Avare,* represented as a wretched miser.

Harpier or **Harper.**—Some mysterious personage referred to by the witches in Shakespeare's tragedy *Macbeth.*

Hassan.—*The Giaour,* Byron. Caliph of the Ottoman empire, noted for his hospitality and splendor. In his seraglio was a beautiful young slave named Leila, who loved a Christian called the Giaour. Leila is put to death by an emir, and Hassan is slain by the Giaour. Caliph Hassan has become the subject of popular romance.

Hassan, Al.—The Arabian emir of Persia, father of Hinda, in Moore's *Fire-Worshippers.*

Hatto.—In German legend, an archbishop of Mentz in the tenth century, who, for his hard-heartedness to the poor in time of famine, was eaten by mice in the "Mouse Tower" on an island in the Rhine near Bingen. Robert Browning has made this legend the subject of a poem.

Havelok the Dane.—A fisherman, known as Grim, rescued an infant named Havelok, whom he adopted. This infant was the son of the king of Denmark, and when the boy was restored to his royal sire Grim was laden with gifts. He built the town which he called after his own name. This is the foundation of the mediæval tales about *Havelok the Dane.*

Hazlewood, Sir Robert.—The old baronet of Hazlewood.

Hazlewood, Charles.—*Guy Mannering*, Scott. Son of Sir Robert. In love with Lucy Bertram, whom he marries.

Heart of Midlothian.—The tolbooth, or old jail of Edinburgh, Midlothian being the old name of Edinburgh county. It is the title of one of Sir Walter Scott's novels.

Heep, Uriah.—*David Copperfield*, Dickens. A detestable character, who, under the garb of the most abject humility, conceals a diabolic malignity. Mrs. Heep, Uriah's mother, was a character equally to be despised for her hypocritical assumption of humility.

Helena.—(1) A lady in Shakespeare's *Midsummer Night's Dream*, in love with Demetrius. (2) The heroine of Shakespeare's *All's Well That Ends Well*, in love with Bertram, who marries her against his will and leaves her, but is finally won by the strength of her affection. (3) A character in an old popular tale, reproduced in Germany by Tieck.

Hermann and Dorothea.—The hero and heroine of Goethe's poem of the same name.

Hermegild.—*Canterbury Tales*, Chaucer. The wife of the lord-constable of Northumberland. She was converted by Constance, but was murdered by a knight. Hermegild at the bidding of Constance restored sight to a blind Briton.

Hermia.—A lady in Shakespeare's *Midsummer Night's Dream*, in love with Lysander.

Hermione.—The heroine of the first three acts of Shakespeare's *Winter's Tale.*

Hernani or **Ernani.**—The hero of Victor Hugo's tragedy of the same name, and of Verdi's opera, founded on the play. He was a Spanish noble in revolt against the Emperor Charles V. and killed himself from a high sense of honor.

Hilda.—A New England girl of the most sensitive delicacy and purity of mind, in Hawthorne's romance *The Marble Faun.* She is an artist, living in Rome, and typifies, perhaps, the conscience.

Hildebrand.—The Nestor of German romance, a magician and champion.

Hildesheim.—In an old German legend, the monk of Hildesheim, doubting how a thousand years with God could be "only one day," listened to the melody of a bird, as he supposed, for only three minutes, but found that he had been listening to it for a hundred years.

Hobbididance.—The name of one of the fiends mentioned by Shakespeare in *Lear*, and taken from the history of the Jesuits' impostures.

Hödeken.—A famous German kobold, or domestic fairy-servant; so called because he always wore a little felt hat pulled down over his face.

Holofernes.—(1) A pedant living in Paris, under whose care Gargantua is placed for instruction. (2) A pedantic schoolmaster in Shakespeare's *Love's Labor's Lost.*

Holt, Felix.—The hero of George Eliot's novel by the same name.

Homilies.—The later entries in the Peterborough *Chronicle* and a few homilies are almost all that we have left of the literature of the twelfth century. Some of these homilies are copied or imitated from those of Ælfric.

Honeycomb, Will.—One of the members of the imaginary club by whom the *Spectator* was professedly edited. He is distinguished for his graceful affectation, courtly pretension, and knowledge of the gay world.

Honeyman, Charles.—A fashionable preacher in Thackeray's novel, *The Newcomes.*

Hopeful.—A pilgrim in Bunyan's *Pilgrim's Progress*, who accompanies Christian to the end of his journey.

Hop-o'-my-Thumb.—A character in the tales of the nursery. Tom Thumb and Hop-o'-my-Thumb are not the same, although they are often confounded. Tom Thumb was the son of peasants, knighted by King Arthur, and was killed by a spider. Hop-o'-my-Thumb was a nix, the same as the German "*daumling*," the French "*le petit pouce*," and the Scotch "Tom-a-lin" or "Tam-lane." He was not a human dwarf, but a fay.

Horatio.—*Hamlet*, Shakespeare. An intimate friend of Hamlet, a prince, a scholar, and a gentleman.

Horatius Cocles.—Captain of the bridge gate over the Tiber. He and two men to help him held the bridge against vast approaching armies. Subject and title of a poem by Lord Macaulay.

Horner, Jack.—The name of a celebrated personage in the literature of the nursery. A Somersetshire tradition says that the plums which Jack Horner pulled out of the Christmas pie alluded to the title deeds of the abbey estates at Wells, which were sent to Henry VIII., in a pasty, and were abstracted on the way by the messenger, a certain Jack Horner.

Hortense.—*Bleak House*, Dickens. The vindictive French maid-servant of Lady Dedlock. In revenge for the partiality shown by Lady Dedlock to Rosa, Hortense murdered Mr. Tulkinghorn, and tried to throw the suspicion of the crime on Lady Dedlock.

Houssain.—A prince in the *Arabian Nights* who had a flying carpet which would carry him whithersoever he wished.

Hubbard, Old Mother.—A well-known nursery rhyme. *Mother Hubbard's Tale*, by Edmund Spenser, is a satirical fable in the style of Chaucer.

Hubert de Burgh.—Justice of England, created Earl of Kent, introduced by Shakespeare into *King John.* He is the one to whom the young prince addresses his piteous plea for life. The lad was found dead soon afterward, either by accident or foul play.

Hubert, Saint.—The legend of Saint Hubert makes him a patron saint of huntsmen.

Hudibras.—The title and hero of a celebrated satirical poem by Samuel Butler. Hudibras is a Presbyterian justice of the time of the commonwealth.

Hugh of Lincoln.—A legendary personage who forms the subject of Chaucer's *Prioress' Tale*, and also of an ancient English ballad. Wordsworth has given a modernized version of this tale.

Hugo Hugonet.—*Castle Dangerous*, Scott. Minstrel of the earl of Douglas.

Humphrey.—The imaginary collector of the tales in *Master Humphrey's Clock*, by Charles Dickens.

Humpty Dumpty.—The hero of a well-known nursery rhyme. The name signifies humped and dumpy, and is the riddle for an egg.

Huon of Bordeaux, Sir.—A hero of one of the romances of chivalry bearing this name.

Hural Oyun.—In the fairy tales found in the Koran, these are the black-eyed daughters of paradise. They are created from muck and are free from all physical weakness and are always young. It is held out to every male believer that he will have seventy-two of these girls as his household companions in paradise.

Hylas.—A beautiful boy, beloved by Hercules, who was drawn into a spring by the enamored nymphs. The story has been treated by Bayard Taylor, and by William Morris in his *Life and Death of Jason.*

Hypapanti.—The Feast of Purification is called *Festum Hypapanti.*

Hyperion.—This myth has formed a favorite theme for English poets. In Keats' *Hyperion* nature and classic imagery are combined with exquisite delicacy.

Hypocrites' Isle.—An island described by Rabelais in one of his satires. He pictures this island of *Hypocrites* as wholly inhabited by people of low and defiled natures, as, by sham saints, spiritual comedians, seducers, and "such-like sorry rogues who live on the alms of passengers like the hermit of Lamont."

Iago.—*Othello*, Shakespeare. Othello's ensign and the villain of the play. Iago is said to be a character next to a devil, yet not quite a devil, which Shakespeare alone could execute without scandal.

Idleness, The Lake of.—*Faërie Queene*, Spenser. Whoever drank thereof grew instantly "faint and weary." The Red Cross Knight drank of it, and was readily made captive by Orgoglio.

Ignaro.—*Faërie Queene*, Spenser. Fosterfather of Orgoglio. Spenser says this old man walks one way and looks another, because ignorance is always "wrong-headed."

Imogen.—The wife of Posthumus, and the daughter of Cymbeline in the play of Shakespeare's under title *Cymbeline.* "Of all Shakespeare's women," says Hazlitt, "she is, perhaps, the most tender and the most artless."

Improvisatori.—Poets who utter] verses without previous preparation on a given theme. Among the ancients, Greece was the land of improvisation. In modern times, it has been almost entirely confined to Italy, where Petrarch introduced the practice of singing improvised verses to the lute.

Incantation.—Is derived from a Latin root meaning simply "to sing." It is the term in use to denote one of the most powerful and awe-inspiring modes of magic, resting on a belief in the mysterious power of words solemnly conceived and passionately uttered.

Inchcape Rock.—It is dangerous for navigators, and therefore the abbot of Aberbrothock fixed a bell on a float, which gave notice to sailors. Southey says that Ralph the Rover, in a mischievous joke, cut the bell from the buoy, and it fell into the sea; but on his return voyage his boat ran on the rock, and Ralph was drowned. Precisely the same tale is told of St. Goven's bell.

Inferno, The.—*Divine Comedy*, Dante. Epic poem in thirty-four cantos. Inferno is the place of the souls who are wholly given up to sin. The ascent is through Purgatory to Paradise.

Interludes. The.—Springing from the moralities and bearing some resemblance to them, though nearer the regular drama, are the interludes, a class of compositions in dialogue, much shorter and more merry and farcical. They were generally played in the intervals of a festival.

Invocation.—An address at the commencement of a poem, in which the author calls for the aid of some divinity, particularly of his muse.

Iphigenia.—The heroine of Euripides' tragedy *Iphigenia in Aulis*, and of Goethe's tragedy *Iphigenie auf Tauris.* She was placed on the altar in a rash vow by her father. Artemis at the last moment snatched her from the altar and carried her to heaven, substituting a hind in her place. The similarity of this legend to the scripture stories of Jephthah's vow and Abraham's offering of his son Isaac is noticeable.

Iras.—A strongly delineated character in *Ben Hur, a Tale of The Christ*, by Lew Wallace.

Iras.—A female attendant on Cleopatra in Shakespeare's play, *Antony and Cleopatra.*

Isaac of York.—A wealthy Jew, the father of Rebecca, in Sir Walter Scott's novel, *Ivanhoe.*

Isabella.—The heroine in Shakespeare's comedy, *Measure for Measure.*

Island of Lanterns.—In the celebrated satire of Rabelais, an imaginary country inhabited by false pretenders to knowledge. The name was probably suggested by the *City of Lanterns*, in the Greek romance of Lucian. Swift has copied this same idea in his *Island of Laputa.*

Island of St. Brandan.—A marvelous flying island, the subject of an old and widely spread legend of the middle ages. Though the island of St. Brandan has been a disappointment to voyagers, it has been a favorite theme with poets.

Island of the Blest.—Imaginary island in the west. Hither the favorites of the gods were conveyed without dying, and dwelt in never-ending joy. The name first occurs in Hesiod's *Works and Days.* This phrase is often used in modern literature.

Ithuriel.—In Milton's *Paradise Lost*, an angel commissioned by Gabriel to search through paradise, in company with Zephon, to find Satan, who had eluded the vigilance of the angelic guard, and effected an entrance into the garden. It is related that Ithuriel found Satan "squat like a toad, close at the ear of Eve," and transformed him by a touch of his spear into his proper shape.

Ivory Gate of Dreams.—Dreams which delude pass through the ivory gate, but those which come true through the horn gate.

Jack and the Bean-Stalk. A nursery legend said to be an allegory of the Teutonic *Al-fader*, the "red hen" representing the all-producing sun, the "money-bags" the fertilizing rain, and the "harp" the winds.

Jack-in-the-Green.—A prominent character in Maypole dances.

Jack Robinson.—A famous comic song by Hudson.

Jack Sprat.—The hero of a nursery rhyme. Jack and his wife form a fine combination in domestic economy.

Jack the Giant-killer.—The name of a famous hero in the literature of the nursery, the subject of one of the Teutonic or Indo-European legends, which have become nationalized in England and America.

Jaquenetta.—*Love's Labor's Lost*, Shakespeare. A country wench courted by Don Adriano de Armado.

Jaques.—A lord attending upon the exiled duke, in Shakespeare's *As You Like It.* A contemplative character who thinks and does—nothing. He is called the "melancholy Jaques," and affects a cynical philosophy. He could "suck melancholy out of a song, as a weasel sucks eggs."

Jarley, Mrs.—The proprietor of a waxwork show in Dickens' *Old Curiosity Shop.* She has lent her name to a popular game of parlor tableaux.

Jarndyce.—A prominent figure in Dickens' *Bleak House*, distinguished for his philanthropy, easy good-nature and good sense, and for always saying, "The wind is in the east," when anything went wrong with him. The famous suit of Jarndyce *vs.* Jarndyce, in this novel is a satire upon the court of chancery.

Jarvie, Nicol.—A prominent character in Sir Walter Scott's novel *Rob Roy.* He is a bailie of Glasgow.

Javert (*zhä-var'*).—An officer of the police force in *Les Misérables*, by Victor Hugo. He is the incarnation of inexorable law.

Jarvis.—A faithful old servant, in Moore's *The Gamester*, who tries to save his master, Beverley, from his fatal passion of gambling.

Jaup.—An old woman at Middlemas village, in Scott's *The Surgeon's Daughter.*

Jellyby, Mrs.—A character in Dickens' novel, *Bleak House*, a type of sham philanthropy. She spends her time and energy on foreign missions to the neglect of her family. Mrs. Jellyby is quite overwhelmed with business correspondence relative to the affairs of Borrioboola Gha.

Jenkins, Winifred.—The name of Miss Tabitha Bramble's maid in Smollett's *Expedition of Humphry Clinker.* She makes ridiculous blunders in speaking and writing.

Jenkinson, Ephraim.—A green old swindler, whom Dr. Primrose met in a public tavern. Dr. Primrose sold the swindler his horse, Old Blackberry, for a draft upon Farmer Flamborough.

Jeroboam Sermon.—One of Dr. Emmons' sermons, which made a great noise at the time. It was known as his Jeroboam Sermon. It was written on the occasion of Jefferson's inauguration as president, and, although Jefferson is not named, the delineation of the character of Jeroboam is such that no one can doubt the personal application intended.

Jessica.—The beautiful daughter of Shylock, in Shakespeare's *Merchant of Venice.*

Jones, Tom.—The hero of Fielding's novel entitled *The History of a Foundling,* represented as a model of generosity, openness, and manly spirit, though thoughtless and dissipated.

Joyeuse.—The sword of Charlemagne as mentioned in romances of chivalry.

Joyeuse Garde, La.—The residence of the famous Lancelot du Lac.

Judith.—The heroine in the book by the same name in the Apocrypha. She was a beautiful Jewess of Bethulia, who, when her town was besieged by Holofernes, the general of Nebuchadnezzar, attended him in his tent, and, when he was drunk, killed him, whereupon her townsmen fell upon the Assyrians and defeated them with great slaughter. The tale is not mentioned by Josephus, and has, from an early period, been held to be an allegory. It has frequently furnished poets and painters with subjects.

Kadr, Al.—The night on which the *Koran* was sent down to Mohammed. Al Kadr is supposed to be the seventh of the last ten nights of Ramadan, or the night between the twenty-third and twenty-fourth days of the month.

Kay.—A foster brother of King Arthur, and a rude and boastful knight of the Round Table. He was the butt of King Arthur's court. Called also Sir Queux. He appears in the *Boy and the Mantle,* in Percy's *Reliques.* Sir Kay is represented as the type of rude boastfulness, Sir Gawain of courtesy, Sir Launcelot of chivalry, Sir Mordred of treachery, Sir Galahad of chastity, Sir Mark of cowardice.

Kehama.—A Hindu rajah who obtains and sports with supernatural power. His adventures are related in Southey's poem entitled *The Curse of Kehama.*

Kent, Earl of.—A rough, plain-spoken, but faithful nobleman in Shakespeare's *King Lear,* who follows the fallen fortunes of the king, disguised as a servant, under the assumed name of Caius.

Kenwigs.—A family in Dickens' novel *Nicholas Nickleby,* including a number of little girls who differed from one another only in the length of their frilled pantalets and of their flaxen pigtails tied with bows of blue ribbon.

Kilkenny Cats.—Two cats, in an Irish story, which fought till nothing was left but their tails. It is probably a parable of a local contest between Kilkenny and Irishtown, which impoverished both boroughs.

Kilmansegg, Miss.—An heiress with great expectations and an artificial leg of solid gold, in Hood's poem, *A Golden Legend.*

King Horn.—A metrical romance which was very popular in the thirteenth century. King Horn is a beautiful young prince who is carried away by pirates; but his life is spared, and after many wonderful adventures he weds a princess, and regains his father's kingdom.

King Log and King Stork.—Characters in a celebrated fable of Æsop, which relates that the frogs, grown weary of living without a government, petitioned Jupiter for a king. Jupiter accordingly threw down a log among them, which made a satisfactory ruler till the frogs recovered from their fright and discovered his real nature. They, therefore, entreated Jupiter for another king, whereupon he sent them a stork, who immediately began to devour them.

Klaus, Peter.—The hero of an old popular tradition of Germany—the prototype of Rip Van Winkle—represented as a goatherd.

Knickerbocker, Diedrich.—The imaginary author of a humorous fictitious *History of New York,* written by Washington Irving.

Knight of the Swan.—Lohengrin, son of Parsival, because his boat was drawn by a swan.

Knights of the Round Table.—King Arthur's Knights were so called because they sat with him at a round table made by Merlin for King Leodogran. This king gave it to Arthur on his marriage with Guinevere, his daughter.

Koppenberg.—The mountain of Westphalia to which the pied piper (Bunting) led the children, when the people of Hamelin refused to pay him for killing their rats. Browning's poem, *The Pied Piper,* tells the tale.

Kriemhild or **Chriemhild.**—The heroine of the *Nibelungenlied* the sister of Günther, king of the Burgundians, and the wife of Siegfried, after his death marrying Etzel, king of the Huns. She is the Gudrun of the *Volsunga Saga* and the *Edda.*

Lake of the Cat. Name given to Lake Erie until the last of the seventeenth century.

Lake Poets, The. Wordsworth, Southey, and Coleridge, who lived about the lakes of Cumberland.

Lampoon. A personal satire, often bitter and malignant. These libels, carried to excess in the reign of Charles II., acquired the name of lampoons from the burden sung to them: "*Lampone, lampone, camerada lampone.*"

Land of Beulah. The paradise in which souls wait before the resurrection. In *Pilgrim's Progress* the land from which the pilgrims enter the Celestial City. The name is found in Isaiah lxii, 4.

Land of Bondage. Name given to Egypt in the bible.

Land of Cakes. A name sometimes given to Scotland, because oatmeal cakes are a common national article of food, particularly among the poorer classes.

Land of Nod. In common speech sleepy-land or land of dreams.

Land of Promise. The land promised to Abraham—Canaan.

Land of Shadows. A place of unreality, sometimes meaning land of ghosts.

Land o' the Leal. An unknown land of happiness, loyalty, and virtue. Caroline Oliphant, baroness Nairne, meant heaven in her song and this is now its accepted meaning.

Land of Wisdom. A name given to Normandy, in France, because of the wise customs which have prevailed there, and also because of the skill and judgment of the people in making laws.

Land of Veda. Name often given to India.

Landlady's Daughter. She rowed Flemming "over the Rhine-stream, rapid and roaring wide," and told to him the story of the *Liebenstein.*

Last of the Mohicans. The Indian chief Uncas is so called by Cooper in his novel of that title.

Launfal, Sir. Steward of King Arthur. James Russell Lowell has a poem entitled *The Vision of Sir Launfal.*

Lavaine. Son of thelord of Astolat, who accompanied Sir Lancelot when he went to tilt for the ninth diamond. Lavaine is described as young, brave, and a true knight. He was brother to Elaine.

Lavinia and Palemon. Lavinia was the daughter of Acasto, patron of Palemon. Through Acasto Palemon gained a fortune and wandered away from his friend. Acasto lost his property, and dying, left a widow and daughter in poverty. Palemon often sought them, but could never find them. One day, a lovely modest maiden came to glean in Palemon's fields. The young squire was greatly struck with her exceeding beauty and modesty, but she was known as a pauper and he dared not give her more than a passing glance. Upon inquiry he found that the beautiful gleaner was the daughter of Acasto; he proposed marriage, and Lavinia was restored to her rightful place.

Leonato.—Governor of Missina in Shakespeare's *Much Ado About Nothing.* He prematurely accredited the accusations against his daughter, Hero.

Leonine.—In Shakespeare's *Pericles.* Servant to Dionyza. The latter conspired with him to murder Marina, and was saved from the crime only by the intervention of pirates.

Leonor.—In Molière's *L'ecole des Maris,* sister of Isabelle, an orphan; brought up by Ariste according to his notions of training a girl to make him a good wife. He put her on her honor, tried to win her confidence and love, gave her all the liberty consistent with propriety and social etiquette, and found that she loved him, and made him a fond and faithful wife.

Little John. A big, stalwart fellow, named John Little, who encountered Robin Hood, and gave him a sound thrashing, after which he was rechristened, and Robin stood godfather. Little John is introduced by Sir Walter Scott in *The Talisman.*

Little Nell.—*Old Curiosity Shop,* Dickens. The prominent character of the story, pure and true, though living in the midst of selfishness and crime. She was brought up by her grandfather, who was in his dotage, and who tried to eke out a narrow living by selling curiosities. At length, through terror of Quilp, the old man and his grandchild stole away, and led a vagrant life.

Lochinvar.—A young highlander, in the poem of *Marmion,* was much in love with a lady whose fate was decreed that she should marry a "laggard." Young Lochinvar persuaded the too-willing lassie to be his partner in a dance; and, while the guests were intent on their amusements, swung her into his saddle and made off with her before the bridegroom could recover from his amazement.

Locksley.—So Robin Hood is sometimes called, from the village in which he was born.

Lohengrin.—The Knight of the Swan; the hero of a romance by Wolfram von Eschenbach, a German minnesinger of the thirteenth century, and also of a modern musical drama by Richard Wagner. He was the son of Parsival, and came to Brabant in a ship drawn by a white swan, which took him away again when his bride, disobeying his injunction, pressed him to discover his name and parentage.

Lorelei.—In German poetry and romance, a siren supposed to haunt the Lurlenberg rock on the Rhine, and lure sailors and fishermen to destruction. She is the subject of a beautiful ballad by Heine.

Mab.—The queen of the fairies, famous in English literature if only on account of the exquisite description of her put into the mouth of Mercutio, in *Romeo and Juliet,* beginning "O, then, I see Queen Mab hath been with you."

Macheath, Captain.—A highwayman who is the hero of Gay's *Beggar's Opera.*

Mac-Ivor.—*Waverley,* Scott. Fergus Mac-Ivor is a prominent character in the novel, and his sister, Flora Mac-Ivor, the heroine. They are of the family of a Scottish chieftain.

Macreons, The Island of.—*Pantagruel,* Rabelais. The title is given to Great Britain, derived from a Greek word meaning long-lived, "because no one is put to death there for his religious opinions." Rabelais says the island "is full of antique ruins and relics of popery and ancient superstitions."

Madasima, Queen.—An important character in the old romance called *Amadis de Gaul;* her constant attendant was Elisabat, a famous surgeon with whom she roamed in solitary retreats.

Maidens' Castle.—An allegorical castle mentioned in Malory's *History of Prince Arthur.* It was taken from a duke by seven knights, and held by them till Sir Galahad expelled them. It was called The Maidens' Castle because these knights made a vow that every maiden who passed it should be made a captive.

Maid Marian.—A half mythical character, but the name is said to have been assumed by Matilda, daughter of Robert, Lord Fitzwalter, while Robin Hood remained in a state of outlawry. The name is considered the foundation of the word marionettes, from Maid Marian's connection with the morris dance, or May-day dance, at which she was said to appear.

Maid of Athens.—Made famous by Lord Byron's song of this title. Twenty-four years after this song was written an Englishman sought out "the Athenian maid," and found a beggar without a vestige of beauty.

Maid of Saragossa.—*Childe Harold,* Byron. A young Spanish woman distinguished for her heroism during the defense of Saragossa in 1808-09. She first attracted notice by mounting a battery where her lover had fallen, and working a gun in his place.

Malaprop, Mrs.—A character in Sheridan's *Rivals,* noted for her blundering use of words.

Malbecco.—*Faërie Queene,* Spenser. The husband of a young wife, Helinore, and himself a crabbed, jealous old fellow.

Malengrin.—A character in Spenser's *Faërie Queene,* who carried a net on his back "to catch fools with." The name has grown to mean the personification of guile or flattery.

Malepardus.—The castle of Master Reynard the Fox, in the beast epic of *Reynard the Fox.*

Malvoisin.—*Ivanhoe,* Scott. One of the challenging knights at the tournament (Sir Philip de Malvoisin). Sir Albert de Malvoisin was a preceptor of the Knights Templar.

Mambrino.—*Poems,* Ariosto, etc. A king of the Moors, who was the possessor of an enchanted golden helmet, which rendered the wearer invulnerable, and which was the object of eager quest to the paladins of Charlemagne. This helmet was borne away by the knight Rinaldo. In *Don Quixote* we are told of a barber who was caught in a shower of rain, and who, to protect his hat, clapped his brazen basin on his head. Don Quixote insisted that this basin was the helmet of the Moorish king; and, taking possession of it, wore it as such.

Managarm.—*Prose Edda.* The largest and most formidable of the race of giants. He dwells in the Ironwood, Jamvid. Managarm will first fill himself with the blood of man, and then will he swallow up the moon. This giant symbolizes war, and the iron wood in which he dwells is the wood of spears.

Mantalini.—*Nicholas Nickleby,* Dickens. The husband of madame; he is a man-doll, noted for his white teeth, his oaths, and his gorgeous morning gown. This "exquisite" lives on his wife's earnings, and thinks he confers a favor on her by spending. Madame Mantalini is represented as a fashionable dressmaker near Cavendish Square, London.

Marcellus.—*Hamlet,* Shakespeare. An officer of Denmark, to whom the ghost of the murdered king appeared before it presented itself to Prince Hamlet.

Marchioness, The.—*Old Curiosity Shop,* Dickens. A half-starved maid-of-all-work, in the service of Sampson Brass and his sister Sally. She was so lonesome and dull, that it afforded her relief to peep at Mr. Swiveller even through the keyhole of his door. Mr. Swiveller called her the "marchioness," when she played cards with him, "because it seemed more real and pleasant" to play with a marchioness than with a domestic. While enjoying these games they made the well-known "orange-peel wine."

Mariana in the Moated Grange.—In Tennyson's poem by this name, a young damsel who sits in the moated grange, looking out for her lover, who never comes. (2) In Shakespeare's *Measure for Measure* Mariana is a lovely and lovable lady, betrothed to Angelo, who, during the absence of Vincentio, the duke of Vienna, acted as his lord deputy. Her pleadings to the duke for Angelo are wholly unrivaled.

Martin's Summer, St.—Halcyon days; a time of prosperity; fine weather. Mentioned by Shakespeare in *Henry VI.,* etc.

Masora.—A critical work or canon, whereby is fixed and ascertained the reading of the text of the Hebrew version of the bible.

Mauth Dog.—*Lay of the Last Minstrel,* Scott. A black specter spaniel that haunted the guard-room of Peeltown in the Isle of Man. A drunken trooper entered the guard-room while the dog was there, but lost his speech, and died within three days.

McFingal.—The hero of Trumbull's political poem of the same name; represented as a burly New England squire, enlisted on the side of the Tory party of the American revolution, and constantly engaged in controversy with Honorius, the champion of the Whigs.

Meg Merrilies.—A prominent character in Scott's *Guy Mannering,* a half-crazy gypsy or sibyl.

Meistersingers.—In Germany an association of master tradesmen, to revive the national minstrelsy, which had fallen into decay with the decline of the minnesingers or love-minstrels (1350-1523). Their subjects were chiefly moral or religious, and constructed according to rigid rules.

Melissa.—*Orlando Furioso*, Ariosto. The prophetess who lived in Merlin's cave. Bradamante gave her the enchanted ring to take to Rogero; so, assuming the form of Atlantes, she not only delivered Rogero but disenchanted all the forms metamorphosed in the island where he was captive.

Melnotte, Claude.—*Lady of Lyons*, Bulwer. The son of a gardener in love with Pauline, "the Beauty of Lyons," but treated by her with contempt. Beauseant and Glavis, two other rejected suitors, conspired with him to humble her.

Melyhalt.—A powerful female subject of King Arthur's court. Sir Galiot invaded her domain, but she forgave his trespass, and chose him for her knight and chevalier.

Merlin.—The name of an ancient Welsh prophet and enchanter. He is often alluded to by the older poets, especially Spenser, in his *Faërie Queene*, and also figures in Tennyson's *Idylls of the King*. In the *History of Prince Arthur* by Malory, Merlin is the prince of enchanters and of a supernatural origin. He is said to have built the Round Table and to have brought from Ireland the stones of Stonehenge on Salisbury Plain.

Merlin's Cave.—In Dynevor, near Carmarthen, noted for its ghastly noises of rattling iron chains, groans, and strokes of hammers. The cause is said to be this: Merlin set his spirits to fabricate a brazen wall to encompass the city of Carmarthen, and, as he had to call on the Lady of the Lake, bade them not slacken their labor till he returned; but he never did return, for Vivian held him prisoner by her wiles.

Mildendo.—*Gulliver's Travels*, Swift. The metropolis of Lilliput, the wall of which was two feet and a half in height, and at least eleven inches thick. The emperor's palace, called Belfaborac, was in the center of the city.

Minnehaha.—*Hiawatha*, Henry W. Longfellow. The daughter of the arrow-maker of Dacotah, and wife of Hiawatha. She was called Minnehaha from the waterfall of that name.

Minnesingers.—A name given to the German lyric poets of the middle ages, on account of love being the principal theme of their lays, the German word "minne" being used to denote a pure and faithful love.

Miranda.—*The Tempest*, Shakespeare. The daughter of Prospero, the exiled duke of Milan, and niece of Antonio, the usurping duke. She is brought up on a desert island, with Ariel, the fairy spirit, and Caliban, the monster, as her only companions.

Miriam.—A beautiful and mysterious woman in Hawthorne's romance *The Marble Faun*, for love of whom Donatello commits murder, thus becoming her partner in crime.

Mualox.—*The Fair God*, Lew Wallace. The old paba or prophet who assured Nenetzin that she was to be the future queen in her father's palace.

Mucklebacket.—*The Antiquary*, Scott. Name of a conspicuous family, consisting of Saunders Mucklebacket, the old fisherman of Musselcrag; Old Elspeth, mother of Saunders; Maggie, wife of Saunders; Steenie, the eldest son, who was drowned; Little Jennie, Saunders' child.

Mumblecrust, Madge.—A character in Udall's *Ralph Roister Doister*, whose name was subsequently employed in Dekker's *Satiro-Mastix*, and the comedy of *Patient Grissel*. Madge is mentioned in the MS. comedy of *Misogonus*.

Munchausen, The Baron.—A hero of most marvelous adventures, and the fictitious author of a book of travels filled with most extravagant tales. The name is said to refer to Hieronymus Karl Friedrich von Münchausen, a German officer in the Russian army, noted for his marvelous stories.

Mussel Slough Affair.—*Octopus*, Norris. The basis of plot for the novel and name given to an actual piece of history almost unknown in the east, when the wheat-growers of the San Joaquin valley came into conflict with the railroad which they believed was trying to defraud them of their land.

Natty Bumppo.—Called "Leather-Stocking." He appears in five of Cooper's novels: (1) *The Deerslayer;* (2) *The Pathfinder;* (3) As "Hawk-eye" in *The Last of the Mohicans;* (4) "Natty Bumppo" in *The Pioneers;* and (5) as The "Trapper" in *The Prairie*, in which he dies.

Neæra.—The name of a girl mentioned by the Latin poets, Horace, Vergil, and Tibullus; sometimes also introduced into modern pastoral poetry as the name of a mistress or sweetheart.

Nepenthe.—A care-dispelling drug, which Polydamna, wife of Thonis, king of Egypt, gave to Helen. A drink containing this drug "changed grief to mirth, melancholy to joyfulness, and hatred to love." The water of Ardenne had the opposite effects. Homer mentions this drug nepenthe in his *Odyssey*. It is also mentioned in Poe's *Raven*.

New Atlantis, The.—An imaginary island in the middle of the Atlantic. Bacon, in his allegorical fiction so called, supposes himself wrecked on this island, where he finds an association for the cultivation of natural science and the promotion of arts. Called the "New" Atlantis to distinguish it from Plato's Atantis, an imaginary island of fabulous charms.

Nourmahal.—*Lalla Rookh*, Moore. "Light of the Harem." She was for a season estranged from the sultan, till he gave a grand banquet, at which she appeared in disguise as a lute-player and singer. The sultan was so enchanted with her performance that he exclaimed, "If Nourmahal had so played and sung, I could forgive her all"; whereupon the sultana threw off her mask.

Nucta.—*Paradise and the Peri*, Moore. The name given to the miraculous drop which falls from heaven, in Egypt, on St. John's day, and is supposed to stop the plague.

Nun of Nidaros.—*Tales of a Wayside Inn*, Longfellow. The abbess of the Drontheim convent, who heard the voice of St. John while she was kneeling at her midnight devotions.

Nut-Brown Maid.—*Reliques*, Percy. The maid who was wooed by the "banished man." The "banished man" describes to her the hardships she would have to undergo if she married him; but finding that she accounted these hardships as nothing compared with his love, he revealed himself to be an earl's son, with large hereditary estates in Westmoreland, and married her.

Obermann.—The impersonation of high moral worth without talent, and the tortures endured by the consciousness of this defect. This name was given to the hero and imaginary author of a work of the same name by Etienne Pivert de Senancourt, a French writer.

Oberon.—King of the fairies, whose wife was Titania. Shakespeare introduces both Oberon and Titania in his *Midsummer Night's Dream*. He and Titania, his queen, are fabled to have lived in India, and to have crossed the seas to northern Europe to dance by the light of the moon.

Oberon the Fay.—A humpty dwarf only three feet high, but of angelic face, lord and king of Mommur.

Ogier the Dane.—One of the paladins of the Charlemagne epoch. Also made the hero of an ancient French romance, and the subject of a ballad, whose story is probably a contribution from the stores of Norman tradition, Holger, or Olger, Danske, being the national hero of Denmark. He figures in Ariosto's *Orlando Furioso*.

O'Groat.—A name often alluded to in early English parables or sayings coming from the legend of *John O'Groat's House*. This ancient building was supposed to stand on the most northerly point in Great Britain. John of Groat and his brothers were originally from Holland. According to tradition, the house was of an octagonal shape, being one room with eight windows and eight doors, to admit eight members of the family, the heads of eight different branches of it, to prevent their quarrels for precedence at table, which, on a previous occasion, had well-nigh proved fatal.

Oldbuck, Jonathan.—*Antiquary*, Scott. The character whose whimsies gave name to the novel. He is represented as devoted to the study and accumulation of old coins, medals, and relics. He is irritable, sarcastic, and cynical from an early disappointment in love, but full of humor and a faithful friend.

Old Man of the Sea.—In the *Arabian Nights*, a monster encountered by Sindbad the sailor in his fifth voyage. After carrying him upon his shoulders a long time, Sindbad at last succeeds in intoxicating him, and effects his escape. The *Old Man of the Sea* was also made the title of a humorous and well-known poem by O. W. Holmes.

Old Red Sandstone.—One of the most noted of Hugh Miller's famous writings on geological subjects. It revealed his discovery of fossils in a formation which, up to that time, had been deemed almost destitute of them.

Oliver.—*As You Like It*, Shakespeare. Son and heir of Sir Rowland de Bois, who hated his youngest brother, Orlando, and whom he planned to murder by indirect methods. Orlando, finding it impossible to live in his brother's house, fled to the forest of Arden, where he joined the society of the banished duke. Oliver pursued him, and as he slept in the forest, a snake and a lioness lurked near to make him their prey. Orlando chanced to be passing, slew the two monsters, and then found that the sleeper was his brother Oliver. Oliver's feelings underwent a change, and he loved his brother as much as he had before hated him. In the forest, the two brothers met Rosalind and Celia. The former, who was the daughter of the banished duke, married Orlando; and the latter, who was the daughter of Frederick, the usurping duke, married Oliver.

Olivia.—*Twelfth Night*, Shakespeare. A rich countess, whose love was sought by Orsino, duke of Illyria; but, having lost her brother, Olivia lived for a time in entire seclusion, and in no wise reciprocated the duke's love. Olivia fell in love with Viola, who was dressed as the duke's page, and sent her a ring. Mistaking Sebastian (Viola's brother) for Viola, she married him out of hand.

Ophelia.—*Hamlet*, Shakespeare. Daughter of Polonius, the chamberlain. Hamlet fell in love with her, but, after his interview with the Ghost, finds that his plans must lead away from her. During his real or assumed madness, he treats her with undeserved and angry rudeness, and afterward, in a fit of inconsiderate rashness, kills her father, the old Polonius. The terrible shock given to her mind by these events completely shatters her intellect, and leads to her accidental death by drowning.

Osbaldistone.—*Rob Roy*, Scott. A family name in the story which tells of nine of the members: (1) the London merchant and Sir Hildebrand, the heads of two families; (2) the son of the merchant is Francis; (3) the offspring of the brother are Percival, the sot; Thorncliffe, the bully; John, the gamekeeper; Richard, the horse-jockey; Wilfred, the fool; and Rashleigh, the scholar, by far the worst of all. This last worthy is slain by Rob Roy, and dies cursing his cousin Frank whom he had injured.

O'Shanter.—See *Tam O'Shanter*.

Osman.—Sultan of the East, conqueror of the Christians, a magnanimous man. He loved Yara, a young Christian captive. This forms the subject of a once-famous ballad.

Osrick.—A court fop in Shakespeare's *Hamlet*. He is made umpire by Claudius in the combat between Hamlet and Laertes.

Osseo.—*Hiawatha*, Longfellow. Son of the Evening Star. When broken with age, he married Oweenee, one of ten daughters of a northland hunter. She loved him in spite of his ugliness and decrepitude, because "all was beautiful within him." As he was walking with his nine sisters-in-law and their husbands, he leaped into the hollow of an oak tree and came out strong and handsome; but Oweenee at the same moment was changed into a weak old woman. But the love of Osseo was not weakened. The nine brothers and sisters-in-law were transformed into birds. Oweenee, recovering her beauty, had a son, whose delight was to shoot the birds that mocked his father and mother. An Algonquin legend gave the foundation of the story.

Pacolet.—In *Valentine and Orson*, an old romance, a character who owned an enchanted steed, often alluded to by early writers. The name of Pacolet was borrowed by Steele for his familiar spirit in the *Tatler*. The French have a proverb, "It is the horse of Pacolet;" that is, it is one that goes very fast.

Page.—*Merry Wives of Windsor*, Shakespeare. Name of a family of Windsor, conspicuous in the play. When Sir John Falstaff made love to Mrs. Page, Page himself assumed the name of Brook. Sir John told the supposed Brook his whole "course of wooing."

Page, Anne.—Daughter of the above, in love with Fenton. Slender calls her "the sweet Anne Page."

Page, Mrs.—Wife of Mr. Page, of Windsor. When Sir John Falstaff made love to her, she joined with Mrs. Ford to dupe him and punish him.

Palamon.—(1) A character in *The Knight's Tale* in Chaucer's *Canterbury Tales*, in love with Emilia, who is also beloved by Palamon's friend, Arcite. (2) In Falconer's poem of *The Shipwreck* is in love with the daughter of Albert, the commander of the vessel in which he sails. (3) In Thomson's poem of *Autumn* in *The Seasons*, is a young man, "the pride of swains," in love with Lavinia. He is a poetical representation of Boaz, while Lavinia is intended for Ruth.

Pangloss, Dr.—(1) A poor pedant, in Colman the Younger's comedy of the *Heir at Law*, who has been created an *Artium Societatis Socius* (*A. S. S.*). He is remarkable for the aptness, if triteness, of his quotations. (2) An optimist philosopher in Voltaire's *Candide*.

Pantagruelian Law Case.—*Pantagruel*, Rabelais. This case, having nonplussed all the judges in Paris, was referred to Lord Pantagruel for decision. After much "statement" the bench declared, "We have not understood one single circumstance of the defense." Then Pantagruel gave sentence, but his judgment was as unintelligible as the case itself. So, as no one understood a single sentence of the whole affair, all were perfectly satisfied.

Partington, Mrs.—An imaginary old lady whose laughable sayings have been recorded by an American humorist, B. P. Shillaber.

Pauline.—The Lady of Lyons in Bulwer-Lytton's play of this name. She was married to Claude Melnotte, a gardener's son, who pretended to be a count.

Paul Pry.—*Paul Pry*, John Poole. An idle, inquisitive, meddlesome fellow, who has no occupation of his own, and is forever poking his nose into other people's affairs. He always comes in with the apology "I hope I don't intrude."

Peeping Tom of Coventry.—A tailor of Coventry, the only soul in the town mean enough to peep at the Lady Godiva as she rode naked through the streets to relieve the people from oppression.

Peggotty, Clara.—The nurse of David Copperfield in Dickens' novel of this name. Being very plump, whenever she makes any exertion some of the buttons on the back of her dress fly off.

Peggotty, Dan'l.—Brother of David Copperfield's nurse. Dan'l was a Yarmouth fisherman. His nephew, Ham Peggotty, and his brother-in-law's child, "little Em'ly," lived with him.

Peggotty, Em'ly.—She was engaged to Ham Peggotty; but being fascinated with Steerforth she eloped. She was afterward reclaimed, and emigrated to Australia.

Peggotty, Ham.—Represented as the very beau-ideal of an uneducated, simple-minded, honest, and warm-hearted fisherman. He was drowned in his attempt to rescue Steerforth from the sea.

Pendennis.—Name of the hero of a novel by Thackeray, published in 1849 and 1850, the immediate successor of *Vanity Fair*. Literary life is described in the history of Pen, a hero of no very great worth.

Pendennis, Laura.—Sister of Arthur, considered one of the best of Thackeray's characters.

Pendennis, Major.—A tuft-hunter, who fawns on his patrons for the sake of wedging himself into their society.

Petruchio.—A gentleman of Verona, in Shakespeare's *Taming of the Shrew*. A very honest fellow, who hardly speaks a word of truth, and succeeds in all his tricks. He acts his assumed character to the life, with untired animal spirits, and without a particle of ill-humor.

Philip.—*The Madness of Philip*, Josephine Daskam. A representation of the unregenerate child—"the child of strong native impulses who has not yet yielded to the shaping force of education; the child, therefore, of originality, of vivacity, of humor, and of fascinating power of invention in the field of mischief."

Philtra.—*Faërie Queene*, Spenser. A lady of large fortune, betrothed to Bracidas; but, seeing the fortune of Amidas daily increasing, and that of Bracidas getting smaller, she attached herself to the more prosperous younger brother.

Phineas.—*Uncle Tom's Cabin*, Mrs. Stowe. The quaker, an "underground railroad" man who helped the slave family of George and Eliza to reach Canada, after Eliza had crossed the river on cakes of floating ice.

Phyllis.—In Vergil's *Eclogues*, the name of a rustic maiden. This name, also written Phillis, has been in common use as meaning any unsophisticated country girl.

Pied Piper of Hamelin.—Old German legend. Robert Browning, in his poem entitled *The Pied Piper*, has given a metrical version. The legend recounts how a certain musician came into the town of Hamel, in the country of Brunswick, and offered, for a sum of money, to rid the town of the rats by which it was infested. Having executed his task, and the promised reward having been withheld, he in revenge blew again his pipe, and by its tones drew the children of the town to a cavern in the side of a hill, which, upon their entrance, closed and shut them in forever.

Pietro.—*The Ring and the Book*, Browning. The professed father of Pompilia, criminally assumed as his child to prevent certain property from passing to an heir not his own.

Pinch, Tom.—A character in Dickens' *Martin Chuzzlewit*, distinguished by his guilelessness, his oddity, and his exhaustless goodness of heart.

Pistol.—A follower of Falstaff, in Shakespeare's comedy of *The Merry Wives of Windsor*, and in the second part of *King Henry IV.* "A roguing beggar, a cantler, an upright man that liveth by cozenage."

Pocket.—*Great Expectations*, Dickens. Name of a family prominent in the story.

Pocket.—A real scholar, educated at Harrow, and an honor-man at Cambridge, but, having married young, he had to take up the calling of "grinder" and literary fag for a living. Pip was placed in his care.

Pocket, Herbert.—Son of Mr. Matthew Pocket, wonderfully hopeful, but had not the stuff to push his way into wealth.

Pocket, Mrs.—Daughter of a city knight, brought up to be an ornamental nonentity, helpless, shiftless, and useless. She was the mother of eight children, whom she allowed to "tumble up" as best they could, under the charge of her maid Flopson.

Pocket, Sarah.—Sister of Matthew Pocket, a little dry, old woman, with a small face that might have been made of walnut-shell, and a large mouth.

Portia.—In *The Merchant of Venice*, a rich heiress, whose hand and fortune hang upon the right choosing between a gold, a silver, and a leaden casket. She is in love with Bassanio, who, luckily, chooses well. She appears at the trial of Antonio as a "young doctor of Rome," named Balthazar.

Poyser, Mrs.—A character in *Adam Bede*. Some of her wonderfully shrewd and humorous observations have passed into the language. Here are some specimens: "It seems as if them as aren't wanted here are th' only folks as aren't wanted in the other world." "I'm not denyin' the women are foolish; God Almighty made 'em to match the men." "It's hard to tell which is Old Harry when everybody's got boots on." "There's many a good bit o' work done with a sad heart." "It's poor work allays settin' the dead above the livin'. It 'ud be better if folks 'ud make much on us beforehand, istid o' beginning when we're gone." "Some folks' tongues are like the clocks as run on strikin', not to tell you the time of day, but because there's summat wrong in their own inside."

Primrose, Rev. Charles.—*Vicar of Wakefield*, Goldsmith. A clergyman, rich in heavenly wisdom, but poor indeed in all worldly knowledge.

Primrose, Moses.—Brother of the above, noted for giving in barter a good horse for a gross of worthless green spectacles with copper rims.

Primrose, Olivia.—The eldest daughter of the doctor. Pretty, enthusiastic, a sort of Hebê in beauty. "She wished for many lovers," and eloped with Squire Thornhill.

Primrose, Sophia.—The second daughter of Dr. Primrose. She was "soft, modest, and alluring."

Priscilla.—*Courtship of Miles Standish*, Longfellow. A Puritan maiden who is wooed by Captain Standish through the mediation of his friend, John Alden, who is in love with Priscilla. She prefers John Alden and marries him after the captain's supposed death. The captain, however, appears at the close of the wedding service, and the friends are reconciled.

Prospero.—*Tempest*, Shakespeare. Rightful duke of Milan, deposed by his brother. Drifted on a desert island, he practiced magic, and raised a tempest in which his brother was shipwrecked. Ultimately Prospero "broke his wand," and his daughter married the son of the King of Naples.

Puff, Mr.—In Sheridan's farce *The Critic*, a hack writer, who, having failed at other occupations, tries criticism for a living, and is a "professor of the art of puffing."

Puss in Boots.—The subject and title of a well-known nursery tale derived from a fairy story in the *Nights* of the Italian author Straparola, and Charles Perrault's *Contes des Fées*. The wonderful cat secures a princess and a fortune for his master, a poor young miller, whom he passes off as the rich marquis of Carabas.

Pyncheon.—The name of an ancient but decayed family in Hawthorne's romance *The House of the Seven Gables*. There are: (1) Judge Pyncheon, a selfish, cunning, worldly man. (2) His cousin Clifford, a delicate, sensitive nature, reduced to childishness by long imprisonment and suffering. (3) Hepzibah, the latter's sister, an old maid who devotes herself to the care of Clifford. (4) A second cousin, Phœbe, a fresh, cheerful young girl, who restores the fallen fortunes of the family and removes the curse which rested on it.

Quasimodo.—*Notre Dame de Paris*, Hugo. A misshapen dwarf, one of the prominent characters in the story. He is brought up in the cathedral of Notre Dame de Paris. One day, he sees Esmeralda, who had been dancing in the cathedral close, set upon by a mob, and he conceals her for a time in the church. When, at length, the beautiful gypsy girl is gibbeted, Quasimodo disappears mysteriously, but a skeleton corresponding to the deformed figure is found after a time in a hole under the gibbet.

Quaver.—*The Virgin Unmasked*, Fielding. A singing-master, who says, "if it were not for singing-masters, men and women might as well have been born dumb." He courts Lucy by promising to give her singing-lessons.

Queen Lab.—*Arabian Nights*. The queen of magic, ruler over the enchanted city, in the story of Beder, prince of Persia. She transforms men into horses, mules, and other animals. Beder marries her, defeats her plots against him, but is himself turned into an owl for a time.

Quickly, Mistress.—*Merry Wives of Windsor*, Shakespeare. A serving woman to Dr. Caius, a French physician. She is the go-between of three suitors for "sweet Anne Page," and with perfect disinterestedness wishes all three to succeed.

Quickly, Mistress Nell.—Hostess of a tavern in Eastcheap, frequented by Harry, Prince of Wales, Sir John Falstaff, and all their disreputable crew.

Quidnunkis.—Title and name of hero in a fable found or written by Gay in 1726. This hero was a monkey which climbed higher than its neighbors, and fell into a river.

Quilp.—*Old Curiosity Shop*, Dickens. A hideous dwarf, cunning, malicious, and a perfect master in tormenting. Of hard, forbidding features, with head and face large enough for a giant, he lived on Tower hill, collected rents, advanced money to seamen, and kept a sort of wharf, calling himself a ship-breaker.

Quintus Fixlein.—Title of a romance by Jean Paul Richter and the name of the principal character.

Quirk, Gammon, and Snap.—A firm of rascally, scheming, hypocritical solicitors in Warren's *Ten Thousand a Year*.

Raby, Aurora.—In Byron's *Don Juan*. She was a rich, noble English orphan "a rose with all its sweetest leaves yet folded."

Radigund.—*Faërie Queene*, Spenser. Queen of the fabled Amazons. Having been rejected by Bellodant "the Bold," she revenged herself by degrading all the men who fell into her power by dressing them like women, and giving them women' work.

Random.—*Roderick Random*, Smollett. A young Scotch scapegrace in quest of fortune. At one time he revels in prosperity, again he is in utter destitution. He roams at random, in keeping with his name.

Rappaccini.—*Mosses from an Old Manse*, Hawthorne. A doctor in whose garden grew strange plants whose juices and fragrance were poison. His daughter, nourished on these odors, became poisonous herself. Her lover found an antidote which she took, but the poison meant life and the antidote meant death to her.

Raud the Strong.—*Tales of a Wayside Inn*, Henry W. Longfellow. The viking who worshiped the old gods and lived by fire and sword. King Olaf went against him, sailing from Drontheim to Salten Fjord.

Ravenswood.—*Bride of Lammermoor*, Scott. The lord of Ravenswood, an old Scotch nobleman and a decayed royalist. His son Edgar falls in love with Lucy Ashton, daughter of Sir William Ashton, Lord-Keeper of Scotland. The lovers plight their troth, but Lucy is compelled to marry Frank Hayston, laird of Bucklaw. The bride, in a fit of insanity, attempts to murder the bridegroom and dies. Bucklaw goes abroad. Colonel Ashton seeing Edgar at the funeral of Lucy, appoints a hostile meeting; and Edgar, on his way to the place appointed, is lost in the quicksands. A prophecy, noted as a curse, hung over the family and was thus fulfilled.

Raymond.—In *Jerusalem Delivered*, by Tasso. Raymond was known as the Nestor of the crusaders, slew Aladine, the king of Jerusalem, and planted the Christian standard upon the tower of David.

Rebecca.—*Ivanhoe*, Scott. Daughter of Isaac the Jew, in love with Ivanhoe.

Red-cross Knight.—The Red-cross Knight is St. George, the patron saint of England, and, in the obvious and general interpretation, typifies holiness, or the perfection of the spiritual man in religion. In Spenser's *Faërie Queene* the task of slaying a dragon was assigned to him as the champion of Una.

Redgauntlet.—One of the principal characters in Sir Walter Scott's novel of the same name, a political enthusiast and Jacobite, who scruples at no means of upholding the cause of the Pretender and finally accompanies him into exile. His race bore a fatal mark resembling a horse-shoe which appeared on the face of Red-gauntlet as he frowned when angry.

Red-Riding-Hood.—This nursery tale is, with slight variations, common to Sweden, Germany, and France. In Charles Perrault's *Contes de Fées* it is called *Le Petit Chaperon Rouge*.

Rigolette.—The name of a female character in Eugène Sue's *Mysteries of Paris*. It has acquired a proverbial currency, and is used as a synonym of "grisette."

Rinaldo.—A Christian hero in Tasso's *Jerusalem Delivered*. He was the son of Bertoldo and Sophia and nephew of Guelpho, but was brought up by Matilda. He was one of Charlemagne's Paladins and cousin to Orlando. Having killed Charlemagne's nephew Berthelot, he was banished and outlawed. After various adventures and disasters, he went to the Holy Land, and, on his return, succeeded in making peace with the emperor.

Roderick Dhu.—*Lady of the Lake*, Scott. An outlaw and chief of a band of Scots who resolved to win back what had been lost to the Saxons. In connection with Red Murdock he sought the life of the Saxon Fitz-James.

Roderigo.—In Shakespeare's *Othello*, a Venetian in love with Desdemona, who, when the lady eloped with Othello, hated the "noble Moor."

Roland.—The hero of one of the most ancient and popular epics of early French or Frankish literature and, according to tradition, the favorite nephew and captain of the Emperor Charlemagne. Roland is the hero of Théroulde's *Chanson de Roland*, of Turpin's *Chronique;* of Bojardo's *Orlando Innamorato;* of Ariosto's *Orlando Furioso*.

Romeo.—In Shakespeare's tragedy of *Romeo and Juliet*, a son of Montague, in love with Juliet, the daughter of Capulet, who was the head of a noble house of Verona, in feudal enmity with the house of Montague.

Romulus.—The mythical founder of the city of Rome. His name is only a lengthened form of Romus, and he is, therefore, to be regarded as a symbolical representation of the Roman people.

Rosetta Stone.—Found at Rosetta in the delta of the Nile, contains equivalent inscriptions in hieroglyphics in demotic and in Greek letters. The meaning of the Greek text being known, the hieroglyphics could be translated.

Rowena.—A Saxon princess, ward of Cedric of Rotherwood, in Sir Walter Scott's romance of *Ivanhoe*.

Rumpelstilzchen.—*Old German Tales*. According to Grimm, this name is a compound, but the spirit represented is one familiar to all German children. The original story tells of him as a dwarf who spun straw into gold for a certain miller's daughter.

Ruydera.—*Don Quixote*, Cervantes. A duenna who had seven daughters and two nieces. These were imprisoned for 500 years in a cavern in Spain. Their ceaseless weeping stirred the compassion of Merlin, who converted them into lakes in the same province.

Sacripant, King.—(1) King of Circassia, and lover of Angelica, in Bojardo and Ariosto. (2) A personage in Tassoni's mock-heroic poem, *Rape of the Bucket*, represented as false, brave, noisy and hectoring.

Sancho Panza.—The esquire and counterpart of Don Quixote in Cervantes' famous novel. He has much shrewdness in practical matters, and a store of proverbial wisdom. He rode upon an ass and was noted for his proverbs.

Satyrane, Sir.—*Faërie Queene*, Spenser. A noble knight who delivered Una from the fauns and satyrs. The meaning seems to be that Truth, driven from the towns and cities, took refuge in caves and dens where for a time it lay concealed. At length

Sir Satyrane (Luther) rescues Una from bondage; but no sooner is this the case than she falls in with Archimago, to show how very difficult it was at the time of the Reformation to separate Truth from Error.

Sawyer, Bob.—*Pickwick Papers*, Dickens. A drinking young doctor who tries to establish a practice at Bristol, but without success. Sam Weller calls him "Mr. Sawbones."

Scalds, or Skalds.—Court poets and chroniclers of the ancient Scandinavians. They resided at court, were attached to the royal suite, and attended the king in all his wars. These bards celebrated in song the gods, the kings of Norway, and national heroes. Few complete Skaldic poems have survived, but a multitude of fragments exist.

Schahriah.—*Arabian Nights.* The sultan of Persia. His reign was a despotism and his decrees absolute.

Scheherezade.—*Arabian Nights.* The fabled relater of the stories in these "Entertainments."

Scaramouch.—An Italian character whose traits are cowardice and boastfulness. He is of Spanish creation copied into Italian comedy.

Schlemihl, Peter.—The name of the hero of a little work by Chamisso, a man who sells his shadow to the devil. The name has become a byword for any poor, silly, and unfortunate fellow.

Schneider.—Rip Van Winkle's dog, in Boucicault's dramatization of Irving's *Rip Van Winkle.* The name of the dog in the story is "Wolf."

Scourge of God.—Attila, king of the Huns. A. P. Stanley says the term was first applied to Attila in the Hungarian *Chronicles.* It is found in a legend belonging to the eighth or ninth century.

Scrooge, Ebenezer.—*Christmas Carol*, Dickens. The prominent character, made partner, executor, and heir of old Jacob Marley, stock-broker.

Sebastian.—(1) Brother of Viola, in *Twelfth Night.* They were twins, and so much alike that they could not be distinguished except by their dress. Sebastian and his sister being shipwrecked, escaped to Illyria. Here Sebastian was mistaken for his sister (who had assumed man's apparel), and was invited by the countess Olivia to take shelter in her house from a street broil. Olivia was in love with Viola, and thinking Sebastian to be the object of her love, married him. (2) Brother of Alfonso, king of Naples, in *The Tempest* (3) Father of Valentine and Alice, in Beaumont and Fletcher's *Mons. Thomas.*

Sedley, Mr.—*Vanity Fair*, Thackeray. A wealthy London stock-broker, brought to ruin in the money market just prior to the battle of Waterloo.

Selith.—One of the two guardian angels of the Virgin Mary and St. John, the divine in Klopstock's *Messiah.*

Sempronius.—(1) In Shakespeare's *Timon of Athens*, a flatterer of Timon, who excuses himself from lending Timon money on the ground that others had been asked first.

Senena.—*Madoc*, Southey. A Welsh maiden in love with Caradoc. Under the assumed name of Mervyn she became the page of the Princess Goervyl, that she might follow her lover to America, where Madoc colonized Caer-Madoc. Senena was promised in marriage to another; but when the wedding day arrived the bride was nowhere to be found.

Serena.—*Faërie Queene*, Spenser. Allured into the fields by the mildness of the weather, to gather wild flowers for a garland, she was attacked by the Blatant Beast, which carried her off in its mouth. Her cries attracted to the spot Sir Calidore, who compelled the beast to drop its prey.

Sesame.—In Arabian tales given as the talismanic word which would open or shut the door leading into the cave of the forty thieves. In order to open it, the words to be uttered were, "Open, Sesame!" and in order to close it, "Shut, Sesame!" Sesame is a plant yielding grain which is sometimes used for food, and from which an oil is expressed. When Cassim forgot the word, he substituted "Barley," but without effect. Sesame has come into general use in connection with any word or act which will open the way for accomplishment of the thing desired.

Sganarelle.—The hero of Molière's comedy *Le Mariage Force.* He is represented as a humorist of about fifty-three, who, having a mind to marry a fashionable young woman, but feeling a doubt, consults his friends upon this momentous question. Receiving no satisfactory counsel, and not much pleased with the proceedings of his bride elect, he at last determines to give up his engagement, but is cudgeled into compliance by the brother of his intended.

Shallow.—A braggart and absurd country justice in Shakespeare's *Merry Wives of Windsor*, and in the second part of *King Henry IV.*

Shandy, Mrs.—The mother of Tristram Shandy in Sterne's novel of this name. She is the ideal of nonentity, a character individual from its very absence of individuality.

Shandy, Tristram.—The nominal hero of Sterne's *The Life and Opinions of Tristram Shandy, Gent.*

Shandy, Walter.—The name of Tristram Shandy's father in Sterne's novel of this name, a man of an active and metaphysical, but at the same time a whimsical, cast of mind, whom too much and too miscellaneous learning had brought within a step or two of madness.

Sharp, Becky.—A leading character in Thackeray's *Vanity Fair*, the daughter of a poor painter, dashing, selfish, unprincipled, and very clever.

Shepherd of Salisbury Plain, The.—The hero and title of a religious tract by Hannah More. The shepherd is noted for his homely wisdom and simple piety.

Shepherd's Pipe.—Pan, in Greek mythology, was the god of forests, pastures, and flocks, and the reputed inventor of the shepherd's flute or pipe.

Shingebis.—In Longfellow's *Hiawatha*, the diver who challenged the North Wind and put him to flight in combat.

Shocky.—*The Hoosier Schoolmaster*, Edw. Eggleston. The little lad from the poorhouse who adores the schoolmaster and early warns him of plans for upsetting his authority. He is also a small poet, not in rhyming, but in comprehension of things about him and in his way of looking at life, and he grows to be a helper in the *Church of the Best Licks*, founded by the schoolmaster.

Shylock.—A sordid, avaricious, revengeful Jew, in Shakespeare's *Merchant of Venice.*

Siege Perilous, The.—The Round Table contained sieges, or seats, in the names of different knights. One was reserved for him who was destined to attainment in the quest of the Holy Grail. This seat was called "perilous" because if any one sat therein except he for whom it was reserved, he would "lose himself." It finally bore the name of Sir Galahad.

Siegfried.—The hero of various Scandinavian and Teutonic legends, particularly of the old German epic poem, the *Nibelungenlied.* He is represented as a young warrior of physical strength and beauty, and in valor superior to all men of his time. He cannot easily be identified with any historical personage.

Sikes, Bill.—A brutal thief and housebreaker in Dickens' novel *Oliver Twist.* He murders his mistress, Nancy, and, in trying to lower himself by a rope from the roof of a building where he had taken refuge from the crowd, he falls, and is choked in a noose of his own making. Sikes had an ill-conditioned, savage dog, the beast-image of his master, which he kicked and loved, ill-treated and fondled.

Silken Thread.—*Gulliver's Travels.* In the kingdom of Lilliput, the three great prizes of honor are "fine silk threads six inches long, one blue, another red, and a third green." The thread is girt about the loins, and no ribbon of the Legion of Honor, or of the Knight of the Garter, is worn more worthily or more proudly.

Sindbad the Sailor.—A character in the *Arabian Nights*, in which is related the story of his strange voyages and wonderful adventures.

Sinon.—In Vergil's *Æneid* the cunning Greek who, by a false tale, induced the Trojans to drag the wooden horse into Troy.

Sir Roger de Coverley.—In Addison's *The Spectator.* The prototype of this famous character was Sir John Pakington, a hypothetical baronet of Coverley or Cowley, near Oxford.

Slick, Sam.—The hero of various humorous narratives, by Haliburton, illustrating and exaggerating the peculiarities of the Yankee character and dialect.

Slop, Dr.—The name of a choleric and uncharitable physician in Sterne's *Tristram Shandy, Gent.*

Slough of Despond.—*Pilgrim's Progress*, Bunyan. A deep bog, which Christian had to pass on his way to the Wicket Gate.

Sly, Christopher.—*Taming of the Shrew*, Shakespeare. A keeper of bears and a tinker and a sad drinker, son of a peddler.

Sofronia.—A young Christian of Jerusalem, the heroine of an episode in Tasso's *Jerusalem Delivered.* She and her lover, Olinda, are condemned to death by Aladine, king of Jerusalem. The king finally at the solicitation of Clorinda, spares them and they are married.

Spanker, Lady Gay.—In *London Assurance*, by Boucicault, is a woman of great spirit, devoted to the chase.

Speed.—An inveterate punster and the clownish servant of Valentine, one of the two "gentlemen" in Shakespeare's *The Two Gentlemen of Verona.*

Spenlow, *Lavinia* and *Clarissa*, in Dickens' *David Copperfield*, two spinster aunts of Dora Spenlow, with whom she lived at the death of her father.

Squeers.—Name of a family prominent in Dickens' *Nicholas Nickleby.* Wackford Squeers, master of Dotheboys Hall, in Yorkshire, is a vulgar, conceited, ignorant schoolmaster, overbearing and mean. He steals the boys' pocket money, clothes his son in their best suits, half starves them, and teaches them next to nothing. Ultimately he is transported for theft. Mrs. Squeers, a raw-boned, harsh, heartless virago, with no womanly feeling for the boys put under her charge. Miss Fanny Squeers, daughter of the schoolmaster. Miss Fanny falls in love with Nicholas Nickleby, but later hates him because he is insensible to the soft impeachment. Master Wackford Squeers, overbearing, self-willed and passionate.

Squire of Dames.—A personage introduced by Spenser in the *Faërie Queene*, and whose curious adventures are there recorded. The expression is sometimes applied to a person devoted to the fair sex.

Steerforth.—*David Copperfield*, Dickens. The young man who led little Em'ly astray. When tired of his toy, he proposed to her to marry his valet. Steerforth, being shipwrecked off the coast of Yarmouth, Ham Peggotty tried to rescue him, but both were drowned.

Stentor.—A Grecian herald in the Trojan War, whom Homer describes as great-hearted, brazen-voiced Stentor, accustomed to shout as loud as fifty other men.

Stephano.—(1) In Tasso's *Jerusalem Delivered*, earl of Carnuti, the leader of 400 men in the allied Christian army. He was noted for his military prowess and wise counsel; (2) a drunken butler in Shakespeare's *The Tempest;* (3 servant to Portia in Shakespeare's *Merchant of Venice.*

Stiggins, Rev. Mr.—A red-nosed, hypocritical "shepherd," or Methodist parson, in Dickens' *Pickwick Papers*, with a great appetite for pine-apple rum. He is the spiritual adviser of Mrs. Weller, and lectures on temperance.

Strephon.—The shepherd in Sir Philip Sidney's *Arcadia*, who makes love to the beautiful Urania. It is a stock name for a lover, Chloe being usually the corresponding lady.

Strongback.—One of the seven attendants of Fortunio, in D'Aulnoy's *Fairy Tales.* He could never be overweighted, and could fell a forest in a few hours without fatigue.

Summer, St. Martin's.—The fine weather which generally occurs in October and November; referred to in *Henry VI.*

Tabard, The.—Is the inn, in High Street, Southwark, London, from which Chaucer makes his pilgrims start on their journey to Canterbury. It took its name from its sign—a tabard.

Tancred.—In Tasso's *Jerusalem Delivered*, was the greatest of all the Christian warriors, except Rinaldo.

Tartuffe.—The name of the chief character in Molière's most celebrated comedy, *Le Tartuffe*, which has become a synonym in all languages for a hypocritical pretender to religion.

Teazle, Lady.—The heroine of Sheridan's comedy, *The School for Scandal*, and the wife of Sir Peter Teazle, an old gentleman who marries late in life. She is represented as being "a lively and innocent, though imprudent, country girl, transplanted into the midst of all that can bewilder and endanger her, but with enough of purity about her to keep the blight of the world from settling upon her.

Teazle, Sir Peter.—A character in Sheridan's play *The School for Scandal*, husband of Lady Teazle.

Tessa.—In George Eliot's novel of *Romola* is the peasant girl who is deceived into marriage with Tito Melema.

Thangbrand.—*Tales of a Wayside Inn*, Henry W. Longfellow. King Olaf's drunken priest, "Short of stature, large of limb," who was sent to Iceland, found the people poring over their books, and sailed back to Norway to say to Olaf "little hope is there of these Iceland men."

Theagenes and Chariclela.—The chief characters in a Greek love story, by Heliodorus, bishop of Trikka, fourth century. A charming fiction, largely borrowed from by subsequent novelists, and especially by Mdlle. de Scudéri, Tasso, Guarini, and D'Urfé.

Thekla.—The daughter of Wallenstein in Schiller's drama of this name. She is an invention of the poet.

Theodorus.—The name of a physician, in Rabelais' romance of *Gargantua.* At the request of Ponocrates, Gargantua's tutor, he undertook to cure the latter of his vicious manner of living, and accordingly "purged him canonically with Anticyrian hellebore," by which medicine he cleared out all the perverse habit of his brain, so that he became a man of honor, sense, courage, and piety.

Theresa.—Daughter of the count palatine of Padolia, beloved by Mazeppa, in Byron's *Mazeppa.*

Thersites.—A scurrilous Grecian chief, loquacious, loud and coarse, in the *Iliad.* His chief delight was to inveigh against the kings of Greece. He squinted, halted, and on his tapering head grew a few white patches of starveling down.

Thopas, Sir.—In the *Canterbury Tales*, a capital sportsman, archer, wrestler, and runner, who resolved to marry no one but an "elf queen," and accordingly started for Faëryland. Story left unfinished.

Thorberg Skafting.—*Tales of a Wayside Inn.* Henry W. Longfellow. The master-builder ordered by King Olaf to build a ship twice as long and twice as large as the *Dragon*, built by Raud the Strong, which was stranded.

Thyestean Banquet.—Referred to in Milton's *Paradise Lost.* A cannibal feast. Thyestes was given his own two sons to eat at a banquet served up to him by his brother, Atreus.

Thyrsis.—A herdsman introduced in the *Idylls* of Theocritos, and in Vergil's *Eclogues.*

> Hard by, a cottage chimney smokes
> From betwixt two aged oaks,
> Where Corydon and Thyrsis, met,
> Are at their savory dinner set.
> Milton, *L'Allegro.*

Timias.—King Arthur's squire in Spenser's *Faerie Queene.* He went after the "wicked foster," from whom Florimel fled, and the "foster" with his two brothers, falling on him were all slain.

Toby, Uncle.—A character in Sterne's *Tristram Shandy.* A captain who was wounded at the siege of Namur, and was obliged to retire from the service. He is the impersonation of kindness

benevolence, and simple-heartedness; his courage is undoubted, and his gallantry delightful for its innocence and modesty.

Tommy Atkins.—*Barrack-Room Ballads*, Kipling. The name is here used in its general meaning, a British soldier. The name came from the little pocket ledgers served out, at one time, to all British soldiers. In these manuals were to be entered the name, the age, the date of enlistment, etc. The war office sent with each little book a form for filling it in, and the hypothetical name selected was *Tommy Atkins*. The books were instantly so called, and it did not require many days to transfer the name from the book to the soldier.

Topsy.—*Uncle Tom's Cabin*, Mrs. Stowe. A young slave-girl, who never knew whether she had either father or mother, and being asked by Miss Ophelia St. Clare how she supposed she came into the world, replied, "I 'spects I growed."

Touchstone.—A clown in Shakespeare's *As You Like It*. His seven degrees of the lie are: (1) The retort courteous, (2) the quip modest, (3) the reply churlish, (4) the reproof valiant, (5) the countercheck quarrelsome, (6) the lie circumstantial, (7) the lie direct.

Townley Mysteries.—Certain religious dramas; so called because the MS. containing them belonged to P. Townley. These dramas are supposed to have been acted at Widkirk abbey, in Yorkshire.

Tranio.—In Shakespeare's *Taming of the Shrew*, one of the servants of Lucentio, the gentleman who marries Bianca, sister of Katharina "the Paduan shrew."

Triads.—Three subjects more or less connected formed into one continuous poem or subject; thus the "Creation, Redemption, and Resurrection would form a triad.

Trim, Corporal.—Uncle Toby's attendant, in Sterne's novel, *The Life and Opinions of Tristram Shandy, Gent*, distinguished for his fidelity and affection, his respectfulness, and his volubility.

Tristram, Sir.—One of the most celebrated heroes of mediæval romance. His adventures form an episode in the history of Arthur's court, and are related by Thomas the Rhymer, as well as by many romancists.

Tubal.—A wealthy Jew, the friend of Shylock, in Shakespeare's *The Merchant of Venice*.

Tuck, Friar.—*Ivanhoe*, Scott. The father-confessor of Robin Hood and connected with Fountain's Abbey. He is represented as a clerical Falstaff, very fat and self-indulgent, very humorous, and somewhat coarse. His dress was a russet habit of the Franciscan order. He was sometimes girt with a rope of rushes. Friar Tuck also appears in the "morris dance" on Mayday.

Turvey-drop.—*Bleak House*, Dickens. A conceited dancing-master, who imposes on the world by his majestic appearance and elaborate toilette. He is represented as living upon the earnings of his son, who has a most slavish reverence for him as a perfect "master of deportment."

Tutivillus.—In Langland's *Visions of Piers Plowman*, the demon who collects all the fragments of words omitted, mutilated, or mispronounced by priests in the performance of religious services, and stores them up in that "bottomless" pit which is "paved with good intentions."

Tweedledum and Tweedledee.—The prince of Wales was the leader of the Handel party, supported by Pope and Dr. Arbuthnot; and the duke of Marlborough led the Bononcinists, and was supported by most of the nobility.

Ubaldo.—*Jerusalem Delivered*, Tasso. One of the older crusaders, who had visited many regions. He and Charles the Dane went to bring back Rinaldo from the enchanted castle.

Ubeda.—*Don Quixote*, Cervantes. A noted artist who one day painted a picture, but was obliged to write under it, "This is a cock," in order that the spectator might know what was intended to be represented.

Ultima Thule.—The extremity of the world; the most northern point known to the ancient Romans. Pliny and others say it is Iceland.

Una.—*Faërie Queene*, Spenser. The personification of truth. She goes, leading a lamb and riding on a white ass, to the court of Gloriana, to crave that one of her knights might undertake to slay the dragon which kept her father and mother prisoners. The adventure is accorded to the Red Cross Knight. Being driven by a storm into Wandering Wood, a vision is sent to the knight, which causes him to leave Una, and she goes in search of him. In her wanderings a lion becomes her attendant. After many adventures, she finds St. George, "the Red Cross Knight," but he is severely wounded. Una takes him to the house of Holiness, where he is carefully nursed, and then leads him to Eden.

Uncle Tom.—*Uncle Tom's Cabin*, Mrs. Stowe. A negro slave of unaffected piety, and most faithful in the discharge of all his duties. His master, a humane man, becomes embarrassed in his affairs, and sells him to a slave-dealer. After passing through various hands, and suffering intolerable cruelties, he dies.

Urganda.—In the romance of *Amadis de Gaul*, a powerful fairy sometimes appearing in all the terrors of an evil enchantress.

Uriel or **Israfil.**—In the *Koran*, the angel who is to sound the resurrection trumpet. Longfellow, in *The Golden Legend*, calls him "the minister of Mars," and says that he inspires man with "fortitude to bear the brunt and suffering of life."

Uther.—Son of Constans, one of the fabulous or legendary kings of Britain, and the father of Arthur.

Uzziel.—In *Paradise Lost*, the next in command to Gabriel. The word means "God's strength."

Valentine.—(1) One of the heroes in the old romance of *Valentine and Orson*. (2) One of the *Two Gentlemen of Verona*, by Shakespeare. (3) A gentleman attending on the duke in Shakespeare's *Twelfth Night*. (4) One of the characters in Goethe's *Faust*. He is a brother of Margaret.

Valerian or **Valirian.**—*Canterbury Tales*, Chaucer. The husband of St. Cecilia. Cecilia told him she was beloved by an angel, who constantly visited her; and Valerian requested to see this visitant. Cecilia replied that he should do so if he went to Pope Urban to be baptized. This he did, and on returning home the angel gave him a crown of lilies, and to Cecilia a crown of roses, both from the garden of paradise.

Valley of Humiliation.—*Pilgrim's Progress*, Bunyan. The place where Christian encountered Apollyon, just before he came to the "Valley of the Shadow of Death."

Veck, Toby.—*The Chimes*, Dickens. A ticket-porter who went on errands and bore the nickname Trotty. One New Year's eve he had a nightmare and fancied he had mounted to the steeple of a neighboring church, and that goblins issued out of the bells. He was roused from his sleep by the sound of the bells ringing in the new year.

Veiled Prophet.—*Lalla Rookh*, Moore. He assumed to be a god, and maintained that he had been Adam, Noah, and other representative men. Having lost an eye, and being otherwise disfigured in battle, he wore a veil to conceal his face, but his followers said it was done to screen his dazzling brightness.

Vernon, Die or **Diana.**—*Rob Roy*, Scott. The heroine of the story, a high-born girl of great beauty and talents. She is an enthusiastic adherent to a persecuted religion and an exiled king.

Vincentio.—The duke of Vienna in Shakespeare's *Measure for Measure*. He commits his scepter to Angelo, under the pretext of being called to take an urgent and distant journey, and by exchanging the royal purple for a monk's hood, observes incognito the condition of his people.

Vincy, Rosamond.—One of the principal female characters in George Eliot's novel *Middlemarch*.

Viola.—*Twelfth Night*, Shakespeare. A sister of Sebastian. They were twins, and so much alike that they could be distinguished only by their dress. When they were shipwrecked Viola was brought to shore by the captain, but her brother was left to shift for himself. Being in a strange land, Viola dressed as a page, and, under the name of Cesario, entered the service of Orsino, duke of Illyria. The duke greatly liked his beautiful page, and, when he discovered her true sex, married her.

Violenta.—*All's Well That Ends Well*, Shakespeare. A character in the play who enters upon the scene only once, and then she neither speaks nor is spoken to. The name has been used to designate any young lady nonentity; one who contributes nothing to the amusement or conversation of a party.

Virgilia.—In Shakespeare's *Coriolanus*, the wife of Coriolanus, and Volumnia his mother; but historically Volumnia was his wife and Veturia his mother.

Virginia.—A young Roman plebeian of great beauty, decoyed by Appius Claudius, one of the decemvirs, and claimed as his slave. Her father, Virginius, being told of it, hastened to the forum, and arrived at the moment when Virginia was about to be delivered up to Appius. He seized a butcher's knife, stabbed his daughter to the heart, rushed from the forum, and raised a revolt. This has been the subject of a host of tragedies. It is one of Lord Macaulay's lays (1842), supposed to be sung in the forum on the day when Sextus and Licinus were elected tribunes for the fifth time.

Vivian, or **Viviane,** or **Vivien.**—In the Arthurian cycle of romance, an enchantress, the mistress of Merlin. She brought up Lancelot in her palace, which was situated in the midst of a magical lake; hence her name "the Lady of the Lake."

Waverley Novels.—General name given to Scott's historical novels.

Weller, Samuel.—In Dickens' celebrated *Pickwick Papers*. A servant to Mr. Pickwick, to whom he becomes devotedly attached. Rather than leave his master when he is sent to the Fleet, Sam Weller gets his father to arrest him for debt. He is an inimitable compound of wit, simplicity, quaint humor, and fidelity. Tony Weller, father of Sam; a coachman of the old school, who drives between London and Dorking. On the coachbox he is a king, elsewhere a mere London "cabby." He marries a widow, and his constant advice to his son is, "Sam, beware of the vidders."

Wild, Jonathan.—A cool, calculating, heartless villain, with the voice of a Stentor, hero of Defoe's romance of the same name.

Wilford.—(1) In Knowles' *The Hunchback*, supposed to be earl of Rochdale. (2) In Knowles' *The Beggar of Bethnal Green*, the truant son of Lord Woodville, who fell in love with Bess, the daughter of the "blind beggar of Bethnal Green."

Wimble, Will.—A member of the fictitious *Spectator Club*, said to be intended as a portrait of a Mr. Thomas Morecroft, a gentleman of simple habits and good nature.

Worldly-Wiseman, Mr.—One of the characters in Bunyan's *Pilgrim's Progress*, who converses with Christian by the way, and endeavors to deter him from proceeding on his journey.

Wrayburn, Eugene.—*Our Mutual Friend*, Dickens. Barrister-at-law; an indolent, moody, whimsical young man, who loves Lizzie Hexam. After he is nearly killed by Bradley Headstone, he reforms, and marries Lizzie, who saved his life.

Yahoo.—A name given by Swift, in his satirical romance of *Gulliver's Travels*, to one of a race of brutes having the form and all the vices of man. The Yahoos are represented as being subject to the Houyhnhnms, or horses endowed with reason.

Yorick.—(1) The King of Denmark's jester, mentioned in Shakespeare's *Hamlet*. Hamlet picks up his skull in the churchyard and apostrophizes it. (2) A humorous and careless parson in Sterne's *Tristram Shandy*.

Zanoni.—Hero of a novel so called by Lord Lytton. Zanoni is supposed to possess the power of communicating with spirits, prolonging life, and producing gold, silver, and precious stones.

Zenobia. — *Blithedale Romance*, Hawthorne. A strong-minded woman, beautiful and intelligent, who was interested in playing out the pastoral of the life at Brook Farm. She is represented as disappointed in love, and at last she drowned herself.

Zephon.—A "strong and subtle spirit" in Milton's *Paradise Lost*, whom Gabriel dispatched with Ithuriel to find Satan.

Zillah.—One of Southey's characters, beloved by Hamuel, a brutish sot. Zillah rejected his suit, and Hamuel vowed vengeance. Accordingly, he gave out that Zillah had intercourse with the devil, and she was condemned to be burnt alive. God averted the flames, which consumed Hamuel; but Zillah stood unharmed, and the stake to which she was bound threw forth white roses, "the first ever seen on earth since paradise was lost."

Zimri.—In Dryden's *Absalom and Achitophel*, is intended for George Villiers, duke of Buckingham, who had satirized Dryden in *The Rehearsal* as Bayes.

Zophiel.—In Milton's *Paradise Lost*, an angelic scout.

Zuleika.—The heroine in Byron's poem of *The Bride of Abydos*, in love with Selim:

"Fair, as the first that fell of womankind . . .
Soft, as the memory of buried love;
Pure, as the prayer which childhood wafts above:
Such was Zuleika—such around her shone
The nameless charms unmark'd by her alone:
The light of love, the purity of grace,
The mind, the music breathing from her face,
The heart whose softness harmonized the whole—
And, oh! that eye was in itself a soul!"

DICTIONARY OF PSEUDONYMS AND SOBRIQUETS

Pen Name or Sobriquet	Real Name
Abbott, Madeline Vaughan	Mrs. Charles E. Bushnell.
Achitophel, "Achitophel and Absalom"	Earl of Shaftesbury (1621-1638).
Ackermann, Gottlieb	Franz Xavier Mayer.
Ackworth, John	Rev. F. R. Smith.
Adam, Madame (Edmond)	Juliette Lamber.
Adams, Moses	Geo. Wm. Bagley.
Adams, Stephen	Michael Maybrick.
Addison of the North, "The Man of Feeling"	Henry Mackenzie.
Adeler, Max	Charles Heber Clark.
Admirable Doctor	Roger Bacon.
Adonais, "Adonais"	Keats (name given by Shelley).
Agate	Whitelaw Reid.
Agilus	Henry Timrod.
Akers, Elizabeth	Mrs. E. M. Allen.
A. K. H. B.	Rev. A. K. H. Boyd.
Alcaeus	James Montgomery.
Alcibiades, *Punch*, 1846	Lord Tennyson.
Alexander, Mrs.	Mrs. Annie Alexander Hector.
Alexander of the North, The	Charles XII. of Sweden.
Alexander, Sir Drawcansir	Tobias George Smollett.
Alexander the Coppersmith, LL. D.	Thomas Erskine, Baron Erskine.
Alexander the Corrector	Alexander Cruden.
Allen, F. M.	Edmund Downey.
Alte Fritz, Der	Frederick the Great.
Americus	Francis Lieber.
Ames, Lucia True	Mrs. Lucia Ames Mead.
Amyand, Arthur	Capt. E. A. Haggard.
Anacreon Moore	Thomas Moore.

Pen Name or Sobriquet	Real Name
Anacreon of Painters	Francesco Albani.
Anacreon of Persia	Hafiz.
Andrews, Annulet	Mrs. J. Kingsley Ohl.
Ane of that Ilk	Prof. W. E. Aytoun.
Angler, An, "Salmonia."	Sir Humphry Davy.
Anstey, F.	T. Anstey Guthrie.
Apostate, Julian the	Roman Emperor Julian.
Apostle of Germany	St. Boniface.
Apostle of Ireland	St. Patrick.
Apostle of Temperance	Rev. Theobald Mathew.
Apostle of the English	St. Augustine.
Apostle of the French	St. Denis.
Apostle of the Frisians	St. Willibrord or Wilbrod.
Apostle of the Gauls	St. Irenæus.
Apostle of the Goths	Ulfilas.
Apostle of the Indians	Rev. John Eliot.
Apostle of the Indies	St. Francis Xavier.
Apostle of the North	Ansgar or Anscharius.
Apostle of the North	Bernard Gilpin.
Archibald, Mrs. G.	Mrs. George A. Palmer.
Armstrong, Regina	Mrs. C. H. Nichaus.
Arnold, Birch	Mrs. J. M. D. Bartlett.
Arp, Bill	Charles H. Smith.
Ashmont,	J. Frank Perry.
Astrophel	Sir Philip Sidney.
Atlas	Edmund Yates.
Attic Bee	Sophocles.
Attic Muse	Xenophon.
Atticus	Joseph Addison (name given by Pope in "Prologue to the Satires").
Aunt Elmina	Mrs. Isaac Slenker.
Austrian Hyena	Baron Julius Jakob von Haynau.
Autocrat, The	Dr. Oliver Wendell Holmes.
Ayres, Alfred	Thomas E. Osmun.
Bab, "Bab Ballads"	W. S. Gilbert.
Baba, Ali	Alberigh Mackay.
Badinguet	Napoleon III.
Balfour, Clara	Mrs. Felicia Dorothea (Browne) Hemans.
Ballin, Ada S.	Mrs. Oscar G. D. Berry.
Bard of Avon	Shakespeare.
Bard of Ayrshire	Robert Burns.
Bard of Rydal Mount, The	Wm. Wordsworth.
Barnaval, Louis	Charles De Kay.
Barnes, Catharine Weed	Mrs. Henry Snowden Ward,
Bates, Charlotte Fiske	Mme. Adolphe Roge.
Bayard, The Polish	Prince Józef Anton Poniatowski.
Baylor, Frances Courtenay	Mrs. Geo. S. Barnum.
Beard, Frank	Thos. Francis Beard.
Beau Brummel	George Bryan Brummel.
Beauclerc	Henry I. of England.
Beaumont, Averil	Mrs. Hunt.
Beau Nash	Richard Nash (also called "King of Bath").
Bede, Cuthbert	Rev. Edward Bradley.
Bell, Acton	Anne Brontë.
Bell, Currer	Charlotte Brontë.
Bell, Ellis	Emily Brontë.
Bell, Lilian	Mrs. Arthur Hoyt Bogue.
Bell, Lura	Julia May Wilkinson.
Bell, Nancy	Mrs. A. Geo. Bell.
Belloc, Marie Adelaide	Mrs. Frederick S. Rogades.
Bell-the-Cat	Archibald Douglas, fifth earl of Angus.
Belted Will	Lord William Howard
Benson, Carl	Charles Astor Bristed.
Bentzon, Th.	Marie Therese Blanc.
Berkeley, Thusnelda	Mrs. Mary L. Metcalfe.
Berwick, Mary	Adelaide Anne Procter.
Bess, Good Queen	Queen Elizabeth of England.
Bettina	Elisabeth or Bettina (Brentano) von Arnim.
Bevans, Neile	Nellie Bingham van Slingerland.
Bibliophile	L. A. Allibone.
Bibliophile, P. & Jacob	Paul Lacroix.
Bickerdyke, John	Charles H. Cook.
Bickerstaff, Isaac	Swift and Steele.
Biglow, Hosea	J. R. Lowell.
Billings, Josh	Henry W. Shaw.
Bisland, Elizabeth	Mrs. Elizabeth Wetmore.
Black Douglas	(Generic name of Scotch family of Douglas.)
Black Prince, The	Edward, Prince of Wales, son of Edward III. of England.
Blacksmith, The Learned, "Sparks from the Anvil"	Elihu Burritt.
Blanchard, Neltje	Mrs. F. N. Doubleday.
Blind Harry	Henry the Minstrel.
Bluff Hal, or Harry	King Henry VIII. of England.
Boisgilbert, Edmund	Ignatius Donnelly.
Boldrewood, Rolf	Thos. Alex. Browne.
Bon Gaultier	Prof. W. E. Aytoun and Sir Theo. Martin.
Bonehill, Capt. Ralph	Edwd. Stratemeyer.
Bouverie, Bartholomew	Rt. Hon. W. E. Gladstone, M. P.
Boz	Charles Dickens.
Bozzy	James Boswell.
Braddon, Miss M. E.	Mrs. John Maxwell.
Brannigan, Calvin	Jas. Jeffrey Roche.
Breitmann, Hans	Charles Godfrey Leland.
Briscoe, Margaret Sutton	Mrs. A. J. Hopkins.
Brooke, Magdalen	M. H. M. Capes.
Brooks, Esta	Mrs. E. P. Evans.
Brooksby	Capt. Pennell Elmhurst.
Brown, Tom	Thomas Hughes, Q. C., M. P.
Brown, Tom, the Younger	Thomas Moore.
Brydges, Harold	James Howard Bridge.
Bunny	Carl E. Schultze.
Burlington Hawkeye Man	Robert Jones Burdette.
Burnett, Frances Hodgson	Mrs. Stephen Townsend.
Butt, Beatrice May	Mrs. W. H. Alhusen.
Byron, The Russian	Alexander Sergeivitch Puschkin.
C.	Mrs. J. Farley Cox.
Cadenus	Jonathan Swift.
Calderwood, M.	William F. Robertson, M. D.
Caliban	Robert Buchanan.
Caliban	Louis Jean Emmanuel Gonzalès.
Cambridge, Ada	Mrs. George F. Cross.
Candidus	Samuel Adams.
Carmen Sylva	Queen of Roumania.
Carroll, Lewis	Rev. Chas. L. Dodgson.
Carter, Nick	J. Russell Coryell.
Carton, R. C.	R. C. Crutchett.
Cartwright, Julia	Mrs. Henry Ady.
Caryll, Ivan	John Carl.
Caskoden, Edward	Charles Major.
Castlemon, Harry	Charles A. Fosdick.
Catholicus	Cardinal John Henry Newman.
Cato	Alexander Hamilton.
Champ	Jas. W. Champney.
Chester, Eliza	Harriet Eliza Paine.
Chester, Morley	Emily Underdown.
Chicot	Epes Winthrop Sargent.
Chinese Gordon	Maj. Gen. Charles George Gordon.
Citizen King	Louis Philippe.
Clark, Henry Scott	Millard F. Cox.
Cleeve, Lucas	Mrs. Howard Kingscote.
Cleisthbotham, Jedediah	Sir Walter Scott.
Clement, Clara Erskine	Mrs. James Forbes Waters.
Coe, Captain	E. Card Mitchell.
Collingwood, Harry	W. J. C. Lancaster.
Collins, Mabel	Mrs. Keningale Cook.
Collins, Percy	Price Collier.
Colman, R. W.	James Hogg, the Ettrick Shepherd.
Colmore, G.	Mrs. Gertrude Colmore Dunn.
Common Sense	Thomas Paine.
Condroux, Alfred	Honoré de Balzac.
Confessor, The	Edward III., King of Anglo-Saxons.
Connor, Marie	Marie Connor Leighton.
Connor, Ralph	Rev. C. W. Gordon.
Conqueror, William the	Duke of Normandy.
Conway, Hugh	Fergus Hume.
Cooper	W. S. Walker.
Cooper, Susan	Sarah C. Woolsey.
Corelli, Marie	Eva Mary Mackay.
Cornwall, Barry	B. W. Procter.
Corrector, Alexander the	Alexander Cruden.
Corporal	L. C. Alfred de Musset.
Craddock, Charles Egbert	Mary N. Murfree.
Craik, [illegible]	Mrs. May.
Crayon, Geoffrey	Washington Irving.
Creyton, [illegible]	J. T. Trowbridge.
Crichton, The Admirable	James Crichton.
Crinkle, Nym	Ann C. Wheeler.
Croaker & Co.	Joseph Rodman Drake, C. Fitz-Greene Halleck.
Cromarty, Deas	Mrs. Watson.
Crowfield, Christopher	Mrs. H. Beecher Stowe.
Cruiser, Benedict	G. A. Sala.
Curate of Meudon (le Curé de Meudon)	François Rabelais.
Curtius	Noah Webster.
Cusack, George	Grace Carter-Smith.
Cushing, Paul	Roland Alexander Wood-Sey.
D'Ache, Caran	Emmanuel Poiré.
Dacre, J. Colne	Mrs. A. S. Boyd.
Dagonet	George R. Sims.
Dale, Alan	Alfred J. Cohn.
Dale, Darley	Francesca Maria Steele.
Daly, Frederic	Louis Frederic Austin.
Damsel of Brittany	Eleanora, granddaughter of Henry II. of England.
Danbury News Man	J. M. Bailey.
Danby, Frank	Mrs. Julia Frankau.
D'Anvers, N.	Mrs. A. Geo. Bell.
Davy	Alexandre Dumas.
Dean, Mrs. Andrew	Mrs. Cecily Sedgwick.
Dean, The	Jonathan Swift.
De Burgh, A.	E. M. Alborough.
Defender of the Truth	Henry VIII. of England.
Deland, Margaret	Mrs. Lorin F. Deland.
Delorme, Joseph	Chas. Augustin Sainte-Beuve.
Democratic Tory, A.	"Benj. Disraeli: the Past and the Future," John Skelton.
Democritus, Junior	"Anatomy of Melancholy" Robert Burton.
Devoore, Ann	Mrs. R. P. Walden.
Dix, Dorothy	Elizabeth M. Gilmer.
Dobson, Austin	Henry A. Dobson.
Doctor Angelicus	Thomas Aquinas.
Doctor Authenticus	Gregory of Rimini.
Doctor, The	Robert Southey.
Doe, John	Geo. Cavendish Bentinck.
Donovan, Dick	Joyce Emerson Muddock.
Dooley, Martin	Finley Peter Dunne.
Douglas, George	George D. Brown.
Douglas, Marian	Annie Douglas Green Robinson.
Doyle, Conan	Sir Arthur C. Doyle.
Drapier, M. B.	Jonathan Swift.
Drinkwater, Jennie Maria	Jennie Conklin, M. D.
Droch	Robert Bridges.
Duchess, The	Mrs. Hungerford.
Duncan, Sara Jeannette	Mrs. Everard Cotes.
Dunning, Charlotte	Charlotte D. Morse.
Dunshunner, Augustus	Prof. Wm. Aytoun.
Egerton, George	Mrs. R. Golding Bright.
Eichberg, Annie	Mrs. John Lane.
Elia	Charles Lamb.
Eliot, George	Marian Evans.
Eliot, Max	Mrs. Granville Alden Ellis.
Elmwood	James Russell Lowell.
Emery, Clay	Clayton Mayo.
Enemy to Peace, An	Jonathan Swift.
English Opium Eater	Thomas De Quincey.
English Rabelais, The	Dean Swift.
English Republican, An	Algernon Chas. Swinburne.
English Roscius, The	David Garrick.
English Tory	Sir Richard Steele.
Englishman, An	Thomas Paine.
Ettrick Shepherd	James Hogg.
Expounder of the Constitution	Daniel Webster.
Falconer, Lanoe	Mary Elizabeth Hawkes.
Fancy, One of the	Thomas Moore.
Fane, Violet	Lady Currie.
Farnam, Ella	Ella F. Pratt.
Farquharson, Martha	Martha F. Finley.
Fat Contributor, The	W. M. Thackeray.
Father of Angling	Izaak Walton.
Father of English Poetry	Title given by Dryden to Chaucer.
Father of Epic Poetry	Homer.
Father of His Country	Given by Roman Senate to Cicero.
Father of His Country	George Washington.
Father of History	Herodotus.
Father of Jests	Joseph Miller.
Father of Letters	Francis I., King of France.
Father of Letters	Lorenzo de' Medici, Ruler of Florence.
Father of Medicine	Hippocrates.
Father of Music	Giovanni Pietro Aloiso Pierluigi da Palestrina.
Father of the People	Louis XII. of France.
Father of Tragedy	Title bestowed by Athenians upon Æschylus.
Federalist, A.	Noah Webster.
Fellow of the Royal Society, A.	Cotton Mather.
Female Howard	Mrs. Elizabeth Fry.
Fern, Fanny	Sara Payson (Willis) Parton
Field, Michael	Miss Bradley and Miss Cooper.
Fielding, Howard	Charles W. Hooke.
Finn, Mickey	Ernest Jarrold.
Fitz-Boodle, George	W. M. Thackeray.
Fitznoodle	B. B. Valentine.
Fitzvictor, John	Percy Bysshe Shelley.
Fleming, George	Julia Constance Fletcher.
Flynt, Josiah	Josiah Flynt Willard.
Fontenoy, Marquise de	Margaret Owen Cunliffe.
Forbes, Athol	Forbes Alexander Phillips.
Forrester, Francis	Daniel Wise.
Forrester, Frank	Henry Wm. Herbert.
Forrester, Isola	Mrs. Reuben Merrifield.
Foucher, Paul	Victor Hugo.
Fra Diavolo	Michele Pezza.
Fra Elbertus	Elbert Hubbard.
France, Anatole	Jacques Anatole Thibault.
Francis, M. E.	Mrs. Frank Blundell.
Frank, Dr.	J. Frank Perry, M. D.
Freeman, A.	Jean Joseph Louis Blanc.
Freeman, Mrs.	First duchess of Marlborough.
Frogsper, [illegible]	Alphonse Daudet.
Gatrock, [illegible]	Mrs. John R. Mayo.
Gaston, M.	Alphonse Daudet.
Gates, Eleanor	Mrs. Richard Walton Tully.
Gath	George Alfred Townsend.
Gay, Mr. Joseph	Alexander Pope.
Gazul, Clara	Prosper Mérimée.
Gentleman, A.	Edmund Hoyle.
George, G. M.	Mrs. Spurrell.
Gerard, Dorothea	Mme. Longard de Longgarde.
Gerard, Emily	Mme. de Laszowski.
Gerard, Morice	Rev. J. Jessop Teague.
German Milton, The	Friedrich Gottlieb Klopstock.
German Plato, The	Friedrich Heinrich Jacobi.
German Voltaire, The	Christoph Martin Wieland.
G. G.	Henry George Harper.
Gibbons, Lucy	Lucy G. Morse.
Gift, Theo.	Mrs. G. S. Boulget.

Pen Name or Sobriquet	Real Name
Gilman, Winona	Mrs. F. Schoeffel.
Gissing, George	J. Storer Glouston.
Gladiolus	Wm. Ewart Gladstone.
Glyn, Elinor	Mrs. Clayton Glyn.
Glyndon, Howard	Mrs. Laura C. R. Searing.
Godfrey, Hal	Charlotte O'Conor-Eccles.
Going, Maud	E. M. Harding.
Gooch, Fanny C.	Fanny C. G. Iglehard.
Good Gray Poet	Walt Whitman.
Good Knight, without Fear and without Reproach, The	Pierre du Terrail de Bayard [Chevalier.
Goodman, Maude	Mrs. A. E. Scanes.
Goodwell, Godek	Horace Greeley.
Gordon, A. M. R.	Alexander Macgregor Roe.
Gordon, Julien	Mrs. Van Rensselaer Cruger.
Gorki, Maxime	Alexi Maximovitch Peshkov.
Goslett, Paul	Chas. Lever.
Gower, The Moral	John Gower.
Graduate of Oxford	John Ruskin.
Graham, John	David Graham Phillips.
Grand, Mme. Sarah	Mrs. McFall.
Gray, Maxwell	Miss M. G. Tuttiett.
Great Commoner	William Pitt.
Great Elector	Frederick William, Elector of Brandenburg.
Green, Anna Katharine	Mrs. Charles Rohlfs.
Greenwood, Grace	Sara Jane Lippincott.
Greville, Henri	Mme. Durand.
Grey, Barton	George Herbert Sass.
Grier, Sydney C.	Miss Gregg.
Grile, Dod	Ambrose Bierce.
Gubbins, Nathaniel	Edward Spencer Mott.
Gushington, Angelina	Lady Dufferin.
Gyp	Countess de Martel.
Haliburton, Hugh	James Logie Robertson.
Hall, Owen	James Davis.
Hamilton, Gail	Mary Abigail Dodge.
Hard Pan	Geraldine Bonner.
Harland, Marion	Mrs. Mary V. Terhune.
Harlequin	Robert Harley.
Harrod, Frances	Frances Forbes-Robertson.
Harte, Bret	Francis Bret Harte.
Hawthorne, Alice	Septimus Winner.
Hayes, Henry	Ellen Olney Kirk.
Hegan, Alice Caldwell	Mrs. Cale Young Rice.
Helvidius	James Madison.
Henry, John	Hugh McHugh.
Herbert, Morgan	Margaret M. H. Mather.
Hero of the Nile	Horatio Nelson.
Heron, E. and H.	Mrs. Kenneth and Mr. Hesketh Prichard.
H. H.	Helen Hunt Jackson.
Hibernia	Jonathan Swift.
Hickson, Mrs. Murray	Mrs. S. A. P. Kitcat.
Hierro	Victor Marie Hugo.
Hill, Headon	F. Grainger.
Historicus	George Grote.
Historicus	Sir W. Vernon Harcourt.
Hobbes, John Oliver	Mrs. Pearl M. J. Craigie.
Hoffman, Prof.	Angelo Lewis.
Hogan, Ernest	Reuben Crowdus.
Holdsworth, Annie E.	Mrs. Lee-Hamilton.
Holland	E. J. Edwards.
Holloway, Laura	Laura C. H. Langford.
Holm, Saxe	Probably Helen Hunt Jackson.
Honeycombe, Henry	Leigh Hunt.
Hope, Anthony	Anthony Hope Hawkins.
Hope, Rev. Henry	R. Hope Moncreiff.
Horne, R. H.	Dr. Farrar.
Hope, Graham	Jessie Hope.
Hopper, Worz	Mrs. Wilfred H. Chesson.
Huntington, Faye	Theodosia T. Foster.
Hutchinson, Ellen M.	Ellen M. H. Cortissoz.
Ignatius, Father	J. L. Lyne.
Inchiquin	Robert Southey.
Incorruptible, The	Robespierre.
Ingham, Col. Frederick	Edward Everett Hale.
Ingoldsby, Thomas	Rev. R. H. Barham.
Innominato	Mgr. Eugene Boeglin.
Iota	Mrs. Kathleen M. Clyn.
Irish Gentleman, An	Thomas Moore.
Iron Duke	Duke of Wellington.
Iron Hand, The	Gottfried von Berlichingen.
Ironquill	Eugene F. Ware.
Iron, Ralph	Mrs. S. C. Cronwright.
Ironside	Edmund II. (1035-1016)
Ironside, Nestor	Sir Richard Steele.
Irrefragable Doctor	Alexander of Hales.
Isa	Mrs. Isa Craig-Knox.
Ivory Black	Thomas A. Janvier.
Jacob Omnium	W. M. Thackeray.
James, S. T.	Horace E. Scudder.
Jay, W. L. M.	Julia L. M. Woodruff.
Jeames	W. M. Thackeray.
Jean Jacques	Jean Jacques Rousseau.
Jean, Paul	J. P. F. Richter.
Jessamine, James	Bryan Waller Procter.
Jessamy Bride	Mary Horneck (Mrs. Gwyn.)
Jewish Plato, The	Philo Judæus.
Jobber, A.	Daniel Defoe.
Johnson, Benjamin F.	James Whitcomb Riley.
Johnson, Effie	Mrs. Orson Richmond.
Josiah Allen's Wife	Marietta Holley.
J. S. of Dale	Frederick J. Stimson.
June, Jenny	Mrs. David G. Croly.

Pen Name or Sobriquet	Real Name
Kata Phusin	John Ruskin.
Keith, Leslie	Grace L. K. Johnston.
Kendall, B.	Baroness Kurt von Kendall.
Kerr, Orpheus C.	Robert C. Newell.
Kerr, Sherrill	Julia Magruder.
King, Katherine Douglas	Mrs. Burr.
King Maker, The	Richard Nevil.
King of Courts	Quintus Hortensius.
Kirk, Eleanor	Eleanor K. Ames.
Kirke, Edmund	James R. Gilmore.
Kit	Prof. John Wilson.
Klingle, George	Mrs. Holmes.
Knickerbocker, Cholly	John W. Kellar.
Knickerbocker, Diedrich	Washington Irving.
Kron, Karl	Lyman Hotchkiss Bagg.
Kvelve	Rasmus B. Anderson.
Lady, A.	Mrs. Julia Ward Howe.
Lady, A.	Jane Austen.
Lady of Massachusetts	Mrs. Lydia Maria Child.
Laicus	Rev. Lyman Abbott.
Langstaff, Launcelot	Washington Irving et al.
Last of the Fathers	St. Bernard.
Last of the Goths	Roderick of Spain.
Last of the Romans	Aëtius, a Roman general.
Last of the Tribunes	Nicolo Gabrini Rienzi, Cola di Rienzi.
Laughing Philosopher	Democritus of Abdera.
Laurence Slingsby	George Henry Lewes.
Laurie, Annie	Winifred Black.
Le Baron, Grace	Mrs. Henry Macy Upham
Lee, Home	Harriet Parr.
Lee, Vernon	Violet Paget.
L. E. L.	Letitia E. Landon.
Leslie, Amy	Lillie West Brown.
Leslie, Mrs. Frank	Mrs. Miriam F. F. Wilde.
Leviathan of Literature	Dr. Samuel Johnson.
Liberator, The	Simon Bolivar.
Light-Horse Harry	General Henry Lee.
Lion of the North	Gustavus Adolphus.
Little Comedy	Catharine Horneck (Mrs. Bunbury).
Little Corporal	General Bonaparte.
Little Giant	Hon. Stephen A. Douglas.
Little Mac	Gen. George B. McClellan.
Little Magician	Hon. Martin Van Buren.
Little Master	Hans Sebald Beham.
Little Thomas	Thomas Moore.
Logan, Celia	Mrs. J. B. Connelly.
Logan, Olive	Mrs. W. Wirt Sikes.
Lothrop, Amy	Anna Bartlett Warner.
Loti, Pierre	L. M. Julien Viaud.
Ludlow, Johnny	Mrs. Henry Wood.
Luska, Sidney	Henry Harland.
Lyall, Edna	Ada Ellen Bayly.
Lycidas	Edward King.
Lys, Christian	Percy Jas. Brebner.
Maartens, Maarten	J. I. N. W. van der Poorten Schwartz.
MacDermott, B.	Robert M. Sillard.
Mackenzie, Fergus	James Anderson.
Mackie, Pauline B.	Mrs. Herbert M. Hopkins.
MacLaren, Ian	Rev. John MacLaren Watson.
Maclean, Mona	Miss Todd.
MacNab, Frances	Agnes Fraser.
Mad Anthony	General Anthony Wayne.
Madman of the North	Charles XII. of Sweden.
Maid of Orleans	Joan of Arc.
Maid of Saragossa	Augustina Zaragoza.
Maitland, Thomas	R. Buchanan.
Malachi Malagrowther	Sir Walter Scott.
Malet, Lucas	Mrs. William Dixon.
Man of December	Napoleon III.
Man of Destiny	Napoleon Bonaparte.
Man of Ross	John Kyle.
Mantuan Swan	Vergil.
Maori	James Inglis.
Marchant, Bessie	Mrs. J. A. Comfort.
Market Gardener, A	R. D. Blackmore.
Marlitt, E.	Henriette Eugénie John.
Marlowe, Charles	Harriet Jay.
Mars, Vicomte de	Joinville.
Marshal Forward	Field Marshal von Blücher.
Marshes, A Son of the	Mrs. Owen Visger.
Martin, Ellis	Marah Ellis Ryan.
Martin, George Madden	Mrs. Atwood R. Martin.
Marvel, Ik	Donald Grant Mitchell.
Marvel, Matthew	E. P. Ackerman.
Mathers, Helen	Mrs. Henry Reeves.
Mathetes	John Wilson.
Matthaeus, Thomas	John Tindal.
Maxwell, Ellen Blackmer	Ellen B. Barker.
May, Sophie	Rebecca Sophia Clarke.
McManus, Blanche	Mrs. M. F. Mansfield.
Meade, L. T.	Mrs. F. Toulmin Smith.
Meredith, Owen	Earl of Lytton.
Merlin	Lord Tennyson.
Merriam, Florence A.	Mrs. Florence M. Bailey.
Merriman, Henry Seton	Hugh Stowell Scott.
Merry Monarch	Charles II. of England.
Merrypebble, Mr.	Wm. E. Gladstone.
M. E. W. S.	Mrs. Jno. Sherwood.
Mignon, August	John A. Darling.
Mill-boy of the Slashes	Henry Clay.
Miller, Joaquin	Cincinnatus Heine Miller.
Miller, Olive Thorne	Harriet Mann Miller.
Millman, Helen	Mrs. Caldwell Crofton.
Miln, Louise Jordan	Mrs. George Crichton Miln.
Miss Teerius	Mrs. Fred Horner.
Moderator	Thomas Chatterton.

Pen Name or Sobriquet	Real Name
Modern Messalina	Catharine II. of Russia.
Monk, Lewis	Matthew Gregory Lewis.
Montbard, Georges	Charles Auguste Loves.
Moore, Mollie E.	Mary Evelyn Moore Davis.
Morley, Mrs.	Queen Anne.
Morning Star of the Reformation	John Wycliffe.
Morris, Peter	John Gibson Lockhart.
Mortimer, Geoffrey	Walter M. Gallichan.
Morton, Hugh	Charles M. S. McLellan.
Mother Ann	Ann Lee.
Mowbray, J. P.	Andrew C. Wheeler.
Mühlbach, Luise	Mme. Klara (Müller) Mundt.
Mulholland, Rosa	Lady Gilbert.
Mulock, Miss	Mrs. G. L. Craig.
Nasby, Petroleum V.	David Ross Locke.
Nero of the North, The	Christian II. of Denmark.
Nesbit, E.	Mrs. Hubert Bland.
Newton, Aubrey	Ambrose Winterton.
Noble Lord, A.	Lord Byron.
Nobleman, A.	Oliver Goldsmith.
Nordau, Max	Simon Sudfeld.
North, Barclay	William C. Hudson.
North, Christopher	Prof. John Wilson.
Northern Herodotus	Snorro Sturleson.
Novalis	Friedrich von Hardenberg.
Nox, Owen	Charles B. Cory.
Octogenarian, An	Walter Savage Landor.
O'Dowd, Cornelius	Charles James Lever.
Officer, An	Major Alexander Jardine.
Ogden, Ruth	Frances Otis Ide.
Ogilvy, Gavin	J. M. Barrie.
O'Hara Family	J. and M. Banim.
O. K.	Mme. Olga (Kiréef) Novikoff.
Old Bachelor, An	George William Curtis.
Old Bullion	Col. Thomas Hart Benton.
Oldcastle, John	Wilfred Meynell.
Old Ebony	William Blackwood.
Old Hickory	Gen. Andrew Jackson.
Old Noll	Oliver Cromwell.
Old Public Functionary	James Buchanan.
Old Rowley	Charles II. of England.
"Old Sleuth"	Harlan P. Halsey.
Oldstyle, Jonathan	Washington Irving.
O'Neill, Rose Cecil	Mrs. Harry Leon Wilson.
Only, The	Jean Paul Friedrich Richter.
Optic, Oliver	Rev. Wm. T. Adams.
O'Reilly, Private Miles	Charles G. Halpin.
O'Rell, Max	Paul Blouët.
Oriana (*Oriens Anna*, The Dawning Anna)	Anne, queen of James I.
Otis, James	James Otis Kaler.
Ouida	Louise de la Ramée.
Owen, Jean A.	Mrs. Owen Visger.
Oxenham, John	Mr. Dunkerley.
Pacificus	Alexander Hamilton.
Palmer, Lynde	Mrs. A. A. Peebles.
Pansy	Isabella Macdonald Alden.
Papaverius, Thomas	Thomas De Quincey.
Parley, Peter	Samuel G. Goodrich.
Partington, Mrs.	Benjamin P. Shillaber.
Paston, George	Miss E. M. Symonds.
Pathfinder of the Rocky Mountains	Maj.-Gen. John C. Fremont.
Pattieson, Peter	Sir Walter Scott.
Patton, J. B.	Edmund White.
Paul	Sir Walter Scott.
Paul, Jean	Jean Paul F. Richter.
Paul, John	Chas. Henry Webb.
Peasant Bard	Robert Burns.
Pellegrin	Lamotte Fouqué.
Pendennis, Arthur	W. M. Thackeray.
Pennsylvania Farmer	John Dickinson.
Perkins, Eli	Melville D. Landon.
Pfaal, Hans	Edgar Allan Poe.
Philosopher of Malmesbury	Thomas Hobbes.
Phœnix, John, Gentleman	Capt. George H. Derby.
Phiz	H. K. Browne.
Pindar, Peter	Dr. John Wolcott.
Plon-Plon	Prince Napoleon Joseph Charles Bonaparte.
Polish Byron, The	Adam Mickiewicz.
Poor Richard	Benjamin Franklin.
Porcupine, Peter	William Cobbett.
Plymley, Peter	Sydney Smith.
Porte Crayon	David Hunter Strother.
Powell, Richard Stillman	Ralph Henry Barbour.
Prescott, Dorothy	Agnes Blake Poor.
Prescott, E. Livingston	Edith K. Spicer-Jay.
Pretender, The Old	James Francis Edward Stuart.
Pretender, The Young	Charles Edward Stuart.
Prevost, Francis	Harry F. P. Battersby.
Prince of Destruction	Tamerlane, or Timour.
Protestant Pope	Pope Clement XIV.
Prout, Father	Francis S. Mahony.
Q.	Arthur T. Quiller-Couch.
Q.	Douglas William Jerrold.
Quad, M.	C. B. Lewis.
Quaker Poet	John Greenleaf Whittier.
Quarles	Edgar Allan Poe.
Queen of the East	Zenobia of Palmyra.
Quinn, Dan	Alfred Henry Lewis.
Quirinus	Dr. Döllinger.
Quixote of the North	Charles XII. of Sweden.

Pen Name or Sobriquet	Real Name
Quiz	Charles Dickens.
Rail-Splitter, The	Abraham Lincoln.
Raimond, C. E.	Elizabeth Robins.
Raine, Allen	Mrs. Beynon Puddicombe.
Raleigh, Cecil	Mr. Rowlands.
Ranger, Robin	James M. Freeman.
Rare Ben	Ben Jonson.
Redden, Laura Catherine	Laura C. Searing.
Reid, Christian	Francis C. Tiernan.
Republican, A.	Charles Pinckney.
Reybaud, Mme. Charles	Henriette Arnaud.
Rheinhardt, Rudolph H.	George Hempl.
R'Hoone, Lord	Honoré de Balzac.
Riddell, Mrs. J. H.	Mrs. C. E. L. Riddell.
Rita	Mrs. E. M. J. von Booth.
Rives, Amelie	Princess Troubetskoi.
Robertson, Muirhead	Henry Johnson.
Robinson, A. Mary F.	Mme. Emile Duclaux.
Rohan	Koda Nariyuki.
Rosny, J. H.	The Brothers Boex.
Ross, Adrian	Arthur Reed Ropes.
Ross, Albert	Linn Boyd Porter.
Ross, Martin	Violet Martin.
Rough and Ready	General Zachary Taylor.
Rover	Alfred Gibson.
Roving Englishman	Hon. E. C. Grenville-Murray.
Rowe, Bolton	Benj. C. Stephenson.
Rowe, Saville	Clement Scott.
Royal Martyr	Charles I. of England.
Royce, Ashley Allen	Nathaniel Hawthorne.
Roy, Rob	John Macgregor.
Runnymede	Benjamin B. Disraeli.
Rupert of Debate	Earl of Derby.
Rusticus	J. K. Fowler.
Rutherford, Mark	Wm. Hale White.
Sailor King, The	William IV. of England.
Saint Remy	The Duc de Morny.
Saladin	William Stewart Ross.
Salem, Hezekiah	Freneau.
Samian Sage	Pythagoras.
Sand, George	Mme. Dudevant.
Sand, Jules	Jules Léonard Sylvain Sandeau.
Sanghamita, Sister	Countess M. A. de S. Canavarro.
Saunders, Marshall	Margaret M. Saunders.
Saunders, Richard	Benjamin Franklin.
Sauzade, John S.	James Payn.
Savonarola, Jeremy	Francis S. Mahony.
Schreiner, Olive	Mrs. S. C. Cronwright.
Scottish Solomon, The	James VI. of Scotland, and I. of England.
Scourge of God	Attila, king of the Huns.
Scriblerus, Martinus	Swift, Pope, and Arbuthnot.
Scriblerus Secundus	Henry Fielding.
Seeley, Charles Sumner	John William Munday.
Semiramis of the North	Margaret, daughter of Waldemar III. of Denmark.
Semiramis of the North	Catherine II. of Russia.
Seraphic Doctor	St. Bonaventura.
Setoun, Gabriel	Thomas Nicoll Hepburn.
Sevenoaks	Alfred S. Edwards.
Sharp, Luke	Robert Barr.
Shaw, Flora	Lady Flora Lugard.
Sidney, Margaret	Harriett Mulford Lothrop.
Siegerson, Dora	Mrs. Clement Shorter.
Siegvolk, Paul	Albert Mathews.
Single-Speech Hamilton	William Gerard Hamilton.
Sinjohn, John	John Galsworthy.
Slick, Sam	T. C. Haliburton.
Slingsby, Philip	N. P. Willis.
Smith, T. Carlyle	John Kendrick Bangs.
Soldiers' Friend	Frederick, Duke of York.
Sparks, Timothy	Charles Dickens.
Spinner, Alice	Mrs. Augusta Zelia Fraser.
Spy	Leslie Ward.
Stanlaw, Penrhyn	Penrhyn Stanley Adamson.
St. Aubyn, Alan	Frances Marshall.
St. Clair, Victor	G. Waldo Browne.
Stella	Miss Esther Johnson (so called by Swift).
Stepniak	S. Kartcheffsky.
Sterne, Stuart	Gertrude Bloede.
Stewart, Philip	Philip Robinson.
St. Laurence	Alfred Laurence Felkin.
Stonehenge	J. H. Walsh.
Stonewall Jackson	Thomas Jonathan Jackson.
Stretton, Hesba	Sarah Smith.
Stuart, Cosmo	Cosmo Chas. Gordon-Lennox.
Stuart, Esme	Miss Leroy.
Stuart, Leslie	T. A. Barrett.
Sturgis, Dinah	Mrs. Belle A. Whitney.
Subtle Doctor	Duns Scotus.
Surfaceman	Alex. Anderson.
Swan, Annie S.	Mrs. Burnett Smith.
Swan of Cambrai	Fenelon.
Swedish Nightingale	Jenny Lind (Madame Goldschmidt).
Sweet Singer of Israel	King David.
Swift, Benjamin	William Romaine Paterson.
Sylva, Carmen	Elizabeth, Queen of Roumania.
Sylvander	Robert Burns.
Symington, Maggie	Mrs. Sarah M. Blathwayt.
Syntax, Dr.	Wm. Combe.
Temple, Hope	Mme. Andre Messager.
Templeton, Laurence	Sir Walter Scott.
Teufelsdrockh	Thomas Carlyle.
Thanet, Octave	Alice French.
Theuriet, Andre	Claude Adhemar.
The Widow	Teresa Dean.
Thomas, Annie	Mrs. Pender Cudlip.
Thomas, Karl	Karl Thomas Richter.
Thompson, Wolf	Ernest Thompson Seton.
Thorn, Margaret	Ethel S. Cann.
Thorpe, Kamba	Elizabeth Whitfield Bellamy.
Thurston, Henry T.	Francis Turner Palgrave.
Tippecanoe	General W. H. Harrison.
Titcomb, Timothy	J. G. Holland.
Titmarsh	W. M. Thackeray.
Tivoli	Horace W. Bleackley.
Toby	Charles Dickens.
Toby	Jonathan Swift.
Toby, M. P.	Henry W. Lucy.
Tottenham, Blanche L.	Mrs. Arthur Ram.
Tower, Martello	Commander F. M. Norman.
Trask, Katrina	Mrs. Spencer Trask.
Travers, Graham	Dr. Margaret Todd.
Trois-Etoiles	E. C. Grenville-Murray.
Turner, Ethel	Mrs. H. R. Curlewis.
Twain, Mark	Samuel L. Clemens.
Two Brothers	Alfred and Charles Tennyson.
Tyler, G. Vere	Mrs. Lachlan Tyler.
Tynan, Katherine	Mrs. H. A. Hinkson.
Tytler, Sarah	Henrietta Keddie.
Uncle Charles	Charles Welsh.
Uncle Remus	Joel Chandler Harris.
Uncommercial Traveler	Charles Dickens.
Universal Doctor	Thomas Aquinas.
Upper Servant, An	Jonathan Swift.
Vagabondia	Frances Hodgson Burnett.
Valens	Richard Burke.
Vandegrift, Margaret	Margaret T. Janvier.
Varley, John Philip	Langdon E. Mitchell.
Venerable Nestor Ironsides	Richard Steele.
Verne, Jules	M. Olchewitz.
Viator Vacuus	Thomas Hughes.
Violinist, A.	Eric Mackay.
Virgin Queen, The	Queen Elizabeth.
Voltaire	Francois Marie Arouet.
Wagstaff, Simon, Esq.	Jonathan Swift.
Ward, Artemas	Charles F. Browne.
Warden, Florence	Mrs. G. James.
Wetherell, Elizabeth	Susan Warner.
Winter, John Strange	Mrs. H. E. V. Stannard.
Wizard of the North	Sir Walter Scott.
Yellowplush, Charles, Esq.	W. M. Thackeray.
Yendys, Sidney	Sydney Dobell.
Yorick	Laurence Sterne.
Zadkiel	Capt. R. J. Morrison, R. N.
Zeta	J. A. Froude.
Z. Z.	Louis Zangwill.

MYTHOLOGY—The word myth originally signified speech or discourse, and was identical with the word logos. After the age of Pindar and Herodotus, however, it came to be synonymous with the Latin word *fabula*, fable or legend. According to the present use of our language, a myth is an idea or fancy presented in the historical form; and though, of course, any fiction at any time, in this shape, might be called a myth, yet by usage the word is confined to those fictions made in the early periods of a people's existence—particularly of the Greeks and Romans—for the purpose of presenting their religious belief, and generally their oldest traditions, in an attractive form. The tendency to create myths in this way seems inherent in every people; there is no people so uncivilized as to be without them.

A myth is not to be confounded with an allegory; the one being an unconscious act of the popular mind at an early stage of society, the other a conscious act of the individual mind at any stage of social progress. Even myths of which the allegorical significance is pretty plain, such as the well-known Greek myth of Prometheus and Epimetheus, were received as facts of early tradition by the Greeks.

The ancient Greeks believed their gods to be of the same shape and form as themselves, but of far greater beauty, strength, and dignity. They also regarded them as being of much larger size than men; for in those times great size was esteemed a perfection, supposed to be an attribute of divinities, to whom they ascribed all perfections. A fluid named *ichor* supplied the place of blood in the veins of the gods. They were immortal, but they might be wounded or otherwise injured. They could make themselves visible or invisible to men, and assume the forms of men or of animals. Like men they stood in daily need of food and sleep. The meat of the gods was called *ambrosia*, their drink *nectar*. The gods, when they came among men, often partook of their food and hospitality.

Like mankind, the gods were divided into two sexes; namely, gods and goddesses. They married and had children. Often a god became enamored of a mortal woman, or a goddess was smitten with the charms of a handsome youth, and these love-tales form a large portion of Grecian mythology.

To make the resemblance between gods and men more complete, the Greeks ascribed to their deities all human passions, both good and evil. They were capable of love, friendship, gratitude, and all affections; on the other hand, they were frequently envious, jealous, and revengeful. They were particularly careful to exact all due respect and attention from mankind, whom they required to honor them with temples, prayers, costly sacrifices, splendid processions, and rich gifts; and they severely punished insult or neglect.

The most important classes of myths are the religious and moral. The usual classification is as follows:

Superior Gods.—Jupiter, Neptune, Apollo, Mars, Mercury, Vulcan, Janus, Saturn, Pluto, Bacchus, Juno, Minerva, Diana, Venus, Vesta, Ceres, Rhea.

Inferior Gods.—Cœlus, Sol, Æolus, Plutus, Æsculapius, Pan, Luna, Aurora, Nox, Iris, Latona, Themis, Nemesis, Fortuna, Fama. Several gods peculiar to the Greeks: Enyo, Ergane; Cotytto, etc. Several gods peculiar to the Romans: Priapus, Terminus, Vertumnus, Pomona, Flora, Feronia, Pales, etc.

Mythical Beings.—Titans, Giants, Pygmies, Tritons, Sirens, Nymphs, Muses, Graces, Hours, Seasons, Fates, Furies, Harpies, Winds, Genii, Somnus, Mors, Manes, Lares, Penates, Satyrs, Fauns, Gorgons, Amazons, Centaurs, Minotaur, Chimæra, Geryon, Hydra, Pegasus, Scylla, Charybdis, Sphinx, Typhon.

Deified Heroes.—Inachus, Phoroneus, Ogyges, Cecrops, Deucalion, Amphictyon, Cadmus, Danaus, Pelops, Minos, Perseus, Hercules, Theseus, Jason, Castor, Pollux, and heroes of the Theban and the Trojan wars, etc.

Most of the heroes were at last viewed as sons of gods, and often of Jupiter himself. The veneration for the heroes was, however, less sacred and less universal than the worship of the gods. The heroes received only an annual commemoration at their tombs, or in the vicinity, when offerings and libations were presented to them. Sometimes the respect paid them exceeded these limits, and they were exalted to the rank and honors of the gods. The introduction of solemnities in memory of heroes is ascribed to Cadmus.

Many also are known under a variety of names, for as example:

Apollo, Canoba, Cynthius, Delius, Delphicus, Demarus, Horus, Khrishna, Mythras, Numius, Oros, Pæan, Phœbus, Pythius, Sol.
Aurora, Eos.
Bacchus, Biformis, Brisæus, Dionysus, Nyctelius, Nyseus.
Buddha, Gautama.
Ceres, Cybele, Hestia, Ops, Prisca, Rhea, Vesta.
Cupid, Eros, Kama.
Diana, Artemis, Dyctinna, Hecate, Luna, Phœbe, Proserpine, Tergemina.
Flora, Chloris.

Hercules, Alcides, Sem.
Juno, Hada, Hera, Moneta, Nuptialis, Parthenos, Sospita.
Jupiter, Ammon, Apis, Assabinus, Belus, Capitolinus, Ceraunius, Demarus, Dies Pater, Dodonæus, Genitor, Gragus, Grapsios, Hemphta, Imperator, Indra, Jove, Maximus, Muscarius, Olympius, Osiris, Pluvius, Saturnius, Soter, Zeus.
Mars, Corythaix, Gradivus, Quirinus, Papremis, Silvester.
Mercury, Camillus, Caresa, Hermes, Quadratus, Thoth, Vialis
Minerva, Athena, Ergotis, Glaukopis, Pallas, Pylotis.
Neptune, Consus, Poseidon, Varuna.
Pan, Incubus, Innus, Mendes, Supersus.
Pluto, Dis, Februus, Hades, Shesa, Urgus.
Saturn, Chronos, Krodo.
Venus, Acidalia, Aphrodite, Armata, Astarte, Clucina, Cypria, Cythera, Dione, Erycina, Hortensis, Idalia, Onuva.
Vulcan, Hephæstos.

DICTIONARY OF MYTHS

Achates.—Æneas and Achates were friends. The devotion of Achates was so unselfish and exemplary that *Fidus Achates* became a proverb.

Achelous.—The son of Oceanus and Terra, or Tethys, god of the river of the same name in Epirus. As one of the numerous suitors of Dejanira, he entered the lists against Hercules, and, being inferior, changed himself into a serpent and afterward into an ox. Hercules broke off one of his horns and defeated him, after which, according to some, he was changed into a river.

Acheron.—To separate that portion of hades reserved for the punishment of the wicked, Pluto surrounded it with Phlegethon, a river of fire, while the Acheron, a deep and black stream, had to be passed by all souls before they reached Pluto's throne and heard his decree. Acheron is also used to signify hades or hell itself.

Achilles, the son of Peleus and Thetis, was the bravest of all the Greeks in the Trojan war. During his infancy, Thetis plunged him in the Styx, thus making every part of his body invulnerable except the heel by which she held him. To prevent him from going to the Trojan war, Thetis sent him privately to the court of Lycomedes, where he was disguised in a female dress. As Troy could not be taken without his aid, Ulysses went to the court of Lycomedes in the habit of a merchant, and exposed jewels and arms for sale. Achilles, choosing the arms, discovered his sex, and went to the war. Vulcan made him a strong suit of armor, which was proof against all weapons. He was deprived by Agamemnon of his favorite Briseis, and for this affront he would not appear on the field till the death of Patroclus impelled him to vengeance. He slew Hector, who had killed Patroclus, and tying his corpse to his war car, dragged it three times around Troy. He is said to have been killed by Paris, who inflicted a mortal wound in his vulnerable heel with an arrow.

Actæon.—A famous hunter, who, having surprised Diana as she was bathing, was turned by her into a stag, and killed by his own dogs.

Adissechen.—In Indian mythology the serpent of a thousand heads which hold the universe in place.

Admetus.—A king of Thessaly, and husband of Alcestis, famous for his misfortunes and his piety. Apollo tended the flocks of Admetus for nine years, when he was obliged to serve a mortal for having slain the Cyclops.

Adonis.—A beautiful youth, loved by Venus, and slain by a wild boar which he was hunting. Venus was inconsolable at his loss, and at last obtained permission from Proserpine that Adonis should spend six months on earth with her and six months among the shades. Adonis is also the name given to a Syrian god, supposed to be slain by a wild boar in Lebanon, and to revive every year. He is identified with the Greek Adonis, beloved by Venus.

Adrammèlech.—God of the people of Sepharvaim, to whom infants were burned in sacrifice (II. Kings xvii, 31). Adar was the sun worshiped under a particular attribute.

Ægæon.—One of three brothers, huge monsters, with fifty heads and a hundred arms. According to the most ancient tradition, Ægæon and his brothers conquered the Titans when they made war upon the gods, and secured the victory to Zeus, who thrust the Titans into Tartarus, and placed Ægæon and his brothers to guard them.

Ægeus.—King of Athens, and father of Theseus.

Ægis.—The shield of Jupiter, made by Vulcan, was so called and symbolized "divine protection." The shield of Minerva was called an ægis also.

Ægle.—A nymph; a daughter of Æsculapius; one of the Hesperides; also the name of one of the sisters of Phaëton.

Ælurus.—The cat. An Egyptian deity held in the greatest veneration. Herodotus tells us that Diana, to avoid being molested by the giants, changed herself into a cat. The deity used to be represented with a cat's head on a human body.

Æneas.—A Trojan prince, son of Anchises and Venus. He married Creusa, the daughter of Priam, and they had a son named Ascanius. During the Trojan war Æneas behaved with great valor in defense of Troy. When the city was in flames he is said to have carried away his father, Anchises, on his shoulders, leading his son, Ascanius, by the hand, his wife following them. Subsequently he built a fleet of twenty ships, with which he set sail in quest of a settlement. He was driven on the coast of Africa, and was kindly received by Dido, queen of Carthage, who became enamored of him; but he left Carthage by the order of the gods. He has been praised for his piety and his submission to the will of the gods; the term "Pius" is generally appended to his name.

Æolus, the ruler of storms and winds, was the son of Hippotas. He reigned over Æolia, was the inventor of sails, and a great astronomer. The poets have called him the god of the wind.

Æsculapius.—The son of Apollo and Coronis, the daughter of a Thessalian king. By his father he was committed to the care of the wise centaur, Chiron, who taught him botany, together with the secret efficacy of plants. By means of this information, Æsculapius became the benefactor of mankind. In tradition he is noted as having awakened the dead.

Æsir, plural of As or Asa, the celestial gods of Scandinavia, who lived in Asgard (god's ward), situate on the heavenly hills between earth and the rainbow. The chief was Odin.

Æson.—The father of Jason and brother of Pelias, who seized the kingdom rightfully belonging to Æson.

Æstas.—The god of summer; he is crowned with corn and generally holds a sickle in his hand. By poets and artists the seasons are all personified. They are frequently seen together on relievi, medals, and gems. The artists have also followed the poets in representing the four ages of life by depicting Ver (spring) as infantile and tender; Æstas (summer) as young and sprightly; Autumnus (autumn) mature and manly; and Hiems (winter) as old and decrepit.

Agamemnon, king of Mycenæ and Argos, was brother to Menelaus, and son of Plisthenes, the son of Atreus. He married Clytemnestra, and Menelaus Helen, both daughters of Tyndarus, king of Sparta. When Helen eloped with Paris, Agamemnon was elected commander-in-chief of the Grecian forces invading Troy.

Ahriman.—Most malevolent of all the Persian gods.

Ajax, son of Telamon and Periboea, or Eriboea, was one of the bravest of the Greeks in the Trojan war. After the death of Achilles, Ajax and Ulysses both claimed the arms of the dead hero, which were given to Ulysses. Some say that Ajax was killed in battle by Paris, but others record that he was murdered by Ulysses.

Alastor.—A surname of Jupiter. Among the lesser gods the name Alastor is given to the unforgetting, revengeful spirit, who, in consequence of some crime perpetrated, persecuted a family from generation to generation.

Alcestis, or **Alceste.**—A daughter of Pelias, and the wife of Admetus. To save her husband's life, she died in his stead. By request of Apollo, the gods had granted eternal life to Admetus but on the condition that when the appointed time came for the good king's death, some one should be found willing to die in his stead. This decree was reported to Alcestis, Admetus' beautiful young wife, who offered herself as substitute, and cheerfully gave her life for her husband. But immortality was too dearly bought at such a price; and Admetus mourned until Hercules, pitying his grief, descended into hades and brought her back.

Alecto.—One of the Furies. She is represented with her head covered with serpents, and breathing vengence, war, and pestilence.

Alectryon.—A servant of Mars, who was changed by him into a cock because he did not warn his master of the rising of the sun.

Alfadur.—In Scandinavian mythology the Supreme Being—Father of All.

Alpheus and Arethusa.—The Greek fable says that Alpheus, the river-god, fell in love with the nymph Arethusa, who fled from him in affright. Diana came to her rescue.

Al Sirat.—A narrow bridge extending from this world to the next over the abyss of hell, which must be passed by every one who would enter paradise.

Althæa.—The mother of Meleager. She caused the death of her son and killed herself in remorse.

Amacitia.—The goddess of friendship. In Greek mythology she was represented with her head bare, her dress open near the heart, holding in her left hand an elm, around which a vine clung, filled with clusters of grapes.

Amazons.—A nation of women-soldiers who lived in Scythia. Hercules defeated them, and gave Hippolyte, their queen, to Theseus for a wife.

Ambrosia.—The food of the gods; so called because it made them not mortal, *i. e.*, immortal.

Ammon.—One of the names bestowed on Jupiter. As Jupiter Ammon, he was represented as having the horns of a ram.

Amphion.—Son of Jupiter and Antiope. He cultivated poetry, and made such progress in music that he is said to have been the inventor of it, and to have built the walls of Thebes by the sound of his lyre.

Ancæus.—A son of Neptune, who, having left a cup of wine untasted to pursue a wild boar, was killed by it, which gave rise to the proverb, "There's many a slip twixt the cup and the lip."

Anchises.—A son of Capys and Themis. He was so beautiful that Venus came down from heaven on Mount Ida to enjoy his company. Æneas was the son of Anchises and Venus, and was intrusted to the care of Chiron the Centaur. When Troy was taken, Anchises had become so infirm that Æneas had to carry him through the flames upon his shoulders, and thus saved his life.

Andromache.—Daughter of Etion, king of Thebes. She married Hector, son of Priam, and was the mother of Astyanax. Her parting with Hector, who was going to battle, is described in the *Iliad* and has been deemed one of the most beautiful passages in that great work. Pope's translation of the *Iliad* (book 6) describes with great pathos and beauty the parting of Hector from his wife and child. The passage is too long for quotation, but this quatrain from it shows the style:

> Thus having spoke, th' illustrious chief of Troy
> Stretch'd his fond arms to clasp the lovely boy;
> The babe clung crying to his nurse's breast,
> Scared at the dazzling helm and nodding crest.

Andromeda.—Andromeda, to atone for a crime of which she was guiltless, was to have become the victim of divine anger. The whole country was laid waste with plagues, which, according to the oracle of Jupiter Ammon, were not to cease until Andromeda, swallowed up by a sea-monster, should, by her death, expiate the crime of her mother. Perseus beheld the maiden fastened with chains to a rock, and a monster rising out of the sea ready to devour her; while her parents stood on the shore in despair. Perseus rushed down upon the monster, struck a deadly blow, delivered the fair maiden and obtained her as his wife. After her death she was placed among the stars.

Angurvadel.—Frithiof's sword, inscribed with Runic letters, which blazed in time of war, but gleamed with a dim light in time of peace.

Antæus.—One of the giant sons of Neptune whose home was in Libya. His strength was invincible so long as he remained in contact with his mother earth. Once lifted from the earth and allowed again to touch it his strength increased. One of the exploits ascribed to Hercules was the exhibition of his strength in overcoming Antæus.

Antigone.—In the story of Œdipus, Antigone appears as a noble maiden, with a truly heroic attachment to her father and brothers. When Œdipus had put out his eyes, and was obliged to quit Thebes, he was accompanied by Antigone, who remained with him till he died at Colonus, and then returned to Thebes. After her two brothers had killed each other in battle, and Creon, the king of Thebes, would not allow Polynices to be buried, Antigone buried him by night, against the orders of Creon, for which offense he ordered her to be buried alive. She, however, killed herself on hearing of the sentence. The death of Antigone is the subject of a tragedy written by Sophocles.

Aphrodite.—One of the names under which Venus was worshiped. She was said to be the daughter of Zeus, but later poets frequently relate that she was sprung from the foam of the sea, whence they derive her name.

Apis.—One of the Egyptian gods worshiped under the form of an ox.

Apollo.—Son of Jupiter and Latona; called also Phœbus. He was the god of the fine arts and the reputed originator of music, poetry, and eloquence. He had received from Jupiter the power of knowing futurity, and his oracles were in repute everywhere. As soon as he was born he destroyed with his arrows the serpent Python, which Juno had sent to persecute Latona; hence he was called Pythius. He was not the inventor of the lyre, as some have supposed, but it was given to him by Mercury, who received in return the famous Caduceus. He received the surnames of Phœbus, Delius, Cynthius, Pæan, Delphicus, etc. He is in sculpture generally represented as a handsome young man with a bow in his hand, from which an arrow has just been discharged.

Arachne.—A Mæonian maid, named Arachne, proud of her skill in weaving and embroidery, in which arts the goddess of wisdom had instructed her, ventured to deny her obligation, and challenged her patroness to a trial of skill. Minerva accepted the challenge and they met to try their skill. Arachne produced a piece of cloth in which the amours of the gods were woven, and as the goddess could find no fault with it, she tore the work to pieces. Arachne, in despair, hung herself. Athena loosened the rope and saved her life, but the rope was changed into a cobweb, and Arachne herself into a spider.

Ares.—The Greek god of war, known as Mars by the Romans.

Arethusa.—A wood nymph of Elis, in Greece, who, pursued by the River Alpheus, was changed into a fountain and ran under the sea. The waters of the fountain, mingled with the river, rose again in the fountain of Arethusa in the island of Ortygia,

near Syracuse. According to another version of the same legend, it was Diana herself, and not Arethusa, whom the river-god of the Alpheus pursued; and when this pursuit ended in the island of Ortygia, there arose the fountain Arethusa.

Argo.—A fifty-oared ship in which Jason and his companions made their voyage to Colchis in search of the golden fleece. This ship was built of pines cut from Mount Pelion, and, although larger than any other previously constructed, moved lightly and easily, and was therefore called the *Argo* (swift-sailing). From her name those who embarked in her were called Argonauts. The mast of the *Argo* was taken from the forest of Dodona, where the oaks were endowed with the power of making predictions; therefore the ship was regarded as an animated being, in accord with fate, to which a man might commit himself with confidence.

Argonauts.—One of the most celebrated enterprises of the heroic ages, one which forms a memorable epoch in Grecian history, a sort of separation-point between the fabulous and the authentic, was the Argonautic expedition. This was a voyage from Greece to Colchis in order to obtain the golden fleece, conducted by Jason, the son of Æson, king of Thessaly. The undertaking was imposed upon him by his uncle Pelias. He invited the most illustrious heroes of Greece to unite in the expedition, and among those who joined were Hercules, Castor and Pollux, Peleus, Pirithous, and Theseus. The vessel built for the purpose was named *Argo*, which after various adverse events arrived at Æa, the capital of Colchis.

Argus.—A son of Arestor, whence he is sometimes called Arestorides. He had a hundred eyes, of which only two were asleep at one time. Juno set him to watch Io, whom Jupiter had changed into a heifer, but Mercury, by order of Jupiter, slew him, by lulling all his eyes to sleep with the notes of the lyre. Juno put the eyes of Argus in the tail of the peacock, a bird sacred to her.

Ariadne.—Daughter of Minos and Pasiphæ. She fell in love with Theseus, when sent by Ægeus with of the Athenian youths and maidens as tribute, to be devoured by the Minotaur. She gave him the clew of thread by which he found his way out of the labyrinth, and accompanied him on his return to Athens as far as Naxos, where he deserted her. Bacchus found her there, made her his wife, and set in the stars the crown which he gave her at their marriage.

Arion.—A Greek bard, who, having thrown himself into the sea to escape from pirates, was taken up by dolphins, and carried on their backs safe to land.

Aristæus.—Protector of vines and olives, huntsmen and herdsmen. He instructed man also in the management of bees, taught him by his mother Cyrene. He was the father of the famous Actæon.

Artemis.—The daughter of Zeus and Letô, or Latona, and twin sister of Apollo, was the goddess of chastity, of the chase and the woods.

Asgard.—In Scandinavian mythology Asgard represents the city of the gods, situated at the center of the universe, and accessible only by the bridge Bifrost, *i. e.*, the rainbow.

Asir.—In northern mythology the most powerful, though not the oldest, of the deities; usually reckoned as twelve gods and twelve goddesses. The gods are Odin, Thor, Baldur, Niörd, Frey, Tyr, Bragi, Heimdall, Vidar, Vali, Ullur, and Forseti; the best-known of the goddesses Frigga, Freyja, Iduna, and Saga.

Astarte.—Noticed in the Old Testament under the name Ashtaroth, an ancient Syrian deity, who was adored as the goddess of the moon; hence Jeremiah calls her "the queen of heaven." Solomon built her a temple on the Mount of Olives.

Astræa.—Daughter of Zeus and Themis, and the last of the immortals to quit the earth as the wickedness of mortals increased.

Astyanax.—Son of Hector and Andromache, was hurled from the walls of Troy on its capture.

Atalanta.—Daughter of Iasus and Clymene. She took part in the Calydonian hunt. She required every suitor to run a race under penalty of death if she defeated them. Hippomenes defeated her by throwing in her path three golden apples given him by Aphrodite, which Atalanta turned aside to pick up. They were both turned into lions for profaning the sacred grove of Zeus.

Ate.—Daughter of Zeus. She led both gods and men into rash actions. Zeus banished her from Olympus.

Athena.—One of the twelve great Greek divinities. She sprang, full armed, from the head of Zeus. She was the virgin goddess of wisdom, agriculture, and art, and was also a warlike divinity.

Atlas.—A Titan, son of Iapetus and Clymene. Being defeated in the war of the Titans against the gods, he was condemned to bear the heavens upon his shoulders.

Atreus.—A king of Mycenæ, son of Pelops and Hippodamia, and father of Agamemnon and Menelaus, who, from him, were called the *Atridæ*. The crimes and calamities of Atreus and his family afforded a prolific subject for the Greek poets.

Atropos.—One of the three Parcæ, or Fates; the one that cut the thread of life. As wife of Pluto, and queen of hell, Proserpine presided over the death of mankind; and, according to the opinion of the ancients, no one could die if the goddess herself, or Atropos, the minister, did not cut off one of the hairs from the head.

Augean Stables.—The stables of Augeas, king of Elis, in Greece. In these stables he had kept 3,000 oxen, and the stalls had not been cleansed for thirty years. When Hercules was appointed to cleanse these stables, he turned the course of the river Alpheus through them.

Augurs.—Their principal business was to observe the flight and cry of birds, from which they predicted future events. They also explained other omens and signs.

Auræ.—The auræ, or sylphs, nymphs of the air, a species of sportive, happy beings, and well-wishers to mankind; they were winged and represented as flying.

Aurora.—The goddess of the morning, or of the dawn; sometimes described as the goddess of day. She is represented as standing in a magnificent chariot, sometimes drawn by winged steeds. A brilliant star sparkles upon her forehead, and, while with one hand she grasps the reins, she holds in the other a lighted torch.

Avatar.—The incarnation or descent of the deity Vishnu, of which nine are believed to be past, and the tenth is yet to come, when Vishnu will descend from heaven on a white-winged horse, and introduce on earth a golden age of virtue and peace.

Avernus.—Properly, a small, deep lake in Campania, occupying the crater of an extinct volcano, and almost completely shut in by steep and wooded heights. The entrance to the infernal regions, called Avernus, is described as having around it a host of dreadful forms—Disease, Old Age, Terror, Hunger, Death, War, Discord, and the Furies, the avengers of guilt.

Azazel.—Ewald considers Azazel to have been a demon belonging to the pre-Mosaic religion. Another opinion identifies him with Satan, or the devil. Milton makes him Satan's standard bearer.

Azrael.—Meaning in Hebrew "help of God." In the Jewish and the Mohammedan mythology, the name of an angel who watches over the dying, and separates the soul from the body.

Baal.—A sun god, the center of whose worship was Phenicia, whence it spread to neighboring countries.

Bacchus.—Called also Dionysus, son of Zeus and Semele, god of wine. He married Ariadne after her desertion by Theseus.

Baimwawa.—In American Indian folk-lore, the sound of thunder.

Balder.—The god of peace, son of Odin and Frigga. He was killed by the blind war-god, but was restored to life at the general request of the gods.

Balios.—A famous horse given by Neptune to Peleus as a wedding present, and afterward given to Achilles.

Balmung.—In Norse mythology, the sword of Siegfried forged by Vulcan.

Banshee.—The domestic spirit of certain Irish or Scottish families, supposed to wail shortly before the death of one of the family. The banshee is allowed only to families of pure stock.

Barguest.—A frightful goblin among fairies, armed with teeth and claws. An object of terror in the north of England.

Bay-tree.—The tree of Apollo, hence a shield against lightning. A wreath of bay-leaves was worn as protection during thunder-storms. The withering of a bay-tree was dreaded as an omen of death.

Beelzebub.—A heathen god of evil at the head of nine ranks of demons and second only to Satan. Also the god of flies.

Befana, La.—The fairy of Italian children, who is supposed to fill their stockings with toys on Twelfth Night.

Bellerophon.—Son of Glaucus, king of Corinth, and Eurymede. Having killed Bellerus, he fled to Prœtus for protection. Antea, Prœtus' wife, became enamored of Bellerophon, and on his rejecting her advances, she accused him to her husband, who thereupon sent him to Iobates, king of Lycia, with a letter requesting that he be put to death. Iobates accordingly sent him to kill the Chimæra, which Bellerophon did with the aid of the winged horse Pegasus. After other trials, in which he was successful, Iobates gave him his daughter in marriage.

Bellona.—Goddess of war. She prepared the chariot of Mars when he was going to war, and appeared in battles armed with a whip and holding a torch.

Belphegor.—A god of evil, worshiped by the Moabites. An archfiend who had been an archangel.

Belus.—The name of the Chaldean sun-god.

Berenice.—A princess who vowed to sacrifice her hair to the gods, if her husband returned in safety. She suspended her hair in the temple of Venus. After her husband's safe return the locks disappeared, and the astronomer Conon reported that Jupiter had placed the queen's locks among the stars, and pointed out the constellation since called Berenice's hair.

Berg Folk.—Pagan spirits doomed to live on the Scandinavian hills till the day of redemption.

Bertha.—The white lady who guards good German children, but is the terror of the bad, who fear her iron nose and big feet. Corresponds to the Italian La Befana.

Bheem.—One of the five brotherhoods of Indian demi-gods, famous for his strength.

Bifrost.—In Norse mythology, a bridge between earth and heaven, over which none but the gods could travel. It leads to the palace of the Fates.

Bilskirnir.—A wonderful palace built by Thor for the use of peasants after death.

Bona Dea.—A Roman divinity, worshiped by women as a chaste and prophetic goddess.

Boreas.—The name of the north wind blowing from the Hyperborean mountains. According to the poets, he was son of Astræus and Aurora. He was passionately fond of Hyacinthus.

Bragi.—The son of Odin and Frigga and the god of poetry and eloquence. He is represented as an old man with flowing white beard.

Brahma.—The supreme god of the Hindus, represented with four heads and four arms. He is regarded as the creator of the universe, and forms, with Vishnu the preserver, and Siva the destroyer, the divine triad.

Briareus.—A giant with fifty heads and a hundred hands. He hurled a hundred rocks at Jupiter in a single throw and Jupiter bound him under Mount Ætna with a hundred chains.

Bukadawin.—The god of famine among American Indians.

Butes.—An Argonaut beloved by Aphrodite, who snatched him away as he was swimming toward the Sirens.

Byblis.—According to Ovid, the daughter of Miletus, sister of Caunus, and niece of Sol. From her tears arose the fountain of Byblis.

Cacus.—A giant, son of Hephæstus, living on Mt. Aventine, who plundered the neighboring country. He stole from Hercules some of the cattle of Geryon, dragging them by their tails to his cave that their tracks might not be discovered. He was, however, detected and slain by Hercules.

Cadmus.—Son of Agenor, king of Phenicia. When his sister Europa was carried off by Zeus, Agenor sent Cadmus to find her. Unable to do this he settled in Bœotia and built Thebes, having followed a cow to that place from Thrace by direction of the oracle of Delphi. He slew a dragon which guarded the well of Ares at that place, and sowed the teeth, from which armed men sprung, the ancestors of the Thebans. He married Harmonia, and the two were changed to serpents. Cadmus is said to have introduced or invented the alphabet.

Cæneus.—Originally a maiden, beloved by Poseidon, she was by him changed to a man, and took part in the Argonautic expedition and Calydonian hunt. He was buried under a mass of trees by the Centaurs, and changed into a bird. He recovered his female form in the lower world.

Calliope.—The Muse who presided over epic poetry and rhetoric. She is generally depicted using a stylus and wax tablets, the ancient writing materials.

Callisto.—In Greek mythology an Arcadian huntress, a companion of Artemis, beloved of Zeus and transformed by him into a she-bear. In this form she was slain by Artemis in the chase. She was placed among the stars as the constellation Arctos (Bear).

Calpe.—One of the two pillars of Hercules, the other named Abyla. These two were originally only one mountain, which Hercules tore asunder, pouring the sea between them.

Calypso.—One of the daughters of Atlas. When Ulysses was shipwrecked on her coasts she received him with hospitality, and offered him immortality if he would remain with her, which he refused to do. After seven years' delay he was permitted to depart from the island.

Camdeo.—The Hindu god of love.

Camilla.—Virgin princess of the Volscians. She was so swift that she could run over a field of corn without bending a blade, or make her way over the sea without wetting her feet.

Canopus.—The Egyptian god of water. The Chaldeans worshiped fire, and sent all the other gods a challenge, which was accepted by a priest of Canopus. The Chaldeans lighted a vast fire, when the Egyptian deity spouted out torrents of water and quenched it.

Capitolium.—The temple of Jupiter Optimus Maximus at Rome, was situated on the south summit of the Mons Capitolinus, so called on account of the temple.

Capys.—(1) Son of Assaracus, and father of Anchises. (2) A companion of Æneas, from whom Capua was said to have derived its name.

Cassandra.—Daughter of Priam and Hecuba. She was left when young asleep in the temple of Apollo, where her ears were purified by serpents so that she could understand the voices of nature. Apollo, becoming enamored, conferred upon her the gift of prophecy, but upon her refusing to grant his desires, ordained that no one should believe her prophecies. Upon the capture of Troy she fell to the lot of Agamemnon and was killed by Clytemnestra.

Cassiopeia.—The chief stars of this constellation form the outline of a chair. Cassiopeia boasted that the beauty of her daughter Andromeda surpassed that of the sea-nymphs. The sea-nymphs complained to the sea-god of this affront, and Andromeda was chained to a rock to be devoured by sea-monsters. Perseus delivered her and made her his wife. The mother was taken to heaven and placed among the stars.

Castor and Pollux.—Twin brothers, called the Dioscuri, sons, according to some, of Zeus and Leda. They took part in the Argonautic expe-

dition. Castor was famous for his skill in managing horses, and Pollux for his boxing.

Cauther.—In Mohammedan mythology the lake of paradise, whose waters are as sweet as honey, as cold as snow, and as clear as crystal; and any believer who tastes thereof is said to thirst no more.

Cecrops.—In mythology is represented with upper part of his body human, the lower part that of a dragon. Cecrops is said to have founded Athens, and to have divided Attica into twelve communities, and to have introduced the first elements of civilized life; he instituted marriage, abolished bloody sacrifices, and taught his subjects how to worship the gods.

Centaurs.—Monsters, half horse, half human. They are especially celebrated for their contest with the Lapithæ in the mountains of Thessaly.

Cephalus.—Husband of Procris, loved by Eos, who advised him, when he rejected her advances, to try his wife's fidelity. Disguising himself as a lover, he returned to Procris, but she received his advances with disdain. He made himself known, loaded her with reproaches, and left her in a rage. Procris then fled to Crete, where Artemis gave her a dog and an unerring spear and sent her back. To obtain the dog and spear, Cephalus pretended to love her, and a reconciliation followed. He killed her accidentally with the spear.

Cerberus.—The three-headed dog that keeps the entrance of the infernal regions. He prevents the living from entering and the shades from escaping. Orpheus lulled Cerberus to sleep with his lyre; and the sibyl who conducted Æneas through the inferno, also threw the dog into a sleep with cake seasoned with poppies.

Ceres.—The daughter of Saturn, sister of Jupiter and Neptune. She was the goddess of corn, flowers, and harvest. She is represented as riding in a chariot drawn by dragons, and crowned with poppies. She was the mother of Proserpine, who was seized by Pluto while she was gathering flowers. Ceres was the Roman name for mother-earth.

Chaos.—The vacant space which existed before the creation of the world, and out of which the gods, men, and all things arose. Chaos was called the mother of Erebus and Night.

Charon.—A god of the infernal regions, son of Nox and Erebus, who conducted the souls of the dead in a boat over the rivers Styx and Acheron.

Charybdis.—A woman who robbed travelers and was turned by Jupiter into a dangerous whirlpool on the coast of Sicily, opposite Scylla. Scylla and Charybdis are generally mentioned together to represent alternative dangers.

Chibiabos.—A musician, ruler in the land of spirits, and friend of Hiawatha. Personification of harmony in nature.

Chimæra.—A celebrated monster goat, lion, and dragon, which continually vomited flames. It was destroyed by Bellerophon.

Chiron.—A centaur, son of Philyra and Saturn. He was famous for his knowledge of medicine, and taught mankind the use of plants and herbs. He was placed among the stars, and is known as Sagittarius.

Chloris.—The goddess of flowers, known as Flora in Greek mythology.

Chou.—An Egyptian god corresponding to the Roman Hercules.

Cimmerians.—People living in a land of perpetual darkness.

Circe.—A sorceress, daughter of Sol and Perseis, celebrated for her knowledge of magic and venomous herbs. Ulysses, on his return from the Trojan war, visited her coasts, and his companions were changed by her potions into swine.

Clio.—The muse who presided over history.

Clotho.—The youngest of the Fates, three daughters of Jupiter and Themis, supposed to preside over the moment of birth. She held the distaff and Lachesis spun the thread of life.

Cluricaune.—An Irish elf, who guards a hidden treasure. He has an evil disposition, and appears as a wrinkled old man.

Clytemnestra.—Daughter of Tyndareus and Leda, sister of Castor, Pollux, and Helena; wife of Agamemnon; and mother of Orestes, Iphigenia, and Electra. During her husband's absence at Troy she lived in adultery with Ægisthus, and on his return to Mycenæ she murdered him with the help of Ægisthus. She was subsequently put to death by her son Orestes, to revenge the murder of his father.

Clytie.—A water-nymph who loved the sun-god, Apollo, and was changed into a sunflower. In this form, she turns always toward the sun.

Cocytus.—A river of the infernal regions. The unburied dead wander on its banks for 100 years, and it is known as the river of lamentation.

Colchis.—A country of Asia famous for the expedition of the Argonauts, and the birthplace of Medea.

Comus.—The god of revelry, presiding over feasts.

Concordia.—The goddess of peace and concord, one of the oldest at Rome. She is represented holding a scepter budding with fruit, and a horn of plenty. Camillus raised a temple to this goddess, in the capital.

Consentes Dii.—The twelve Etruscan gods who formed the council of Jupiter, consisting of six male and six female divinities—Jupiter, Neptune, Mercury, Apollo, Mars and Vulcan; Juno, Ceres, Vesta, Minerva, Diana and Venus.

Cophetua or **Copethua.**—A mythical king of Africa, of great wealth, who fell in love with a beggar-girl, and married her. Her name was Penelophon, but Shakespeare writes it Zenelophon in *Love's Labor's Lost.*

Corybantes.—Priests who served at the worship of the mother of the gods. The name came from their habit of striking themselves in their religious dances.

Cressida.—Daughter of Calchas the Greek, beloved by Troilus, son of Priam. They vowed eternal fidelity, and as pledges Troilus gave the maiden a sleeve, and Cressida gave the Trojan prince a glove.

Creusa.—Daughter of Priam, and wife of Æneas. She was lost in the city of Troy when her husband escaped from its flames.

Cronos.—The youngest of the Titans. Cronos was also known as the father of Jupiter.

Cupid.—God of love, son of Jupiter and Venus, represented as a winged boy, naked, armed with a bow and arrows, and often with a bandage covering his eyes. He shot his arrows into the hearts of both gods and men. Like all the gods, he put on different forms to suit his plans. He became the husband of Psyche.

Cybele.—A goddess, daughter of Cœlus and Terra, and wife of Saturn. On her birth she was exposed on a mountain, where she was tended and fed by wild beasts, receiving the name of Cybele from the mountain. She is represented on a throne with lions at her side.

Cyclops.—One-eyed giants who forged the thunderbolts of Jove. Homer describes them as wild, insolent, lawless shepherds, who devoured human beings. A later tradition represents them as Vulcan's assistants.

Cyparissus.—A beautiful youth, beloved by Apollo, whose favorite stag he inadvertently killed, and who was metamorphosed into a cypress because of his grief.

Cythera.—A name given to Venus from the island Cytheræa, where she first rose from the foam of the sea.

Dag.—In mythology of the north this name is given to the "radiant son of night." The name is also applied to the last of a treacherous race, the Hundings.

Dagon.—A national god of the Philistines, formed in human shape upward from the waist, and resembling a fish downward, with a finny tail.

Dagun.—In Indian mythology a god who reconstructed the world when it had been destroyed after creation.

Dahak.—In mythology of Persia the ages of the world are divided into periods of 1,000 years. When the cycle is complete, the reign of Ormuzd will begin, and men will be good and happy; but this event will be preceded by the loosing of Dahak, who will break his chain and fall upon the world, and bring on man the most dreadful calamities.

Daikoku.—A mythical god invoked by Japanese workers. He is represented as holding a full sack, which he beats to bring from it all useful articles, and the sack never becomes empty.

Daityas.—Among Hindu gods these are powerful to work evil.

Danaë.—The daughter of Acrisus, king of Argos, who became the mother of Perseus. An Italian legend related that Danaë came to Italy, built the town of Ardea, and married Pilumnus, by whom she became the mother of Daunus, the ancestor of Turnus.

Danaides.—The fifty daughters of Danaus, king of Argos, who married the fifty sons of their uncle Ægyptus.

Daphne.—A nymyh, daughter of Penios. Apollo courted her, but she fled from him, and was, at her own request, turned into a laurel tree.

Daphnis.—A Sicilian shepherd, son of Hermes (Mercury), by a nymph, was taught by Pan to play on the flute, and was regarded as the inventor of bucolic poetry. A naiad to whom he proved faithless punished him with blindness, whereupon his father, Hermes, translated him to heaven.

Deiphobus.—A son of Priam and Hecuba, and, next to Hector, the bravest among the Trojans. After the death of Paris, he married Helen, but was betrayed by her to Menelaus, by whom he was slain and fearfully mangled on the capture of Troy by the Greeks.

Delius.—A name of Apollo, from Delos, the island in which he was born. The name Delia, of his sister Diana, has the same origin.

Delphi.—A town on Mount Parnassus, famous for the oracle and the temple of Apollo. Over the cleft of a cavern was placed the tripod on which sat the priestess through whose mouth he was thought to reveal the future.

Demeter.—The mother of Persephone, who was evidently a goddess of the earth, whom some ancient system married to Zeus, the god of the heavens.

Demogorgon.—The genius of the soil or earth, the life and support of plants. He was depicted as an old man covered with moss, and was said to live underground.

Deucalion.—The son of Prometheus, who, according to the legend, was, with his wife Pyrrha, the sole survivor of the Thessalian deluge.

Diana.—An ancient Italian divinity, whom the Romans identified with the Greek Artemis. At Rome Diana was the goddess of light. She was a daughter of Jupiter, and was born of Latona, or Leto, on the island Delos, at the same time with Apollo. As in Apollo the sun was deified and adored, so was the moon in Diana.

Dido.—Daughter of Belus, King of Tyre. She was married to Sychaeus, who was murdered for the sake of his wealth by Pygmalion. Dido then fled with some followers and founded Carthage. A neighboring king, Hiarbas, sought her hand in marriage; but she refused, and, erecting a funeral pile, ascended it and stabbed herself. Vergil, in the *Æneid*, makes Æneas visit her, and her death the consequence of his desertion.

Diomed.—A Greek hero of the Trojan war, a son of Tydeus, and a king of Argos. He was a favorite of Minerva, who, according to Homer, encouraged him to attack and wound both Mars and Venus, who were engaged on the side of the Trojans.

Diomedes.—The cruel tyrant of Thrace, who fed his mares on the flesh of his guests, was overcome by Hercules, and was given to the same horses as food.

Dione.—The youngest of the Titan sisters and reputed mother of Venus. The name has also been poetically applied to Venus herself.

Dionysus (Bacchus).—Son of Jupiter and Semele, the daughter of Cadmus. He was the god of wine, and is generally represented crowned with vine leaves.

Diræ.—The avenging goddesses, or Furies.

Dis.—A name sometimes given to Pluto, and hence also to the lower world.

Discordia.—A malevolent deity corresponding with the Greek Eris, the goddess of contention. She was driven from heaven by Jupiter because she sowed dissensions among the gods. At the nuptials of Peleus and Thetis she threw an apple among the gods, which was the primary cause of the ruin of Troy, and of infinite misfortunes to the Greeks.

Dives.—Demons of Persian mythology. According to the Koran, they are ferocious and gigantic spirits under the sovereignty of Eblis.

Dodona.—The most ancient oracle was that of Jupiter at Dodona, a city of the Molossi, said to have been built by Deucalion.

Donar.—A name given, sometimes, to Thor, the thunder-god, in Norse mythology.

Doris.—Daughter of Oceanus and Tethys, wife of Nereus, and mother of the Nereides.

Draupnir.—The marvelous ring belonging to Odin, with which he worked magic. It was burned on the funeral pyre of his son Balder.

Droma.—The chain forged for the purpose of binding the Fenris wolf, but which he broke. Hence the proverb, "to dash out of Droma."

Dryads.—Wood nymphs, believed to be sent from heaven. The dryads were distinguished from the hamadryads in this, that the latter were supposed to be attached to some particular tree, with which they came into being, lived and died; while the former had the care of the woods and trees in general.

Duergar.—Dwarfs who dwell in rocks and hills; noted for their strength, subtlety, magical powers, and skill in metallurgy. They are the personification of the subterranean powers of nature.

Durga.—A goddess worshiped among the Hindus.

Echidna.—A monster, half woman, half serpent, mother of the Chimæra, the Sphinx, Cerberus, the Hydra, etc.

Echo.—A nymph who by her incessant talking engaged the attention of Hera while Zeus sported with the nymphs. Hera punished her by changing her into an echo; she pined away in consequence of an unrequited love for Narcissus, until nothing remained but her voice.

Egia.—One of the nine beautiful giantesses seen by Odin along the seashore, known as wave-maidens. Her son became guardian of Bifrost, the rainbow bridge.

Egil.—The Vulcan of northern mythology, one of the three brothers who married the swan-maidens. He was a great archer, killed his brother. Völund by command of the king, and himself later became a peasant.

Egipans.—Rural deities who inhabited the forests and mountains, the upper half of the body being like that of a man, and the lower half like that of a goat.

Egis.—Part of the armor of Jupiter used by Minerva as a shield.

Eira.—An attendant of the goddess Fuigga, and a skillful nurse. She gathered herbs and plants for the cure of both sickness and wounds and taught the science to women.

Elatus.—A prominent warrior among the mythical people of Thessaly and the father of Caneus, whom Neptune changed into the form of a man.

Elbegast.—One of the dwarfs of Scandinavian mythology who dwelt in a magnificent palace underground, and drew their servants from the bosom of the earth.

Elberich.—In the German hero legends a dwarf who aided the Lombard Emperor Otnit to win the daughter of the soldan of Syria. He is identical with the Oberon of French and English fairy mythology.

Electra.—The bright or brilliant one. A daughter of Agamemnon and Clytemnestra, and the sister of Iphigenia. She became the accomplice of Orestes in the murder of their mother.

Elf.—The water sprite, known also as Elb, from which the name of the river Elbe is said to be derived. Elves are more properly known as mountain fairies, or those airy creatures that dance on the grass or sit in the leaves of trees and delight in the full moon.

Elivagar.—In Norse mythology the name of a great stream in Chaos, flowing from a fountain in the land of mist. This stream was much frequented by the elves at their creation.

Elysium.—The paradise of the Greeks, known also as the Happyland. Departed mortals were adjudged to Elysium or to Tartarus by the sentence of Minos and his fellow judges in the "Field of Truth." Elysium is described as adorned with beautiful gardens, meadows, and groves; where birds ever warble; where the river Eridanus winds between banks fringed with laurel, and "divine Lethe" glides in a quiet valley; where the air is always pure, and the day serene; where the blessed have their delightful abode.

Embla.—An elm tree found in human form, by the gods, according to northern mythology.

Empyrean.—A term used by the ancients to express the highest heaven, where the blessed enjoy the beatific vision. Its name is derived from its having been supposed to be the region of fire.

Enceladus.—A Titan, son of Terra, and the most powerful of all the giants who conspired against Jupiter, and attempted to scale heaven. He was struck by Jupiter's thunderbolts, and chained beneath Mount Ætna.

Endymion.—In Greek mythology the setting sun, with which the moon is in love. One of the many renderings of his story is that Endymion was a beautiful youth who fed his flock on Mount Latmos. One clear night, Diana, the moon, looked down and saw him sleeping. The cold heart of the goddess was warmed by his beauty, and she came down to him, kissed him, and watched over him while he slept. Another story was that Jupiter bestowed on him the gift of perpetual youth united with perpetual sleep. One version of this myth made sleep a reward for piety, while another version made it a punishment for presuming to fall in love with Hera.

Enipeus.—A fabled river in Thessaly. Poseidon assumed the form of the god of this river in order to obtain possession of Tyro, who was in love with Enipeus. She became the mother of Pelias and Neleus.

Enyo.—One of the gray maidens who became the goddess of war, and who delights in bloodshed and the destruction of towns, and accompanies Ares in battles.

Eolus.—Known in Roman mythology as the god of the winds.

Eos.—Goddess of the morning, known as Aurora among the Romans. Every morning she arose from the couch of Tithonus to announce the coming of the day to gods and mortals.

Epaphus.—The son of Zeus and Io, born on the river Nile, after the long wanderings of his mother. He became king of Egypt, and built Memphis.

Erebus.—Son of Chaos. The name is used by the poets to signify the dark spaces under the earth through which the shades passed on their way to hades.

Ergatis.—A name given to Minerva. It means the work-woman, and was given to the goddess because she was credited with having invented spinning and weaving.

Eris.—The goddess of discord; a sister of Mars, and a daughter of Night; the same as the Roman "Discordia."

Erl-king.—Name given to the king of the elves, or a spirit of the air. According to tradition, its home is in the Black forest of Germany, and it appears as a goblin, working harm and ruin, especially among children.

Eros.—The Greek name of the deity called Cupido (Eng. *Cupid*) by the Romans. He is said to have come forth from the egg of Night, floated on Chaos, and to have inherited arrows with which he pierced all things, thereby giving new life, and a torch with which he lighted the world. See *Cupid*.

Erytheia.—One of the daughters of Night, appointed to guard the golden apples in the gardens of the Hesperides.

Eumenides or **Erinyes.**—The three furies, Tisiphone, Alecto and Megære, the avenging goddesses, originally the personification of the curses pronounced upon a criminal.

Eumolpus.—A Thracian bard, son of Poseidon and Chione, was regarded as the founder of the Eleusinian mysteries, and the first priest of Demeter. His descendants continued to be her priests at Eleusis.

Euphorbus.—The son of Pantheus, one of the bravest of the Trojans, slain by Menelaus, who dedicated his shield in the temple of Hera (Juno), near Mycenæ. Pythagoras asserted that he had once been Euphorbus, and in proof of his assertion took down at first sight the shield from the temple of Hera.

Euphrosyne.—One of the three Graces. She specially represented joy, as her sisters stood for splendor and pleasure.

Europa.—A daughter of Agenor, king of Phenicia, and Telephassa. Her beauty attracted Jupiter, and to become possessed of her he assumed the shape of a handsome bull, and mingled with the herds of Agenor while Europa was gathering flowers in the meadows. She caressed the animal and mounted on his back. The god crossed the sea with her, and arrived in Crete, where he assumed his proper form and declared his love. She became the mother of Minos, Sarpedon, and Rhadamanthus.

Eurydice.—Wife of Orpheus. After her death, her husband ventured to go to hell, where by the melody of his lyre he obtained from Pluto the restoration of his wife provided he did not look behind on their journey back to earth. Eager to see his wife, he looked behind, and so lost her forever.

Eurylochus.—One of the companions of Ulysses in his wanderings, and the only one of them who was not changed by Circe into a hog.

Eurystheus.—King of Argos and Mycenæ, who appointed the twelve labors of Hercules.

Eurytos.—The god made tutor to Hercules, by Mercury, who taught him the use of the bow and arrows.

Evadne.—Wife of Capaneus, and mother of Sthenelus. Her husband having been killed at the siege of Thebes, she threw herself upon the funeral pile, and was consumed with him.

Excalibur.—(Written also Excalibor, Escalibar, etc.) The name of King Arthur's sword. When about to die, he sent Sir Bedivere to throw the weapon into a lake near by. Twice eluding the request, the knight at last complied. A hand and arm rose from the water, clutched the sword, and brandished it three times; then both sank.

Fada.—A fée or kobold of the south of France, sometimes called "Hada." These house-spirits, of which, strictly speaking, there are but three, bring good luck in their right hand and ill luck in their left.

Fafnir.—In northern mythology the eldest son of the dwarf king, Hreidmar. The slaying of Fafnir is the destruction of the demon of cold or darkness who had stolen the golden light of the sun.

Fahfah.—Name given to one of the rivers of Paradise in the mythology of the east.

Fates.—In Greek and Roman mythology the Fates are identical with the Parcæ. They were three sisters, daughters of Night, whom Jupiter permitted to decide the fortune and especially the duration of mortal life. One of them, Clotho, attached the thread; the second, Lachesis, spun it; and the third, Atropos, cut it off when the end of life arrived. They were viewed as inexorable, and ranked among the inferior divinities of the lower world. Their worship was not very general. The Parcæ were usually represented as three old women, with chaplets made of wool interwoven with the flowers of the narcissus, and wearing long robes—Clotho with a distaff; Lachesis sometimes having near her several spindles; and Atropos holding a pair of scissors.

Fauni.—The fauns differ from the satyrs. They are represented in human form, but with erect and pointed ears and the tail of a goat. Ease and freedom from care are their chief characteristics. Their festival was celebrated at Rome on the 5th of December.

Faunus.—Son of Picus, who was the son of Saturnus, mythical king of Italy. Picus was a fabulous king of Latium, and a prophetic divinity. Faunus was king of the Latins, and father of Latinus. He was worshiped as the god of fields and shepherds, was sometimes identical with the Arcadian Pan of the Greeks, and was regarded as one of the founders of the religion of Latinum.

Fay.—(Fr. *fée*). A fairy; an elf.

Felicitas.—A symbolical, moral deity of the Greeks and Romans. She was the goddess of happiness and prosperity, and is frequently seen on Roman medals, in the form of a matron, with the staff of Mercury and a cornucopia.

Feng.—The name taken by Odin in the capacity of wave-stiller. Under this name he teaches mortals to distinguish between good and bad omens and to know the moods of the winds.

Flora.—The Romans had a particular goddess of blossoms and flowers, whom they worshiped under the name of Flora. She is said to have been the same as the Grecian nymph Chloris.

Fortitudo.—A deification of courage and bravery was one of the moral deities of the Romans.

Fortuna.—Known also as Fortune and sometimes as the goddess of chance, to whom was ascribed the distribution and the superintendence of prosperity and adversity in general.

Fortunatæ Insulæ.—The Isles of the Blessed, mythical islands in the Atlantic where Elysium was supposed to be placed.

Fraud.—An evil god seen by Dante between the sixth and seventh circles of the Inferno.

Freki and Geri.—The two wolves of Odin. When Odin, seated on his throne, overlooks heaven and earth, his two wolves lie at his feet.

Frey.—Scandinavian god of the sun and of rain, and hence of fertility and peace. He was one of the most popular of the northern divinities. No weapons were ever allowed in Frey's temple, although oxen and horses were sacrificed to him. His name was connected with the taking of any solemn oath, a heavy gold ring being dipped in the blood of the sacrifice and the oath sworn upon the ring. One of the most celebrated of the temples built to Frey was at Thervi, in Iceland.

Freyja.—She was the sister of Frey, and the wife of Odur, who abandoned her on her loss of youth and beauty, and was changed into a statue by Odin, as a punishment. She is known as the northern goddess of beauty and love; plants were called Freyja's hair, and the butterfly, Freyja's hen.

Frigga.—In Scandinavian mythology the wife of Odin, the queen of the gods, and the mother of Baldur, Thor, etc. She sometimes typifies the earth, as Odin does the heavens. The Anglo-Saxons worshiped her as Frea. The name survives in Friday.

Frodi.—The son of Frey, a god of peace. Under his direction two giantesses turned a pair of magic millstones which ground out gold according to his wish and filled his coffers. Excited by greed he forced them to labor, allowing rest only long enough for the singing of one verse. When Frodi himself slept, the giantesses changed their song and proceeded to grind out an army of troops to invade the land. These troops represent the vikings.

Furies.—Among the divinities of the lower world were three daughters of Acheron and Night, or of Pluto and Proserpine, whose office it was to torment the guilty in Tartarus, and often to inflict vengeance upon the living. The Greeks called them "Furies."

Fylgie.—Guardian spirits in Norse mythology. Besides the Norns or Dises, who were regarded as protective deities, the Norsemen ascribed to each human being a guardian spirit named Fylgis, which attended him through life.

Gabriel.—Is called "chief of the angelic guards" in *Paradise Lost*; but in another place Michael is said to be "of celestial armies prince," and Gabriel "in military prowess next."

Gæa (Ge).—The personification of the earth among the Greeks. Among the Romans she was worshiped as Tellus.

Galatea.—A sea-nymph, beloved by Polypheme. She herself had a heartache for Acis. The jealous giant crushed his rival under a huge rock, and Galatea, inconsolable at the loss of her lover, was changed into a fountain.

Ganesa.—Goddess of wisdom, in Hindu mythology.

Gangler.—The gate-keeper in Odin's palace who gave the explanation of the northern mythology that it might be recorded.

Ganymede.—A Phrygian youth, son of Tros, king of Troy, according to Homer, and the most beautiful of all mortals, was carried off by the gods that he might fill the cup of Zeus (Jupiter), and live among the immortal gods. Later writers state that Zeus himself carried him off, in the form of an eagle, or by means of his eagle, from Mount Ida; and he is generally represented sitting on the back of a flying eagle.

Garm.—A fierce dog that kept guard at the entrance of Hel's kingdom, the realm of the dead. He could be appeased by the offering of a Hel-cake which always appeared in the hand of one who, on earth, had given bread to the needy.

Gemini.—One of the names given to the twins, Castor and Pollux, under which they were transported to dwell among the stars.

Genii or **Ginn.**—An intermediate race between angels and men. They ruled on earth before the creation of Adam.

Gerda.—Wife of Frey, and daughter of the frost giant Gymir. She is so beautiful that the brightness of her naked arms illuminates both air and sea.

Geryon.—Was a monster, said to be the offspring of Chrysaor and Callirhoë, and to have three bodies and three heads. He was monarch of three islands in the dusky west, where his numerous flocks were kept by the herdsman Eurytion, and guarded by a two-headed dog called Orthrus. The destruction of this monster formed one of the twelve labors of Hercules.

Gialler Bridge.—The bridge of death, over which all must pass.

Gialler Horn, The.—Heimdall's horn, which went out into all worlds whenever he chose to blow it. According to northern mythology, he blew a long-expected blast as a rallying call to the battle which ended the reign of the gods Odin, Frey, and Tyr.

Gian ben Gian.—In Arabia, king of the Ginns or Genii, and founder of the Pyramids. He was overthrown by Azazel or Lucifer.

Gigantes.—The Giants, sprung from the blood that dropped from Uranus upon Ge. They fought against the gods, but were conquered with the aid of Hercules. They personified the great powers of nature—as their names signify: Cottos (eruption), Briareos (hurricane), and Gyes (earthquake). In fables the giants are beings of monstrous size, with dragons' tails and fearful countenances. They attempted to storm heaven, being armed with huge rocks and the trunks of trees, but were killed by the gods with the assistance of Hercules, and were buried under Mount Ætna and other volcanoes. In Scandinavian mythology they are described as evil genii of various forms and races, enemies of the gods. They dwelt in a territory of their own, called Giant-land. They had the power of assuming divers shapes, and of increasing or diminishing their stature at will.

Gill.—The infernal river of Scandinavian mythology.

Ginungagap.—In Norse mythology the vast chaotic gulf of perpetual twilight which existed

before the present world, and separated the region of fog from the region of heat. Giants were the first beings who came to life among the icebergs that filled this vast abyss.

Gladsheim.—The palace of Odin, in which were the great hall Valhalla (the hall of the slain) and the twelve seats occupied by the gods when holding council.

Glasir.—A marvelous grove in Asgard, in which the leaves were all of shimmering red gold.

Glendoveer.—In Hindu mythology is a kind of sylph, the most lovely of the good spirits.

Gnome.—One of a class of spirits or imaginary beings which were supposed to tenant the interior parts of the earth, and in whose charge mines, quarries, etc., were left. Rübezahl, of the German legends, is often cited as a representative of the class.

Goblins and Bogies.—Familiar demons of popular superstition, a spirit which lurks about houses. It is also called hobgoblin. Goblin is used in a serious sense by Shakespeare in *Hamlet*, where the ghost is supposed to be a "spirit of health or goblin damned."

Golden Apples, The.—The golden apples in the gardens of the Hesperides were a great treasure which was thought to be altogether unattainable. The gardens were watched by a monstrous dragon, and to bring the golden fruit to Eurystheus was one of the tasks imposed upon Hercules.

Golden Fleece.—Ino persuaded her husband, Athamas, that his son Phryxos was the cause of a famine which desolated the land, and he ordered him to be sacrificed to the angry gods. Phryxos made his escape over sea on a "ram which had a golden fleece." When he arrived at Colchis, he sacrificed the ram to Zeus, and gave the fleece to King Ætes, who hung it on a sacred oak. It was afterward stolen by Jason in his celebrated Argonautic expedition.

Gorgons, The.—Three sisters, with heads covered with serpents. Two of them, Stheno and Euryale, were immortal, while Medusa was mortal. Originally a beautiful maiden, she was transformed into a gorgon by Athena for profaning her temple, and her appearance was so terrible that those who gazed upon her were changed into stone. She was killed by Perseus, and Athena placed her head in the center of her shield.

Graces.—To the retinue of Venus belonged the Graces, servants and companions of the goddess. They were said to be daughters of Jupiter and Eurynome, or, according to others, of Bacchus and Venus herself, and were three in number—Splendor, Pleasure, and Joy. They were honored, especially in Greece, and had temples in the principal cities. Altars were often erected to them in the temples of other gods, especially in those of Mercury, Venus, and the Muses.

Grida.—Wife of Odin and mother of Vidar. She lent Thor her girdle, staff, and glove, warning him to beware of treachery.

Gripir.—A horse-trainer, servant of Odin, who could foretell events of the future. He could teach a young hero all that he might need to know. He is compared to Chiron the Centaur.

Hades or Pluto.—Brother of Zeus and Poseidon, obtained the kingdom of the lower world in the division of the world among the three brothers, and his name was often used as synonymous with the abode of the shades. He carried off and married Persephone, or Proserpine.

Hamadryades.—Nymphs, each of whom was born and died with the tree in which she lived.

Harmonia.—A daughter of Menelaus and Helen. She was privately promised in marriage to Orestes, the son of Agamemnon; but her father, ignorant of the engagement, gave her hand to Pyrrhus, the son of Achilles, whose services in the Trojan war he had valued.

Harpies.—Winged monsters who had the face of a woman, the body of a vulture, and feet and ngers armed with claws. They were three in number—Aëllo, Ocypete, and Cæleno—and were daughters of Pontus and Terra.

Hebe.—Daughter of Zeus and Hera. She served as cupbearer to the gods until Hercules was received among them, when she was given to him in marriage.

Hecate.—A mysterious threefold goddess, daughter of Perses and Asteria, sometimes identified with Selene in heaven, Artemis on earth, and Proserpine in the lower world.

Hector.—Son of Priam and Hecuba, the bravest of the Trojan heroes. He married Andromache. Upon his killing Patroclus, friend of Achilles, the latter was roused to vengeance. He pursued Hector and slew him, and then dragged his body at his chariot wheels into the camp of the Greeks.

Hecuba.—Daughter either of Dymas of Phrygia, or of Cissius king of Thrace, wife of Priam. She was carried away as a slave by the Greeks, and was either transformed into a dog or threw herself into the sea.

Heimdall.—In northern tales a god who lived in the celestial fort Himinsbjorg, under the farther extremity of the bridge Bifrost, and kept the keys of heaven. He is the watchman or sentinel of Asgard, sees even in sleep, can hear the grass grow, and even the wool on a lamb's back. Heimdall, at the end of the world, will wake the gods with his trumpet.

Helena.—Daughter of Zeus and Leda, the most beautiful woman of Greece. In her youth she was carried off by Theseus, but was rescued by her brothers Castor and Pollux. She married Menelaus, but was seduced and carried to Troy by Paris. The Greek chiefs who had been her suitors resolved to take vengeance, and accordingly sailed against Troy. After the death of Paris she married his brother Deiphobus. When Troy was captured Helena betrayed Deiphobus to the Greeks, and became reconciled to Menelaus, with whom she lived until his death. The accounts of her death differ.

Helicon.—A range of mountains in Bœotia, sacred to Apollo and the Muses, from which sprung the fountains of the Muses—Aganippe and Hippocrene.

Helios.—The god of the sun, called Sol by the Romans.

Helle.—Daughter of Athamas and Nephele and sister of Phryxus. When his stepmother Ino was about to sacrifice Phryxus to Zeus, Nephele rescued her two children, who rode away through the air on a ram with the golden fleece, which Hermes gave. Between Sigeum and the Chersonesus, Helle fell into the sea, which received the name of Hellespontus in consequence.

Hellen.—Son of Deucalion and Pyrrha, mythical ancestor of all the Greeks.

Hell Shoon.—In Icelandic mythology indispensable for the journey to Valhalla as the obolus for crossing the Styx.

Helmet of Hades.—A helmet borrowed from Pluto and worn by Perseus, rendering him invisible. Minerva lent him her buckler; and Mercury, wings, winged shoes, and a short curved sword. After he had slain Medusa he restored them again, and presented the gorgon's head to Minerva, who placed it in the middle of her shield.

Hera.—Greek name for the wife of Jupiter, known among the Romans as Juno. Hera was worshiped in many parts of Greece, but more especially at Argos, in the neighborhood of which she had a splendid temple, on the road to Mycenæ. She had also a temple in Samos. Hera was usually represented as a majestic woman of mature age.

Heraclidæ.—Name given to the descendants of Hercules, who, in conjunction with the Dorians, conquered the Peloponnesus eighty years after the destruction of Troy, or B. C. 1104, according to mythical chronology. This legend represents the conquest of the Achæan population by Dorian invaders, who henceforward appear as the ruling race in the Peloponnesus.

Hercules.—The most celebrated of the Grecian heroes. He was the son of Jupiter and Alcmena. The birth of Hercules was attended with many miraculous events. Before he was eight months old Juno sent two snakes to devour him, which he seized, and crushed to death. He achieved a series of enterprises known as the "Twelve Labors of Hercules." These were: (1) To slay the Nemean lion; (2) To destroy the hydra which infested the marshes of Lerna; (3) to bring to Eurystheus the Arcadian stag with the golden horns and brazen hoofs; (4) to bring to his master the boar of Erymanthus; (5) to cleanse the stable of King Augeas, in which 3,000 oxen had been kept for thirty years, and which had never been cleaned out; (6) to destroy the Stymphalides, terrible carnivorous birds; (7) to capture the bull that was desolating Crete; (8) to capture the mares of Diomedes, which breathed fire from their nostrils, and ate human flesh; (9) to procure the girdle of Hippolyte, queen of the Amazons; (10) to bring to Eurystheus the flesh-eating oxen of Geryon, from the island of Erythea; (11) to bring away some of the golden apples from the gardens of the Hesperides; (12) to bring up from hades the three-headed dog Cerberus. Besides these labors he performed numerous other difficult feats. He was conducted by Mercury to Omphale, queen of Lydia, became her slave, and he permitted her to dress in his armor while he was sitting to spin with her female servants. He delivered Dejanira from the Centaur Nessus, whom he killed. The Centaur, as he expired, gave Dejanira a mystic tunic, which, in a jealous paroxysm, she gave to Hercules to put on, which he had no sooner done than he was seized with a desperate distemper which was incurable. He erected a burning pile on Mount Œta, on which he cast himself. Jupiter surrounded the burning pile with smoke, amidst which Hercules, after his mortal parts were consumed, was carried to heaven in a chariot drawn by four horses.

Hermes.—One of the twelve great Greek divinities, son of Zeus and Maia. He was the herald of the gods and the god of eloquence, prudence and skill, and conducted the shades of the dead from the upper to the lower world. He also was the patron of commerce and riches, and inventor of the lyre. The Romans identified their god Mercurius with Hermes.

Hermione.—A daughter of Mars and Venus, who married Cadmus. She was changed into a serpent, and placed in the Elysian fields.

Hero.—A beautiful priestess of Venus, greatly enamored of Leander, who used to swim across the Hellespont to see her, while she directed his course by holding a burning torch on the top of a high tower. One stormy night Leander was drowned, whereupon Hero threw herself into the sea and perished also.

Hesperides.—The Hesperides are called daughters of Night, because their origin and existence are veiled in darkness. Their names were Ægle, Erytheia, and Arethusa; and they were appointed to guard the golden apples, which were the gift of Earth to Juno on her wedding day. The celebrated gardens of the Hesperides abounded with fruits and were carefully guarded by a dragon which never slept.

Hesperus.—A supposed son or brother of Atlas enrolled among the deities after death, and made identical with the evening star.

Hestia.—The Greek name for Vesta. She was the goddess of the domestic hearth.

Hippocrene.—A fountain of the Muses, on Mount Helicon, in which they bathed. "The whole mountain was celebrated for its fresh rills, and cool groves, and flowery slopes"; and the legends of the locality, as if in sympathy with its natural features, were free from the harshness characterizing those of other mountains more wild and rugged.

Hippolyte.—A queen of the Amazons, given in marriage to Theseus by Hercules. Hippolytus was their son.

Hippolytus.—Son of Theseus and Hippolyte. His stepmother, Phædra, fell in love with him. He fled to the seashore, where, his horses taking fright and rushing among the rocks, his chariot was broken into pieces, and he was killed. According to some accounts, he was restored to life by Diana.

Hippomenes.—Son of Megareus, and great-grandson of Poseidon (Neptune). He conquered Atalanta in a foot-race by dropping three golden apples, one by one, which she stopped to pick up. By this delay she lost the race

Hobomoko.—An evil spirit known among American Indians.

Hödeken.—A famous German kobold, or domestic fairy servant; so called from wearing a little felt hat pulled down over his face.

Hoder.—In Norse mythology a blind god who destroyed his brother Balder, at the instigation of Loki, without meaning to do so. He is the type of night and darkness, as Balder is of light and day.

Hofvarpnir.—The fleet steed of Ina, in Scandinavian legend, which traveled through fire and air and enabled this messenger of the gods to see all that was happening on the earth.

Honir.—In Asgard tales, name given to the god of mind or thought.

Horæ.—Daughters of Zeus and Themis, the goddesses of the order of nature and of the seasons. They guarded the doors of Olympus, and promoted the fertility of the earth.

Horus.—The Egyptian god of the sun, son of Osiris and Isis, who was also worshiped in Greece and at Rome.

Hugin.—One of Odin's two ravens, which carried him news from earth, and, when not thus employed, perched upon his shoulders. The personification of thought or intellect.

Hugon.—A kind of evil spirit in the popular superstition of France—a sort of ogre made use of to frighten children.

Hundred-eyed.—Argus, in Greek and Latin fable. Juno appointed him guardian of Io, but Hermes killed him with a stone; whereupon Juno transplanted his eyes into the tail of her peacock.

Hyacinthus.—A youth beloved by Apollo, and accidentally slain by him while playing at quoits. From his ashes sprang the flower which bears his name.

Hyades.—Daughters of Atlas and one of the Oceanides. They were five in number, and were changed into a constellation called the Hyades.

Hydra.—A celebrated monster which infested the neighborhood of Lake Lerna, in the Peloponnesus. It was one of the labors of Hercules to destroy the monster, which he accomplished with the aid of Iolas.

Hygeia.—The goddess of health, daughter of Æsculapius. She was held in great veneration among the ancients.

Hymenæus or Hymen.—The god of marriage among the Greeks. He was the son of Bacchus and Venus, or, according to some, of Apollo and one of the Muses.

Hyperboreans.—A fabulous people, supposed to live beyond the north wind, in a land of perpetual sunshine.

Hyperion.—A son of Cœlus and Terra, who married Thea. Aurora was their daughter. The name Hyperion is often used by the poets to signify the sun; as, for instance, by Shakespeare in *Titus Andronicus*.

> Even from Hyperion's rising in the east.
> Until his very downfall in the sea.

Also in *Troilus and Cressida* and other of Shakespeare's plays, the same license is used.

Hypermnestra.—One of the Danaides, who were the fifty daughters of Danaus. She was ordered by her father to murder her husband Lynceus on the night of their marriage, which she refused to do. Danaus wished to punish her for her disobedience, but afterward forgave her, and left his kingdom at his death to Lynceus.

Hypsipyle.—A queen of Lemnos, daughter of Thoas. During her reign, Venus, whose altars had been slighted, punished the Lemnian women by causing their husbands' affections to be estranged from them. This enraged the women, and they put to death their male relatives, except

in the case of Hypsipyle, who spared her father Thoas.

Iacchus.—The solemn name of Bacchus in the Eleusinian mysteries, whose name was derived from the boisterous song called *Iacchus*. In these mysteries Iacchus was regarded as the son of Zeus and Ceres, and was distinguished from the Theban Bacchus (Dionysus), the son of Zeus and Semele.

Iapetos.—The father of Atlas and ancestor of the human race, called the progeny of Iapetos. By many considered the same as Japheth.

Icarius.—An Athenian who hospitably received Dionysus in Attica, and was taught the cultivation of the vine.

Icaros.—Son of Dædalos, who flew with his father from Crete; but the sun melted the wax with which his wings were fastened on, and he fell into the sea, hence called the Icarian.

Ida.—A mountain range of Mysia, in Asia Minor. celebrated in mythology as the scene of the rape of Ganymede and of the judgment of Paris. In Homer the summit of Ida is the place from which the gods watch the battles in the plain of Troy. It is an ancient seat of the worship of Cybele. A mountain in Crete, known as Mount Ida, was closely connected with the worship of Jupiter.

Idæan Mother.—Cybele, who had a temple on Mount Ida, in Asia Minor.

Idomeneus.—Son of Deucalion. He led the Cretan forces against Troy, and was one of the bravest of the Greek heroes of the Trojan war. On his return, being overtaken by a storm, he vowed to sacrifice to Poseidon the first object he met on landing. This was his son, whom he accordingly sacrificed. A plague was sent upon Crete in consequence, and Idomeneus was banished.

Iduna or **Idun.**—Daughter of the dwarf Svald, and wife of Bragi. She kept in a box the golden apples which the gods tasted as often as they wished to renew their youth. Loki on one occasion stole the box, but the gods compelled him to restore it. Iduna seems to personify that part of the year when the sun is north of the equator. Her apples indicate fruits generally. Loki carries her off to Giant-land when the sun descends below the equator, and he steals her apples. In time, Iduna makes her escape, in the form of a sparrow, when the sun again rises above the equator; and both gods and men rejoice in her return.

Ifing.—In Scandinavian mythology the great stream between the earth and the sacred lands, whose waters never froze.

Ilus.—Son of Tros and Callirrhoë the founder of Ilium, called also Troy after his father.

Inachus.—One of the river-gods, a son of Oceanus and Tethys, and father of Phoroneus and Io. He was the first king of Argos, and is said to have given his name to the river Inachus.

Indra.—In Hindu mythology the ever-youthful god of the firmament, and the omnipotent ruler of the elements. He is a most important personage in Indian fable. In the Vedic period of the Hindu religion, he occupied a foremost rank, and, though degraded to an inferior position in the Epic, he long enjoyed a great legendary popularity. In works of art he is represented as riding on an elephant.

Ino.—Daughter of Cadmus and Harmonia, married to Athamas after the death of Nephele.

Io.—Daughter of Inachus, and beloved by Zeus, who changed her into a white heifer to escape Hera's jealousy. Hera set Argus to watch her, and Zeus directed Hermes to steal her away. Finally Hermes killed Argus. Hera then sent a gadfly to torment Io, who wandered from land to land over all the earth, finding rest at last on the Nile, where she was restored to her natural form. She was afterward identified with Isis.

Iolaus.—Son of Iphicles, relative and faithful companion of Hercules.

Ion.—Son of Apollo and Creusa, fabulous ancestor of the Ionians.

Iphicles.—Son of Amphitryon and Alcmene, and brother of Hercules.

Iphigenia.—A daughter of Agamemnon and Clytemnestra. When the Greeks, going to the Trojan war, were detained at Aulis by contrary winds, they were informed by a soothsayer that, to appease the gods, they must sacrifice Iphigenia to Diana. As the fatal knife was about to be plunged into her, Iphigenia suddenly disappeared, and a goat of great beauty was found in the place where she had stood ready for the sacrifice.

Irene.—The Roman goddess of peace, and daughter of Zeus and Themis, and one of the Horæ.

Iris.—Daughter of Thaumas and Electra, messenger of the gods, especially of Hera. The rainbow was considered the road on which she traveled, and she was therefore identified with it.

Irus.—The beggar of gigantic stature who kept watch over the suitors of Penelope. His real name was Arneos, but the suitors nicknamed him Irus because he carried their messages for them. Ulysses, on his return, felled him to the ground.

Isis.—The Egyptian goddess of the earth, also identified with the moon. Her worship prevailed extensively in Greece, and also in Rome under the emperors.

Israfil.—Known among Arabians as the angel of music, who possessed the most melodious voice of all God's creatures. This is the angel who is to sound the resurrection trump, and make music for the saints in paradise. Israfil, Gabriel and Michael were the three angels that warned Abraham of Sodom's destruction.

Ithaca.—In mythology the island-kingdom of Ulysses. The city of Ithaca, the residence of Ulysses, was situated on a precipitous, conical hill, now called "eagle's cliff," occupying the whole breadth of the isthmus. Ithaca was also the home of Penelope.

Ithuriel.—One of the angels commissioned by Gabriel to search for Satan, who had effected his entrance into paradise.

Ixion.—King of the Lapithæ, treacherously killed Deioneus. Zeus purified him, and carried him to heaven, giving him a seat at the table of the gods.

Jamshid.—King of the genii, famous for a golden cup full of the elixir of life. This cup, hidden by the genii, was discovered while digging the foundations of Persepolis.

Janus.—An ancient king who reigned in Italy. He was a native of Thessaly, a d, according to some writers, a son of Apollo. He built a town which he called Janiculum. Some authors make him to have been son of Cœlus and Hecate. He is represented with two faces, because he was acquainted with the past and future. His temple was always open in time of war, and was shut when peace existed.

Jason.—In Greek legend, king of Iolchos in Thessaly, celebrated for his share in the Argonautic expedition. On his return to Iolchos with Medea as his wife, he avenged the murder of his parents and his brother by putting Pelias to death. Unable to retain possession of his throne, however, he fled to Corinth, where, after some time, he married Glauce (or Creusa), daughter of the king, and put away Medea and her children. Different accounts are given of his death.

Jinn.—A sort of fairies in Arabian mythology, the offspring of fire. They are governed by a race of kings named Suleyman, one of whom "built the pyramids." Their chief abode is the mountain Kâf, and they appear to men under the forms of serpents, dogs, cats, monsters, or even human beings, and become invisible at pleasure. The evil jinn are ugly, but the good are beautiful. According to fable, they were created from fire two thousand years before Adam was made of earth.

Jord.—Daughter of Night and mother of Thor. In Scandinavian mythology the name given to primitive earth.

Jove.—Known in classical mythology as the god of thunder. The name Jove is but another appellation, rarely given to Zeus or Jupiter.

Juggernaut or **Jaggernaut.**—A Hindu god. The temple of this god is in a town of the same name in Orissa.

Juno.—A celebrated deity among the ancients, daughter of Saturn and Ops. Jupiter married her, and the nuptials were celebrated with the greatest solemnity in the presence of all the gods. By her marriage with Jupiter, Juno became the queen of all the gods, and mistress of heaven and earth. She presided over marriage, and patronized those of her sex who were distinguished for virtuous conduct. Paris gave her great offense by giving the golden apple, as an award to beauty, to Venus instead of herself.

Jupiter.—The chief of all the gods of the ancients. According to Varro, there were three hundred persons of that name. To him of Crete, who passed for the son of Saturn and Ops, the actions of the rest have been attributed. Jupiter was educated in a cave on Mount Ida, in Crete, and fed with the milk of the goat Amalthæa. While he was very young he made war on the Titans, whom he conquered. The beginning of his reign in the supernal regions was interrupted by the rebellion of the giants who were sons of the earth, and who were desirous of revenging the death of the Titans; but by the aid of Hercules Jupiter overpowered them. Jupiter married Metis, Themis, Ceres, Euronyme, Mnemosyne, Latona, and Juno. His worship was universal: he was the Ammon of the Africans, the Belus of Babylon, and the Osiris of Egypt.

Kama.—The Hindu god of love. His wife is Rati (voluptuousness), and he is represented as riding on a sparrow, holding in his hand a bow of flowers and five arrows, each tipped with the bloom of a flower supposed to conquer one of the senses. His power is so much exalted that even the god Brahma is said to succumb to it.

Kami.—The gods of ancient Japan. The name, in modern times, designates any spiritual saint, and may also be applied to a prince.

Kaswa.—The camel admitted into Moslem paradise, the favorite camel of Mohammed which fell on its knees in adoration when "the prophet" delivered the last clause of the Koran to the assembled multitude at Mecca.

Kederli.—In Mohammedan mythology is a god corresponding to the English St. George, and is still invoked by the Turks when they go to war.

Kelpie.—In mythology of Scotland a spirit of the water seen in the form of a horse. Each lake has its kelpie.

Kobold.—A house-spirit in German superstition. In northern lands the name is sometimes used in place of elf or dwarf, representing an underground spirit. Probably the same as the Scotch brownie.

Koppelberg.—The hill which miraculously opened to receive the children who followed the Pied Piper. This belongs to mythology, as people in the middle ages considered Odin as the leader of disembodied spirits, and from this came the Pied Piper. The rats were the restless souls of the dead, which the Pied Piper released by drowning.

Krishna.—In Hindu mythology the eighth incarnation of Vishnu. According to some authorities, he is considered distinct from all the Avatars, as these had only a portion of the divinity, and Krishna was Vishnu himself in form of "the Black One."

Kronos.—Kronos (Time) was the youngest of the Titans, and as the heavens measure out time to us, and earth is considered its beginning, he is said to be born of Uranos and Ge. He was generally worshiped under the name of Saturn.

Kubera.—In Hindu mythology the god of riches, represented as frightfully deformed, and as riding in a car drawn by hobgoblins.

Lab.—The sorceress-queen in *Arabian Nights*. She tried to change Beder, the young king of Persia, into a halting, one-eyed hack; but Beder was forewarned, and changed Lab herself into a mare.

Lachesis.—One of the three Fates, or Parcæ. She spun the thread of life.

Ladon.—The dragon who guarded the apples of the Hesperides, and was slain by Hercules. Ladon is also the name of the father of Daphne and Metope.

Læding.—In Norse mythology the strong chain with which the wolf Fenris was bound. He easily broke the chain, and from this legend has grown the saying, "to get loose out of Læding." A stronger chain was known as Droma.

Laërtes.—A king of Ithaca who married Anticlea, daughter of Autolycus. Ulysses was their son, and succeeded him on the throne, Laërtes retiring to the country, and devoting his time to gardening, in which employment he was found by Ulysses on his return from the Trojan war, after twenty years' absence.

Laocoon.—A priest of Apollo who, in the Trojan war, was opposed to the admission of the wooden horse to the city. For this, as a punishment, two enormous serpents were sent to attack him, which they did while, accompanied by his two sons, he was offering a sacrifice to Neptune. The serpents coiled round him and his sons, and crushed them to death.

Laodamia.—The wife of Protesilaus, who was slain before Troy. She begged to be allowed to converse with her dead husband for only three hours, and her request was granted. Hermes (Mercury) led Protesilaus back to the upper world; and, when Protesilaus died a second time, Laodamia died with him.

Laomedon.—The king who built the walls of Troy, assisted by Neptune and Apollo, who had displeased Jupiter, and were sent to work for wages. Neptune built the walls of Troy, while Apollo tended the king's flocks on Mount Ida. When the two gods had done their work, Laomedon refused the reward he had promised, and expelled them from his dominions. Neptune sent a sea-monster to ravage the country; and a maiden, chosen by lot, was from time to time sacrificed to propitiate it.

Lapithæ.—A mythical people of Thessaly, noted for their defeat of the Centaurs.

Lares.—Gods of inferior power at Rome, who presided over houses and families. They were two in number, sons of Mercury and Lara.

Latinus.—A son of Faunus and Marica, king of the Aborigines in Italy, who from him were called Latini.

Latona.—A daughter of Cœus the Titan and Phœbe. She was admired for her beauty by Jupiter. Juno made Latona the object of her vengeance, and sent the serpent Python to persecute her.

Leander.—A youth of Abydos. He was passionately in love with Hero, a young girl of Sestos. He was in the habit of swimming across the Hellespont to visit her, in doing which, on a tempestuous night, he was drowned. Lord Byron performed the same feat in 1810, an exploit which he has celebrated in verse in his occasional pieces. He expresses surprise that, as the truth of Leander's story had been questioned, no one had hitherto tested its practicability.

Leda.—A daughter of King Thespius and Eurythemis, who married Tyndarus, king of Sparta. She is famous for her intrigue with Jupiter. She was the mother of Pollux, Helena, Castor, and Clytemnestra. She is said to have received the name of Nemesis after death.

Lemures.—The specters or spirits of the dead. They were said to wander about at night as specters, and to torment and frighten the living. In order to propitiate them the Romans celebrated the festival of the *Lemuralia* or *Lemuria*.

Lethe.—The river that separates hades from the Elysian fields. The Greeks believed in a magical power of the waters of this river, which the souls of all the dead are obliged to taste, that they may forget everything said and done in the earth.

Liber.—An ancient Roman divinity of wines, identified afterward with Bacchus.

Libertas.—The goddess of liberty, to whom several temples were erected at Rome. Libertas is represented in works of art as a matron, with the pileus, the symbol of liberty, or a wreath of laurel.

Sometimes she appears holding the Phrygian cap in her hand.

Libissa.—Queen of fays and fairies.

Libitina.—An ancient goddess of Rome, who presided over the burial of the dead. At her temple at Rome everything necessary for funerals was kept, and persons might there either buy or hire such things. Hence a person undertaking the burial of a person (an undertaker) was called "libitinarius," and his business "libitina."

Lidskialf.—The throne of Alfadir, whence he can view the whole universe.

Lif.—In Norse mythology the name given to man who is to occupy the purified earth when goodness resumes its sway.

Lilinau.—In American Indian folk-lore Lilinau was wooed by a phantom. She followed his green waving plume through the forest, and was never seen again.

Lilith.—In Hebrew mythology a female spectre who lies in wait for children in order to destroy them. The older traditions tell of Lilith as a former wife of Adam and the mother of demons. Amulets were worn as protection from her powers.

Lobaircin.—In Irish mythical tales a fairy shoemaker resembling an old man, who resorts to out-of-the-way places, where he is discovered by the noise of his hammer. He is rich, and, while any one keeps his eye fixed upon him, cannot escape, but the moment the eye is withdrawn he vanishes.

Lofn.—The Scandinavian god who guards friendship.

Lofua.—The Scandinavian goddess who reconciles lovers.

Loki.—The great god of fire in Norse mythology.

Lorelei.—In German legend a siren who haunted a rock of the same name on the right bank of the Rhine. She combed her hair with a golden comb, and sang a wild song which enticed fishermen and sailors to destruction on the rocks and rapids at the foot of the precipice. In northern mythology Lorelei is represented as immortal, a daughter of the Rhine, and dwelling in the river bed.

Lotis.—A nymph, who, to escape the embraces of Priapus, was metamorphosed into a tree, called, after her, Lotus.

Lubins.—A species of goblins in Normandy that take the form of wolves, and frequent churchyards. They are very timorous, and take flight at the slightest noise.

Lucifer.—The planet Venus when a morning star, called by the Greeks Phosphorus. The same star when seen in the evening was called Hesperus or Vesper.

Lucina.—The goddess who presides at the birth of children. She was a daughter of Jupiter and Juno.

Lud.—In ancient British mythology the king of the Britons.

Luna.—She was the daughter of Hyperion and Theia, and was distinct in name, descent, and story from Diana, who was taken as goddess of the moon. To Luna was ascribed great influence in relation to the birth of men. Luna seems to have been especially worshiped by the Atlantides.

Lycomedes.—A king in the island of Scyros, to whose court Achilles was sent, disguised as a maiden, by his mother, Thetis, who was anxious to prevent his going to the Trojan war. Some traditions say that Lycomedes treacherously killed Theseus by throwing him from a rock.

Mænalus.—A mountain in Arcadia, extending from Megalopolis to Tegea, celebrated as the favorite haunt of the god Pan. The Roman poets frequently use the adjectives "Mænalius" and "Mænalis" as equivalent to Arcadian.

Mæra.—The dog of Icarios. Icarios, having made wine, gave it to some shepherds, who, thinking themselves poisoned, killed him; recovering themselves, they buried him. His daughter, Erigone, being shown the spot by his faithful dog Mæra, hung herself through grief.

Mammon.—In demonology, placed at the head of nine ranks of demons. Also a Syriac word used in the scriptures to signify either riches or the god of riches. By poetic license, Milton makes Mammon one of the fallen angels.

Manes.—The name given by the Romans to the spirits of the departed. The god of funerals and tombs.

Mani.—Name given in ancient Norse mythology to the moon. Later known as the son of Mundilfori; taken to heaven by the gods to drive the moon-car. He is followed by a wolf, which, when time shall be no more, will devour both Mani and his sister Sol.

Manitou.—The great spirit of American Indians.

Mars.—The god of war, was the son of Jupiter and Juno, or of Juno alone, according to Ovid. The loves of Mars and Venus are greatly celebrated. On one occasion, while in each other's company, Vulcan spread a net around them, from which they could not escape without assistance. They were thus exposed to the ridicule of the gods till Neptune induced Vulcan to set them at liberty. During the Trojan war Mars interested himself on the side of the Trojans, and defended the favorites of Venus with great determination.

Marsyas.—A celebrated piper of Celæne in Phrygia. He challenged Apollo to a trial of skill in music, which challenge was accepted, the Muses being appointed umpires. The palm of victory was awarded to Apollo, who tied his antagonist to a tree and flayed him.

Medea.—A celebrated magician, daughter of Æetes, king of Colchis, and niece of Circe. When Jason came to Colchis in quest of the Golden Fleece, Medea fell in love with him, and they exchanged oaths of fidelity; and, when he had overcome all the difficulties which he had to encounter, Medea embarked with him for Greece. She lived in Corinth with her husband Jason for ten years, with much conjugal happiness, when he became enamored with Glauce, daughter of Creon, king of Corinth. To avenge herself on Jason she caused the destruction of Glauce, and killed her two children in his presence.

Medusa.—One of the three gorgons, daughter of Phorcys and Ceto. She was the only one of the gorgons subject to mortality. She was celebrated for her personal charms and the beauty of her hair, which Minerva changed into serpents. According to Apollodorus and others, the gorgons were born with snakes on their heads instead of hair, and with yellow wings and brazen hands. Perseus rendered himself famous by his conquest of Medusa. He cut off her head and placed it on the ægis of Minerva. The head had the power of changing those who looked at it into stone.

Megæra.—One of the furies; sometimes said to personify a guilty conscience.

Megin-giord.—A magic belt worn by the god Thor. He once proposed to show his strength by lifting great weights, but when challenged to pick up the giant's cat, he tugged and strained, only to succeed in raising one paw from the floor, although he had taken the precaution to enhance his strength as much as possible by tightening his belt Megin-giord.

Meleager.—A celebrated hero of antiquity who signalized himself in the Argonautic expedition, and especially by killing the Calydonian boar, a famous event in mythological history.

Melissa.—A nymph, said to have discovered the use of honey, and from whom bees were believed to have received their name. There can be no doubt, however, that the name really came from a Greek word meaning honey, and was hence given to nymphs.

Mellona.—One of the rural divinities, the goddess of bees.

Melpomene.—One of the Muses, daughter of Jupiter and Mnemosyne. She presided over tragedy. She is generally represented as a young woman wearing a buskin, and holding a dagger in her hand.

Melusina.—The most noted among French fairies. She was condemned to become every Saturday a serpent from the waist downward, as a punishment for having, by means of a charm, inclosed her father in a high mountain, in order to avenge an injury her mother had received from him. She married Raymond, count of Poitiers, and, having been seen by him during her loathsome transformation—in violation of his solemn promise never to visit her on a Saturday—was immured in a subterranean dungeon of the castle of Lusignan.

Memnon.—A king of Ethiopia, son of Tithonus and Aurora. He came with ten thousand men to assist Priam in the Trojan war, where he behaved with great courage, and killed Antilochus, Nestor's son, on which Nestor challenged Memnon to fight, but he refused on account of the great age of the challenger; but he fought Achilles, who killed him. A statue was erected in his honor which had the property of uttering a melodious sound every day at sunrise.

Mendes.—An Egyptian god like Pan. He was worshiped in the form of a goat.

Menelaus.—King of Lacedæmon, brother of Agamemnon and husband of Helena. After Helena's flight with Paris, Menelaus and Ulysses went to Troy to demand her restitution; on the failure of their attempt Menelaus and his brother organized the expedition against Troy. After the capture of the city he became reconciled to Helena, and they lived happily in Sparta.

Mentor.—A friend of Ulysses, to whom the latter confided the care of his house and the instruction of his son Telemachus on departing for the Trojan war.

Mephistopheles.—One of the seven chief devils in the old demonology, the second of the fallen archangels, and the most powerful of the infernal legionaries after Satan. He figures in the old legend of *Dr. Faustus* as the familiar spirit of that magician. To modern readers he is chiefly known as the cold, scoffing, relentless fiend of Goethe's *Faust*, and the attendant demon in Marlowe's *Faustus*.

Mercury.—Has been identified with the Greek Hermes. The Romans of later times transferred all the attributes and myths of Hermes to their own god. The Fetiales, however, never recognized the identity; and, instead of the "caduceus," they used a sacred branch as the emblem of peace. The resemblance between Mercurius and Hermes is indeed very slight. The worship of Mercury was very common among Egyptians, Greeks, and Romans, and many temples were consecrated to him. At Rome there was a particular festival held for the expiation of merchants, in honor of Mercury.

Meriones.—A Cretan hero, son of Molus, who was one of the bravest heroes in the Trojan war, and usually fought along with his friend Idomeneus.

Mermaids.—Wave maidens of northern mythology, and classed with nymphs in Grecian and Roman. They were generally represented as young and beautiful virgins, partially covered with a veil or thin cloth, bearing in their hands vases of water, or shells, leaves, or grass, or having something as a symbol of their appropriate offices. They were attendants of the gods.

Merope.—One of the Pleiades, daughter of Atlas, and wife of Sisyphus.

Merops.—King of Cos, whose wife was killed by Artemis for neglecting to worship her. Merops tried to kill himself, but was changed to an eagle, and placed among the stars.

Meru.—In Hindu mythology a sacred mountain, 80,000 leagues high, situated in the center of the world. It is the abode of Indra, and abounds with every charm that can be imagined. The Olympus of the Indians.

Midas.—A king of Phrygia, son of Gordius or Gorgias. According to some traditions, in the early part of his life he found a treasure, to which he owed his greatness and opulence. He showed hospitality to Silenus, in return for which Bacchus permitted him to choose whatever recompense he pleased. He demanded of the god that whatever he touched might be turned into gold. His wish was granted; but, when the very food which he attempted to eat became gold in his mouth, he prayed Bacchus to revoke the favor, and he was ordered to wash himself in the river Pactolus, the sands of which were turned into gold by the touch of Midas. Afterward, in consequence of maintaining that Pan was superior to Apollo in singing and playing the flute, he had his ears changed into those of an ass by the god.

Midgard.—In Scandinavian mythology the name given to the earth. Out of the giant's flesh they fashioned Midgard (middle garden), as the earth was called, which was placed in the exact center of the vast space, and hedged all around with Ymir's eyebrows, which formed its bulwarks or ramparts. The solid portion of Midgard was surrounded by the giant's blood or sweat, which now formed the ocean, while his bones made the hills, his flat teeth the cliffs, and his curly hair the trees and all vegetation.

Midgard Sormen (earth's monster).—The great serpent that lay in the abyss at the root of the celestial ash. Child of Loki.

Milo.—A celebrated Crotona athlete, who is said to have felled an ox with his fist, and to have eaten the beast in one day.

Mimir.—In Scandinavian mythology the god of wisdom. Also god of the ocean, which is called "Mirmir's well," in which wit and wisdom lay hidden, and of which he drank every morning from the horn Gjallar.

Minerva.—The goddess of wisdom, war, and all the liberal arts, sprang, full-grown and armed, from the head of Jupiter, and was immediately admitted to the assembly of the gods, and became one of the most faithful counselors of her father. Her power in heaven was great; she could hurl the thunders of Jupiter, prolong the life of men, and bestow the gift of prophecy. She was known among the ancients by many names. She was called Athena, Pallas, Parthenos, Tritonia, and Hippia, Sais, and other names. She is usually represented with a helmet on her head with a large plume on it, in one hand holding a spear, and in the other a shield with the head of Medusa on it. Temples were erected for her worship in different places, one of the most renowned of which was the Parthenon at Athens. She was the tutelar deity of the city of Athens.

Minos the Second.—Was a son of Lycastes, the son of Minos the first, and king of Crete. He married Pasiphæ, the daughter of Sol and Perseis.

Minotaur.—A celebrated monster, half a man and half a bull, for which a number of young Athenian men and maidens were yearly exacted to be devoured. The Minotaur was confined in a famous labyrinth, where at length it was slain by Theseus, who was guided out of the labyrinth by a clew of thread given to him by Ariadne, daughter of King Minos.

Mithras.—In Persian mythology one of the principal gods of the ancient Persians, a personification of the sun. He was regarded as a mediator between the two opposite deities, Ormuzd and Ahriman, or the principle of good and the principle of evil.

Mjolnir.—From mythology of northern lands. The name of Thor's celebrated hammer—a type of the thunderbolt—which, however far it might be cast, was never lost, as it always returned to his hand; and which, whenever he wished, became so small that he could put it in his pocket.

Mnemosyne.—A daughter of Cœlus and Terra, mother of the nine Muses. Jupiter assumed the form of a shepherd in order to enjoy her company.

Moloch.—A god of the Phenicians to whom human victims, principally children, were sacrificed. Moloch is figurative of the influence which impels us to sacrifice that which we ought to cherish most dearly.

Momus.—The god of mirth amongst the ancients according to Hesiod, was the son of Nox. He amused himself by satirizing the gods by turning into ridicule whatever they did.

Moakkibat.—A class of angels, according to the Mohammedan mythology. Two angels of this class attend every child of Adam from the cradle to the grave. At sunset they fly up with the record of the deeds done since sunrise. Every good deed is entered ten times by the recording angel on the credit or right side of his ledger, but when an evil deed is reported the angel waits seven hours, "if happily in that time the evil-doer may repent."

Moiræ.—The Greek name for Parcæ, or the Fates. These grave and mighty goddesses were represented by the earliest artists with staffs or scepters, the symbols of dominion. They received the same homage as the Furies.

Morpheus.—A minister of the god Somnus, who imitated very naturally the gestures, words, and manners of mankind. He is sometimes called the god of sleep. He is generally represented as a sleeping child of great corpulence, with wings.

Mowis.—The bridegroom of Snow, who (according to American Indian tradition) wooed and won a beautiful bride; but when morning dawned, Mowis left the wigwam, and melted into the sunshine. The bride hunted for him night and day in the forests, but never saw him more.

Musæ.—The Muses, certain goddesses who presided over poetry, music, dancing, and all the liberal arts. They were daughters of Jupiter and Mnemosyne, and were nine in number—Clio, Euterpe, Thalia, Melpomene, Terpsichore, Erato, Polyhymnia, Calliope, and Urania.

Myrmidons.—The trusty followers of Achilles. They are said to have inhabited originally the island of Ægina, and to have emigrated with Peleus into Thessaly. The Myrmidons disappear from history at a later period.

Mysterious Three, The.—In Scandinavian mythology were Har "the Mighty," the "Like-Mighty," and the "Third Person," who sat on three thrones above the rainbow. Then came the Æsir, of which Odin was chief, who lived in Asgard (between the rainbow and earth); next came the Vanir, or gods of the ocean, air, and clouds, of which deities Niörd was chief.

Naiads.—The nymphs of fresh water, whether of rivers, lakes, brooks, or springs. Many of these nymphs presided over springs which were believed to inspire those who drank of them.

Naraka.—The hell of the Hindus. It has twenty-eight divisions, in some of which the victims are mangled by ravens and owls; in others they are doomed to swallow cakes boiling hot, or walk over burning sands.

Narcissus.—A beautiful youth, who, for his unfeeling heart, was caused by Nemesis to see his own image reflected in a fountain and to become enamored of it. He gradually pined away and was changed into the flower which bears his name.

Nausicaa.—A daughter of Alcinous, king of the Peæacians, and Arete, who conducted Ulysses to the court of her father.

Nectar.—Wine conferring immortality, and drunk by the gods.

Neleus.—Son of Poseidon and Tyro, brother of Pelias. He was cast off by his mother and brought up by countrymen. He settled in Pylos, and became father of Nestor. He and all his sons except Nestor were killed by Hercules.

Nemean Lion.—A monstrous lion, near the forest of Nemea, which wasted the surrounding country and threatened destruction to the herds. Hercules promised to deliver the country of the monster, and Thespius rewarded Hercules by making him his guest so long as the chase lasted. Hercules slew the lion, and henceforth wore its skin as his ordinary garment, and its mouth and head as his helmet.

Nemesis.—One of the infernal deities, daughter of Nox. She was the goddess of vengeance. She is made one of the Parcæ by some mythologists, and is represented with a helm and a wheel. The term is sometimes used to signify vengeance itself.

Neoptolemus.—Called also Pyrrhus, son of Achilles and Deidamia; he was one of the Greek heroes concealed in the wooden horse, and killed Priam. Andromache fell to his lot, and he became by her father of several children. He married Hermione and was killed at Delphi.

Neptune.—In Roman mythology the divine monarch of the ocean. The principal exploits and merits ascribed to Neptune are the assistance to Jupiter against the Titans; the building of the walls and ramparts of Troy; the creation and taming of the horse; the raising of the Island Delos out of the sea; and the destruction of Hippolytus by a monster from the deep.

Nereus.—A son of Pontus and Gæa, and husband of Doris, by whom he became the father of the fifty nereides.

Nessus.—A centaur who attempted to carry off Dejanira but was shot by Hercules with a poisoned arrow. His poisoned blood was afterward the cause of Hercules' death.

Nestor.—King of Pylos, son of Neleus. He was spared by Hercules when his brothers and father were killed. In his youth he was a distinguished warrior, taking part in the Calydonian hunt and Argonautic expedition. At the siege of Troy he was of advanced age, and distinguished for his wisdom and eloquence.

Nickar or **Hnickar.**—The name assumed by Odin when he personated the destroying principle.

Nicneven.—A gigantic and malignant female spirit of the old popular Scottish mythology. The hag is represented as riding at the head of witches and fairies at Hallowe'en.

Nidhögg.—The dragon that gnaws at the root of Yggdrasil, the tree of the universe in Scandinavian mythology.

Niflheim.—Mist-home of old Norse mythology. The region of endless cold and everlasting night, ruled over by Hela. It consists of nine worlds, to which are consigned those who die of disease or old age. This region existed "from the beginning" in the north, and in the middle thereof was the well Hvergelmir, from which flowed twelve rivers.

Ninus.—A son of Belus. He built Nineveh and founded the Assyrian monarchy, of which he was the first sovereign, B. C. 2059. He married Semiramis, whose husband had destroyed himself through fear of Ninus. He reigned fifty-two years.

Niobe.—A daughter of Tantalus, king of Lydia, and Euryanassa, or Dione. She married Amphion, and, according to Hesiod, they had ten sons and ten daughters. All the sons of Niobe expired by the darts of Apollo, and all the daughters, except Chloris, were destroyed by Diana. Niobe, overwhelmed with grief, was changed into a stone.

Niörd.—The Scandinavian sea-god. He was not one of the Æsir. Niörd's son was Frey (the fairy of the clouds), and his daughter was Freyja. His home was Noatun. Niörd was not a sea-god like Neptune, but the spirit of water and air. The Scandinavian Neptune was Ægir, whose wife was Skadi. His temples were near the seashore and all aquatic plants belonged to him.

Nisus.—A Trojan youth who accompanied Æneas to Italy, after the fall of Troy, and who is celebrated for his devoted attachment to Euryalus.

Nix.—Little creatures not unlike the Scotch brownie and German kobold. They wear a red cap, and are ever ready to lend a helping hand to the industrious and thrifty.

Nokomis.—Daughter of the moon, American Indian myths. Sporting one day with her maidens on a swing made of vine canes, a rival cut the swing, and Nokomis fell to earth, where she gave birth to a daughter named Wenonah.

Nornir or **Norns.**—The three fates of Scandinavian mythology, past, present, and future. They spin the events of human life, sitting under the ash-tree Yggdrasil which they carefully tend. Their names are Urda (the past), Verdandi (the present), and Skuld (the future). Besides these three Norns, every human creature has a personal Norn or fate. The home of the Norns is called in Scandinavian mythology Doomstead.

Nox.—Goddess of night, considered among the ancients as one of their oldest divinities, and was worshiped by them with great solemnity.

Nymphæ.—The nymphs, female divinities of a lower class. They were divided into: (1) Nymphs of the watery element, comprising the Oceanides, nymphs of the ocean; Nereides, nymphs of the Mediterranean; Naiades, the naiads or fresh-water nymphs. (2) Nymphs of mountains and grottoes, called Oreades. (3) Nymphs of forests and groves, called by different names. (4) Nymphs of trees (supposed to die with the trees which had been their abode), known as Dryads and Hamadryads.

Oceanides and **Oceanitides.**—Sea nymphs, daughters of Oceanus, from whom they received their name. According to Apollodorus, they were 3,000 in number, while Hesiod speaks of them as consisting of forty-one.

Oceanus.—A powerful deity of the sea, son of Cœlus and Terra. He married Tethys, the Oceanides being their children.

Odhærir.—In Scandinavian mythology the mead or nectar made of Kvasir's blood, kept in three jars. The second of these jars is called "Sohn," and the third "Bohn." Probably the nectar is the "spirit of poetry."

Odin.—The king of gods and men, and the reputed progenitor of the Scandinavian kings. He corresponds both to the Jupiter and the Mars of classical mythology. As god of war, he holds his court in Valhalla, surrounded by all warriors who have fallen in battle, and attended by two wolves, to whom he gives his share of food; for he himself lives on wine alone. On his shoulders he carries two ravens, Hugin (mind) and Munin (memory), whom he dispatches every day to bring him news of all that is doing throughout the world. He has three great treasures, namely, Sleipnir, an eight-footed horse of marvelous swiftness; Gungnir, a spear, which never fails to strike what it is aimed at; and Draupnir, a magic ring, which every ninth night drops eight other rings of equal value. The German tribes worshiped Odin under the name of "Woden." The fourth day of the week, Wednesday, was sacred to him.

Odur.—In Scandinavian mythology, husband of Freyja, whom he deserted. He abandoned his wife on her loss of youth and beauty, and was punished.

Odysseus.—A Greek form of the name Ulysses.

Œdipus.—He was the son of Laius, king of Thebes and his wife Jocasta. Laius, having been warned by an oracle that his throne and life were in danger from this son, gave him to a herdsman to be killed. But his life was saved, and he was reared by a peasant. Afterward he ransomed Thebes from the Sphinx by answering her riddle, unwittingly killed his own father, married Jocasta, and became king of Thebes. Subsequently discovering his parentage, he destroyed his eyesight, and wandered away from Thebes, attended by his daughter Antigone, who remained with him till his death.

Œgir.—God of the ocean, whose wife is Ran. They had nine daughters, who wore white robes and veils. These daughters are the billows, etc.

Ogres.—In nursery mythology giants of very malignant dispositions, who live on human flesh.

Olympia.—Celebrated games which received their name either from Olympia, where they were observed, or from Jupiter Olympus, to whom they were dedicated.

Olympus.—A mountain in Macedonia and Thessaly. The ancients supposed that it touched the heavens, and thus they have made it the residence of the gods, and the place where Jupiter held his court. On the top of the mountain, according to the poets, eternal spring reigned.

Omphale.—A queen of Lydia, daughter of Iardanus, and wife of Tmolus, after whose death she reigned herself. The story is frequently told of Hercules serving her as a slave, and of his wearing her dress, while Omphale put on the skin and carried the club.

Ops.—A daughter of Cœlus and Terra, the same as the Rhea of the Greeks, who married Saturn, and became mother of Jupiter. She was known among the ancients by the different names of Cybele, Bona Dea, Magna Mater, Thya, Tellus, and Proserpina.

Orestes.—A son of Agamemnon and Clytemnestra. His father was slain y Clytemnestra and Ægisthus, but young Orestes was saved, and married a sister of Agamemnon. He was indulgently treated by Strophius, who educated him with his son Pylades. The two young princes formed the most inviolable friendship. When Orestes had arrived at years of manhood he avenged his father's death by killing his mother, Clytemnestra.

Orion.—A giant and hunter, who, when intoxicated, offered violence to Merope, and was in consequence deprived of his eyesight. His eyesight was restored, and he lived as a hunter with Artemis. He was placed among the stars after his death.

Orithyia.—A daughter of Erechtheus, beloved by Boreas, who carried her off as she was wandering near the river Ilissus.

Orlog.—A god of Norse fable personifying the eternal law of the universe, from whose decree there was no appeal.

Ormuzd.—The name of the supreme deity of the ancient Persians, and of their descendants, the Parsees and Ghebers. He is an embodiment of the principle of good, and was created by the will of the great eternal spirit, Zervan-Akharana, simultaneously with Ahriman, the principle of evil, with whom he is in perpetual conflict. Ormuzd is the creator of the earth, sun, moon, and stars, to each of which he originally assigned its proper place, and whose various movements he continues to regulate.

Orpheus.—A legendary character, son of Œagrus and Calliope. He was instructed by the Muses, and enchanted with his lyre not only wild animals but trees and rivers. He accompanied the Argonauts, and on his return married Eurydice, who died from a serpent's bite. To recover her, Orpheus visited the infernal regions, when Pluto promised him his wife on condition that he should not look back on her until he had reached the upper world. He turned around, however, to see if she was following, and she disappeared from his sight. His grief made him reject the advances of the Thracian women, who in revenge drowned the sound of his lyre with their shrieks, and tore him to pieces in a Bacchanalian orgy.

Osiris.—A great deity of the Egyptians, husband of Isis. The ancients differ in opinion concerning this celebrated god, but they all agree that as ruler of Egypt he took care to civilize his subjects, to improve their morals, to give them good and salutary laws, and to teach them agriculture. He was worshiped under the form of an ox.

Ossa.—A celebrated mountain in the north of Thessaly, connected with Pelion on the southeast, and divided from Olympus on the northwest by the vale of Tempe. It is mentioned in the legend of the war of the giants.

Pactolus.—The river whose sands turned to gold when Midas washed in the waters by order of Bacchus.

Paimosaid.—In American Indian myths a walking thief, especially one who walks through cornfields about harvest time to pluck the ears of maize or corn.

Palæmon.—Originally called Melicertes. Son of Ino; called Palæmon after he was made a sea-god. The Roman Portunus, the protecting god of harbors, is the same.

Palamedes.—Son of Nauplius and Clymene, a Greek warrior at the siege of Troy. Agamemnon, Diomedes, and Ulysses caused a Phrygian captive to write to Palamedes a letter in the name of Priam, which they concealed in his tent. They then accused him of treachery, and, upon finding the letter, caused him to be stoned to death.

Pales.—The goddess of shepherds, presiding over cattle and pastures, whose festival, the Palilia, was celebrated on the 21st of April, the day on which Rome was founded.

Palladium.—A sacred image of Athena, which was supposed to keep safe the city in which it was preserved. Zeus threw it from heaven as Ilus was beginning to build Troy, and Ilus built a sanctuary for it. Ulysses and Diomedes carried it away.

Pallas.—A name of Minerva. She is said to have received the name because she killed a noted giant bearing that name.

Pan.—The god of shepherds, huntsmen, and the inhabitants of the country. He was in appearance a monster; he had two small horns on his head, and his legs, thighs, tail, and feet were like those of the goat. He was the inventor of the syrinx or shepherd's flute. Sudden fright without visible cause, a panic, was ascribed to Pan. The Romans identified Faunus with him.

Pandarus.—A son of Lycaon, who aided the Trojans in their war with the Greeks. He broke the truce which had been agreed on by the contending armies, and wounded Menelaus and Diomedes. He was at last killed by Diomedes.

Pandion.—King of Athens, father of Procne and Philamola, in whose reign Bacchus and Demeter are said to have come to Attica.

Pandora.—The first woman on earth. When Prometheus stole fire from heaven Zeus bade Hephæstus to make a woman from earth. Aphrodite gave her beauty, Hermes boldness and cunning, and each god gave some gift. Hermes took her to Epimetheus, who married her. In his house was a jar which he had been forbidden to open. Pandora was tempted by curiosity to open the lid, when all the evils incident to humanity poured out, and she had only time to shut the lid, preventing the escape of Hope.

Pantheon.—A celebrated temple at Rome, built by Agrippa in the reign of Augustus, and dedicated to all the gods.

Parcæ.—The Fates, powerful goddesses who presided over the birth and life of mankind. They were three in number, Clotho, Lachesis, and Atropos, daughters of Nox and Erebus, according to Hesiod, or, according to what he says in another place, of Jupiter and Themis.

Paris.—In Greek mythology, the second son of Priam, king of Troy, by Hecuba. His mother dreamed before his birth that she had brought forth a firebrand, which was interpreted to mean that he would cause the destruction of Troy. To prevent this the child was exposed on Mount Ida, where he was discovered by a shepherd, who brought him up as his own son. Here his grace and courage commended him to the favor of Œnone, a nymph of Ida, whom he married. At the marriage of Peleus and Thetis a dispute arose whether Hera, Athena, or Aphrodite was the most beautiful, and as such entitled to the golden apple. Paris was chosen judge, and decided in favor of Aphrodite, who had promised him the fairest woman in the world for his wife. Subsequently he visited Sparta, the residence of Menelaus, who had married Helena (or Helen), the fairest woman of the age, whom he persuaded to elope with him. This led to the siege of Troy, at the capture of which he was killed by an arrow.

Parnassos or **Parnassus.**—A mountain near Delphi, in Greece. It contained numerous caves, glens, and romantic ravines. It has two summits, one of which was consecrated to Apollo and the Muses, the other to Bacchus. It was anciently called Larnassos, from larnax, an ark, because Deucalion's ark stranded there after the flood. After the oracle of Delphi was built at its foot it received the name of Parnassos. It is celebrated as one of the chief seats of Apollo and the Muses, and an inspiring source of poetry and song.

Parthenope.—One of the sirens, whose dead body was washed ashore on the present site of Naples. She threw herself into the sea out of love for Ulysses.

Patroclus.—The gentle and amiable friend of Achilles in Homer's *Iliad*.

Pauguk.—Name given to the great power, death, in American Indian mythology.

Pau-Puk-Keewis.—In American Indian folk-lore a mischievous magician, who is pursued by Hiawatha, goes through a series of wonderful transformations in his endeavors to escape, and finally becomes an eagle.

Pax.—The goddess of peace, worshiped in Greece under the name Irene. Pax wears a crown of laurel, and holds in her hand the branch of an olive tree.

Peboan.—In America Indian folk-lore the personification of winter in form of a great giant who shook the snow from his hair and turned water into stone by his breath.

Pegasus.—The winged horse which sprung from the blood of Medusa. He ascended to the immortals and was used by Zeus to carry thunder and lightning. He was also the horse of the Muses.

Peleus.—King of the Myrmidons at Phthia in Thessaly. Having in conjunction with his brother Telamon murdered his half-brother Phocus, he was expelled by Æacus from Ægina and went to Thessaly. He was purified from the murder by Eurytion who gave Peleus his daughter Antigone in marriage, and a third part of his kingdom.

Pellas.—The name of the spear of Achilles, which was so large that none could wield it but the hero himself.

Pelion.—A high mountain in Thessaly celebrated in mythology. Near its summit was the cave of the Centaur Chiron. The giants, in their war with the gods, are said to have attempted to heap Ossa and Olympus on Pelion, or Pelion and Ossa on Olympus, in order to scale heaven. On Pelion the timber was felled with which the ship Argo was built.

Pelops.—Son of Tantalus and Dione, husband of Hippodamia, king of Pisa in Elis; from him the southern peninsula of Greece, or the Peloponnesus, derived its name. His father once invited the gods to a banquet, and killed Pelops and served him; they refused to taste the dish, and he was restored to life.

Penates.—The household gods of the Romans, in which were included the Lares.

Penelope.—The faithful wife of Ulysses, who being importuned, during his long absence, by numerous suitors for her hand, postpones making a decision among them until she shall have finished weaving a funeral pall for her father-in-law, Laërtes. Every night she secretly unravels what she has woven by day, and thus puts off the suitors till Ulysses returns.

Peri.—Peris are delicate, gentle, fairy-like beings of eastern mythology, begotten by fallen spirits. They direct with a wand the pure in mind the way to heaven. These lovely creatures, according to the Koran, are under the sovereignty of Eblis; and Mohammed was sent for their conversion, as well as for that of man.

Persa or **Perseis.**—A daughter of Oceanus, and wife of Helios (the sun), by whom she became the mother of Ætes, Circe, Pasiphaë, and Perses.

Perseis.—A name given to Hecate, as the daughter of Perses by Asteria.

Persephone.—The Greek name of Proserpine. Homer describes her as the wife of Hades (Pluto), and the formidable, venerable, and majestic queen of the shades, who rules over the souls of the dead, along with her husband.

Perseus.—Son of Zeus and Danaë. Polydectes, the king of Seriphos, to which Danaë and Perseus were borne in the boat in which they were set afloat when Perseus was born, treated them kindly, but, falling in love with Danaë, he dispatched Perseus to fetch the head of the Gorgon Medusa. Under the guidance of Athena and Hermes, he obtained the winged sandals, the helmet of Pluto which rendered him invisible, the magic wallet, and buckler which served as a mirror. By help of the mirror he cut off Medusa's head and escaped and went to Æthiopia, where he discovered and saved Andromeda. He afterward returned to Argos with her, and accidentally killed Acrisius, his grandfather, by hitting him with a quoit.

Phædra.—A daughter of Minos and Pasiphaë, who married Theseus. She became the mother of Acamas and Demophoön. She brought an unjust accusation against Hippolytus (a son of Theseus before she married him), who was killed by the horses in his chariot taking fright, causing him to be thrown under the wheels and crushed to death. On hearing this, Phædra acknowledged the falseness of the charge she had brought against Hippolytus, and hanged herself in despair.

Phaëton.—Son of Helios and Clymene. He obtained from his father permission to drive the chariot of the sun for one day. He was unable to control the horses, and they rushed so near the earth as to set it on fire. Zeus killed him with a thunderbolt and flung him into the river Eridanus. His sisters, for their excessive grieving, were changed into poplars.

Phaon.—Originally an old and ugly boatman of Mitylene, who received youth and beauty from Aphrodite for carrying her across the sea without accepting pay. Sappho is said to have fallen in love with him and to have leaped from the Leucadian rock on his slighting her. But, while Sappho is a historical character, Phaon is purely mythical.

Philoctetes.—A celebrated archer, friend and armor-bearer of Hercules, whose bow and poisoned arrows he inherited. On his voyage to Troy he was wounded in the foot either by a snake or one of his own arrows. The wound produced an intolerable stench, and Philoctetes was left alone in Lemnos. Subsequently he was sent for, as Troy could not be taken without the arrows of Hercules. At Troy he was cured, and killed, among others, Paris.

Philomela.—A daughter of Pandion, king of Athens. Her sister Procne had married Tereus, king of Thrace, and, being separated from Philomela, spent her time in great melancholy. Tereus treated Philomela with great cruelty. In poetry we frequently find the nightingale alluded to as Philomela.

Phœbe.—The goddess of the moon, and sister of Phœbus; a name of Diana. See *Diana*.

Phœbus.—The god of archery, prophecy, and music. He was the son of Jupiter and Latona, and brother of Diana (Artemis). He was god of the sun, as Diana, his sister, was the goddess of the moon.

Phœnix.—A fabulous bird described as being as large as an eagle; its head finely crested with a beautiful plumage, its neck covered with gold-colored feathers, its tail white, and its body purple or crimson.

Phryxus.—Son of Athamas and Nephele and brother of Helle. He was to be sacrificed to Zeus in consequence of the intrigues of his stepmother Ino. Nephele rescued her children, who rode away on the ram with the golden fleece. He arrived safely in Colchis, married Chalciope, daughter of Ætes, and sacrificed the ram to Zeus.

Phyllis.—A daughter of Sithon, or, according to some authorities, of Lycurgus, king of Thrace. She received Demophoön, who landed on her coasts on his return from the Trojan war, and fell in love with him, and he reciprocated her affection; but afterward proving faithless, Phyllis hanged herself, and, according to an old tradition, was changed into an almond tree.

Picus.—King of Latium, son of Saturn, who married Venilia. As he was hunting he was met by Circe, who became enamored with him. She changed him into a woodpecker.

Pierides.—A name given to the Muses, because they were born in Pieria, or, as some say, because they were supposed to be the daughters of Pierus, a king of Macedonia, who settled in Bœotia.

Pirene.—A celebrated fountain of Corinth, at which Bellerophon is said to have caught the horse Pegasus. It gushed forth from the rock in the Acrocorinthus, was conveyed down the hill by subterraneous conduits, and fell into a marble basin, from which the greater part of the town was supplied with water. The poets frequently used Pirenis in the general sense of Corinthian.

Pleiades.—Means the "sailing stars," because the Greeks considered navigation safe at the return of the Pleiades, and never attempted it after those stars disappeared. The Pleiades were the seven daughters of Atlas and Pleione, named Electra, Alcyone, Celæno, Maia, Sterope, Taygete, and Merope. They were transformed into stars, one of which (Merope) is invisible, out of shame because she alone married a human being. Some call the invisible star "Electra," and say she hides herself from grief for the destruction of the city and royal race of Troy.

Pluto.—He was a second brother of Jupiter, and received, as his portion in the division of empire, the infernal regions, or the world of shades. The chief incident in the history of Pluto is his seizure and abduction of Proserpine, who thereby became his wife, and the queen of the lower world.

Plutus.—The god of riches; was probably of allegorical rather than mythical origin, since his name in Greek is but the common term for wealth.

Pluvius.—"The sender of rain," a surname of Jupiter among the Romans, to whom sacrifices were offered during long-protracted droughts.

Podalirius.—The son of Æsculapius, and brother of Machaon, with whom he led the Thessalians of Tricca against Troy. He was, like his brother, skilled in the medical art.

Polias.—Meaning "the goddess protecting the city." A surname of Athena at Athens, where she was worshiped as the protecting divinity of the Acropolis.

Polites.—A son of Priam and Hecuba, and father of Priam the younger. He was slain by Pyrrhus.

Pollux.—A son of Jupiter and Leda, brother to Castor.

Polydorus.—(1) King of Thebes, son of Cadmus and Harmonia, husband of Nycteis, and father of Labdacus. (2) Son of Priam and Hecuba. When Ilium was on the point of falling into the hands of the Greeks, Priam intrusted Polydorus and a large sum of money to Polymnestor, king of the Thracian Chersonesus.

Polyhymnia.—Daughter of Jupiter and Mnemosyne One of the Muses, who presided over singing and rhetoric.

Polyphemus.—A celebrated Cyclops, son of Neptune and Thoösa, the daughter of Phorcys. He is represented as a monster with one eye in the middle of his forehead. Ulysses was his captive, but escaped by putting a firebrand in the monster's eye.

Polyxena.—Daughter of Priam and Hecuba, beloved by Achilles, and whose treachery led to the latter's death. Neoptolemus slew her on the tomb of his father.

Pomona.—A nymph at Rome, who was supposed to preside over gardens and to be the goddess of fruit trees.

Ponemah.—In American Indian mythology the name of the land of the future life, or the spirit-land.

Poseidon.—Called Neptune by the Romans; was the god of the Mediterranean Sea. He was a brother of Zeus (Jupiter), and Hades (Pluto), and it was determined by lot that he should rule over the sea. The palace of Poseidon was in the depth of the sea, near Ægæ, where he kept his horses with brazen hoofs and golden manes. With these horses he rides in a chariot over the waves of the sea, which become smooth as he approaches, while the monsters of the deep play around his chariot. Poseidon, in conjunction with Apollo, is said to have built the walls of Troy for Laomedon.

Priamus.—The last king of Troy, was son of Laomedon, by Strymo, called Placia by some writers. He married Arisba, whom he divorced in order to marry Hecuba, by whom he had a number of children, the most celebrated of whom were Hector, Paris, Deiphobus, Helenus, Laodice, and Cassandra. After he had reigned some time, Priam was anxious to recover his sister Hesione, who had been carried into Greece by Hercules, and, to achieve this, he manned a fleet, the command of which he gave to his son Paris, who instead

Of obeying the paternal instructions, carried away Helen, the wife of Menelaus, king of Sparta. This caused the Trojan war, which lasted for ten years. At the end of the war Priam was slain by Neoptolemus, the son of Achilles.

Prometheus.—Son of the Titan Iapetus and Clymene, and brother of Atlas, Menœtius, and Epimetheus. He is represented as the great benefactor of men in spite of Zeus (Jupiter). He stole fire from heaven in a hollow tube, and taught mortals all useful arts. In order to punish men, Zeus gave Pandora as a present to Epimetheus, in consequence of which diseases and sufferings of every kind befell mortals. He also chained Prometheus to a rock on Mount Caucasus, where in the daytime an eagle consumed his liver, which was restored in each succeeding night. Prometheus was thus exposed to perpetual torture; but Hercules killed the eagle and delivered the sufferer, with the consent of Zeus, who in this way had an opportunity of allowing his son to gain immortal fame.

Proserpina.—A daughter of Ceres and Jupiter, called by the Greeks Persephone. As she was gathering flowers Pluto carried her off to the infernal regions, where he married her. Ceres, having learned that her daughter had been carried away by Pluto, demanded of Jupiter that Pluto should be punished. As queen of hell, Proserpine presided over the death of mankind. She was known by the names of Hecate, Juno Inferna, Libitina, and several others.

Proteus.—A sea deity, son of Oceanus and Tethys, or, according to some writers, of Neptune and Phœnice. He had received the gift of prophecy from Neptune, but when consulted he often refused to give answers, and puzzled those who consulted him by assuming different shapes.

Psyche.—A beautiful maiden who excited the envy of Venus, who bade her son Cupid to inspire her with a love for the basest of mortals. Cupid fell in love with her himself and conveyed her away to a lonely spot where, unseen and unknown, he visited her, bidding her never seek to know who he was. Her curiosity overcame her and she lighted a lamp to look upon him as he slept. A drop of oil fell from the lamp and woke him, and he left her with reproaches. She wandered about seeking her lover, and finally fell into the power of Venus, who forced her to perform the severest and most humiliating services, in which she was secretly aided by Cupid. She at length overcame Venus' enmity, was made immortal, and reunited to Cupid. The word Psyche means the soul.

Pukwana.—The smoke from the calumet or peace-pipe among American Indians. The pipe was made from stone found near the headwaters of the Mississippi. A quarry, located near the mountains, was famous among the Indians, who had made the adjacent territory neutral ground. Here they came and provided themselves with pipes. To apply the stone to any other use than that of pipe-making would have been sacrilege in their mind. From the color, they even fancied it to have been made, at the great deluge, out of the flesh of the perishing Indian.

Puk-Wudjies.—The pygmies of American Indian folk-lore; little wild men of the woods.

Pygmalion.—A grandson of Agenor. He made a beautiful statue, which he fell so deeply in love with, that Venus, at his earnest petition, gave it life.

Pythia.—The priestess of Apollo and Delphi. She is represented as crowned with laurels and seated on a tripod similarly adorned and placed over a chasm whence arose a peculiar vapor.

Pylades.—Son of Anaxibia, sister of Agamemnon. His father was king of Phocis; and after the death of Agamemnon, Orestes was secretly carried to his father's court. Here Pylades contracted that friendship with Orestes which became proverbial.

Pyramus.—The lover of Thisbe, who, on account of her supposed death, stabbed himself under a mulberry tree. Thisbe, afterward, finding the body of her lover, killed herself on the same spot with the same weapon; and the fruit of the mulberry has ever since been as red as blood. See *Thisbe.*

Pyrrhus.—Known also as Neoptolemus, a son of Achilles, remarkable for his cruelty at the siege of Troy. He was slain at Delphi, at the request of his own wife, by Orestes.

Python.—A celebrated serpent sprung from the mud and stagnated waters which remained on the surface of the earth after the deluge of Deucalion. Apollo killed the monster.

Quirinus.—An Italian divinity, identified with Romulus and assimilated to Mars.

Rachaders.—In Indian mythology the second tribe of giants or evil genii, who had frequently made the earth subject to their kings, but were ultimately punished by Shiva and Vishnu.

Radegaste.—In Slavonic mythology a tutelary god of the Slavi. The head was that of a cow, the breast was covered with an ægis, the left hand held a spear, and a cock surmounted its helmet.

Ragnarök (twilight of the gods).—The day of doom, when the present world and all its inhabitants will be annihilated. Vidar and Vali will survive the conflagration, and reconstruct the universe. In Scandinavian mythology the belief is taught that after this time the earth or realm will become imperishable and happiness sure.

Rahu.—In Hindu mythology the demon that causes eclipses. One day Rahu stole into Valhalla to quaff some of the nectar of immortality. He was discovered by the Sun and Moon, who informed against him, and Vishnu cut off his head. As he had already taken some of the nectar into his mouth, the head was immortal; and he ever afterward hunted the Sun and Moon, which he caught occasionally, causing eclipses.

Rakshas.—Evil spirits in Hindu myths, who guard the treasure of Kuvera, the god of riches. They haunt cemeteries and devour human beings; assume any shape at will, and their strength increases as the day declines. Some are hideously ugly, but others, especially the female spirits, allure by their beauty.

Ravana.—According to Indian mythology, was fastened down between heaven and earth for 10,000 years by Siva's leg, for attempting to move the hill of heaven to Ceylon. He is described as a demon giant with ten faces.

Ravens.—According to an oracle from the gods, delivered at ancient Athens, ravens prognosticate famine and death because they bear the characteristics of Saturn, the author of these calamities, and have a very early perception of the malign influence of that planet.

Remores.—Birds which retard the execution of a project.

Rhadamanthus.—A son of Jupiter and Europa, brother of Minos, and king of Lycia. He was so renowned for his justice and equity, that, after death, he was made one of the three judges in the underworld.

Rhamnus.—A daughter of Nox, and otherwise known as Nemesis. The city of Rhamnus was under her special patronage.

Rhea.—Daughter of Uranus and Gæa, a goddess of the earth. By Cronos she became mother of Hera, Pluto, Poseidon, Zeus, and other divinities.

Rhesus.—Marched to the assistance of Troy. An oracle had declared that the city could not be taken if his horses drank the water of the Xanthus and fed on Trojan grass. Ulysses and Diomedes slew Rhesus and carried off his horses.

Romulus.—According to tradition, the founder of Rome. He was a son of Mars and Ilia, and was twin brother of Remus. The twins were thrown into the Tiber, but were saved and suckled by a she-wolf till they were found by Faustulus, a shepherd, who brought them up. Disputes arising between the brothers in reference to the building of the city, Romulus caused Remus to be slain.

Saga.—Goddess of history in Scandinavian mythology.

Salamander.—A fabulous animal supposed by the ancients to live in and have the quality of eating fire.

Salmoneus.—King of Elis, who, wishing to be thought a god, used to imitate thunder and lightning by driving his chariot over a brazen bridge, and darting burning torches on every side.

Salus.—The Roman goddess of health and prosperity.

Sarpedon.—A Lycian prince, son of Zeus and Laodamia. He was killed at the siege of Troy by Patroclus.

Saturnus.—The son of Cœlus, or Uranus, by Terra. It was customary to offer human victims on his altars till this custom was abolished by Hercules. He is generally represented as an old man bent with age, and holding a scythe in his right hand.

Saturnalia.—Feasts in honor of Saturn. Slaves were reputed masters during the three days they lasted; were at liberty to say what they pleased; and were served at table by their owners. These festivities were held annually toward the end of December.

Satyr.—A sylvan deity, or demigod, represented as a monster, half man and half goat; having horns on his head, a hairy body, with the feet and tail of a goat. They belong in the train of Bacchus, and have been distinguished for lasciviousness and riot. Although mortal, they are superior to the cares and sorrows of mortal life.

Scylla.—A maiden whose body the enchantress Circe changed below the waist into frightful monsters always barking. The old Greek story is that Circe was jealous of Scylla, and so deformed her by pouring the juice of poisonous herbs into the water in which she bathed. This sudden metamorphosis so terrified Scylla that she threw herself into the sea, and became the rocks which bear her name.

Sedrat.—The lotus tree which stands on the right-hand side of the invisible throne of Allah. Its branches extend wider than the distance between heaven and earth. Its leaves resemble the ears of an elephant. Each seed of its fruit incloses an houri; and two rivers issue from its roots. Numberless birds sing among its branches, and numberless angels rest beneath its shade.

Segesta.—A rural divinity who protected corn during harvest time.

Semele.—Daughter of Cadmus and Harmonia, at Thebes, and accordingly sister of Ino, Agave, Autonoë, and Polydorus. She was beloved by Zeus (Jupiter). Hera (Juno), stimulated by jealousy, appeared to her in the form of her aged nurse Beroë, and induced her to ask Zeus to visit her in the same splendor and majesty with which he appeared to Hera. Zeus warned her of the danger of her request; but as he had sworn to grant whatever she desired, he was obliged to comply with her prayer. He accordingly appeared before her as the god of thunder, and Semele was consumed by the lightning; but Zeus saved her child Dionysus (Bacchus), with whom she was pregnant. Her son afterward carried her ou of the lower world, and conducted her to Olympus, where she became immortal under the name of Thyone.

Serapis or **Sarapis.**—An Egyptian divinity whose worship was introduced into Greece in the time of the Ptolemies. His worship was introduced into Rome together with that of Isis.

Seriswattee.—The Janus of Hindu mythology.

Sex.—Milton says that spirits can assume either sex at pleasure, and Michael Psellus asserts that demons can take what sex, shape, and color they please, and can also contract or dilate their form at pleasure.

Silenus.—A demigod who is represented generally as a fat old man riding on an ass, with flowers crowning his head.

Silvanus or **Sylvanus.**—A deity presiding over woods, forests, and fields. He is also called the protector of the boundaries of fields.

Sirens.—They were a sort of sea goddesses, said by some to be two in number, by others, three, and even four. They lured to destruction those who listened to their songs. When Ulysses sailed past their island he stopped the ears of his companions with wax, and had himself tied to the mast of his ship. Thus he passed with safety, and the sirens, disappointed of their prey, drowned themselves.

Sirius.—Known in mythology as the faithful dog of Orion, and set in the heavens as a bright star by Diana when she mourned the display of her archery which caused Orion's death.

Sisyphus.—Son of Æolus and Enaretta. After death he was condemned, in the infernal regions, to roll a stone to the summit of a hill, which always rolled back, and rendered his punishment eternal.

Siva.—The third of the Hindu triad of divinities, who, among a thousand names, bears also that of Mahadeva. The greatest confusion exists as to his attributes; now he is said to be the destroyer, and now the creative principle.

Sol.—The Greeks and Romans worshiped Apollo as the god and dispenser of light, and in view of this attribute named him Phœbus; yet they conceived another distinct divinity, distinguished from Apollo under the literal name applied to designate the sun, *viz.*, Sol. This name, therefore, was employed to express not only the actual body in the heavens, but also a supposed being having a separate and personal existence.

Somnus.—Son of Nox and Erebus. He was one of the infernal deities, and presided over sleep.

Specter of the Brocken.—Among German myths, a singular colossal apparition seen in the clouds, at certain times of the day, by those who ascend the Brocken, or Blocksberg, the highest peak of the Hartz mountains.

Sphinx or **Sphynx.**—A fabulous monster who ravaged Thebes until answer should be found to her enigmas. On Œdipus having explained all the riddles, the monster immediately flung herself into the sea and perished. The form of the so-called Egyptian sphinxes is that of a winged lion with a human head and bust, always in a lying attitude, whereas the Greek sphinxes are represented in any attitude which might suit the fancy of the poet.

Stentor.—One of the Greeks who went to the Trojan war. He was noted for the loudness of his voice, and from him the term "stentorian" has become proverbial.

Styx.—A celebrated river of the infernal regions. The gods held it in such veneration that they always swore by it, the oath being inviolable.

Surya.—The sun-god, according to the Hindu *Veda*, whose car is drawn by seven green horses, the charioteer being Dawn.

Syrinx.—An Arcadian nymph, who, being pursued by Pan, fled into the river Ladon, and at her own prayer was metamorphosed into a reed, of which Pan then made his flute.

Tantalus.—Son of Zeus, father of Pelops and Niobe. For his crimes on earth (some say the murder of Pelops) he was punished in the lower world by being placed in a lake, the waters of which receded whenever he tried to drink, while overhead hung branches of fruit which also receded whenever he tried to reach them. The English verb "tantalize" comes from his name.

Tarpeia.—Daughter of Tarpeius, who admitted the Sabines to the fortress on the Capitoline hill, tempted by their gold bracelets. As they entered they threw their shields upon her, crushing her to death. Part of the hill was called the Tarpeian rock from her.

Tartarus.—A dark abyss under the earth in which the Titans were chained when their father feared their strength. The music of Orpheus penetrated its depths and caused the condemned to cease their toil. The name has come to signify an inner region of hell, to which the gods sent the exceptionally depraved.

Telemachus.—Son of Penelope and Ulysses. At the end of the Trojan war he went in search of his father, whom, with the aid of Minerva, he found. Aided by Ulysses, he delivered his mother from the suitors that beset her.

Terpsichore.—One of the Muses, daughter of Jupiter and Mnemosyne. She presided over dancing.

Themis.—The daughter of Cœlus and Terra, and the goddess of law; according to some legends, married to Jupiter.

Thenus.—The goddess of justice and one of the most celebrated of the Titanides, or daughters of Uranus and Titæa. To her is ascribed the first uttering of oracles, and also the first introduction of sacrifices.

Thersites.—The ugliest of the Greeks that came to the siege of Troy. He was chastised by Ulysses for reviling Agamemnon and killed by Achilles for ridiculing him.

Theseus.—Son of Ægeus and Æthra. He killed Procrustes and other robbers and monsters, and the Marathonian bull. He also went to Crete, volunteering as one of the seven youths sent as tribute to be devoured by the Minotaur, which by the help of Ariadne he killed. He deserted Ariadne at Naxos and defeated the Amazons, whose queen he married. He took part in many exploits and finally invaded the lower regions to assist his friend Pirithous in carrying off Persephone. Here he was imprisoned until delivered by Hercules.

Thespian Maids, The.—The nine Muses. So called from Thespia, in Bœotia, near Mount Helicon, often called Thespia Rupes.

Thetis.—A sea deity, daughter of Nereus and Doris. She married Peleus, their son being Achilles, whom she plunged into the Styx, thus rendering him invulnerable in every part of his body except the heel by which she held him.

Thisbe.—A beautiful girl of Babylon, beloved by Pyramus. They lived in adjoining houses and conversed through a crack in the wall. They agreed upon a rendezvous at the tomb of Ninus, and Thisbe, who arrived first, fled from a lioness, which smeared with blood the veil she dropped. When Pyramus arrived he slew himself, supposing her to have been devoured by the lioness, and Thisbe, when she found her lover's body, also killed herself.

Thor.—In Scandinavian mythology the eldest son of Odin and Frigga; strongest and bravest of the gods. He launched the thunder, presided over the air and the seasons, and protected man from lightning and evil spirits. His wife was Sif ("love"); his chariot was drawn by two he-goats; his mace or hammer was called Mjolner; his belt was Megin-giord, and whenever he put it on his strength was doubled; his palace, Thrudvangr, contained 540 halls; Thursday is Thor's day. The word means "refuge from terror."

Titans.—The children of Uranus and Gæa. They deposed their father and raised their brother Cronus to the throne of the gods. They were overcome by Zeus, who confined them in a cavity below Tartarus.

Tithonus.—A son of Laomedon, king of Troy. He was so beautiful that Aurora became enamored of him, and persuaded the gods to make him immortal; but, as she forgot to ask for eternal youth, he became decrepit and ugly, and was, therefore, changed by her into a cicada.

Tityus.—A famous giant, son of Jupiter and Trera. His body was so vast that it covered nine acres of ground. He had dared to offer an insult to Juno and in punishment was chained like Prometheus while a vulture feasted on his liver. He is mentioned by Vergil.

Tomalin.—A valiant fairy knight, kinsman of King Oberon. Tomalin is not the same as "Tom Thumb," as we are generally but erroneously told, for in the "mighty combat" Tomalin backed Pigwiggen, while Tom Thumb seconded King Oberon. This fairy battle was brought about by the jealousy of Oberon, who considered the attentions of Pigwiggen to Queen Mab were "far too nice."

Trimurti.—The name of the Hindu triad of deities; or Brahma, Vishnu, and Siva united in one godhead, and spoken of as an inseparable unity.

Triptolemus.—Son of Oceanus and Terra, or, according to some authorities, son of Celeus, king of Attica, and Neæra. He was in his youth cured of a severe illness by Ceres, with whom he became a great favorite. She taught him agriculture, and gave him her chariot drawn by dragons, in which he traveled over the earth, distributing corn to the inhabitants.

Triton.—Son of Neptune, who dwelt with his father and mother in a golden palace in the bottom of the sea, or, according to Homer, at Agae. Later writers describe him as riding over the sea on sea-horses or other monsters.

Trolls.—Dwarfs of Northern mytaology, living in hills or mounds; they are represented as stumpy, misshapen, and humpbacked, inclined to thieving, and fond of carrying off children or substituting one of their own offspring for that of a human mother. They are called hill-people, and are especially averse to noise, from a recollection of the time when Thor used to fling his hammer after them.

Tros.—Son of Erichthonius and Astyoche, and grandson of Dardanus. He was married to Callirrhoë, by whom he became the father of Ilus, Assaracus, and Ganymedes, and was king of Phrygia. The country and people of Troy derived their name from him. He gave up his son Ganymedes to Zeus (Jupiter) for a present of horses.

Troy.—The capital of Troas, in Asia Minor. A city whose fame belongs entirely to the heroic age, and the siege of which by the Greeks, for the recovery of Helen, which lasted for ten years, is the subject of Homer's grand epic, and the most renowned legend of all antiquity.

Typhœus or **Typhon.**—A famous giant, son of Tartarus and Terra, who had a hundred heads. He made war against the gods, and was put to flight by the thunderbolts of Jupiter, who crushed him under Mount Ætna.

Tyr.—In Norse mythology, a warrior deity, and the protector of champions and brave men; he was also noted for his sagacity. When the gods wished to bind the wolf Fenrir, Tyr put his hand into the demon's mouth as a pledge that the bonds should be removed again. But Fenrir found that the gods had no intention of keeping their word, and revenged himself in some degree by biting the hand off. Tyr was the son of Odin and brother of Thor.

Ulin.—An enchantress, who had no power over those who remained faithful to Allah and their duty; but if any fell into error or sin, she had full power to do as she liked. Thus, when Misnar (sultan of India) mistrusted the protection of Allah, she transformed him into a toad. When the Vizier Horam believed a false report, obviously untrue, she transformed him also into a toad. And when the Princess Hemjunah, to avoid a marriage projected by her father, ran away with a stranger, her indiscretion placed her in the power of the enchantress, who transformed her likewise into a toad. Ulin was ultimately killed by Misnar, sultan of Delhi, who felled her to the ground with a blow.

Ulysses.—The famous king of Ithaca, son of Anticlea and Laërtes, or, according to some, of Sisyphus. He married Penelope, daughter of Icarius, on which his father resigned to him the crown. He went to the Trojan war, where he was esteemed for his sagacity. On the conclusion of the war he embarked for Greece, but was exposed to numerous misfortunes on his journey. In his wanderings, he with some of his companions, was seized by the cyclops Polyphemus, from whom he made his escape. Afterward he was thrown on the island of Æea, where he was exposed to the wiles of the enchantress Circe. Eventually he was restored to his own country, after an absence of twenty years. The adventures of Ulysses on his return from the Trojan war form the subject of Homer's *Odyssey*.

Urania.—One of the Muses, daughter of Jupiter and Mnemosyne. She presided over astronomy.

Utgard-Loki.—The chief of the giants, in Norse mythology.

Valhalla.—In Scandinavian mythology the palace of immortality wherein are received the souls of heores slain in battle.

Valkyrs.—The battle-maidens of Scandinavian mythology. They were mounted on swift horses and held drawn swords. They rushed into battle and selected those destined to death and conducted them to Valhalla. The number of Valkyrs differs greatly according to the various mythologists and ranges from three to sixteen, the greater part of them, however, naming only nine.

Varuna or **Vrauna.**—In Hindu mythology, the deity who presides over the waters of the ocean corresponding with *Neptune* of classic mythology.

Venus.—The goddess of beauty, and mother of love. She attained but little importance until she was identified with the Greek goddess Aphrodite. It is said that she sprang from the foam of the sea, and was carried to heaven, where all the gods admired her beauty. Jupiter gave her in marriage to Vulcan, but she intrigued with some of the gods, notably with Mars, their offspring being Hermione, Cupid, and Anteros. She became enamored of Adonis, which caused her to abandon Olympus. Her contest for the golden apple, which she gained against her opponents Juno and Minerva, is a prominent episode in mythology. She had numerous names applied to her; conspicuous among which may be named Anadyomene, under which cognomen she is distinguished by the picture representing her as rising from the ocean, by Apelles. Sparrows and doves were customarily yoked to her chariot; her girdle inspired all hearts with passion for the wearer; and her son Cupid was her attendant and minister. The myrtle was sacred to her. Her favorite residence was at Cyprus.

Vesta.—The ancient goddess of fire. Æneas was believed to have brought the eternal fire of Vesta from Troy, along with the images of the Penates; and the prætors, consuls, and dictators, before entering upon their official functions, sacrificed, not only to the Penates, but also to Vesta at Lavinium. In the ancient Roman house, the hearth was the central part, and around it all the inmates daily assembled for their common meal (cœna); every meal thus taken was a fresh bond of union and affection among the members of a family, and at the same time an act of worship of Vesta, combined with a sacrifice to her and the Penates.

Vestal.—One of the virgin priestesses who, among the Romans, were consecrated to the service of Vesta. Their employment was to take care that the sacred fire of Vesta was not extinguished. The vestal took a solemn vow of chastity for the thirty years of her service; the dreadful punishment of a violation of which was that she should be buried alive in a subterranean vault near the Collina gate.

Victoria or **Victorina.**—The mother of Victorinus, after whose death she was hailed as the mother of camps; and coins were struck bearing her effigy.

Vidar.—The Scandiavian god of wisdom, noted for his thick shoes, and not infrequently called "The god with the thick shoes."

Virtus.—The Roman personification of manly valor. She was represented with a short tunic, her right breast uncovered, a helmet on her head, a spear in her left hand, a sword in the right, and standing with her right foot on a helmet.

Vishnu.—In Hindu mythology one of the great deities of the Hindu triad, ranking as the *Preserver*, after Brahma, the *Creator*, and before Siva, the *Destroyer*. It is believed that he has appeared on earth nine times, his tenth *avatar*, or incarnation, having yet to come.

Vulcan.—The son of Jupiter and Juno, who was lamed (according to some legends) by being kicked out of Olympus by Jupiter, and falling in Lemnos. He was the god of fire, and he forged the thunderbolts of his father in the forges of Ætna. Venus was married to him. But the legends differ very much in their account of him.

Wenonah.—Mother of Hiawatha and daughter of Nokomis. Nokomis was swinging in the moon, when some of her companions, out of jealousy, cut the ropes, and she fell to earth "like a falling star." That night was born her first child, a daughter, whom she named Wenonah. In due time, this lovely daughter was wooed and won by Mudjekeewis (the West Wind), and became the mother of Hiawatha. The false West Wind deserted her, and the young mother died.

Woden.—The Anglo-Saxon form of the Scandinavian god Odin; Wednesday is called after him.

Wooden Horse.—Vergil tells us that Ulysses had a monster wooden horse made by Epeos after the death of Hector, and gave out that it was an offering to the gods to secure a prosperous voyage back to Greece. By the advice of Sinon, the Trojans dragged the horse into Troy for a palladium; but at night the Grecian soldiers concealed therein were released by Sinon from their concealment, slew the Trojan guards, opened the city gates, and set fire to Troy.

Xanthos.—The marvelous, though mythical, horse of Achilles.

Yama.—In the *Rigveda*, the name of the god who rules in heaven over the blessed—the Manes, Fathers, or Pitris—and is therefore called king.

Yggdrasil.—In Scandinavian mythology the great ash tree which binds together heaven, earth, and hell. Its branches extend over the whole earth, its top reaches heaven, and its roots hell. The three nornas, or fates, sit under the tree, spinning the events of man's life.

Zem.—The sacred well of Mecca. According to Arab tradition, this is the very well that was shown to Hagar when with Ishmael in the desert. It is supposed to be in the heart of the city of Mecca.

Zephyr.—The personification of the west wind, described by Hesiod as a son of Astræus and Eos. Zephyrus and Boreas are frequently mentioned together by Homer, and both dwelt together in a palace in Thrace.

Zeus.—Called Jupiter by the Romans, the greatest of the Olympian gods, was a son of Cronus (Saturnus), and Rhea. When Zeus and his brothers distributed among themselves the government of the world by lot, Poseidon obtained the sea, Hades the lower world, and Zeus the heavens and the upper regions, but the earth became common to all. According to Homer, Zeus dwelt on Mount Olympus in Thessaly, which was believed to penetrate into heaven itself. He is called the father of gods and men. He is the supreme ruler, who with his counsel manages everything; the founder of law and order, whence Dice, Themis, and Nemesis are his assistants. Everything good, as well as bad, comes from Zeus; according to his own choice he assigned good or evil to mortals; fate itself was subordinate to him.

Zohak.—The giant of Persian mythology who keeps the "mouth of hell." He was the fifth of the Pischdadian dynasty, and was a lineal descendant of Shedâd, king of Ad. He murdered his predecessor, and invented both flaying men alive and killing them by crucifixion. The devil kissed him on the shoulders, and immediately two serpents grew out of his back and fed constantly upon him. He was dethroned by the famous blacksmith of Ispahan, and appointed by the devil to keep hell-gate.

Zohara.—An oriental queen of love, and mother of mischief. When Harût and Marût were selected by the host of heaven to be judges on earth, they judged righteous judgment till Zohara, in the shape of a lovely woman, appeared before them with her complaint. They then both fell in love with her and tried to corrupt her, but she flew from them to heaven; and the two angel-judges were forever shut out.

Zosteria.—A surname of Minerva. She had two statues under that name in the city of Thebes, in Bœotia. The word signified girt, or armed for battle, words synonymous among the ancients.

Zulzul.—According to Chinese mythology the sage whose life was saved in the form of a rat by Gedy, the youngest of the four sons of Corcud. Zulzul gave him, in gratitude, two poniards, by the help of which he could climb the highest tree or most inaccessible castle.

SCIENCE

CLASSIFICATION OF THE SCIENCES.—Science (Latin, *Scientias*, that which we know) is *human experience, tested* and *set in order*. It differs from creed (that which one believes), resting on bases other than human experience; it differs from philosophy (our generalization as to that which transcends or lies beyond human experience); it differs from mere fact or record not set in order; it differs from history in dealing properly with causes and effects shown in proper relations. It differs also from art, which is essentially action based on human knowledge. In common language, however, the art and the science on which it rests may often receive the same name, as in the case of agriculture, which word implies a science, or group of sciences, relating to the rearing of crops, and also the use of this classified knowledge or science in actual practice.

In the language of modern Europe, the names of most of the sciences are derived from Greek roots, the second element in each being λόγος, *logos*, a discourse. Thus osteology (ὀστεον, *osteon*, bone) is a discourse on bones; ornithology (ὄρνις, *ornis*, bird) a discourse on birds. More exactly we may say that osteology is the science of bones. Again as each science is to the individual man an object of study, osteology becomes pedagogically the study of bones. By the addition of *logy* to a Greek root, an indefinite number of additional words can be framed, and will be framed in the future as the need for expression shall arise. For example, we may have rhodology, the science or the study of roses; orchidology, the science or the study of orchids; cynology, the science or study of dogs.

Other names applied to sciences conventionally terminate in the termination *ics*, which forms in many cases a euphonic ending. Thus optics, the science of vision (ὄψ, *ops*, eye); ceramics (κέραμος, *ceramos*, a pitcher), the science of pottery. Other words of this sort might be readily devised, as cynics, the science of dogs; rhodics, the study of roses. Still other terms end in English in *graphy* (γράφειν, *graphein*, to write), indicating that the science is accompanied by writings or drawings: as geography, description of the earth, as distinguished from geology, the study or science of the earth (γή, *gē*, earth). Still other recognized names of science spring from various roots, mainly from the Greek.

Beginning with inorganic nature, we may make the following classification of those branches of science which have recognized names in the English language.

SCIENCES OR STUDIES OF INORGANIC NATURE

Concerning the Heavens

- ASTRONOMY; science or study of the stars.
- Cosmology; science of the universe.
- Uranography; science (mapping) of the heavens.

Concerning the Earth

- ANEMOLOGY; science of winds.
- Climatology; science of climates.
- Crystallography; science of crystals.
- Epigene Geology; science of forces molding earth from without.
- Geodesy; science of the earth's surface.
- Geognosy; science of the earth's peculiarities.
- Geography; science (mapping) of the earth's surface.
- Geology; science of the earth.
- Hydrography; science of river basins.
- Hypogene Geology; (Plutonics) science of forces molding earth from within.
- Lithology; science of stones.
- Metallography; science of metals.
- Metallurgy; science (and art) of metals and ores.
- Meteorology; science of weather phenomena.
- Mineralogy; science of minerals.
- Oceanography; science of the ocean basins.
- Oreography; science of mountains.
- Petrography; science of rock composition.
- Physiography; science of the physical features on the earth's surface (also called physical geography).
- Seismography; science of recording earth tremors.
- Seismology; science of earthquakes.
- Stratigraphy; science of rock strata.
- Topography; science of the modifications of land surfaces.

Concerning Mass and Force

- PHYSICS; the science of mass and force.
- Dynamics; science of force.
- Mechanics; science of application of force.
- Thermodynamics; science of force as related to heat.
- Acoustics; science of sound and hearing.
- Astrophysics; the science of physical features of the stars.
- Calorics; science of heat, as a mode of motion.
- Electricity; the science of the mode of motion known as electric currents.
- Galvanism; the science of galvanic electricity.
- Geophysics; science of physical features of the earth.
- Hydraulics; science of moving water.
- Hydrodynamics; science of the relation of liquids and power.
- Hydromechanics; science of power derived from motion of water.
- Hydrostatics; science of pressure of water at rest.
- Magnetism; the science of magnetic electricity.
- Optics; science of light and vision.
- Pneumatics; science of relations of gases to force or power.

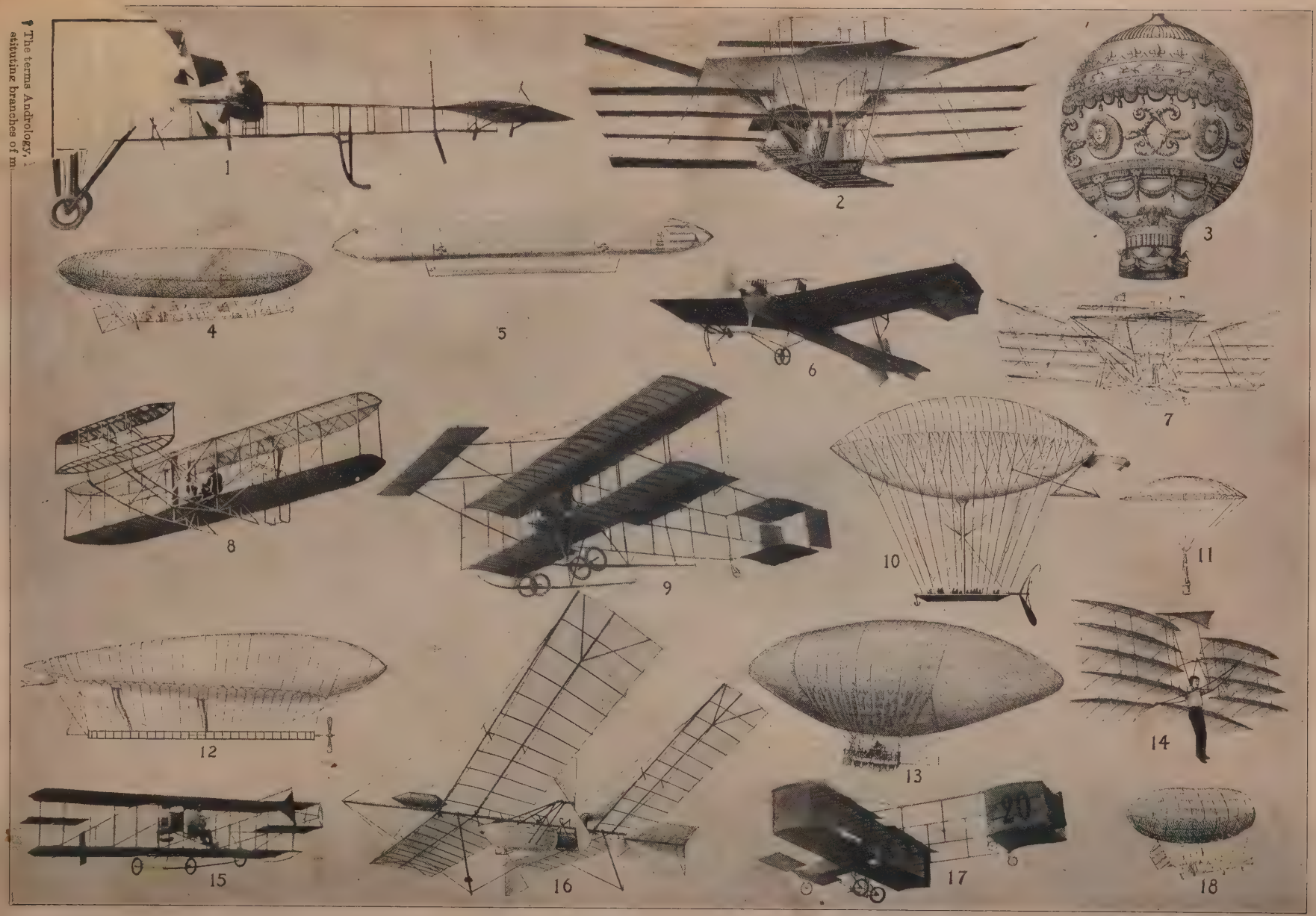
Concerning the Molecules and Lesser Divisions of Matter

- CHEMISTRY; the science of the intimate composition of matter.
- Alchemy; science (and art) of the alleged transformation of baser metals into gold.
- Biochemistry; the science of the chemistry of living beings.
- Inorganic Chemistry; science of elements and compounds not produced by the process of life.
- Organic Chemistry; science of the chemical compounds produced by the processes of life.
- Physical Chemistry; science of the features of matter involving both physics and chemistry.
- Physiological Chemistry; science of chemical changes within the bodies of animals.
- Spectroscopy; science (and art) of relation of chemical substances in the stars or on earth to the light spectrum.

Concerning Living Organisms

- BIOLOGY; science of life and of living organisms (animals and plants).
- Analogy; the science or study of chance relationship.
- Anatomy; science of the structure of living organisms.
- Bionomics; science of changes in form of living organisms due to life adjustment and to other causes, from generation to generation.
- Comparative Anatomy; science of the relation of forms in organs of living beings.
- Cytology; science of the structure and functions of the organic cells forming tissues in living beings.
- Dietetics; science of food stuffs in relation to digestion.
- Ecology; science of the adjustment or behavior toward environment of living organisms (used chiefly in reference to plants).
- Embryology; science of the development of the fertilized germ-cell through different stages; the science of embryos.
- Environment; science of the effects of the results of external conditions in the development of individuals or species.*
- Heredity; science of continuity of type, from generation to generation (the name also applied to the law or fact of such continuity).*
- Histology; science of the tissues of which organs are formed.
- Homology; the science of underlying resemblances in man or lower organisms, the supposed impress of common heredity.
- Hygiene; science of the methods of maintaining health; (is used chiefly in reference to man).
- Isolation; science of the results of the separation of individuals from the mass of the species.*
- Morphology; science of forms in organs of living organisms.
- Ontology; science of the life history of the individual.
- Organic Evolution; science of orderly change in life forms from generation to generation; (the name more often applied to the fact or process than to the science).
- Pathology; science of disease in men or other organs isms.
- Phylogeny; science of the history or development of the species or type.
- Physiology; science of the functions of the organs of living beings.
- Sanitation; science of the processes of maintaining health.
- Selection; science of the results of the survival of one class of individuals as compared with others, from generation to generation.*
- Taxonomy; science of the orderly arrangement of living beings according to their structure or according to their supposed origin or development. Classification is the general name for the processes of taxonomy.
- Teleology; science of real or supposed purpose or adaptation in structures of men or lower organisms.
- Teratology; science of monstrosities and their causes among men or other organisms.
- Variation; science of individuality and the tendencies to divergence from generation to generation.*

*The terms Environment, Heredity, Isolation, Selection and Variation are used more generally in the sense of factors in organic evolution of species or types.



1. Farman's Monoplane.
2. Maxim's Flying Machine.
3. Montgolfier's Balloon.
4. Santos Dumont's Balloon.
5. Zeppelin's Airship.
6. Latham's Machine.
7. Maxim's Model.
8. Wright Aeroplane.
9. The Farman Machine.
10. Dupuy de Lemes' Airship.
11. Parachute.
12. Airship of Renard and Krebs.
13. Wolfert's Airship.
14. Chanute's Flying Apparatus.
15. Glen Curtiss' Machine.
16. Langley's Flying Machine.
17. Paulham's Machine.
18. Stanley Spencer's Balloon.

¶ The terms Andrology, stituting branches of m

AËRONAUTICS.—The art of sailing in or navigating the air, has occupied the ingenuity of men from the earliest ages. But it was not till the composition of the atmosphere had begun to be ascertained, and that means had been devised of filling vessels with heated air, or other air lighter than atmospheric air, and consequently capable of floating on it, that there came to be a rational prospect of succeeding in the "audacious attempt" of riding in the air.

Balloon.—In 1782, the brothers Montgolfier succeeded in constructing a balloon; and on the 21st of October, 1783, Pilatre de Rozier, a young naturalist, and the Marquis d'Arlandes, ascended from Paris to an elevation of more than 3,000 feet, and alighted safely from their "aërial tour," after describing a circuit of about six miles.

The ascents performed by Gay-Lussac, who attained an elevation of 4½ miles, are memorable for being the first ever undertaken solely for objects of science. In 1862 Mr. Glaisher reached the estimated elevation of 37,000 feet, which was approximated by two German aëronauts at Berlin in 1901. The most daring attempt at an aërial voyage was that of the Swede, Andree, who, with two companions, in 1897 ascended from Spitzbergen in hopes of reaching the north pole, their fate remaining unknown.

The modern balloon is but a slight improvement on that invented by Montgolfier. In place of heated air or hydrogen, common coal gas is now used. This improvement was introduced by Mr. Green, the English aëronaut. As gas expands rapidly as the balloon ascends, and the pressure of the external air is diminished, the neck of the balloon is commonly left open, and the machine is also furnished with a safety valve at the top, which can be opened or shut at pleasure.

Shape.—The balloon is usually a large pear-shaped bag, made of pliable silk cloth, covered with a varnish of caoutchouc dissolved in oil of turpentine to render it air-tight. The ordinary size may range from 20 to 30 feet in equatorial diameter, with a proportionate height, but balloons of far greater dimensions have been constructed. A car, generally of wicker-work, supported by a network which extends over the balloon, contains the aëronaut; and a valve, usually placed near the top and to which is attached a string reaching the car, gives him the power of allowing the gas to escape, whereby the balloon is lowered at pleasure.

A quantity of sand ballast in small bags is usually taken, and when the balloon tends to descend too far sand is thrown out and it rises again. The guide-rope, a long and heavy rope trailing over the ground, is sometimes used when the country is such that no serious damage will result from its trailing. The principle of this device is that as the balloon tends to rise it must lift more of the rope off the ground, while when the balloon sinks it is relieved of so much weight, and thus it will tend to float at one level above the ground. A *parachute*, a contrivance resembling a huge umbrella, is often used in ballooning, and by its means an aëronaut can leave a balloon and descend slowly to the ground.

Steering.—The problem of how to steer or propel a balloon in a desired horizontal direction can scarcely be said to have been satisfactorily solved, though numerous attempts at producing navigable balloons have lately been made. In a navigable balloon to be propelled through the air by some kind of motor—against the wind if necessary—the familiar balloon shape is departed from as quite unsuitable, and the airship is usually of an elongated form and more or less cylindrical or cigar-shaped. These are floated by gas, and propelled by a screw driven by a dynamo-electric machine, and steered by a large rudder.

Renard and Krebs, two other workers in this field, subsequently built an airship 165 feet long and 127½ feet in diameter, moved by a battery of Renard's invention, a dynamo and a screw 7 feet in diameter. This machine, in 1884, was driven at a speed of 12 to 15 miles an hour in calm weather, and had power enough to contend against a light breeze.

The names of Count Zeppelin and M. Santos-Dumont have recently become well known in connection with such balloons. From 1897 to 1910 the former constructed several huge cylindrical air ships of great length, with paraboloid ends, divided into a number of separate chambers filled with hydrogen gas and these inclosed in an outer air balloon, the whole being braced and made rigid by an aluminum framework, and the means of propulsion being screws driven by Daimler petroleum motors and fixed to the longitudinal axis of the airship.

M. Santos-Dumont has constructed several navigable balloons, and one of them was so successful at Paris in 1901 as to gain a prize of 100,000 francs. On this occasion his airship made the journey from St. Cloud to the Eiffel tower and back again, a distance of about 9½ miles, in half an hour. In 1907, and since, the British army balloon department made remarkably successful experiments with airships; and successes on the part of Count Zeppelin and others were also reported.

Aviation.—Besides balloons, which are lighter than a corresponding volume of air, and airships depending on the same principle, various apparatus have been constructed for aërial navigation that are heavier than the air. Attempts at navigation by means of such craft is termed *aviation*. Some of these machines are intended more for gliding or soaring through the air than for actual flight, having somewhat the nature of a huge bird with outstretched wings beneath which a man attaches himself and on springing from a height gradually descends to the bottom.

Aëroplane.—Hence the invention of the *aëroplane*, which shows a large flat surface contrived to float nearly horizontally in the air, but with the front edge very slightly raised, so that in being propelled rapidly along it receives the pressure of the air on the under side, the air thus tending to counteract the force of gravity. Sir H. S. Maxim in 1894 constructed a huge machine with main and several subsidiary aëroplanes, propelled by two large screws driven by steam engines of 300 horsepower, and able to rise with a great weight. As a model, at least, Prof. Langley's *aerodrome* had some success, flying through the air a distance of three-quarters of a mile. It had two rigid pairs of wings about 12 feet in width, with large screw-propellers between them driven by a small steam engine.

Type of Aëroplane.—Since the first aëroplane types of flying machines, designed by Maxim and Lilienthal, the work of inventors and scientists along the line of motor-driven, heavier-than-air flying machines has shown steady progress. The general and most popular design is that of the simple aëroplane, supported by air, through which it is propelled by detached force. The aëroplane, it should be observed, however, consists of two types—the *monoplane* and the *biplane*. There have been many radical but experimental departures from the aëroplane type, none of which, however, has shown any great degree of success. Among these radical types is the helicopter, the production of Otto Luyties of Baltimore, Md. The design of the machine embraces several pairs of huge wings and two or more upright revolving propellers, the latter operated by a 100-horsepower motor for the purpose of lifting the machine. The entire weight is 1,700 pounds.

Wright Machine.—The first achievement, however, in the form of sustained flight, with power to rise and descend without mishap, and to guide the machine in a circular flight, is confined to the Wright brothers of Dayton, Ohio, one of whom, in 1906, remained in the air thirty-eight minutes and three seconds, making a circular flight of twenty-four and a half miles. The brothers Voisin also constructed an aëroplane on lines laid down by M. Octave Chanute, which was driven in a successful flight in November, 1907, at Paris by M. Henry Farman. The aëroplane on the first attempt rose slowly from the ground, and in one minute and fourteen seconds completed a circle.

Officials of the Aëro Club of America, at the international congress held in New York, 1907, admitted that in flights of man-carrying gasless machines the Wright brothers were far ahead of all competitors. What the Wright brothers have accomplished since 1908, in both this country and France, has marked a new era in aërial navigation; and the prolonged, flights of motor-driven aëroplanes, together with the recent work of Santos-Dumont, Voisin brothers, Farman, Bleriot-Levasseur, Curtiss and other aëroplane builders and operators fills the future with great expectations.

ASTRONOMY is the science of the heavenly bodies. It has evolved from the ancient astrology which assumed that the relative positions of heavenly bodies, as seen from earth, influenced human life and destiny. Astrology, asserting the ability to ascertain such influence, could predict the future of realms and potentates, even the individual. So it was a useful science, and the earliest astronomers were emperors and princes, who built and maintained observatories, and themselves made the observations and all the calculations based on them. The practical needs of astrology, therefore, led to accurate observations of the sun, moon, stars and planets, in order to predict therefrom their future positions. So the astrology of the middle ages merged naturally into the astronomy of the Renaissance. As the fundamentals of astrology were abandoned, the utilities of astronomy were accepted and adopted; and the science of to-day embraces many subdivisions not wholly distinct, and which in many instances blend and overlie.

Chronological Astronomy fixes the exact relations of the time-units of the calendar, and settles disputed dates of ancient battles, reigns of kings and other historic events.

Nautical Astronomy, by observation and calculation, enables the navigator to conduct ships from port to port in safety.

Geodetic Astronomy supplies the basis for

measuring the earth, and mapping all its features accurately.

Spherical Astronomy is the application of spherical trigonometry to the celestial sphere.

Theoretical and Mathematical (formerly called *physical*, or *gravitational*) **Astronomy** unfolds the laws governing the motions of the heavenly bodies, and enables us to calculate their position at any past or future time.

Practical Astronomy is the art of using astronomical instruments, making observations with them, and calculating results therefrom.

Descriptive Astronomy is a systematic presentation of our knowledge of the motions, characteristics, and phenomena of the heavenly bodies.

Physical Astronomy or astrophysics is the science of the physical characteristics and constitution of the heavenly bodies; that is, physics and chemistry applied to astronomy.

Speculative Astronomy includes the cosmogony, planetology, plurality of worlds, habitability of the planets, and other subjects of astronomical investigation where no absolute conclusion is possible.

Astronomical Bodies.—The astronomical philosopher divides the bodies of the visible universe into five general classes:

Nebulae, faint, cloudlike objects, thousands of which are visible in the telescope, widely variant in figure, the most common and probably primordial form being the spiral nebula.

Stars, many millions of which exist, brilliant, self-luminous bodies, and with a single exception (the sun) so vastly remote as to resemble mere glistening points.

Planets, opaque bodies, few in number, far inferior to the stars in size, tributary to and dependent upon the sun, the earth being a planet of medium size.

Comets, peculiar tenants of interplanetary and interstellar space, self-luminous, semi-opaque, and composed of shoals of lesser bodies partly solid and partly gaseous, called meteors.

Meteoric Bodies, fragments of disintegrated comets, made up of elemental combinations similar to terrestrial ones, and scattered everywhere throughout the celestial spaces.

All knowledge of these bodies of the universe is embraced in the astronomy of the present day.

The Solar System is a vast assemblage of many hundred bodies classifiable in five divisions: (1) the sun, central, massive, dominant and self-luminous; (2) about 700 opaque, sun-illumined bodies called planets, of which the earth is one; (3) about 30 bodies called moons, or satellites, revolving around the planets, our moon being one of the largest; (4) many hundred comets, slight in mass but huge in dimension, self-luminous, usually with tails and often spectacular in appearance; (5) innumerable meteors, or shooting stars, fragments of disintegrated comets.

Ptolemaic Theory.—Astronomers of the ancient time taught that the earth was the center of the solar system, and that all the other bodies, even including the sun, traveled around it, each in its own earth-centered sphere of crystal. This false theory is known as the geocentric (that is, earth-centered) or Ptolemaic system, from Ptolemy (A. D. 140) a Greco-Egyptian, perhaps the most eminent of all ancient astronomers, whose chief work is entitled *The Almagest.*

Copernican Theory.—With the dawn of the Renaissance, Copernicus (1473–1543) advocated the true, or heliocentric (that is, sun-centered) system; but many years elapsed before it was accepted. Tycho Brahe (1546-1601) by a lifetime of effort at his famous observatory of Uraniborg, furnished an unparalleled mass of observations of the planets, especially Mars, showing their relative position among the stars.

Kepler's Laws.—Kepler (1571–1630) studied these observations for years, and eventually established three laws of planetary motion: (1) Every planet travels round the sun in an elliptic path, with the sun's center in one focus; (2) the radius vector, or line joining the centers of sun and planet, sweeps over equal areas of the ellipse in equal times; (3) the squares of the planets' times of revolutions around the sun are proportional to the cubes of their average distances from the sun's center.

Law of Gravitation.—Then came Sir Isaac Newton (1642–1727), who combined all three of Kepler's laws into a single one, known as the law of universal gravitation, as follows: Every body in the universe attracts and is attracted by every other body, with a force depending upon their mass, and growing less in exact proportion as the square of the distance between the bodies grows greater. Kepler gave no explanation of his laws, nor did Newton of gravitation, the cause of which remains yet unknown.

Age of Solar System.—The solar system is inconceivably old, but it is believed to have had a beginning, and to be drifting very slowly toward an end. Its entire lifetime is counted in hundreds of millions of years, so that human documents within historic time contain no record of cosmic change, in either the system or the earth itself. Certain it seems, however, that very gradual changes must be taking place. Apparent evidence of this is furnished by close comparative study of the planets. Proctor (1837-88), Flammarion (1842-19—), and Lowell (1855–19—) have devoted much attention to this speculative research.

We may summarize their conclusions briefly by saying that some of the bodies of the solar system (sun, Jupiter, Saturn, Uranus, Neptune) are as yet undeveloped to the life-supporting era, because of intense internal heat; others (earth, Venus, the Galilean moons of Jupiter, and possibly Mars) have a constitution and temperature hospitable to life; while still others (asteroids and lesser satellites, the moon, Mercury, and possibly Mars) have likely been habitable in the remote past, but are no longer capable of sustaining life.

The solar system is not at rest in interstellar space, but the sun with all its planetary freight is voyaging toward the northern constellation Lyra about twelve miles a second. Whether this motion is in a straight line or in a vast orbit around some stellar center is yet unknown.

The Sun is a dense, gaseous sphere, 866,000 miles in diameter, inconceivably hot (perhaps 10,000° F.), and 93,000,000 miles distant from the earth. The sun is exceedingly massive—330,000 planets like the earth fused in one would barely weigh as much as the sun. Gravity at the sun's surface is nearly twenty-eight times greater than here on earth—an average man would weigh a ton there. Slowly round on its axis the sun turns once in 27¼ days.

The Outer Surface of the sun is not solid, but atmospheric; and the phenomena of this surface confirm beyond question the existence of swift, tumultuous currents, not only sidewise but up and down, in the vaporized materials composing the outer layers. Most prominent of these is the photosphere, an unbroken mass of incandescent cloud a few thousand miles in depth. Just outside the photosphere is a vapor-laden atmosphere called the reversing ayer, probably less than a thousand miles deep It causes the dark absorption lines of the solar spectrum first mapped by Fraunhofer (1787–1826), and named after him. Rising to vastly greater heights than the reversing layer is the chromosphere (color-sphere), chiefly hydrogen, calcium and helium, averaging seven or eight thousand miles in depth. Projected from the chromosphere, sometimes quiescent in form and again violently eruptive, are the scarlet prominences, or protuberances. All these interesting phenomena of the sun's surface are now photographed daily by means of the spectroheliograph of Hale (1868–19—) and Deslanders (1853-19—).

Far outside the chromosphere is a sort of quasi-atmosphere, seen only when the sun itself is totally eclipsed, and called the solar corona—an irregularly filamentous halo of pearly light, whose long streamers often stretch millions of miles into space with the soft radiance of a comet or a distant searchlight. Its cause and significance are very obscure. In part at least, the corona seems to be an electro-magnetic phenomenon.

Sun Spots.—Spots on the sun are sometimes large enough to be seen without telescopic aid. They are well viewed through a small telescope by projection on a white screen. The largest spots are about 50,000 miles across, and the smaller are mere dark specks 500 miles in breadth. Spots are never permanent, though they sometimes endure for many months. The dark center of a spot (umbra) is surrounded by a less dark, ring-shaped area (penumbra). After many days the umbra usually begins to break up and it, a train of small spots forms, and gradually fuse into the general surface of the photosphere. Schwabe (1789–1875) first discovered that sun spots appear and disappear in a pretty regular period of $11\frac{1}{9}$ years. They were very numerous in 1905 and fewest in 1900 and 19— Spots are most frequent in solar latitudes 15 degrees north and south, but not wholly of significance.

Students of the sun are not wholly agreed as to the cause of sun spots. The true spots are consequent on depressions, in lie in the sun itself; finding as well as are consequent on elevations. Many of them are hollows, they are cyclonic, luminous matter as recent photographs descending. Frequently large or numerous as demonstrated ways accompanied by of Hale. Epochs of aurora, magnetic disturbances are nearly earth-currents, sometimes displays of the enough to interfere with ances and electric telephones and telegraphs. times powerful spots, protuberances or the working effect upon the weather is ciently proven. When spots Whether very abundant, the weather (for corona have generally) has been sometimes less not yet sufficiently sometimes more so; sometimes have been colder, than the average. the earth's disturbances due to fluctuations on the sun are at best very warmer, undetermined. Faculæ, or So that spots, are frequent near the edge, or ting con the sun, and the spectroheliograph slight bright limb, c

roved that they exist everywhere on un's surface. Many of them are the of incandescent calcium clouds.

cal Composition.—Close study of sun's spectrum for a half century revealed many terrestrial elements ne sun in the vapor state—alumin- calcium, carbon, cobalt, copper, hy- en, iron, magnesium, nickel, oxygen, icon, silver, sodium, titanium, zinc and many others. Iron, calcium, hydrogen, nickel and sodium are the most strongly ndicated. But chlorine, gold, mercury, nitrogen, phosphorus and sulphur are not present.

ght and Heat.—So dazzling is the radiance of the sun that all artificial sources of light pale against it—even the arc light seems black by comparison. Even the spots emit light and are only relatively dark. The sun's total light surpasses that of the ull moon 600,000 times. If the sun's heat could be fully utilized, the deck of a steamer on tropical oceans receives enough to maintain it at a ten-knot speed. The sun's light and heat are essentially constant, and their maintenance is satisfactorily explained on the theory of slow but continuous contraction upon itself by its own gravity. A practical method of converting the sun's heat into available mechanical energy will be one of the great discoveries of the future.

ne Moon, nearest of all celestial bodies to us (239,000 miles), and brightest of all save the sun, is a solid, opaque sphere of very rough contour, traveling around the earth once in 27⅓ days. The moon's motion easterly from night to night is obvious, if we refer it to the stars; and it passes over its own breadth (about half a degree) every hour. Occasionally a star is hidden behind it (occulted)—a very sudden phenomenon at either disappearance or reappearance. Sometimes a planet suffers occultation; and when the moon occults the sun, a total eclipse takes place. A fortnight earlier (or later) an eclipse of the moon itself is liable; but this is due to the moon's passing through the earth's shadow, so that sunlight is for the time withdrawn from it.

ght.—Half of the moon's sphere is always illuminated by the sun, and it is the amount of this illuminated half turned toward us that causes the moon's phases. Much of the time between new moon and either quarter, the ashy light of the unilluminated part of the moon's disk is faintly visible, called the "old moon in the new moon's arms." It is caused by sunlight reflected from the earth. Eastward progress of the moon makes it rise on the average about three-quarters of an hour later from night to night. The full moons of autumn rise with a daily retardation of less than half this amount; so they are called (in September and October) harvest moon and hunter's moon.

The spectroscope shows that the moon's light and sunlight are identical in composition. We often say the full moon is as bright as day, but a half million full moons would not equal the sun's radiance.

mensions.—The diameter of the moon is 2,160 miles, easily ascertained after her distance is found. The distance is not difficult to determine, once we know the size of the earth, and can tell the straight-line distance between two observatories, as Greenwich and Cape Town. This becomes a base-line from which the distance between the earth's center and the moon's can be found by a trigonometric solution. Eighty-one globes like the moon rolled into one would equal the mass, or weight of the earth, and surface gravity is a sixth what it is here. An average man would weigh but 25 pounds there, and an athlete with terrestrial thighs would find a 30-foot standing jump mere exhilaration. The moon turns round on its axis very slowly—only once, in fact, while it is making one complete journey round the earth. So that the half turned toward us is always the same, and no one has ever seen the other side of the moon. Her atmosphere, if the moon has any, must be very slight; and water, if at all, must exist as ice.

Heat.—Lacking an atmosphere to absorb and retain the solar heat, the lunar surface must always be intensely cold. Moon's perigee (least distance) and apogee (greatest distance) cause a slight disturbance of magnetic needles; but the changing phases of the moon, especially the angle of the cusps with the horizon, are not responsible for any weather changes that the critical expert has ever been able to discern.

Surface.—The moon's surface is highly diversified by a wealth of smooth, darkish patches, named *mares* (seas), now regarded as desert plains; a few mountain chains; hundreds of rills or valleys; numerous systems of radiating streaks; and over 30,000 ring mountains of all sizes from a mile in diameter to a breadth sixty times that. All details of the lunar surface are mapped and named. Hevelius (1611-87) of Danzig made the first map of the moon, and Schmidt (1825-84) of Athens the last. The recent photographic atlases of the Lick and the Paris observatories show the lunar surface very satisfactorily, and Ritchey (1864-19—) attained even greater success with the Yerkes telescope. Changes on the moon, if at all, are on a very small scale, too minute for detection with present instruments.

The Planets, in the order of their distance from the sun, are Mercury, Venus, earth, Mars, asteroids (about 700), Jupiter, Saturn, Uranus, and Neptune. No planets have yet been discovered inside of Mercury's orbit, or outside that of Neptune. Venus is the brightest planet, and Jupiter comes next. With Mars, Saturn and Mercury, these are all that are easy to see with the naked eye.

Inferior and Superior.—Mercury and Venus are classified as inferior planets, because their orbits are within the earth's; all the others are superior, that is, outside the earth's. To the naked eye none of the planets have appreciable disks or phases, but with the telescope Mercury and Venus pass through all the phases of the moon. Of the superior planets Mars alone exhibits a considerable phase, being at times gibbous, or like the moon two days from full.

Motion.—The planets are so named because they appear to move among the stars. The general trend of their motion is eastward (direct motion) along the ecliptic, or sun's apparent path. But during a part of each year every planet also travels westward (retrograde motion). When nearest the earth a planet's motion is retrograde; when farthest, direct. The ancients explained this forth and back motion of the planets by means of the epicycle of the Ptolemaic system; whereas it is really due to composition of earth's and planet's own motions around the sun.

Venus is a bright evening star in the western sky in August 1911, March 1913, October 1914, May 1916, December 1917 and August 1919. Mercury and Venus when nearest are at inferior conjunction; superior planets when nearest are at apposition. At inferior conjunction, Mercury and Venus sometimes pass directly between earth and sun, called a transit.

Dates of transits of Mercury are May of 1878, 1891, 1924 and November of 1868, 1881, 1894, 1907, 1914. Transits of Venus are much less frequent—December of 1631, 1639, 1874, 1882 and June of 1761, 1769, 2004, 2012.

For all details of motion of the planets, their distance from earth and sun, and positions in the sky at any time, consult the *Nautical Almanac*, a mathematical work based primarily on what are termed the "elements of the orbits." These technical quantities express with accuracy the size, form and position of the planetary orbits in space.

The Northern Lights (aurora borealis of the northern hemisphere, and aurora australis of the southern) are a phenomenon of the earth's atmosphere. This composite, compressible gas is rather less than one-millionth the earth's weight, is a hundred miles or more in depth, its density increases rapidly downward, and at the bottom of this ocean of air humanity lives and moves and has its being. The atmosphere bends downward the rays of light coming from all celestial bodies, causes the twinkling or scintillation of the stars, and the common phenomena of dawn and twilight. The aurora is another phenomenon of the atmosphere, a soft, vibrating luminosity, streaming upward into the sky, sometimes to the zenith, exhibiting greenish yellow, pale blue and other tints, occasionally with pulsating streamers. The semiperiodic recurrence of the aurora connects it with sun spots and protuberances. The magnetism of the earth as influenced by the condition of the sun appears responsible for the aurora, a species of luminosity in the very rare gases of the upper atmosphere.

Comets nearly a thousand in number have been recorded within historic time. Half have had the paths of their motion in space ascertained. If the orbits of two or more are the same, it is generally true that they are not different comets, but the same body moving in an elliptical track around the sun, which is situated (as in planetary orbits) at one focus of the ellipse.

Halley (1656–1742) first made this important discovery, and the comet which in

Planet's Name	Distance From the Sun		Eccentricity of Orbit	Inclination to Plane of Ecliptic	Time of Revolution Around the Sun	Length of Planet's Day	Diameter of Planet in Miles
	Earth's Equals Unity	In Millions of Miles					
Mercury	0.39	36	0.206	7° 0′	88d.	88d.	3,000
Venus	0.72	67	0.007	3° 24′	225d.	225d.	7,700
Earth	1.00	93	0.017	0° 0′	365¼d.	23h.56m.	7,900
Mars	1.52	142	0.093	1° 51′	687d.	24h.37m.	4,200
Jupiter	5.20	483	0.048	1° 19′	12y.	9h.55m.	87,000
Saturn	9.54	886	0.056	2° 30′	29.5y.	10h.13m.	73,000
Uranus	19.18	1780	0.046	0° 46′	84y.	Unknown	30,000
Neptune	30.06	2790	0.009	1° 47′	165y.	Unknown	30,000

consequence bears his name returns to the sun at intervals of about seventy-six years. Before his time comets were thought to move in straight lines through space. So it seemed quite possible that a comet might collide with the earth and wreak destruction thereon. In such case, however, collision would doubtless destroy the comet.

Description and Development.—If we conceive of a vast congeries of separate particles, varying in size from grains of sand to that of large buildings, these masses not compacted together but loosely related or hundreds of miles apart, traveling in shoals through space, we shall have the modern notion of a comet. During most of the time comets are dark invisible bodies; but, on approaching the sun within 500 million miles, they gradually begin to glow with a self-luminosity, and are visible in the telescope as faint, round patches of cloud-like light. Their true nature is detected by apparent motion among the stars from night to night. Most telescopic comets never develop beyond this simple stage; but the larger ones, on approaching near the sun, form first a nucleus, then a corona, or head with curving envelopes, or sheaths, sometimes opening toward the sun like an unfolding fan. Later follows development of the tail, quite invariably on the side away from the sun. Often it stretches through space many millions of miles, giving the comet a bizarre and spectacular appearance which no other heavenly body possesses.

Comets sometimes have two or more tails; one had six (in 1744). Differences in their curvature are perhaps due to the nature of the volatile gases composing them—the straight tails due to hydrogen, the slightly curving ones to hydrocarbons, and the stubby, sharply curved tails to vapor of iron or chlorine. The showy tail is formed at the expense of the head and its particles never return to the comet again. A slow disintegration thus takes place at every return. When near the sun the head of a comet shines very faintly by reflected solar rays, and the spectroscope shows that the light of comets is mainly due to hydrocarbons, cyanogen and sodium.

The Great Comets and Their Discoverers.—Two French astronomers, Pons (1761–1831) and Messier (1730–1817), are the most famous of all discoverers of comets. In America Swift (1820–19—), Brooks (1844–19—) and Barnard (1857–19—) have been most successful. Discoveries are now sometimes made by photography. Encke's comet moves around the sun in the shortest period (3⅓ years), and is noted also for freaky changes of form. The largest and brightest comet ever seen came in 1843, stretching from horizon to horizon. It approached nearest to the sun of all known comets, and was visible to the naked eye at noon. Probably the outer regions of its head brushed through the streamers of the solar corona. Its velocity at perihelion was more than one and a quarter million miles per hour, and its tail was 150 million miles long. This comet will not return for 500 years. Other very bright and striking comets appeared in 1811, 1858 (Donati's), 1861, 1874 (Coggia's), 1882, 1887, and 1910. In extreme cases comets are visible a year and a half to two years. Occasionally one is discovered during a total eclipse of the sun (as in 1882 and 1893), and never seen again.

Meteors, or shooting stars, are fragments of comets rendered luminous by impact and friction with our atmosphere. Comets have been caught in the act of breaking up, as Biela's in 1845–6, and Brooks' in 1893. Generally, however, disintegration takes place very slowly, and the cometary fragments are thus scattered everywhere along the paths of these bodies. Showers of such fragments come within reach of the earth's attraction every day. For the most part they are dissipated in the upper air; but occasional fragments that reach the earth's surface, called meteorites, are found by chemical analysis to have the same constitution as comets themselves. Meteorites are either stones or irons, the latter yielding a large percentage of nickel. Fine American collections of meteorites are in the museums of Chicago, New York, Washington, Cambridge, New Haven and Amherst.

The Stars are situated at incomprehensible distances in the depths of space. To express these enormous distances, an astronomical unit is employed called the light-year: it is nearly six trillions of miles in length, and is the distance that a light-wave (whose speed is 186,000 miles per second) travels in a whole year. So astronomers have ascertained that Alpha Centauri, the nearest known fixed star, is four light-years away, Sirius is double that, Vega thirty light-years, Polaris seventy, and Castor 120, and so on.

Classification.—The stars are variously classified, first by their apparent magnitudes, or order of brightness. There are about twenty stars of the first magnitude, sixty-five of the second and 200 of the third, proceeding in geometric progression; 5,000 of the sixth, 720,000 of the tenth magnitude, and so on. An average first-magnitude star gives two and a half times more light than one of the second magnitude, and so on, by a nearly constant relation. In a clear, dark sky the average sixth-magnitude star is the faintest visible to the naked eye.

But the telescope reveals stars fainter and fainter, until the seventeenth magnitude is reached, as a *minimum visibile* in a forty-inch lens. Keeping pace with their diminution in brightness, the number of the stars increases, until their total is estimated at 150 millions. Dark or non-luminous stars there are also, and some astronomers think these exceed the luminous ones in number. The total light from all the stars is rather more than a hundredth that of the full moon.

Colors.—Another but less marked classification of the stars is by their colors; still another by their spectra, of which there are not less than five types, by the scheme of Secchi (1818-78):

(I.) *Sirians*, stars with spectra resembling that of Sirius, with broad, dark hydrogen lines.

(II.) *Solars*, with spectra resembling the sun's, with fine, dark metallic lines. Practically all the stars are evenly divisible between types I. and II.; and stars of type II. are least remote from the sun.

(III.) *Dark*, banded spectra, with bands well-defined on the blue-ward side.

(IV.) *Spectra* with dark bands, or flutings, fading out toward the blue. Stars of this type are few, faint, blood-red in hue, and their atmospheres are charged with carbon.

(V.) *Stars* with bright-line spectra.

Classification of stars by their ages, indicated by the character of their spectra, has been attempted. The spectra show that all the stars are self-luminous.

Yet another classification recognizes variable stars, new or temporary stars, double and binary stars, multiple stars, star clusters and nebulæ. About 4,000 stars are variable; that is, their light is subject to fluctuation, regular or irregular. Some of them are like Algol, whose light is for a long time at its brightest, and then faint (minimum) for a relatively brief span. Such fluctuations of brightness are due to temporary occultation by a large, dark star whose orbit lies nearly edgewise to our vision. Others are called Omicron Ceti variables, also after the type star, often called "Mira the Marvelous." Variables are especially numerous in the thick fields of star clusters.

Of double stars more than 10,000 are now catalogued—stars with a near-by companion usually much fainter than the bright component. Burnham is the chief American discoverer of these objects. Hundreds of doubles belong to the class of binaries, whose components revolve around their common center of gravity in an elliptic orbit, generally in a long period of years. These paths are usually very eccentric, and the masses of the stars often nearly equal.

A similar type has been discovered, called the spectroscopic binary. In such the components are so near each other that the telescope unaided is powerless to divide, or separate them; therefore their spectra overlie. Capella, Castor, Polaris and Spica are spectroscopic binaries. Of all the stars so far examined, nearly one-tenth reveal orbital motion. Multiple stars are those with many components: Epsilon Lyræ, near Vega, is a beautiful system of this sort.

Stellar Clusters are either loose, as the Pleiades, with a few scattering bright stars in a region where the photographic plate shows many thousands; or close, like that in Perseus, with thousands of stars compactly aggregated and forming a denser region of the Milky Way. The whole of this marvelous galaxy, stretching all the way around the heavens, is made up of millions of minute stars, each comparable in size and constitution with our sun, and so immensely remote that their effect is that of a continuous sheet of faint luminosity.

The distance of stars can be stated intelligibly in light-years only, and their location around the sun seems nearly central, like the girdle of meteoric masses comprising the ring of Saturn.

The Nebulae are located among the stars, and 12,000 are now known and catalogued. They appear like faint masses of luminous fog, mostly irregular in form and brightness. Many nebulæ are glowing, incandescent gases, mainly hydrogen, as the spectroscope shows. Some, however, are resolvable into separate faint stars, as in the Milky Way; a few are variable; and as a whole the nebulæ appear like the residue of original chaos from which the universe has, through uncounted millions of years, come into its present state.

Classification.—Nebulæ are often classified as (1) annular, or ring-shaped, (2) spiral, (3) planetary, (4) nebular stars, (5) irregular nebulæ, for the most part large, of which the great nebula in Orion is the finest example. Its light emanates from incandescent hydrogen and helium, it is intimately related to the neighboring stars of the constellation, its distance from the sun is increasing eleven miles a second, and this incomparably vast structure of tangled wisps and twisted cloud-shapes has, like nearly all the other nebulæ, persisted for centuries without any certain change of form.

TABLE OF STARS AND CONSTELLATIONS

Name of Constellation	Author	No. of Stars	Principal Stars	Magnitude
ZODIACAL CONSTELLATIONS				
Aries, the Ram	Aratus	66	α Arietis,	2
Taurus, the Bull	"	141	Aldebaram,	1
Gemini, the Twins	"	85	Castor, Pollux,	1-2
Cancer, the Crab	"	83	Acubens,	3
Leo, the Lion	"	95	Regulus, Denebola,	1-2
Virgo, the Virgin	"	110	Spica Virginis,	1
Libra, the Balance	"	51	Zubenich Meli,	2
Scorpio, the Scorpion	"	44	Antares,	1
Sagittarius, the Archer	"	69		
Capricornus, the Goat	"	51		
Aquarius, the Water-bearer	"	108	Scheat,	3
Pisces, The Fishes	"	113		
NORTHERN CONSTELLATIONS				
Ursa Minor, The Lesser Bear	"	24	Pole-star,	2
Ursa Major, the Great Bear	"	87	Dubhe, Alioth,	1-2
Perseus, and Head of Medusa	"	59	Algenib, Algol,	2-2
Auriga, the Waggoner	"	66	Capella,	1
Boötes, the Herdsman	"	54	Arcturus,	1
Draco, the Dragon	"	80	Rastaben,	3
Cepheus	"	35	Alderamin,	3
Canes Venatici, the Greyhounds Asteria and Chara	Hevelius	25		
Cor Caroli, Heart of Charles II	Halley	3		
Triangulum, the Triangle	Aratus	16		
Triangulum minus, the Little Triangle	Hevelius	10		
Musca, the Fly	Bode	6		
Lynx	Hevelius	44		
Leo Minor, the Lesser Lion	"	53		
Coma Berenices, Berenice's Hair	Tycho Brahe	43		
Cameloepardalis, the Giraffe	Hevelius	58		
Mons Menelaus, Mount Menelaus	"	11		
Corona Borealis, the Northern Crown	Aratus	21		
Serpens, the Serpent	"	64		
Scutum Sobieski, Sobieski's Shield	Hevelius	8		
Hercules, with Cerberus	Aratus	113	Ras Algratha,	3
Serpentarius, or Ophiuchus, the Serpent-bearer	"	74	Ras Aliagus,	2
Taurus Poniatowski, the bull of Poniatowski	Poczobat	7		
Lyra, the Harp	Aratus	22	Vega,	1
Vulpeculus et Anser, the Fox and Goose	Hevelius	37		
Sagitta, the Arrow	Aratus	18		
Aquila, the Eagle, with Antinous	"	71	Altair,	1
Delphinus, the Dolphin	"	18		
Cygnus, the Swan	"	81	Deneb,	1
Cassiopeia, the Lady in her Chair	"	55		
Equulus, the Horse's Head	Ptolemy	10		
Lacerta, the Lizard	Hevelius	16		
Pegasus, the Flying Horse	Aratus	89	Markab,	2
Andromeda	"	66	Almaac,	2
Tarandus, the Reindeer	Lemounier	12		
SOUTHERN CONSTELLATIONS				
Phœnix*	Bayer	13		
Apparatus Sculptoris*, the Sculptor's Apparatus	Lacaille	12		
Eridanus Fluvius, the River Po	Aratus	84	Acherner,	1
Hydrus*, the Water Snake	Bayer	10		
Cetus, the Whale	Aratus	97	Menkar,	2
Fornax Chemica, the Chemical Furnace	Lacaille	14		
Horologium*, the Clock	"	12		
Rheticulus Rhomboidialus*	"	10		
Xiphias Dorado*, the Sword Fish	Bayer	7		
Celapraxitelis, the Engraver's Tools*	Lacaille	16		
Lepus, the Hare	Aratus	19		
Columba Noachi, Noah's Dove	Halley	10		
Orion	Aratus	78	Betelgeuse, Rigel	1
Argo Navis, the Ship Argo	"	64	Canopus,	1
Canis Major, the Great Dog	"	31	Sirius,	1
Equuleus Pictoris	Lacaille	8		
Monoceros, the Unicorn	Hevelius	31		
Canis Minor, the Little Dog	Ptolemy	14	Procyon,	1
Chamæleon*	Bayer	10		
Pyxis Nautica, the Mariner's Compass	Lacaille	4		
Piscis Volans*, the Flying Fish	Bayer	8		
Hydra, the Serpent	Aratus	60	Cor Hydræ,	1
Sextans, the Sextant	Hevelius	41		
Robur Carolinum*, the Oak of Charles II	Halley	12		
Antlia Pneumatica, the Air Pump	Lacaille	3		
Crater, the Cup	Aratus	31	Alker,	3
Corvus, the Crow	"	9	Algorab	3
Crux*, the Cross	Royer	6		
Apis Musca, the Bee, or Fly	Bayer	4		
Avis Indica*, the Bird of Paradise	"	11		
Circinus*, the Compass	Lacaille	4		
Centaurus, the Centaur	Aratus	35		
Lupus, the Wolf	"	24		
Norma, or Euclid's Square	Lacaille	12		
Triangulum Australis*, South Triangle	Bayer	5		
Ara*, the Altar	Aratus	9		
Telescopium,* the Telescope	Lacaille	9		
Corona Australis, the Southern Crown	Ptolemy	12		
Pavo*, the Peacock	Bayer	14		
Indus*, the Indian	"	12		
Microscopium, the Microscope	Lacaille	10		
Octans Hadliensis*, Hadley's Octant	"	43		
Grus*, the Crane	Bayer	14		
Toucan, the American Goose	"	9		
Piscis Australis, the Southern Fish	Aratus	24	Fomalhaut	1
Mons Mensa*, the Table Mountain	Lacaille	30		

***Indicates those constellations which never rise in North latitude 52°.**

Cosmogony is the science of the development of the universe. Beyond a shadow of doubt the universe is inconceivably old, and has come to its present being by an orderly process—an evolution through the long-continued action of fixed natural laws, especially the law of universal gravitation. For countless ages the universe existed only potentially; the celestial spaces were tenanted by nebulous masses of gas, "without form and void." Every molecule attracted every other molecule; centers of attraction formed, and as they drew other masses inward upon themselves, the collision of particles and friction upon each other developed heat; the gaseous condensations grew hotter and hotter; thousands upon thousands of nebular nuclei formed; condensation progressed, in some regions more rapidly than others. The sun itself, in its early history, was one of these centers, every star was such a center, or became one, in the slow process of world-building. As the gaseous masses could not usually fall directly toward their centers of attraction, huge nebular whirlpools were set in motion.

No spiral nebulæ were known to Laplace; the first was discovered by Lord Rosse; but thousands were found by Keeler at the Lick Observatory, by means of photography. Next to the star itself, the spiral nebula is the type of object most frequent in the sky. Their existence is in full accord with the principles of dynamics, as pointed out by Chamberlin and Moulton in their planetesimal hypotheses.

Progressive development from a formless nebula tends toward the flat, revolving disk; contraction makes the inner regions whirl more and more rapidly, thus producing the spiral, or whirlpool structure. So the spiral nebula became the fundamental natural form. In great part the stellar systems, then, and probably our planetary system also, had their origin, not from Laplacian rings left behind as the nebular disk contracted, but from condensation into knots of nebulosity, ever and anon detached from the whirling nebulous mass, each knot subsequently condensing into a separate star or planet.

So Keeler's significant discovery of multitudes of spiral nebulæ has greatly strengthened the evidence in general favor of a nebular hypothesis of origin of the stellar and planetary systems throughout the universe.

BACTERIOLOGY.—Bacteria constitute a group of microscopic plants and are the smallest known living organisms. Although they comprise only a small botanical group their importance is so great that their study has developed into a distinct science and is now occupying the attention of thousands of scientists.

The Scope of Bacteriology.—Bacteria, and their allies the *yeasts* and *molds*, form one of the mightiest forces in nature and have relations in many unexpected directions.

Disease.—Their agency in producing disease is now unquestioned. It was this that first attracted attention to them, and which still attracts the widest interest. Out of this phase of their study has developed modern *medical bacteriology* and *sanitary science.* (See Hygiene for further relation of bacteria to disease.)

Dairying.—Almost simultaneously with their disease relations it was learned that bacteria have close relations to milk. Later this developed into *dairy bacteriology* that has revolutionized dairying in all its branches.

Soils.—The problem of soil fertility has come to be recognized as closely dependent upon bacterial activity. While this subject is still incompletely understood, it is rapidly changing agricultural methods. *Agricultural bacteriology* is now recognized as of equal importance to medical bacteriology.

Foods.—The problems of food supply involve the production, preparation and preservation of foods. The first two are incidentally, and the last exclusively, problems of microbiology, bacteria standing first as causing the spoiling of foods.

Biology of Bacteria.—Classification of Bacteria.—Bacteria represent a small group of the large class of colorless plants called *fungi*. They are closely related to yeasts, so close indeed that any study of bacteria should properly include yeasts. Allied to them also in their functions are the molds.

Structure.—There are three chief types of bacteria: 1. Simple spheres, called *Cocci*. These are subdivided according to their methods of multiplication into the genera *Micrococcus*, *Staphylococcus*, *Streptococcus* and *Sarcina*. 2. Straight rods, either long or short. According to whether they possess motile organs, these are divided into the genera *Bacillus* (with motile flagella), and *Bacterium* (without flagella). 3. Spiral rods of which the two most important types are *Spirillum* and *Spirochaeta*.

Size.—All bacteria are very minute, those known ranging from about $\frac{1}{50,000}$ to $\frac{1}{8,000}$ of an inch in length. There are some probably even more minute.

Species.—There is an immense number of different kinds of bacteria, but their simple structure makes it difficult, or at present impossible, to divide them satisfactorily into species. To-day, although there are some thousands mentioned under different names, only a few are well enough known to be fully understood, and it is not known to what extent this large number represents really different types.

Multiplication.—Bacteria multiply by simply increasing in length and then dividing into two equal parts. In this method lies the chief difference between them and yeasts, the latter multiplying by the production of a bud on the sides of the older cells. The bacteria thus multiply by *fission*, the yeasts by *budding*. The rapidity with which bacteria multiply is almost incredible. Some of them can divide every half hour, a rate that would give a progeny of about 17,000,000 in half a day. It is this wonderful power of multiplication that makes them agents of such importance in nature.

Foods.—As a rule bacteria feed upon organic foods. All kinds of animal or plant substances are attacked and utilized by some of the numerous kinds of bacteria. By far the larger majority of them are unable to feed upon living animal or plant tissue, and can consume these tissues only after the animal or plant is dead. Such bacteria are called *Saphropytes*. A few are able to feed upon living tissues and these are called *Parasites*. Since it is the latter alone that can produce disease they are frequently called *disease germs*. The number of disease germs is very small compared with the large number of non-parasitic bacteria.

Effect on Foods.—Bacteria do not take their food bodily inside of themselves but secrete digestive substances upon the foods, subsequently absorbing the digested material. As a result of this kind of process the substances upon which they feed are softened and broken down. The general effect of bacterial life is thus a breaking down of complex compounds. They are thus engaged in the general process of pulling to pieces the compounds which have been previously built up by the life of ordinary plants and animals, and are thus nature's great agents of *decomposition*.

Significance of Decomposition. — Decomposition is an absolute necessity for the continuation of life processes. The life of ordinary green plants results in a continual extraction from the soil and air of substances upon which plants feed. These are continually being built up by plants into complex organic compounds which are used as foods for animals. Unless there were some means by which these compounds could be broken to pieces so as to be used again by plants, the soils would have long since become exhausted of plant foods and life would have become extinct. The chief agent in this destruction of compounds is the group of bacteria, and they thus form a fundamental factor in nature's life processes.

Products of Bacterial Life.—The new products resulting from bacterial growth are of two general classes.

a. *Biproducts of decomposition.* When complex compounds are broken to pieces there arise of necessity new substances of a simpler nature. These are in general called biproducts of decomposition.

b. *Secretions.* In their growth bacteria carry on internal life processes, resulting in the final elimination of new substances produced within the bodies of the bacteria. These are eventually excreted, just as similar substances are excreted by higher animals and plants, and form secretions.

Biproducts are naturally simpler than the substances from which they are produced; Secretions may be either simpler or more complex. Both secretions and biproducts may be either harmless or poisonous.

Habitat of Bacteria.—Bacteria are practically universally distributed over the earth's surface. Their minuteness and lightness enables them to be carried everywhere by air currents. Their marvelous powers of reproduction enables them to seize upon any available food, and feeding upon it to multiply indefinitely. Hence we find them everywhere in an abundance dependent upon the food that is available for them, upon the amount of moisture and the temperature.

Air. — The air is a means of distribution of bacteria rather that a habitat in any proper sense. They do not feed upon air, nor multiply in it so far as we know, but they are freely carried by it. Hence the number of bacteria in air will be dependent upon its nearness to a source of supply. The air of a city street contains bacteria in great abundance; the air over the snow fields of a high mountain contains practically none.

Water.—Water is also chiefly a means of distribution. Most bacteria die in water after a few days. Some however lie and multiply in it, especially if the water contains food for them. Pure water of springs and deep wells contain very few and these of a harmless type. Streams which receive the rain washings of the earth's surface, or especially those that receive sewage discharges from human habitation, may contain bacteria in large numbers, with many dangerous ones among them. In such waters bacteria multiply and may assist in the decomposition of the organic products in the waters. Eventually they tend to become few in numbers in such streams and, unless the stream is receiving constantly fresh contamination, the waters become finally purified of most of bacteria as well as its organic matter. This is called the *Self Purification of Streams*.

Soil.—Modern study is teaching us to look upon soil almost as if it were alive. At all events all soil is crowded with living organisms upon whose activity its powers of supporting life are dependent. The bacteria are the most important of these agents and bacterial life and soil fertility go hand in hand. The number of bacteria in the soil varies widely with conditions. They are most abundant at the surface or immediately below. At depths of a few inches they decrease in numbers, and below a few feet they are not found. In dry soil they are few and in desert soils they are practically absent. Soil rich in organic matter and moisture contains them in large numbers, the number near a manure pile, a sink drain or where sewage is spread out on the soil being prodigious.

Functions of Soil Bacteria. — As already stated soil fertility is closely dependent upon the soil bacteria. The reasons for this will be readily understood when we recognize the various functions they perform.

Destruction of organic bodies. The secretions from animals and plants, as well as their dead bodies, are being constantly added to the soil. By bacteria they are being constantly destroyed, and thus the soil is kept in a comparatively pure condition. This is the *Self-Purification of Soil.*

Reconstruction of decomposition products into Plant foods. Many of the biproducts of decomposition are not in proper condition to be used by plants. Soil bacteria are at work, not only in forming these biproducts but also in building them up into plant foods. For example when proteid bodies are decomposed the nitrogen is liberated in the form of *ammonia* (NH_2) or as free nitrogen, neither of which can serve plants as food. But certain soil bacteria cause the ammonia to combine with oxygen to form *nitrites* and others cause the nitrites to combine with more oxygen to form *nitrites*. In the last form the nitrogen is again in condition to serve a new generation of plants as food. This process is called *nitrification*, and it is an absolutely necessary phenomenon in all fertile soil. Other somewhat similar functions are performed by bacteria in connection with other soil ingredients, though none are so well understood as nitrification.

Liberation of Carbon. The carbon in the organic substances in the soil is combined with oxygen to form *carbonic dioxide* (CO_2). This gas, together with the free nitrogen and some of the ammonia gas, is liberated into the atmosphere.

Solution of minerals. Soil fertility demands the presence of soluble phosphorus; lime, potassium, etc. Quantities of these exist in the soil in an insoluble condition and therefore not available for plant life. The carbon dioxide produced by bacteria aids in dissolving the limestones; various acids also produced by the growth of soil bacteria dissolve the other rocks which without such acids are not soluble in water. This brings the

required minerals into solution available for plants.

Fixation of Atmospheric Nitrogen. Nitrogen is necessary for plant life and plants must have access to nitrogen in the form of nitrates. The soil contains only a limited supply of nitrates and, as already noticed, the nitrogen is being constantly converted into ammonia or free nitrogen and dissipated into the atmosphere. This process would inevitably long since have exhausted the soil were there not at hand some means for restoring this lost nitrogen. This is accomplished by soil bacteria in at least two ways: 1. *In combination with legumes.* It has long been known that leguminous plants when grown in soil tend to increase rather than decrease its fertility. The last twenty years have shown that they do this through the agency of soil bacteria which enter their roots and form tubercles on the roots. The combination of the bacteria growing in these tubercles and the leguminous plant itself brings about a fixation of atmospheric nitrogen, and makes it available in the soil for plant food. 2. *Unaided.* Certain species of bacteria unaided by legumes or other plants are able to fix nitrogen and store it in the soil.

The factors above enumerated are those upon which soil fertility is dependent and the close relation of bacteria to soil fertility thus becomes apparent.

limentary Canal.—**Mouth.**—In the human mouth bacteria are always incredibly abundant. They are fewer in a cleanly kept mouth than in one ill cared for, but even in the most clean mouth there are hundreds of millions at all times. Here they cause the fermentation of food particles and produce acids that may attack the teeth, thus being agents in producing the decay of teeth. In other respects mouth bacteria are generally harmless, although among them are occasionally *diphtheria germs*, or other types that produce sores in the mouth, such as *abscesses* or *ulcerations*. Ordinarily the mouth bacteria do no injury.

tomach and Intestine.—In the stomach and intestines, bacteria are present in inconceivable numbers. That they must play some part in the digestion of food is apparent, but their relations to our life is not wholly understood. Experiments seem to indicate that we could not thrive without them, and certainly their presence is consistent with the best of health. It is certain too, that some illnesses are due to the disturbance of the normal relations of intestinal bacteria. Somewhat recently there has developed a plan of keeping up the normal bacterial relation by swallowing in large numbers bacteria of a known wholesome variety. Excessive numbers of putrefactive bacteria in the intestines appear to be harmful, but the bacteria that produce lactic acid, like those that cause the souring of milk, are not only themselves harmless, but they check the growth of the putrefactive forms. Sour milk, buttermilk and other milk preparations containing lactic acid bacteria in great numbers, are to-day frequently drunk to furnish the lactic acid bacteria as a corrective to putrefactive troubles in the intestines.

Elsewhere in the body bacteria are not common though they are occasionally found even in health. So far as known they are of no significance.

elation to Foods.—In their relation to our foods, bacteria are both useful and detrimental. They are necessary in the preparation of some foods, but their most common action upon foods is to cause their spoiling by *decay*.

Preparation of Foods.—Bacteria are occasionally useful in giving special flavors or other characters to foods or beverages. *Alcoholic Fermentation*, in alcoholic beverages are produced by the closely related yeasts. *Vinegar* is the result of a further change produced in alcohol by which acetic acid is produced. *Sauerkraut* is the result of a fermentation of cabbage produced by bacteria and yeasts together. *Silage* is a fermentation produced largely by bacteria. In the preparation of *butter* the cream, after separation from the milk, is allowed to stand for a time before churning. During this time bacteria grow in it and cause it to sour. The butter made from this soured cream has a butter flavor, while butter made from sweet cream tastes like cream but not like butter. Guided by these facts butter makers to-day artificially inoculate their cream with a culture of selected bacteria, to insure the desired flavor and uniformity in their product. Cheese too, needs to undergo a long ripening before it is ready for the market, and in this ripening bacteria play an important part.

Preservation of Foods.—The readiness with which bacteria destroy all kinds of food makes it necessary to adopt various methods of guarding against them. If we do not do this, bacteria will attack practically any kinds of food and destroy it quickly. The chief methods of protecting food against bacteria are the following:

Drying.—Bacteria cannot grow in the absence of water, and foods that are naturally dried, such as grains, are not injured by them. Other foods, like fruits, meats, fish, etc. are frequently preserved by artificial drying.

Cooling.—Most putrefactive bacteria grow readily at high temperatures, slowly at low temperatures, and not at all at temperatures below freezing. The ice chest and cold storage plant, therefore, preserve food by preventing bacteria growth.

Preservatives.—It is easy to prevent bacteria growth by adding to the food certain substances called preservatives. Some of these are harmless to the subsequent consumer of the food. Such, like *salt*, *sugar* and *spices*, are widely and legitimately used, either alone or in combination with drying for food preservation. Other materials, though much more effective, are harmful. These, like *borax*, *salicylic acid*, *benzoic acid* and *formalin*, being harmful, are illegal. They are, however, used somewhat extensively in some countries.

Canning.—Canning as a method of mechanically protecting food from bacteria. The food is first heated to a temperature sufficient to destroy all bacteria, including all spores, and is then sealed in jars or cans in such a way as to prevent further contamination by atmospheric bacteria. If the process is carried out successfully the food will keep indefinitely, since no bacteria can get at it to spoil it. This process has become widely utilized today, practically all kinds of foods being now preserved by it. The perfection of the process has brought about great changes in the food supply of our communities.

Bacteria in Milk.—Milk presents special problems in its relations to bacteria, some of which have proved very difficult of solution. The significance of the problems may be recognized from the following summary.

Normal Milk is Always Heavily Inoculated With Bacteria.—Owing to the method of its production milk always becomes more or less mixed with dirt and filth, and, since such material always contains numerous bacteria, the milk is filled with them long before it reaches the consumer.

Milk is One of the Best Media for Bacterial Growth. In it is found plenty of water and food material. It is also warm when drawn from the cow and thus in the very best condition for bacteria growth. No laboratory culture media offer better conditions for bacteria growth than milk.

Milk Spoils Rapidly.—The growth of bacteria in the milk rapidly changes its chemical nature and the milk soon becomes unfit to drink. It is frequently totally spoiled as milk, within twelve hours after it is drawn from the cow. To preserve it longer special care must be taken to keep it clean and cool.

A Great Demand.—The growth of cities has produced an immense demand for milk at centers, while the source of supply has to be pushed farther and farther away. New York, for example, demands 2,000,000 quarts of milk daily, and this must be drawn from a radius of 500 miles. It must be delivered fresh to the consumer before the bacteria have had an opportunity to spoil it. The difficulty of doing this has become immense and is constantly increasing.

A Distributor of Disease. Certain disease germs sometimes gain access to milk and are then naturally distributed to consumers. Since the milk is usually drunken raw, the consumer becomes readily inoculated with the disease germs. The diseases that are thus distributed are, *tuberculosis*, *typhoid fever*, *diphtheria*, *scarlet fever* and *diarrhœal diseases*. Some of these disease germs grow readily in milk, while others do not. But all may be distributed by the milk, from the patient or from the cow, to the consumer of the milk.

To satisfactorily solve all the problems connected with the subjects thus suggested has been hitherto impossible. The solution lies along the line of the proper control of bacteria. Dairy bacteriology has come to occupy a very prominent relation to modern life. Immense improvement in methods have been adopted in the last fifteen years, and it is not an exaggeration to say that bacteriology has revolutionized the dairy industry in respect to all three of its products, *milk*, *butter* and *cheese*.

Relation of Bacteria to Disease.—**Germ Diseases.**—This is a broad term covering those diseases that are caused by microörganisms which multiply inside the body of man. At first bacteria alone were included under this term, but now it is known that yeasts, molds and some microscopic animals (Protozoa) cause disease and are all therefore properly called disease germs. Most microörganisms cannot live a parasitic life, but the few that can may cause injury and thus produce disease.

Infectious Diseases.—The term infectious diseases is now applied to all which are caused by the multiplication of microscopic organisms inside the body. The germs which cause them may be eliminated from the body in condition to enter into other individuals and then reproduce the disease (*diphtheria*). In such cases the disease is *contagious*. In other diseases (*malaria*, *yellow fever*), the germs have no

natural means of elimination from the body, or at all events cannot be carried directly from one individual to another. These are *non-contagious diseases* though they are *infectious*. The ease of contagion varies much even among the contagious diseases. In some the infectious material very easily passes from person to person, and the disease is highly contagious (*scarlet fever*). In others the transfer is less easy and the disease is only slightly contagious, as in the case of *typhoid* where the germs are eliminated in the fæces and must reach the mouth of another person before they can develop a new case of the disease. All contagious diseases are probably caused by microörganisms, but not all by bacteria. Those known to be caused by bacteria are, *blood poisoning, pneumonia, meningitis, gonorhœa, anthrax, diphtheria, typhoid fever, dysentery, influenza, tetanus, tuberculosis, leprosy, cholera,* and some other less well known diseases.

How Bacteria Produce Disease.—The direct injury done by the bacteria is commonly produced by poisonous products which they secrete. These poisons are very different in the different diseases, and they act upon the body in a variety of different ways. Problems connected with these poisons, with their method of action, and with the power of the body to resist them, have become very complicated and constitute the fore-front of bacteriological research to-day.

Fighting Germ Diseases.—The facts which the last half century has disclosed have given us an entirely new attitude toward disease. We are no longer helpless in the face of epidemics, but know how to fight them. The new knowledge is rapidly revolutionizing the conditions of society and producing a new phase of civilization. The fight against disease has three distinct aspects.

The Prevention of Distribution.—If we can confine disease germs to the patient, or prevent them being distributed to others, we may stop the spread of disease. To do this each disease has to be studied as a special problem in which there are at least three factors to be considered.

Method of Elimination From the Patient.—If it is by the breath, the sputum, or the skin, the problem will clearly be quite different from that where they are eliminated by the fæces.

Means of Distribution.—Some diseases are distributed by water, some by milk, some by air, some by mosquitoes or flies, and each disease must be fought by attacking its means of distribution.

Method of Invasion.—Some kinds of disease germs enter the body through the mouth, others through the nose, and others through the skin, etc. Hence, for some diseases we must guard the food or drink, for others the air we breathe, and for others, we must guard against skin abrasions or the bites of insects.

A proper knowledge of these facts puts us into a position where we can largely check disease and prevent the ravages of epidemics, such as used to visit our communities. The application of this knowledge has produced modern *sanitary science* which has so changed our life. Sanitation, indeed, began before the birth of modern bacteriology, but it was largely guess work and its results uncertain. Our present knowledge of bacteria has placed sanitation on a firm basis of intelligible fact. It has taught us how to guard the water supply; how to solve the sewage problem; when and how long to apply the principle of isolation of the patient; the real value of quarantine; the meaning of disinfection and how to apply it. It has taught us to fight the mosquito, thus producing the marvelous results in stopping suddenly the ravages of yellow fever and malaria in the tropics. It has established health boards, which are to-day making life possible under conditions in which in former centuries epidemics decimated the human race. Sanitary science is the offspring of bacteriology.

Development of Resistance.—The knowledge that the individual has resisting power against disease has shown us a means of fighting by increasing this resistance. This is done to-day along two lines.

Hygienic Life.—Resistance is dependent upon personal vigor, and this upon a proper life. Proper attention to food, drink, air, exercise, etc., constitute thus one of the most efficient means of combating bacterial diseases.

Developing Acquired Immunity.—Convincing animal experiments have demonstrated that immunity against disease may be produced by giving mild infections, recovery from which leaves the individual resistant. This principle has been applied to man in several diseases. *Vaccination* against smallpox was the first example. The same principle of *preventive inoculation* has been applied with various modifications in the following diseases. *Rabies, tetanus, diphtheria, typhoid fever,* the *plague* and *cholera*. The first four can be quite positively prevented by the use of inoculation, the last two with much less certainty. The guarding against disease by preventive inoculation always involves some trouble and a little danger. This plan is therefore not adopted except for serious diseases, like smallpox, or in emergencies, as when one is bitten by a rabid animal. But bacteriology is pretty sure to devise inoculation methods for prevention of most infectious diseases, and it is impossible to predict what will be the development of this principle in the future.

Recovery from Germ Diseases.—Remembering that bacteria have the power of indefinite multiplication, it would seem as if when they had once gained a foothold in the body they would develop without check, until the death of the individual resulted. Why then are not germ diseases always fatal? Recovery from such diseases is so common and indeed the rule. The course of the diseases is commonly something as follows.

A Period of Incubation.—This is the time elapsing between the time of infection and the first appearance of the disease, and it is from several days to several weeks. It is the time during which the bacteria are getting a foothold and are beginning to multiply in the body.

The Onset of the Disease.—During this period, the person shows the symptoms of the disease and becomes more and more ill, as the germs increase in numbers and their poisoning action becomes greater.

The Crisis.—At this time the germs apparently cease to multiply and the effect is at its maximum.

The Recovery.—Now the germs become reduced in numbers and are finally driven from the body.

Evidently the body has resisting forces which are called upon to free it from the invaders. Just what these resisting forces are is a subject being to-day eagerly studied.

a. *Antitoxins and Antibacterial Substances.* These are substances secreted by the patient. The *antitoxins* are antidotes to the toxins which are produced by the bacteria causing the disease. They neutralize the action of the toxins, so that they no longer retain their poisonous properties. The *antibacterial substances* act upon the bacteria, preventing their growth or killing them.

b. *Phagocytosis.*—The blood contains numerous minute bodies called *leucocytes* or white corpuscles. These congregate in great numbers at the points of invasion and do battle with the bacteria. They actually engulf the bacteria and kill them. The process is called *phagocytosis*, and it is one of the active agencies in protecting the body against disease. The two factors concerned in recovery from disease are closely connected, and in a measure dependent upon each other. Together they are sufficient in most diseases to completely overcome the invading bacteria and to make recovery possible.

BOTANY.—One of the natural sciences, dealing with plants, as zoology deals with animals. In its widest sense it includes all kinds of inquiries in regard to plants, their structure, activities, distribution, origin, classification and uses. In fact the study of botany in its entirety includes every inquiry that may be made with regard to plants themselves and their relations to man and other living things, although for convenience the economic relations of plants are now more commonly relegated to agriculture, horticulture, forestry and pharmacy, while the more scientific problems are retained in botany.

Departments of Modern Botany.—The science may be divided for convenience into about ten departments, although sometimes fewer and again more divisions are recognized. The following is a conservative treatment:

Cytology deals with the minute structure of plants, especially with the *cells*, of which all plants are composed. A typical cell consists of a minute body of protoplasm (a soft ish nitrogenous substance) surrounded by a permeable membrane (wall of cellulose). The protoplasm is differentiated into a central denser, roundish part (nucleus), surrounded by a more watery part (cytoplasm). A still further differentiation has been made out for both nucleus and cytoplasm, the protoplasm consisting of a more active granular or fibrillar part (kinoplasm) scattered through the less active, nearly clear part (hyaloplasm). Moreover in the cytoplasm there are generally several (rarely one) rounded bodies of denser cytoplasm (plastids) which are stained by a green pigment.

Cells are the living units, and they produce other cells, and so increase the bulk of the plant. The usual method of the production of new cells is by the division of a cell into two. This is done by the cell itself, and in the process the granular matter of the nucleus (kinoplasm) divides itself very exactly into two equal portions, each of which becomes surrounded by its half of the clear nuclear matter (hyaloplasm); these equal parts of the nucleus now constitute two new nuclei, and each now draws around it its half of the cytoplasm. Thus there are now two cells where there was but one, and these generally build up a partition wall between them.

Histology deals with the *tissues* as made up of different kinds of cells. Here a mass of similar cells constituting a portion of

1. Composites: (a) head with rays, (b) ray flower, (c) disk flower, (d) head of tubular flowers.
2. Gagea: flower.
3. Maple (*acer*): (a) pistillate, (b) staminate flower, (c) fruit.
4. Clove (*Jambosa*): flower section and fruit.
5. Lamium: flower side and front.
6. Orobanche: flower section.
7. Pepper (*capsicum*): flower and fruit.
8. Oenothera: flower section.
9. Aralia: flowers.
10. Cornus: flower.
11. Clover (*Trifolium*): (a) flower, (b) fruit, (c) seed.
12. Beech (*Fagus*): (2) staminate, (3) pistillate flowers.
13. Sage (*Salvia*): flower and section.
14. Oak (*Quercus*): (2) staminate, (3) pistillate flower, (4) acorn.
15. Peach (*Prunus*): flower section.
16. Saxifrage (*Saxifraga*).
17. Ash (*Fraxinus*): apetalous flowers.
18. Grape (*Vitis*): closed, opening and opened flower.
19. Gentian (*Gentiana*): flower section.
20. Cinchona: flower and fruit.
21. Carrot (*Daucus*): flower and fruit.
22. Part of a fern frond.
23. Alfalfa (*Medicago*): (a) flower, (c) seed.

1. Cotton (*Gossypium*): fruit and seed.
2. Linden (*Tilia*): flower section.
3. Tamarix: flower section.
4. Morning Glory (*Convolvulus*): flower section, fruit and seed.
5. Willow (*Salix*): 4, 5, 6, 7, 8, 9, 10, flowers and seed.
6. Dammar-pine: leaves, cone, and scale.
7. Magnolia: flower section.
8. Field Horsetail (*Equisetum arvense*): plant form.
9. Arnica: stem, leaf, and flower.
10. Thistle (*Cnicus*): flowers and bristle.
11. Flax (*Linum*): fruit and seed.
12. Monotropa: flower section.
13. Poppy: flower section.
14. Birch (*Betula*): flowers.
15. Melon (*Cucumis*): flower section.
16. Buttercup (*Ranunculus*): section of flower, pistils, stamens, ovals, etc.

the plant substance is known as a tissue; accordingly tissues may be of as many kinds as there are kinds of cells. A convenient classification of tissues is as follows:

Rudimentary Tissue (meristem) consists of young, thin-walled cells which are still undergoing modification. It constitutes the bulk of all rapidly growing parts of plants.

Soft Tissue (parenchyma) consists of mature, thin-walled, usually short cells which have attained their growth, as the tissue of ripened fruits, the green tissue of leaves, etc.

Thick-Angled Tissue (collenchyma) consists of long prismatic cells with thin walls, but with the longitudinal angles much thickened. It occurs as a strengthening tissue just beneath the epidermis in many stems.

Stone Tissue (sclerenchyma) consists of thick-walled, usually short cells so tightly packed together that they form a hard mass, as in the shells of nuts; *e. g.*, hickory nuts, walnuts, filberts, etc., and in the "stones" of many fruits, as plums, cherries, etc.

Fibrous Tissue consists of thick-walled, elongated cells so tightly packed together that they make up the fibrous part of the wood (wood fibers) and bark (bark fibers) of the stems of most higher plants.

Sieve Tissue consists of elongated, usually large cells, more or less united into tubes, and having only slightly thickened walls. The name is given on account of the fact that the transverse partitions between the cells are perforated in a "sieve-like" pattern, and through these perforations the protoplasm connects from cell to cell. Sieve tissue occurs in the young bark.

Tracheary Tissue, like the preceding, is a tubular tissue, but here the continuity of the cavity is usually more complete. The walls are somewhat thickened, in rings, spirals, or reticulations. When young these tubes contain protoplasm, but eventually they contain air. Tracheary tissue occurs in the woody parts of stems and leaves.

Milk Cells and Tubes (laticiferous tissue) occur singly or in masses in many plants, and are easily recognized by their milky contents, as in the many kinds of milkweeds. The milk (latex) is often very poisonous, while more rarely it is wholesome. In some cases it contains caoutchouc, from which india rubber is manufactured.

Morphology deals with form as applied to the plant as a whole, or to corresponding parts. With respect to the latter it considers especially the correspondence and equivalence of parts of plants.

Plant Body.—Every kind of plant has a "body" of a more or less definite form. In every simple (primitive) plant the body is a single more or less rounded cell. There is no hint of root, stem or leaf. Plants a little higher are unbranched rows of nearly similar cells. Next the body is a row of cells differentiated into base and apex, the former rooting, the latter growing terminally. Branching simple rows rooted basally and growing terminally constitute a higher type.

A still higher type is seen where the rows of cells are not simple, but consist of several parallel cells. From this structure, which is very common in aquatic plants, especially the red seaweeds, the step is an easy one to massive structures, as in the brown seaweeds and the flat plant bodies of many liverworts. Eventually the type of body characteristic of higher plants is reached, in which there are roots, stems, and leaves.

Physiology has to do with the activities of plants, particularly those that relate to nutrition, growth and reproduction.

Absorption.—In the nutrition of plants the first stage is that of absorption of food-matter, which includes the imbibition of water and the solutions held in it, and the absorption of various gases. Naturally those parts of the plant which are normally in contact with the water are those which absorb water, and in like manner those parts which are normally in contact with the air absorb gases, and it is pretty certain that this has come about as an adaptation of each part to its environment.

The method of absorption must be little more than a simple diffusion through the permeable membrane of the cell-wall. It is found that gases and watery substances are absorbed indiscriminately, and that the plant does not have any "power of selection." Thus the plant is supplied with everything gaseous or soluble with which it is in contact. If these are sufficient for its needs, and none is harmful, the plant may thrive, otherwise it will starve.

Ordinary higher plants in their development have accustomed themselves to many of the solutions in common soils, and apparently they are so habituated to these solutions that they languish without them. On the other hand there are solutions that are known to be quite essential; for example, those that contain nitrogen and phosphorus. The gases of importance to plants are carbon dioxide, and oxygen, both of which occur in sufficient quantities in ordinary air.

Synthesis.—The food matters absorbed are subjected to certain synthetic processes by which they are made more available for the plant at large. Thus some of the water and the carbon dioxide are broken up and recombined into carbohydrates of definite composition, which are then available for the use of growing cells.

This particular synthetic process, since it requires light for its accomplishment, is known as photosynthesis. It takes place only in the green cells of plants, and is thus the chief function of the leaves of higher plants. The product of this synthesis is usually a sugar, containing carbon, hydrogen and oxygen (commonly $C_6H_{12}O_6$), which is commonly changed to starch ($C_6H_{10}O_5$).

Growth.—The carbohydrates formed are sooner or later used as proper food for the cells, and here we may use the terms "digestion" for the earlier steps, and "assimilation" for the later steps. The result is that the cells are nourished and increased in substance. This increase in the substance of the cell due to the nourishment by carbohydrates is what we know as growth. Yet in ordinary growth there is usually another factor, namely, the forcible distension and enlargement of the cell by the imbibition of a great amount of water.

And so it is with the growth of tissues, each cell of which increases in substance by the assimilation of carbohydrates (mainly) and increases in size by the distension due to its forcible imbibition of water. Along with this increase in substance and size in tissues there is usually an increase in the number of cells, by cell division as described.

The growth of organs and parts of plants is essentially like that of tissues, but here we have to do with more considerable masses of meristem cells in which cell division is the characteristic feature, especially in the earlier stages, and cell distension of the later stages.

Water Loss.—During the nutrition and growth of plants that grow partly or wholly in the air they are more or less constantly subject to a considerable loss of their water by evaporation, and unless there is a constant supply of water to counterbalance this loss such plants will dry up and die.

Reproduction.—All plants reproduce in some manner. Some merely break into fragments, each of which then grows into a new plant. This simple method is more common with lower, simpler plants, but that it still persists among some of even the higher plants is shown by the ease with which new plants may be grown from "cuttings."

Many lower plants regularly separate certain cells (spores) from particular portions of the plant body, and these on germination give rise to new plants. In many water plants such separated cells are motile by means of cilia, hence called zoöspores. Such production of new plants is known as the asexual (nonsexual) reproduction.

In addition to the asexual modes of reproduction most plants reproduce sexually also. In its simplest form sexual reproduction consists of the union of two free-swimming similar zoöspores (isogametes). The resulting cell sooner or later grows into a plant like that which gave rise to the isogametes. In passing upward we find successively free-swimming but unlike gametes (heterogametes); one free-swimming gamete (sperm), and one motionless gamete (egg); both gametes (sperms and eggs) motionless, and dependent upon other agencies for coming in contact with each other. The latter is the condition in the flowering plants.

Physiologically, sexual reproduction is a special activity of certain cells wherein two fuse into one, thus producing a new cell somewhat different from either. This in its growth produces a plant somewhat different from the plant or plants which produced the sexual cells. Sexual reproduction is thus a mode of growth. It is also a mode of variation.

Pathology considers the diseased or abnormal condition of plants. As physiology has to do with the normal healthy activities of plants, so pathology has to do with abnormal activities. Diseased conditions of plants are due to many causes, which may be summarized as follows:

Physical Injuries, which may include all kinds of purely mechanical rupture, cutting or puncture of the tissues, due to wind, lightning, hail, or other violence, and the eating by insects, birds, and other animals. The mutilation by such agents interferes with the normal functions of the plant. In this place may be named some of the injuries due to too low temperature (freezing) or too high a temperature (scalding) and probably also the scalding or scorching effect of too intense light.

Errors of Nutrition may include all cases where there is an insufficient amount of any or all of the food substances, including water, solutions, gases and the carbohydrates and other more complex nutrients. Here the word "starvation" may properly be used. When plants are supplied with too little light they suffer from starvation, there being a deficiency

in carbohydrates. So also plants in too low a temperature are not able to make use of available food substances, and starvation is the result.

Parasitic Injuries may be due to the presence of living animals or plants in the tissues. Under the former the most notable are the nematodes, which are very minute thread-like worms, which seriously injure the parts of the plants that they infest. The nematode disease of sugar beets is a good example, as also the root-knot nematode diseases of many different kinds of plants

Of the plant parasites the most common are bacteria of several kinds which destroy the cells in certain tissues, as in apple blight; external fungi which injure young twigs and leaves, as the powdery mildews; internal fungi which grow through the tissues of stems and leaves, injuring or wholly destroying them, as in rusts, smuts leaf-spot diseases, fruit rots, etc.; flowering plant parasites, as the dodder, mistletoe, etc., which often attack plants and distort or destroy the stems, as clover dodder, pine mistletoe, etc. The number of known disease-producing parasites is very great, and the literature on the subject is very voluminous.

Ecology deals with the relations of plants to their environment. It has been recognized as a distinct part of botanical study for less than twenty years, and is still associated with physiology, of which it is an extension and development. It is sometimes spoken of as out-of-door physiology, and it certainly has led to a closer study of plants in their natural environment than had been the practice in ordinary plant physiology. How plants affect one another, how they come to occupy particular habitats, and how these affect the plants themselves, are among the more common inquiries made by the ecologist.

Phytogeography, or geographical botany, as it is more commonly called, includes all the inquiries that relate to the distribution of plants throughout the world. In its more local inquiries it is identical with ecology, but its scope is much broader in its world-wide application.

Phylogeny and Taxonomy deal respectively with the descent and consequently the relationship of plants, and their natural classification.

Outline of the Taxonomy of Plants.—Botanists are now somewhat acquainted with about 233,000 different kinds of plants, at least they have given names to that many and assigned them to their orders and families.

A careful consideration of this vast mass of plants enables us to recognize a dozen or more rather well-marked groups of related forms. These groups are regarded as the results of definite development along as many evolutionary lines, and to these groups thus understood we now apply the name "phyla." So a phylum is a group of related plants, their relationship being due to the fact that they have had a common origin. Beginning with the lowest the phyla are as follows:

The Blue-Greens (*Myxophyceæ*) are minute water plants of such simplicity of structure that we are warranted in giving them the lowest place in the vegetable kingdom. Their cells for the most part do not have definite nuclei or chromatophores, and their walls are usually soft and more or less gelatinous. The color of the cells is never a bright green, but is blue-green, brown-green or smoky-green. They reproduce by fission, and the production of asexual spores, and there is no sexual reproduction whatever.

About 2,000 species are known, including many "bacteria" which are here regarded as blue-greens that have become hysterophytic and as a consequence have lost their coloring matter.

The Lower Green Algae (*Protophyceæ*) are also minute water plants, but their cells have well developed nuclei and chromatophores, and their walls are usually firm. Their color is a bright green, due to the presence of typical chlorophyll.

Like the preceding, these plants reproduce by fission, but in addition many of them form motile cells (ciliated zoöspores) which swim away and eventually grow into new plants. Some of these zoöspores fuse when two meet, the result being a new cell which then grows into a new plant, this process constituting a simple sexual act. There are above 1,100 species of the lower green algæ now known. The lower members of the phylum are unicellular, but for the most part they are filamentous plants.

The Pond Scums (*Zygophyceæ*) are typically filamentous plants in which a marked sluggishness of habit has entered to such an extent as to have materially modified their structure. Although filamentous, the plants for the most part very easily break into segments, or single cells. Although related to zoöspore-forming plants in the preceding phylum, the pond scums do not form zoöspores, nor do they have free-swimming ciliated gametes; on the contrary the protoplasms of two contiguous cells sluggishly fuse together.

In the treatment here suggested the more filamentous forms are considered more primitive, and those in which the filaments fragment early into single cells or short filaments of few cells are regarded as the later, or derived forms.

All told there are about 7,000 species of the pond scums and of these the diatoms include by far the greater number.

The Tube Algae (*Siphonophyceæ*) show another peculiar modification of the filamentous structure found in the lower green algæ, whereby the filaments instead of forming cross-walls to separate their cells are left partly or wholly tubular. In other respects the tube algæ resemble the lower green algæ, from which phylum they no doubt originated.

There are about 1,260 known species of tube algæ.

The Brown Algae (*Phæophyceæ*) include plants ranging from small filaments to large, massive plants many meters in length. They are peculiar in having a brown-green coloring matter instead of the bright green chlorophyll of ordinary plants. They are here regarded as a marine modification and development from the filamentous lower green algæ.

The brown algæ number somewhat more than 1,000 species.

The Red Algae. (*Carpophyceæ*) are green plants almost wholly marine, whose green color is mostly hidden by an additional red coloring matter which suffuses the protoplasm of the cells. The simpler species are filamentous and often very minute, but many of the higher species are large massive plants of a complex structure.

The red algæ number about 3,050 species, by far the greater part of which are red or purple in color.

The Fungi (*Carpomyceteæ*).—Here are brought together a vast number of hysterophytic plants, apparently related to the plants of the phylum just preceding, but which in becoming dependent have lost their green color, in addition to suffering many other changes.

Structure.—The plant body in all fungi is very simple (no doubt reduced), consisting of slender filaments which creep through the substance or the tissues upon which they feed. In most cases there is an asexual form of reproduction consisting of cells (conidia) that separate from the ends of certain filaments, and on germinating grow into new plants.

This phylum contains an enormous number of species, no less than 63,700 being enumerated in systematic works at the present time (1911), and every year hundreds of additional species are being identified and described.

Classification.—The fungi may be summarily outlined as follows:

1. Class *Ascosporeæ*, the sac fungi, including about fifteen orders and over one hundred families. Here we find the beetle fungi, the powdery mildews, black fungi, black lichens, script lichens, cup fungi, cup lichens, morels, tubers, etc.

2. Class *Teliosporeæ*, the rusts and smuts, including two orders and five families of excessively parasitic plants which live in the tissues of higher plants.

3. Class *Basidiosporeæ*, the basidium fungi, including nine orders and twenty-two families. Here are found the subterranean fungi, stinkhorns, puff-balls, bird-nest fungi, toadstools and mushrooms, pore-fungi, prickle-fungi, shell-fungi, ear-fungi, jelly-fungi, etc., in all of which the structure which we see is the spore-fruit, while the plant itself is the webby mass of filaments from which the spore-fruit grew. Thus the toadstool, with its well-known umbrella-shaped structure, is the fruit of a white filamentous plant growing beneath the surface.

The Mossworts (*Bryophyta*) are green plants of a markedly higher degree of development than any of the preceding phyla. In them we have for the first time a distinct alternation of sexual and asexual generations in the round of life. Thus one generation produces the sperms (in antherids) and eggs (in archegones) and the fertilized egg develops a second generation which does not produce sexual organs, but produces spores, and when the spores germinate they grow into sexual plants, and so on. The two generations are known in science as (a) the gametophyte, that is, the gamete-producing plant, (*i. e.*, the sexual plant), and (b) the sporophyte, that is, the spore-producing plant, (*i. e.*, the asexual plant).

There are all told somewhat more than 16,000 species of mossworts.

1. Class *Hepaticæ*, the liverworts, with mostly bilateral, often thalloid, creeping gametophytes, and globose to elongated, mostly splitting sporophytes, usually with "elaters" mingled with the spores. Here are to be found the crystalworts, horned liverworts, great liverworts and scale-mosses.

2. Class *Musci*, the mosses, with multilateral, mostly erect, leafy-stemmed gametophytes, and more or less elongated, erect sporophytes, which usually dehisce by a circular lid, and are without "elaters." There are more than sixty families of mosses, among which are species of peat mosses, cushion mosses, petticoat mosses, bristle-stalk mosses, ephemeral mosses, wood mosses, hair-cap mosses, humpback mosses, tree mosses, bog mosses.

The Ferns (*Pteridophyta*) are much larger land plants than the mossworts, to

which they are closely allied. They show the same marked alternation of generations, but here the gametophyte is much smaller, sometimes in fact so small as to be actually microscopic, and in all cases it is much shorter lived than the sporophyte. The latter is early provided with roots and leaves, and so becomes quite independent of the gametophyte.

In common ferns the gametophyte is a small, flat, heart-shaped plant, a few millimeters in diameter, and growing attached to the moist soil by the hairs on its lower surface. It bears antherids and archegones on its lower surface, and after the fertilization of an egg in one of the latter, a leafy-stemmed and rooted plant (the sporophyte) develops. The fern as we see it is the sporophyte generation, and eventually it produces spores (in common ferns on the lower surfaces of the leaves) which on germination produce gametophytes again.

There are two great types of ferns, namely, the ancient and the modern, including all told somewhat more than 3,800 species.

The Calamites (*Calamophyta*) represent a phylum once very important but now almost extinct. In these plants the gametophyte is much like that of the ferns, while the sporophyte consists of cylindrical, jointed, often hollow stems, rooted below, and bearing narrow, whorled leaves above.

The spores of calamites are borne in whorled sporangia that compose terminal cones upon the stems. When they germinate they produce the small gametophytes referred to above.

There are only about twenty-four species of living calamites, all belonging to the genus *Equisetum* (horsetails).

The Lycopods (*Lepidophyta*) are represented to-day by about 700 species of small plants.

Here we find such living genera as *Lycopodium* (club-mosses and ground-pines) and *Selaginella* (little club-mosses).

The Cycads (*Cycadophyta*), like the preceding, constitute a phylum from which many types have died out, and what we have left is a mere remnant of a much larger and much more diversified group. In this phylum the gametophytes are very small, so small in fact that they are made out with difficulty even with the aid of the compound microscope, while the sporophyte is large, massive and often of the dimensions of trees. This great difference between the gametophyte and sporophyte generations has obscured the alternation of generations, and this has been emphasized by the fact that the megaspore which gives rise to the archegonial gametophyte does not escape from the sporangium, but remains within it, developing its gametophyte *within the sporangium*. This retention of the megaspore is the most important step that has been taken in the evolution of this part of the vegetable kingdom, resulting as it does in the better nourishment and greater protection of the gametophyte. This retention of the megaspore necessarily results in the formation of the seed, which appears first in this phylum.

Development of the Seed.—The sporangia which produce the microspores are found upon leaf-like structures (microsporophylls, or "stamens") and these are often aggregated into cones (staminate cones). In like manner the sporangia producing megaspores are on similar leaf-like structures (megasporophylls or "carpels"), and these again are often aggregated into cones (carpellary cones). Moreover, since the megasporangia are to retain the megaspores, they develop an external coat of protective tissue (the "seed coat"). When the megaspore is mature it at once develops a minute gametophyte in which several archegones are produced, each containing an egg. While this development is going on in the megasporangium, the microspore falls out from its sporangium and is carried by the wind to the summit of the young seed, where it germinates and produces a very simple, tubular, antheridial gametophyte, which in turn gives rise to two motile sperms, essentially like those in the preceding phyla.

Upon fertilization of an egg by a sperm it grows and rapidly develops into a new plant (young sporophyte) within the protective coats, and a little later the megasporangium, with the embryo plant and the surrounding coat, ripens into a "seed." This falls to the ground, and upon the resumption of growth by the embryo the latter soon splits the seed-coat and escapes, sending its root into the ground and its little leaves into the air, and it is henceforth able to maintain itself independently.

There are four or five known classes of cycads, two of which are wholly extinct, and those remaining are mere remnants of larger groups. The living species number between 125 and 150.

The Conifers (*Strobilophyta*) are related to the cycads, but this is in many respects a more modern group. As in cycads so here the archegonial gametophyte is very small, and permanently inclosed in the young seed. The antheridial gametophyte is tubular but the sperms are not motile. The development of the gametophytes and the fertilization of the eggs and production of the seed are essentially the same in conifers as in cycads. The sporophyte of conifers is much branched, woody, and often developed into enormous trees; the leaves are never large, always simple, and are often narrow or even scale-like, and generally persistent (evergreen). The fact that the megosporophylls and microsporophylls are nearly always in cones (strobili) has given them their common name of "conifers."

About 400 species are known. The principal genera are *Taxodium* (the bald cypress), *Sequoia* (the redwoods), *Araucaria* and *Dammara* (the ancient pines), all of which have many extinct species; *Abies* (the firs), *Picea* (the spruces), *Pinus* (the pines), *Cupressus* (the cypresses), *Thuja* (the arbor vitæ), and *Taxus* (the yew trees).

The Flowering Plants (*Anthophyta*) stand as the highest development reached in the vegetable kingdom. The particular structure which is characteristic of this phylum is the flower. This is a modification of the crude structures found in some ancient cycads, and now is typically composed of an axis on which are borne closed megasporophylls above, microsporophylls next lower, and below these one or more whorls of flower-leaves. More particularly, the megasporophylls are not open and more or less flat, as they are in preceding phyla, but as they grow their edges come together and finally become grown together so that the megasporangia are inclosed in the cavity so formed. This structure is known as a "pistil" in ordinary descriptive botany, and the megasporangia with their one or two coats are the young seeds ("ovules"). The microsporophylls (stamens) are much like those of the two preceding phyla, and the microspores themselves are known as "pollen." The flower leaves are typically two whorls, and then the inner whorl is usually more delicate and colored ("petals" composing the "corolla"), the outer whorl is typically of coarser texture and green ("sepals" composing the "calyx"). The principal modifications of the structure of the flower as here given will be indicated elsewhere.

Fertilization of the Egg.—The ovule develops as in the preceding phyla, but the archegonial gametophyte is delayed and the egg advanced in the sequence of changes, so that the gametophyte is still quite immature when the egg is ready for fertilization, and it is only after fertilization that it completes its development (as the "endosperm" of the seed). Fertilization is effected as follows: The microspore (pollen) falls upon a particular portion of the external surface of the pistil (the "stigma") and there develops a very simple tubular gametophyte which penetrates the soft stigmatic tissues in the direction of the ovule, which it eventually reaches and penetrates. In the end of the tube there are now two motionless sperms, one of which is passed through to the egg. After fusion of sperm and egg the resultant cell (zygote) divides and subdivides until a new plant is formed. At the same time the development of the belated gametophyte (endosperm) is resumed, the ovule tissues become less watery, the seed coat hardens, and the result is the mature seed.

Number of Species.—The flowering plants include an immense number of species, the number now known considerably exceeding 132,000, and with the additions of new species which are constantly being made it is safe to say that the number will eventually reach fully 150,000.

In the development of this vast number some marked modifications of structure have taken place, and these rightly understood give us a clew to the mode and sequence of the evolution, and since taxonomy must follow phylogeny, we have here the key to the classification of these plants.

While it is probable that the embryo plant in the seed of primitive flowering plants had two opposite leaf rudiments, (cotyledons) and hence were dicotyledonous, an early modification appeared in which the embryo had but one leaf rudiment, being monocotyledonous, and this has been adhered to in a group (the monocotyledons) which includes nearly one-fifth of all the flowering plants. These may be briefly arranged as follows:

The Monocotyledons (class *Monocotyledoneæ*) have a single cotyledon, alternate leaves which are parallel-veined, and the fibrovascular bundles of their stems are scattered. There are seven or eight orders and nearly fifty families, beginning with the water plantains and their relatives, *Alisma* (water plantain), *Butomus*, *Potamogeton*, etc., in which the pistils are normally many and separate and the other parts of the flower separate also and normally in whorls of three each.

In the lilies the pistils have been reduced to three and these have fused into a single structure (compound pistil), while the stamens have been reduced to six or three, and the petals and sepals are of three each.

In this central group of the monocotyledons are found such genera as *Lilium* (lily),

Tulipa, (tulip), *Gagea*, *Yucca*, *Asparagus*, *Allium* (onions), *Tradescantia*, *Juncus*, etc.

From the lilies have come at least five other orders by as many modifications of the lily structure. These are the calla lilies, with their crowded, soft, small, lily-like flowers and thick succulent stems and leaves, including *Calla*, *Caladium*, *Calocasia Arisæma* (Indian turnip), *Symplocarpus*, *Acorus*, etc., and the reduced duckweeds (*Lemna*).

Next to these are the palms, with small, firm, lily-like flowers and strong, stiff, spreading leaves upon the summits of woody trunks. Here are the date palms (*Phœnix*), coconuts (*Cocos*), palmettos (*Sabal*), royal palm (*Oreodoxa*), rattan palm (*Calamus*), etc.

Then come the grasses, with their stiff, leafy stems, and reduced, chaffy flowers of the lily type, including also the sedges with three-ranked leaves upon three-angled stems, *Cyperus*, *Scirpus* (rushes), *Carex*, etc. The genuine grasses have two-ranked leaves, borne upon rounded stems.

The genera may be grouped into about a dozen tribes—*viz.*, the bamboos (*Bambusa*), fescues (*Festuca*, *Bromus*, *Poa*, etc.), oats (*Avena*), wheats (*Triticum*, *Hordeum*, *Secale*), grammas (*Bouteloua*, *Buchloe*), red tops (*Agrostis*, *Sporobolus*), canary grasses (*Phalaris*), rices (*Oryza*), panic grasses (*Panicum*, *Setaria*), canes (*Sorghum*, *Saccharum*, *Andropogon*), maize grasses (*Zea*).

In all the foregoing the pistils, whether simple or compound, stand at the summit of the flower axis and are not overgrown or inclosed by any of the other parts of the flower or the petals or sepals (pistil superior), but in the three following orders such overgrowth has taken place and the pistil is said to be "inferior."

The waterworts (*Hydrales*) include a few water plants, as *Vallisneria*, *Hydrocharis*, etc.

The irises include terrestrial, mostly erect plants, with regular and often showy flowers (*Amaryllis*, *Narcissus*, *Agave*, *Iris*, *Ananas* (pineapple), *Musa* (banana), *Zingiber* (ginger), *Canna*.

From this latter order, by the development of "irregularity" in the flower, came the orchids with their odd-shaped flowers adapted to secure the help of insects in the carrying of pollen from flower to flower. Here are *Cypripedium* (lady's slipper), *Orchis*, *Epipactis*, *Vanilla*, *Spiranthes*, etc.

The Dicotyledons (class *Dicotyledoneæ*) have two opposite cotyledons, opposite or alternate leaves which are reticulate veined, and the fibrovascular bundles are arranged in concentric layers in the stem.

The *number of species* of dicotyledons is about four and a half times that of monocotyledons, and accordingly we find more numerous and much greater modifications of structure in this class, and while the dicotyledons probably appeared earlier in time than the monocotyledons, it is true also that they have attained a higher development. In fact, when we consider the flowering plants as a whole, we are led to the conclusion that the dicotyledons are *the typical* flowering plants, and that the monocotyledons constitute a nontypical and much less important modification.

The *flower* of primitive dicotyledons consists of an axis bearing on its terminal portion a considerable number of pistils; below these are whorls of stamens, and still below these the whorls of flower leaves (petals and sepals). Such a flower structure is found in the buttercups and their relatives. From this point of beginning, development has progressed along two main lines, culminating in one case in the mints and in the other in the sunflowers and the dandelions.

First Line.—In the buttercup-mint line there are about fourteen orders and 146 families. The more important orders are as follows:

The buttercups (*Ranales*), with all of the flower parts typically free and distinct from one another. Here are such genera as *Myosurus*, *Ranunculus* (buttercups), *Anemone*, *Magnolia*, *Asimina*, *Berberis*, *Nymphaea* (water lilies), etc.

The crucifers (*Rhoedales*), with the carpels mostly two, and united, as in *Sanguinaria*, *Papaver* (poppy), *Sinapis*, *Brassica* (mustard), *Raphanus* (radish), *Reseda* (mignonette), etc.

The pitcher plants (*Sarraceniales*), *Sarracenia*, *Nepenthes*.

The pinks (*Caryophyllales*), with pistil of three or more united carpels, the petals separate and free, as in *Dianthus* (carnations), *Lychnis*, *Tamarix*, *Salix* (willows), *Populus*, *Portulaca*, *Amaranthus*, *Chenopodium*, *Polygonum*.

The geraniums (*Geraniales*), as in *Geranium Oxalis*, *Linum* (flax), *Ruta*, *Citrus* (orange), *Euphorbia*.

The guttifers (*Guttiferales*), as in *Thea* (tea), *Viola*, *Passiflora*.

The mallows (*Malvales*), as in *Tilia* (linden), *Malva*, *Gossypium* (cotton), *Ulmus* (elm), *Morus*, *Ficus*, *Urtica*, in all of which the petals are free and distinct from one another.

In the following the petals are united (gamopetalous) and there is a gradual reduction in the number of carpels in the compound pistil. The primroses (*Primulales*), as in *Primula Dodecatheon*, *Plantago*.

The heaths (*Ericales*), as in rhododendron, *Kalmia Erica*, *Pirola Monotropa*.

The ebonys (*Ebenales*), as in *Achras*, *Diospyros* (persimmon), *Styrax*.

The phloxes (*Polemoniales*), as in *Gilia*, *Phlox*, *Convolvulus* (morning glories), *Solanum*, *Capsicum*, *Datura*.

The gentians (*Gentianales*), as in *Olea* (olive), *Fraxinus* (ash), *Gentiana*, *Asclepias*.

The figworts (*Scrophulariales*) as in *Verbascum*, *Gerardia*, *Catalpa*, *Orobanche*, *Utricularia*, *Acanthus*.

The mints (*Lamiales*), as in *Verbena*, *Nepeta*, *Lamium*, *Salvia* (sage), *Mentha* (mints).

These plants are at the summit of this line, and represent the highest development attained by plants with gamopetalous flowers whose pistils are superior.

Second Line.—In the rose-sunflower line there are about nine orders and ninety families, the general sequence of which is as follows:

The roses (*Rosales*) are very much like the buttercups, having usually a considerable number of simple pistils, many stamens, and petals and sepals not united. The flower axis has a disk-shaped enlargement at its base, and this appears to be the dominant structure of this line. Here are such genera as *Potentilla*, *Fragaria* (strawberry), *Spiræa*, *Rosa*, *Pirus* (apple), *Prunus*, *Mimosa*, *Gleditsia*, *Trifolium*, *Medicago*, *Vicia*, *Pisum* (pea), *Saxifraga*, *Ribes*, *Crassula*, *Platanus*.

The myrtles (*Myrtales*) have overgrown the compound pistil by the cup-shaped disk, as in *Myrtus*, *Jambosa* (clove), *Eucalyptus*, *Oenothera*, *Fuchsia*.

The cactuses (*Cactales*) have, in addition to myrtle-like flowers, a leafless, fleshy plant body, as in *Opuntia*, *Cereus*, *Cactus*, *Melocactus*, etc.

The loasas (*Loasales*) include such genera with inferior pistils as *Mentzelia*, *Cucurbita* (pumpkins), *Cucumis* (melons), *Citrullus*, *Begonia*.

The buckthorns (*Celastrales*) include *Rhamnus*, *Vitis* (grapes), *Celastrus*, *Ilex* (holly), *Elæagnus*, *Viscum* (mistletoe), etc.

The horse-chestnuts (*Sapindales*), which include a series of trees with more and more simplified flowers, from *Aesculus*, *Acer* (maple) and *Rhus*, to *Juglans* (walnuts), *Betula* (birch), *Corylus*, *Fagus* (beech), *Castanea* (chestnuts), and *Quercus* (oaks).

The umbelworts (*Umbellales*), in which the mostly bicarpellary two-celled pistil is wholly inferior by the adhesion of the disk, and the five stamens and five petals are distinct, while the sepals are small. Here we find *Aralia Hedera* (ivy), *Coriandrum*, *Conium*, *Cicuta*, *Pastinaca*, *Daucus* (carrot), *Cornus*, etc.

The madderworts (*Rubiales*), with the general structure of the umbelworts but with the petals united (gamopetalous), represented by *Galium*, *Coffea Cinchona*, *Sambucus*, *Lonicera* (honeysuckle), etc.

The sunflowers (*Asterales*), with small flowers mostly crowded into heads, the pistil typically bicarpellary but mostly one-seeded and one-celled, the corolla tubular and the calyx reduced to chaff or bristles (pappus) or entirely wanting. Here at the summit of the vegetable kingdom are found the bellworts (*Campanula*) and lobelias (*Lobelia*) and also a vast number of "composites," of which more than 13,000 species are now known. These represent the highest development to be found anywhere in the vegetable kingdom.

The sunflowers proper (species of *Helianthus*) are to be regarded as representing the lower or primitive composites, from which have come the ragweeds (*Ambrosia*), as well as the asters (*Aster*) and golden-rods (*Solidago*) and ironweeds (*Vernonia*) on the one hand, and the chrysanthemums (*Chrysanthemum*), groundsels (*Senecio*, *Arnica*), thistles (*Cnicus*), the chicories (*Cichorium*), the lettuces (*Lactuca*) and the dandelions (*Taraxacum*).

The last-named genus is on many accounts to be regarded as the highest in this group, and, as a consequence, in the vegetable kingdom.

Bibliography of Botany.—Only the most important works are here enumerated.

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Cytology, Histology, Morphology.—In addition to the ordinary text-books consult Strasburger, Noll, Schenck and Karsten's *Textbook of Botany*.

Physiology.—Pfeffer's *Physiology of Plants*.

Pathology.—Ward's *Disease in Plants*.

Ecology.—Clement's *Research Methods in Ecology*.

Phytogeography.—Schimper's *Plant Geography*.

Phylogeny, Taxonomy.—Campbell's *Evolution of Plants*; Engler's *Übersicht über die Unterabteilungen, Klassen u. s. w. der Embryophyta siphonogama*, and *Erlauterungen zu der Übersicht*; Bessey's *Synopsis of Plant Phyla*, *Phylogeny and Taxonomy of Angiosperms*, *The Phyletic Idea of Taxonomy*.

Nomenclature.—*International Rules of Botanical Nomenclature adopted by the International Botanical Congress of Vienna, 1905.*

For the systematic botany of the whole vegetable kingdom consult:

Engler and Prantl's *Natürlichen Pflanzenfamilien* and Bessey's *Synopsis of Plant Phyla*.

For Phyla I., II., III., IV., V., VI., VII. consult also De Toni's *Sylloge Algarum*, and Saccardo's *Sylloge Fungorum*.

Phylum VIII., Hedwig's *Species Muscorum*.

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Phyla XII., XIII., XIV., consult:

Bentham and Hooker's *Genera Plantarum*.

De Candolla's *Prodromus*.

Bessey's *Phylogeny and Taxonomy of Angiosperms.*
Engler's *Das Pflanzenreich.*
Gray's *Synoptical Flora of North America.*
Britton and others' *North American Flora*, and various local manuals:
Britton and Brown's *Illustrated Flora of the Northern United States, Canada and the British Possessions.*
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Gray's *New Manual of Botany.*
Small's *Flora of the Southeastern United States.*
Coulter and Nelson's *New Manual of the Botany of the Central Rocky Mountains.*
Piper's *Flora of Washington.*
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Among current botanical periodicals should be mentioned the following:
American.—*Botanical Gazette; Bulletin of the Torrey Botanical Club.*
English.—*Annals of Botany; New Phytologist.*
German.—*Flora; Berichte der Deutschen Botanischen Gesellschaft; Botanische Jahrbucher fur Systematik, Pflanzengeschicte und Pflanzengeographie; Jahrbucher fur Wissenschaftliche Botanik.*
French.—*Annales des Sciences Naturelle (Botanique), Journal de Botanique.*

CHEMISTRY is that science which is largely concerned with a study of the different species of matter and of the changes from one species to another. When iron rusts, or when charcoal burns, the products of these chemical changes are species of matter that are different from the original iron or charcoal. The different species or kinds of matter are called *substances.* Granite, and also gunpowder, are mixtures of at least three different substances.

Substances are recognized and identified often by their *physical properties*, such as color, density, boiling point, melting point, and solubility. They can also be recognized by their *chemical properties*, such as combustibility, ease of rusting, or, generally, their *chemical reactions* or behavior toward other substances chosen to test them with.

Pure Substances.—In studying the different kinds of matter (different substances), such as iron, charcoal, salt, sugar, or niter, it is necessary to first prepare them in a pure state. To do this the chemist uses various processes. In *filtration* the insoluble solid matter is retained by a piece of unsized filter-paper, while the liquid passes through the paper and is collected as the *filtrate.* Instead of filter paper, unglazed earthenware may be used to filter drinking water. The pores in this are so small (in Pasteur filters) that even the minute microbes, some of which cause disease, cannot pass through.

In *distillation* a liquid, by raising its temperature, is converted into gas and is so separated from any substances that accompany it which are less *volatile, i. e.*, less easily gasified. In this way, for example, pure drinking water may be obtained on board ship from sea water, which contains difficultly volatile salts, including common salt, dissolved in it. The gaseous water (steam) is *condensed* to water again by passage through a cooled tube. It should be noticed that the changes from water into steam and *vice versa* are classed as *physical changes*, because analysis shows that steam and water consist of the same substance differing only in state, steam being in the gaseous state, water in the liquid, and ice in the solid state.

Sublimation refers to the distillation of solids. Sal-ammoniac, benzoic acid, etc., are purified by sublimation. *Lixiviation* and *leaching* refer to the dissolving out of a soluble substance from its admixture with an insoluble substance.

Physical Properties.—The substance having been obtained in a pure state, a study may be made of its properties. Purity is extremely important; and chemists and physicists alike have in the past often wasted years of their lives in studying substances that were seriously impure and that could not, therefore, be expected to yield constant results.

Solubility.—Among physical properties, *solubility* is one of the most important to the chemist. Liquids dissolve solids, other liquids, and also gases. If common salt be added to water, it dissolves, and, after stirring, the solution is said to be homogeneous because all samples, wherever taken, prove to be identical. Water is here the *solvent* and salt the *solute.* If more and more salt be added by degrees, the temperature remaining constant, a stage is finally reached at which the solution will take up no more salt. The solution is then said to be *saturated*, at that temperature, with common salt.

Its *concentration* may be stated in any one of three ways: (1) Weight of salt contained in such a weight of the solvent; (2) weight of salt contained in such a weight of the solution; (3) weight of salt contained in such a volume of the solution. When the temperature is raised it is found that the solution can take up more salt. Tables of solubilities state the concentration of the saturated solution at a series of different temperatures. It is by making use of their differences in solubility that intimate mixtures of different solids can be separated into their components; for instance, radium bromide is separated from barium bromide by repeated *fractional crystallization.*

Most, but not all, solids are more soluble at higher temperatures than at lower. All substances seem to be slightly soluble in water, although in some cases the saturated solution is an exceedingly dilute one.

That gases dissolve in water is known to every one who has examined *soda-water*, which contains the gas carbon dioxide in solution. If the gas is under pressure, the weight of it that the solvent will dissolve is proportional to the pressure (Henry's law). Since soda-water is *aerated* at several atmospheres' pressure, a portion of the gas tends to escape when the pressure is released. Gases are less soluble the higher the temperature, and can often, though not always, be completely removed by boiling the solvent. By ten minutes' boiling, for example, the gases dissolved from the air by ordinary water may be removed and the water thus rendered flat or insipid to the taste.

Molecular Hypothesis.—In studying the physical properties of substances there is a hypothesis as to the structure of matter—the kinetic-molecular hypothesis—that has proved particularly illuminative. On this hypothesis, each substance is supposed to be built up of minute particles of its own material called *molecules*, all alike and each incapable of finer subdivision if the substance is to remain the same. In the gaseous state of the substance the molecules are at distances apart that are great in comparison with their own diameters, and are moving about in straight lines with great speed, each occasionally colliding with some other molecule or with the walls of the vessel. The miniature bombardment of the walls of the vessel by myriads of molecules is the cause of the pressure of the gas on the walls.

Boyle's Law.—In agreement with this conception is the well-known fact that if a gas be compressed to $\frac{1}{n}$ times its original volume, then its pressure is increased n-fold. For, plainly, the molecules, and therefore their impacts, will now be n-times as many as before. It is also a well-known fact of experiment that the pressure of an inclosed volume of gas varies directly as its absolute temperature, *i. e.*, its temperature measured from the absolute zero, which is −273°C. This is accounted for by considering that the speed of motion of the molecules is increased as the temperature rises, and that the impacts of the molecules are therefore stronger. It is indeed strange that gases should all be precisely alike in conforming to these two laws, for in the case of solids and of liquids the behavior toward pressure and toward change of temperature is different for each substance. Gases must, therefore, all have something in common which liquids and solids have not.

It seems certain that all gases contain, at like temperature and pressure, the same number of molecules in equal volumes. Since this is so, by weighing equal volumes of different gases the relative weights of their molecules can at once be found. The *molecular weights*, compared with the weight of a molecule of oxygen taken as 32, of gases, or of gasifyable substances, are determined in this way.

Vapor Pressure.—In the case of liquids, the crowding together of the molecules is much closer than in gases. If a gas be at a temperature lower than its *critical temperature*, however, it may always be compressed into a liquid. From the surface of a liquid, supposed to be placed, for example, in an empty closed vessel, some of the molecules are constantly escaping into the upper part of the vessel, where they behave like gas molecules, giving rise to a (gaseous) pressure there, known as the *vapor pressure* of the liquid. Some of these are constantly returning to the liquid, in the course of their wanderings, but their places are taken by newcomers from the liquid. The vapor pressure, therefore, remains constant at any temperature. If the temperature is raised, this vapor pressure increases. For this reason, water in such a vessel, if raised sufficiently in temperature, might finally "burst its boiler."

Chemical Analysis.—The chemical properties of pure substances may be studied by testing by experiments their behavior, under different conditions, both alone and toward other substances. In particular it may be discovered, for example, that red lead can be made to furnish the metal lead and the gas oxygen. The processes of finding out what substances or mixtures of substances are made up of are called chemical analyses.

Qualitative Analysis concerns itself with the kinds of matter present, and *quantitative analysis* with the proportions by weight or by volume in which they are present. It has been found that all substances are made up from only about eighty-two different kinds of matter, called *elements*, combined in different ways. Thus sugar, alcohol, acetic acid, cotton and starch, although apparently so different, each contains only the three elements, carbon, hydrogen, and oxygen in different proportions. All compounds containing only oxygen in combination with one other element are called oxides, as calcium oxide (quicklime), lead oxide (litharge). Those compounds containing chlorine in combination with one other element are chlorides, as sodium chloride (common salt), etc. In general, compounds with the termination *ide* contain only the elements named. Those whose names end in *ite* contain, besides, oxygen, as sodium chlorite; those ending

in *ate* more oxygen still, as sodium chlorate, while sodium *per*chlorate contains still more oxygen than sodium chlorate. The majority of the elements are metallic elements (metals), while only about fourteen are nonmetallic elements (carbon, hydrogen, oxygen, nitrogen, sulphur, phosphorus, chlorine, silicon, etc.).

Quantitative Analysis has brought out many of the most remarkable facts of chemistry that were entirely missed by the chemists of antiquity and of the middle ages. It is found, by weighing, that no matter can be destroyed, although one compound may be changed into another. This principle is called the *conservation of matter*. A candle appears to burn to nothing merely because its products of combustion happen to be invisible. If it be allowed to burn in a large closed vessel, there is just as much carbon in the vessel after as before the burning, although it is now in the form of a gas (carbon dioxide) instead of combined as a solid compound with hydrogen.

Quantitative analysis of different samples of the same pure substance brings out the fact that the composition of every pure substance is invariably the same, or, in other words, that the elements combine in definite proportions by weight to form each particular compound. This observed regularity is known as the *law of definite proportions*. By analysis of different compounds made of the same elements, A and B, it is found, further, that the weights of B, which, in the different compounds, are united with the same weight of A, are related to each other in the ratio of small integers. This could not have been anticipated, and, when found, calls for explanation. The accepted explanation is most concrete in terms of the atomic theory.

The Atomic Theory supposes that the molecules of every compound are built up of units, called atoms, of the elements that are present, and that all the atoms of any one element are identical in material and weight. Thus, water consists of molecules each of which contains two atoms of the element hydrogen combined with one atom of the element oxygen.

Symbols are given each element to stand for the weight of its atom compared to the weight of an atom of oxygen, which is taken as 16 (for arbitrary reasons of convenience). The formula for a molecule of water is thus H_2O, signifying that one atomic weight of oxygen (16 parts by weight) is combined with two atomic weights ($2 \times 1 = 2$ parts by weight) of hydrogen. The formula for hydrogen peroxide is H_2O_2.

It will be seen upon reflection that this atomic hypothesis accounts perfectly for the experimentally found law of multiple proportions referred to above, as well as for the observed fact (*law of combining weights*) that the proportions by weight in which elements combine to form compounds can always be expressed perfectly by (usually) small integral multiples of particular numbers, one number belonging to each element.

Combustion.—A Christmas candle will burn less than ten seconds in half a pint of air. A kerosene lamp with a good Rochester burner will burn not more than four minutes in an empty flour barrel if tightly covered. The burning of the wax or the oil consumes a portion of the oxygen which constitutes one-fifth of the air, and they cease to burn when one-quarter of the oxygen, or one-twentieth of the air, is used up. Air which contains not more than 15 per cent oxygen will extinguish a fire; it will also extinguish life. Hence a lantern is lowered into old wells to determine whether it would be safe for a man to descend into them. The air which comes from one's lungs is very nearly like that left in the barrel after the lamp had extinguished itself in it. A bottleful of air from the lungs will extinguish a candle flame.

Formation of Compounds.—Fuels in burning unite with the oxygen of the air, forming new compounds. For example, when we burn in an ordinary furnace fifteen tons of coal, the furnace consumes also about thirty-two tons of oxygen from the air, and pours out into the air about forty-four tons of carbon dioxide gas, leaving behind about three tons of ashes. These figures, although not exact, are intended to convey two ideas—first, that combustion is a union of oxygen with fuels; and, second, that the process neither destroys nor creates matter, but merely changes combinations of matter. The oxygen is quite as much fuel as the coal.

In the case of the coal, the kerosene or the candle, water vapor is produced as a product of combustion along with the carbon dioxide. This water vapor is noticed when a cool chimney is first put upon a kerosene lamp.

Fuels and Foods.—Our foods correspond to fuels and we take in also oxygen as a food, or fuel. By a process analogous to combustion we cause oxygen to unite with these foods, producing water vapor, carbon dioxide, and heat for our bodies.

When a bottle of pure oxygen is placed over a burning candle the candle of course burns brighter and longer than it would in a bottle of air, but goes out before all the oxygen is exhausted. The contents of the bottle will now act as a fire extinguisher, although it contains as much oxygen as ever. Part of the oxygen is now bound in chemical union with carbon from the candle, and the oxygen which is free does not constitute a sufficiently large portion of the whole to support combustion.

Rust.—As might be expected, many things burn vigorously in pure oxygen which burn but slowly or not at all in the air, since the air is greatly diluted oxygen. A thin strip of iron may be burned with great vigor in pure oxygen. The black substance which will be found on the bottom of the bottle after the close of this experiment is analogous iron rust. It weighs considerably more than the iron which was burned and the increase in weight represents the oxygen which was burned. Combustion and rusting differ only in the rapidity of the action. Combustion is rapid rusting, and rusting is slow combustion. Both are called oxidation and the products are called oxides. The oxidation of our foods in our bodies is slow—more like rusting than combustion. We cover iron with various things to prevent the oxygen of the air from rusting it. It is covered with tin in the tinware of the kitchen, with zinc in the case of "galvanized" iron, with nickel, with porcelain, with paint, with grease, with vaseline, etc.

Extinguishing Fires.—In fighting a fire at its start, the one thing to do is to make the fire smother itself. An ordinary living room does not contain oxygen enough to burn up five pounds of wood. If the doors and windows are closed perfectly tight, a fire burning in a pile of dry kindlings in such a room will smolder for a time and finally go out precisely as does the candle burning in a bottle.

Most fire extinguishers are devices for producing carbon dioxide gas. With this they smother small fires by pouring into the atmosphere around them enough of the gas to reduce the proportion of oxygen below 15 per cent.

Streams of water, when thrown in sufficient quantity, as by fire engines, extinguish large fires both by cooling the fuel and by diluting the air with steam until the proportion of oxygen falls below 15 per cent.

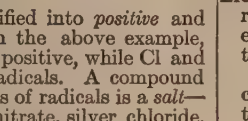
Atomic Weight. — The choice of atomic weights is a matter of some little complexity. The atomic weight of an element is defined to be the smallest of the weights of the element found in the molecular weights of all its volatile compounds. To pick out the correct atomic weight for the element chlorine, for instance, the molecular weights of all the volatile compounds of chlorine must first be found. Next, to find out what part of the molecular weight of each compound is due to chlorine, each of the compounds must be analyzed. Thus a series of numbers is arrived at which might read as follows: 71, 106.5, 71, 35.5, 142, 35.5, 71, etc. From this it is seen that the smallest weight of chlorine occurring in any of these compounds is, on the scale used, 35.5. Since no compound is found to contain in its molecular weight a smaller weight of chlorine than this, 35.5 is adopted as the molecular weight of chlorine. It should be noted that the formula for the gas chlorine is Cl_2, because its molecular weight is found by experiment to be 71, and must therefore contain two atomic weights of chlorine.

The case is more difficult when we have to deal with an element that forms few volatile compounds. In such cases, we are aided by a regularity, or law, first observed by the French chemists Dulong and Petit in 1819, that the numerical product of the atomic weight of an element by its specific heat is usually close to 6.3. When in doubt between several plausible values for the atomic weight of an element, we may, therefore, settle the question by determining its specific heat and then selecting for atomic weight that value which will yield a product near to 6.3 when multiplied by the specific heat observed.

Valence.—If one examines the formulas for a number of different chlorides, as $NaCl$, $MgCl_2$, $AlCl_3$, CCl_4, PCl_5, it is evident that the atoms of sodium, magnesium, etc., seem to differ in their power of holding chlorine atoms. Sodium, as also chlorine, is said to have a valence one, magnesium two, aluminium three, carbon four, and phosphorus five. The valence of oxygen is two, and the formulas for the oxides corresponding to the above chlorides are Na_2O, MgO, Al_2O_3, CO_2, P_2O_5. Thus two atoms of aluminium with their total of six valence "bonds" are found united with three atoms of oxygen, which also have, in all, six valence bonds. Many elements can function, under different conditions, with two or even more valences; thus iron in one series of compounds is dyad or bivalent, as in $FeCl_2$, FeO, etc.; and in another series triad or trivalent, as in $FeCl_3$, Fe_2O_3, etc. Phosphorus is triad in PCl_3, but pentad in PCl_5.

Graphic Formulas.—There are often good reasons for assigning certain arrangements of the atoms within the molecule. This

arrangement is expressed graphically in formulas such as Ba(O)(O) basium peroxide and Pb(=O)(=O) lead dioxide; or



acetic acid, the simple formula for which is $C_2H_4O_2$.

Space Formulas.—Pasteur was the first to study certain pairs of substances whose molecules contain atoms of precisely the same elements arranged precisely similarly, but with only this difference, that the molecules of the two "enantiomorphous" substances are related to each other as a right-hand glove is to a left-hand glove, or as an object is to its mirror-image. Such molecular arrangements can be imitated accurately by models in space of three dimensions.

Reactions—Chemical reactions are represented by means of equations. Thus, the fact that 56 parts of iron will unite with 32 parts of sulphur to produce 88 parts of ferrous sulphide is written $Fe+S$— FeS. Again the equation $4Al+3O_2$— $2Al_2O_3$ indicates, if the atomic weights be known, the respective weights of aluminium and of oxygen that react to form a certain weight of aluminium oxide. This is a case of *simple combination.*

A more complex reaction, which takes place in solution, is shown by the equation $AgNO_3+NaCl$— $AgCl+NaNO_3$, where we find the four "radicals" Ag, NO_3, Na and Cl exchanging partners. Such a change is called a *double decomposition.* A group of atoms such as NO_3 that remain together throughout a series of reactions is called a *compound radical.*

Radicals are classified into *positive* and *negative* radicals. In the above example, Ag and Na are each positive, while Cl and NO_3 are negative radicals. A compound containing both kinds of radicals is a *salt*—for example, silver nitrate, silver chloride, sodium nitrate, sodium chloride.

Those salts that have hydrogen for their positive radical are called acids, and their solutions have a sour taste and turn the blue coloring matter litmus red. Those salts that have the group OH for their negative radical are bases, and their solutions have a soapy taste and feel, and turn red litmus blue; example, sodium hydroxide. When an acid is mixed with a base in solution, the radicals H and OH combine to form water HOH, and the remaining positive and negative radicals, on uniting, constitute a salt. If the resulting solution has no action on litmus, the acid and base have "neutralized" each other.

Salts may also be formed in the dry way by the union of an "acidic oxide" such as carbonic anhydride with a "basic oxide" such as calcium oxide, CO_2+CaO— $CaCO_3$. The oxides of the nonmetals are acidic, while the lower oxides of the metals are basic. The higher oxides of the metals, *i. e.*, those with more oxygen, are frequently acidic. An acidic oxide yields an acid when it combines with water, while a basic oxide yields a base.

Besides involving changes from one form of matter to another, all chemical reactions are accompanied by some energy change. Heat, light, mechanical or electrical energy may be produced or consumed. The corresponding branches of chemistry that deal with such energy changes are thermochemistry, electrochemistry, photochemistry, etc.

Thermochemistry.—(I.) If the parts taken be grams, the above mentioned reaction between aluminium and oxygen gives rise to 760,400 calories of heat. This is expressed by the thermochemical equation $4Al+3O_2$— $2Al_2O_3+760{,}400$ cal. This particular reaction has been chosen as an example because of its technical importance. Few other metals in combining with oxygen produce nearly so much heat as aluminium. Thus, for the burning of iron the thermochemical equation is $4Fe+3O_2$— $2Fe_2O_3+388{,}800$ cal. Now if aluminium filings are mixed with iron oxide and the mixture ignited, the aluminium deprives the iron of its oxygen as shown by the equation $2Al+Fe_2O_3$— $Al_2O_3+2Fe+185{,}800$ cal., and the amount of heat liberated is the difference between the heat supplied by the combination of aluminium with oxygen and that consumed in the decomposition of the iron oxide, *viz.*, $(760{,}400-388{,}800)\div 2=185{,}800$. Since the materials are in close admixture, the reaction proceeds rapidly, and, as no volatile products are formed, no heat is thus carried away. A very high temperature is produced and may be utilized for welding rails, etc. (Goldschmidt process).

(II.) It is sometimes necessary, on the other hand, to produce a very high temperature before a chemical action will take place. In addition to the ordinary types of furnaces, electric furnaces have latterly been used for this purpose, their exceedingly high temperatures rendering possible the manufacture on a commercial scale of calcium carbide, carborundum, silicon, "electrical steel," artificial graphite, etc., thus giving rise to many industries which were not dreamed of before the advent of this type of furnace.

Electrochemistry.—A study of chemical reactions in their relations to electrical energy has developed enormously within the last twenty years.

(I.) Many chemical reactions may be so conducted as to furnish a supply of electricity. Such reactions are allowed to take place in primary batteries, *e. g.*, in the Daniell or Leclanché cells. In a secondary cell, such as a lead accumulator, a chemical action is caused to take place by putting in electrical energy from the dynamo. When this reaction is complete, the cell is "charged"; and whenever the reaction is allowed to reverse itself, electricity will be given out.

(II.) There are many reactions which can be made to occur by the use of electrical energy. For example, salts, whether fused or in solution, may be decomposed by electrolysis. Thus gold, silver, nickel, copper, etc., may be deposited from solution of their salts (*cf.* gold, etc., plating, electrotyping, etc.). Solution of common salt may yield on electrolysis sodium hydroxide, chlorine, sodium hypochlorite and sodium chlorate, all valuable products. Copper is refined electrolytically. The metals sodium, potassium, magnesium, calcium, aluminium, etc., are produced commercially by electrolysis of their molten compounds.

Electrical energy may also be used to produce electric discharges in which such actions as the making of ozone, nitrogen peroxide (and hence nitric acid) may be caused to take place. The latter application may prove of vast importance in the near future, when the world's supply of Chili saltpeter ($NaNO_3$), upon which, as a nitrogenous manure, the wheat supply in part depends, is exhausted.

Photochemistry finds its chief application in the field of photography. The efficiency of various mixtures of the earths ceria and thoria in incandescent gas mantles, or of titanium carbide as a substitute for the carbons of arc-lamps, are really questions of physics, but have obviously a close connection with chemistry.

Physical Chemistry includes, besides the three branches just referred to that deal with the energy changes accompanying chemical reactions, the study of many other topics that are closely related to physics. This side of chemistry has developed in a quite phenomenal degree since the year 1887, in which the ionic theory was first propounded.

Ionic Theory.—According to the ionic theory, when salts are dissolved in water they are largely split up into their radicals, which are then present in the solution carrying electric charges. These charged radicals are called ions. Thus, the ions furnished by common salt in solution are $Na^{\bullet}$ and Cl', where the positive and negative charges on the ions are indicated by a $^{\bullet}$ and a $'$ respectively.

In a solution containing 58 grams of common salt per liter, 68 per cent of the molecules of sodium chloride are considered to be ionized, while the remaining 32 per cent remain in the form of unbroken molecules. It must be remembered that the ion Cl' is not by any means the same substance as the gas chlorine, for, though it is made of the same kind of matter, its energy content is very different. The ions in a solution of sodium sulphate (Na_2SO_4) are $Na^{\bullet}$, $Na^{\bullet}$, and SO_4''.

In alcoholic solution, salts are not so highly ionized as in water; that is, the proportion of un-ionized (or undissociated) molecules is larger. In solution in other liquids, salts are often scarcely ionized at all, and it is found that such solutions do not conduct electricity as aqueous solutions of the same salts do.

The mechanism of the (electrolytic) conductivity of a solution of a salt, acid, or base in water consists, on the ionic hypothesis, in a bodily attracting of the positive ions in the solution by the negatively charged pole, and of the negative ions by the positive pole immersed in the solution. The positive and negative ions, therefore, move or travel toward the electrodes or poles, and finally give up their charges there. In this way electricity is transported through the solution.

In terms of the ionic theory, an acid owes its acid properties to the presence of hydrogen-ion in its solution, while a base owes its basic properties to the presence of hydroxide-ion (OH'). The strongest acids and bases are those that under like circumstances yield the highest concentration of $H^{\bullet}$ and OH' respectively.

Subdivisions of Chemistry.—In its treatment of the various forms of matter, chemistry divides itself into the two great branches of inorganic and organic chemistry.

Organic Chemistry.—The latter is so-called because it originally dealt with the substances that are found in the organic vegetable and animal kingdoms. Practically most of these substances contain carbon, so that organic chemistry is nowadays the chemistry of the carbon compounds. As the number of known organic compounds is well over 100,000, the subject is a large one, with a very voluminous literature, increasing year by year in yearly as well as in total volume.

Carbon.—The valence of carbon in most of its compounds is uniformly 4, a regularity which simplifies matters con-

siderably at the outset. Carbon atoms are found to have the faculty of linking themselves together to form chains and rings. In this faculty carbon is exceptional among the elements, and for this reason no other element approaches carbon in the multitude of its compounds, so as to merit the treatment of its compound as a separate branch of chemistry. The attaching of carbon atoms to each other does not utilize all four of the available valences, and the unoccupied valences are therefore able to attach to the molecule such other elements as hydrogen, oxygen, nitrogen, etc.

It is found that the same grouping of elements recurs as part of a complex molecule; and all substances that possess the same group somewhere in their molecule are fortunately found to show the same reactions in virtue of the presence of that group. Thus, all the compounds containing the group —CH_2OH are classed as primary alcohols; those with the group —CHO are aldehydes; those with —COOH are acids; those with the group —$\overset{\overset{O}{\|}}{C}$— attached to carbon atoms on both sides, are ketones; and so on. The fact that all primary alcohols, all aldehydes, acids, etc., behave chemically more or less alike makes it possible to bring order out of the chaos of organic compounds, since the typical groupings of atoms are comparatively few in number.

Hydrocarbons.—Many important organic compounds contain only the elements carbon and hydrogen. These are called the *hydrocarbons*, and include marsh gas (CH_4), acetylene (C_2H_2), benzene (C_6H_6) and the components of rock oil, which is a mixture of many hydrocarbons.

Carbohydrates.—Another set of organic compounds contains only the three elements carbon, hydrogen and oxygen, the latter two in the same proportion as in water, *viz.*, two atoms of hydrogen to one of oxygen. These are the *carbohydrates*, and include grape and fruit sugars ($C_6H_{12}O_6$), cane, malt and milk sugars ($C_{12}H_{22}O_{11}$), the starches and cellulose [$(C_6H_{10}O_5)_n$], which last is the structural material of the vegetable world. The fats and oils, common alcohol, glycerine, and acetic, citric and tartaric acids contain only carbon, hydrogen and oxygen.

When to these elements is added nitrogen as a possible constituent of organic substances, the list becomes a very varied one, including nitroglycerine, nitrocellulose or guncotton, aniline and a horde of dyes, and most of the alkaloids—substances of very powerful physiological action that occur in plants. Adding also sulphur, the vastly important proteins are included, some of which (the nucleoproteins) may contain also phosphorus. Other than water, fats and mineral constituents, proteins constitute the building material of the animal body, and are necessary in the diet of animals.

Inorganic Chemistry, deals with over eighty different elements and their compounds, including those of the mineral world. Its extent is in part indicated in the subjoined table of *Chemical Elements.*

The selection and grouping together of the facts and principles of chemistry that bear on some particular topic gives rise to such divisions as "physiological chemistry," "agricultural chemistry," "biochemistry," "immunochemistry," etc. Such titles are, for the most part, self-explanatory.

CHEMICAL ELEMENTS

Tabulation of facts concerning all the known elements.
At. wt., atomic weight; S. G., specific gravity; M. P., melting point; B. P., boiling point; C. T., critical temperature.

Name, With Certain Data	Occurrence and Preparation	Properties	Chief Compounds and Uses
Aluminium. Symbol Al. At. wt. 27.1. Valence III. S. G. 2.6. M. P. 658°.	Occ.—cryolite AlF_3, 3NaF; bauxite, impure $Al(OH)_3$; in feldspars, micas and clay; emery, ruby, sapphire (Al_2O_3). Prep., com'l, by electrolysis of Al_2O_3, from bauxite, dissolved in cryolite, water-power usually furnishing the electrical energy.	Silver-white, ductile, malleable at 120°, tensile strength (wrought) 16 tons per sq. in. A better conductor of electricity, weight for weight, than copper. Molten metal not mobile enough to make castings. It turns badly in the lathe. Acted upon by dil. hydrochloric acid, slowly by sulphuric, but not by nitric or the acids occurring in foods. Soluble in alkaline hydroxides. The tarnishing action of moist air soon comes to an end as the tarnish acts as an *adherent* protective coating.	Used for cooking utensils, boat-building, military accouterments and small articles requiring lightness and strength; for electric leads. The powdered metal is used as a body for paint; and its mixture with ferric oxide, called thermite, is used for producing very high temperatures (up to 3700°C.) for welding rails, etc. Many metals are reduced from their oxides by means of Al, hence its use in casting steel. Aluminium bronze (10% Al), rolled, has tensile strength of 40 tons per sq. in. Its sulphate forms alums, *e. g.*, $KAl(SO_4)_2$, $12H_2O$, common alum.
Antimony. Symbol Sb. At. wt. 120.2. Valence III and V. S. G. 6.7. M. P. 630.7°. B. P. red heat.	Occ.—free, and as stibnite (Sb_2S_3). Prep.—roasting stibnite gives Sb_2O_4, which is then reduced by heating with carbon.	White, brittle, crystalline metal. Its alloys expand on solidification, and therefore give very sharp castings, *e. g.*, for type. It does not tarnish, but may be burned in air, and unites directly with the halogens.	The metal is a constituent of the alloys type metal, Britannia metal and Babbitt metal (used for bearings). Its oxide (Sb_2O_3) is both basic and acidic. The trichloride, butter of antimony ($SbCl_3$), is easily hydrolyzed. Tartar emetic ($SbOKC_4H_4O_6$) is used in medicine and in dyeing.
Argon. Symbol A. At. wt. 39.86. Valence nil. Density 39.9 (oxygen =32). B. P. —186°. M. P. —190°.	Present in the air 0.94% by volume. To isolate, air is freed from CO_2 by soda-lime, water by P_2O_5, oxygen by red-hot copper, nitrogen by magnesium and calcium. From the residual mixture argon is obtained by fractional distillation.	Is a monatomic gas and is identified by its characteristic spectrum seen by examining the light emitted when the gas is placed in a vacuum tube at low pressure and sparked. More soluble in water than nitrogen, 100 vols. water dissolving 4 vols. argon under ordinary conditions.	Forms no compounds, hence its name—does no work.
Arsenic. Symbol As. At. wt. 74.96. Valence III and V. S. G. 5.7. B. P. 450° (sublimes) M. P. 480° (under pressure).	Occ.—free, as arsenical pyrites (FeSAs), as orpiment (As_2S_3) and as realgar (As_2S_2). Prep.—by heating arsenical pyrites, FeSAs — FeS+As.	A steel-gray, dully-metallic and crystalline element classed as a metalloid because intermediate between metals and nonmetals. Its vapor has a density corresponding to As_4 at 644°, and to As_2 at 1700°. It burns in air and unites directly with the halogens, sulphur and with many metals.	Used for hardening lead for shot. All its compounds are poisonous. White arsenic (As_2O_3) is partly basic, forming a chloride and partly acidic, forming arsenites. Scheele's green ($CuHAsO_3$) is a pigment dangerous in wallpapers. Traces of arsenic are detected by Marsh's test, in which the intensely poisonous arsine (AsH_3) is formed.
Barium. Symbol Ba. At. wt. 137.37. Valence II. S. G. 3.6. M. P. red heat.	Occ.—as barytes or heavy-spar ($BaSO_4$), and as witherite ($BaCO_3$). Prep.—by electrolysis of the fused chloride.	A silver-white, lustrous, malleable metal harder than lead. Like calcium, it acts slowly on water to give barium hydroxide and hydrogen. The vapors of its compounds impart a green color to the Bunsen flame.	The peroxide (BaO_2) is used in the manufacture of oxygen and of hydrogen peroxide. The nitrate and chlorate in pyrotechny to give green fires. The sulphate as the body for a permanent white paint and for filling glazed paper. All soluble compounds are poisonous.
Bismuth. Symbol Bi. At. wt. 208.0. Valence III (and V). S. G. 9.9. M. P. 266.5°. B. P. ca. 1200°.	Occ.—free and as trioxide (Bi_2O_3) and trisulphide (Bi_2S_3). Prep.—the ore is roasted and then heated with charcoal and metallic iron (to remove traces of sulphur).	An exceedingly brittle, crystalline shining metal, white with a tinge of pink. Bismuth expands on solidification. It does not tarnish, but can be burnt in air. Dissolves in oxygen acids.	Used for making fusible alloys, *e.g.*, Wood's metal, M.P. 60.5°, which are used in plugs of fire sprinklers and boiler safety valves, and for taking casts. The oxynitrate is used in medicine and as a cosmetic.
Boron. Symbol B. At. wt 11.0. Valence III. S.G. (amorph.) 2.4; (cryst.) 2.5. B.P. 3500° (sublimes)	Occ.—as boric acid (H_3BO_3), borax ($Na_2B_4O_7,10H_2O$), colemanite ($Ca_2B_6O_{11},5H_2O$). Prep.—amorphous boron by reducing B_2O_3 with Mg. Impure cryst. boron by reducing B_2O_3 with excess of Al.	Amorphous boron is a greenish black powder that burns in air at 700°, forming B_2O_3 and also BN. It is oxidized, by hot conc. sulphuric or nitric acids, to boric acid.	The compounds are analogous to those of silicon. Borax is used as a flux, and, in solution, as a mild alkali on account of its hydrolysis. Boric acid is used as a weak antiseptic and preservative.

CHEMICAL ELEMENTS—Continued

Name, With Certain Data	Occurrence and Preparation	Properties	Chief Compounds and Uses
Bromine. Symbol Br. At. wt. 79.92. Valence I. S. G. 3.2. B. P. 59°. M. P. —7.3°.	Occ.—in seawater as alkali bromide, and in the upper layers of salt deposits as sodium and magnesium bromide. Prep.—by treatment of the brines with sulphuric acid and manganese dioxide, or else with chlorine.	A dark red liquid, smelling like chlorine, whose vapor irritates eyes, throat and nose. Dissolves in thirty parts of water (bromine water). Combines directly with most other elements, but less vigorously than chlorine.	Potassium bromide is used in medicine, silver bromide in photography. Bromine is used in course of the preparation of organic dyes.
Cadmium. Symbol Cd. At. wt. 112.40. Valence II. S. G. 8.6. M. P. 321.7. B. P. 770°.	Occ.—in association with the zinc ores, as carbonate and sulphide. Prep.—in the distillation of impure zinc, the cadmium comes over in the first portions.	A silver-white metal, more ductile and malleable than zinc. It burns in air, and is attacked by dilute acids.	All the compounds are poisonous, and little ionized. The sulphide (CdS) is the basis of "cadmium yellow." The iodide is used in medicine.
Cæsium. Symbol Cs. At. wt. 132.81. Valence I. S. G. 2.4. M. P. 26.3°. B. P. 670°.	Occ.—in certain micas, and in the ashes of certain plants. Prep.—by heating the hydroxide (CsOH) with magnesium.	A white silvery metal resembling potassium. It is one of the most active of metals, and decomposes water violently.	The compounds are characterized by giving, especially, two bright lines in the blue of the spectrum (*cæsius* sky-blue).
Calcium. Symbol Ca. At. wt. 40.09. Valence II. S. G. 1.54. M. P. 760°.	Occ.—as carbonate (Iceland spar, calcite, aragonite, marble, chalk, limestone), sulphate (gypsum), phosphate (apatite), fluoride (fluor spar), and as complex silicates in great variety (feldspars, pyroxenes, amphiboles, etc.). Prep.—by electrolysis of the fused chloride.	A white crystalline metal, harder than lead, that can be cut, drawn, rolled and turned. It attacks water, and burns in the air at a red heat, forming the oxide (CaO) and the nitride (Ca_3N_2). It unites with hydrogen to CaH_2, whose action on water is a source of hydrogen for balloons.	Calcium oxide (quicklime) is used for mortar and to remove hair from hides. The hydroxide [$Ca(OH)_2$] mixed with sand forms mortar; its solution is limewater. Plaster of paris, a less hydrated sulphate, takes up water on setting to form $CaSO_4,2H_2O$. The phosphates are fertilizers. Bleaching powder is CaClOCl and calcium carbide is CaC_2. Common glass contains silicates of calcium and sodium.
Carbon. Symbol C. At. wt. 12.00. Valence IV. S. G. diamond 3.5; graphite 2.3; amorphous 1.9 M. P.—not realized.	Occ.—as diamond and graphite, in the free state; in combination with hydrogen as petroleum, with oxygen as carbon dioxide in the air, with these and other elements as coal, and in plant and animal tissues; and as many carbonates. Prep.—by dry distillation of wood or coal, yielding charcoal and coke respectively.	Diamond is crystalline and the hardest of minerals, the dark-colored "bort" being used for cutting and grinding. Graphite has a black metallic luster, is crystalline and may be scratched by the finger-nail. Charcoal is amorphous, and possesses the power of absorbing gases and also coloring matters. All three forms burn in oxygen to produce carbon dioxide.	The carbon compounds form the subject of "Organic Chemistry." Carbon dioxide results from the burning of coal, coke, wood, oil or illuminating gas, from fermentation and decay, which are slow burnings, and is exhaled in the breath. Carbon monoxide, arising from recently-stoked fires, is an exceedingly poisonous gas.
Cerium. Symbol Ce. At. wt. 140.25. Valence III, IV (and VI). S. G 7.0; M. P. 623°.	Occ.—as silicate in cerite, along with Nd, Pr and La; also in monazite sand. Prep.—by electrolysis of the fused chloride.	A metal with the color and luster of iron, like tin in hardness, and very ductile and malleable. Burns in air more easily and brightly than magnesium.	Welsbach incandescent gas mantles contain one per cent of cerium dioxide CeO_2.
Chlorine. Symbol Cl. At. wt. 35.46. Valence I (and VII). S. G. (liquid) 1.3. M. P. —102°. B. P. —33.6°. C. T. +146°.	Occ.—in seawater as chlorides of the alkalis and alkaline earths, and as like compounds in salt deposits. Prep.—by electrolysis of alkali chloride, fused or in solution; or by the action of manganese dioxide on hydrochloric acid.	A greenish-yellow gas of characteristic odor, with a violent action on the respiratory tract. Unites directly with all elements save oxygen, nitrogen and the argon family. Displaces bromine and iodine from bromides and iodides, and substitutes hydrogen in organic compounds.	The gas is used in extracting gold and in preparing bleaching and disinfecting agents. In presence of water it bleaches many coloring matters. Forms chlorides (as NaCl, HCl, $CaCl_2$), hypochlorites [as solution of $Ca(OCl)_2$], chlorates (as $KClO_3$, used for matches and in pyrotechny), and perchlorates (as $KClO_4$).
Chromium. Symbol Cr. At. wt. 52.0. Valence II, III and VI. S. G. 6.9. M. P. 1515°.	Occ.—as chromite [$Fe(CrO_2)_2$]. Prep.—by reducing Cr_2O_3 with aluminium filings.	A steel-gray, lustrous, brittle and very hard metal. At high temperatures it burns in air to green Cr_2O_3. It is attacked by dilute sulphuric or hydrochloric acid, but not by nitric acid.	The alloy ferrochromium is used in steel-making. Chrome green, the pigment, is Cr_2O_3. Chrome yellow is $PbCrO_4$. Bichromates (as $K_2Cr_2O_7$) are used in photo-processes, tanning and dyeing and as oxidizing agents, *e. g.*, in batteries.
Cobalt. Symbol Co. At. wt. 58.97. Valence II and III. S. G. 8.5. M. P. 1500°.	Occ.—as smaltite ($CoAs_2$) and cobaltite CoAsS. Prep.—by igniting the oxide in hydrogen.	A white magnetic malleable metal, less tenacious than iron. By exposure it turns pinkish. It is less active chemically than iron.	Its intensely blue silicates are used in coloring porcelain and constitute the pigment smalt.
Columbium (Niobium) Symbol Cb. At. wt. 93.5. Valence I, II, IV and V. S. G. 12.7; M. P. 1950°.	Occ.—in the mineral columbite. Prep.—by reduction of CbO_2 by paraffin.	A light-gray malleable and ductile metal, as hard as wrought iron, which is not affected by acids, even by aqua regia.	The hydride (CbH) burns in air. The compounds occur with those of tantalum, which they closely resemble.
Copper. Symbol Cu. At. wt. 63.57. Valence I and II. S. G. 8.9. M. P. 1084.1. B. P. 2100°.	Occ.—free, as cuprite (Cu_2O), copper glance (Cu_2S), chalcopyrite (Cu_2S,Fe_2S_3), malachite [$CuCO_3,Cu(OH)_2$]. Prep.—after removal of iron and sulphur, the oxide is reduced by heating with carbon. It is refined electrolytically.	A red, lustrous, very ductile and malleable metal of tensile strength 14 tons per sq. in., second only to silver in electrical conductivity. In ordinary air it gradually becomes coated with basic carbonate. In absence of air, nitric acid alone among the dilute acids attacks it, but in presence of air even the acids found in foodstuffs can dissolve it.	The metal is used for coins, electroplating, electric leads, roofing, cooking vessels and for making alloys, such as brass, bell and gun metals, German silver and the bronzes. The soluble compounds are poisonous, and are therefore used as germicides in agriculture. Blue vitriol is $CuSO_4,5H_2O$; the basic acetate is verdigris.
Dysprosium. Symbol Dy. At. wt. 162.5. Valence III.	Occ.—in monazite, gadolinite, etc. Prep.—not yet isolated.	The oxide dysprosia, along with three other rare earths, constitutes erbia.	The salts are green or yellow in color and show characteristic absorption bands.
Erbium. Symbol Er. At. wt. 167.4. Valence III.	Occ.—same as for dysprosium. Prep.—not yet isolated pure.	Crude erbia has been separated into erbia, holmia, thulia, and dysprosia.	The salts are rose-colored, and show characteristic absorption spectra.
Europium. Symbol Eu. At. wt. 152.0. Valence III.	Occ.—in monazite and other rare minerals. Prep.—not yet isolated.	This element so closely resembles samarium that the analytical separation of the two is difficult.	The salts are pinkish and show a faint absorption spectrum.
Fluorine. Symbol F. At. wt. 19.0. Valence I. S. G. (liquid) 1.14 at —187°. M. P. –223°. B. P. –187°.	Occ.—as cryolite ($AlF_3,3NaF$), fluor spar (CaF_2) and very widely elsewhere in small quantities. Prep.—by electrolysis of dry hydrogen fluoride at –23°.	A pale yellowish-green gas that unites with every element excepting oxygen and the argon family. It rapidly displaces oxygen from water or chlorine from hydrogen chloride.	Hydrogen fluoride is used for etching glass and in silicate analysis. Silver fluoride is soluble and calcium fluoride insoluble, in contrast with the other halides of these metals.
Gadolinium. Symbol Gd. At. wt. 157.3. Valence III.	Occ.—in gadolinite and samarskite. Prep.—not yet isolated.	This element closely resembles terbium in its compounds.	The salts are colorless and show no absorption bands.

CHEMICAL ELEMENTS—Continued

Name With Certain Data	Occurrence and Preparation	Properties	Chief Compounds and Uses
Gallium. Symbol Ga. At. wt. 69.9. Valence III. S.G. 5.9. M.P. 30.1°.	Occ.—in zinc blende and in bauxite. Prep.—by electrolysis of a suitable solution of its salts.	A bluish-white tough metal that may be cut with a knife. Like aluminium, it is soluble in hydrochloric acid and in caustic alkali, but not in nitric acid.	It forms two chlorides ($GaCl_3$ and $GaCl_2$) which yield spark spectra very characteristic of gallium.
Germanium. Symbol Ge. At. wt. 72.5. Valence II and IV. S.G. 5.5. M.P. 900°.	Occ.—in the rare mineral argyrodite. Prep.—by the reduction of the dioxide ($Ge\ O_2$) by carbon.	A grayish-white, brittle, lustrous metal, insoluble in hydrochloric acid. It combines directly with the halogens.	The close relation of this element to carbon and silicon is shown in the compound germanium chloroform ($GeHCl_3$).
Glucinum (or Beryllium). Symbol Gl. At. wt. 9.1. Valence II. S.G.1.8. M.P. below 960°.	Occ.—in beryl [$Al_2Gl_2(SiO_3)_6$]. Prep.—by electrolysis of the fused double fluoride $GlF_2,2KF$.	A hard white metal that tarnishes when heated in air, and is soluble in dilute acids when powdered.	Its hydroxide [$Gl(OH)_2$] is feebly acidic as well as basic, thus resembling the hydroxide of zinc. Emerald is beryl colored green by chromium.
Gold. Symbol Au. At. wt. 197.2. Valence I. and III. S. G. 19.32. M. P. 1062.4°.	Occ.—chiefly free, but also as telluride; many specimens of iron pyrites are auriferous. Prep.—from gold-bearing sands by washing away the lighter material, and dissolving the gold from the residue by mercury, which is subsequently separated from the gold by distillation. Quartz ores are pulverized in stamping mills, and the powder is then carried by water over amalgamated copper plates on which the gold collects.	A soft bright-yellow metal, easily scratched by the knife, an excellent conductor of heat and of electricity. The most ductile and the most malleable of all the metals. Chemically, gold is rather inert, and is not attacked by the oxygen of the air, by hydrogen sulphide, nor, indeed, by any single one of the common acids. It is attacked by fused alkalis, yielding aurates, and by aqua regia, yielding chlorauric acid ($HAuCl_4$).	Pure gold is called 24-carat gold. American, French and German gold coins are 21.6 carat, while British sovereigns are 22 carat, the balance in all these cases being copper. Jewelry is made in 18, 14, 9, etc., carat gold, the addition of copper increasing the hardness and rigidity. Sodium chloraurate ($NaAuCl_4$) is used for "toning" in photography, while potassium auricyanide [$KAu(CN)_4$] is used in electro-gilding.
Helium. Symbol He. At. wt. 3.99. Valence 0. S. G. (liquid) 0.15. B. P. —268.7°.	Occ.—in air to the extent of 1 to 2 volumes per million; also occluded in certain minerals. Prep.—neon and helium are boiled off crude argon, and the neon solidified by cooling.	The lightest gas after hydrogen, transparent, odorless and colorless, very inert, forming no compounds with other elements.	It is one of the decomposition products of certain other (radio-active) elements.
Hydrogen. Symbol H. At. wt. 1.008. Valence I. S. G. (liquid) 0.07. M. P. —259°. B. P. —252.5°.	Occ.—in air to the extent of 1 vol. per 20,000 vols. air; combined, in water (11.19% by wt.) natural gas, petroleum and all animal and vegetable bodies. Prep.—by treating zinc with hydrochloric or sulphuric acid; by electrolysis of water.	The lightest gas, transparent, odorless and colorless, soluble in water (2 vols. in 100 vols. water under everyday conditions), in platinum, in palladium (502 vols. in 1 of pd). Burns in air and in chlorine, and unites with many of the other elements.	Its two oxides are water (H_2O) and hydrogen peroxide (H_2O_2), the latter of which is used in solution as a bleaching agent. Every acid contains hydrogen as an essential constituent. Its compounds with carbon and other elements number over 100,000. Hydrogen gas is used for the oxyhydrogen flame and for filling balloons.
Indium. Symbol In. At. wt. 114.8. Valence III and I. S. G. 7.4. M. P. 176°.	Occ.—in zinc blende (ZuS). Prep.—electrolytically from solutions of its salts.	A white metal, malleable and softer than lead.	Its compounds color the nonluminous gas flame blue and show a characteristic blue line in the spectrum.
Iodine. Symbol I. At. wt. 126.92. Valence I, V and VII. S. G. 4.95. M. P. 114°. B. P. 184°.	Occ.—in the ocean, in certain seaweeds, and in Chili saltpeter, always in the combined state. Prep.—from iodides by displacement of their iodine by chlorine.	A dark gray brittle solid with a metallic luster. Its vapor is violet, as are its solutions in chloroform and in carbon bisulphide. It requires over 5,000 parts of water for its solution. Combines directly with many elements, but is much less active than chlorine and bromine.	Its tincture is used in medicine as a counter-irritant. Potassium iodide (KI) and iodoform (CHI_3) likewise find application in medicine. The alkyl iodides (*e. g.*, $C_2\ H_5I$) are much used in synthetic organic chemistry.
Iridium. Symbol Ir. At. wt. 193.1. Valence III and IV. S. G. 22.42. M. P. 1950°.	Occ.—along with platinum. Prep.—by a complex series of operations from platinum ores.	A white metal, brittle when cold, and very hard. It is attacked by fused alkalies, but not by aqua regia.	It is used for pointing gold pens. Its alloy with 9 parts of platinum is used for standard meter bars on account of its inalterability.
Iron. Symbol Fe. At. wt. 55.85. Valence II and III. S. G. 7.86; pig, 7.03 to 7.73. M. P. 1804°. wrought 1600°. steel 1375°. gray pig 1275°. white pig 1075°.	Occ.—as magnetic oxide (Fe_3O_4), hematite (Fe_2O_3), limonite ($2Fe_2O_3,3H_2O$), siderite (Fe_2CO_3), which are important ores; iron pyrites (FeS_2); in rocks as complex silicates, and in plants and animals. Prep.—pig iron is prepared in the blast furnace by reduction of the ore by means of carbon monoxide in presence of a suitable flux. From pig iron, wrought iron is obtained by puddling, and steel by the Bessemer, Siemens-Martin or other process.	A white, malleable, ductile, magnetic metal, unchanged in dry air or air-free water, but rusting in moist air. Easily attacked by dilute acids, but not by fused alkalies. Cast iron contains 2 to 5% of carbon and other impurities, and is hard and brittle. Wrought iron contains less than 0.2% of carbon, and is softer and tougher, with a tensile strength of 22 to 25 tons per sq. in. Steel contains from 0.2 to 1.5% of carbon, is permanently magnetic, may be tempered, and possesses tensile strength up to 100 tons per sq. in.	The metal is used as a structural material, for rails, machinery, tools, etc. Jeweler's rouge and Venetian red consist of the oxide (Fe_2O_3). Rust is chiefly the hydrated oxide (FeO,OH). Hammer scale and lodestone have the composition Fe_3O_4. Ferric chloride ($FeCl_3$), ferrous iodide (FeI_2) and other iron compounds are used in medicine. Green vitriol ($FeSO_4,7H_2O$) is used in making ink, and in dyeing. Potassium ferrocyanide [$K_4Fe(CN)_6$] is used for making Prussian blue, potassium cyanide, etc.
Krypton. Symbol Kr. At. wt. 82.9. Valence 0. M. P. —169° B. P. —152°.	Occ.—in minute quantity in the air. Prep.—from crude argon by fractional distillation.	An inert, colorless, odorless gas, resembling, but denser than, argon.	It forms no compounds, and is identified by its characteristic spectrum.
Lanthanum. Symbol La. At. wt. 139.0. Valence III and V. S. G. 6.15.	Occ.—as lanthanite [$La_2(CO_3)_3,8H_2O$]. Prep.—by electrolysis of fused $LaCl_3$.	An iron-gray metal tarnishing in air to steel-blue; malleable and ductile. Attacked slowly even by cold water.	When heated in air it forms oxide (La_2O_3) and nitride (LaN).
Lead. Symbol Pb. At. wt. 207.10. Valence II, IV. S. G. 11.4. M. P. 326°.	Occ.—as galena (PbS), and in silver ores. Prep.—by calcination of partially roasted galena. Purification is effected by Parkes process.	A soft gray metal, malleable, but of low tensile strength. In presence of air, water acts on lead to produce the hydroxide, which, being slightly soluble, may cause lead poisoning if present in water supplies. When heated in air it is oxidized to litharge (PbO), and, under suitable conditions, to minium (Pb_3O_4).	The metal is used for water pipes, roofs and gutters and storage batteries. For shot it is alloyed with 0.4% of arsenic. Typemetal contains 20% of antimony. Babbitt metal, for bearings, contains over 70% of lead. Solder and pewter are alloys of lead and tin. The basic carbonate [$Pb(OH)_2,2PbCO_3$], "white lead," is the basis of most oil paints.

CHEMICAL ELEMENTS—Continued

Name, With Certain Data	Occurrence and Preparation	Properties	Chief Compounds and Uses
Lithium. Symbol Li. At. wt. 6.94. Valence I. S. G. 0.53. M. P. 186°. B. P. above 1400°.	Occ.—as a mixed fluoride with aluminium in amblygonite. Prep.—by electrolysis of the fused chloride.	A silver-white metal, softer than lead, that tarnishes quickly in air, and is easily acted upon by water. When heated, it unites vigorously with nitrogen.	The carbonate [$Li_2(CO_3)$] is used in medicine as a solvent for uric acid, lithium urate being soluble. The lithium salts give a carmine flame coloration.
Lutecium. Symbol Lu. At. wt. 174.0.	Occ.—in euxenite. Prep.—it has not been isolated.		Its compounds resemble those of ytterbium.
Magnesium. Symbol Mg. At. wt. 24.32. Valence II. S. G. 1.75. M. P. 633°. B. P. 1100°.	Occ.—as magnesite ($MgCO_3$), dolomite ($MgCO_3,CaCO_3$), carnallite ($MgCl_2$, KCl, $6H_2O$) and in very many complex silicates. Prep.—by electrolysis of dried, fused carnallite.	A silver-white metal, ductile when hot. It tarnishes in air, and acts slowly upon water, rapidly on steam. Burns in air to the oxide MgO, emitting a very bright light used in photography. It unites directly with nitrogen.	The sulphate ($MgSO_4,7N_2O$) is known as epsom salts and is used in medicine, as are the oxide (magnesia), the carbonates and citrate. Magnalium is a light, hard alloy with aluminium.
Manganese. Symbol Mn. At. wt. 54.93. Valence II, III, IV, VI, VII. S. G. 8.0. M. P. ca. 1300°.	Occ.—as pyrolusite (MnO_2), beaunite (Mn_2O_3), hausmannite (Mn_3O_4) and manganese spar ($MnCO_3$). Prep.—by heating Mn_3O_4 with aluminium filings.	A steel-gray, hard, brittle metal with a pinkish tinge. It rusts in moist air and is attacked by dilute acids.	Ferromanganese and spiegeleisen are alloys with iron, used in steel making. With copper it forms the hard, tough manganese bronzes, with tensile strength up to 30 tons per sq. in. Impure sodium permanganate ($NaMnO_4$) is used in disinfecting as Condy's fluid.
Mercury. Symbol Hg. At. wt. 200.0. Valence I and II. S. G. 13.6. M. P.—39.5°. B. P. 356.95°.	Occ.—free and as cinnabar (HgS). Prep.—by roasting cinnabar $HgS+O_2$——$Hg+SO_2$.	A silver-white mobile liquid with a vapor pressure at 0° of 0.0002 mm. It tarnishes but slowly in air and is attacked only by dilute nitric among the dilute acids. The vapor is monatomic.	It is used for filling thermometers and barometers. Its alloys are called amalgams, some of which are used in dentistry. Calomel (HgCl) is administered internally in medicine; corrosive sublimate ($HgCl_2$) forms a solution with very powerful germicidal properties.
Molybdenum. Symbol Mo. At. wt. 96.0. Valence III, IV, V, (VI. S. G. 9.0. M. P. 2110°.	Occ.—as molybdenite (MoS_2) and wulfenite ($PbMoO_4$). Prep.—by reducing the oxides with aluminium powder.	A white metal, as malleable as iron, that will not scratch glass. Insoluble in hydrochloric or dilute sulphuric acid.	The ferromolybdenum alloys are used in the manufacture of special steels.
Neodymium. Symbol Nd. At. wt. 144.3. Valence III and IV. S. G. 6.9. M. P. 840°.	Occ.—with cerium and lanthanum. Prep.—by electrolysis of the fused chloride.	A yellowish metal, tarnishing in air.	The salts are rose-violet in color, and their solutions show characteristic absorption spectra.
Neon. Symbol Ne. At. wt. 20.2. Valence 0. B. P. ca. —243°.	Occ.—in minute quantity in the atmosphere. Prep.—neon and helium are boiled out of crude argon, and the neon separated from helium by cooling with liquid hydrogen.	A colorless, transparent, odorless, inert gas, resembling argon.	It forms no compounds, and is recognised by its characteristic spectrum.
Nickel. Symbol Ni. At. wt. 58.68. Valence II and III. S. G. 8.9. M. P. ca. 1485°.	Occ.—as nicollite (NiAs) and nickel glance (NiAsS). Prep.—by igniting the oxalate in hydrogen.	A white, very hard, lustrous metal, malleable, ductile and tenacious. It rusts but slowly in air, and is attacked easily by only nitric acid.	The metal furnishes a protective coating when plated on iron. German silver is an alloy of nickel, copper and zinc. Nickel steel is used for armor plates. Manganin, containing nickel, copper and manganese, is used for electrical resistances.
Nitrogen. Symbol N. At. wt. 14.01. Valence III and V. M. P. —214°. B. P. —194°.	Occ.—free nitrogen forms about four-fifths of air by volume. As Bengal saltpeter (KNO_3), Chili saltpeter ($NaNO_3$); and as an essential constituent of vegetable and animal protoplasm. Prep.—by heating ammonium nitrite, by oxidation of ammonia, etc.	A colorless, odorless, transparent gas, rather inactive chemically. At ordinary temperature and pressure, 100 volumes of water dissolve 1.5 volumes of nitrogen. It unites directly with strongly heated boron, lithium, calcium and magnesium.	Nitrous oxide (N_2O), or laughing gas, is used, by dentists. Nitric acid (HNO_3) has many applications in technical chemistry. Ammonia (NH_3) is a very soluble gas. Ammonium sulphate [$(NH_4)_2SO_4$] and Chili saltpeter are used as nitrogenous manures. Nitrogen is a constituent of the anilinedyes, the proteins and many other important classes of organic substances.
Osmium. Symbol Os. At. wt. 190.9. Valence II, III, IV, VI, VIII. S. G. 22.477. M. P. ca. 2400°.	Occ.—along with platinum. Prep.—by reducing OsO_4.	A gray metal, harder than glass, the heaviest of known bodies.	Its alloy with iridium is used in tipping gold pens. Osmium tetroxide (OsO_4) is used as a microscopic stain for fat.
Oxygen. Symbol O. At. wt. 16.00. Valence II. S. G. (liquid at b.p.) 1.13. M. P. —227°. B. P. —182.5°.	Occ.—free oxygen forms about one-fifth of air by volume. Water contains 88.88% of oxygen. The rocks of the earth's crust contain about 45% in combination, chiefly as silicates. Prep.—in the laboratory, by heating potassium chlorate ($KClO_3$). Commercially, from the air.	A colorless, odorless, tasteless, transparent gas, slightly heavier than air. At ordinary temperature and pressure, 100 volumes of water dissolve 3 volumes of oxygen. It is very active chemically, combining directly with all but a few of the other elements to form oxides. Sulphur, phosphorus, etc., burn much more vigorously in oxygen than in air. Liquid oxygen is magnetic.	The gas is sold compressed in mild steel cylinders, and is used for the oxyhydrogen blowpipe and in medicine, besides for chemical purposes. It is necessary to support animal respiration and to sustain ordinary combustion. It enters as a constituent into all oxides, most salts and many organic compounds.
Palladium. Symbol Pd. At. wt. 106.7. Valence II and IV. S. G. 11.9. M. P. ca. 1535°.	Occ.—along with platinum, and with gold in Brazil. Prep.—by a complex series of processes from platinum ores.	A silvery, malleable and ductile metal, related to platinum, unlike which, however, it is attacked by nitric acid. Under suitable conditions it can take up over 900 volumes of hydrogen.	Since it does not tarnish, it is used for coating silver goods, and by dentists as a substitute for gold.
Phosphorus. Symbol P. At. wt. 31.04. Valence III and V. S. G. white, 1.82. red, 2.25. M. P. white, 44°. B. P. 269°.	Occ.—as phosphates, such as apatite [$Ca_5F(PO_4)_3$]; in bones, teeth, brain and seeds of plants. Prep.—by reduction of calcium phosphate by carbon in the electric furnace in presence of a suitable flux.	Phosphorus exists in two allotropic modifications: white phosphorus is waxy in consistency, soluble in carbon bisulphide, evil smelling and poisonous; red phosphorus is a solid, insoluble in carbon bisulphide, odorless and not poisonous. White phosphorus has a low ignition temperature, hence its former use in matches.	Red phosphorus is used in the manufacture of matches, as also is the compound P_4S_3. In the form of superphosphate of lime [$CaH_4(PO_4)_2$] phosphorus is an important artificial manure. The chlorides (PCl_3 and PCl_5) are much used in organic chemistry.
Platinum. Symbol Pt. At. wt. 195.2. Valence II and IV. S. G. 21.48. M. P. 1753°.	Occ.—free, alloyed with the platinum metals, as nuggets in alluvial sands in the Urals, California, etc. Prep.—it is freed from the metals with which it is alloyed by a complex series of processes.	A silvery, tenacious, ductile and malleable metal, unaltered in moist air and unattacked by any single common acid. Aqua regia, fused alkalies, alkali nitrates and cyanides attack it, however. Platinum "sponge" and "black" are finely divided forms.	On account of its resistance to acids, platinum is much used for chemical vessels. Since platinum has a coefficient of expansion very close to that of glass, platinum wires can be fused through glass without danger of breakage on cooling. The salts are used in photography.

CHEMICAL ELEMENTS—Continued

Name, With Certain Data	Occurrence and Preparation	Properties	Chief Compounds and Uses
Potassium. Symbol K. At. wt. 39.10. Valence I. S. G. 0.86. M. P. 62.5°. B. P. 667°.	Occ.—as sylvite (KCl), carnallite (KCl, $MgCl_2,6H_2O$); in plant and animal ashes, and in many complex silicates. Prep.—by reduction or by electrolysis of fused potassium hydroxide (KOH).	A silver-white lustrous metal, as soft as wax, tarnishing instantly in moist air. Chemically it is a very active metal, decomposing water in the cold and uniting violently with the halogens, sulphur and oxygen.	An alloy with sodium is used in filling high-temperature thermometers. Bengal saltpeter is the nitrate and is used in pyrotechny, for gunpowder and as a preservative. The iodide (KI) is used in medicine. The chlorate, like the nitrate, is used as a source of oxygen in pyrotechny and for match heads. Caustic potash (KOH) has many chemical applications. The cyanide (KCN) is used in gold extraction.
Praseodymium. Symbol Pr. At. wt. 140.6. Valence III and IV. S. G. 6.47. M. P. 940°.	Occ.—with cerium and lanthanum. Prep.—by electrolysis of the fused chloride.	A yellowish metal, remaining untarnished in air.	The salts are leek-green in color, and their solutions have characteristic absorption spectra.
Radium. Symbol Ra. At. wt. 226.4. Valence II.	Occ.—in minute quantity in pitchblende and other uranium minerals. Prep.—the metal has recently been isolated; the bromide is separated from the barium bromide prepared from pitchblende by fractional crystallization.	In all of its compounds, the metal has the power of emitting certain radiations. These can pass through matter that is opaque to light, render air a conductor, affect a photographic plate and cause a zinc-sulphide screen to fluoresce visibly.	The rays from radium compounds (such as $RaBr_2$, $RaCl_2$, $RaCO_3$) act destructively on living tissues and on bacteria. One gram of radium in any of its compounds gives off about 100 calories of heat per hour.
Rhodium. Symbol Rh. At. wt. 102.9. Valence II, III, and (IV. S. G. 12.1. M. P. above 2000°.	Occ.—in the ores of platinum. Prep.—by a complex series of processes from platinum ores.	A silvery, malleable and ductile metal, not tarnishing in air and not attacked by aqua regia.	The red chloride ($RhCl_3$) is formed by the action of chlorine upon the metal.
Rubidium. Symbol Rb. At. wt. 85.45. Valence I, III, and (V. S. G. 1.52. M. P. 38.5°. B. P. 696°.	Occ.—the salts are associated with salts of potassium. Prep.—similar to that of potassium.	A silver-white metal resembling potassium, like which it attacks water vigorously.	The compounds show characteristic flame-spectra, and were recognized as those of a new element spectroscopically by Bunsen.
Ruthenium. Symbol Ru. At. wt. 101.7. Valence III, IV, VI, VII, and VIII. S. G. 12.1. M. P. above 2000°.	Occ.—in the ores of platinum. Prep.—by a complex series of processes from platinum ores.	A hard, white, brittle metal, oxidized when heated in air, scarcely attacked by aqua regia.	The following oxides are known: Ru_2O_3, RuO_2, RuO_4, as well as salts corresponding to RuO_3 and Ru_2O_7.
Samarium. Symbol Sa. At. wt. 150.4. Valence II and III. S. G. ca. 7.7. M. P. 1300 to 1400°.	Occ.—in the mineral samarskite. Prep.—by electrolysis of the chloride.	A whitish-gray metal, tarnishing in air.	The salts are topaz-yellow in color, and are similar to those of lanthanum.
Scandium. Symbol Sc. At. wt. 44.1. Valence III.	Occ.—in the minerals euxenite and gadolinite. Prep.—the metal has not been isolated.	The existence of this element, whose oxide was discovered in 1879, was predicted by Mendeléeff in 1869.	The chloride ($ScCl_3$) shows a characteristic spark spectrum.
Selenium. Symbol Se. At. wt. 79.2. Valence II, IV. and VI. S. G. amorphous 4.27. monoclinic 4.47. hexagonal 4.8. M. P. amorphous 50°. monoclinic 170 to 180°. hexagonal 217°. B. P. 690°.	Occ.—free in some specimens of sulphur, and in combination with lead, iron and other metals, as in pyrites. Prep.—(amorphous) by reducing selenious acid (H_2SiO_3) by sulphur dioxide.	Three varieties are known: (1) red amorphous, soluble in carbon bisulphide, from which it is d posited as (2) red translucent monoclinic crystals, soluble in carbon bisulphide, (3) blue-gray metallic selenium, insoluble in carbon bisulphide. This last form conducts electricity many times better when exposed to light, and the better the brighter the light.	Selenium cells are used as indicators of intensity of illumination. The compounds strongly resemble those of sulphur. Hydrogen selenide is an evil-smelling inflammable gas. Selenic acid (H_2SeO_4) is a more powerful oxidizer than sulphuric acid, and dissolves gold.
Silicon. Symbol Si. At. wt. 28.3. Valence IV. S. G. amorphous 2.0. crystalline 24.9. M. P. 1200°. B. P. ca. 3500°.	Occ.—silicon dioxide (SiO_2) occurs as flint, quartz, quartz sand, etc. The igneous rocks are composed largely of silicates, and this element constitutes over 25% of the earth's crust. Prep.—by reducing sand with coke in the electric furnace.	Amorphous silicon is a brown powder that burns when heated in air. Crystalline silicon forms black needles. It is less active than the amorphous variety and is attacked only slowly by a mixture of hydrofluoric and nitric acids. It unites with fluorine, however, at ordinary temperatures.	The "pigs" of silicon made at Niagara are used in steel-making. The ornamental varieties of quartz find uses as gemstones, as do several natural silicates. Silicon carbide, "carborundum" (SiC), is used as an abrasive. Sodium silicate solution is "waterglass," used to protect sandstone and to preserve eggs. Common glass is a mixture of sodium and calcium silicates.
Silver Symbol Ag. At. wt. 107.88. Valence I. S. G. 10.53. M. P. 960°. B. P. 2050°.	Occ.—native, as sulphide (Ag_2S) often associated with galena; chloride (AgCl), etc. Prep.—from lead by the Pattinson or the Parkes process; from the ores by the Mexican and other processes.	A white, highly lustrous, tough, very ductile and malleable metal, the best conductor of heat and electricity known. Liquid silver dissolves oxygen. It is unaffected by the oxygen of moist air, and its tarnishing is due to the action of hydrogen sulphide. It dissolves in dilute nitric and in concentrated hot sulphuric acid.	It is employed for articles of use and of ornament and for coinage. U. S. sterling silver contains 90% silver with 10% copper. Lunar caustic is silver nitrate. This salt and the halides of silver are extensively used in photography. For electroplating, a bath of potassium argenticyanide [$KAg(CN)_2$] is used.
Sodium. Symbol Na. At. wt. 23.00. Valence I. S. G. 0.97. M. P. 95.6°. B. P. 742°.	Occ.—in the sea as chloride (NaCl); in salt deposits as chloride, borate, nitrate; in many complex silicates in rocks. Prep.—by electrolysis of fused sodium hydroxide (NaOH).	A silver-white metal, as soft as wax, that may be welded at ordinary temperature. Like potassium it is very active, uniting directly with many other elements, and attacking water vigorously in the cold.	The metal is used in the manufacture of several chemicals. Sodium chloride (NaCl) is a necessity of life to most animals; and is used in the manufacture of hydrochloric acid, chlorine and sodium compounds. Sodium carbonate ($NaCO_3$, $10H_2O$) or washing soda, and sodium hydroxide (NaOH) are used for cleaning, and in the manufacture of soap and chemicals. Baking soda is sodium bicarbonate ($NaHCO_3$). The sulphate (Na_2SO_4, $10H_2O$) is known as Glauber's salt; the thiosulphate, by photographers, as "hypo."
Strontium. Symbol Sr. At. wt. 87.63. Valence II. S. G. 2.55. M. P. ca. 800°.	Occ.—as strontianite ($SrCO_3$) and celestine ($SrSO_4$). Prep.—by electrolysis of the fused chloride.	A white metal, softer than calcium and harder than sodium, tarnishing to a yellow tint. Like calcium, it is active enough to attack water vigorously in the cold.	The nitrate and chlorate are used in pyrotechny for red fire. All volatile compounds color the Bunsen flame red.

CHEMICAL ELEMENTS—Continued

Name, With Certain Data	Occurrence and Preparation	Properties	Chief Compounds and Uses
Sulphur. Symbol S. At. wt. 32.07. Valence II, IV and VI. S. G. rhombic 2.06. monoclinic 1.96. M. P. rhombic 112.4°. monoclinic 119°. B. P. 444.9°.	Occ.—native, in combination with most metals as sulphides, and with some metals as sulphates. Prep.—by melting the free sulphur away from the rocky matrix, and subsequent purification by distillation.	Natural sulphur is rhombic in crystalline form, yellow, brittle, of vitreous luster, and a poor conductor of heat and electricity. This and the monoclinic variety are soluble in carbon bisulphide, while amorphous sulphur is not. When heated, sulphur unites directly with most of the other elements.	Sulphur is used to prepare sulphur dioxide (SO_2), which is used in making sulphuric acid and sulphites, and for bleaching: also for vulcanizing rubber and in the manufacture of black gunpowder, fireworks and matches. Sulphuric acid (H_2SO_4) is to chemical industry what iron is to engineering.
Tantalum. Symbol Ta. At. wt. 181.0. Valence II, IV and V. S. G. 16.6. M. P. bet. 2250° and 2300°.	Occ.—in tantalite and many other rare minerals. Prep.—by the action of sodium on sodium tantalofluoride (Na_2TaF_7).	A hard silver-white metal, ductile and malleable when hot, of very high tensile strength. The hot metal can absorb 740 volumes of hydrogen. It is not attacked by aqua regia.	The metal is used for filaments for electric lamps, which possess twice the efficiency of the carbon filament lamp.
Tellurium. Symbol Te. At. wt. 127.5. Valence II, IV and VI. S. G. cryst. 6.3. M. P. cryst. 455°. B. P. 1400°.	Occ.—free and as tellurides. Prep.—by reducing tellurious acid (H_2TeO_3) by means of sulphur dioxide.	The crystalline variety is white, has metallic luster, and conducts heat and electricity. The precipitated variety is black and of lower density. The element is related to sulphur but is more metallic in character.	The compounds find few applications. Telluric acid (H_6TeO_6) has basic as well as acid characters, in keeping with the position of the element between metals and nonmetals.
Terbium. Symbol Tb. At. wt. 159.2. Valence III.	Occ.—in gadolinite, samarskite, and other rare minerals. Prep.—the metal has not been prepared.		The salts show no absorption spectrum.
Thallium. Symbol Tl. At. wt. 204.0. Valence I and II. S. G. 11.8. M. P. 303.	Occ.—in crookesite, and in small quantities in many samples of iron pyrites. Prep.—it is precipitated by zinc from a solution obtained by suitable treatment of the flue dust from sulphuric acid works.	A bluish-white lead-like metal, rather soft, malleable, but of low tensile strength. It decomposes water rapidly at red heat, and dissolves in dilute acids.	It forms two sets of salts, the thallous (*e. g.*, TlCl) and the thallic (*e. g.*, $TlCl_3$). All the compounds show a characteristic green line in the spectrum
Thorium. Symbol Th. At. wt. 232.0. Valence IV. S. G. 11.0.	Occ.—in monazite sand. Prep.—by reducing potassium thorium chloride with sodium, or by electrolysis of the chloride in a mixture of fused potassium and sodium chlorides.	A metal with the color of nickel, that can be burnt in air. Hydrochloric acid attacks it but slowly.	The nitrate [$Th(NO_3)_4,6H_2O$] is used in making Welsbach incandescent mantles, which consist of 99% of ThO_2. All the compounds are radio-active.
Thulium. Symbol Tm. At. wt. 168.5. Valence III. M. P. 1700°.	Occ.—in gadolinite and other yttrium minerals.		The salts are of a pale bluish color which is destroyed very easily by minute quantities of erbium.
Tin. Symbol Sn. At. wt. 119.0. Valence II and IV. S. G. 7.3. M. P. 232°. B. P. ca. 1600°.	Occ.—as cassiterite (SnO_2). Prep.—after roasting, the ore is reduced by heating with carbon.	A silver-white, rather soft, very malleable and ductile metal, practically unchanged in air. When heated, it may be burned in air. Dilute nitric acid is the only dilute acid that attacks it rapidly. When kept long at temperatures below zero C., ordinary tin changes to a brittle gray powdery modification. This form is the stable one below 20°.	Large quantities of tin are used in the tinning of iron for tinplate. It is a constituent of the alloys Britannia metal, pewter, solder, bronze, etc. Tin forms two sets of salts, stannous (*e. g.*, $SnCl_2$) and stannic (*e. g.*, $SnCl_4$). "Pink salt" [$(NH_4)_2SnCl_6$] is used in dyeing. "Mosaic gold" is SnS_2.
Titanium. Symbol Ti. At. wt. 48.1. Valence II, III and IV. S. G. 4.5. M. P. below 1850°.	Occ.—as rutile (TiO_2) and in titanic iron ore ($FeTiO_3$). Prep.—by reducing the chloride ($TiCl_4$) by means of sodium.	A hard, brittle metal, resembling polished steel in appearance, that may be forged at a low red heat. It dissolves in dilute sulphuric acid, and decomposes steam at 800°. It unites easily with nitrogen.	The element is very widely disseminated, though in small quantity. It is contained in the ashes of all plants.
Tungsten. Symbol W. At. wt. 184.0. Valence II, IV, V and VI. S. G. 19.3. M. P. ca. 2800°.	Occ.—as wolfram ($FeWO_4$) and as scheelite ($CaWO_4$). Prep.—by reducing tungstic acid (H_2WO_4) by carbon at a high temperature.	A hard, brittle, gray metal, attacked by chlorine only at 250°, although it can be caused to burn in air. It is slowly acted upon by dilute acids and even by water.	The metal is used for the filaments of incandescent electric lamps, giving an efficiency of 1.3 watts per candle power. Tungsten steel has 5% W. Sodium tungstates are used as mordants in dyeing.
Uranium. Symbol U. At. wt. 238.5. Valence III, IV, V and VIII. S. G. 18.7. M. P. ca. 1500°.	Occ.—as pitchblende, which contains U_3O_8. Prep.—by reducing the oxides with aluminium.	A white lustrous metal, tarnishing in air and attacking water slowly in the cold. It combines directly with many of the other elements.	All the compounds of uranium are radio-active in proportion to their uranium content. Glass to which uranium compounds have been added shows a greenish-yellow fluorescence.
Vanadium. Symbol V. At. wt. 51.06. Valence II, III, IV and V. S. G. 5.5.	Occ.—in a few rather rare minerals. Prep.—by reduction of the dichloride (VCl_2) in hydrogen.	A silver-white lustrous metal harder than quartz. It does not tarnish nor attack water at ordinary temperatures, but can be burnt in oxygen.	Vanadium added to steel in even small quantity (0.2%) increases the tenacity and elastic limit without reducing the ductility.
Xenon. Symbol Xe. At. wt. 130.2. Valence 0. B. P. 109°.	Occ.—in minute quantity in the air, less than one volume in 100 million. Prep.—by fractionation of liquid argon.	A transparent, colorless and odorless gas, very inert like its congener argon. It is the densest of the argon family.	It forms no compounds.
Ytterbium (Neoytterbium). Symbol Yb. At. wt. 172.0. Valence III.	Occ.—in gadolinite, euxenite and other rare minerals. Prep.—the metal has not been isolated.		The compounds show a characteristic spark spectrum.
Yttrium. Symbol Y. At. wt. 89.0. Valence III.	Occ.—in gadolinite, euxenite and other rare minerals. Prep.—by electrolysis of sodium yttrium chloride.	A gray lustrous metal.	The chloride yields a characteristic, though complex, spectrum.
Zinc. Symbol Zn. At. wt. 65.37. Valence II. S. G. 6.9 to 7.2. M. P. 418.2°. B. P. 920°.	Occ.—as zinc blende (ZnS), calamine ($ZnCO_3$), zincite (ZnO), etc. Prep.—after roasting, the ore is reduced by coal, the metal distilling off.	A bluish-white, lustrous, brittle metal, that is malleable and ductile at 120°. It tarnishes in moist air, attacking water slowly in the cold and rapidly when heated in steam. It dissolves in dilute acids and in sodium hydroxide solution.	Sheet zinc is used for roofs and gutters. Iron is galvanized by dipping it in molten zinc, and so protected from rusting. Zinc is used for galvanic batteries and, alloyed with copper, to make brass. The salts are used in medicine; the chloride and sulphate yield antiseptic solutions.
Zirconium. Symbol Zr. At. wt. 90.6. Valence IV. S. G. 4.1.	Occ.—as zircon ($ZrSiO_4$). Prep.—by reducing the oxide (ZrO_2) with carbon in the electric furnace.	A hard gray metal, remaining bright in air and only slowly oxidized at a white heat. It is dissolved by aqua regia and by caustic potash solution.	The oxide is contained in some incandescent gas mantles.

THE CHEMISTRY OF FOODS.—Food is anything which, taken into the alimentary canal, furnishes heat and energy to the system, repairs waste and builds tissue.

The common idea of food is confined to solid or semisolid foods having the above properties. Liquid foods are usually spoken of as drinks or beverages. Condimental substances, such as salt, pepper, spices, etc., are generally segregated from the ordinary classification of foods. There is a legal definition of foods found in the act of Congress of June 30, 1906, which is as follows:

"The term 'food,' as used herein, shall include all articles used for food, drink, confectionery, or condiment by man or other animals, whether simple, mixed, or compound." This comprehensive definition will be followed in this article.

Kinds of Foods.—According to their predominant characteristics for nutritive purposes, foods are recognized as of the following kinds:

Nitrogenous.—Food material containing nitrogen as a distinctive element. The common name *proteid* or *protein* is applied to this class of foods. Most of the true proteid foods also contain sulphur as an essential ingredient. Examples of characteristic proteid foods are found in lean meat, white of egg, gliadin of wheat, hordein of barley, zein of maize, etc. Among the liquid foods, milk contains casein, which is a most important ingredient, and albumen, a proteid food soluble in cold water. Other forms of protein are insoluble in cold water but are soluble in salt solutions, alcohol, etc. By means of these various solvents proteid matter can be separated into different classes. Proteid food is often described as a tissue builder, but this is not a strictly correct classification. Only certain tissues of the body, such as the muscle, the nerve and the brain, are composed largely of proteid. Tissues such as fat and bone are composed largely of other substances.

Starch and Sugar.—Carbohydrates form by far the largest bulk of human foods. They are typically represented by starch and sugar. There are many carbohydrates in foods, however, which are more or less useful but not important as regards quantity or digestibility. The so-called woody tissues and fiber in foods are composed of carbohydrates, but these are of more importance for the nourishment of domesticated animals than for man. For practical purposes the term *carbohydrates* applied to human foods embraces only starch and sugar. These substances in a pure state are characterized by being free of both nitrogen and sulphur, which are, as above stated, the most distinctive constituents of proteid. They consist solely of carbon, oxygen and hydrogen, the oxygen and hydrogen existing in the proportions to form water.

Kinds of Sugars.—Sugars are of various kinds, the most important for human nourishment being the substance known as cane sugar, which has the composition of $C_{12}H_{22}O_{11}$. Sugar is an abundant product of almost every plant. It is stored especially, however, in some certain plants in such a manner as to become available for extraction. The principal sugar producing plants are the sugar cane, sugar beet, the maple, and the sugar palm. Practically all the sugar of commerce comes from the sugar cane and the sugar beet. The amounts made from other sources are insignificant. In addition to cane sugar there are other varieties of sugar derived from starch. Among these perhaps the most important for dietetic purposes is maltose. Maltose is a sugar derived from starch in the process of the sprouting of the grains containing starch, or by acting upon starch by sprouted barley (malt). The starch of cereal grains is largely converted into maltose by the ferments of the malt. Starch is also converted into sugar by the ferments of the digestive organism. The saliva begins this conversion and it is completed in the intestinal tract, especially in the small intestine. Starch is also converted into sugar by the action of a dilute acid at a high temperature, and the sugar thus formed is known as dextrose. Glucose, cane sugar, maltose and dextrose are all valuable foods, furnishing particularly heat and energy. Starch, as such, is not available for nutritive purposes, being insoluble and incapable of assimilation. There are many other forms of sugar or sugar-forming substances found in plants, among them levulose, the companion of dextrose, found as levulon particularly in the dahlia, artichoke and certain cacti. When cane sugar is eaten or when it is treated with a dilute acid it is converted into a mixture of equal parts of dextrose and levulose. Honey is sugar exuded by the blossoms of plants and collected and stored by bees, and consists chiefly of cane sugar which has been converted as described above by nature or the bees and hence is a mixture of approximately equal parts of dextrose and levulose.

Glycerides.—Fats are also important foods, furnishing weight for weight a larger quantity of heat and energy than any other food product. Fats exist in various forms. When they are solid or semisolid at ordinary temperatures they are called fats; when they are liquid at ordinary temperatures they are called oils. Among the fats some of the most important for food purposes are butter, lard and tallow; among the oils, olive, cotton-seed, peanut and sesame. The fats are chemically known as glycerides, being a compound produced by the union of a fat acid and glycerine. In the fresh, pure state they contain but little free acid, but on standing for a long time larger quantities of free acid are found. The rancidity of the fat, however, does not depend solely upon its quantity of free acid, but upon other conditions due probably to bacterial or enzymic action. Warmth and light tend to render fats and oils rancid, while keeping them cool and in the dark tends to preserve them from rancidity.

Minerals.—The fourth class of foods are those of a mineral character, namely, foods which are essentially composed of mineral substances. Among the most important of the mineral foods in the nutrition of man are phosphorus and lime. These two bodies go to make up the greater part of bone tissue and are found as essential ingredients in many parts of the body. Phosphorus and lime are not usually found in any concentrated form in food products, but are distributed in small quantities in nearly all foods. The phosphorus which nourishes the body is ingested usually in an organic combination and not as phosphoric acid. Certain food products, as, for instance, cereals and eggs, are particularly rich in organic phosphorus. Lime is found in nearly all food products and especially in cereals and water.

Mineral substances other than phosphorus and lime are also useful to some extent in nutrition, as, for instance, iron, potash, and soda, the latter being valuable more for their incidental properties than because of their occurrence in the tissues of the body. In other words, it may be said that the blood in order to perform its functions must have a certain saline content, without which its circulation and the carrying of food to all parts of the body would be impossible. These saline materials, although not entering into the tissues of the body, must be regarded as essential parts of our food.

Condimentals.—Condiments are useful more for their effect on palatability than for purposes of pure nutrition. Palatability, however, has important relations to digestion, and hence condiments are properly classed as foods. Most condimental substances have some nutritive properties, containing as they do more or less starch, sugar, proteid and fats. Vinegar, of which the most important ingredient is acetic acid, furnishes a certain degree of heat and energy, inasmuch as all the acetic acid is burned in the body, the products being water and carbon dioxide. Salt does not enter into the tissues of the body but affords hydrochloric acid, which is essential to digestion. On the other hand, wood smoke, a valuable condiment, does not have any food value.

Manner in Which Food Performs Its Functions.—All food products ingested in the alimentary canal, if not already in a condition suitable for digestion, are prepared by previous mastication. The importance of the mastication of the food is shown by two facts: (1) The food in order to be digested must be properly subdivided; (2) the mixing of saliva with starchy foods is an important adjunct to digestion. In so far as meat foods are concerned, the admixture of saliva is perhaps of no importance in digestion, and the need of complete mastication is not so evident. The chief functions of food have been noted in the original definition. All foods taken into the body, with the possible exception of water and wood smoke, undergo profound modifications. The process of digestion is essentially a chemical one, and consists in the thorough destruction of the ingested forms of matter and the building up of entirely new combinations. Attention may be called, for instance, to the fact that the fat of the human body does not consist of any particles of the fat ingested in the food, but is a substance which is generated by combinations of particles of matter in the processes of digestion and assimilation. The tissues of the body, under a selective influence which is not fully understood, cull out from the current of circulating blood those particular particles of matter which go to build them up and reject those which are of no use.

Metabolism.—The building of tissue, especially in the growing animal, is one of the chief functions of foods. When an animal has reached maturity it remains in practically the same condition for a number of years. In this condition the building of new tissues ceases and nature is satisfied with restoring those which are destroyed and excreted. This process of repairing waste keeps the adult body in a state of equilibrium for a given time, but as old age comes on the repair does not keep pace with the waste and the natural decadence of age ensues. The sum of changes which food undergoes from its entry into the body until excreta are voided is called metabolism.

Foods as Fuel.—The next most important function of the food is to furnish heat

and energy. The human body is a pure machine and its functions depend upon a supply of heat and energy just as much as a boiler or an engine. Foods furnish heat in varying quantities as already indicated. Starch and sugar furnish about 4,000 units of heat per unit of weight; proteid matter, if completely burned, furnishes about 5,500 units of heat per unit of weight; fats, when completely burned, furnish about 9,300 units of heat per unit of weight. In point of fact, however, proteid matter is not completely burned in the body, and a considerable amount of nitrogen is excreted without being reduced to the last state of oxidation. Hence, proteid matter does not furnish any more heat during the process of digestion and assimilation than an equal amount of carbohydrates, so that the heat value of a proteid, in so far as the human machine is concerned, is practically the same as that of a sugar or a starch, while the value of a particle of fat is two and a quarter times greater than that of either a proteid or a carbohydrate.

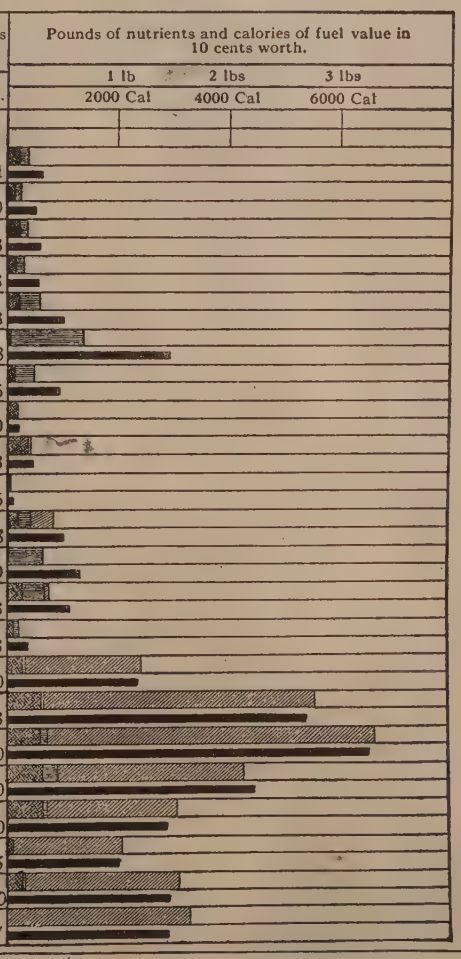
The Calorimeter.—A simple method of calculation is pursued in measuring heat value. A particle of food is inclosed in a strong steel vessel, called a *bomb*, and into this vessel oxygen is pumped under high pressure. The apparatus is so arranged that by means of platinum wire, or other appropriate device, the food substance may be ignited in the atmosphere of oxygen and burned completely into final forms of oxidation, producing water, carbon dioxide, nitric, phosphoric and sulphuric acids, according to the relative quantities of the various constituents present. Before igniting the particle of food, the whole apparatus is set in a measured quantity of water at a known temperature and the rise of temperature attained is carefully noted by a standard thermometer. This apparatus is called a calorimeter. In this manner the accurate data which have been mentioned are obtained.

The Body a Furnace.—An exactly similar process goes on in the human organism, though slowly, and experiments have shown that the data obtained by the calorimeter are entirely comparable with those obtained in the organism. This has been proved by inclosing a human being in a tight compartment by means of which all the heat and all the products of combustion which are produced in his organism are measured. This experiment shows how complete a machine the human organism is.

COMPARATIVE FOOD VALUES

Protein. Fats. Carbohydrates. Fuel Value.

FOOD MATERIALS	Price per lb	Ten cents will buy
	Cents	Lbs.
Beef, round	14	.71
Beef, sirloin	20	.50
Beef, shoulder	12	.83
Mutton, leg	16	.63
Pork, loin	12	.83
Pork, salt, fat	12	.83
Ham, smoked	18	.56
Codfish, fresh, dressed	10	1.00
Codfish, salted	7	1.43
Oysters, 35 cts. per quart	18	.56
Milk, 6 cents quart	3	3.33
Butter	25	.40
Cheese	16	.63
Eggs, 24 cents dozen	16	.63
Wheat bread	5	2.00
Wheat flour	3	3.33
Cornmeal	2½	4.00
Oatmeal	4	2.50
Beans, white, dried	5	2.00
Rice	8	1.25
Potatoes, 60 cents bushel	1	10.00
Sugar	6	1.67



Balanced Ration.—Experience has shown that man eats from choice certain quantities of the kinds of food mentioned, and in a certain definite proportion. While the dietaries of different nations differ, it may be stated that men in the same ranks of life, having practically the same means of obtaining subsistence, live in a uniform manner the world over. It is possible, therefore, by experience and study to determine the normal diet of man. The total quantity of food which a man eats is usually determined by the heat units mentioned and known as *calories*. The average man eats an amount of food which produces a quantity of heat recognized by the expression *three thousand calories*. That is, if the food which the average man eats were burned, it would raise a unit volume of water from zero to a temperature of three thousand degrees. As water could not bear such a temperature, however, a better expression is that the food of an average man per day would raise the temperature of three thousand unit weights of water one degree.

A study of these data show that not only is the human organism a machine but it is the most economical machine known. This is true of the animal organism in general and not of the human system in particular.

A balanced ration may be regarded as that quantity of food which will furnish three thousand units of heat, and so distributed among the various kinds of foods as to secure the proper proportions of protein, carbohydrates, minerals, condiments, and fats. This quantity of food, if deprived entirely of its water, represents about one per cent of the weight of the individual eating it. In other words, a man weighing 150 pounds in ordinary circumstances, and at light physical employment, eats one per cent of his weight of dry food a day, that is, one and a half pounds of dry food. As the ordinary foods used, however, contain about three times as much water as they do of dry substance, the total weight of food, including water, used by the average man of 150 pounds, is from four to five pounds per day.

Average Distribution of the Dry Food.—Assuming that the average man eats one and a half pounds of dry food per day, experience has shown that this is distributed in about the following proportions:

Proteid	0.25 lb.
Fat	0.2 lb.
Carbohydrates	1.0 lb.
Mineral matter, etc.	0.05 of a lb.

The above data are to be considered only as approximate expressions in round numbers of the general distribution of the diet of an ordinary person.

Adulteration of Food.—Adulteration of food has been largely practiced for the purpose of commercial gain. In so far as nutrition and palatability are concerned, and from the common point of view of the consumer, there is no possible excuse for adulteration of any kind. The sole purpose of the practice of adulteration is to secure unearned profit for the manufacturer and dealer. Adulteration of food is practiced in various ways, the most common of which are as follows:

(a) *The abstraction of some valuable ingredient.* This is illustrated in the skimming of milk and the sale of the product as a whole milk.

(b) *The addition of some agent which dilutes or weakens the product.* This is shown in the addition of water to milk;

of chicory to coffee; of ground shells to pepper and other spices, etc.

(c) *The concealing of inferiority of a product.* This is done chiefly by coloring or bleaching, as for instance, the use of color in a distilled vinegar to make it appear like cider vinegar; the addition of an artificial flavor to an extract to make it resemble the genuine article; the bleaching of flour to make it look like high-grade patent flour, etc.

(d) *The addition of a substance to a food product which may render it injurious to health.* This is practiced chiefly for the purpose of preserving foods, though some of the coloring matters employed are undoubtedly injurious to health, such as sulphate of copper and many coal-tar dyes. Many authorities on hygiene are of the opinion that any kind of a preservative drug added to a food product is injurious. The reason for this belief is that a preservative only acts by destroying or paralyzing germ life and a preservative is only effective when enough of it is added to secure this effect. It is a very common opinion among experts, especially those charged with the protection of the public health, that all such practices are objectionable. On the other hand, there are experts, also eminent in their professions, who maintain that the use of preservatives is not deleterious. All nations that have food laws have either forbidden or restricted the use of these preservative materials, and this shows that the feeling of the community is decidedly opposed to them. When it is further considered that every kind of food which is suitable for human consumption may be perfectly preserved in some unobjectionable way without the use of preservatives, it is evident that their employment is wholly unnecessary and, therefore, always objectionable.

Misbranding of Food Products.—Almost as objectionable as adulteration is the practice of misbranding. As in the case of adulteration, this is done solely to secure undeserved profits on the part of the manufacturer or dealer. From the consumer's point of view there can be no excuse offered for the misbranding of foods. This misbranding takes various forms of which the following are some examples:

(a) *Misbranding* as to the state or country in which the food is produced, as, for instance, representing a domestic wine as of foreign manufacture, either by name or other device.

(b) *The giving of a false or fictitious name of manufacturer.* This is a very common practice among those who make different grades of products. Their own names are placed on the high grades and the names of fictitious firms on the low grades.

(c) *The calling of adulterated food by the name of the real article.* This is probably the most common form of misbranding, and is illustrated in the sale of milk which has been skimmed and watered as milk; a buckwheat flour which has been mixed with other materials as buckwheat flour, and maple sirup mixed with other sweets as maple sirup.

(d) *The misrepresentation of the qualities of a food product is another form of misbranding.* It is not uncommon to see advertisements calling attention to "superior qualities" which the article does not possess, such as "the most wholesome," "best made," "entire substitute for," etc. A most dangerous practice, and one which threatens health and often life, is found in the claims made for certain varieties of infants' and invalids' foods. Another very common form of misbranding is where long stored foods are advertised as fresh—a form of misbranding which is now receiving attention in all the countries of the world, and regulations are being made looking to the minimizing of this evil. Infants' and invalids' foods of all others, should be pure, wholesome and free from misbranding and adulteration.

ENTOMOLOGY.—The branch of zoölogy which treats of the insects. The true insects are those animals of the division *Arthropoda* or *Articulata* distinguished from the other classes of the division by the fact that the three divisions of the body—the head, thorax, and abdomen—are always distinct from one another.

There are never more than three pairs of legs in the perfect insect, and these are all borne upon the thorax. The wings are expansions of the sides of the second and third sections of the thorax, and are attached by slender tubes called *nervures.* In the beetles the anterior pair of wings becomes hardened so as to form protective cases for the posterior membranous wings, and are called in this condition *elytra* or *wing-cases.* The head is composed of several segments amalgamated together, and carries a pair of feelers or *antennae,* a pair of eyes, usually compound, and the appendages of the mouth. The thorax is composed of three segments, also amalgamated, but generally pretty easily recognized.

The organs of the mouth take collectively two typical forms, the masticatory and the suctorial, the former exemplified by the beetles, the latter by the butterflies, in which the mouth is purely for suction.

Generally the young are very different from the full-grown insect, and pass through a *metamorphosis* before attaining the mature stage. When this metamorphosis is complete it exhibits three stages—that of the larva, caterpillar, or grub, that of the pupa or chrysalis, and that of the imago or perfect winged insect.

Classification.—Insects have been divided into three sections—*Ametabola Hemimetabola,* and *Holometabola,* according as they undergo no metamorphosis, an incomplete one, or a complete one.

Ametabola.—The young of the Ametabola differ from the adult only in size. They are all destitute of wings; the eyes are simple and sometimes wanting. This section is divided into three orders—*Anoplura* (lice), *Mallophaga* (bird-lice), and *Thysanura* (springtails).

Hemimetabola undergo an incomplete metamorphosis, the larva differing from the imago chiefly in the absence of wings and in size. The pupa is usually active, or if quiescent capable of movement. The section Hemimetabola comprises the orders *Hemiptera* (cicades, bugs, plant-lice, etc.), *Orthoptera* (cockroaches, crickets, grasshoppers, locusts, earwigs, etc.), and *Neuroptera* (dragon-flies, May flies, white ants, etc.).

In the Holometabola the metamorphosis is complete, the larva, pupa, and imago differing greatly from one another in external appearance and habits. The larva is wormlike and the pupa quiescent. The Holometabola comprises the orders *Aphaniptera* (fleas), *Diptera* (gnats, botflies, gadflies, mosquitoes, house flies, etc.), *Lepidoptera* (butterflies and moths), *Hymenoptera* (bees, wasps, and ants), *Strepsiptera* (stylops, minute and parasites), and *Coleoptera* (lady-birds, glow-worms, cockchafers, weevils, and all of the beetle tribe). [See Dictionary of Animals.]

ETHNOLOGY.—Anthropology is that science which studies man. Taken in its most comprehensive significance it includes so great and such diversified material that it is necessary to subdivide it. Four main divisions are usually recognized—somatology, ethnology, ethnography, culture history. Somatology, sometimes called physical anthropology, considers man as a living organism, in himself and in his relations to other animal forms. It involves, anatomy, physiology, psychology. Ethnology and ethnography deal with races; the former is a philosophical, the latter a descriptive science. The difference between them is the same as that between geology and geography.

Place Among Sciences.—Ethnology is based on somatology; it defines the different races of mankind; it studies the great questions of origin, variation and distribution. Ethnography describes the different populations of mankind; it aims to give a definite picture of the life and culture of each and every division of the human race; it deals little in theories, much in facts. Culture history studies the development of culture from lowest savagery to highest civilization; it is constructed from the facts supplied by ethnography.

The Scope and Field of ethnology may be briefly indicated. The philosophical study of the human race involves investigation of the origin of mankind; it attempts to reconstruct the primitive type of man; it aims to locate man's first home; it defines the definite types and varieties of the human species; it seeks to follow the movements of mankind from its first home, and to present the facts of the present distribution of human varieties.

Origin of Man.—To-day, science assumes evolution as an underlying principle. Man is commonly recognized as no exception to the general rule. He is a part of animate creation, and is related by genuine ties of blood with other animals. His closest relatives are the various species of anthropoid apes living to-day in Africa, in southeastern Asia, and the adjacent islands. There are four types which so much resemble man as to deserve the name of anthropoid apes—the gorilla, chimpanzee, orang-utan, and gibbon. The gorilla and chimpanzee live in tropical Africa; the orang-utan and the gibbon live in the islands southeast from Asia, and in the neighboring portions of the continent. The gorilla is the largest of the four types, the different gibbons the smallest; all resemble man, but perhaps the nearest approach is in the chimpanzee and the orang-utan. Neither Darwin nor his followers have claimed that man is descended from any of the living types of anthropoids; they and he alike have descended from a common ancestor; they are collateral relatives.

Unity of Mankind.—The old question of monogenism is no longer one of serious importance. Monogenism is the doctrine that all men have descended from a single stock; that all are of one blood. The counterproposition that the different races of man have absolutely different origins, that they are different in blood, that all men are not brothers, is called polygenism.

In the early days of ethnology the battle between these two views was bitter. Naturalists held the fixity of plant and animal species. It was recognized that within the range of a single species there might be

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1 Bronze Copper Butterfly.
2, 4, 10, 21 Horned Beetles.
3 Gipsy Moth.
5 Pine Weevil.
6, 13 Grain Weevil.
7 Locust.
8, 14 Monarch Butterflies.
9, 19 Tussock Moth.
11 Seed Weevil.
12, 22 Lantern Fly.
15 Brazil Moth.
16, 24 Butterflies.
17 Swamp Fly.
18 Fruit Fly.
20 Chinese Candle Fly.
23 Samia Cecropia.
25, 26, 27, 28 Water Beetles and Larvæ.
29 Wood Borer.

variation, and varieties of species were recognized and clearly defined. But the idea that a species itself was temporary, and that one might go over to another through modification and by selection, was not recognized.

The question, then, was whether man formed a single species with several varieties or whether there were several human species. Certain criteria of species had been determined. The two of most significance were these:

(1) *Between the different individuals of a species the resemblance must be great and the variation limited.*

(2) *There must be fertility between varieties.*

The scientific consideration as to whether man is of *one* or of *several* species clearly belongs to the naturalist (the biologist). As regards degree of resemblance it is certain that the different human races present less striking differences than those within the range of pigeons and domestic dogs. Whether the different races of mankind really breed well together and give rise to fertile offspring was much discussed, but, on the whole, may be assumed. Most of the old students, then, decided that mankind formed a single species with a number of varieties.

To-day, however, the old question has little meaning. Biology no longer holds to fixity of species. All existing forms of life are believed to have been derived from previously existing forms through variation and selection. Under evolutionistic teaching, all types of man will eventually trace back to some single form, however different may be the present types of race. The question whether we shall speak of one or several species depends only at what point we choose to pass the plane which cuts across the twigs diverging from the parent branch. On the whole, the evolutionist of to-day chooses to assume a single species of mankind, but if he does so, he believes that variation early took place within the species and recognizes that the fundamental race types are old and have undergone comparatively little change in recent times.

Original Type of Man.—Various attempts have been made to reconstruct the primitive type of man. Years ago, de Quatrefages, on the basis of individual peculiarities occurring within the limits of all human races, peculiarities which he believed might be considered reversive, suggested that the first men were probably yellow of skin, red-haired, and green-eyed. While his view has been rarely accepted *in toto* it has perhaps some elements of truth. It is possible to make a guess as to the structure of the earliest human occupants of western Europe, where various remains have been found in ancient deposits. Each fragment of human skeleton that has been found in glacial gravels or in cave-earth has given rise to bitter controversy. The number of pieces which have stood the test of critical examination and are unquestionably old is small. Among the most interesting of these remains are the skull-cap of Neanderthal and the skulls of Spy. Within a few years past, several discoveries of extraordinary importance have been made, and the list of authentic ancient pieces is double what it was a few years since. Rutot has recently summarized the whole discussion and we present a table based upon his evidence.

Table of Ancient Human Remains from European Quaternary

Drawn from Rutot; abbreviated.

European Quaternary Division	Nature of Piece and Locality	Type
Mindelian Glaciation.	Jaw-bone *Mauer.*	Neanderthaloid.
	Skeleton. *Galley Hill.*	Transition (doubtful authenticity).
Interglacial.		?
Rissian Glaciation.	Skull. *Denise.*	Transition?
Interglacial.	Skeleton. *Tilbury.*	Neanderthaloid.
	Skull. *Bury St. Edmunds.*	
	Skeleton. *Moustier.*	Neanderthal.
	Skeleton (fem.) "	Transition.
	Skeleton. *La Ferassie.*	Neanderthal.
	Skeleton. *Chapelle-aux-Saints.*	Neanderthal.
	Skeleton. *Combe-Capelle.*	Transition.
	Skeletons. *Spy.*	Neanderthal.
	Skeleton. *Duruthy.*	Cro-Magon.
	Skeletons. *Mentone.*	Negroid.
	Remains. *Hastière.*	Transition.
	Remains. *Crapina.*	Neanderthaloid.
	Jaw-bone. *Grotto des Fées.*	Transition?
	Jaw-bone. *Malarnaud.*	Transition?
	Jaw-bone. *La Naulette.*	Neanderthal.
	Skull-cap. *Neanderthal.*	Neanderthal.
	Skeletons. *Cro-Magnon.*	Cro-Magnon.
	Skeletons. *Mentone.*	Cro-Magnon.
	Skeleton. *Brünn.*	Transition.
	Skull. *Brünn-Rotenberg.*	Transition.
	Skeletons. *Predmost.*	Transition?
	Remains. *Trou Magrite.*	?
Wurmian Glaciation	Jaw-bones. *Goyet.*	Cro-Magnon?
	Skeleton. *Laugerie-Basse.*	Cro-Magnon.
	Skeleton. *Chancelade.*	Cro-Magnon.
	Skeleton *Duruthy.*	Cro-Magnon.
	Skulls. *Placard.*	Cro-Magnon.
	Skeletons. *Solutre.*	Cro-Magnon.
	Skeleton. *Grotto des Hoteaux.*	Cro-Magnon.
	Skulls. and bones *Furfooz.*	Furfooz.
	Remains. *Schweizersbild.*	Pygmy.

It is still too early to attempt a complete restoration of early man from these fragments. We may, however, say that even at that early time there were already variations. The type of Neanderthal presents many interesting points of resemblance to the anthropoid apes and suggests a being of low intelligence. At the same time, however, there existed forms with a far higher development.

Man's First Home.—It is possible that the discussion as to man's first home has been tinged by a survival of religious bias. The Garden of Eden of the Jewish scriptures was located in southwestern Asia. Most writers have, when they discussed the matter from the point of view of science, looked for man's home in the Asiatic continent. De Quatrefages claimed that it was natural to locate the place of man's appearance where his three great races—yellow, black and white—came into contact; where the different types of language also met. For him, the first home of man was in southern Asia, and from there migration started. Later writers look farther south. Keane, for instance, believes that man originated on a land mass now disappeared, the old Indo-African continent, the existence of which has been proved by recent geological studies.

A hint as to the place of man's appearance comes from studying the range, past and present, of the anthropoid apes. We have already stated that the living species of anthropoids are confined to Africa and the Asiatic islands. It is probable that no forms strikingly resembling man have existed very far outside of the extreme range of living species. The much discussed and interesting "missing link" of Dubois, *Pithecanthropus erectus*, lived in Java. It may be fairly assumed that the place of man's origination was somewhere within the anthropoid range thus suggested. It may also be quite safely claimed that a species like man, little adapted by nature to withstand a rigorous climate, originated in a region of mild temperature.

Migrations.—From the center of his original appearance man early started on migrations, which have been continued until, to-day, it may practically be said that he has penetrated every land area upon the globe. This is a fact without parallel. No other mammalian species can compare with man in its travels. The only approximation is the dog, which, as his friend and companion, has accompanied man upon his wanderings. It is legitimate study for the ethnologist to investigate the lines of migration, but a most difficult task. The present distribution of mankind, however, is a far more simple matter. The ethnological map of the world has been constructed with a fair degree of accuracy.

Races of Man.—How many and what are the races of mankind? Authors differ greatly in their answers. At first sight, this wide divergence of opinion between authors seems a serious matter; one feels as if the whole subject were in uncertainty and doubt; he is inclined to ask whether ethnology is actually a science. Huxley recognized two races; some other writers carried the number up to nearly forty. Cuvier, and French ethnologists generally, recognized three great races.

Blumenbach, who has profoundly influenced the general public and whose classification is that usually found in geographies and school text-books, defined five—Ethiopian, Mongolian, Malay, American, and Caucasian. His terminology has largely affected subsequent workers, even when they differed from him in their schemes.

The present tendency, as exemplified in three or four recent writers of repute, is toward the recognition of four main races. Thus Keane recognizes *Homo ethiopicus*, *Homo mongolicus*, *Homo americanus*, *Homo caucasicus*.

While this diversity between authors is to some degree a matter of regret, it need cause no serious distrust. The object of classification is convenience in study and the bringing together of things which are

alike. When we compare the different ethnological schemes with one another, we usually find that they meet both these ends with fair success. All bring together groups which are alike, and but rarely do natural relationships of peoples seem to be disjointed.

We shall recognize the same differences that Keane does, but shall apply to them the terms Ethiopic, Mongolic, American, and Caucasic races.

Characters of Race.—Topinard attempted to define the race types of the world. His study was the most careful and precise undertaken to that time. He based his types of races absolutely upon physical characters and made five features fundamental. These were the stature, head form, nose, hair, and color.

Stature.—In stature, man ranges from the tall Patagonian, with an average of six feet or more, to the pygmies of central Africa and the Negrito of the Asiatic archipelago. Among all races there is a sex difference in stature, and, in general, it may be said that the female will average one-sixteenth less than the male. In stating that any race or people is of a given stature it is meant that the average of stature in adult males is to be understood. The average stature of mankind is perhaps 1.65 meters.

The term *pygmy* is applied to the populations of smallest stature and the French writers have agreed to call all populations *pygmy* where the average stature of adult males does not exceed 1,500 millimeters. Sir William Flower set the limit for pygmy stature in English measure at 5 feet, which is practically the same thing. The ethnologist divides people on the basis of stature into tall tribes (1,700 mm. and up) medium (1,600 to 1,699 mm.) and short (below 1,600 mm.).

The Head Form is difficult to define in words. To convey it to the mind, certain measures are taken and a numerical statement made. The two most important head measures are the length and breadth. Actual length and actual breadth, however, have but little value, and it is common to compare the two, expressing the ratio between them in what is known as an index.

Two head indices are commonly employed, one of which expresses the relation between the length and breadth of the skull and the other the relation of length and breadth upon the living subject. To the former the name cranial index is given; to the latter that of cephalic index. These indices are found by the same method, which is to divide the breadth by the length and drop the decimal point. Thus, if a skull measured eight inches in length and six inches in breadth, the cranial index would be 75. If, on a living head, the length were seven and one half inches and the breadth five inches, the cephalic index would be 66⅔. There are no normal skulls with an index so low as 50 or so high as 100; *i. e.*, there are no normal skulls which are twice as long as they are broad, or which are as broad as they are long.

The indices are constantly employed in the defining of human races. The actual range as found in the averages of races is 69.4 to 88.7. Special terms are used to indicate the head form. Thus brachycephalic (85.3 and up), mesocephalic (85.2 to 77), dolichocephalic (below 77). The Armenians are for the most part brachycephalic with an index of 85.6; the Eskimo are dolichocephalic (76.8).

Nose.—The form of nose is one of the best distinguishing characters of race. Here again, an index is calculated from two measurements—height and breadth. The nasal index is found by dividing the breadth of the nose by the height and dropping the decimal point. The range is from 60.4 to 107.9. A nose as wide as it was high would have a nasal index of 100; one which was half as broad as high an index of 50. Individuals with an index of 100 or more are not uncommon among negroes.

On the whole, the white peoples of Caucasic race have the narrowest and most prominent of noses. Three terms are used in connection with the nasal index—leptorrhinian (below 70), mesorrhinian (70 to 84.9), platyrrhinian (85 and up). The northern type of European is leptorrhinian, the Negrito of the Philippines is platyrrhinian,

Hair is one of the most distinctive marks of race. Huxley made it fundamental in his classification, and recognized two main divisions of mankind—the straight haired and the woolly haired. Various points should be observed regarding it. As regards its general form, hair may be straight, wavy, curly, crinkly or woolly. In cross section, it may be circular, oval or elliptical, or flattened. White peoples, generally, have hair oval or elliptical in cross section; yellow peoples have hair with circular cross section; and blacks have distinctly flattened hair.

Hair differs racially in diameter, texture, abundance, distribution and angle of emergence. There are marked differences between races in the matter of calvity (baldness) and canity (graying). There are notable differences also in distribution and in the quantity and development of face hair. In color, race differences of hair lead to the employment of the terms black, brown, medium, light and blond. Red hair is found exceptionally among all races, but is typical of some sub-types. There are actually two types of red hair, one of which is blond, the other a variety of black.

Skin Color.—The color of the skin varies with race. Its differences are so striking that they have attracted universal attention and in many attempts at classification the color basis is fundamental. It is difficult to suggest a serviceable series of color terms. There are no actual black populations and no truly white ones. For a careful discrimination, color scales are necessary, and ethnologists quite generally use a series of fixed color samples which they match with the skin of the subjects studied. The best known chromatic scale for use in race study is that of Broca, where some thirty-four shades are discriminated. In ordinary practice a list of half a dozen terms is employed.

Four Great Races.—The four great races may be characterized as follows:

Ethiopic.—Color, from brown to almost black; generally dolichocephalic; forehead, frequently retreating with heavy arches over the orbits; prognathic—*i. e.*, the lower part of the face notably projecting; the cheek bones do not project notably forward and anteriorly; the nose is broad and flattened, platyrrhinian; the eyes are large and prominent and lustrous, dark brown or black in color; the hair is black, frizzly or woolly, and presents a flattened cross section; the stature is above the average of mankind at 5 feet 10 inches. The pygmy populations differ from the normal Ethiopic type in stature, in head form, tending toward brachycephaly, and in hair color, frequently a reddish brown.

Mongolic.—Color, a lighter or darker yellow; brachycephalic; the forehead fairly developed and without conspicuous orbital arches; the general impression given by the face is flatness and broadness with prominent forward development of the cheek bones; the nose is generally small and mesorrhine; the eyes black, with narrow almond-shaped opening, which appears to be oblique on account of a fold of skin at the inner edge; hair black, lank, coarse, circular in cross section; stature below the average at 5 feet 4 inches.

American.—Color, brown with a reddish or yellowish tinge; mesaticephalic; large, coarse features; forehead well developed and usually slight prognathism; cheek bones are prominent; nose mesorrhine, prominent, large, often aquiline; eyes small, round, straight, sunken, black; hair, black, lank, coarse, long, round; the face is usually beardless and there is little body hair; stature above the average at 5 feet 8 inches.

Caucasic.—Color, ranging from white to almost black and presenting in white peoples distinctly fair and dark varieties; both types of head form occur, combined with both fair and dark colors; the face usually harmonizes in its form with the head form; prognathism rare; cheek bones not projecting; leptorrhine; eyes straight, rather large, and varying in color from light gray or blue to dark brown or black; hair, wavy, oval or elliptical in cross section, varying from flaxen to black; beard usually developed and body hair abundant; stature variable from tall to average.

The Ethiopic Race may be divided into continental and island divisions. The continental blacks occupy Africa from the Sahara desert southward. The insular group is found in Melanesia and it is customary to add the native population of Australia to this race. Both on the continent and in the islands, two sharply contrasted types are found—the large negroes and the small, or pygmy, populations.

Pygmies.—The pygmies present the typical hair, features and general characters of the race, but in the average of adult males fall below 5 feet in stature. In central Africa they occur in little groups scattered over a wide area in the midst of large black peoples. They have practically no agriculture and depend on the chase for food, representing the culture stage of savagery. Their hair is frequently of a reddish or grayish brown. They are not to be considered a dwarfed or degenerate population, but a well-developed and active people of a type among the oldest known.

A curious condition of commensalism usually exists between these little people and their large neighbors. The populations among whom they live are settled agricultural peoples, living in large and well-built villages. The pygmy settlements are usually at the edges of these towns, and a constant trade exists between the two groups; the little people bring fresh meat, ivory, honey and other natural products and receive in trade field products, cloth, and iron.

To the little blacks of the island world, of whom those living in the Philippines

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ETHIOPIC—1. Akka (Pygmy). 2. Darfur negro. 3. Swahili (Bantu). 4. Bechuana girl. 5. Bushman woman. 6. South Australian. 7. Fijian (Melanesian). AMERICAN—10. Pai Ute. 11. Botocudo (South America). 12. Fuégian (South America). 13. Apache. MONGOLIC—14. Chinese. 15. Gilyak. 16. Korean. 17. Japanese woman. 18. Sunda woman (Malay). 19. Batta of Sumatra ("Indonesian"). 9. Eskimo. CAUCASIC—8. Samoan (Polynesian). 20. Fellah (Hamitic.)

are typical, the name "Negrito" is usually applied. They present the same physical peculiarities, stage of culture, and mode of living. They live in practically the same relations with the neighboring Malays that the pygmies do with their large neighbors.

Bushmen.—It is customary to group the Bushmen of southern Africa with the pygmies. They present some interesting points of difference. Their skin has a distinct yellowish tinge; they live in little wandering groups, taking refuge in caves and rock-shelters; they are hunters, but there is no distinct commensalism between them and their Bantu neighbors; they delight to mark their cavern walls with crude but lively representations of the animals they pursue. These peculiarities, to a less degree, mark the pygmies of central Africa. They are also found in the Hottentots, neighbors of the Bushmen, usually considered to be the result of intermarriage between them and the Bantu of the region.

Negroes.—The large continental blacks have reached the stage of barbarism in culture, and live in good towns, depend upon the product of the fields (cultivated by women), or, especially toward the south, upon herds of cattle. Two great divisions are recognized—the true negro of the Soudan district and the Bantu populations farther south.

In the true negro the characteristics of the race already mentioned are carried to their fullest development; blackness, coarseness of features, flatness of nose, prognathism with accompanying thickness of lips, and dolichocephaly are emphasized in them. The Bantu present a fine, chocolate brown tint, more regular and, to the eye, pleasing features; prognathism is rarely pronounced and the head is by no means markedly dolichocephalic.

Melanesians.—In the islands, the large blacks include the Papuans of New Guinea and the Melanesians of Fiji, New Caledonia, the Solomons and other island groups. Their life is interesting and has been the subject of much study. Dark colored, woolly haired, dolichocephalic, platyrrhine and of good stature, they are actually comparable with the big blacks of Africa.

The Mongolic Race is the most populous of the divisions of mankind. There is reason to believe that of the great races it perhaps nearest approaches the primitive stock of humanity. It is vigorous, hardy, and expansive. Its primitive home is the great continent of Asia, which is still chiefly occupied by it. The race presents two chief divisions to which Keane gives the names Mongolo-Tatar and Tibeto-Indo-Chinese.

The Mongolo-Tatar is the northern in position. It has spread from Asia across northern Europe and occupies to-day the north of Russia and a considerable area in Scandinavia. To it belong the great wandering hordes of Siberia—Mongols, Kalmucks, Buriats, Tungus, Yakuts and the like; to it also belongs the great Finno-Tatar group—with Tatars, Turki, and Ugrians. To this belong the Finns, Magyars and Bulgarians. In the far north are the Samoyeds and Lapps, the latter a people of small stature, who raise reindeer in the north of Sweden and Norway. To the great Mongolo-Tatar mass also belong the Koreans and the Japanese, relatives in blood and language. The Koreans are relatively pure Mongols, the Japanese much mixed with other elements, as we shall later see.

The Tibeto-Indo-Chinese division includes the Tibetans, the Chinese proper and the great mass of people in Indo-China and southeastern Asia, such as the Siamese, Burmese and the people of Anam. They are sedentary peoples, depending upon agriculture, with towns and cities, a dense population with distinctive culture, a true civilization. Linguistically, the southern group differs profoundly from the Mongolo-Tatar. Chinese and Japanese represent totally different types of language.

Eskimo.—Besides the two great divisions mentioned, the Mongolic race includes two interesting extra-continental groups—the Eskimo and the Oceanic Mongols, or Malays. Taxonomically, the Eskimo present a difficult problem. In color, face, features, stature—in fact, in the whole general impression—they are clearly Mongolic. But they are at the same time dolichocephalic; the Eskimo skull is one of the most sharply marked; it is long and narrow, has square jaws and ridged vault to the degree that, viewed directly from in front, it gives a distinct pentagonal outline.

The Eskimo occupy the whole arctic coast of North America from south and western Greenland to the western end of Alaska and overlap into eastern Asia. Throughout this enormous range of thousands of miles they present remarkable uniformity in type, language, and mode of life. The area occupied is chiefly American, not Asian; and the bulk of Eskimo population is found in the new world.

Malays.—The Oceanic Mongols, or Malays, occupy the islands of Malaysia, the Malay peninsula and a part of the great island of Madagascar off the east coast of Africa. Blumenbach considered the Malay one of the fundamental populations of mankind. It presents a fairly well-marked type, which, however, may be included in the Mongolic. The Malays and the Malayan peoples (for the word "Malay" proper is used chiefly in ethnology for those in the peninsula) are good seamen.

The American Race.—Keane refuses to recognize the Malays as distinct, but insists upon separating the American type from the Mongolic. For him they are an offshoot, but one of ancient date, which has had ample chance to develop peculiar characters in the American area. Contrasted with the other great races it presents a notable degree of physical uniformity. Writers have often said: "When you have seen one American Indian you have seen all"; "The American Indian presents the same type from the cold waters of the Arctic to the cold waters of Cape Horn."

This uniformity is striking but not absolute. Careful study shows tall and short tribes of American Indians, from the Patagonians, who are perhaps the giants of mankind, to Otomi, who almost touch the limit of pygmy height. There are long headed and short headed tribes, light and dark—from almost black to almost white; there are tribes with large faces and coarse features, like the Sioux, and tribes with soft and mild faces and delicate features, like the Chinantecs.

The American Indians present a notable uniformity in culture and it may be said that as a whole they are in barbarism. They represent every degree of barbaric culture from the lowest to the highest, and it may almost be said that not a single tribe of the many hundreds of American Indians represents either savagery or civilization. The rudest Athabaskans of British America had reached lower barbarism and the Aztecs and Mayas of Mexico fall just short of civilization. While writers usually have claimed a single origin for the American peoples, it seems more reasonable to assume that immigrants have come by many routes from many regions. Within the new environment the fragments of old populations have approximated to each other until we have the present condition of relative uniformity.

The Caucasic Race.—The continent of Europe is chiefly occupied by people of Caucasic race. Light whites and dark whites are readily distinguished. No section of the world has presented more serious problems to the ethnologist and no race is more difficult of satisfactory discussion than the Caucasic.

So far as Europe is concerned, Ripley recognizes three races: the northern, which is fair, tall, dolichocephalic; the Alpine, which is short, dark, and broad headed; the southern or Mediterranean, which is short, dark and long headed. This classification is attractive for its simplicity. It seems indeed to be too simple, and with its acceptance, points of importance are lost from sight and real distinctions fail to be recognized. Deniker recognizes ten types of European whites speaking Aryan tongues, which he groups under six races and four sub-races. His characterization of these types is as follows:

I. **Northern.**—Very lofty stature (1.73m.); dolichocephalic (76-79); fair; wavy hair, sometimes reddish; light eyes, usually blue; ruddy white skin; long face; prominent, straight nose; *e. g.*, Swedes.
A. *Sub-Northern.* Tall; mesocephalic; fair; straight hair; angular face; turned-up nose. *e. g.*, Letto-Lithuanians.

II. **Eastern.**—Short (1.63 m.); moderately round-headed (82-83); fair; straight light-yellow or flaxen hair; square-cut face; eyes blue or gray; nose frequently turned up; *e. g.*, Russians.
A. *Vistulian.*—Very short; mesocephalic; fair; *e. g.*, some Poles.

III. **Ibero-Insular.**—Short (1.61 - 1.62 m.); dolichocephalic (73-76); dark; hair black, often curly; very dark eyes; tawny skin; straight or turned-up nose; *e. g.*, Spaniards.

IV. **Western,** or **Cevenole.** — Short (1.63-1.64 m.); very rounded skull (85-87); dark; brown or black hair; light or dark brown eyes; rounded face; thick-set figure; *e. g.*, central French.

V. **Littoral,** or **Atlanto-Mediterranean.**—Tall (1.66 m.); moderately dolichocephalic or mesocephalic (79-80); dark; hair and eyes very dark colored. Always near the Mediterranean coast.
A. *Northwestern.*—Tall; sub-dolichocephalic; chesnut hair, often brown; *e. g.*, Welsh.,

VI. **Adriatic,** or **Dinaric.**—Tall (1.68 - 1.72 m.); brachycephalic (85-86); dark; brown or black wavy hair; dark eyes; straight eyebrows; elongated face; delicate, straight or aquiline nose; slightly tawny skin; *e. g.*, Montenegrins.
A. *Sub-Adriatic.*—Less tall (1.66 m.); less brachycephalic (82-85); lighter hair and eyes; *e. g.*, Luxemburgers.

These are all truly European types, speaking related languages.

Non-Aryan Whites.—There are however other Caucasic peoples; thus, in the region of the Caucasus itself, a district of extraordinary mixture and ethnic confusion, are many interesting peoples. It is from this district of Georgians and Circassians that the name applied to th whole great race was drawn. The Basques of the Pyrennean district, divided politically into French and Spanish Basques, are white men, Caucasian, European, but not included in Deniker's types, being unrelated in language to the races of Aryan Europeans.

The whole of north Africa is occupied by peoples who are neither Ethiopic nor Mongolic, and who, though dark in skin for the most part, are regularly classed in the Caucasic race. Although, in their entirety, the general name Hamitic is given to them, some of them have been profoundly

influenced by Semitic peoples and languages.

Many fine types occur within this area, which, of course, includes the Egyptians, past and present, the Libyans and the Berbers. While these peoples are for the most part dark, some remarkable groups of notably blond types occur among them. That these blond types are ancient is clearly shown by the wall-paintings of old Egypt, where the Libyan is regularly represented as blond. To the Caucasic race belong also the brunette populations, ancient and modern, who speak the pure and typical Semitic languages—Hebrews, the modern Arabs and their neighbors. With them, we enter Asia.

Asiatic Caucasians.—In Asia, also, are Caucasic peoples, some of them speaking Aryan languages, in Persia, Afghanistan, and parts of India. Caucasic elements in Asia date far back, and there is good evidence of their existence and influence even in that section of the great continent which is occupied by Mongolo-Tatar populations.

The Ainu of Yeso and Saghalien are a Caucasic people. They are the remnant of the aboriginal population of Japan. Perhaps they occupied the entire archipelago before the coming of the Japanese from the continent by way of Korea. They are dirty white in color, have abundant wavy hair, elliptical in cross section, horizontal, large expressive eyes, almost European features, abundant body hair and heavy beards. They are mild in disposition and in culture are almost in savagery. Their language differs notably from Japanese in structure and lexicon.

In India are the Todas, whom Keane considers Caucasic. In face, features, hair and heavy beards, in yielding character, they present considerable analogy to the Ainu. They are, however, cattle raisers, and their whole life is wrapped up in the care of their animals. There are in other parts of Asia scattered fragments of populations which one and another writer have suggested are Caucasic and it is not impossible that continuous populations of inoffensive and weak Caucasic type once occupied the whole of eastern Asia and that they have been broken and separated by the flood of Mongolics coming from the west. The present tendency is to recognize the existence of Caucasic people in the island world.

Indonesians.—The term "Indonesian" is much used for certain people of Malaysia who do not present the true ("Malay") Mongolic type. It is assumed by those who use the term that these Indonesians are in large part Caucasic, modified by Malay or other island blood. The Polynesians, too, are largely claimed at present as Caucasic. These peoples present a handsome, attractive type; of good stature, well built, with faces of regular features, they are beautiful, by our standards.

Geographical Distribution.—In general, each continent has a distinct type of mankind. Asia has its Mongolic type; Europe and northern Africa its Caucasic type; south Africa its Ethiopic type; and the double continent of America its American type. Even Australia has a definite race type. While this is true, there has been so much of movement, interpenetration, and admixture that the population of no great land area is now uniform.

European Peoples.—Europe, with northern Africa, is the true home of the Caucasic race, but contains Mongolic peoples as well. In the accompanying table of European peoples by countries the main or fundamental population is given in one column, the more important secondary elements in another.

Asiatic Peoples.—Asia is the continental home of the Mongolic race, which still forms the greater part of its population, but a large Caucasic element has been present since ancient times and there is local mixture of Ethiopic blood. Deniker recognizes eleven physical types, which have intermingled to produce the Asiatic peoples of to-day. Five of them are peculiar to Asia—Dravidian, Assyroid, Indo-Afghan, Ainu, Mongolian; six occur elsewhere—Negrito, Indonesian, Arab, Ugrian, Turkish and Eskimo. Six of these are Caucasic—Dravidian, Assyroid, Indo-Afghan, Ainu, Indonesian, Arab; four are Mongolic—Mongolian (Tibeto-Indo-Chinese), Ugrian (Mongolo-Tatar), Turkish (Mongolo-Tatar), Eskimo; one is Ethiopic—Negrito.

Dravidian applies to the brown aboriginals of southern India, who are short of stature, dolichocephalic and with curly or wavy hair. Peschel made of them a great race type. Their position among races has been disputed, but in our four-race classification they must be called Caucasic.

Assyriod is so called because the type is common in the wall sculptures of old Assyria. It is well characterized, with tawny-white skin, narrow hooked nose with thick lips, brachycephalic, hair wavy or curly. It is the Armenian type and the oft-mentioned "Jewish" type is fundamentally Assyroid. In our scheme it is Asiatic Caucasic. So, too, is Indo-Afghan, the type of the invading conquerors of part of India. It has clear brown skin, black wavy hair, narrow straight or convex nose, dolichocephaly, tall stature.

The Arab, typical Semite — though the word Semitic is properly linguistic, not ethnic—is dark, with black wavy hair, dark eyes, long elliptical face, dolichocephalic head, aquiline nose, prominent occiput.

Jew.—This term should be used in only a religious sense; in so far as it has ethnic application it is fundamentally Assyroid or Arab or both; but it is everywhere mixed and approximates the people of the surrounding populations. Jews, of course, exist the world over. Gypsies, also world-wanderers, probably began in India and are Indo-Afghan, at least in part.

African Peoples.—To draw up similar tables of the population of other continents would be more difficult and less satisfactory. The population of Africa falls into two well-marked divisions. Northern Africa to the Sudan must be ethnically joined to Europe. Brinton emphasized this fact by making one continent of the two land masses, to which he gave the name Eurafrica. Its population is Caucasic, though many of its peoples are dark of skin. In features, head-shape, hair, nose, they are clearly related to European peoples. Among them are Berbers, Libyans, Egyptians, Nubians, Abyssinians. Collectively these north-African peoples are called Hamitic but they have been

Table of Peoples of European Countries

Country	Chief or Foundation Peoples	Subordinate or Local
Austria.	Northern.	Western. In south, Adriatic.
Belgium.	Northern (Flemish). Western (Walloon).	Northwestern.
British Isles.	Northern, Subnorthern.	Northwestern; in Wales and Ireland.
Bulgaria.	Bulgars. (Mong.—Turko-Finn.)	Mixed with Slav elements.
Denmark.	Northern.	Along coast, Western.
France.	Western or Cevenole, in highlands.	Northwestern, in northern lowlands. Littoral in south. Adriatic. Ibero-Insular.
Germany.	Northern, in lowlands.	Sub-Adriatic. Western.
Greece.	Diversified and uncertain.	
Italy.	Adriatic in north. Ibero-Insular in south.	Littoral. Western.
Montenegro.	Adriatic.	
Netherlands.	Northern. Subnorthern.	
Norway.	Northern. Lapps, etc., (Mong.) in north.	Sub-Northern and Northwestern, along coasts.
Portugal.	Ibero-Insular.	Northwestern.
Roumania.	Turki (Mong.). Western elements.	
Russia.	(Cauc.) Northern. Sub-Northern. Eastern. (Mong.) Lapps. Finns, Samoyeds.	Vistulian (Poles). Adriatic.
Servia.	Adriatic.	
Spain.	Ibero-Insular.	Western, north coast; Littoral, south coast.
Sweden.	Northern. Lapps and Finns (Mong.)	Subnorthern and Northwestern along coasts.
Switzerland.	Cevenole, or Western.	Adriatic. Sub-Adriatic.
Turkey.	Turki (Mong).	

Table of Peoples of Asiatic Countries

Country	Chief or Foundation Peoples	Subordinate or Local
Afghanistan.	Indo-Afghan (Cauc. of Aryan speech).	Assyroid (Cauc.).
Arabia.	Arabs. Syrians (Cauc.—Semites).	
Baluchistan.	Baluchi (Cauc.—Indo-Afghan)	Arab. (Cauc.—Semitic). Negroid.
Burma.	Burmese.	(See Indo-China).
China.	Chinese. (Mong.—T.-I.-C.).	Lolos, Mantse. (perhaps Cauc.). Other fragments of aboriginal peoples.
India.	In north, Mongolic.	In Punjab - Deccan; brachycephal Cauc.?
	Ganges and Indus valleys, Aryo-Dravidians.	Ceylon; Veddahs, aborigines (Cauc.?).
	In south; Dravidians.	
Indo-China.	Cambodians. Annamese. Burmese. Thai. (Shans. Laotians. Siamese.)	(Aboriginal "Indonesians" mixed with incoming Mongolic peoples.) Negrito.
Japan.	Japanese (Mong.—K.-J.).	Ainu (Cauc.). Much Malay influence.
Korea.	Koreans (Mong.—K.-J.).	Trace of Caucasic elements.
Persia.	Persians (Cauc. of Aryan speech).	Semites (Cauc.). Turki (Mong.—M.-T.).
Siam.	Siamese (Mong.—T.-I.-C.).	(See Indo-China).
Siberia.	Mongols. Tungus. Tatars, Yakuts, etc.	
Tibet.	Tibetans (Mong.—T.-I.-C.).	
Turkey.	Turki (Mong.—M.-T.).	Assyroid (Cauc.).

strongly influenced by Arab (Semitic) hordes which have swept over the area.

On the southern border there is much mixture with negro blood. To the rest of Africa, Brinton applies the name Aust-Africa. It is divided between true negroes in the north and the Bantu peoples of central and south Africa. Bantu is a linguistic term, and the division between the two masses of population is primarily linguistic. But there are physical differences also. Scattered amid the big blacks of central Africa are the pygmy groups, and in the Kalihari desert region of the south live Bushmen.

American Peoples.—The great double continent, America, was occupied solely by the American race, except along the northern coast, where Eskimo live. American Indians have never been seriously classified upon the basis of physical types, due to the uniformity already mentioned.

Language is the basis generally employed in dividing the race into study groups. There are hundreds of languages spoken among them, and even language families, or independent stocks, number scores. Powell recognized fifty-eight linguistic families in North America north of Mexico. Brinton divides the double continent into five geographical regions—North Pacific, North Atlantic, Isthmian, South Pacific, South Atlantic. North Pacific, North Atlantic and Isthmian make up North America; the other two regions constitute South America.

While this division is geographical, Brinton emphasizes the fact that these regions are really culture areas as well. In such an article as this further detail would but confuse by introducing a multitude of tribal names.

Oceanic Peoples.—The Island World is not a unit ethnologically. It includes four well-marked, clearly characterized, areas—Malaysia, Melanesia, Australasia and Polynesia.

Australasia.—These may be separated into the Australian and the Tasmanian types. The latter seems more primitive and approaches, perhaps, the Melanesian. The Australians are fundamentally blacks, Ethiopic, but have been influenced by Dravidian or other elements until they have lost the woolly hair. With chocolate brown skin, broad nose, dolichocephaly, and medium stature they present a fairly uniform type, which some authors class among the great races.

Melanesia includes New Guinea or Papua and a number of groups of smaller islands. The true Papuan shows a fairly distinct type, but he is usually included with the rest under the general term Melanesian, which includes all the large Oceanic negroes, Ethiopic in race.

Malaysia extends from Madagascar to Melanesia, thus lying west of the two areas just considered. It includes the great islands of Sumatra, Java and Borneo; also Celebes, the Philippines, and many smaller islands; Formosa, ethnically, is Malayan. Malays form the chief population, but Melanesians have had local influence, and negritos, little blacks, occur at many points.

The most interesting portion of Malaysia is the Philippine archipelago. Its ethnology is complicated. After making the first serious study of it, Blumentritt suggested the following theoretical explanation: Four populations occur—(1) the aboriginal Negritos; (2) a great list of tribes representing an early Malayan immigration, tribes like the Igorot, Ifugao, etc.; (3) a second Malayan immigration of people much further advanced in culture, represented by the civilized "Cristiano" populations, which form the bulk of the Philippine peoples to-day, Tagals, Visayans, Ilocano, etc.; (4) a third Malayan immigration, Mohammedans, the "Moros" of Mindanao and the Sulu islands. This immigration was just well under way when the Spaniards appeared in the sixteenth century and checked it. It seems to have been a northward streaming of Malayans from the Philippines and Formosa that carried Malay blood and influence into Japan. The Japanese are not pure Mongols, but owe much to Malays.

Polynesia is singularly uniform in population. There are local mixtures, of course, where the area touches Melanesia.

The recent streaming out of white men into all parts of the world has had a remarkable influence on race vitality and characteristics. To-day in America and Australia, in Polynesia, and even in Africa, the original populations are disappearing or subordinated.

OUTLINES OF GEOLOGY.—Geology is the science which treats of the development of the earth.

Departments or Phases.—Astronomic or Cosmic Geology treats of the influence that the sun, moon, and other heavenly bodies have upon the earth.

Chemical Geology is that branch of dynamic geology in which are discussed the chemicals and chemical processes active in the creation or modification of earth conditions.

Crystallography is that branch of mineralogy which is concerned with the investigation and recognition of the regular geometrical forms that many minerals assume when free to do so at the time of their formation.

Dynamic or Philosophic Geology is a discussion of the agencies and forces involved in the development of the earth.

Economic Geology is that branch of geology which treats of the occurrence, the distribution, and the laws governing the formation of the economically important earth constituents.

Geognosy is a study of the form and constituents of the earth, and of the structure or arrangement of the earth's components.

Geotectonic or Structural Geology is that branch of geognosy in which the structural arrangement of the constituents of the earth is discussed.

Glacial Geology is that branch of physiography which treats of the modifications of the earth's surface produced by masses of ice.

Historical Geology is a presentation of the sequence of events in the history of the earth and its inhabitants.

Lithology is that branch of geognosy which is concerned with the study of rocks without the aid of the compound microscope.

Mineralogy is that branch of geognosy which treats of the nature, appearance, occurrence, and value of minerals.

Mining Geology is that branch of geognosy in which are discussed the principles applicable to the solution of mining problems.

Palaeontology is that branch of historical geology which deals with extinct or fossil fauna (animals) and flora (plants).

Petrology is that branch of geognosy which is concerned with the study of thin sections of rocks by means of the compound microscope.

Physiography, or Physical Geography, is that branch of dynamic geology which treats of the surface configuration of the earth, the forces which modify this, and the changes which thus result.

Stratigraphical Geology is that branch of geognosy in which stratification and the features found in, or connected with, stratified rocks are discussed.

Geological Agencies or Forces.—All features of the external form and accessible internal structure of the earth are due to the action of either air, water, or heat produced by pressure or chemical activity, and these are known, respectively, as the atmospheric, aqueous, and igneous geological agencies. These three great agencies have been active throughout geological time, their effects in past ages being essentially similar to those they now produce.

THE ATMOSPHERE AS A GEOLOGICAL AGENT

The work and functions of the atmosphere are suggested by the following outline:

I. Acts as a protective thermal blanket for the earth.

II. Sustains life.

III. Chemical work.	Through evaporation, precipitates substances from solution in water.	
	Oxidizes surface materials.	Tend to disintegrate surface and form soils.
	Forms carbonates from surface materials.	
	Forms hydrates from surface materials.	
	Unusual vapors and gases, often the products of volcanic activity, attack and change the nature of surface materials.	
IV. Mechanical work.	Wind removes loose surface material.	
	Wind generates water waves and currents.	
	Wind uproots trees and thus breaks up the soil.	
	Wind transports seeds and small organisms.	
	Wind transports and deposits sand as dunes.	
	Wind transports and deposits fine material as loess.	
	Wind aids in holding dust in suspension in the atmosphere, thus affecting the temperature and aiding condensation.	
V. Thermal work.	Changing temperatures tend to rupture rocks as a result of sudden contraction and expansion.	Form soils.
	Freezing of water in cracks involves expansion and tends to rupture rocks.	
VI. Electrical work.	Rocks may be ruptured by lightning, thus hastening their disintegration and aiding the formation of soils.	
	Rocks may be fused by lightning and their mechanical or chemical disintegration be thus retarded.	

VII. Is a medium for the evaporation and precipitation of water, forming clouds, fog, rain, snow, hail, and cloudbursts.

WATER AS A GEOLOGICAL AGENT

The work of water, outside of its influence upon the condition of the atmosphere, may be thus outlined:

I. Moving surface water	**Mechanical work**	EROSION. Cuts all types of valleys and tends to remove, ultimately, all hills and mountains, thus reducing the inequalities on the earth's surface.
		TRANSPORTATION. Eroded fragments are carried great or small distances, depending upon their size and the velocity of the current.
		DEPOSITION. Flood-plain deposits and deltas of rivers are formed when a decrease in the velocity of the current causes the deposition of transported fragments, which are usually well rounded.
	Chemical work.	SOLUTION. Dissolves soluble portions of rocks.

WATER AS A GEOLOGICAL AGENT—Continued

II. Standing water.	**Mechanical work.**	EROSION. Waves and currents cut into shores and tend to enlarge the area of lakes and seas. TRANSPORTATION. Fragments derived from erosion by waves and currents are carried in suspension by currents. DEPOSITION. Transported fragments are deposited, mostly near shore, forming sedimentary or stratified deposits.
	Chemical work.	SOLUTION. Soluble portions of shore are dissolved. PRECIPITATION. Soluble substances derived from tributary streams or the shore are deposited by evaporation or by the interaction of one on another, forming deposits of rock-salt, gypsum, limestone, borax, alkaline carbonates, etc.
III. Underground water.	**Mechanical work.**	EROSION. Unimportant, but may form caves. TRANSPORTATION. Relatively unimportant. DEPOSITION. Relatively unimportant.
	Chemical work.	SOLUTION. Soluble materials with which the water comes in contact are dissolved, forming caves, particularly in limestone, and making "mineral water." PRECIPITATION. Substances in solution are deposited due to relief of pressure, lowering of temperature, or chemical interaction, forming mineral veins and spring deposits, partially or wholly filling cavities encountered, or acting as a cement for loose earth material.
IV. Ice Mechanical work.		EROSION. Alpine or valley glaciers partially shape amphitheaters or cirques, where snow accumulates and hardens into ice. They also form U-shaped valleys leading downward therefrom, and included rock fragments groove or "glaciate" the bedrock beneath. Great continental glaciers strip off the mantle of softened, altered waste or soil, as well as some of the solid rock below, which is also grooved or glaciated by included rock fragments. TRANSPORTATION. Material that falls upon a glacier is carried on the surface, either in the middle (medial moraine) or along the sides (lateral moraine), or works its way down into the ice and forms a part of the glacial drift, while that eroded beneath the glacier is dragged along in the bottom of the ice or between the glacier and the solid rock below (ground moraine). All the material transported by a glacier is apt to be unaltered and rather angular, although the edges of the fragments that form the ground moraine may be somewhat rounded, and they may be glaciated on one or more faces. DEPOSITION. The melting of a glacier causes the deposition of the material in or on the ice, that which accumulates at the end forming a terminal moraine, while that along the sides forms lateral moraines. Medial moraines are apt to be washed away by the melting ice. Beneath continental glaciers, the ground moraine is often heaped into low, smoothly rounded hills called *drumlins*, while overloaded, subglacial streams, flowing in cracks in, or tunnels beneath, the ice, deposit long, winding, steep-sided ridges called *eskers*. The rounded hills or hummocks in terminal moraines are called *kames*.

HEAT AS A GEOLOGICAL AGENT

The internal heat of the earth is conducted slowly outward to the surface through the cool outward portion, and is also carried rapidly upward through the medium of ascending molten material. The effects of such transference of heat from one position to another may be thus outlined:

I. Effects of the gradual outward conduction of heat, and consequent differential expansion and contraction of different portions of the so-called "crust."
- a. Formation of mountains accompanied by folding of the materials involved.
- b. Changes in the character (metamorphism) of the earth materials involved in such movements.
- c. Production of cracks or fissures with or without the slipping of one side relative to the other.
- d. Occurrence of earthquakes as a result of such fracturing or slipping.
- e. Elevation or depression of considerable areas.

II. Effects of ascending molten material, and the consequent differential expansion and contraction of different portions of the crust.
- a and b. Same as c and d above.
- c. Elevation or depression of relatively small areas.

III. Effects of ascending molten material and the consequent displacement of solid material in the crust.
- a and b. Same as c and d under I. above.
- c. Elevation of small to large areas depending upon the size of the intrusion.

IV. Effects of ascending molten material resulting from the cooling of the molten material itself.
- a. Formation of igneous rocks.
- b. Changes in the composition, texture, or hardness (metamorphism) of the solid rocks with which the molten material comes in contact.

V. Additional effects of ascending molten material resulting from its extrusion upon, or intrusion close to, the surface.
- a. Explosive volcanic eruptions and the formation of volcanoes.
- b. Opening of fissures and the quiet extrusion of extensive surface lava which flows therefrom.
- c. Formation of hot springs and geysers. (The heat involved in these phenomena may be either the product of chemical activity or of radiation from hot igneous rocks near the surface of the earth.)

TABLE OF GEOLOGICAL TIME DIVISIONS

The youngest period is at the top and the oldest at the bottom. Epochs often regarded as periods are marked with an asterisk (*).

Eras of Time and Rock Groups	Periods of Time and Rocks Systems	Most Important Epochs of Time and Rock Series	Ages	Most Characteristic Rocks	Location of Chief North American Outcrop	Physical History	Principal Economic Products	Features Terminating Period
Psychozoic	**Recent**		Age of Man	Alluvium.	Along rivers and streams and in drained lake basins.	Same as at present.	Clay.	Transitional to the present.
Cenozoic	**Quaternary**	Champlain Pleistocene Ozarkian	Age of Mammals	Alluvial and glacial deposits, such as river gravels and silt, boulder clay, drift, etc.	Alluvium along existing and ancient stream-beds. Glacial drift along a curving line from British Columbia to Long Island.	Ozarkian was an epoch of great elevation of the continent particularly in the north. The Pleistocene is known as the Glacial epoch. The Champlain was a time of melting ice and flooded rivers and lakes.	Clay.	The domination of man.
	Tertiary	*Pliocene *Miocene Oligocene *Eocene (Neocene)		Marine and fresh water sediments like those now forming; often imperfectly solidified, but, where great diastrophism has occurred subsequent to their deposition, they are metamorphosed to great hardness. Extensive beds of lava in northwestern United States.	Along Atlantic and Gulf borders, the latter extending north to southern Illinois. As extensive lake or continental deposits in the west, central part of the continent. Constitute a large part of the Coast Range and the lowest foothills of the Sierras.	A period of exceptional volcanic activity stupendous diastrophic changes and a much warmer climate than at present. Among the mountains formed during this period are the Coast Range, many Basin Ranges, the Pyrenees, Alps, Jurus, Himalayas and Andes.	Clay. Coal. Petroleum. Asphalt. Diatomacious Earth.	A general elevation and seaward extension of the continent, obliterating the great inland lakes and leaving the continent practically as at the present, except that a large part of Florida and the coastal plains were formed later.
	Cretaceous	Upper Cretaceous *(Cretaceous) Lower Cretaceous *(Comanchian or Shastan)	Age of Reptiles	All kinds of sediments with much limestone and chalk in the Upper Cretaceous. Every one of the principal divisions contains workable coal in one place or another, and this is the coal period in the West.	Through the southern Atlantic and Gulf states extensively distributed over a broad zone running northerly clear through the western part of the continent. Smaller areas in the Pacific coast states.	A time of quiet erosion and sedimentation without unusual volcanic activity, and no great organic movements except at the end. (See features terminating period). The climate was warm with little diversity.	Clay. Coal. Petroleum and Gas. Limestone. Cement.	During the "Rocky Mountain Revolution," the eastern Rockies were mainly elevated, the interior sea disappeared, and the Wasatch and the Uintah Mts. were formed.

Mesozoic	**Jurassic**			Character varies greatly in different localities; are often continental deposits. Triassic rocks are prevailingly red in color and are apt to contain salt and gypsum. The same is true of the Jurassic system to a lesser degree. Both sometimes contain coal.	Scattered over a broad belt running northerly through the western United States, and then turning westerly over western Canada to the Pacific; also another wide zone on the Pacific coast of the United States.	Periods of quiet erosion and sedimentation with no unusual volcanic activity and no great diastrophism except at the end of the Jurassic. (See features terminating period.) Climate probably milder than now and quite arid much of the time, particularly during the Triassic.	Coal. Iron. Salt. Gold. Barite. Building Stone.	During the "Sierra Revolution," the Sierras, the Cascades, and many Basin Ranges were formed, the western Mississippi Valley was depressed and great lava flows were extended along the Atlantic Coast.
	Triassic				In a narrow strip through the Atlantic Coast States, scattered over a broad area in the west central part of the United States, and over a wide belt along the Pacific.		Salt. Gypsum.	Cheirogenic movements destroyed the trough-like bodies of water east of the Appalachians and modified the Continent in the West.
	Carboniferous	*Permian *Pennsylvanian *Mississippian	Age of Amphibians or Acrogens	All kinds of sediments; igneous rocks quite common particularly near disturbed areas. Often contain coal and iron ore, particularly the Pennsylvanian. Permian rocks are apt to be very red in color and frequently include gypsum and salt.	Many extensive areas from Pennsylvania westward over the Mississippi Valley States; also in the Rocky Mountain region northward through Alaska.	First two epochs were times of quiet erosion and sedimentation. The climate was warm and moist with little variation with latitude. Myriads of quick growing swamp plants lived, and their carbonized remains make this the coal period in the East. The Permian was a glacial epoch. Ice accumulated on Gondwana Land, a hypothetical antarctic continent connecting Australia, southern India and Africa.	Coal. Fire-clay. Iron. Salt. Gypsum.	The "Appalachian Revolution" occurred during the Permian. Then, the Appalachian system was formed and the whole eastern half of the continent elevated, the Pacific Coast was depressed, and large land masses appeared in the western states.
Paleozoic	**Devonian**		Age of Fishes	All kinds of sediments in the East with limestone at the base and middle of the system. Largely limestone and shale in the West.	Bordering a V-shaped mass of land extending 500 to 1000 miles west, south and east of Hudson Bay, in the Appalachian Region and in strips or patches in, or west of the Rockies.	Period of quiet erosion and sedimentation with rather extensive epeirogenic changes. First indications of seasonal changes appear in the ringed structure of the gymnosferous climate probably warmer than now.	Petroleum and Gas. Phosphates. Gold. Silver. Lead. Zinc.	A relatively sudden change in the life system and a considerable enlargement of the water-covered areas of the United States.
	Silurian	*Gotlandian (Silurian) *Ordovician	Age of Invertebrates	In the East the system contains all kinds of sediments and continental deposits with thick bed of limestone at several horizons, and with salt and gypsum in the upper beds. In the Mississippi Valley and the West, limestone predominates.	Bordering a V-shaped mass of land extending 500 to 1000 miles west, south and east of Hudson Bay in the Appalachian region in small strips or patches in or west of the Rockies, several small areas in the Mississippi Valley, extensive deposits on the southwest shore of Hudson Bay.	A period of quiet erosion and sedimentation with extensive diastrophic changes at the end of the Ordovician when the great Taconic Range was uplifted between New York and New England. This was accompanied by rather extensive epeirogenic changes. Climate warmer than now and practically the same at all latitudes; aridity at the end of the period.	Petroleum and Gas. Lead and Zinc. Gold and Silver. Iron. Salt. Cement. Marble.	Extensive epeirogenic changes and a comparatively sudden development of the life system.
	Cambrian			In general system is largely argillaceous sediments with a little sandstone and limestone in northwestern United States. Is largely sandstone in north central, limestone in south-eastern and south-central United States and Rockies, and sandstone further west. Are many local variations.	Widely distributed over the United States, excepting along Atlantic and Pacific coasts, and may be found scattered over a broad belt running across western Canada and Alaska.	A time of quiet erosion and sedimentation with a gradual, but great, extension of the continental water areas as time proceeded. Except at the very beginning (or just before the period) when there was a glacial epoch, the climate was probably much warmer than it is now.	Lead. Gold. Silver.	A comparatively sudden development of the life system.
Proterozoic (Algonkian)	**Keweenawan Huronian**			Lower system is composed of rocks made up of large and small fragments of igneous rocks. Often greatly metamorphosed; quartzite, slate, marble, and wackes are common. Upper system is a succession of great lava flows and sedimentaries derived from them.	Associated with and scattered over the areas of Archeozoic rocks. Are rather rare, yet they occasionally occur in large areas, particularly around, and north of, the great lakes.	Era of mature erosion of the uplifted Archeozoic rocks and deposition of the products in seas which gradually encroached upon the land areas. The beginning of the Keweenawan period was a time of great volcanic activity. There were doubtless great crystal movements but their exact nature is obscure.	Iron. Copper. Building and Ornamental Stone.	Great erosion of Proterozoic and Archeozoic rocks, and extensive epeirogenic movements. The time between this and the next area is called "The interval."
Archeozoic (Archean) (Azoic)	**Laurentian Keewatin**			The Keewatin is a great schist system of fairly basic character, being metamorphosed lavas, ash beds, etc. with considerable areas of sedimentaries largely limestone (Grenville series). May include planetesimal material. Laurentian is a great granitoid system.	Over a V-shaped mass of land extending 500 to 1000 miles west, south and east of Hudson Bay, on the east side of the Appalachians; in narrow widely separated areas in the Rockies and the more westward ranges, and in small patches in the Mississippi Valley.	A time of stupendous volcanic activity and diastrophian with erosion and sedimentation occupying subordinate positions.	Precious Metals and Stones, Emery, Apatite, Feldspar, Mica, Minerals of Rare Elements, Iron, Copper, Zinc, Building Stone, Graphite Asbestos.	Great erosion of uplifted rocks, resulting in an almost universal inconformity of the Archeozoic and Proterozoic groups where the contact is exposed.

Earth Materials. — With the exception of the comparatively small amount of material of organic origin confined to, or relatively near, the surface, all the non-gaseous ingredients of accessible portions of the earth may be classified either as minerals or rocks.

Minerals.—A mineral is a non-gaseous, natural occurring, inorganic, homogeneous substance of a definite chemical composition within certain limits.

According to this definition, gases, artificial products, or pieces of wood are not minerals. Neither is a piece of granite a mineral since it is composed of several diverse substances—each one a mineral, and the whole thus lacking in homogeneity.

Rocks.—A rock is any substance not a liquid or gas which forms a considerable part of the accessible portion of the earth. It may be one mineral, as in the case of gypsum or limestone; it may consist of a non-homogeneous mixture of minerals, like granite which contains orthoclase, quartz, mica, and sometimes other species; or it may contain no minerals at all, volcanic glass—obsidian or pitch-stone—being an illustration. The only essential feature of a rock is, then, that it occur in relatively large quantities.

Rocks may be subdivided into four great divisions: (1) Igneous rocks, (2) sedimentary rocks, (3) precipitates, (4) metamorphic rocks.

Igneous rocks are those that have solidified from a molten condition. They include all so-called lavas, as well as many others.

Sedimentary or Stratified Rocks.—These are largely formed from debris which is washed from land surfaces by running water and carried into lakes or seas where it settles to the bottom. The layers of material thus formed, which are said to be stratified, may later be more or less consolidated by cementation or pressure and elevated above water level, where erosion may ultimately expose them to view. Many stratified rocks are doubtless transported and deposited by the wind.

The successive layers may so differ in color or hardness as to give the whole a somewhat banded appearance, and there is usually a noticeable tendency for the rock to split along the bedding or stratification planes between the different layers. The greater, mineralogically similar divisions are called strata.

The character of sediments differs with their position (deep or shallow water), the nature of the body of water in which they form (river, lake, or large sea), the rapidity of the depositional process, the composition and relative erosional maturity of the land from which they are derived, and other factors. Their characteristics, including contained fossils, comprise a fairly complete record of the times when they were being deposited. The history of past geological ages is, then, largely recorded in, and read from, stratified rocks. Among the commoner varieties are the following:

Conglomerate. Composed of water-rounded pebbles or boulders.

Breccia. Comprising sharp, angular fragments of such size as to be easily visible to the unaided eye.

Sandstone. Made up of small, sharp-angular or rounded particles, often largely quartz. When composed of so-called volcanic ashes, the rock is called a tuff.

Quartzite. Sandstone that has had the interstices between the grains completely filled with quartz, making a very compact, hard, more or less finely granular rock.

Shale. Formed from the finest silt, the individual particles being mostly invisible to the eye, and possessing a platy or laminated structure that results from the ease with which the layers of sediment separate. A mud rock.

Clay. Like shale except that it is unlaminated.

Slate. Greatly hardened shale or clay that often tends to break in thin plates in other directions than parallel to the sedimentary lamination.

Precipitates.—These are formed by the chemical precipitation of salts in solution in water. As they are frequently interbedded with sediments, they are often included under stratified rocks. They usually consist of a single mineral with or without small quantities of other minerals that may be considered as impurities. Limestone (in part) and gypsum are common examples.

Metamorphic Rocks.—These consist of any kind of rock that has had its form, and sometimes its composition, changed in such a fashion that it is no longer desirable to classify it under its original name. The two following types are recognized:

Regional Metamorphic Rocks. Changed by the great pressure and moderate heat developed in mountain-making earth movements. They cover extensive areas, are characterized by the fact that they are crystalline, yet show a parallelism of arrangement of the ingredients, called schistosity, and include gneisses and mica schists.

Contact Metamorphic Rocks. The result of the contact of molten igneous rocks with other earth materials. The agents involved are heat, gases, and vapors expelled from the cooling molten material. A common effect is to bake and harden the surrounding rocks.

Origin of the Earth.—All hypotheses concerning the earth's origin postulate the existence of the material of the earth in another form; they do not attempt to explain how the matter originated. Until recently, most scientists accepted the so-called nebular, gaseous, or LaPlacian hypothesis or one of its modifications, but this has now been almost completely discarded among the younger geologists, particularly in America, who have adopted the planetesimal or accretion hypothesis.

The Planetesimal Hypothesis.—It is assumed that the parent nebula was composed of a swarm of cold particles, mostly in a solid condition, which rotated in approximately parallel orbits in a common direction around a common center which was already, or later became, incandescent. In motion these particles are comparable to very small planets—*planetesimals*.

The development of our system is supposed to have involved the aggregation of these myriads of comparatively small bodies into a few much larger masses—the planets, while the incandescent center now constitutes the sun. It is believed that there were a number of relatively dense centers of attraction in the original swarm, and that the ingathering or accretion of the more scattered particles took place, at least at first, largely at the intersection of the somewhat elliptical, shifting orbits of the dense portions and of the scattered planetesimals. After the process had been in operation for some time, the planetary nuclei would attain such a size that their great gravitational attraction would draw distant planetesimals from their orbits, and the system would eventually contain none of the smaller bodies.

When Life Originated.—The earliest record of the existence of life was doubtless hidden beneath enormous masses of falling planetesimals and extrusive rocks, and it is probable that the great heat and pressure to which these have been subjected has so obliterated the record that it would not be decipherable if exposed to our view.

The earliest legible record in the form of fossils shows such decidedly advanced evolution along many divergent lines that we can only conclude that life must have already existed for eons of time.

MINERALOGY.—Minerals may be described and classified either in accordance with their chemical composition, their crystallographic forms, or their physical properties of hardness, fracture, color, luster, etc. or a combination of all, and thus various systems of classification have been adopted. Most minerals crystallize in definite forms, and this form is one of the chief characteristics of many mineral species. There are not a few, however, which are not distinctly crystalline, but are earthy or occur in masses; the latter exhibiting important varieties of structure, as *laminated, fibrous, granular, reniform, botryoidal*, etc. Other distinctive characteristics are *color*, which, however, varies even in the same mineral; *luster*, the character of the light reflected from the surface, and described as *adamantine, vitreous, nacreous, greasy, silky*, etc.; *fracture*, or the character of the freshly-broken surface; *streak*, or the appearance and color of a furrow made in the mineral by a hard-tempered knife or file; and *hardness*. Diaphaneity, refraction, polarization, electric properties, etc., are all distinguishing marks.

Precious Stones.—Are those which, because of their beauty, hardness, and rarity, are prized for use in ornamentation, especially in jewelry. The diamond, ruby, sapphire, and emerald are the only stones which are, strictly speaking, entitled to be called "precious" in this sense; but the opal, on account of its beauty, is often classed with the precious stones; as is also the pearl, which is really not a stone, but a secretion of a shellfish.

Alexandrite.—A variety of chrysoberyl found in the mica slate of the Ural mountains. It is of a rich garnet color by artificial light, by daylight of a dark moss green. It is the only stone that so changes. The finest specimens of alexandrite are nearly as valuable as diamonds.

Amethyst.—A variety of crystallized quartz, of a purple or bluish-violet color, of different shades. It is much used as a jeweler's stone. The lighter colored ones come from Brazil, the deep purple ones from Siberia. In value they are about the same as the garnet.

Beryl.—A very hard mineral of much beauty when transparent. It occurs in hexagonal prisms, commonly of a green or bluish-green color, but also yellow, pink, and white. It is a silicate of aluminium and glucinum. Beryls are very rich in colors. Their value is about four dollars per carat.

Bloodstone.—A green siliceous stone sprinkled with red jasper, whence the name.

Cameo.—A figure cut in stone or shell that is composed of different colored layers. The value depends on the artistic merit of the engraved figure.

Carbuncle.—A beautiful gem of a deep red color (with a mixture of scarlet), found in the East Indies. When held up to the sun it loses its deep tinge, and becomes of the color of a burning coal.

Carnelian.—A variety of chalcedony, of a clear, deep red, flesh-red, or reddish-white color. It is moderately hard, capable of a good polish, and often used for seals. It is now used but little.

Cat's-eye.—A variety of quartz or chalcedony exhibiting opalescent reflections from within, like the eye of a cat. The name is given to other gems affording like effects, especially the chrysoberyl.

Chalcedony.—A cryptocrystalline, translucent variety of quartz, having usually a whitish color, and a luster nearly like wax.

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1, 5 Agates.
2, 20 Opals.
3, 6 Emeralds.
4 Clustered Formation.
7 Quartz.
8 Garnet.
9 Aquamarine.
10 Sapphire.
11, 13 Rubies.
12 Dendrite.
14 Conglomerate.
15 Almadine.
16 Free Crystals.
17 Turquoise.
18 Cluster of Crystals.
19 Diamond.
21, 26, 27 Topaz.
22 Lapis Lazuli.
23 Spinel Ruby.
24 Peridote.
Oölite.
Heliotrope.
Amethyst.

Dendrite.—A stone or mineral in which are branching figures, resembling shrubs or trees, produced by a foreign mineral, usually by an oxide of manganese, as in the moss agate.

Diamond.—A precious stone or gem excelling in brilliancy and beautiful play of prismatic colors, and remarkable for extreme hardness. It is found in many hues—green, rose, straw, yellow, etc.—but the straw-colored ones are the most common. The diamond is a native carbon occurring in isometric crystals, often octahedrons, with rounded edges. It is the hardest substance known. Diamonds are said to be of the *first* water when very transparent, and of the *second* and *third* water as the transparency decreases.

Diopside.—A crystallized variety of pyroxene (a silicate of lime and magnesia), of a clear, grayish-green color; also called *mussite.*

Emerald.—A precious stone of a rich green color; it is the most valuable variety of beryl. (See beryl.)

Epidote.—A mineral, commonly of a yellowish-green color, occurring granular, massive, columnar, and in crystals. It is a silicate of alumina, lime, and oxide of iron, or manganese.

Essonite.—Cinnamon stone. A variety of garnet. It is not much used.

Fire opal.—(See opal.)

Fluorite.—Calcium fluoride, a mineral of many different colors, white, yellow, purple, red, etc., often very beautiful. When crystallized it is commonly in cubes with perfect octahedral cleavage. Some varieties are used for ornamental vessels. Also called *fluor spar*, or simply *fluor.* The colored varieties are often called *false ruby, false emerald, false topaz, false sapphire,* and *false amethyst.* For jewelry purposes the chief value of the stone is the expense of cutting and mounting.

Flint.—A massive, somewhat impure variety of quartz, in color usually of a gray to brown or nearly black, breaking with a conchoidal fracture and a sharp edge. (See quartz.)

Fluor spar.—Same as fluorite.

Garnet.—A mineral having many varieties, differing in color and in their constituents, but with the same general chemical formula. The commonest color is red; the luster is vitreous, or glassy; and the hardness is greater than that of quartz, about half as hard as the diamond.

The common crystal forms are the dodecahedron and trapezohedron. Besides the red varieties there are also white, green, yellow, brown, and black ones.

The garnet is a silicate with various bases, such as alumina-lime (grossularite essonite or cinnamon stone), alumina-magnesia (pyrope), alumina-manganese (spessartite), and chromium-lime (ouvarovite, color emerald green). The transparent red varieties are used as gems. The garnet was the carbuncle of the ancients. Garnet is a very common mineral in gneiss and mica slate.

The finest specimens of red garnets come from Arizona and a single carat stone is worth about two dollars. A green variety that comes from Russia is worth about half as much as the diamond.

Golden beryl.—(See beryl.)

Heliotrope or *bloodstone.*—A green siliceous stone sprinkled with jasper, as if with blood, whence the name.

Hematite.—An important ore of iron, the sesquioxide, so called because of its red color when in the form of powder. It occurs in splendent rhombohedral crystals, and in massive and earthy forms, the last being called red ocher. It is now seldom used in jewelry.

Hyacinth.—A red variety of zircon, sometimes used as a gem. It resembles closely a dark Spanish topaz, and is worth a little more than the garnet.

Idiocrase.—A mineral occurring in tetragonal crystals and also massive, of a brown to green color, rarely sulphur yellow or blue. It is a silicate of alumina and lime, with some iron and magnesia. It is common at Mt. Vesuvius. It is little used.

Indicolite.—A variety of tourmaline of an indigo-blue color.

Iolite.—A silicate of alumina, iron, and magnesia, having a bright blue color and a vitreous or glassy luster. It is remarkable for its dichroism, and is also called *dichroite.*

Jacinth.—Same as hyacinth.

Jade.—A stone commonly of a pale to dark green color, but sometimes whitish. It is hard and very tough, capable of a fine polish, and is used for ornamental purposes and for implements, especially in eastern countries and among many primitive peoples.

Jasper.—An opaque, impure variety of quartz, of red, yellow, and other dull colors, breaking with a smooth surface. (See quartz.)

Kyanite.—A mineral occurring in thin-bladed crystals and crystalline aggregates, of a sky-blue color. It is a silicate of aluminium. It is little used for jewelry.

Labradorite.—A kind of feldspar, commonly showing a beautiful play of bluish-gray colors, and, hence, much used for ornamental purposes. The finest specimens come from Labrador.

Lapis-lazuli or *lazuli.*—A mineral of a fine azure-blue color, usually occurring in small rounded masses. It is essentially a silicate of alumina, lime, and soda, with some sodium sulphide. It is often marked by yellow spots or veins of sulphide of iron, and is much valued for ornamental work.

Moonstone.—A nearly pellucid variety of feldspar, showing pearly or opaline reflections from within. The best specimens come from Ceylon. Their value is not much more than the expense of cutting.

Nephrite.—A hard, compact mineral, of a dark green color, formerly worn as remedy for diseases of the kidneys, whence its name *kidney stone.*

Obsidian.—A kind of glass produced by volcanoes. It is usually of a black color and opaque, except in thin splinters.

Olivine.—A common name of the yellowish-green mineral chrysolite, especially of the variety occurring in eruptive rocks. (See chrysolite.)

Onyx.—Chalcedony in parallel layers of different shades of color. It is used for making cameos, the figure being cut in one layer with the next layer as a background (see cameo). It is stained black and used to make a mourning jewelry.

Opal.—A mineral consisting, like quartz, of silica, but inferior to quartz in hardness and specific gravity. The precious opal shows a peculiar play of colors of delicate tints and it is highly esteemed as a gem. One kind, with a varied play of colors in a reddish ground, is called *harlequin opal.* The *fire opal* (which comes from Mexico) has colors like the red and yellow of flame. This is not the cheap variety commonly called Mexican opal. A spherical opal about three-eighths of an inch in diameter, or an oval flat opal about half an inch long, would be worth about sixty dollars. A Mexican opal of the same size would be worth about fifteen dollars.

Pearl.—A shelly concretion, usually rounded, having a brilliant luster, with varying tints, formed in the mantle, or between the mantle and shell, of certain bivalve mollusks (especially in the pearl oysters and river mussels) and sometimes in certain univalves. Its substance is the same as nacre or mother-of-pearl. Pearls which are round, or nearly round, and of fine luster, are highly prized as jewels. They are sold by carat grains instead of carats.

Pyrope.—A variety of garnet of a poppy-red or blood-red color, frequently with a tint of orange. It is used as a gem.

Rhodonite.—Manganese spar, or silicate of manganese, a mineral occurring crystallized and in rose-red masses. It is almost entirely used for ornamental purposes, in slabs, blocks, etc.

Rock crystal or *mountain crystal.*—Any transparent crystal of quartz, particularly of limpid or colorless quartz. A sphere of rock crystal of absolutely perfect clearness, about five inches in diameter, is worth at least twenty thousand dollars.

Rose quartz.—A variety of quartz which is pinkish red.

Rubellite.—A variety of tourmaline varying in color from a pale rose-red to a deep ruby, and containing lithium. It is a little more valuable than the garnet.

Ruby.—A precious stone of a carmine-red color, sometimes verging to violet, or intermediate between carmine and hyacinth red. It is a crystallized variety of corundum. The ruby from Siam is of a dark color and is called oxblood ruby. It has about the same value as the diamond. The ruby from Burma, called the pigeon-blood ruby, is of a lighter color and several times more valuable than the oxblood ruby. A fine pigeon-blood ruby of two carats would be worth upward of six thousand dollars.

Rutile.—A mineral, usually of a reddish-brown color and brilliant, metallic, adamantine luster, occurring in tetragonal crystals.

Sapphire.—A variety of native corundum or aluminium sesquioxide. As the name of a gem the term is restricted to the transparent varieties of blue, pink, yellow, and other colors. The best specimens of the blue variety are nearly as valuable as the diamond. The sapphire is next to the diamond in hardness.

Sard.—A variety of carnelian, of a reddish-yellow or brownish color.

Sardonyx.—A variety of onyx consisting of sard and white chalcedony in alternate layers. (See onyx.)

Spinel.—A mineral occurring in octahedrons of great hardness and various colors, as red, green, blue, brown, and black, the red variety being the gem *spinel ruby.* It consists essentially of aluminium magnesium, but commonly contains iron and sometimes also chromium. The fine specimens of spinel ruby are worth rather more than half as much as the diamond.

Sunstone.—Aventurine feldspar; aventurine.

Topaz.—A mineral occurring in rhombic prisms, generally yellowish and pellucid, also colorless, and of greenish, bluish, or brownish shades. It sometimes occurs massive and opaque. It is fluosilicate of aluminium, and is used as a gem. It is but little more valuable than the garnet, except occasional unusually fine specimens.

Tourmaline.—A mineral occurring in three-sided prisms. Black tourmaline is the most common variety, but there are also other varieties, as the blue (*indicolite*), red (*rubellite*); also green, brown, and white. The red and green varieties, when transparent, are valued as jewels. The finest ones come from Maine, and are worth four or five times as much as garnets.

Turquoise.—A hydrous phosphate of alumina containing a little copper. It has a blue, or bluish-green color, and usually occurs in kidney-shaped masses with a nodular surface like that of a bunch of grapes. The fine specimens are worth nearly half as much as diamonds.

Unio-pearl.—A single large pearl.

Uralian emerald.—A precious stone of a rich green color, a variety of beryl.

Verd antique.—A mottled-green, serpentine marble. Also a green porphyry, which is called *oriental verd antique.*

Zircon.—A mineral occurring in tetragonal crystals, usually of a brown or gray color. It consists of silicon and zirconium, and is harder than the garnet. The transparent varieties are used as gems. The red variety is called *Hyacinth*; a colorless, pale yellow, or smoky-brown variety from Ceylon is called *jargon.*

ORNITHOLOGY.— The science which teaches the natural history and arrangement of birds; or, to use the definition of Cuvier, of vertebrated oviparous animals, with a double circulation and respiration, organized for flight.

Classification.—Many systems for the classification of birds have been proposed. A common division is into seven orders, to which an eighth, the *Saururae* of Huxley, is often added, to include the extinct archæopteryx. These orders are:

Order I.—Raptores or *Accipitres.* Birds of prey, as eagles, vultures, hawks, and owls. Beak strong and curved, sharp at the edges. Feet adapted for seizing and destroying other animals. Claws sharp, much hooked, and retractile. Hind toe on the same level with the others. Wings well developed.

Order II.—Insessores, *Passeres,* or perching birds, by far the most numerous order. It includes all the singing birds, and indeed, excluding the birds of prey, most birds which live habitually among trees. Feet formed for grasping and perching, claws moderately curved and not retractile. Hind toe on the same level as the rest. This order is usually divided into four *tribes* or suborders—*Conirostres* (cone-billed); *Dentirostres* (tooth-billed); *Tenuirostres* (slender-billed); *Fissirostres* (cleft-billed).

Order III.—Scansores or *Zygodactyli.* Climbing birds, as the parrots, wood-peckers, cuckoos, toucans, etc. Feet formed for climbing, two of the toes directed forward and two backward; powers of flight not in general great; bill variously shaped.

Order IV.—Rasores or *Gallinae.* Domestic fowls, pheasants, pigeons, etc. Legs large and strong. Feet with the hind toe situated above the heel, suited for scratching. Bill short, thick, and arched above.

Order V.—Cursores or *Struthionidae.* Running birds, as the ostrich, emu, cassowary, etc. Wings rudimentary and quite useless for flight; legs long and strong; hind toe wanting or merely rudimentary; breastbone without a ridge or keel.

Order VI.—Grallatores or *Grallae.* Waders, as the cranes, herons, snipes, sandpipers, etc. Legs long, bare of feathers from above the knee; toes often half-webbed. Bill in general long and slender.

Order VII.—Natatores or *Palmipedes.* Swimmers; web-footed birds, as ducks, geese, gulls, etc. Feet formed for swimming, in general webbed, that is, the toes connected by a membrane. Hind toe elevated above the plane of the others. Bill various, mostly flattened. (See Dictionary of Animals).

HUMAN PHYSIOLOGY.—Physiology in relation to the human body is the science which concerns itself with the functions of the various parts and the manner in which they perform their duties. The work done by any part depends primarily upon the character of the minute particles of matter of which it is formed.

Cells.—Each of these microscopic particles is called a *cell.* It consists of a thin sac enveloping a clear substance, the *proto-*

plasm, which contains a less granular portion known as the *nucleus*.

Tissues, Organs, Systems.—A combination of similar cells forms a *tissue*, and the union of two or more tissues to constitute a structure for the performance of a special function is called an *organ*. The heart is an organ for pumping blood and the stomach is an organ for helping to digest food. Several organs working in harmony for the accomplishment of a common purpose constitute a *system*.

Locomotion.—The *osseous system*, composed of over 200 bones, and the *muscular system*, formed of over 500 muscles, serve chiefly for the purpose of locomotion. One kind of muscles known as the *involuntary* are present in nearly all tubelike structures, such as the alimentary canal and blood vessels. The marked power of contraction and relaxation possessed by all muscles enables them to render important service to the bodily welfare. They have, however, no power in themselves to act, but must be stimulated by another set of organs composing what is known as the nervous system.

The Nervous System, consisting of the brain and spinal cord, with their thousands of tiny nerve fibers branching to all parts of the body, controls every movement and the activity of each organ. The numerous nerve fibers, which are bound into bundles forming the white cord-like nerves, are the processes of cells located in the brain or spinal cord or near to them.

Neurone.—A nerve cell, with its two or more processes, varying from less than a half inch to more than three feet in length, is called a *neurone*. The purpose of the processes is to transmit a stimulus or message, while the function of the body-part of the neurone is to originate a stimulus or modify one sent to it by another neurone.

Brain.—The neurones in the thinking regions of the brain, *i. e.*, the frontal third and the portion adjacent to the crown, seem able to originate stimuli and direct at will the daily activities in which we engage. A band of neurones in front of the central fissure of the brain is called the *motor area* because these cells control the voluntary movements of the body. The bursting of a blood vessel in this area or along the processes of these cells extending down through the brain and cord often causes paralysis of the muscles which the neurones affected govern. The band of neurones behind the central fissure form the *sensory area* of the brain. Here the impulses aroused by touch, heat, cold and pain are received. The *hearing neurones* are located in the region of the brain adjacent to the ear and those concerned in *seeing* lie in the back part of the brain.

Communication of Neurones. — The neurones whose cell bodies form the gray matter, and their processes, the white fibrous portions of the brain and cord, are able to communicate with one another by contact of processes. The independent neurones of the brain direct the dependent neurones both in the brain and in the spinal cord.

Reflex Action.—The dependent neurones can also be made to act by an outside stimulus, such as touch or pain. A pinprick on the toe of a sound sleeper will send an impulse up the sensory nerves to the spinal cord, where it will arouse the motor neurones to send an impulse causing the muscles to contract and withdraw the limb, but the brain will know nothing of the operation. Such activities, carried on without the effort of brain neurones controlled by the will, are known as *reflex actions*.

Sympathetic System.—Many neurones concerned in reflex action are located at the base of the brain and in its stem, while others of the same character form the *sympathetic system*, whose nerves supply the digestive organs and other viscera and all the involuntary muscles of the body. The work of the lungs, heart, stomach, liver and other vital organs goes on involuntarily because the neurones governing them are stimulated to act by the needs of the body.

The taste of food stimulates the neurones, causing the stomach to form gastric juice, but we can also make the stomach do this work to some extent by thinking of the delicious flavor of foods. In this case the neurones of the brain originate a stimulus and send it down to the neurones exciting the juice-making organs to work. Even though food is in the stomach and its presence has started the flow of gastric juice, the output may in a few minutes be greatly decreased by the inhibiting influence of the neurones of the brain, aroused to action by some excitement or great grief affecting the mind.

Influence of Mind on Body. — Although the exact relation of the mind to the brain and other parts of the body is not entirely understood, observations and experiments show that the mind may influence the work of all the organs of the body. This fact forms a vital part of the Christian Science faith, which teaches that thought is more efficient than drugs and hygienic measures in curing disease. In many disorders of the nervous system mental suggestion renders worthy service.

Sense Organs.—In order that the brain may be informed of the conditions in the external world, many of the nerve fibers called sensory nerves have special terminations on or near the surface of the body called *sense organs*. The eyes are the special sense organs which are so affected by the waves of light coming from objects that they can send to the brain through their nerves a message telling how things look. The ears receive and transmit to the brain only those impulses aroused by the waves of sound. The delicate nerve endings within the nose inform the brain concerning odors, while the peculiar nerve terminations in the tongue and other parts of the mouth receive and send to the brain all knowledge as to how foods taste. Special tiny organs at the ends of nerves are scattered throughout the skin to receive the stimuli aroused by touch, heat or cold, and, inform the brain when the body is being hurt.

Foods.—While thought and action are the chief purposes of the body, the systems which effect these must be hourly repaired and nourished, the waste matter must be gotten rid of, and a means of reproducing the species must be provided. The chief part of the living tissues consists of *proteids* whose worn-out parts can be replaced only by the consumption of other *proteids* found in the albumen of lean meat, the white of egg, casein of milk, and in peas, beans, corn and wheat.

Oxidation.—Starches, sugars and fats cannot repair the worn-out parts of the cells, but by the living action of the body these foods can be made to unite with oxygen. This *oxidation* may furnish heat to keep the body warm and may also supply the energy necessary for its activities. While the fat of the body is largely made from the starches and sugars, forming what is known as the carbohydrate foods, proteids can also be transformed into fat and used to furnish energy and heat.

Diet.—The daily food requirements of a man at ordinary labor are about three ounces of proteids and one pound of starches, sugars and fats. Some inorganic salts and water are also necessary.

Digestion.—In order that the nourishing materials may reach all cells of the body they must be prepared to enter the blood stream for transportation. This preparation is accomplished by a group of organs forming the digestive system. The two chief processes of digestion are mastication, or the breaking up of the food into small particles in the mouth, and the transforming action of the juices from certain organs called *glands*. The important elements in the watery secretions of these glands are known as *enzymes*. These are ferments which cause chemical changes in the food without any change in themselves.

The *ptyalin* from the salivary glands of the face changes starch into sugar, the *pepsin* from the thousands of gastric glands in the lining of the stomach transforms part of the proteids into peptones, while the other part is acted on by the *trypsin* of the pancreas. This chief gland of digestion also yields *lipase* to split up the fats and *amylopsin* to make sugars of the remaining starches.

Absorption of Food.—After the food has been acted on by the gastric juice from one to four hours, and by the intestinal and pancreatic juices a variable period, it is in a state capable of being absorbed by the cells forming the lining of the small intestine. The absorbing surface is greatly increased by transverse folds and millions of tiny projections called *villi*. Within these are thin-walled tubes to receive the liquid food and pass it on to the larger blood tubes, whence it is transported to all parts of the body.

Liver.—The liver serves as a storehouse for part of the food, which it deals out according to the needs of the body. Much of the food passes through the liver before it is distributed to the body, thus giving this organ opportunity to remove poisons which may be present and dispose of them in the bile sent into the intestine to aid digestion.

Circulatory System.—The circulatory system, in addition to distributing the food throughout the body, conveys the oxygen from the lungs to all the tissues and transports the waste matter from all cells to the lungs, skin and kidneys for elimination. The *plasma*, or clear part of the blood, bears the food elements, while the red corpuscles, with a special affinity for oxygen on account of their hemaglobin, load up with this gas in the lungs and discharge it to the tissues throughout the body.

Heart, and Course of the Blood. — The blood stream is kept in perpetual motion by the beating of the heart, with valves so arranged as to prevent any backward flow. The blood is carried by the veins from all parts of the body to the right auricle of the heart, whence it passes to the right ventricle. This sends it through the pulmonary artery to the lungs, where the carbon dioxide is exchanged for oxygen through the tiny, thin-walled capillary branches of the artery. The oxygenated blood returns by the pulmonary veins to the left auricle, passes to the left ventricle and thence out through the aorta,

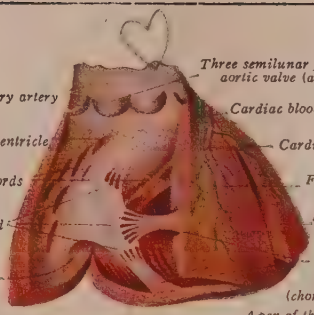

Fig. 1. Heart

Fig. 2. Auricles of the heart

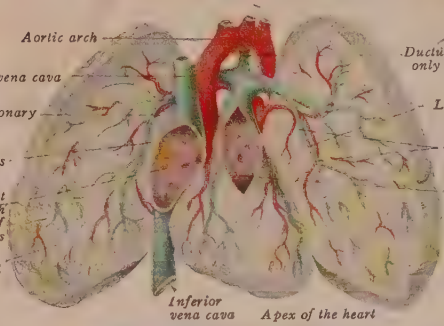

Fig. 3. Pulmonary circulation

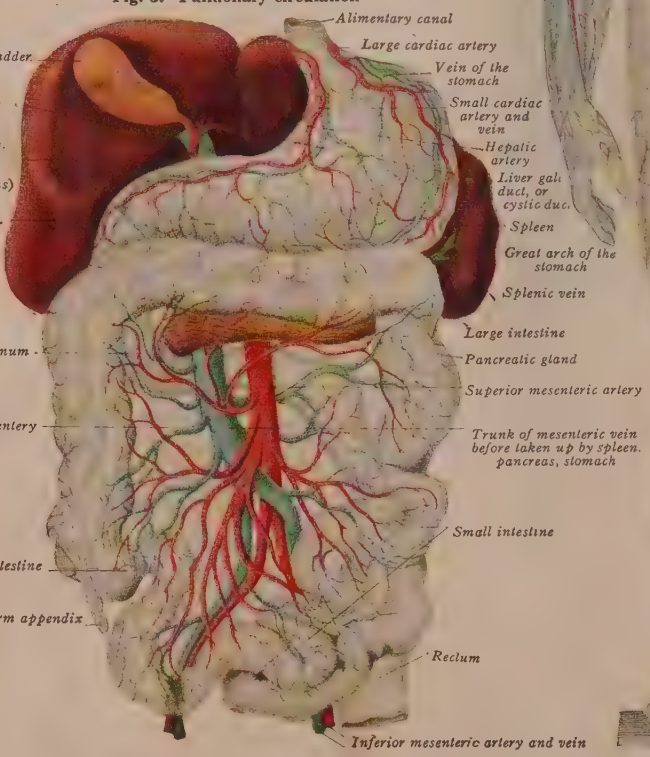

Fig. 4. Portal vein circulation

(The union of veins of the stomach, intestine, spleen and pancreas into trunk of portal vein is hidden by the stomach)

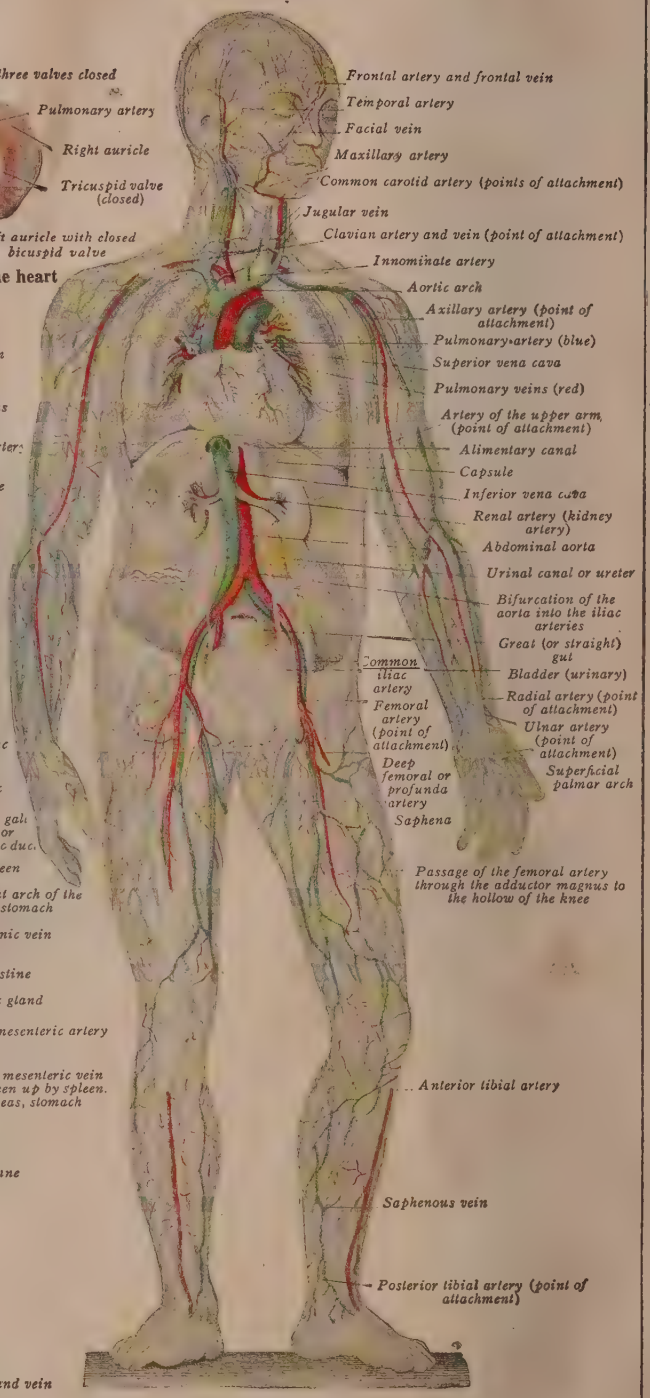

Fig. 5. Circulation of the blood in the body

In fig. 5 the intestines of the portal vein circulation have been removed from the abdominal cavity

The red lines indicate the arteries, the blue lines the veins

branching again and again in all regions of the body until the final subdivisions are smaller than hairs and with walls so thin that the oxygen and food can easily pass through to nourish the cells. At the same time the carbon dioxide and part of the other waste products enter the blood stream of these tiny vessels called *capillaries*, which unite to form the veins carrying the blood to the heart.

Lymphatics. — Some of the blood plasma and the white corpuscles passing out of the capillaries, together with some of the waste matter, enter a set of vessels called *lymphatics*. These unite into larger vessels which ramify through firm bunches of tissues called *lymph glands* and terminate in veins in the neck.

Exercise renders the lymph system more active because the muscular contractions press the waste matter into the vessels and move it forward, as a series of valves prevents the backward flow. *Massage* accomplishes the same effect and therefore like exercise greatly aids the body in removing its waste. The purpose of the lymph glands, so abundant in the groin, the armpit, the neck and amid the intestines, is to catch and destroy any infection such as bacteria.

Respiratory System.—The sole purpose of the respiratory system, consisting of the lungs and the air passages leading to them, is to supply the body with oxygen and cast out the carbon dioxide constantly resulting from living processes. The inspired air consists of four-fifths parts of nitrogen, one-fifth part of oxygen and only four-ten-thousandths part of carbon dioxide, while the expired air contains one-twentieth part of carbon dioxide and less than one-sixth part of oxygen.

Excretory System.—The dying tissues and a remnant of the oxidized food proteids form the nitrogenous waste which is removed from the body by the excretory system. This consists chiefly of the kidneys, with the two tubes called ureters carrying the urine drop by drop into the bladder, where it is stored and passed out at intervals through a small tube called the urethra. About one and a half quarts of urine, containing some salts and an ounce of urea, the tissue waste, are excreted daily.

Diabetes and Bright's Disease. — In persons with diabetes the urine contains sugar because too much sugar is free in the blood. This condition may be due to a disorder of the cells of the pancreas or liver. In Bright's disease the cells of the kidney fail to perform their work and allow some of the nourishing part of the blood to escape with the urine. Such a condition is sometimes due to a prolonged fever, the excessive use of alcohol, a heavy meat diet, lack of thorough mastication or too little exercise.

Skin.—The skin is also an organ of excretion, as its millions of sweat glands pour out daily from one quart to a gallon of perspiration containing some salt and a little urea. The chief use of the sweat, however, is to cool the body. The skin is filled with the terminations of the nerves of sense, whose stimulation by heat or cold excites to action the entire system.

Bathing.—On this fact depends the physiologic effects of bathing and hydrotherapy. Many internal chronic disorders, as well as acute ailments, are frequently alleviated or entirely cured by the proper application of water when all other measures fail. Since a large portion of the blood passes through the skin each minute, cold bathing relieves the body of much heat and is therefore the most efficient means of lowering the temperature in cases of fever.

Hair.—Each hair grows from a little papilla at the bottom of its sac and will be renewed every time it is pulled out so long as the papilla is uninjured. A pair of sebaceous glands in connection with each hair furnish an oily substance to soften the hair and skin. The loss of the hair on the scalp is seldom due to any microbe or germ, but to a diminishing of the nourishment from the blood-vessels in the papilla. The best remedy for falling hair is a thorough washing of the scalp fortnightly and a daily five-minute massage continued for several months.

Reproductive System.—The average length of life of each individual is about 45 years. To continue the race new individuals must arise. The only portion of the body, however, which can give origin to a new being is a special large cell called an *ovum* or *egg* developed in females from about the thirteenth to the fiftieth year within the two small organs called *ovaries* lying below the kidneys. This special cell or ovum is capable of further growth only after another special cell, the *spermatozoon*, from the testes of the male has united with it. After the union of the two cells, which process is known as *fertilization*, the egg continues down the tube leading from the ovary into a thick-walled sac, the *uterus* or *womb*. Here it becomes fixed to the soft lining, absorbs nourishment from the blood of the mother for a period of about nine months, when it is born as a complete individual.

HYGIENE.—Hygiene is the science which concerns itself with the prevention of disease and the maintenance of the body in vigorous health. Personal hygiene relates to the special care of one's own body, while public hygiene includes much of sanitary science and deals with the general food supply, water supply, disposal of sewage, quarantine regulations and other questions affecting the entire community.

Death Rate. — The development of the science of hygiene began about the middle of the nineteenth century and has made such rapid progress as to greatly lessen the death rate in communities regulating their living according to its teachings. In benighted India the death rate is 42, *i. e.*, 42 people die annually among every thousand living. In the United States the death rate is 17, while in Norway, Sweden and Denmark, where hygienic living is practiced by the greatest numbers, the death rate is only 14 per thousand.

Length of Life.—The average length of life increases with our growing knowledge and practice of healthful living. The average length of life in the sixteenth century was about 18 years; to-day it is over 40 years in Germany, England and the United States. The life span in France in 1830 was only 39 years, while in 1900 it was over 47 years. In Massachusetts it increased from 39 years in 1850 to 46 years in 1900.

Cause of Sickness.—There are about 3,000,000 people sick every day in the United States and one-half this number die annually from disease. Recent investigations show that at least one-fourth of this sickness and death can be avoided by the individual and combined efforts of the people of our country. Much of the sickness and about one-half of the deaths result from diseases caused by the countless army of unseen life called *microbes*.

Contagious Diseases. — Microbes are the agents concerned in all *infectious diseases*, some of which are spoken of as *contagious* because the healthy readily contract the ailments by associating with the sick or by handling articles from the sickroom. The germs of tuberculosis slay 150,000 persons yearly in the United States, pneumonia destroys more than 100,000 lives, while typhoid fever kills about one-tenth of its 250,000 victims. Over 100,000 infants perish yearly from digestive disorders due to bacteria, largely introduced by unclean milk and other food.

How Disease Germs Are Scattered.—The germs of typhoid fever, cholera, dysentery and diarrhœa leave the body in the excreta from the bowels and kidneys. The body of a sick person is a germ garden yielding a deadly harvest of microbes, which if allowed to escape alive in the body waste are quite certain by the aid of wind, water or insects to find new victims. This fact shows the vital importance of treating the body excretions in such a manner as to destroy the agents of disease. If this were carefully done for even a decade, students of hygiene believe that tuberculosis and typhoid fever would be lessened by one-half.

How Typhoid Is Contracted.—The germs of typhoid generally reach new victims either in water or in food, though they may be transferred to the mouth by the fingers or other objects which have been in contact with the sick. Fortunately the germs will generally not live in ordinary river water more than ten days and most of them are destroyed by sedimentation, sunlight and other agencies during twenty-four hours transportation in a stream averaging two or three feet in depth and flowing at the rate of about three miles per hour. Investigations indicate that more than one-half of the cases of typhoid fever are due to contaminated water.

Food as a Source of Infection. — Such foods as shellfish, celery and cress are sometimes the source of typhoid and dysentery when they have been taken from water or earth contaminated by sewage or night soils.

Since tuberculosis is widely distributed among the cattle of this country and as many as 10 per cent are affected in many localities, market milk frequently contains tubercle bacilli. These germs enter the milk sometimes through the udder but more frequently by means of the feces which soil the cow and are then knocked as dry particles into the milk pail.

Diarrhoea in Infants.—The greater part of the diarrhœa and intestinal disorders of infants, resulting in over 10,000 deaths during each warm month of the year, is due to the large number of germs of various kinds in unclean milk. In many instances, the milk when delivered to the customers in the city contains one million germs per cubic centimeter. Milk from healthy cows and properly cared for should not contain more than 30,000 germs per cubic centimeter when twenty-four hours old.

Other Diseases Conveyed by Milk. — In addition, to typhoid fever and tuberculosis, scarlet fever and diphtheria are frequently transmitted through the agency of milk. This fact explains why every one should wash his hands thoroughly before handling milk, in which diphtheria and typhoid germs multiply rapidly.

Since the year 1908 it has been clearly demonstrated that the germs of some diseases are introduced directly into the blood by insects.

Insects Conveying Disease. — The agents of malaria, yellow fever and filariasis are known to be transmitted by the bite of certain mosquitoes which have previously sucked blood from patients suffering from these diseases. Havana was freed from yellow fever for the first time within a century by destroying the breeding places of mosquitoes in the quiet waters. The destroying fevers which made it impossible for the French to dig the Panama canal are kept away from our laborers now accomplishing the task by driving away the *Stegomyia* and *Anopheles* mosquitoes.

Bubonic Plague, etc. — Fleas of the rat and some other kinds transmit the germs of bubonic plague from man, rats and ground squirrels to man. The plague was stopped in California by killing the rats. The tsetse fly of Africa bears the deadly microbe of sleeping sickness from the sick to the well, and a certain tick seems to be responsible for the spread of the Rocky mountain spotted fever. The common body louse in some cases, if not always, serves as the carrier of the typhus fever from man to man. Leprosy and pellagra are probably also insect-borne diseases. Since pathogenic germs are so widely distributed and are even present occasionally in the air breathed it is impossible to prevent entirely their entrance into the system. In fact persons in health have frequently been found with germs of diphtheria or pneumonia in the mouth, and post-mortem examinations and tuberculin tests show that less than one fourth of the persons infected with the tubercular germs actually suffer from the disease. The explanation of the freedom of certain persons from some diseases is found in the fact that the body has been made immune. This condition of immunity or safety from certain maladies may be accomplished in several ways.

Infection With Tubercle Bacilli.—Experiments and observations show that the tubercle germs, especially in children, can pass from the alimentary canal into the blood and be carried to the lungs, where they most frequently cause disease. Extensive studies, however, show that probably 90 per cent of the victims of the white plague have been infected by the germs in human sputum carried to food by flies or transmitted by the drinking cup, fingers, or dust.

Prevention of Disease.—One effective method of preventing the ill-health due to these man-eating microbes, which give off a poison called toxin while they feed on the human flesh, is to wage a warfare seeking their complete destruction. Most of the *pathogenic germs, i. e.,* those producing disease, are developed in the bodies of the sick and are distributed in their excretions. The germs of tuberculosis, pneumonia, diphtheria, scarlet fever, whooping cough and measles are present in vast numbers in the sputum discharged from the mouth and often smeared on drinking cups, pencils, books and the fingers. These deadly bacteria may remain in the saliva several weeks or in some cases even months after the recovery of the patient.

Disinfection. — The process of destroying agents of disease is called *disinfection* and the substance used is a *disinfectant.* Formaline, bichloride of mercury, carbolic acid, chloride of lime, hydrogen peroxide, boiling water and sunlight absolutely destroy disease bacteria in a few minutes, and are therefore called *germicides.* Weak solutions of carbolic acid, boracic acid and lime do not kill the germs but prevent their growth, and are on this account known as *antiseptics.*

One of the best methods of disinfecting the stools of a patient with typhoid fever, dysentery or diarrhœa is to add to them an equal part of 5 per cent formaline (5 parts of 40 per cent formaldehyde solution to 95 parts of water) and allow the mixture to stand two hours before disposing of it. This destroys not only the germs but also all odor.

Vitality of Germs.—One of the best disinfectants known is sunlight. Germs of typhoid fever, tuberculosis and diphtheria spread out in a thin layer are destroyed by exposure to a bright sun in less than one hour, while in a dark room they may live for weeks or even months. The fact that typhoid germs buried in the soil or remaining in privy vaults may retain their virulence for more than three months explains the danger in using night soil on truck patches.

Purifying Water. — Because of this fact several hundred towns and cities during the last twenty years have constructed large filters for removing germs from the water before it is delivered to the users. In many cities with a previously heavy typhoid mortality the filtration of the water supply has reduced the annual number of typhoid cases one-half, and in some instances, including Albany and Pittsburg, effective filtration has lessened the typhoid morbidity three-fourths.

Contaminated water may also be made safe for drinking by heating it until the boiling point is reached. Actual boiling renders it insipid. A Berkefeld or Pasteur-Chamberland filter costing only a small sum may be attached directly to the spigot in the house, so that it will keep the water free of germs provided it is cleaned and boiled weekly.

Public Sewage Disposal. — In order to avoid the pollution of the water supply many cities have during the last decade constructed sewage disposal plants consisting of septic tanks and fermenting beds for breaking up the solid matter and reducing it in some degree to gases and inorganic substances. This also destroys many of the pathogenic bacteria and the others may be eliminated by the use of a sand filter or treatment with chemicals.

Private Sewage Disposal. — The improper disposal of sewage about the home often results in the spread of typhoid fever, dysentery, and hookworm disease. Where there is no water supply to carry the waste off to the septic tank and contact beds, the dry-pail closet is the most sanitary arrangement. This consists of a water-tight tub or galvanized iron can to receive the excreta and a box of dry earth of which about a pint should be scattered over the surface of the contents of the tub or can each time it is used. This process prevents unpleasant odors and helps to rapidly mineralize the organic matter. When the receptacle is full the contents should be emptied in the garden or field remote from the water supply and covered with a little soil.

Insects and Disease.—A feature of great importance in the disposal of body waste is the exclusion from it of flies. These insects have caused many epidemics of typhoid fever and dysentery by distributing in milk receptacles and on food the germs collected on their feet from the filth upon which they often feed. The wisdom of protecting all food from flies is further shown by recent investigations demonstrating that they not only infect food with the germs of tuberculosis carried on their feet from sputum, but also with those deadly germs eaten in their feast on sputum and later deposited as fly specks. This fact clearly shows why it should be unlawful to spit upon floors or sidewalks, or use open spittoons which contain no disinfectants.

Preventing Hookworm Disease. — In the Southern states, where many persons in nearly every community are infected with hookworms, the tub for the excreta should be filled one-fourth full of a 5 per cent crude carbolic acid solution to kill the eggs which pass from infected persons by the thousands daily. Instead of using a tub or can for the excreta a cement vault may be built under the privy and emptied at intervals of a few weeks far away from the water supply.

Improper care of excreta has resulted in the pollution of the water and soil about many homes. Here the typhoid germs and young hookworms wait for their victims. The worms are able to enter the body not only in water and food but also by piercing the skin and boring into the blood vessels, in which they are carried to the lungs. Here they enter the air sacs, make their way up the windpipe, and then journey down the gullet and through the stomach to their home in the intestines.

Preventing Tuberculosis.—Continuous living in the pure air, deep breathing for a few minutes several times daily, the use of nutritious foods, such as eggs, milk, meat and cereals, and the avoidance of excesses of all kinds will so strengthen the tissues of the body that they will be able to destroy any tubercular germs which enter. The habit of sleeping with wide-open windows summer and winter, taking a cold bath upon rising, and devoting one hour to outdoor exercise daily will do much not only in fortifying the body against tuberculosis but also against colds, catarrh and other minor ailments.

Cancer and diseases of the kidneys and heart are greatly on the increase, while nearly all other diseases have decreased notably during the last decade. Many of the early superficial cancerous growths may be cured by the use of the X-rays, but the surest remedy for internal cancers is removal by the surgeon.

Late studies indicate that wrong diet, impure air and lack of exercise have a considerable influence in causing morbid changes in the blood vessels and kidneys and inducing rheumatism. The consumption of starches and sugars greatly aggravate diabetes, and rheumatism and Bright's disease are made worse by a meat diet and alcohol.

Keeping Germs Out of the Body.—Owing to the hygienic ignorance and carelessness of a considerable part of mankind the germs of contagious diseases are being scattered by the millions daily. For this reason it is necessary to take precautions to prevent the entrance of these into our bodies. Articles used by the sick and the rooms in which they have lived often harbor the germs of disease. Eating utensils and linen may be disinfected by placing them in boiling water a few minutes. The sickroom, after the recovery or death of the patient, should be treated with formaldehyde gas. This may be generated in sufficient quantity to disinfect a room

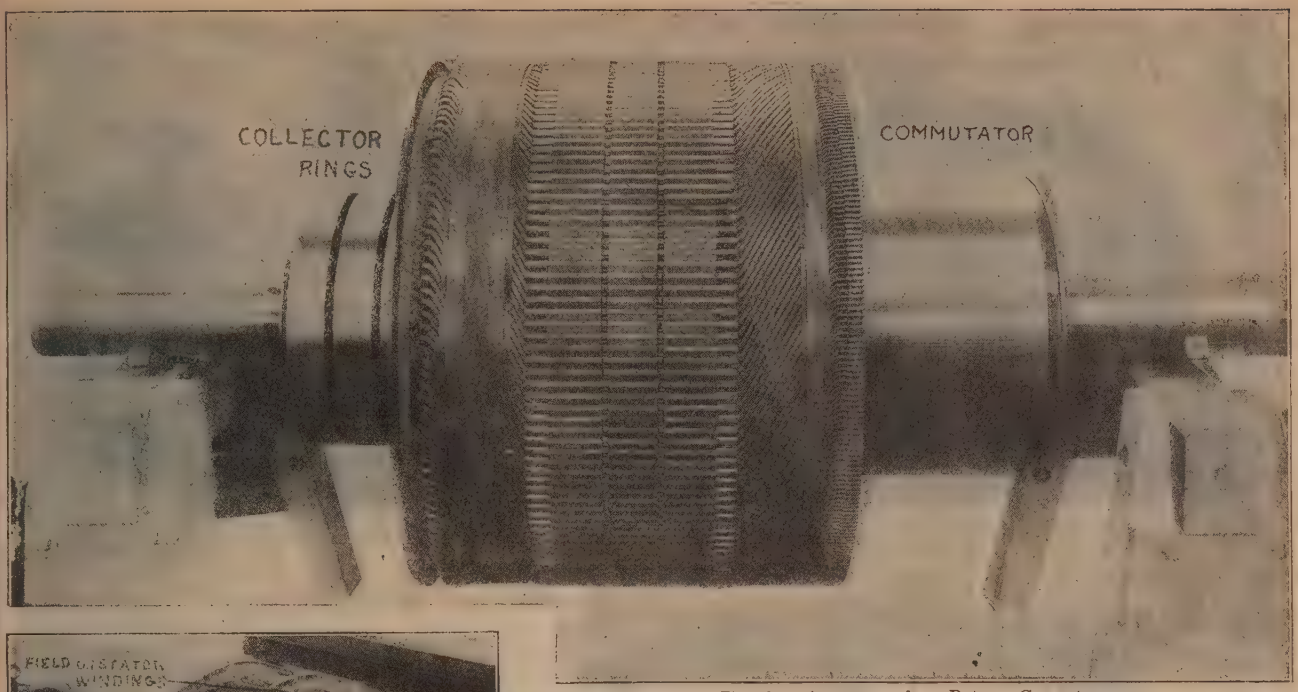

Fig. 37. Armature of a Rotary Converter.

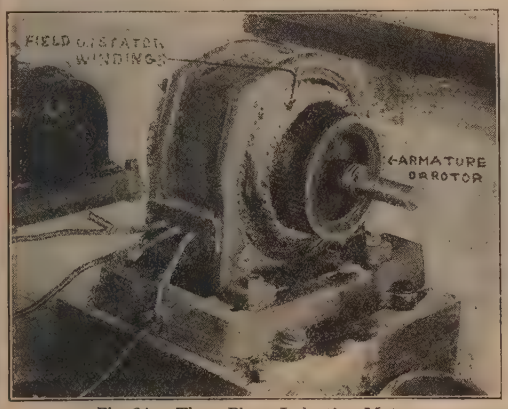

Fig. 34. Three-Phase Induction Motor.

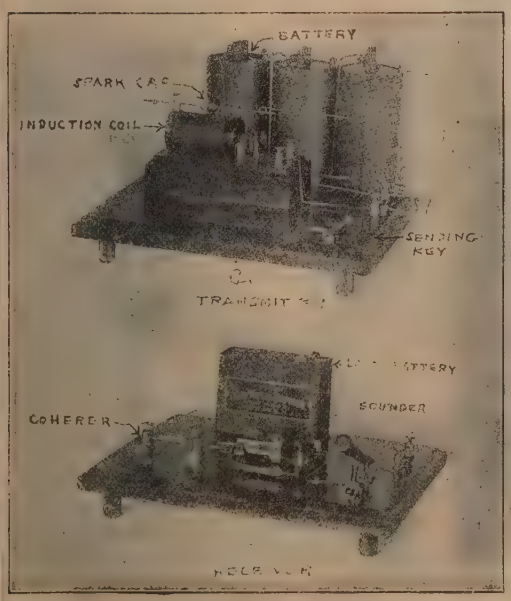

Fig. 41. Wireless Telegraph Apparatus.

Fig. 42. A Radiograph.

ELECTRICAL SCIENCE PLATE, No. 2.

Fig. 26. Large Modern Three-Phase Alternator

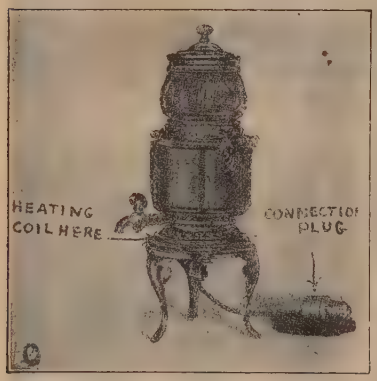

Fig. 40. Electric Cooking Utensil.

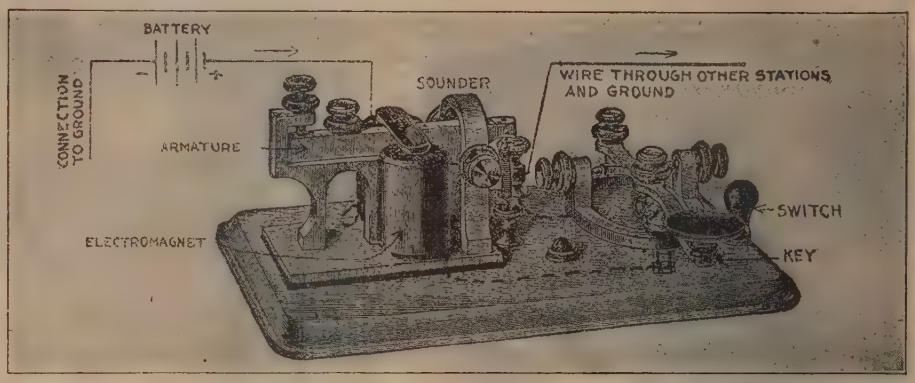

Fig. 30. Telegraph Set and Line.

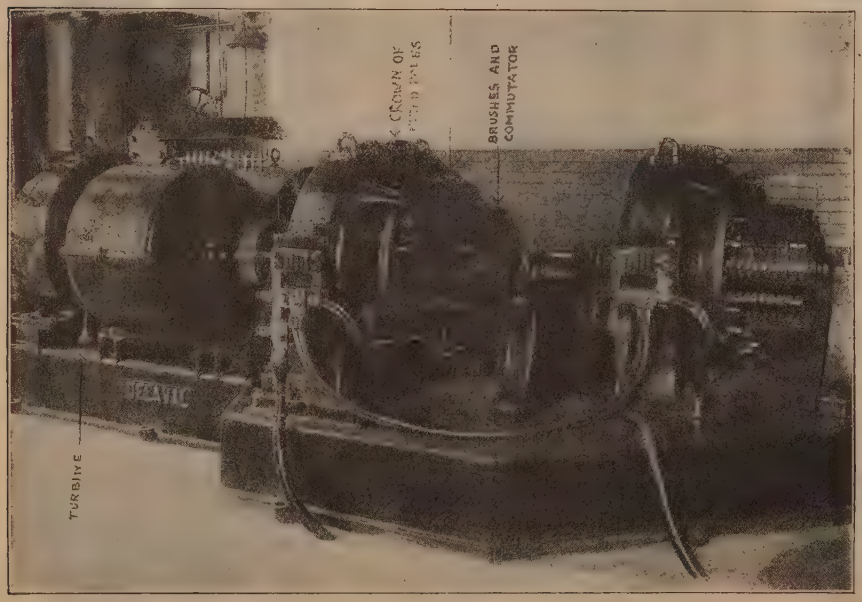

Fig. 22. Large Multipolar Direct Current Generator

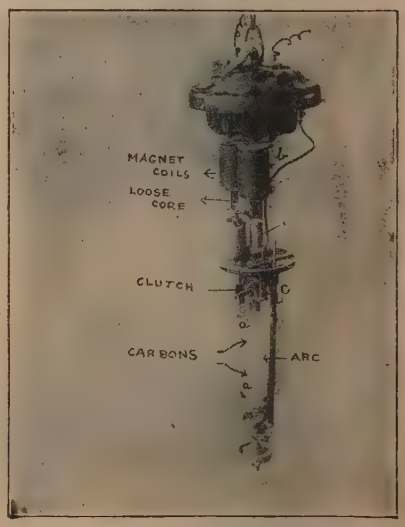

Fig. 28. Enclosed Carbon Arc Lamp.

ELECTRICAL SCIENCE PLATE, No. 1.

of a thousand cubic feet by adding one pint of formaldehyde solution to a gallon jar containing twelve ounces of potassium permanganate. The room should remain tightly closed for twelve hours. Clothing, metals and furniture are in no way injured by the gas.

Vaccination. — Specific immunity against various infectious diseases may be acquired by *vaccination*. This consists in inoculating the body with weakened germs or the growth-products of the same kind of germs as those causing the disease to which one wishes to become immune. Immunity from typhoid fever, plague and cholera is often secured by injecting under the skin dead cultures of the germs of these diseases. Immunity from hydrophobia is secured by several successive inoculations with hydrophobia germs which have been weakened in the spinal cords of rabbits exposed to dry air from two to fifteen days.

The most successful vaccine produced is that which prevents smallpox, the most dreaded malady of the eighteenth century, when it killed 60,000,000 people in Europe. This vaccine is prepared by weakening the smallpox germs by growing them in the skin of calves. These weakened germs when smeared on the broken skin of the arm result in the formation of a large scab, some fever and slight indisposition due to the products of the germs, which cause the body tissues to react and form substances capable of destroying the strong smallpox germs which may later reach the body. Owing to the fact that these substances so inimical to the smallpox germs in the body become successively weaker each year after four or five years, it is necessary for one to be vaccinated every ten years until middle life.

Antitoxins. — Immunization against such diseases as lockjaw and diphtheria is effected by introducing into the body substances which nullify the poisons generated by the growing germs. These substances are called antitoxins. They are secured from the blood of animals which have developed them to fight off the poisons of these germs injected into them at varying intervals.

The constitutional diseases, such as diabetes, rheumatism, Bright's disease, arteriosclerosis or hardening of the arteries, and certain affections of the heart, are not well understood as to their causation, and therefore efforts to prevent them have not met with success.

The Certified Milk to be had in many cities is usually of high quality and contains less than 30,000 bacteria per cubic centimeter. Such milk is taken from cows shown to be free of disease by periodical physical examination and tuberculin tests. The stables are kept scrupulously clean and free from flies and all the milk receptacles after being rinsed in cold water are sterilized in steam or boiling water. The milk is cooled immediately after it is drawn and stored in ice water, because warmth causes a rapid growth of the bacteria which poison the children.

Pasteurized Milk.—It is unsafe to give to young children milk not known to be clean and from healthy cows. When it is necessary to use questionable milk it should always be pasteurized. A special apparatus for pasteurizing may be purchased, but with some care the process may be accomplished by placing the milk in a Mason jar or tall pail, which is then set into a kettle of boiling water just removed from the stove. The water in the kettle should stand at least as high as the milk in the pail, which must be stirred ten minutes and then left standing covered ten minutes longer. The milk should then be cooled as quickly as possible by placing it in cold water and stirring it a few minutes. Milk thus treated will usually remain sweet in an ordinary refrigerator three or four days, but it is preferable to use it within twenty-four hours.

The commercial pasteurized milk sold in many cities is often unreliable because the pasteurization has not been properly accomplished, and frequently the milk is of too dirty a quality at the beginning. Experiments prove that children thrive almost if not quite as well on properly pasteurized milk as upon clean raw milk. In pasteurization the temperature should never exceed 160 degrees and it is preferable to maintain it at about 148 degrees. Boiled or sterilized milk should not be used as the regular food for children because some of the albumin has been coagulated and salts precipitated.

Mastication.—Toxins injurious to the heart and other organs are commonly generated in large quantities in the large intestine of those consuming much meat. A vegetarian diet with milk, especially buttermilk, and eggs lessens the formation of these toxins and thorough mastication, often called Fletcherizing, in some way stimulates the bowels to cover the waste matter with a coat of mucus preventing the absorption of any toxins present.

The careful preservation of the teeth, the thorough mastication of a largely vegetarian diet, regular daily exercise in the open air, daily evacuation of the bowels induced by laxative foods and exercise and not by drugs, and eight hours of sleep in a room with open windows, together with a cold morning bath, are the best known means for maintaining a vigorous constitution which will have marked power in warding off both infectious and constitutional diseases, and for enabling the organs to continue in the healthy performance of their functions even beyond four score years and ten.

PHYSICS, or Natural Philosophy, is the science, or rather group of sciences, relating to the phenomena of the material world, or of the laws and properties of matter; more restrictedly it treats of the properties of bodies as bodies, and of the phenomena produced by the action of the various forces on matter in the mass. Its chief branches are *mechanics*, *heat*, *light*, *sound*, *electricity* and *magnetism*.

Electricity. — The term *electricity* is the name given to the agent or cause of a large number of natural phenomena, which are more or less interrelated and are exhibited in various forms which we can perceive or make use of. The phenomena upon which electrical science is based has frequently been conventionally divided into the following subdivisions as a matter of convenience:

Static Electricity.—If a piece of gutta percha or glass is rubbed by means of cloth, say of wool or silk, the rubbed and rubbing articles will gather thereby *charges* of electricity. The charges of the two bodies are equal in value, but one is called positive electricity while the other is called negative electricity. Either the rubbed or rubbing substances while charged with electricity tend to *induce* charges of opposite signs on other nearby objects. Unlike charges attract each other and charges of like signs repel. When a charged body is brought near a light article, like a pith ball or bits of paper, it tends to induce upon the light article a charge of opposite sign and to attract it, as may readily be proven by simple experiment. Figure 1 shows a machine for generating high tension electric charges by this kind of electrostatic induction.

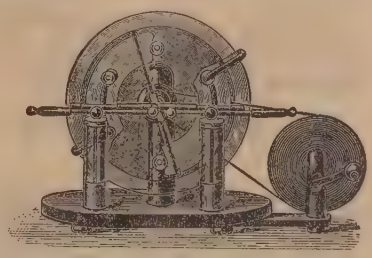

Fig. 1. Electrostatic Induction Machine.

Electric Currents.—In the last paragraph what are called *insulators* were rubbed together. If *conductors* are similarly rubbed and uninsulated, the electricity generated immediately flows away so that the negative and positive electricities, as they are termed, merge and no effect is evidenced. Substances, such as rubber, shellac, dry wood, glass, paper, etc., are insulators, as they will not thus readily conduct electric charges; while metals which readily conducts the charges and some other substances which can conduct to a greater or less extent, are called conductors, or semi-conductors. Most liquids, likewise, permit the flow of charges of electricity, but in the process change their chemical constitution. Such substances are called *electrolytic conductors*.

From this explanation, it is evident that when an electric charge leaks away from a charged body, the rate of flow of that electricity may very properly be termed, and is termed, an *electric current*. Such electrical currents have many characteristics quite similar to the flow of water or other liquids, but it must be borne carefully in mind that the electric current is more of the nature of a rate of vibration.

Flow of electricity may be divided into two general classes: *direct currents* and *alternating currents*. In the former, the electricity flows through the conductor of the circuit always in the same direction, while in the latter it flows back and forth. In most cases, *electric circuits*, as they are termed, or the paths of conductors, through which electric currents flow, are closed. That is, the electricity circulates entirely around its circuit very much like water if it were pumped from a lower reservoir to a higher, and then permitted to flow back through pipes or water wheels or other paths to the lower reservoir again.

Thermal Electricity is induced by the heating or cooling of the junctions of dissimilar metals. Thus, if a wire of brass has its two ends connected to the two ends of say, a wire of iron, and has one of the junctions between the two metals heated, while the other remains cool, a small current of electricity will flow around the circuit composed of the two wires of iron and copper. Figure 2 is a number of these junctions grouped together and called a thermopile.

Electrolysis.—When two plates, called *electrodes*, of metals are immersed in a liquid salt or acid, called the *electrolyte*, a current is caused to flow through the circuit of the two plates and the liquid itself. Chemical separation of the com-

ponents of the liquid takes place, which, as a result, frequently causes the decomposition of one or both plates. This breaking up of a liquid into components is termed *electrolysis*. The plate from which the current flows into this electrolyte is termed the *anode* and that to which it flows is termed the *cathode*. It is by this effect

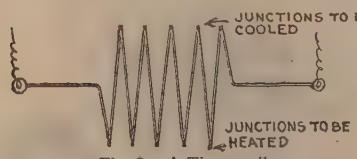

Fig. 2. A Thermopile.

that electroplating and electrotyping are done. Thus, to copper plate, the electrolyte may be copper sulphate solution, the anode a copper plate, and the cathode the object to be plated. Figure 3 exhibits a plating vat. By the same process metals may be purified.

Electromagnetism and Magnetism.—When an electric current flows, it is surrounded by a swirl of *magnetic flux*. That is, *magnetic material* brought near such a current will be affected thereby. The *magnetomotive force* of the current which sets up this flux may be concentrated by winding the wire carrying the current into a coil. If then a bar of magnetic material, say soft iron, is inserted through the opening of the coil it will become *magnetized*. Such an arrangement of coil with an iron core is called an *electro-magnet*. When the electric current is withdrawn by breaking the circuit, or otherwise, most of the magnetism in the iron disappears from the soft iron core; if, however, the bar is of hard steel, much of the magnetism remains, making a *permanent magnet*.

A magnet has two poles, one at or near each end, called respectively north and south, or positive and negative. The positive pole of a freely swinging magnet

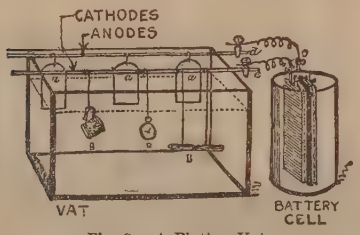

Fig. 3. A Plating Vat.

points North, the negative South. Unlike poles attract, and like repel. Iron, steel, nickel, cobalt and some other materials are capable of being magnetized when brought near an electric current or another magnet. The ancients knew the lodestone, an iron ore, which is magnetic. If a strong magnet is brought near iron filings, it will pick them up as its influence is to make each of the filings a small magnet. The magnetic flux of the magnet passes from the north pole in curving lines to the south pole, called the positive direction, and the filings tend to arrange themselves in the direction of this flux with their poles in relatively the same direction to it. Figure 4 shows an electromagnet which is holding a string of iron pieces, by magnetic attraction, having induced in them temporary magnet poles. This attractive power is used in much electrical machinery.

Voltage, Power, Heating, etc.—Some impelling force is required to set up an electric current just as water flows by reason of a change in its level, or by some such force as that exerted by the propeller of a vessel or piston of a pump. This force is called *voltage* and its practical unit of measure is the *volt*. The practical unit of current is the *ampere*, and of electrical power, the *watt*. The watt is equal to $\frac{1}{746}$ of a horse power. The resistance to the flow of current in a circuit is the *impedance* and its practical unit in the *ohm*. The amperes of current which will flow in a circuit is equal to the ratio of the volts of voltage to the ohms of impedance in the circuit—this is a generalized statement of Ohm's Law. The amperes or volts of an alternating current or voltage is the *effective* or working value (a value obtained by taking the square root of the instantaneous values squared).

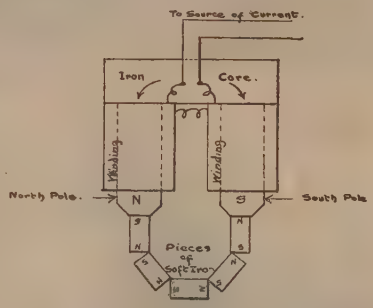

Fig. 4. Electromagnet Holding Up Iron Blocks.

The power expended in a circuit is equal to amperes of current squared multiplied by the ohms. The expenditure of this power produces heat, mechanical work, chemical energy, or light depending upon the kind of circuit. Some heat, however, is always produced. In the case of a circuit in which heat only is produced, the watts equal the product of amperes and volts—as where a uniform direct current passes through an ordinary wire. In such a case the impedance is due entirely to the size and material of the wire. Impedance of this kind is called *resistance* and it is this part of impedance that was used in the statement of Ohm's Law as early enunciated.

Induced Current and Voltage.—If a wire is moved across a magnetic flux emanating from a magnet pole, it is said to "cut magnetic lines of force" and a voltage is induced in the wire; if the wire is part of a closed circuit, a current flows by reason of this voltage. This is the basis of the *dynamo*. If this circuit, while the wire is under the pole, has a current sent through it from another source and is free from restraint, it moves across the flux because of the mutual attraction of the magnetic flux from the pole, and that of the current. This is the principle of the *electric motor*. While moving, such a "motor" wire sets up a *counter voltage* by reason of its cutting the flux as it moves, while the "dynamo" wire opposes its being moved due to the magnetic attractions.

Changes of magnetism within a coil tend to set up a voltage therein. So that if a soft iron core has two coils wound upon it, and a variable current, causing a variable magnetic flux in the iron, is sent through one coil, a varying voltage is set up in the other due to the changing flux. This is the principle of the *transformer*, which uses alternating currents. The first coil will also have internal counter voltages within it, due to the same flux variation; such voltages set up in any circuit by the magnetic effects of its own currents, are voltages of *self induction*, while those in another circuit due to the current in the first are voltages of *mutual induction*.

Electrotherapeutics.—Many electrical manifestations have a marked effect upon living structures and tissues, and by the use of these effects much advance had been made in medical science.

Electromagnetic radiation.—This form of electricity is similar in many of its characteristics to light, and it is by means of the transmission of energy in this form that wireless telegraphy and telephony are accomplished.

Batteries.—When two sheets of dissimilar metals are placed within a liquid salt or acid, which has a tendency to attack one or both of them chemically, the two plates assume differences of electrical potential, or there is a voltage between them, and a current tends to flow through a circuit completed by connecting a wire between the plates. Such an arrangement is a *primary battery cell*. The necessary energy to keep this current flowing is furnished by the chemical action which takes place within the cell. One of the simpler battery cells is the Daniel.

Figs. 5, 6. Daniel Gravity Cell; Carbon Cell.

Figure 5 illustrates the gravity form of this cell. A plate or a crowfoot of zinc is placed in the upper part, while a copper sheet or sheets are placed in the bottom. The electrolyte may be made by placing crystals of sulphate of zinc and water in the vessel. The current flowing from the anode, when the circuit is closed between the plates, carries away zinc which changes the liquid in its neighborhood to zinc sulphate. The copper, which is freed from the liquid by this means, is deposited on the copper plate, thus tending gradually to increase its weight. In this case, as in the case of most commercial batteries, the consumption of zinc furnishes the energy which drives the current. Another cell illustrated uses zinc as the anode, negative electrode, and carbon as the cathode, positive electrode. The electrolyte in this case is ammonium chloride. The surface of the carbon is made very large to reduce the *polarization, i. e.*, the collection of hydrogen on the cathode, which interferes with current flow. Such cells are used largely for ringing door bells, operating telephones, etc. Figure 6 illustrates a battery of this kind.

An improvement upon this type of cell is the Leclanche cell. About the carbon plate are placed blocks of dioxide of manganese. These blocks tend to absorb the hydrogen which is freed when the current flows, and thus prevent rapid polarization. *Dry cells*, built on the general principles of the zinc-carbon cell just described, are now much used. In these the liquid ammonium sulphate is replaced by a paste, but the reactions are very much the same

as in the wet cell. There is a wide variety of battery cells using other chemical reactions than those given here.

The storage cell or battery is one form which energy may be discharged through a circuit and then be recharged by connecting it to a dynamo, or some other primary source of energy. The most common form of storage battery cell is one in which the positive electrode is largely peroxide of lead, and the negative electrode, spongy lead; the electrolyte being dilute sulphuric acid. When current is discharged from this cell, both plates tend to become lead sulphate. When being charged by a current forced through in the reverse direction, from a dynamo or other source, the electrodes tend to return to the chemical condition required for discharge. Figure 7 shows a battery cell of this type having nine plates; five negative, and four positive.

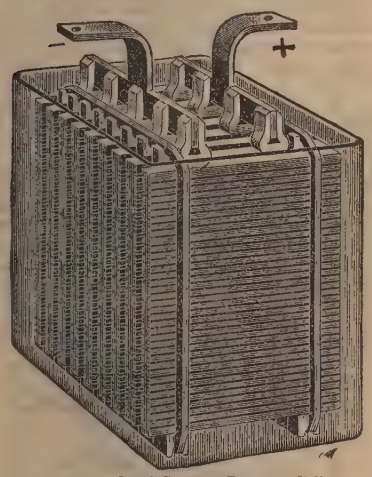

Fig. 7. Lead Storage Battery Cell.

Other forms of storage batteries are also in use, the most important of which is the Edison, the plates of which are nickel oxide and iron oxide, and the electrolyte potassium hydroxide.

The voltage varies in various forms of common primary cells from something less than one to almost two volts, while in the lead storage batteries, the voltage of full charge is about 2.6 volts.

The voltages of a number or *battery* of cells can be added by connecting the positive plates of one cell to the negative of the next and so on.

Distribution.—The distribution of electrical current, whether generated by batteries, dynamos, or in any other manner, can be readily accomplished through the medium of metal wires properly insulated to prevent the electricity from leaking away from the path it is desired that it should take. Copper wire for ordinary transmission of power for lighting, motors, heating, etc., is almost universally used, while the power is generated by means of dynamos hitched to steam engines, water wheels, or other prime movers.

Resistance.—A wire offers a resistance to the flow of current which depends inversely upon its cross section and directly upon its length, as well as upon the material of the wire. The resistance of a copper wire is, $\text{ohms} = \frac{10.6 \times \text{length}}{\text{cross-section}}$ where the length is measured in feet, and the cross section in circular mils (the circular mil being the area of a cylindrical wire .001 inch in diameter), and 10.6 is the resistance of a copper wire one foot long and .001 inch in diameter. This resistance varies slightly with the temperature. It was stated earlier that current flow is dependent upon this relation: $\text{amperes} = \frac{\text{volts}}{\text{ohms}}$. These are the most important relations for line calculations where the resistance of the material of the wire is the only opposition to current flow, and is therefore the impedance of the circuit.

As an example, let us suppose that a dynamo generating 120 volts is to supply 100 amperes to a group of electric lamps situated 1000 feet away, and that the voltage used in the lamps is 110, so that 10 volts are left to force the current through the wires leading from the dynamo to the lamps. What now is the size of copper wire which will be required to enable the transmission of the electrical current from the dynamo to the lamps under these conditions? First, in the above formula for amperes there results, $100 = \frac{10}{\text{ohms}}$, or ohms=.1. Substituting this and the distance from the dynamo to the lamps and back gives, $.1 = \frac{10.6 \times 2000}{\text{cross-section}}$, or cross section=216,000 circular mils, which from a wire table is found to be very nearly a number 0000 wire of Brown and Sharpe gauge. By increasing the voltage, the cross section of wire, for the transmission of a fixed amount of power can be decreased inversely as the square of the voltage without changing the power lost in the wire, hence the advantage of having high voltages for the long distance transmission of power.

The relations as given above are accurate when applied to circuits using direct current. If alternating currents are used, the result obtained must be multiplied by a factor, called the *power factor*, as a larger opposition or impedance is offered to the flow of an alternating current than to a direct. The amount of this additional opposition is dependent upon the special conditions of the case, and for information in regard thereto, handbooks or standard text books should be consulted.

Electric power is transmitted by direct currents for distances up to a few miles and at voltages commonly not over 600 volts, and alternating currents for distances up to more than 100 miles and at voltages up to more than 100,000 volts.

The Alternating Current Systems may be divided into *single phase* and *polyphase*. As explained earlier, the alternating current is like waves of electricity rushing back and forth through the circuit. A single phase current is represented as in Figure 8 where horizontal distances repre-

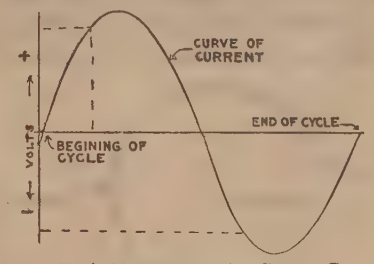

Fig. 8. Single-Phase Alternating Current Curves.

sent time in seconds, while vertical distances represent amperes, thus as time progresses, the current grows from zero up to the maximum in amperes, back to zero, to the maximum in the opposite direction and back to zero again, and so on repeating this *cycle* as long as the current flows. The time consumed per cycle is called the *period*. The *frequency* or the number of cycles per second in commercial work varies from twenty-five to sixty ordinarily; sixty being the common frequency used for lighting purposes. Quarter-phase currents—one of the polyphase systems—is shown in Figure 9.

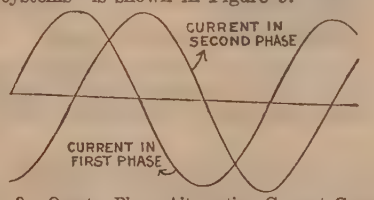

Fig. 9. Quarter-Phase Alternating Current Curves.

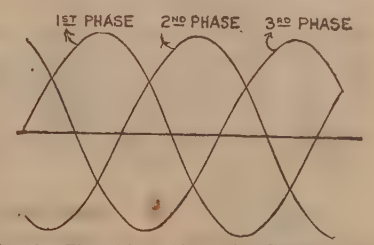

Fig. 10. Three-Phase Alternating Current Curves.

Here one of the curves rises a quarter of a period, in time, behind the other and maintains this time relation. Three-phase currents — another polyphase system — are illustrated in Figure 10 where three curves of current are seen to rise successively one-third of a period apart.

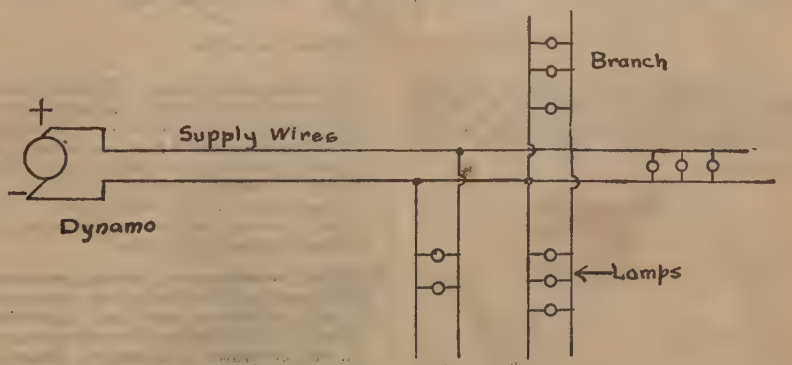

Fig. 11. Simple Two-Wire Circuit.

Direct and single-phase currents may be transmitted by two wires running between the *load* and dynamo, as shown in Figure 11. The small circles represent groups of lamps or motors which are connected across the wires or in *parallel*. When lamps are as in Figure 12, they are said

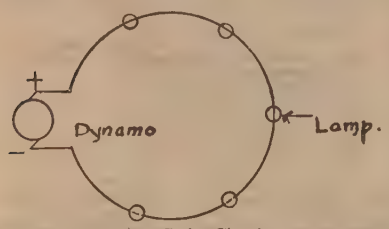

Fig. 12. Series Circuit.

to be connected in *series*. The well known Edison three wire system is a modification of such a simple circuit, in which two dynamos or other source of power are used and a considerable saving of copper is accomplished. This is shown in Figure 13. Quarter phase currents usually have

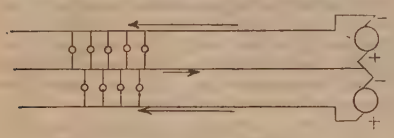

Fig. 13. Edison Three-Wire Circuit.

two independent two-wire circuits, one for each phase, or they may use a common return, as shown in Figure 14 a, and b.

Fig. 14. Quarter-Phase Circuits.

Each phase of the three-phase system may have independent two-wire circuits, though ordinarily the sides of the independent circuits are combined so that three wires only are necessary. Such circuits are commonly connected up to the load in *star* or *wye*, as shown in a, Figure 15, or in

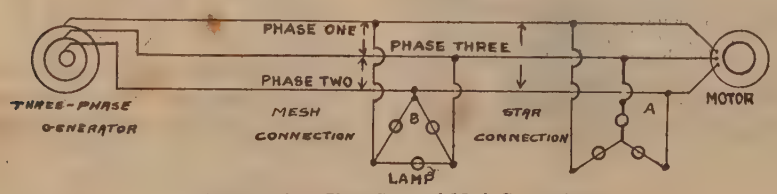

Fig. 15. Three-Phase Star and Mesh Connections

mesh or *delta* as shown in b of the same figure. A greater number of phases are also now and then used, more particularly for operating what are termed rotary converters.

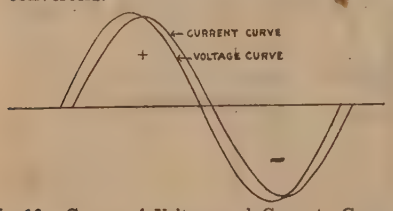

Fig. 16. Curves of Voltage and Current—Current Lagging.

Size of Lines, usually of Ohm's Law, and the variation of resistence of metal wires directly as their length and inversely as their cross section, are the basis for calculation of size of lines for any of these systems, remembering that alternating current systems must use also an additional factor depending upon the local conditions. This factor is usually caused by the tendency of the wave of current to lag behind the wave of voltage in the line—see Figure 16—which in turn is caused by electric magnetic inertia of the circuits. This inertia effect is caused by a change of magnetic flux about the conductor as the waves of the current rise and fall. These changes in magnetic flux set up counter voltages in various parts of the circuit which impede and delay the rising or falling of the current. The current sometimes leads the voltage of a circuit—see Figure 17—though this is not so common—due to

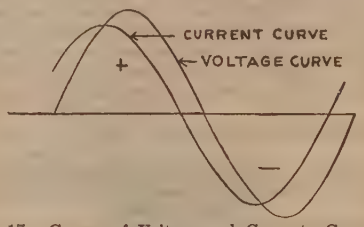

Fig. 17. Curves of Voltage and Current—Current Leading.

the variation of the static charge in the circuit as the voltage changes. The measure of the amount of charge a circuit will take by reason of a unit voltage is its *capacity*. The leading or lagging current may also be caused by certain types of electrical machinery which may be regulated to produce this effect. Each phase may be dealt with separately in polyphase circuits when the phase wires are independent, but where they are not independent, calculations are not so easily made. In a *balanced* three-phase system, *i. e.*, where the conditions of load, voltage, etc. are the same in each phase, the total power is equal to the square root of 3 times the power in each phase.

Electric power in watts is always equal to the *product of the instantaneous values of the voltage and current*. Figure 18 shows a curve of power from an alternating current circuit where the current is lagging. The average power is less than would have been the case had the voltage and current been in consonance and has a ratio to such a value equal to the power factor. With direct currents the power is constant for constant amperes and volts.

Electrical Generators.—Electrical generating machinery may be divided in two classes, namely, direct current and alternating current. The simplest form of alternating current generator is shown in Figure 19. In this figure is seen an electromagnet excited by current from an external source, which sets up a heavy flux between its poles. Between the poles is placed the *armature* marked A. This armature consists of a ring or cylinder of iron made up of thin circular stampings or *laminations*, which prevent large induced currents from flowing in the iron—such stray currents

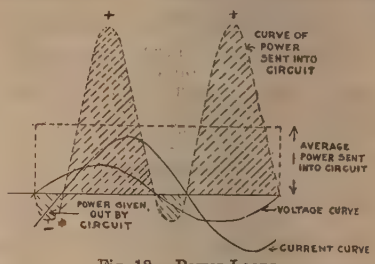

Fig. 18. Power Loops.

are called *eddy currents*. Wrapped upon this ring is placed a coil of insulated wire. The coil conductors when rotating cut the magnetic flux from the poles and set up a voltage. The ends of the coil are attached to the two rings B and C, and upon these rings, called *collector rings*, are placed *brushes*. If these brushes are connected to an electric circuit, the electromotive force set up will send a current through the circuit. When the coil moves 180° from a vertical position, the current goes through the external circuit in one direction; during the second 180° the coil cuts the flux in relatively the opposite direction, hence the current is reversed, thus a complete cycle of alternating current is generated for each rotation.

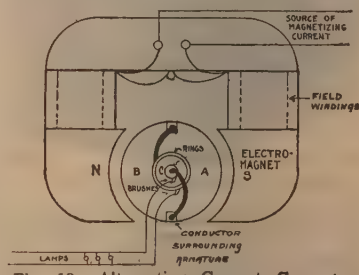

Fig 19. Alternating Current Generator.

Dynamo.—If now the terminals of the armature coil are connected to two half rings, as shown in Figure 20, at the instant the current reverses in the coil the half rings have exchanged brushes so that the loops of current from the coil always flow from the brushes to the external circuit

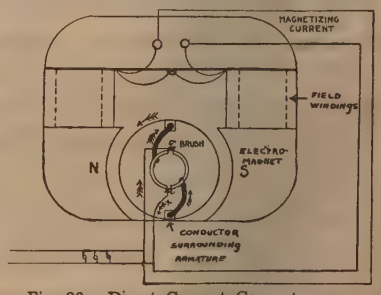

Fig. 20. Direct Current Generator.

in the same direction. Such an arrangement of half rings is called a two bar *commutator*, and such a machine is a direct current generator or *dynamo*. A large number of coils of several turns each are ordinarily placed upon the armature, which connects to a commutator having a large number of bars. A simple ring wound armature with four poles is shown

in Figure 21. In this case, the current passes in as many paths as there are poles from the minus to the plus brushes, and the voltages of the coils in each path add, thus making a higher voltage than that of one coil and one which is almost constant in value.

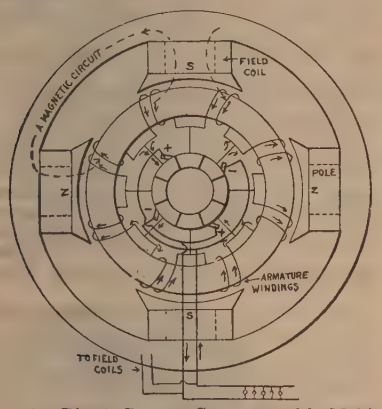

Fig. 21. Direct Current Generator with Multiple Coil Armature.

The electromagnetic *field* of such a machine may be excited by running part or all of the rectified current from the commutator through the field coils. The generation of voltage is started by the armature conductors cutting the *residual magnetism* of the poles. If all of the current coming from the brushes is carried through the field coils, so that these coils are in series with the external circuit, the field winding is said to be in series, or the machine is *series wound*, and the magnetic excitation and voltage increase with the current. If, on the other hand, the field coils are connected in parallel or shunt with the external circuit, the machine is *shunt wound*, and the voltage drops slightly with the current. A machine in which the fields are excited by both shunt and series coils is *compound wound*. In a compound generator, the voltage may be made almost constant for all currents, or may be made to rise with the current to compensate for drop of voltage in the transmission lines. Figure 22 on Electrical Science plate, shows two modern dynamos connected to a turbine, with

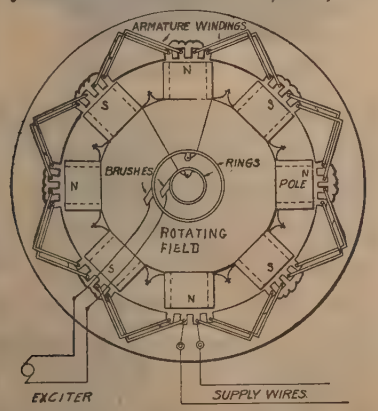

Fig. 23. Single-Phase Alternator.

eight poles and eight brushes. The armature coils of all large direct and alternating current machines are laid in *slots* on the surface, spanning from pole to pole.

The Alternator or alternating current generator, unlike that shown in Figure 19, usually has a large number of poles, running from six or eight up to thirty or forty, or more. There are also as many coils on a single phase machine as there are poles, or half that number. The poles are alternately north and south and the coils are so connected in series so as to give the sum of all the coil voltages between the armature terminals as shown in Figure 23. Four slots in the surface are here

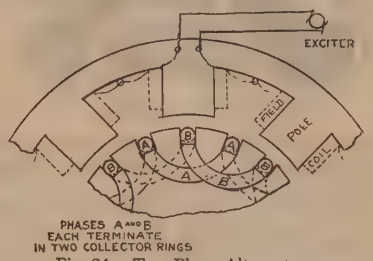

Fig. 24. Two-Phase Alternator.

used for each coil and the coils are wound alternately right and left handed. In alternators the fields usually revolve and the armature is stationary as indicated in this figure. In polyphase machines, additional sets of winding like those shown in Figure 23 are inserted between the windings of the first phase; thus Figures 24 and 25 indicate two phase and three phase windings the first with a rotating armature and the second with a second rotating field. The field exciting current for alter-

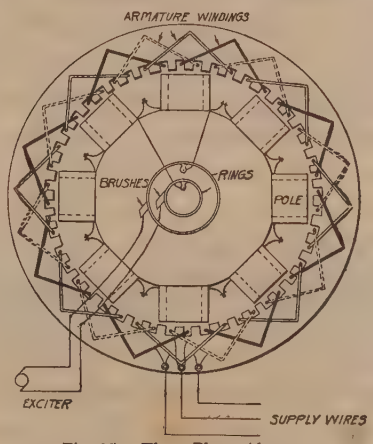

Fig. 25. Three-Phase Alternator

nator fields is usually furnished by a small direct current generator called an *exciter*. The voltages of alternators range from any low voltage up to as high as fifteen or more thousand volts, and their sizes range from the smallest battery dynamo, of a fraction of a horse power to as high as thirty to forty thousand horse power capacity. Figure 26 Electrical Science plate, is a large, modern, three phase alternator connected to a steam turbine.

Electric Lighting.—During the last fifty years, arc lighting has been highly developed. Figure 27 represents an electric arc. *Arc lamps* consist in principle of two cylindrical carbons, or electrodes, which can be maintained a small constant distance apart by some type of electromagnetic control and between which a current flows forming an electric arc. Such a lamp is shown in Figure 28, Electrical Science plate. Here the "carbons" are at a, a, and the coil of wire, or *solenoid*, and loose iron core which sucks in and draws them apart to the proper distance, is shown at b. If the arc becomes so long that it breaks, or the current is much weakened, the magnetic force of the solenoid becomes less and its core, to which the mechanism is attached, drops back and the carbon is permitted to slip down through a clutch at c. When the solenoid again becomes strengthened, it pulls up the core and, by means of the clutch, raises the carbon again to a proper distance. Modern carbon lamps usually have the arc enclosed by small globes as shown in the figure. The enclosure is not absolutely air tight, but permits the escape of gases caused by the burning carbon, while not permitting the carbon to be consumed by the entrance of much air. By this means, the life of the carbon has been increased from eight and ten hours to over one hundred. The luminous or magnetite arc lamp, which has been developed within the past few years, has proven more economical in the use of power for the amount of light given out

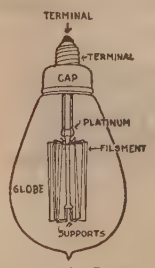

Fig. 29. An Incandescent Lamp.

Fig. 27. An Electric Arc

than the carbon type. It is useful, however, only in large spaces or out of doors as it generates unpleasant fumes. In this lamp a piece of copper is used for the upper electrode and a cylinder of an iron compound is used for the lower. The lamp only uses direct current, while the carbon lamp, with proper modifications, uses both direct and alternating currents. The flaming arc lamp is also becoming quite common and is a very efficient source of light. This lamp is quite similar to the carbon lamp, except that the carbons meet diagonally and are impregnated with salt, which when burning, gives out an intense illumination.

Incandescent lamps were developed shortly after the arc lamp, the most important improvement being made by Thomas A. Edison. The original lamp has a filament made of bamboo which has been carbonized by a proper process of baking. This carbon filament is enclosed in a glass bulb, from which the air has been extracted. The ends of the filament are attached to wires which lead to the outside. The parts of the wires leading through the glass are made of platinum or suitable alloy, as platinum and glass expand at the same rate, approximately, and thus no air can leak through the joint. The wires after leaving the bulb are attached to a suitable pair of terminals which, when the lamps are screwed into the electric light socket make a complete circuit from the external electric light wires through the filament of the lamp. A small current passed through the high resistance of the carbon filament causes a sufficient rise of temperature to bring the filament to an intense yellowish white glow. The modern carbon filament, lamp is essentially the same in principle but the filament is made by squirting a liquid hydro-carbon compound through a dye, hardening, and then carbonizing it.

Figure 29 shows an incandescent lamp with a tungsten filament. The filament in the modern lamp is given a uniform cross section by special treatment sometimes called flashing, and frequently it is given a special hardening treatment which improves its efficiency. During the last few years, what are termed metallic filament lamps have been invented and have become successful. The first of these to be developed commercially was the tantalum lamp, in which the filament is a fine wire composed of tantalum. A short time later the tungsten filament lamp was developed and has now come to be used extensively.

The carbon lamp uses from three to four watts of electrical power for each unit of light given out, while the tungsten lamp uses only about one and one-fourth watts for the same amount of light. The metallic lamps are practically the same in construction as the carbon, except that the filaments are usually made either of a compound of fine tungsten or other metal combined with a proper binder, or of a tungsten alloy.

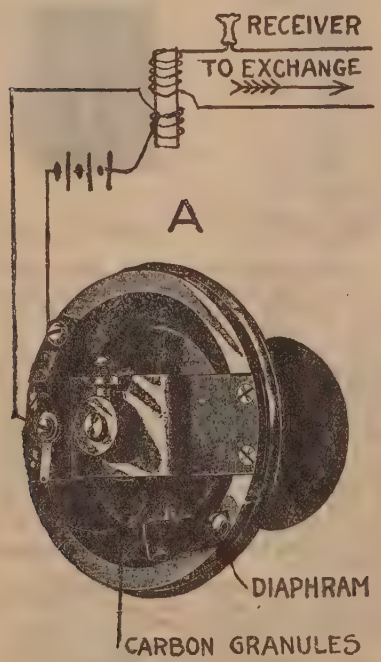

Fig. 31-A. Telephone Transmitter.

Incandescent lamps are built from a very small fraction of the light of a *candle power* to that of several hundred candle power, while arc lamps of various types can be built from a few hundred candles up to many thousands of candles. By a *candle power* is meant the unit measure of light, and it is not far from the light given out horizontally by an ordinary sperm candle. The ordinary rating of incandescent lamps is on the basis of the average horizontal candle power; thus, a 16 candle power lamp is one that gives an average light in the horizontal direction equal to 16 candle power.

Other Lamps.—Besides incandescent and arc lamps, recent years have brought forth other electric lights based upon different principles. For instance, the Cooper-Hewitt lamp consists of an exhausted glass tube into which a little mercury has been placed, and which has terminals running through the glass. When the current is started through this tube, mercury vapor conducts the electricity, giving forth, at the same time, a brilliant illumination of green-

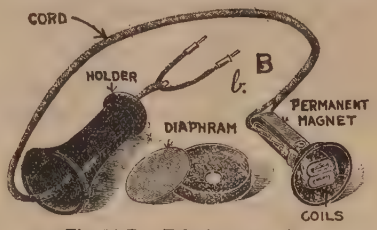

Fig. 31-B. Telephone Receiver.

ish color which is not very satisfactory for ordinary daily use. Ordinary lamp voltages may be used for this lamp, *i. e.*, from 100 to 220 volts. Another light may be made by exhausting a glass tube and applying to wires passing through the ends an extremely high voltage from the secondaries of the transformer or induction coil. The light may be given different colors by placing different materials within. Its normal colors, however, is very white and close to that of daylight.

The Nernst incandescent lamp which uses oxides of certain rare earths as the filament is quite efficient and can be burned without being inclosed in a vacuum. As the filament of this lamp is a conductor only when hot, special means must be adopted to get it started.

The Telegraph.—The electromagnetic *telegraph* was invented by Morse between the years of 1840 to 1845. As finally perfected in its simplest form, the system consists of a line between stations carrying a uniform current of electricity at all times when the instruments are not working. A *sounder* is introduced at each station. This sounder is an electromagnet which is arranged to attract a piece of soft iron, or *armature*. If the current is interrupted, the armature is pulled upward by means of a spring, thus making a click. When the current is allowed to flow again, the armature is pulled down by the magnet and another click occurs. By the arrangement and length of time between these clicks, signals are sent. The basis of such signals is the well known Morse code. In each station placed with the sounder is a *key* whereby the operator may close and open the electrical circuit. When the instrument is not in use, a switch keeps the circuit closed, so that at any time the operator may, by opening the switch and using his key, send impulses of current through the line, which will affect the sounders in all of the stations connected thereto. The ground is usually used for the return current, which is not possible for transmission of larger currents. Figure 30, Electrical Science plate, shows a telegraph set and diagramatically the arrangement of such a system. In a long line, having high resistence to the flow of current, it is usual to put what are called *re-lays* at each station, which are built on the principle of the sounder, but are more delicate and do not give a good sound. The re-lay, when its armature moves, makes and breaks an electric contact in which an ordinary sounder and battery is placed. By proper arrangements, it is possible to send two, three, or four messages, or even more at the same time over the same line. This *multiplex* telegraph, as it is called, is somewhat complex in details of arrangement, but is based upon simple electrical principles.

Telephone.—The most important principle of the *telephone* was discovered by Alexander Graham Bell within the last thirty-five years. In this instrument as in use to-day, the *transmitter* consists of a diaphragm of metallic or other flexible substance bearing upon a pocket full of carbon granules, see Figure 31A. The pocket of granules forms part of a circuit of a battery, and when the diaphragm receives the air waves due to a voice or other sound, it alternately compresses and releases the granules, thereby changing the resistance to the flow of current from the battery. This sets up waves of current through the battery which are similar in form to the waves from the voice. This battery current also passes through the primary coil of an induction coil or transformer. The current from the secondary coil of this transformer passes through the lines to the instrument where the message is to be received.

The *receiver* contains a permanent magnet upon the ends of which are coils, which are attached to the line, as shown in Figure 31B. The talking current from some other instrument coming in on the line wire and going through the coils at the ends of the permanent magnet, varies the magnetic flux. This variable magnetic flux causes an iron diaphragm placed close to the end of the magnet to be attracted proportionately to the current flowing. Thus it is vibrated in such a manner as to give out air waves which are similar to those of the voice which orginally spoke into

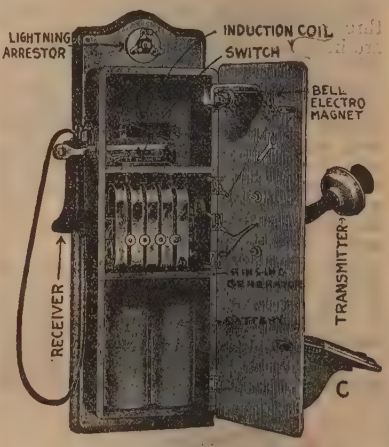

Fig. 31-C. Telephone Magneto.

the transmitter at the other end of the line. The receiver holder is a switch for cutting the instrument into and out of service. Signaling between different telephones is frequently done by a *magneto;* a magneto being a small alternating generator having a permanent magnet for its field (see Figure 31C). In order that large numbers of telephone users may be connected properly one with another, a *central exchange* is required. Thus the lines from an instrument pass to connections on a *switchboard* in the exchange, and by having all lines properly connected into *switches*, or circuit closing devices, it is possible for an operator to connect any two subscribers together. The operator has an operating set so that she can, by means of switch connections, talk to any subscriber and find out what is wanted. When the subscriber calls, a signal is given at the switchboard either by the moving of a small piece of iron, called a *drop*, or by the lighting of an incandescent lamp. A

similar signal occurs when the conversation is completed. The most modern systems do not use the magneto, but have what is called a *central energy battery* at the exchange. This battery is so attached that it sends a current out on all lines and gives the necessary talking current, as well as furnishing the proper power for making signals. In such systems, to signal the telephone operator, remove the receiver from its hook; the hook being a switch properly arranged for the purpose. By *trunk lines* between various exchanges, it is possible for the telephone subscriber to be put in connection with any one of many millions of other subscribers.

Electrical bells and alarms are similar in many respects to telegraph instruments. Figure 32 shows an electric bell. An iron

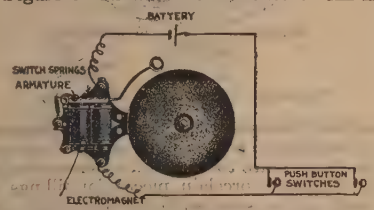

Fig. 32. Electric Bell and Circuit.

armature is placed in front of the poles of an electro-magnet. When the current flows through the magnet, the armature is attracted and causes the hammer of the bell to strike. When this armature thus moves, it opens a switch, breaks the current, allowing the armature and tapper to be pulled back by a spring. When this happens, the connection is again made, so that the tapper is again thrown forward. In this way, by continual tapping, the bell rings. The push button is a switch for closing the circuit.

a magnetic field, it has a tendency to move, and this tendency causes the motor to rotate. The motor acts as a dynamo by generating a voltage which is called counter electromotive force, and it is the difference between the voltages of the supply wires, and this counter electromotive force which drives the current

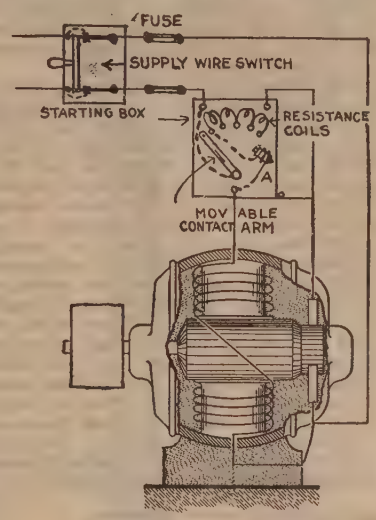

Fig. 33. A Shunt Motor Connected with a Starting Rheostat.

through the armature. A motor requires a special resistance in series with the armature at starting to prevent an excessive flow of current. After it has been properly started, this can be cut out, as then the counter voltage generated in the windings of the armature, as they cut

used as a motor must run in what is called *synchronism* with the frequency of the alternating current supplied to it. Otherwise, as the current reverses in the armature the tendency would be as much to turn the armature in one direction as the other. When running in synchronism, the current from the supply wires reverses in exactly the same length of time that is taken for the motor armature to travel the distance of one field pole to the next. In the same way, when two alternating current generators are connected to the same system; that is, *running in parallel*, they must be brought into synchronism so that their current impulses will act uniformly and together. Synchronous motors must be brought to synchronism by some external device, such as a special starting transformer, or by means of a small motor or steam engine.

The most common form of alternating current motor is an *induction motor*. The polyphase type of this motor, which is the one most frequently seen, has what is termed a *rotating magnetic field;* that is, by connecting a polyphase system to a set of windings, exactly as they are connected in a polyphase alternator, one phase to each coil, the magnetic fluxes set up by the three currents so combine as to cause a resultant magnetism to whirl around through the polar space. The armature is commonly a core of laminated iron having many conductors in slots on its surface, parallel to the axis and closed, or short circuited, by conducting rings at the ends. The rotating flux passing over this network of conductors induces currents therein which are attracted in turn by the inducing flux, and thus the motor armature is caused to rotate. (See Fig. 34, Electrical Science plate.) A small special transformer or *auto-transformer* is used to lower

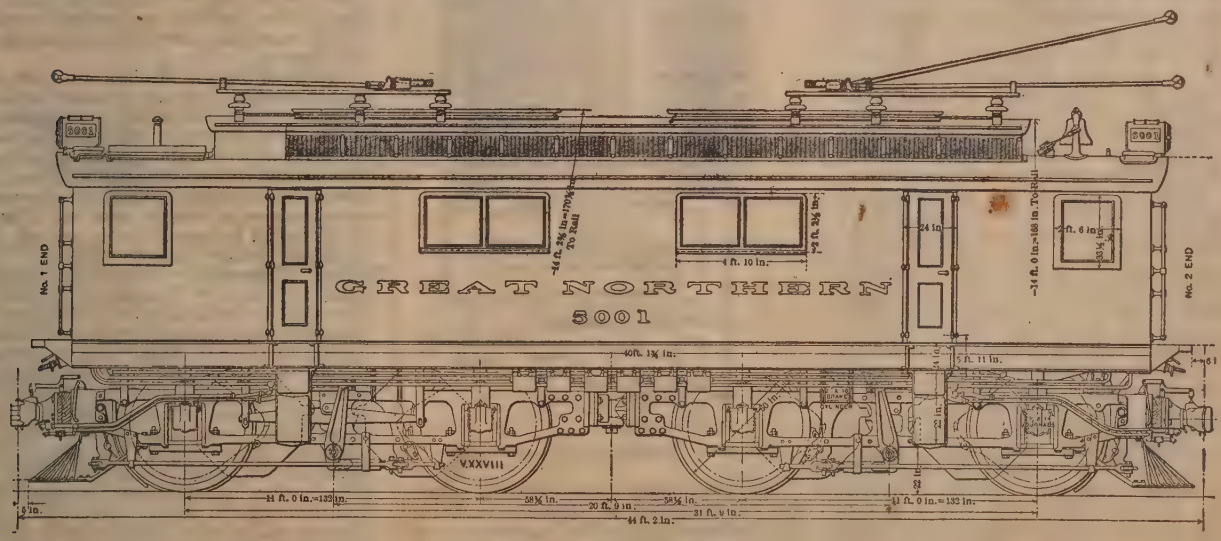

Fig. 36. An Electric Locomotive.

Electric Motors.—One of the widest fields for the application of electrical energy is by means of the *electric motor*. A direct current electric motor is similar to a direct current generator in all of its principal features, and indeed any direct current generator can be used as a motor. Its terminals are connected to the supply wires of some generating electrical system and current is forced through the fields and the armature. As explained earlier, when a wire carrying current passes through

through the flux, will oppose the flow of an undue current. Figure 33 shows a shunt motor connected up to its controlling rheostat or resistance. At A is an electromagnet which holds the contact arm against a spring which pulls it back when the current stops flowing.

Alternating Current Motors are principally of two forms; one form is called a *synchronous motor*, and is merely an alternating current generator reversed. That is, used as a motor. Such a generator

the voltage on starting this motor to prevent too great a rush of current at that time.

One of the most common methods of applying electrical power is for *electrical traction work*. In this, heavy series wound motors of the direct current type are usually used, though series wound motors of much the same character, but using single-phase alternating currents of low frequency, are now becoming common and polyphase systems are sometimes employed

Such motors are geared to the axle of the car, and the current required is taken from the trolley wire overhead, or from an underground conduit, passes through the motor and then to the rail. The *controller*, or regulating impedance, is arranged to permit a wide range of current through the motors in order to give facile speed control. Figure 35 shows a diagram of the general

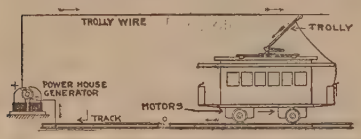

Fig. 35. Diagram of Trolley System.

arrangement in a trolley system. For direct currents, from five to six hundred volts is the most common voltage; while in the case of alternating currents, as much as eleven thousand or more volts are to be found between the trolley and rail. Instead of the trolley wire overhead, or a conduit underneath the tracks, heavy installations now and then use a third rail. Upon this rail a trolley shoe bears which is attached to the car and carries the current to the motors. Figure 36 is a large locomotive used for drawing heavy trains through a tunnel in the West. It uses three-phase induction motors and two trolley wires.

Transformers and Converters.—Rotary *converters* are machines for transforming alternating current to direct current or *vice versa*. The machine is similar to the direct current dynamo and has rings mounted upon its armature on the side away from the commutator. These rings are attached to the windings, and through the rings are led alternating currents from the power plant. When the machine rotates as a synchronous motor, direct current can be taken from the commutator on the other side of the armature. On the other hand, if direct current is run into the commutator, alternating current can be taken from the rings. Or again, if the machine is driven by a pulley, both alternating and direct currents can be generated at the same time. Figure 37 Electrical Science plate, is the armature of such a machine.

Electrical *transformers* are pieces of apparatus for the purpose of raising or lowering the voltage of an alternating current system; thus at the power plant, the voltage may be 2,500, while it may be desired to transmit this a long distance at 60,000 volts, for the purpose of reducing the size of wire; then when a town is reached it may be desired to reduce the voltage for distribution therein to 2,500, and still again at the various houses, or groups of houses, to which power is to be furnished for lighting, etc., it may be desirable to reduce the voltage to the safe values of from 110 to 220 volts. By means of transformers, these changes in voltage can be accomplished with very little loss. The transformers consists usually of a core of soft iron of the best quality—laminated to reduce eddy currents,—built up in the form of a hollow rectangle or rectangles. Upon this core and threading through it are placed two coils called respectively the *primary* and *secondary*. The power supply wires connect with the primary coil, and the secondary coil to the circuits beyond the transformer. The voltage at the terminals of the two coils is proportional to the number of turns in each coil; thus, if ten thousand volts are led into a primary and there are five thousand turns of wire in the primary coil, there will be approximately 2,000 volts in the secondary, if the number of turns of the secondary coil is 1,000. Figure 38 is a diagram of a transformer with two rectangular cores at right angles, the primary split into two partial coils, and arranged for immersion in oil. Sometimes a single coil only is put upon a core and connected to the power plant. Then various voltages are taken, obtained by tapping this coil at various points along its length. Such an arrangement is termed an *auto-transformer* or *compensator*.

Cutouts, Cables, etc.—In distributing electricity, various types of wires are used, although the most common is copper, due to its high conductivity. Aluminium is also much used; and for telegraph and telephone circuits iron is sometimes adopted. The usual wire or cable for medium voltage electric light and power purposes is of copper insulted with fabric and usually impregnated with a bitumen compound which will withstand heat and moisture. Very high or low voltage, overhead circuits are made of bare wire. Where wires are used in conduits under ground they are also covered with a water-tight lead casing. Underground conduit for holding such wires are frequently in the form of rectangular or circular terra cotta pipes which are imbedded in a concrete trench. Overhead wires are insulated from the poles by means of knobs of glass, porcelain, rubber, etc.

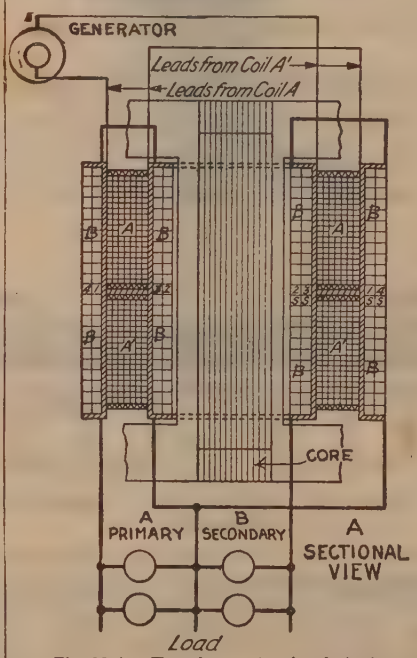

Fig. 38-A Transformer (sectional view).

The power plant of an electrical system has the wires from the dynamos carried to a switchboard which is of marble or slate, and having suitable *switches* and instruments thereupon for controlling and measuring the output. From this switchboard, the wires are carried throughout the district to be supplied. Figure 39 is a cross section of a power plant. The switchboard contains fuses or automatic electromagnetic circuit breakers which open a circuit when the current becomes too great through an accident or otherwise; likewise, at each transformer fuses are placed; where wires enter buildings; and in each branch from the *center of distribution* in a building. Fuses are made of a compound of lead and other substances which will melt at a low temperature, and should be of such sizes as to melt before the wires of the circuit are injured by overloading.

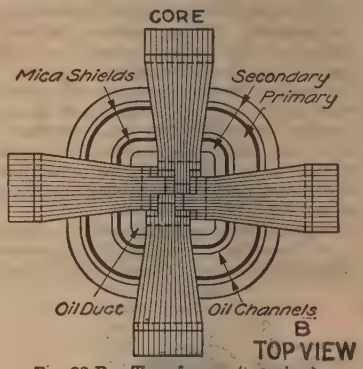

Fig. 38-B. Transformer (top view).

Electrical Furnaces and Heaters.—Electrical furnaces have come to be used quite extensively, and are to be found in sizes suitable for making porcelain pieces for fillings in teeth up to sizes sufficient to purify 200 tons of steel per day. Many of the small furnaces are made by winding high resistance wires in the form of coils in some heat resisting material. The larger furnaces which are used for making carbide, reducing iron ore, purifying steel, etc., usually make use of the intense heat or the electric arc. The apparatus is a good deal like a great lamp with carbons sometimes a foot or more in diameter, and six or seven feet and more in length and using thousands of amperes of current. Iron ore, or whatever is to be reduced, is placed in the path of this arc which has a natural temperature of about twice that of the melting point of iron. These furnaces are destined to take a very important place in the industries of the country.

Electrical heating devices are built on the same principle as are the small furnaces which use a wire heating coil. An ordinary electrical flat iron has a properly insulated coil laid just above the smoothing surface. The heating wire may be laid in a body of asbestos, or enamel, or may be uncovered as in the case of electric toasters. Figure 40 Electrical Science plate, is one of the numerous electric domestic utensils.

Wireless Telegraphy.—When an electric spark is caused by breaking a circuit, or otherwise, it tends to set up vibrations in the surrounding medium very much as when a pin is stuck into a dish of jelly and caused to vibrate by striking it, the vibration will cause a pin in the jelly at the other side of the dish to also vibrate. Therefore, the transmitting apparatus of the wireless telegraph consists of a transformer, or induction coil, which raises the voltage to a high value; a suitable switch for making and breaking the flow of current into the primary coil of this induction coil, and a suitable break or gap in the circuit connected to the high voltage secondary coil. The spark across the gap consists of a large number of rapid electric oscillations which disturb the surrounding medium. The receiving apparatus consists of a small tube containing silver filings. These silver filings form part of the local electrical circuit of a small battery. When the vibrations from the transmitting device fall upon these silver filings, they tend to cohere, or stick together, thus making contact and forming a conducting path for

current from the battery. The increase of current is sufficient to operate a telegraph sounder, also in the battery circuit. As the silver filings will not *decohere* readily, a mechanical device is used for shaking or hammering them loose after each signal. Figure 41, Electrical Science plate, shows one of these instruments, and also the principle upon which it operates.

A wireless telephone may be operated upon much the same principle as the wireless telegraph. In this case the disturbance in the surrounding medium, due to electrical stress, must contain waves caused by sound. The receiving apparatus is a properly arranged electrical circuit, containing an ordinary telephone receiver, which is affected by the disturbance.

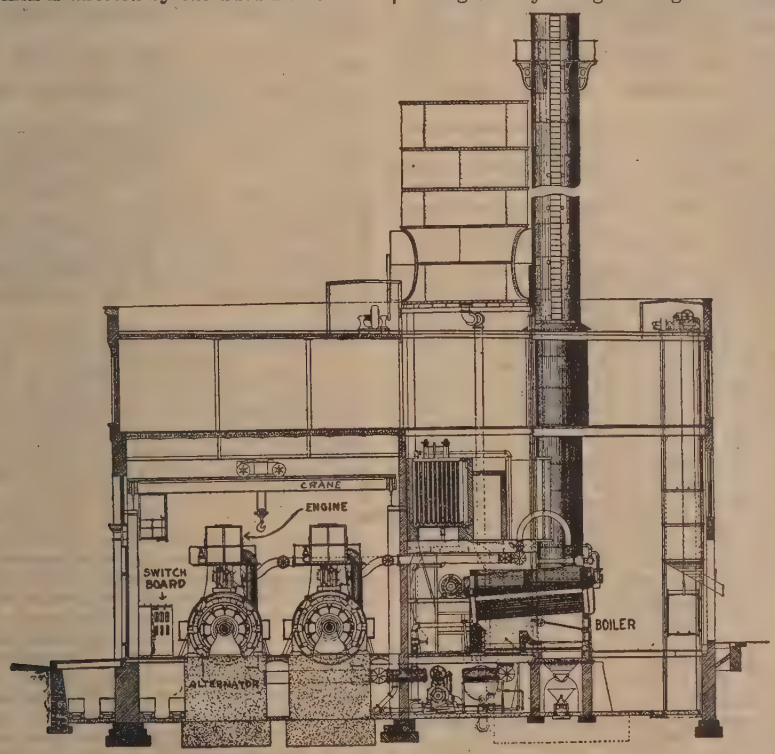

Fig. 39. Cross-Section of a Power Plant.

Roentgen Rays and Electrotherapeutics.—The Roentgen, or X-ray, is also a disturbance of the medium surrounding an electrical disturbance and is a most valuable servant in the field of therapeutics. The X-Ray, or Roentgen Ray, is obtained by connecting the high tension terminals of a transformer or induction coil to the terminals of a highly exhausted Crook's tube, which is a tube of glass having terminals for electrical connections extending within. Where all the conditions are right, the rays pass outward from the glass tube. They are able to penetrate many substances, such as the flesh of the human body, and they affect a photographic plate; so that if such an apparatus is placed above the hand and a photographic plate beneath, the Roentgen Ray photographs the bones of the hand, leaving the flesh a mere dim outline This is because the rays pass with greater ease through the flesh than through the bone. Electricity is valuable in many ways in surgery or therapeutics; thus, it is possible to have small electric lights which may be inserted in the cavities of the body for purposes of medical inspection. It is also possible to have properly mounted platinum heating wires which can be used in surgical operations requiring searing and burning. It has been found in many cases of bodily trouble that a direct current from a battery passed through the parts affected, will tend to perform the necessary change in the tissues through which it passes. It has been found also that the high voltage current of an induction coil when passed through the body, has a positive and important effect upon the nervous system, and the effect of placing or maintaining a very highly charged body near the patient is likewise found to have marked effect in the case of nervous disorders. In the last case there is what is called a *quiet* or *static discharge* of electric energy from the highly charged body. High voltage transmission wires make this quiet discharge evident on dark nights by a glow or *corona* about the wires. Contact with circuits of 1000 volts voltage or more is apt to be fatal to human beings, and circuits of lower voltages are dangerous.

Units of Measurement and Measuring Instruments.—The most common units used in electrical work have already been given; namely, the ampere, the volt, and the watt, or the kilowatt (=1000 watts). To these should be added the *kilowatt hour*, which is the common unit for measuring the amount of electrical power for a given time, or the amount of work actually performed. A definition of other electrical units may be obtained by reference to any good engineer's handbook. An instrument for measuring amperes, or an amperemeter, may be made by two coils of heavy wire, one fixed and the other movable, through which the current in the circuit passes. To the movable coil is attached a spring and a pointer. When a current passes through the two coils, their magnetic fluxes react upon one another, and cause the pointer to move. The scale under the pointer may be divided to read amperes. The voltmeter, for measuring volts, may be made in the same way except that it must be of high resistance, so that it can be placed between the points between which the voltage is to be measured without an excessive current flowing. Then the pointer, if the scale is properly calibrated, reads volts, as the amount of current flowing between the two points of connection must be proportional to the voltage of those points. The wattmeter, for measuring watts, may be made also in the same way, having one heavy coil in series with the circuit and carrying the current, and another, usually a movable one, across the circuit which has a current proportional to the voltage. The reading of the pointer is now proportional to the instantaneous product of the current, or the voltage, or to the watts, which is the power. For the connections of these instruments, see Figure 43. Direct current instruments are often built with a single coil and permanent magnet, and others frequently use soft iron cores with a coil or coils. Recording wattmeters, or *watt-hour-meters*, are often in the nature of a small motor so controlled and designed so as to run with a speed proportional to the amount of power to be measured. The armature of this motor is connected to a train of gears which turn pointers on a number of dials. The dials are so calibrated and divided that the pointers read directly the number of kilowatt hours of the circuit. Such instruments as these are installed in buildings, or residences for determining how much energy has been used during a given time—say a month, by the consumer.

Other Electrical Applications.—There are innumerable applications of electrical phenomena, some of which have already been mentioned. A few others are mentioned below.

The heat of an electric spark is used for igniting blasts of powder and the gas in cylinders of gas engines.

The *printing telegraph* is operated by means of electromagnets that move a printing disc containing the letters of the alphabet.

The *telantograph* or *writing telegraph* is worked by so attaching mechanism to the transmitting pen as to vary the currents in two circuits when it moves. The receiving pen is then moved by electromagnets energized by these two currents.

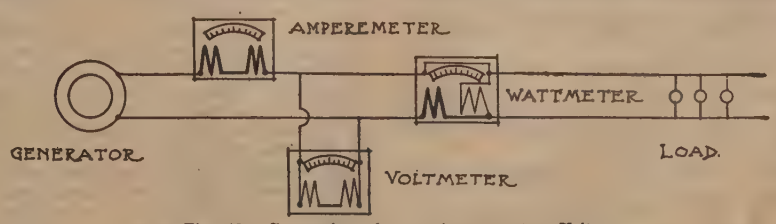

Fig. 43. Connections for an Amperemeter, Voltmeter and Wattmeter.

The *phototelegraph*, whereby pictures are transmitted, is dependent upon the characteristic of metallic selenium whereby variation in light affects its electrical resistance. By passing light through points on a photographic plate consecutively and allowing it to strike a piece of selenium connected to an electrical circuit, the current in the circuit varies proportionally to the density of the picture at each instant. By proper apparatus these varying currents may be made to duplicate the picture at the other end of the circuit.

The electric arc may be made to sing or talk by imposing upon its current waves of current from a telephone transmitter. If the beams of light from a "talking arc lamp" fall upon a piece of selenium connected in circuit with a battery and telephone receiver the message is transmitted to the listener by means of the beam of light. By combining alternating current waves of various frequencies and amplitude and transmitting them through a telephone receiver the music of a whole orchestra may be produced.

The chemical effects of the electric current, such as in electrolysis, are being utilized in the manufacture of a great number of important products. Welding of metal is done by the heat of the electric current. Metallic ores are being purified by magnetic electrostatic, electrolytic, and electrothermic means.

Electric motors are driving mining, agricultural, manufacturing, household, and other machines of all sizes from the dental engine to the great rolls of the immense iron rolling mills. Enormous electromagnets are being used for lifting large masses of iron.

Sources of Electrical Energy.—The chief sources of energy in practical use are coal, petroleum, wood, water at a height, and wind. Of these coal is by far the most important; water power comes perhaps next in importance; while the power of the wind is as yet almost undeveloped.

Mechanics.—Is that branch of physics which treats of forces and their applications. The tendency of force acting upon matter is to produce motion, but two such tendencies may oppose one another, as the direction of the motions which they seek to produce may differ. When two do not completely counteract one another, it is possible that three or four or any number of forces—so many of them acting in one general direction and so many in another, so many for instance trying to produce motion eastward, and so many motion westward—may produce no motion whatever. From the application of any number of forces there may be rest produced, and it is quite evident that there may be motion.

Mechanics treats these two cases, embracing in its sphere the theory as well as practice of *motion*, or *dynamics*, and *equilibrium*, or *statics*, both with and without the aid of machinery.

Dynamics.—The theory of dynamics comprehends in general:

(1) *Motion of Projectiles* or bodies which are thrown or driven by an impelling force from the surface of the earth, and acted on by gravity and the resistance of the air. Examples of projectiles are a stone thrown from the hand, a bullet from a gun, etc. The theory of projectiles is very important in the study of the science of gunnery.

(2) *Theory of Machines*, or the mechanical forces so manipulated as to increase or regulate the effect of a given force, or to produce or regulate motion. Machines are either *simple* or *compound*. The simple machines, otherwise called the *simple mechanical powers*, are usually reckoned six in number; namely, the *Lever*, the *Wheel and Axle*, the *Pulley*, the *Wedge*, the *Screw*, and the *Funicular Machine*. Compound machines are formed by combining two or more simple machines. They are classed according to the forces by which they are put in motion, as *hydraulic* machines, *pneumatic* machines, *electrical* machines, etc.; or the purposes which they are intended to serve, as *military* machines, *architectural* machines, etc.

(3) *Doctrine of Center of Gravity*, or that point in a body through which passes the resultant of all the parallel forces exerted by gravity on the particles composing the body. In more practical language the centre of gravity may be said to be a point about which the body would balance in whatever position it might be placed.

(4) *Doctrine of Oscillation and Gyration. Oscillation* is the reciprocal ascent and descent of a pendulous body. The problem of oscillation, in its widest sense, includes most of those which occur in astronomy, optics, etc. To their average motions, the moon and planets add small oscillations about their mean places; the tides consist of oscillations of the ocean about the uniform spheroid, which, if it were not for the action of the heavenly bodies, would be carried round in the daily rotation of the earth; the phenomena of light are supposed to result from oscillations in an elastic ether, those of sound from oscillations in the air, etc. In general language, however, the problem of oscillation refers only to the purely theoretical part of the problem of the pendulum. The *centre of oscillation* is that point in a vibrating body in which, if all the matter of the body were collected into it, the vibrations would be performed in the same time as before. The *axis of oscillation* is a straight line passing through the point of suspension, parallel to the horizon.

The *centre of gyration*, or rotary motion, is a point within a body such that if the whole mass were concentrated therein, the moment of inertia with respect to the corresponding *axis of gyration* would remain unaltered. The circle described by such a point is called a *circle of gyration*, its radius the *radius of gyration*.

(5) *Collision of Bodies* one or both of which were previously in motion. The laws of the direct impact of two spherical bodies are deduced from the principle that the sum of the momenta of the impinging bodies, estimated in a fixed direction along the line of motion, is not altered by the collision. The velocities of the bodies after impact, however, depend upon the hardness and elasticity of these bodies. If perfectly hard, they will move, after impact, as one body with a velocity, and in a direction which is ascertained by dividing the algebraical sum of their previous momenta by that of their masses. If not perfectly hard, a certain compression takes place on collision, and is immediately followed by a more or less perfect restitution of form, according to the degrees of elasticity which the bodies possess. In the case of perfectly elastic bodies, this force of restitution is equal to that of compression, and the loss or gain in the velocity of each body which occurred at the moment of collision is precisely repeated.

(6) *Theory of Rotation* or the motion of a body about an axis, so that every point in the body describes a circular orbit, the centre of which lies in the axis. It is thus distinguished from revolution, or the progressive motion of a body revolving round another body or external point. If a point which is not the centre of gravity, be taken in a solid body, all the axes which pass through that point will have different moments of inertia, and there must exist one in which the moment is a maximum, and another in which it is a minimum. Those are called the *principal axes of rotation*. When a solid body revolves round an axis its different particles move with a velocity proportional to their respective distances from the axis, and the velocity of the particle whose distance from the axis is unity is the *angular velocity of rotation*.

(7) *Theory of Torsion*, that force by which a thread, or wire returns to a state of rest after it has been twisted by being turned round on its axis.

(8) *Strength of Materials*, such as wood, stone, iron, etc., tested as to their physical constitution, viz.: form, texture, hardness, elasticity, and ductility. The resistance of materials in engineering works is tested in reference to various strains; such are—1. Extension or tension; 2. Compression or crushing; 3. Transverse or cross strain; 4. Shearing strain; 5. Torsion or twisting strain.

(9) *Hydrodynamics* treats specially of the laws of force as applied to fluids. It is divided into *hydrostatics*, which is concerned with forces applied to fluids at rest, and *hydrokinetics*, which treats of the application of forces so as to produce motion in fluids. The term hydrodynamics is, however, very often used in the latter sense, being thus opposed to hydrostatics.

Statics treats of the properties and relations of forces in equilibrium. Equilibrium, etymologically, points to the equipoise of the two arms of a balance, which is as good an illustration as can be given of what equilibrium in the mechanical sense is. But there are many cases less simple, as those of arches and domes. The tendency of the center of gravity to occupy the lowest possible position creates three kinds of equilibrium — stable, unstable, and neutral. In *stable* equilibrium the body when disturbed tends at once to return to its original position; in *unstable* equilibrium, it tends when disturbed to depart farther from the original position; and in *neutral* equilibrium it does neither, but simply remains in its new position.

Applied Mechanics is the practical application of the laws of matter and motion to the construction of machinery, etc.

Heat.—Heat is sometimes called invisible light. It is conceived to be an ether vibration of a little longer wave length than light. When these waves strike against any substance they cause its molecules to vibrate rapidly, and as a result the substance expands, and sometimes melts, or perhaps evaporates, or, under the influence of the waves, it may undergo chemical change, either resolving itself into simpler substances or uniting with other substances to make more complex ones. These molecular motions may stimulate motions among the molecules of other substances at a distance, through the intervention of ether waves. These ether waves impinging upon our bodies give us the sensation of heat.

Absorption.—Substances whose molecules most readily respond to the heat vibrations of the ether are called good

absorbers of heat. The barefoot boy walking about a field has plenty of evidence that although the sun may shine alike on all substances, some of them get much hotter than others. The New York subway is much of it built underneath the streets with a comparatively thin roof of concrete over it. This concrete is a particularly good absorber of the sun's radiation and keeps the subway hot as a garret in summer.

Applied Heat.—Heating a stove oven is a good deal like lighting it. The walls of the oven send heat rays to the bread. If two loaves of bread set side by side in the oven each is in the shadow of the other and must be turned around occasionally to bake uniformly. The oven would bake quite as well without air as with it. Like light rays, heat rays pass better through a vacuum than through air. The most economical way of heating a house is by radiators, although this method is objectionable on the score of ventilation. Proper ventilation necessitates a wasteful method of heating our dwellings and public buildings.

Air is a particularly poor absorber, carrier, and radiator of heat. In our common thought we have given it far too much credit in the distribution of heat. When the walls, furniture, etc., of a room get warm, we may displace all the warm air in it by cold air—even freezing cold air—without its perceptibly affecting the thermometer.

Conductors.—There are no very good conductors of heat. With very great loss we do conduct electricity several miles by copper wires, but there is nothing which will conduct heat as many inches. The mystery is that copper wires should conduct or give direction to electric waves at all.

Ice must absorb a very large amount of heat radiation before it can change to water, hence its usefulness in the ice box. Vast volumes of air may pass through the ice box without melting the ice, since air has so little capacity for heat radiation. Salt strangely assists ice in absorbing heat rays; hence ice which cannot freeze the cream alone, may, if mixed with salt, absorb the heat radiation from the cream quickly—changing itself to brine and reducing the temperature of the cream many degrees below freezing.

Water in changing to vapor absorbs a large quantity of heat radiation, hence boiling water in the double boiler may prevent the hottest flame from raising the temperature in the inner boiler above 212 degrees.

Temperature.—Changes of temperature are best measured by the expansion and contraction of a column of mercury in a glass tube. An arbitrary scale is attached to this. Freezing temperature is in this country indicated by 32 degrees. The temperature of boiling is 212 degrees. The temperature of the inner portion of the human body is 98 degrees. The proper temperature of a living room is about 64 degrees to 68 degrees. It seems to be necessary to our welfare that the internal heat of our bodies should be about 30 degrees above our surroundings when we are not exercising. Chemical action within raises the temperature and evaporation of moisture from the skin reduces the temperature. The balance is kept very constant amid a great variety of surroundings.

Volatile liquids, such as alcohol and gasoline, feel cold because they absorb our heat in changing their state from liquid to gas. In the fall of the year, when the nights begin to be cold, paper tied over plants may keep them from freezing. Just as a paper shade may be put over a lamp to cut off its rays of light, so paper over the plant cuts off the heat radiation from the plant and prevents its getting cold enough to freeze.

Light.—It is now a quite universally accepted theory that light is a wave motion in the ether which pervades all space. A microscopic examination of the interior of the eye shows that, like the ear, it is adapted to respond to wave motions of extreme rapidity. The highest tone which the human ear is capable of responding to is produced by about forty thousand air waves per second coming in upon it, but the human eye responds to nothing short of four hundred trillion ether waves per second.

Color. — As sound has tones of various pitch, so light has various colors. The sensation which we get from the tone called middle C on the piano is produced by 256 air waves each 4 feet long beating upon the ear each second. 512 air waves each 2 feet long (that is, twice the number each half as long) beating upon the ear each second will give the sensation of the tone called C, one octave above middle C.

Red.—So the eye is stimulated to the sensation of *red* by having 400 trillion ether waves each about $\frac{3}{100,000}$ of an inch in length borne in upon it each second, while twice that number of ether waves per second each of half the length will give the eye the sensation of violet at the other end of the spectrum. The sensation of heat is produced by ether waves longer than the red, and ether waves shorter than the violet produce chemical change, such as tanning the skin, fading our garments, fogging the photographic plate, making the green material in plants, etc.

Reflection.—Light waves are reflected from all objects in the same manner that sound waves are, or indeed as water waves are. All objects which we see are either themselves stirring up waves in the ether or are reflecting ether waves which have been sent out from other sources. When six amperes of electricity are sent through a piece of number 24 iron wire, the wire sends forth in great abundance those ether waves which we call heat, but no light waves. Seven amperes of the electric current will cause it to send forth those ether waves which will affect the eye with red light and we call it red hot. Eight amperes will cause it to send forth violet ether waves, which, mingled with the red, will produce white light, and we say the iron wire is white hot.

Refraction.—Light waves pass through glass much more readily than heat waves do. Hence a glass screen before an open fire allows one to see the fire without having his face scorched. Glass, however, offers some resistance to the passage of light waves and hence when these waves strike upon a disk of glass which is thicker at the center than at the edges (such a piece of glass is called a lens), the waves are retarded at the center and the outer portions of the waves are turned inward so that they are concentrated at a point, or focus, on the other side of the lens. This bending of the waves is called *refraction.*

A large size lens, sometimes called a burning glass, serves in this way to concentrate the sun's light and heat waves to an intensely bright and hot point which may cause wood or paper to burn. The red light waves being akin to heat waves are retarded more than violet waves in passing through glass.

Spectrum. — Thus in passing white light, which is a combination of all colors, through a glass prism, the red waves are turned from their course more than any of the other colors and the violet is refracted least.

Prismatic Colors.—The colors thus shown are usually said to be seven—red, orange, yellow, green, blue, indigo, violet; although in reality there is an enormous, if not an infinite, number of perfectly distinct colors in light. The seven colors are frequently called the primary colors, and other tints and shades are producible by mixing them; but in a stricter sense the primary colors are three in number, namely, red, green, and violet (or blue). These three colors or kinds of light cannot be resolved into any other.

In the scientific sense of the word white and black are not considered colors, a white body reflecting, and a black body absorbing, all the rays of light without separating them, whereas the colors proper are due to separation of the rays of light by partial absorption and reflection or by refraction. If a body absorbs every other kind of light and reflects or transmits red light only, it will appear of a red color; if it absorbs every kind except blue rays, it will appear blue; and so on. If more than one kind of light be transmitted or reflected, the object will appear of a color compounded of these different rays of light.

In Painting, the term color is applied to that combination or modification of tints which produces a particular and desired effect. The colors of the spectrum have to be distinguished from colors used in reference to *pigments.*

Primary Colors.—The pigments red, blue, and yellow, regarded in the arts as the primary colors, produce effects, when mixed, very different from those produced by admixture of the corresponding spectrum colors. These three pigment colors form other colors thus; Red and yellow make orange, yellow and blue make green, and red and blue make purple; but red, blue, and yellow cannot be produced by any combination of the other colors.

Local Colors are those which are natural to a particular object in a picture, and by which it is distinguished from other objects.

Neutral Colors are those in which the hue is broken by partaking of the reflected colors of the objects which surround them.

Positive Colors are those which are unbroken by such accidents as affect neutral objects.

Complementary Colors are colors which together make white; thus any of the primary colors is complementary to the other two.

Subjective or *Accidental Colors* are the imaginary complementary colors seen after fixing the eye for a short time on a bright-colored object, and then turning it suddenly to a white or light-colored surface.

In Heraldry, the colors used are generally red, blue, black, green, and purple; which are called gules, azure, sable, vert or sinople, and purpure. Tenne or tawny, and sanguine or blood-color, sometimes occur, but they are not common. Yellow and white, again, are not colors in the heraldic sense, but metals; they are called or and argent, and are always represented by gold and silver. It is a fundamental and invariable rule in blazon not to put color upon color, or metal upon metal; thus, if the field be of a metal, the bearing must be of color, and *vice versa.*

CHART OF COLOR HARMONIES

In Decoration, Dress and Ornamentation

	Blue	Brown	Cream	Green	Gray	Helio.	Lavender	Maroon	Myrtle	Navy	Nile	Olive	Orange	Purple	Red	Salmon	Sky Blue	Tan	Wine	Yellow
Blue	..	Good	Good	Strong	Good	Bad	Bad	Fair	Fair	Weak	Bad	Fair	Strong	Weak	Fair	Fair	Weak	Good	Fair	Strong
Brown	Good	..	Good	Fair	Fair	Strong	Strong	Weak	Good	Good	Fair	Good	Weak	Strong	Weak	Weak	Good	Bad	Weak	Bad
Cream	Good	Good	..	Good	Weak	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Weak	Good	Weak
Green	Strong	Fair	Good	..	Good	Bad	Bad	Fair	Weak	Fair	Weak	Weak	Fair	Strong	Strong	Strong	Bad	Fair	Fair	Bad
Gray	Good	Fair	Weak	Good	..	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Bad	Good	Fair
Helio	Bad	Strong	Good	Bad	Good	..	Weak	Bad	Bad	Bad	Bad	Bad	Bad	Weak	Bad	Bad	Weak	Good	Bad	Strong
Lavender	Bad	Strong	Good	Bad	Good	Weak	..	Bad	Bad	Bad	Fair	Bad	Bad	Weak	Bad	Bad	Bad	Good	Bad	Bad
Maroon	Fair	Weak	Good	Fair	Good	Bad	Bad	..	Fair	Fair	Bad	Fair	Bad	Bad	Weak	Bad	Bad	Fair	Weak	Strong
Myrtle	Fair	Good	Good	Weak	Good	Bad	Bad	Fair	..	Good	Bad	Weak	Strong	Strong	Fair	Strong	Bad	Good	Fair	Bad
Navy	Weak	Good	Good	Fair	Good	Bad	Bad	Fair	Good	..	Bad	Good	Strong	Weak	Fair	Strong	Good	Good	Good	Strong
Nile	Bad	Fair	Good	Weak	Good	Bad	Fair	Bad	Bad	Bad	..	Weak	Bad	Bad	Bad	Fair	Weak	Fair	Bad	Bad
Olive	Fair	Good	Good	Weak	Good	Bad	Bad	Fair	Weak	Good	Weak	..	Strong	Bad	Bad	Bad	Bad	Weak	Weak	Bad
Orange	Strong	Weak	Good	Fair	Good	Bad	Bad	Bad	Strong	Strong	Bad	Strong	..	Strong	Weak	Weak	Bad	Fair	Bad	Bad
Purple	Weak	Strong	Good	Strong	Good	Weak	Weak	Bad	Strong	Weak	Bad	Bad	Strong	..	Weak	Bad	Bad	Good	Weak	Strong
Red	Fair	Weak	Good	Strong	Good	Bad	Bad	Weak	Fair	Fair	Bad	Bad	Weak	Weak	..	Weak	Bad	Good	Weak	Strong
Salmon	Fair	Weak	Good	Strong	Good	Bad	Bad	Bad	Strong	Strong	Fair	Bad	Weak	Bad	Weak	..	Fair	Good	Bad	Bad
Sky Blue	Fair	Good	Good	Bad	Good	Weak	Bad	Bad	Bad	Good	Weak	Bad	Bad	Bad	Bad	Fair	..	Good	Bad	Fair
Tan	Good	Bad	Weak	Fair	Bad	Good	Good	Fair	Good	Good	Fair	Weak	Fair	Good	Good	Good	Good	..	Good	Weak
Wine	Fair	Weak	Good	Fair	Good	Bad	Bad	Weak	Fair	Good	Bad	Weak	Bad	Weak	Weak	Bad	Bad	Good	..	Strong
Yellow	Strong	Bad	Weak	Bad	Fair	Strong	Bad	Strong	Bad	Strong	Bad	Bad	Bad	Strong	Strong	Bad	Fair	Weak	Strong	..

Sound and Musical Instruments.—The most noticeable thing about instruments for producing sound is that they are all devices for causing the air to vibrate, and the most interesting thing about the inner ear is that it is evidently a mechanism for receiving and responding to air vibrations. If no air intervenes between the ear and the sounding body no sound can be heard. This is shown to be true by operating an alarm clock or an electric bell in a closed vessel from which the air has been exhausted.

Intensity.—Most instruments for producing sound have some sort of device for reënforcing or intensifying the sound. The jewsharp is a simple reed, or steel spring fastened to a convenient handle. When this reed is made to vibrate, by plucking it with a finger, it emits a faint sound. This sound is intensified by holding it between the lips before the cavity of one's mouth.

Pitch. — Close attention will reveal the fact that the shorter reeds vibrate faster, and hence the pitch of a tone is related to the rapidity of the vibrations which produce it. The short tuning forks vibrate faster than the long forks and produce tones of higher pitch. These tones are heard only faintly until they are reënforced. This may be done by holding the fork, while it is vibrating, before the mouth of a suitable sized bottle, or by pressing the stem of the fork upon a table, or, better, upon a thin wooden box of certain dimensions which will act, like the body of a violin, as a resonator.

One type of music box has a steel comb with teeth of various length. A cylinder with teeth revolves so as to pluck the various teeth of the comb and produce sounds of various pitch.

Reeds. — The harmonica has brass reeds of various length. The mouth of the operator both causes the reeds to vibrate by forcing streams of air over them and furnishes a cavity which reënforces the sound. The mouth moves from right to left to bring into operation the reeds of different length. An accordion is an harmonica with bellows attached to be worked by the hands. This leaves the mouth of the player free to sing to the accompaniment of his instrument if he chooses. Keys are provided by means of which the player may direct streams of air to whichever of the reeds he chooses. A reed, or cabinet organ, is the next step in the evolution of this instrument. In this the bellows are worked by the feet, leaving the hands more free to play the keys.

Strings.—The harp has strings to produce air waves, long strings to vibrate more slowly and produce the low tones and short strings to vibrate faster and produce the high tones. The high-toned strings are likewise thinner and tighter than those which produce the low tones. It is generally true of all stringed instruments that high tones are produced by *short, thin, tight* strings, while those which produce the lower tones are relatively *longer, thicker and looser.*

A piano is like a harp with a "sounding board" attached. This sounding board acts like the body of a violin to intensify the sound. The player upon a harp causes the strings to vibrate by plucking them with his fingers, while the strings of a paino are made to vibrate by hammers which the player operates by means of the keys.

Violins, violas, guitars, mandolins, banjos, violoncellos, and bass viols, etc., all have thin and tight strings for the high tones and thick, loose strings for the low tones, but the player changes the length, and hence the pitch, of each by fingering it. Some strings are wound with wire to make them thicker and heavier and hence vibrate more slowly.

Tones.—When a player puts his finger at the middle point of the string it vibrates in two separate sections, each section vibrating twice as fast as before and the pitch of its tone is raised one octave. By skillful manipulation a string may be made to vibrate in halves, in thirds, in quarters, in fifths, and in sixths, and the vibrations of these various sections will be two, three, four, five, and six times as rapid as those of the whole string. The most curious fact is that a string may vibrate in all these ways at once.

Classes of Tones.—The tone produced by the string vibrating as a whole is called its fundamental and the tones produced by its various segments are called overtones. The most pleasing sounds are those in which the greatest number of overtones abound. The most famous players are those who are most skilled in producing overtones and the most highly valued instruments are those most capable of yielding rich combinations of overtones.

An interesting relationship exists between a series of overtones and their fundamental. If we take, for example, a string whose length, tension and thickness are such that when it vibrates as a whole it gives the tone designated as C,—the middle C of the piano—produced by 256 vibrations per second, the relationship of its overtone is shown by the following table:

Fundamental C, in the middle of the piano 256 vibrations per second.

1st overtone, C, 1 octave above C (2×256) $= 512$ vibrations per second.

2d overtone, G, 1½ octaves above C (3×256) $= 768$ vibrations per second.

3d overtone, C, 2 octaves above C (4×256) $= 1{,}024$ vibrations per second.

4th overtone, E, 2¼ octaves above C (5×256) $= 1{,}280$ vibrations per second.

5th overtone, C, 2½ octaves above C (6×256)=1,536 vibrations per second.

Wind Instruments.—The so-called wind instruments, such as the pipe organ, the various horns, etc., are devices for producing air waves without the intervention of reeds or strings. A strong wind blowing across the top of a chimney causes the column of air within to vibrate until the chimney roars. In like manner the column of air in an organ pipe is made to vibrate by a stream of air blowing, not through the pipe but across one end of the column. The flutist blows, not into his flute but across one end of it.

Relation of Pitch to Length of Pipe.—A two-foot open pipe produces middle C, the tone of 256 vibrations per second. A similar pipe one foot long produces C′,, one octave above middle C. While one four feet long produces C,, an octave below middle C. This is true whether the pipes are straight, as in the case of most organ pipes, or curled up as in the case of most horns. A French horn with eight feet of pipe coiled up will produce C,,, two octaves below middle C. The trombone has sliding joints for changing the length of the tube and thus giving a variety of tones. The flute has holes along its sides which have the effect of changing the length of the air waves, and hence the tones produced. The cornet nas three extra loops of pipe, each of which may be added to the whole length of tube by pressing down a key.

This would account for a few extra tones, but how can a pipe with only three keys produce, say, thirty tones? The answer is that these instruments are the most marvelous devices for bringing out overtones. The player, by slightly changing the shape of his lips and varying slightly the wind pressure may make the air column in the instrument vibrate as a whole or in halves, or thirds, or fourths, or fifths or sixths. The scale for a French horn eight feet long whose fundamental is C,, is shown in the following table (read from the bottom upward):

	0	2	1	3	2 and 3	1 and 3	1, 2 and 3
384 vibrations per second	G						
		F†					
			F				
320 vibrations per second	E			E			
		D†			D†		
			D			D	
				C†			C†
256 vibrations per second	C				C		
		B,				B,	
			A†,				A†,
				A,			
					G†,		
192 vibrations per second	G,					G,	
		F†,					F†,
			F,				
				E,			
					D†,		
						D,	
							C†,
128 vibrations per second	C,						
		B,,					
			A†,,				
				A,,			
					G†,,		
						G	
							F†
84 vibrations per second	C,,						
		B,,,					
			A†,,,				
				A,,,			
					G†,,,	G	
							F†,,,

† Sharp.

The column headed 0 shows the fundamental and overtones which may be produced when none of the keys are pressed. The second column shows the series of tones which may be produced when the second key is pressed. This lengthens the tube sufficiently to depress each note in the series half a tone. The next column shows the series produced when the first key is pressed. The next the series obtained by using the third key, and the remaining columns by combinations of the second and third, first and third, and finally the first, second and third keys.

It will be noticed from this table that the player upon a horn with only three keys is able to produce every tone and half-tone in something over two octaves and that he has two different ways of getting nine of these tones.

Conversational Tones.—The tones which men use most frequently in conversation fall within an octave of C,—128 vibrations; while the tones most frequently heard in female conversation are near to middle C—256 vibrations.

One might sing by waving his hand in the air if he could wave it fast enough. He might fill a large hall with his music by waving his hand at the mouth of a suitable sized bottle as resonator. He might even fill the hall with people if he could wave his hand skillfully enough to produce a rich combination of overtones.

Speed of Sounds.—All sounds, whether high or low, loud or soft, travel at the same rate of speed through the air, else the music of the band would not sound well in the distance. One may see a steamship blow its whistle two miles distant and count ten seconds before hearing its sound. The sound waves travel a mile in five seconds, or 720 miles an hour. In rifle practice one, standing near the target, may hear the bullet hit the target before he hears the discharge of the gun, and frequently he hears the same sound waves several seconds later reflected back to him from the distant hills in echo.

Terrific explosions upon the sun send light waves to us through the ether in eight minutes, but there is no air to bring the sound tones. If there were air and if the sound could come to us without loss it would require fifteen years for the journey.

Range of Tones.—The range of the tones of a piano is usually from 26⅔ vibrations per second to 4,096 vibrations per second. Between these limits are all the tones which may be called musical. Many persons who hear perfectly well tones within the range of the piano are totally deaf to a tone one octave above the highest tone on the piano, and all persons are incapable of hearing sounds whose pitch is higher than three octaves above the piano. It requires other apparatus than the human ear to detect them.

ZOÖLOGY is that half of biology, or the science which treats of life and living things, that deals with animals. It is impossible to frame a definition of *animal*, for although we can distinguish between a cow and a cabbage, the simpler forms of animals grade into the plants. Indeed, there are forms which at one period of their life would be classed with the animals, at another with the plants.

Animals may be studied from many standpoints and there have thus arisen different subdivisions of zoölogy, each of which has its own name. Thus *anatomy* deals with the gross structure, *histology* with the minute anatomy, *embryology* or *ontogeny* with the development from the egg, *physiology* with the way in which the parts perform their functions. The term zoölogy is usually restricted to the recent animals, the fossils forming the province of paleontology. or, better, paleozoölogy.

The classification of animals, or taxonomy, is based upon structure and development (morphology), the attempt being made to arrange the species into groups of different grades so as to show their actual relationships which are the results of their lines of descent (phylogeny). Then there is the subject of geographical distribution, while the special study of several groups has been dignified by special names, like ornithology (birds), ichthyology (fishes), entomology (insects), and malacology (mollusks).

Classification.—The animal kingdom is divided into groups of different values, the series beginning with phyla and ending with species or varieties, the relative rank of these being:

Phylum, divided into classes.
Class, divided into orders.
Order, divided into families.
Family, divided into genera.
Genus, divided into species.
Species, represented by individuals.

There are besides, intermediate grades like super and sub families, suborders, legions, etc. Each of these divisions has its name in Latin form, those of the orders frequently ending in *oidea*, those

of families in *idae.* These groups are not readily defined. We say that a species consists of those individuals which are very closely alike and which will interbreed, while the genus is based on more general characters.

Each animal has a double name, in Latin form, the first word representing the genus, the second the species. Thus all cat-like animals are included in the genus *Felis,* while the species name indicates the kind of cat. Thus the lion is *Felis leo*; the tiger, *Felis tigris*; the wildcat, *Felis catus* and the domestic cat is *Felis domesticus.* These names enable naturalists in all countries to understand exactly what form is meant, and to a certain extent they indicate the relationships of the animals.

All animals are divided, at first, into two great groups of subkingdoms, the *Protozoa,* in which the whole animal consists of but a single cell, and the *Metazoa,* in which the body is composed of multitudes of cells.

Protozoa.—As the *Protozoa* are single-celled animals they are all small, only a few being visible to the naked eye. All of the functions of life are carried on by the one cell, and hence these animals have great interest for the student, as they show the simplest kind of organization and also the great variety of shapes possible in a single cell, for thousands of these forms have been described. Most of the *Protozoa* reproduce by dividing into two, but there are some in which the body breaks up into great numbers of small particles or *spores,* each of which is capable of growing into an animal like the parent.

Porifera.—The sponges, the lowest of the *Metazoa,* bear this name because the surface of the animal is covered with numerous pores. These are the openings to canals by which water and food pass into numbers of small sacs which act as stomachs and from which one or more larger canals carry the water and the waste to the exterior. The familiar bath sponge is only the skeleton from which the flesh has been washed away, but it is always possible in this to recognize the outgoing canals. The best of the commercial sponges come from the Mediterranean, those of Florida and the West Indies being of a coarser character.

Coelenterata.—This phylum consists of the hydroids, jellyfishes, sea anemones and corals, in all of which the cells of the body are arranged in two layers, one forming the external skin, the other the lining of the digestive tract. There is but a single opening into the body and this serves as both mouth and vent. There is but a single cavity inside the body and this is at once digestive and circulatory.

The Hydrozoa have an interesting life history. There is one stage in which the animals are fixed to some submerged object, and by a process of budding they develop into large colonies of individuals connected together by a common stalk. Each individual has tentacles armed with nettle cells around the mouth, by means of which it kills its prey. The digestive cavity is continued through the stalk, connecting all of the individuals. At certain places, varying with the species, other buds are formed. These resemble a bell in shape and have a mouth at the end of the tongue. Each of these bells soon separates from the parent and swims away as an independent animal.

The description above applies to the subclass *Hydroidea;* in the *Siphonophora* we have colonies of jellyfish, connected by a hollow stem, and the fixed stage is absent. Most of the *Hydrozoa* are small, the individuals of the colony usually measuring but a fraction of an inch in length, while the medusæ are rarely an inch across.

The Scyphozoa, also include fixed and free forms. The fixed forms, called *Actinozoa,* are cylindrical animals, attached by one end and bearing a circle of tentacles around the mouth at the other. Internally there is but a single cavity, but this is divided by radial partitions into a series of chambers, thus greatly increasing the digestive surface.

The *sea anemones,* which are usually brightly colored, form no hard parts, and each individual is usually distinct.

In the *corals* there are some forms which are solitary, but usually the coral individuals reproduce by partial division, so that large colonies (sometimes several feet across) may occur. In these the base and usually the sides of each animal secrete a skeleton of carbonate of lime, the secretions of the adjacent individuals joining, so that large masses of coral result. In most of the species this skeleton is porous, but in the precious corals (occurring mostly in the Mediterranean and in Japan) it is dense and takes a high polish. Its color ranges from white to deep red.

The scyphozoan jellyfishes may attain a distance across of six feet, with tentacles a hundred feet in length. All pass through a fixed stage, like a sea anemone, which becomes cut across, each portion forming a jellyfish.

The Ctenophora are distantly related to the other jellyfish. Most of them are spherical and all have eight rows of swimming organs, arranged like the meridians on a globe. Each row consists of plates of vibratile hairs, each plate roughly resembling a comb, whence the name *Ctenophores,* which means comb-bearers. These forms are very voracious, holding the prey by means of numerous adhesive bodies which replace the nettle cells of the other *Cœlenterates.*

The Platodes (flatworms) have elongate flattened bodies, and with the exception of the *Nemertines,* have but a single opening (mouth) to the alimentary canal, which is the only cavity in the body. (In a few of the *Turbellarians* and in all of the *Cestodes* there is no digestive cavity.)

The Turbellaria are small forms occurring in both fresh and salt water, only a few being semiparasites on other animals. The *Trematoda* on the other hand are all parasites, some living on the outside, others in the interior of other animals, sometimes causing severe disturbances and even death. Some of the internal parasites have strange life-histories, the immature stages being passed in the bodies of mollusks, the adults occurring in the organs of vertebrates. The life history is best known of the liver fluke of the sheep, which killed a million and a half of sheep in England in a single year. Other species may attack man, especially in warm climates.

The Cestoda, commonly called tapeworms, are all internal parasites, and this method of life in the intestine of other animals has resulted in a complete loss of the digestive canal, nourishment being absorbed through the surface of the body. Usually these animals pass through two different hosts, the common tapeworms of man passing the immature stages in the pig or cow; less common is one which lives a part of its life in fishes. The immature stages of these are taken with uncooked flesh into the human stomach, where they are set free and then they attach themselves to the lining of the intestines and gradually grow into the adult, becoming divided into a series of joints, each of which is composed almost exclusively of reproductive organs.

The Nemertini are nonparasitic forms occurring in salt and fresh water. They differ from the other *Platodes* in having a vent to the digestive tract. They have little interest except for the student.

The Rotatoria (rotifers or wheel animalcules) are microscopic animals occurring in the water, in which a circle of cilia around the mouth is in constant vibration, giving the impression of a wheel in rapid rotation.

The Coelhelmonthes include worms in which there is a well-developed body cavity surrounding the digestive tract, which always has both mouth and vent.

The Nematoda (round or thread worms) are cylindrical and have no jointing of the body. Some live in moist earth or in the water, but the great majority are parasites in man and other animals, some of them causing severe disturbances or even death. The human parasites longest known are the stomach and pin worms (*Ascaris*). Much more serious is the *Trichina,* not over a sixth of an inch in length, which man obtains from raw pork and which is frequently fatal when occurring in large numbers. Another *Nematode* is *Ankylostomam,* the so-called lazy worm which occurs in the Southern states, while many less known forms attack man in the tropics. All of these, as well as the *Trematodes* and *Cestodes* obtain entrance to the body with food or water; hence the rule should be not to eat flesh (*e. g.,* ham) in the uncooked condition. Salads are also a frequent source of infection.

The Annelida are worms in which the body is divided into a series of rings or segments, one or more of the anterior rings being differentiated into a head, usually bearing eyes and other sense organs. It also contains the mouth, which may be provided with jaws. Among these *Annelids* are the earthworms, of great use in working over the soil, and a number of small forms living in fresh water. But the great majority of the *Annelids* live in the sea, some of them brilliantly colored. The earthworms have no appendages, but many of the marine species have a pair of fleshy appendages which serve as oars on each segment of the body. None of the *Annelids* are parasitic and none have much economic importance.

The Polyzoa (*Bryozoa*) are minute colonial forms whose relationship to the other *Cœlhelmonthes* can only be recognized by careful study. Only a few live in fresh water, the great majority being marine.

Echinoderma.—The members of the phylum *Echinoderma* also have a large body cavity. They derive their name (which means spiny skin) from the fact that the skin contains numerous calcareous plates, an dusually these plates bear numerous spines which protect the animal. There is a complete alimentary canal, with mouth and vent, and the other parts of the body are arranged on the plan of five, radiating from the axis

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1 Jelly-Fish.
2 Cat-Shark.
3 Tube Worm.
4 Root of Jelly-Fish.
5 Umbrella of Jelly-Fish.
6 Crinoid.
7 Squid.
8 Sting-Ray Shark.
9 Giant Perch.
10 Lobster.
11 Red Coral.
12, 13 Star-Fish.
14 Mollusk.
15 Sponge.
16 Coral.
17 Hermit Crab.
18, 19, 23 Sea Anemones.
20 Yellow Coral.
21, 22 Tube Worms.
24, 25 Sea Roses.
26 Crab.
27 Gurnard.
28 Sea-Urchin.
29 Horse Sea-Rose.
30 Sea-Hare.
31 Scallop.
32 Nail Sea-Rose.
33 Weever.
34 Sea-Cucumber.
35 Skate.

connecting mouth and vent. Around the mouth is a ring canal filled with fluid, which gives off branches to each of the radii of the body, and connected with these radial canals are peculiar structures, the tube feet, used in locomotion. All of the *Echinoderma* are marine.

Asteroidea (or starfish) have a central disk, with the mouth on the lower side, and radiating from this, like the spokes of a wheel, are the arms with the tube feet on the lower surface. Starfish feed largely on mollusks and prove great enemies to oyster beds. They have great powers of regeneration and lost arms are rapidly replaced.

The Ophiuroidea (brittle or serpent stars) differ from the other starfish in the more slender arms and in the sharper line between arms and disk.

Crinoidea (or sea lilies) have both arms and disk and are attached to the sea bottom by a stalk arising from the disk on the side opposite the mouth. Thus they live with the mouth uppermost, the branched arms forming a funnel, conveying food to the mouth. There are only a few species of *Crinoids* living, but their skeletons are very abundant in the older rocks, where there also occur two related groups, the *Cystoidea* and *Blastoidea*, now extinct.

The Echinoidea include the sea urchins. These are usually spherical, with the parts arranged as if the arms of a starfish had been folded up over the back, the rays being still distinguishable, each bearing its row of tube feet. The body wall is very strong and the spines are movable, aiding in locomotion. Several species are eaten in Europe. Other species, like the sand dollars, are flattened, and still others are heart shaped, with a marked bilaterality.

The Holothuroidea include the sea cucumbers, which may be compared to a sea urchin, long drawn out between mouth and vent, so that the body is cylindrical. Spines are rare. In the eastern seas some species are taken, dried, and, under the name of trepang, are sent to China, where they are used as a basis for soups.

The Mollusca derive their name from the fact that the body is soft, a matter of little importance. The clams, oysters, snails and squids forming the group have the body cavity greatly reduced; they lack a segmentation to the body; on the lower surface is a projecting part, the foot, while on either side is a fleshy lobe called the mantle, which usually has the power of secreting a shell. This shell, in some forms belonging to several groups, has such a structure that it has an iridescent appearance, and is called mother of pearl. Such mollusks have also the power of forming true pearls, but the majority of pearls come from the pearl oyster of tropical seas.

The Amphineura include the *Chitons* of the seashore, in which the foot is a broad, creeping disk, while the shell consists of eight overlapping plates on the back.

The Acephala have a bivalve shell, the two halves being right and left. Just inside the mantle are two pairs of leaf-like gills, while the foot is a muscular organ projecting from the ventral surface and is used in boring, creeping, and in a few even for leaping. Here belong several forms of economic importance, including the shipworm or *Teredo* (which does great damage to submerged wood), and the oysters, clams, scallops and mussels which serve for food. Of the scallops the part eaten is the muscle which closes the two halves of the shell. There are two edible clams on our eastern coast. The oyster is found to-day in the Gulf of St. Lawrence and from Cape Cod south, but not in the intermediate region. The fresh-water mussels (*Unios*) have a pearly shell, and large numbers (65,000 tons a year) are used in the Mississippi valley in the manufacture of pearl buttons.

The Scaphopoda (or tooth shells) are shaped like an elephant's tusk. All are marine and none is of any economic importance.

The Gasteropoda have a broad creeping foot on the lower surface and a single shell, usually coiled in a spiral. (In a few the shell has been lost.) There is usually a single gill; a few have two; while in the land snails the gills have been lost, their place being taken by a so-called lung. Few of the group have any economic value. A few are eaten; some of the land snails destroy vegetation and some of the marine species eat oysters and other shellfish. Some shells are used for cameo engraving and one of the cowries passes as money in some parts of Africa. In a few species there are glands, the secretions of which become red or purple on exposure to the air. The celebrated Tyrian purple of the ancients was derived from one of the *Gasteropods*. The *Heteropods* and *Oteropods*, often given as distinct groups, are really aberrant *Gasteropods*.

The Cephalopoda have a circle of eight or ten (in *Nautilus* about a hundred) tentacles, usually bearing suckers, around the mouth. They have a saccular mantle and either a single external shell or a rudimentary one concealed within the body. The cuttle bone fed to cage birds is the internal shell of the form known as the cuttlefish. Another feature common to the group is the ink sac which secretes the ink, a colored fluid used in clouding the water when the animals wish to escape from some enemy. This ink of one species forms the pigment sepia. All of the *Cephalopoda* are marine. In the seas of Newfoundland and Japan there are immense species, one measuring twenty feet in length, with tentacles thirty-five feet long. Chambered shells, belonging to extinct species (*Ammonites, Goniatites, Orthoceras*, etc.), are common in the rocks.

Arthropoda.—The members of this phylum differ from the *Annelida* chiefly in the reduced body cavity, the differentiation of the segments into regions (usually head, thorax and abdomen), and in having jointed appendages, specialized for sensory purposes, for eating, for locomotion and for reproductive and protective purposes. All have the segmented body and the presence of compound eyes is common.

The Crustacea are mostly aquatic, breathing by means of gills attached to some of the appendages. Usually the head and thorax are united in a cephalothorax, but the abdomen is distinct and two pairs of appendages are in front of the mouth. Here belong the barnacles (*Cirripedia*) of our shores, the minute *Copepoda* which occur in such enormous numbers in fresh water and in the sea as to be an important food supply for fishes; and the *Decapoda*. This last division, characterized by having five pairs of walking feet, contains the lobsters and crabs, important elements in our food supply.

The Acerata have only six pairs of appendages attached to the cephalothorax. The class includes the horseshoe crabs of the ocean and the spiders and scorpions of the land. The scorpions of the warmer climates have a poison sting at the end of the abdomen which is rarely if ever fatal to man. The spiders are celebrated for their spinning powers, the silk coming out of two or three pairs of glands at the end of the abdomen, each species spinning its peculiar type of web. The first pair of appendages of the spiders contain the poison glands. Allied to the spiders are the mites, common on plants, and the ticks, which are a pest in warm climates.

The Malacopoda include a few tropical animals (*Peripatus*) which are interesting to naturalists from their primitive structure, as they show many resemblances to *Annelida*.

The Insecta breathe by air tubes (tracheæ) which open on the sides of the body and ramify the interior. They have a head with four pairs of appendages, only one pair, the antennæ or feelers, being in front of the mouth, the others being subservient to eating. These latter, the mouth-parts, may be adapted for biting or they may be arranged to form a tube suited for piercing and sucking, as in the case of the mosquito. The *Insecta* include the *Hexapoda* and the *Chilopoda*. (See *Entomology*.)

The Chordata, the highest phylum of the animal kingdom, include animals of very different appearance, but all of them, in either the young or the adult, have the following features: There is an early axial skeleton, the notochord, lying between the digestive canal and the central nervous system, there are gill slits extending from the pharynx to the exterior, and the central nervous system is confined to one side of the alimentary canal. There are four great divisions or subphyla—*Leptocardii, Tunicata, Enteropneusti*, and *Vertebrata*.

The Leptocardii include a few fish-like forms (*Amphioxus*) in the sea in which the notochord is the only skeleton, even a skull being absent. They are of great interest to naturalists from their simple structure.

The Tunicata are also marine. In the young stages they are tadpole shaped, but when they become adult, they are saccular attached forms, commonly called sea squirts, from the way in which they eject water from the two openings in the body wall. In some the animals reproduce by budding, so that colonies of many individuals result.

The Enteropneusti are worm-like forms with no interest except for the zoölogist.

The Vertebrata have a backbone composed of vertebræ formed around the notochord; the brain is inclosed in a skull, and has five regions, and usually there are two pairs of appendages. In the lowest vertebrates, the *Cyclostomes* (lampreys and hagfish), there are no jaws nor paired fins. All other vertebrates have true jaws and hence are called *Gnathostomes*.

The Pisces (or fishes) are aquatic, breathing throughout life by gills. Their appendages are fins and they have a two-chambered heart. Here belong the sharks (*Elasmobranchs*) the *Ganoids* or garpikes and sturgeon, the bony fishes or *Teleosts*, including all of the common fishes, and the lung fishes (*Dipnoi*), in which besides gills, lungs are developed.

The Amphibia include the salamanders, newts, frogs and toads. Thesebrea the by means of gills in the young stages, while in the adult they have lungs and usually the gills are absorbed. Except the *Cœcilians*, they have legs in the place

of fins. All live on the earth or in fresh water, not a single species occurring in the sea.

The Cyclostomes, fishes and *Amphibians* are grouped together as *Ichthyopsida* (fish-like), as they breathe by gills for at least a part of their lives. The remaining groups of vertebrates are included under the head of *Amniota* from the fact that they have a peculiar envelope, the amnion, which appears in the development.

The Sauropsida include the reptiles and the birds which agree in having scales on the whole body or upon the legs (birds) and in a number of peculiarities of the skeleton. The *Reptilia,* besides the scales, have a heart with three chambers (one partially divided in the crocodiles) and are cold blooded, or, better, have a blood of the same temperature as the surroundings. Of recent forms there are the groups of turtles (*Chelonia*), snakes (*Ophidia*), lizards (*Lacertilia*), and crocodiles and alligators (*Crocodilia*). In geologic time there were several other groups, some including enormous animals (*Dinosaurs*) and some that were capable of flight (*Pterodactyls*). The birds or *Aves* are marked off from all other animals by the feathers. All of them lay eggs and all have a four-chambered heart and the blood is always of the same temperature (warm blood), no matter what the surroundings. About twelve thousand different species of birds are known, nine hundred in North America.

The Mammalia are as sharply marked off by the presence of hair and by the presence of milk glands, by the secretion of which the young are nourished. They also have a four-chambered heart and blood of a constant temperature. The lowest group (*Monotremata*), occurring only in the Australian region, lay eggs, but all other mammals bring forth living young.

The *Marsupials,* represented in America by the opossums, in Australia by the kangaroos, wombat, and a number of other forms, have a pouch (marsupium) on the ventral surface in which the young are carried for some time after birth.

Placentalia.—All other mammals have a peculiar structure in their early development, known as the placenta, and hence they are grouped as the *Placentalia.* There are twelve orders of these.

(1) The *Edentates,* in which the teeth are poorly developed or are lacking and the toes are clawed. Here belong the ant-eaters, sloths, etc.

(2) *The Insectivora* are small animals (shrews, moles, hedgehogs) which largely feed upon insects.

(3) The *Chiroptera* (or bats) have the fingers greatly elongated and connected by membrane, the whole forming a wing. Most species are insect feeders, but some are fruit eaters in the tropics of the old world.

(4) The *Rodentia* (or gnawers) have two or four chisel-like teeth in each jaw, and clawed feet. Here belong the rats, mice, squirrels, beaver, porcupines, rabbits and hares.

(5) The *Ungulata* have hoofs on the tips of the toes and are herbivorous. They are subdivided accordingly as the feet have an odd or an even number of toes. To the odd-toed group belong the tapirs, rhinoceroses and horses. The even-toed group includes the hippopotamus, pigs and camels, as well as a large number of species grouped as *Ruminants* because they chew the cud. The giraffes, deer, elk, cattle, buffalo, sheep, goats, and antelopes belong here. As will readily be seen, the *Ungulata* is the most important group of mammals from the standpoint of human interest.

(6) The *Proboscidia* includes the elephants, of which two species are now alive. In these the nose is drawn out into the well-known trunk and the upper incisors grow into the familiar tusks. In former times the group was larger, including the mammoths and mastodons, much like the elephants, and the dinotherium, in which the tusks were in the lower jaw.

(7) The *Hyracoidea* include a few species from the old world, one of which is supposed to be the coney of the bible.

(8) The *Sirenia* are aquatic mammals with the fore limbs fin-like and the hinder ones lacking. The manatee and the dugong represent the group.

(9) The whales, or *Cetacea* externally resemble the *Sirenians,* but they are separated by several anatomical points. The whales are the most aquatic of all mammals and have almost entirely lost the hair, one species having only a scanty mustache in the young stage. The tail is flattened into a caudal fin which differs from that of any fish in being horizontal.

There are two great groups of *Cetacea,* the one having teeth, the other lacking them. To the toothed group belong the dolphins, blackfish, sperm whales and the narwhal. The sperm whales have an enormous mass of a peculiar fat (spermaceti) on the upper side of the head; the narwhal has a single tooth drawn out into a long twisted spine projecting from the front of the head. The toothless whales have a peculiar series of horny plates developed from the roof of the mouth. These form a strainer by means of which the animals are able to strain the minute life on which they feed from the water. This is the whalebone so important in woman's apparel.

(10) The *Carnivora* are the flesh eaters which prey on all other mammals. They have clawed feet and teeth adapted to a diet of flesh. Most of the species are terrestrial, and here may be mentioned the hyænas, raccoon, mink and weasel, ermine, otters, dogs, foxes, bears, and all of the cat tribe. Some of the *Carnivores* have taken to the water and have become almost as aquatic as the whales. These are the seals, sea lions and walruses. As will be seen, the group of *Carnivores* is possibly the most important source of furs, the *Rodentia* only approaching it.

(11) The *Prosimiæ* (or lemurs) include, a few species of monkey-like animals from Madagascar and India.

THE PRINCIPAL GROUPS OF THE ANIMAL KINGDOM

Protozoa.—One-celled animals of microscopic size.		RHIZOPODA. FLAGELLATA. CILIATA. SPOROZOA.	**Metazoa.**—Cont.	**Arthorpoda.**—Jointed animals with distinct feet and hard external skeleton.	CRUSTACEA.—Trilobitæ, trilobites (fossil). Phyllopoda, fairy shrimp. Copepoda. Ostracoda. Cirripedia, barnacles. Malacostraca, crabs, lobsters, shrimp, beach fleas, sowbugs. ACERATA.—Gigantostraca, horseshoe crabs. Arachnida, spiders, scorpions, mites. MALACOPODA.—Peripatus. INSECTA.—Chilopoda, centipedes. Hexapoda, true insects. Apterygota, bristle tails, spring tails. Pseudoneuroptera, white ants, dragon flies. Orthoptera, locusts, grasshoppers, roaches. Neuroptera, May flies, dobsons. Coleoptera, beetles. Hymenoptera, bees, wasps, ants, sawflies. Diptera, true flies. Lepidoptera, butterflies, moths. Diplopoda, thousand legs.
Metazoa.—Many-celled animals.	**Porifera.**—Sponges.	CALCISPONGIÆ. SILICISPONGIÆ.			
	Coelenterata.—Corals, jellyfish, etc.	HYDROZOA.—Hydroidea, hydroids, jellyfish. Siphonophora, tubular jellyfish. SCYPHOZOA.—Actinozoa, sea anemones, corals. Scyphomedusæ, larger jellyfish. CTENOPHORA.—Comb-bearing jellyfish.			
	Platodes.—Flatworms.	TURBELLARIA.—Nonparasitic. TREMATODA.—Flukeworms, etc. CESTODA.—Tapeworms. NEMERTINI.			
	Rotatoria.	ROTIFERA.—Wheel animalcules.			
	Coelhelmonthes.—Worms with body cavity.	NEMATODA.—Round worms. ANNELIDA.—Jointed worms, earthworms, etc. POLYZOA.—Moss animals. BRACHIOPODA.—Lamp shells.	**Chordata.**	**Leptocardii.**—Lancelets. **Tunicata**—Sea squirts, sea peaches etc. **Enteropneusta.**—Whale's tongue, "worm" vertebrate, backboned animals.	
	Echinoderma.—Starfish, sea urchins, etc.	ASTEROIDEA.—Starfish. OPHIUROIDEA.—Brittle stars. CRINOIDEA.—Sea lilies. ECHINOIDEA.—Sea urchins. HOLOTHUROIDEA.—Sea cucumbers.		**Ichthyopsida.**	CYCLOSTOMATA.—Lampreys, hagfish. PISCES.—Fishes. Elasmobranchii, sharks, skates. Ganoids, sturgeon, garpike. Teleostei, ordinary fishes. Dipnoi, lung fishes. AMPHIBIA.—Urodela, newts, salamanders. Anura, frogs, toads.
	Mollusca.—Mollusks, usually with a calcareous shell.	AMPHINEURA.—Chitons. ACEPHALA, bivave mollusks, clams, oysters. SCAPHOPODA.—Tooth shells. GASTEROPODA.—Univalve mollusks, snails. CEPHALOPODA.—Squid, cuttlefish.		**Amniota**	SAUROPSIDA.—Reptilia, snakes, lizards, turtles, alligators. Aves, birds.
			Mammalia.	**Mammals.**	

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1 Blue-and-Red Macaw.
2 Incomparable Bird of Paradise.
3 Golden Bird of Paradise.
4 Resplendent Trogon.
5 King Bird of Paradise.
6 Fire Weaver.
7 Paradise Flycatcher.
8 Broad-Shafted Whidah Bird.
9 Marsh Hawk.
10 Bald Eagle.
11 Barred Owl.
12 Golden Pheasant.

DICTIONARY OF ANIMALS

ard-vark.—The *Orycteropus capensis*, an insectivorous animal which partakes of the nature both of the ant-eater and the armadillo; agreeing with the former in its general habits, but, although entirely destitute of scaly armor, more resembling the latter as to its anatomical structure. It measures about five feet to the end of the tail; its skin is thick, coarse, and covered with stiff hair; limbs short, thick, and very muscular. This animal is very common in South Africa, and has received its popular name from its habit of burrowing (which its taper head and powerful claws are admirably adapted for), as well as from its fancied resemblance to a small pig.

ard-wolf.—The *Proteles lalandii*, a singular carnivorous animal. It forms the connecting link between three genera widely separated from each other, having externally the appearance and bone-structure of the hyæna united to the head and feet of the fox, with the intestines of the civet. Its size is about that of a full-grown fox, which it resembles in both its habits and manners, being nocturnal, and constructing a subterraneous abode.

bou-hannes.—An African bird, considered by some naturalists to be identical with the ancient ibis. Although solitary in its habits, it is sometimes seen in small bands of from six to ten, and is capable of a lofty and powerful flight.

canthurus (or surgeon-fish), chiefly distinguished by the sharp and lancet-like spines with which it is armed on each side of the tail. They abound in the tropical seas, where they are generally seen in large shoals of two or three hundred each, swimming with great strength, and feeding principally on different kinds of seaweed. The genus contains a large number of species, many of which are extremely beautiful, both in form and color.

dder.—A viper (*Pelias berus*), widely distributed throughout Europe, the only British venomous snake. It attains a length of over two feet, is brown, with a black zigzag line down the back, feeds chiefly upon mice, and is viviparous. Its bite rarely proves fatal, unless to very weak persons and children. In the United States the term is applied to some poisonous snakes without rattles, as the moccasin, or "water-adder," and the copperhead, or "red adder," and also to the harmless hognose, which resembles in appearance and assumes the defensive attitude of a viper when it is disturbed.

gouara (or crab-eater).—A carnivorous animal, allied to the raccoons, a native of South America. It equals in size an ordinary fox, to which it bears a slight external resemblance. It derives its name of crab-eater from its habit of feeding on all kinds of crustacea and mollusks, whether marine or terrestrial.

gouti.—A South American animal belonging to the *Rodentia*. The agoutis live for the most part upon the surface of the ground, not climbing nor digging to any depth; and they commonly sit upon their haunches, when at rest, holding their food between their forepaws, in the manner of squirrels. By eating the roots of the sugar-cane, they are often the cause of great injury to the planters.

lbatross.—A genus of birds of the family *Procellaridæ*. The species are the largest of all aquatic birds, the wings, when extended, measuring sometimes fifteen feet, and weight often exceeding twenty pounds. Its plumage is white, with some black bands on the wings and back. It has a strong, hard, long beak, of a pale-yellow color; the feet, flesh-colored, are short and webbed, and the wings are long, strong, and narrow. It preys on the wing, and is very voracious. Many are continually met with in the Southern ocean, and are also seen in immense flocks about Behring strait in the early part of summer, attracted thither by the vast shoals of fish whose migrations they follow. Their powers of flight are prodigious.

lligator.—A genus of very formidable and ferocious reptiles, found in the tropical regions of America, and closely resembling the crocodile. They differ from the true crocodiles in having a shorter and flatter head, cavities or pits in the upper jaw, into which the long canine teeth of the under jaw fit, and feet much less webbed. Their habits are less perfectly aquatic. The largest grows to the length of seventeen or eighteen feet. The female lays her eggs in the sand, to be hatched by the heat of the sun.

lpaca.—The *Peruvian sheep*, a variety of the guanaco or llama. It inhabits the more elevated parts of the mountain ranges, living almost on the border of perpetual snow. The Peruvians keep vast flocks of them for the sake of the silky luster and fineness of their wool, which furnishes material for the best of fabrics.

naconda.—The popular name of two of the largest species of the serpent tribe, *viz.*, a Ceylonese species of the genus *Python tigris*, said to have been met with thirty-three feet long; and *Eunectes murinus*, a native of tropical America, allied to the boa-constrictor, and the largest of the serpent tribe, attaining the length of forty feet. They frequent swamps and rivers, are destitute of poison fangs, and kill their victims by constriction.

nas.—A genus of birds of the subfamily *Anatinæ*, distinguished by a bill broad, depressed, larger than the head, and a pointed tail. The common wild duck or mallard, *Anas boschus* is the original stock of our tame or domesticated duck. The flesh of the wild duck is highly esteemed as an article of food. The widgeon (*Mareca penelope*), a species of the same genus, is a migratory bird, bred in the morasses of the north, which they quit on the approach of winter, spreading themselves along the shores, and over the marshes and lakes in various parts of the United States. They are easily domesticated in places where there is plenty of water, and are much admired for their beauty and sprightliness.

Anchovy.—The *Engraulis encrasicolus*, a well-known small fish of the herring family, abounding in many parts of the Mediterranean, particularly on the coasts of Italy, Greece, Spain, and France. It is about four inches long, of a bluish-brown color on the back, and silvery-white on the belly. They were known to the ancients, and were used both by the Greeks and Romans as a pickle or sauce under the name of *garum*.

Angora goat.—The *Capra angorensis* is by far the most important of all the varieties of the goat, and is a native of Angora, a small district of Asia Minor, remarkable for producing not only this peculiar race of goats, but also sheep, cats, rabbits, etc., with hair of uncommon fineness. The goat of Angora is generally of a beautiful milk-white color, short-legged, with black, spreading, spirally-twisted horns, and pendulous ears. Its chief and distinguishing excellence, however, is the wool, which covers the whole body in long pendent spiral ringlets; and it is from the hair of this animal that the finest camlets are made. To the same genus belongs the cashmere goat, so highly prized for its fleece; it is descended from the goat of Tibet, which pastures on the Himalayas. It is smaller than the common domestic goat, and has long, fine, silky wool. These goats are now acclimatized in the United States, both pure and crossed with the native goat. Far from deteriorating by the transfer, as had been predicted, it is found that in some parts of the country even the unmixed breed of the imported goats has shown evident signs of improvement resulting from the change.

Ant.—The common name of hymenopterous (or membranous-winged) insects of various genera, of the family *Formicidæ*, found in most temperate and tropical regions. They are small but powerful insects, and have long been noted for their remarkable intelligence and interesting habits. They live in communities regulated by definite laws, each member of the society bearing a well-defined and separate part in the work of the colony. Each community consists of males; of females much larger than the males; and of barren females, otherwise called neuters, workers, or nurses. The neuters are wingless, and the males and females only acquire wings for their "nuptial flight," after which the males perish, and the few females which escape the pursuit of their numerous enemies divest themselves of their wings, and either return to established nests, or become the foundresses of new colonies. The neuters perform all the labors of the ant-hill or abode of the community; they excavate the galleries, procure food, and feed the larvæ or young ants, which are destitute of organs of motion. In fine weather they carefully convey them to the surface for the benefit of the sun's heat, and as attentively carry them to a place of safety either when bad weather is threatened or the ant-hill is disturbed. In like manner they watch over the safety of the nymphs, or pupæ, about to acquire their perfect growth. Some communities possess a special type of neuters, known as "soldiers," from the duties that specially fall upon them, and from their powerful biting jaws. There is a very considerable variety in the materials, size, and form of ant-hills, or nests, according to the peculiar nature or instinct of the species. Some ants live on animal food, very quickly picking quite clean the skeleton of any dead animal they may light on. Others live on saccharine matter, being very fond of the sweet substance, called honey-dew, which exudes from the bodies of aphides, or plant lice. These they sometimes keep in their nests, and sometimes tend on the plants where they feed; sometimes they even superintend their breeding. By stroking the aphides with their antennæ they cause them to emit the sweet fluid, which the ants then greedily sip up. Various other insects are looked after by ants in a similar manner, or are found in their nests. It has been observed that some species, like the red ant (*Formica sanguinea*), resort to violence to obtain working ants of other species for their own use, plundering the nests of suitable kinds of their larvæ and pupæ, which they carry off to their own nests to be carefully reared and kept as slaves. In temperate countries male and female ants survive, at most, till autumn, or to the commencement of cool weather, though a very large proportion of them cease to exist long prior to that time. The neuters pass the winter in a state of torpor, and of course require no food. The only time when they require food is during the season of activity, when they have a vast number of young to feed. Some species have stings as weapons, others only their powerful mandibles, or an acrid and pungent fluid (formic acid) which they can emit.

Ant-eater.—A genus of the family *Armadillo*, order *Edentata*. The ant-eaters have no grinders, have the body covered with rather long hair, an elongated slender head, with very long exsertile tongue, and walk on the sides of their feet with the claws incurved. The great ant-eater, *Myrmecophaga jubata*, is a native of Brazil and Guiana, and is much the largest of all the ant-eaters. It is covered with long, coarse, shaggy hair, and has a remarkably large tail, with which, when at repose, it can wrap itself up so as to be effectually protected from heat or rain. It is a powerful animal, and specimens often occur which measure more than eight feet in length from the extremity of the nose to the end of the tail. It lives exclusively on ants, and procures these insects in abundance by tearing open their hills with its hooked claws, and then drawing its long tongue, which is covered with glutinous saliva, over the swarms which flock from all quarters to defend their dwelling.

Antelope.—A division of the large family *Cavicornia*, or hollow-horned ruminants, and of graceful and symmetrical proportions; of a restless and timid disposition; extremely watchful, of great vivacity, and remarkably swift and agile. Externally, they very much resemble deer, from which, however, they are to be distinguished by various points of structure, such as the horns, which in the deer are solid and branched, and by the absence of front teeth in the upper jaw. Generally speaking, antelopes are gregarious, and unite in large flocks or herds. Africa may be considered the head-quarters of the antelope. The species are numerous, and include the springbok, hartbeest, gnu, eland, and gazelle, among others. There are two European antelopes, the chamois, which inhabits the Alps, and the saiga from eastern Russia.

Ape.—The name of a quadrumanous family of mammalian animals, *Simiadæ*, which embraces the most highly developed forms of the monkeys. They are all of them inhabitants of the old world. The nostrils are divided by a narrow septum; they possess opposite thumbs on their fore and hind feet; the callosities on the rumps are generally naked. Some of the species only are furnished with cheek-pouches. The species are divided into two groups—1. The tailless, or apes, comprising the chimpanzee, the gorilla and the orang-outang; 2. The tailed monkeys, including all the true monkeys of the old world.

Ant-lion.—The larva of a neuropterous insect (*Myrmeleon formicarius*), which in its perfect state greatly resembles a dragon-fly; curious on account of its ingenious method of catching the insects—chiefly ants—on which it feeds. It digs a funnel-shaped hole in the driest and finest sand it can find, and when the pit is deep enough, and the sides are quite smooth and sloping, it buries itself at the bottom with only its formidable mandibles projecting, and waits till some luckless insect stumbles over the edge, when it is immediately seized, its juices sucked, and the dead body jerked out. It inhabits southern Europe.

Argonaut.—A molluscous animal of the genus *Argonauta*, belonging to the two-gilled cuttle-fishes, distinguished by the females possessing a single-chambered external shell not organically connected with the body of the animal. The males have no shell and are of much smaller size than the females. The shell is fragile, translucent, and boat-like in shape; it serves as the receptacle of the ova or eggs of the female, which sits in it with the respiratory tube or "funnel" turned toward the carina or "keel." This famed mollusk swims only by ejecting water from its funnel, and it can crawl in a reversed position, carrying its shell over its back like a snail. The argonaut, or *paper-nautilus*, must be carefully distinguished from the *pearly-nautilus* or nautilus proper.

Argus pheasant (*Argus giganteus*).—A large, beautiful, and very singular species of pheasant, found native in the southeast of Asia, more especially in Sumatra and some of the other islands. The males measure from five to six feet from the tip of the beak to the extremity of the tail, which has two greatly elongated central feathers. The plumage is exceedingly beautiful, the secondary quills of the wings, which are longer than the primary feathers, being each adorned with a series of ocellated or eye-like spots of brilliant metallic hues. The general body plumage is brown.

Armadillo (genus *Dasypus*).—A mammal peculiar to South America, consisting of various species, belonging to a family intermediate between the sloths and ant-eaters. They are covered with a hard bony shell, divided into belts, composed of small separate plates like a coat of mail, flexible everywhere except on the forehead, shoulders, and haunches, where it is not movable. The belts are connected by a membrane, which enables the animal to roll itself up like a hedgehog. These animals burrow in the earth, where they lie during the daytime, seldom going abroad except at night. They are of different sizes; the largest, *Dasypus gigas*, being three feet in length without the tail, and the smallest only ten inches. They subsist chiefly on fruits and roots, sometimes on insects and flesh. They are inoffensive, and their flesh is esteemed good food.

Asp (*Naja*, or *Vipera, haje*).—A species of viper found in Egypt, resembling the *cobra da capello*, or spectacle-serpent, of the East Indies, and having

a very venomous bite. When approached or disturbed it elevates its head and body, swells out its neck, and appears to stand erect to attack the aggressor. Hence the ancient Egyptians believed that the asps were guardians of the spots they inhabited, and the figure of this reptile was adopted as an emblem of the protecting genius of the world. The balancing motions made by it in the endeavor to maintain the erect attitude have led to the employment of the asp as a dancing serpent by the African jugglers.

Ass (*Equus asinus*).—A species of the horse genus, supposed by Darwin to have sprung from the wild variety (*Asinus tæniopus*) found in Abyssinia; by some writers to be a descendant of the *onager*, or wild ass, inhabiting the mountainous desert of Tartary, etc.; and by others to have descended from the kiang of southwestern Asia. Both in color and size the ass is exceedingly variable, ranging from dark gray and reddish brown to white, and from the size of a Newfoundland dog in northern India to that of a good-sized horse. In the southwestern countries of Asia and in Egypt, in some districts of southern Europe, as in Spain, and in Kentucky and Peru, great attention has been paid to selection and interbreeding, with a result no less remarkable than in the case of the horse. Thus in Syria there appear to be four distinct breeds—a light and graceful animal used by ladies, an Arab breed reserved for the saddle, an ass of heavier build in use for plowing and draft purposes, and the large Damascus breed. The *mule* is a hybrid between the horse and the ass, differing in size, strength, and beauty, according to the predominance of its parental species; those between a male ass and a mare being far superior to the progeny of a she-ass with a horse. In mountainous countries mules are highly serviceable; no beast of burden being either so sure-footed, or so capable of enduring fatigue; but in beauty of form they fall far short of that noble quadruped, the horse; the mule having a large, clumsy head, long erect ears, a short mane, and a thin tail.

Auk.—A name of certain swimming birds (family *Alcidæ*), including the great auk, the little auk, the puffin, etc. The genus *Alca*, or auks proper, contains only two species, the great auk (*Alca impennis*), and the razor-bill (*Alca torda*). The great auk or gair-fowl, a bird about three feet in length, is now extinct.

Avoset.—A bird about the size of a lapwing, of the snipe family. The bill is long, slender, elastic, and bent upward toward the tip, the legs long, the feet webbed, and the plumage variegated with black and white. The bird feeds on worms and other small animals, which it scoops up from the mud of the marshes and fens that it frequents. It is found in Europe, Asia, Africa, and America; but the American species is slightly different from the others.

Axolotl (*Amblystoma maculatum*).—A curious Mexican amphibian, not unlike a newt, from eight to ten inches in length, with gills formed of three long ramified or branchlike processes floating on each side of the neck. It reproduces by laying eggs, and was for some time regarded as a perfect animal with permanent gills. It is said, however, that they frequently lose their gills like the other members of the genus. The axolotl is esteemed a luxury by the Mexicans. There are a number of species in North America.

Baboon.—A common name applied to a division of old-world quadrumana (apes and monkeys), comprehending the genera *Cynocephalus* and *Papio*. They have elongated abrupt muzzles like a dog, strong tusks or canine teeth, usually short tails, cheek-pouches, small deep eyes with large eyebrows, and naked callosities on the buttocks. Their hind and fore feet are well proportioned, so that they run easily on all fours, but they do not maintain themselves in an upright posture with facility. They are generally of the size of a moderately large dog, but the largest, the mandrill, is, when erect, nearly of the height of a man. They are almost all African, ugly, sullen, fierce, lascivious, and gregarious, defending themselves by throwing stones, dirt, etc. They live on fruits and roots, eggs and insects. They include the chacma, drill, common baboon, and mandrill. The chacma, or pig-tailed baboon, (*Cynocephalus porcarius*) is found in considerable numbers in parts of South Africa. The common baboon (*C. babouin*) inhabits a large part of Africa farther to the north. It is of a brownish-yellow color, while the chacma is grayish black, or in parts black. The hamadryas (*C. hamadryas*) of Abyssinia is characterized by long hair, forming a sort of shoulder cape. The black baboon (*C. niger*) is found in Celebes.

Babyroussa.—A species of wild hog (*Sus* or *Porcus babyrussa*), a native of the Indian archipelago. From the outside of the upper jaw spring two teeth twelve inches long, curving upward and backward like horns, and almost touching the forehead. The tusks of the lower jaw also appear externally, though they are not so long as those of the upper jaw. Along the back are some weak bristles, and on the rest of the body only a sort of wool. These animals live in herds, feed on herbage, are sometimes tamed, and their flesh is well flavored.

Badger.—A quadruped of which there are several species, comprising the genus *Taxidea*, family *Mustelidæ*. It is generally regarded as a solitary, stupid animal, that seeks refuge in the most sequestered places, and shuns the light of day. It has very short legs and a broad flat body; the head is long and pointed, the eyes small, and the tail remarkably short. Its prevailing color is a kind of mottled gray; the face is white, and along each side of the head runs a long pyramidal band of black, including the eyes and ears. With its powerful claws it constructs a deep and commodious burrow. It lives chiefly on roots, fruits, insects, and frogs. It is about 2½ feet long. The flesh of the badger is reckoned a delicacy, and may be cured into hams and bacon.

Barbary ape.—A species of ape, or tailless monkey, with greenish-brown hair, of the size of a large cat, remarkable for docility; also called the *magot*. It is common in Barbary and other parts of Africa, and some used to live formerly on Gibraltar rock, being the only European monkey, though probably not indigenous. It has been the "showman's ape" from time immemorial.

Barbets.—A family of climbing birds with a thick, conical beak, having tufts of bristles at its base. Their wings are short and their flight somewhat heavy. They have been divided into three subgenera—the barbicans, inhabiting India and Africa, and feeding chiefly on fruit; the barbets proper, found in Africa and America, and nearly related to the woodpeckers; and the puff-birds, inhabiting America, and feeding on insects.

Barnacle.—The name of a family of marine crustaceous animals, order *Cirripedia*. They are enveloped by a mantle and shell, composed of five principal valves and several smaller pieces, joined together by a membrane attached to their circumference; and they are furnished with a long, flexible, fleshy stalk or peduncle, provided with muscles, by which they attach themselves to ships' bottoms, submerged timber, etc. They feed on small marine animals, brought within their reach by the water and secured by their tentacula. Some of the larger species are edible.

Basilisk.—The animal now recognized by that name is a reptile, family *Iguanidæ*, of a very singular shape, being distinguished by a long and broad wing-like process or expansion along the back and upper part of the tail, and furnished at certain distances with interval radii analogous to those in the wings of the *draco*, or flying lizard. This process is capable of being either dilated or contracted at the pleasure of the animal; and the occiput, or hind part of the head, is elevated into a very conspicuous pointed hood or hollow crest. Notwithstanding its formidable appearance, however, the basilisk is a perfectly harmless reptile, residing principally among trees, where it feeds on insects, etc. The general color of this animal is a pale cinereous brown, slightly varied on the back and sides with different shades of brown and blue, and silvery-white on the belly. It is possessed of great activity, and from its peculiar structure can adapt itself to the watery element without inconvenience. It is most common in the tropical parts of South America.

Bass.—A genus of fishes, distinguished by scaly opercula terminating in two spines, and by a rough tongue. The striped bass is a salt-water fish which keeps near the land, ascending fresh-water streams in the spring to breed. It is from one to four feet long, brown above, silvery beneath, and is very common on the coast of New England. Some specimens weigh seventy-five pounds each. It readily bites at the hook, and is taken in large quantities with the seine.

Bat.—One of the group of wing-handed, flying mammals having the fore-limb peculiarly modified so as to serve for flight, and constituting the order *Cheiroptera*. Bats are animals of the twilight and darkness, and are common in temperate and warm regions, but are most numerous and largest in the tropics. All European bats are small, and have a mouse-like skin. The body of the largest British species, (*Vespertilio noctuula*,) is smaller than that of a mouse, but its wings stretch about fifteen inches. During the day it remains in caverns, in the crevices of ruins, hollow trees, and such-like lurking-places, and flits out at evening in search of food, which consists of insects. Several species of the same genus are common in North America. Many bats are remarkable for having a singular nasal cutaneous appendage, bearing in some cases a fancied resemblance to a horseshoe. Two of these horseshoe bats occur in Britain. Bats may be conveniently divided into two sections—the insectivorous or carnivorous, comprising all European and most African and American species; and the fruit-eating, belonging to tropical Asia and Australia, with several African forms. An Australian fruit-eating bat, commonly known as the kalong or flying-fox, is the largest of all the bats; it does much mischief in orchards. At least two species of South American bats are known to suck the blood of other mammals, and hence are called "vampire-bats." The best known is the *Desmodus rufus* of Brazil, Chili, etc. As winter approaches, in cold climates bats seek shelter in caverns, vaults, ruinous and deserted buildings, and similar retreats, where they cling together in large clusters, hanging head downward by the feet, and remain in a torpid condition until the returning spring recalls them to active exertions.

Batrachia (from the Gr. *batrachos*, a frog).—An order of amphibious animals, which includes the frogs and toads; it is also designated by the name of *Anoura*, or "tailless" amphibians. In the batrachia, the adult is destitute of gills and tail, and the two pairs of limbs are always present; there are no ribs, and the skin is soft; the mouth is sometimes without teeth, but the upper jaw is usually provided with teeth, and, more rarely, both jaws; the hind-limbs usually have the toes webbed for swimming, and are much larger than the fore-limbs. In the adult batrachia the breathing is carried on by means of lungs; but, as there are no movable ribs, the process of breathing is somewhat peculiar—in fact, it is one of swallowing, and it is possible to suffocate a frog simply by holding its mouth open. The moist and delicate skin, however, also performs an important part in respiration. The young, or larvæ, of frogs and toads are familiarly known as "tadpoles." The eggs are deposited in mosses in water, and the young, when hatched, are fishlike in form, with a broad, rounded head and a compressed tail. There are at first two sets of gills, one external and the other internal; but the outer ones disappear very shortly after birth, and the inner ones are subsequently replaced by lungs. The hind-limbs first make their appearance, and are followed by the fore-limbs; and as the limbs become fully developed the tail gradually disappears. In both the common frog and the toad the tongue is fixed to the front of the mouth, while it is free behind, so that it can be protruded for some distance from the mouth. The tree frogs have the toes of all the feet furnished with terminal suckers, by the help of which they climb with ease; they are mostly found in America, but one species is European. The Surinam toads (found in Surinam and also in Brazil) rarely have teeth, and the mouth is destitute of a tongue.

Beagle.—A small hound or hunting-dog formerly much used in coursing hares, and more remarkable for perseverance than speed. Beagles were formerly distinguished as the *rough* and the *smooth*. The rough wire-haired or *terrier* beagle is now seldom met with, though it was a hardy and altogether a vermin-loving breed, and very strongly formed. The North England beagle is a nimble and vigorous hound.

Bear.—The name of several large plantigrade carnivorous mammals of the genus *Ursus*. The teeth are forty-two in number, as in the dog, but there is no carnassial or sectorial tooth, and the molars have a more tubercular character than in other carnivores. The eyes have a nictitating membrane, the nose is prominent and mobile, and the tail very short. The true bears are about ten in number, natives chiefly of Europe, Asia, and North America. They generally lie dormant in their den during the winter months. The brown or black bear of Europe is the *Ursus arctos*. It is a native of almost all the northern parts of Europe and Asia, and was at one time common in the British islands. It feeds on fruits, roots, honey, ants, and, in case of need, on mammals. It sometimes reaches the length of seven feet, the largest specimens being found farthest to the north. It lives solitarily. The American black bear is the *Ursus americanus*, with black shining hair, and rarely above five feet in length. It is a great climber, is less dangerous than the brown bear, and is hunted for its fur and flesh. It is very amusing in captivity. The grizzly bear (*Ursus ferox* or *horribilis*) is an inhabitant of the Rocky mountains; it is a ferocious animal, sometimes nine feet in length, and has a bulky and unwieldy form, but is nevertheless capable of great rapidity of motion. The extinct cave-bear (*Ursus spelæus*) seems to have been closely akin to the grizzly. The Siberian bear (*Ursus collaris*) is perhaps a variety of the brown bear. The polar or white bear (*Ursus maritimus*) is characterized by its flat head and comparatively long neck.

Beaver.—A quadruped of the order *Rodentia*, or gnawers, the only species of its genus. It is very widely distributed, being found in the northern parts of Europe, Asia, and America, nowadays most abundantly in the northern and thinly peopled parts of North America, dwelling in communities on the banks of rivers and lakes. At one time immense numbers of these animals were killed for their fur, which was largely used in making hats.

Bee.—A well-known family of insects, belonging to the order *Hymenoptera*, an order which also includes the wasps, ants, and gall-flies. Man appears from the very earliest ages to have known the value of bees, and to have taken advantage of their produce. The bible makes mention of honey-bees, and the Latin poet Vergil has celebrated them in the fourth book of his *Georgics*, where he has summed up all that the ancients knew about them. During the greater part of the year the population of our hives is composed exclusively of two sorts of individuals, namely, the female or mother bee, called also the *queen bee*, and the working bees or neuters, which are, properly speaking, females imperfectly developed. A third kind of individuals, the males, called also *drones*, are generally not met with except from May to July. The working bees constitute essentially the bee community; they are recognized by their small size, reddish-brown color, and, above all, by the palettes and brushes with which the hind legs are furnished. The three pairs of legs, which are inserted in the thorax, or chest, of the bee, are its tool. The two hind legs are longer

than the other pairs, and present on the exterior a triangular depression, resembling a *palette*, which is surrounded by stiff hairs, forming the borders of a sort of basket in which the insect deposits the pollen of flowers. To each of these hind legs is jointed a square expanded piece, which might be termed the ankle, smooth on the exterior, but having hairs on its interior surface which has caused it to be named the *brush*, and which is employed in collecting the pollen. The other tools of the working bee consist of a pair of movable mandibles, which close the mouth on its two sides, and of a trunk, or proboscis, which may be considered as a sort of tongue; this latter organ has a hairy surface, to which the honey of flowers adheres, whence it is conveyed to the mouth, and from it to the stomach, to be subsequently disgorged. The males, or drones, are larger and more hairy than the working bees; they emit a buzzing sound, have no palettes, and no sting. The female, or queen, has a longer body than the workers, and the wings shorter in proportion. The only part she has to play is that of laying eggs, and so she has no palettes or brushes. Only one queen lives in each hive, of which she is perfect sovereign, all the workers submissively obeying her. The number of males is scarcely one-tenth that of the working bees, and they live only about three months. The wax of which the cells of the honeycomb are constructed is supposed to be secreted by an organ situated in the abdomen, or belly, of the bee; but, in addition to wax, another substance, much resembling it, but not identical, called *propolis*, is elaborated from the juices of certain plants, and employed to line the inner surface of the hive. The cells are hexagonal in shape, that is, having six equal sides—the most economical form as regards space—and are of two kinds, namely, store-cells, which are filled with honey, as a reserve store of food, and cradle-cells, in which the eggs are deposited. At a certain time of the year the queen leaves the hive, accompanied by the drones, and takes what is called her "nuptial flight" through the air. About forty-eight hours after her return to the hive she begins laying her eggs, at the rate of about two hundred a day. The eggs which are destined to develop into workers are first laid, then those which are to produce males, and lastly those which give birth to females. The eggs are not long in being hatched, and the *larvæ*, or caterpillars, which emerge from them are tended by the workers, and fed by them on a peculiar paste, which is apparently a preparation of pollen. In five or six days the larvæ pass into the condition of *pupa*, or chrysalis, and in about seven or eight days after this the perfect insect is hatched.

Beetle.—A name often used as synonymous with the term *Coleoptera*, but restricted by others to include all those insects that have their wings protected by hard cases or sheaths, called elytra. Beetles vary in size from a mere point to the bulk of a man's fist, the largest, the elephant beetle of South America, being four inches long. The so-called "black beetles" of kitchens and cellars are not properly beetles at all, but cockroaches, and of the order *Orthoptera*.

Bird-catching spider.—A name applied to gigantic spiders of the genera *Mygale* and *Epeira*, more especially to the *Mygale avicularia*, a native of Surinam and elsewhere, which preys upon insects and small birds, which it hunts for and pounces on. It is about two inches long, very hairy, and almost black; its feet when spread out occupy a surface of nearly a foot in diameter.

Bird of paradise.—The name for members of a family of birds of splendid plumage allied to the crows, inhabiting New Guinea and the adjacent islands. The family includes eleven or twelve genera and a number of species, some of them remarkably beautiful. The largest species is over two feet in length. The king bird of paradise (*Paradisea regia*) is possibly the most beautiful species, but is rare. It has a magnificent plume of feathers, of a delicate yellow color, coming up from under the wings, and falling over the back like a jet of water. The feathers of the *Paradisea major* and *Paradisea minor* are those chiefly worn in plumes. These splendid ornaments are confined to the male bird.

Bison.—The name applied to two species of ox. One of these, the European bison, or aurochs, (*Bos. bison* or *Bison europæus*), is now nearly extinct, being found only in the forests of Lithuania and the Caucasus. The other, or American bison, improperly termed buffalo (*Bison americanus*), is found only in the region lying north and south between the Great Slave lake and the Yellowstone river, and is rapidly becoming extinct in the wild state, though formerly to be met with in immense herds. The two species closely resemble each other, the American bison, however, being for the most part smaller, and with shorter and weaker hind-quarters. The bison is remarkable for the great hump or projection over its fore-shoulders, at which point the adult male is almost six feet in height; and for the long, shaggy rust-colored hair over the head, neck, and forepart of the body. In summer, from the shoulders backward, the surface is covered with a very short fine hair, smooth and soft as velvet. The tail is short and tufted at the end. The American bison used to be much hunted for sport as well as for its flesh and skin. Its flesh is rather coarser grained than that of the domestic ox, but was considered by hunters and travelers as superior in tenderness and flavor. The hump is highly celebrated for its richness and delicacy. Their skins, especially that of the cow, dressed in the Indian fashion, with the hair on, make admirable defenses against the cold, and are known as *buffalo robes;* the wool has been manufactured into hats, and a coarse cloth. The American bison has been found to breed readily with the common ox, the issue being fertile among themselves.

Bittern.—The name of several grallatorial birds, family *Ardeidæ* or herons, genus *Botaurus*. There are two British species, the common bittern (*Botaurus stellaris*) and the little bittern (*Botaurus minutus*), a native of the south, and only a summer visitor to Britain. Both, however, are becoming rare from the reclamation of the marshy grounds that form their favorite haunt. The common bittern is about twenty-eight inches in length, about forty-four in extent of wing; general color, dull yellowish-brown, with spots and bars of black or dark brown; feathers on the breast long and loose; tail short; bill about four inches long. It is remarkable for its curious booming or bellowing cry, from which come the provincial names of *miredrum* and *butter-bump*, etc. The eggs (greenish-brown) are four or five in number. The little bittern is not more than fifteen inches in length. The American bittern (*Botaurus lentiginosus*) has some resemblance to the common European bittern, but is smaller.

Blackbird (*Turdus merula*), called also the *merle*, a well-known species of thrush, common in Britain and throughout Europe. It is larger than the common thrush, its length being about eleven inches. The color of the male is a uniform deep black, the bill being an orange-yellow; the female is of a brown color, with blackish-brown bill. The nest is usually in a thick bush, and is built of grass, roots, twigs, etc., strengthened with clay. The eggs, generally four or five in number, are of a greenish-blue, spotted with various shades of brown. The song is rich, mellow, and flute-like, but of no great variety or compass. Its food is insects, worms, snails, fruits, etc. The blackbirds, or crow-blackbirds, of America are quite different from the European blackbird, and are more nearly allied to the starlings and crows. The red-winged blackbird (*Argelaius phœniceus*), belonging to the starling family, is a familiar American bird that congregates in great flocks.

Bloodhound.—A variety of dog with long, smooth and pendulous ears, remarkable for the acuteness of its smell, and employed to recover game or prey which has escaped wounded from the hunter, tracing the lost animal by the blood it has spilled; whence the name of the dog. There are several varieties of this animal, as the English, the Cuban, and the African bloodhounds. In former times bloodhounds were not only trained to the pursuit of game, but also to the chase of man. In America they used to be employed in hunting fugitive slaves.

Bluebird.—A small dentirostral, insessorial bird, the *Erythaca*, or *Sialis wilsonii*, very common in the United States. The upper part of the body is blue, and the throat and breast of a dirty red. It makes its nest in the hole of a tree or in the box that is so commonly provided for its use by the friendly farmer. The bluebird is the harbinger of spring to the Americans; its song is cheerful, continuing with little interruption from March to October, but is most frequently heard in the serene days of the spring. It is also called *blue robin* or *blue redbreast*, and is regarded with the same sort of sentiments as the robin of Europe.

Bluefish (*Temnodon* or *Pomatomus saltator*).—A fish common on the eastern coasts of America, allied to the mackerel, but larger, growing to the length of three feet or more, and much esteemed for the table. It is very destructive to other fishes. It is also called horse-mackerel, greenfish, skip-jack, etc.

Boa.—A genus of serpents, family *Boidæ*, having the jaws so constructed that these animals can dilate the mouth sufficiently to swallow bodies thicker than themselves. They are also distinguished by having a hook on each side of the vent; the tail prehensile; the body compressed and largest in the middle, and with small scales, at least on the posterior part of the head. The genus includes some of the largest species of serpents, reptiles endowed with immense muscular power. They seize sheep, deer, etc., and crush them in their folds, after which they swallow the animal whole. The boas are peculiar to the hot parts of South America. The *boa constrictor* is not one of the largest members of the genus, rarely exceeding twenty feet in length; but the name boa or boa constrictor is often given popularly to any of the large serpents of similar habits, and so as to include the pythons of the old world and the anaconda and other large serpents of America.

Bony pike (or garfish).—A remarkable genus of fishes inhabiting North American lakes and rivers, and one of the few living forms that now represent the order of ganoid fishes so largely developed in previous geological epochs. The body is covered with smooth enameled scales, so hard that it is impossible to pierce them with a spear. The common garfish attains a length of five feet, and is easily distinguished by the great length of its jaws.

Bower birds.—Certain birds of Australia and New Guinea which have the habit of building bowers. These are constructed on the ground, usually in some retired part of the forest under overhanging branches, and are decorated with feathers, shells, stones, bones, etc. The bowers are not nests but are resorts, and are especially used at the mating season.

Buffalo.—A name of certain wild cattle of the warmer parts of the old world, living in marshy places. Some of them have been domesticated and are used much as oxen with us. The name was transferred by the early explorers to the bison of North America, a very different kind of animal. When first discovered America had the buffalo as far east as Ohio, while farther west they occurred in enormous herds. With the opening of the transcontinental railroads these herds were quickly killed off, so that now there are only a few protected herds. The attempt has been made, with some success, of crossing them with domestic cattle.

Bugs.—A name loosely applied to any insect, but rightly belonging to insects of the order *Hemiptera*, which have sucking mouthparts and the wings partly hardened, partly membranous. Most of them feed on the juices of plants which they suck by means of the beak, but a few prey upon other animals, the bedbug attacking man. Most of the group are pests, like the squash bug, the plant lice and the scale insects, but a few are of value, like the lac insects and the cochineal, the one furnishing the shellac, the other the carmine.

Bulldog.—A variety of the common dog, remarkable for its short, broad muzzle, and the projection of its lower jaw, which causes the lower front teeth to protrude beyond the upper. The head is massive and broad; the lips are thick and pendulous; the ears pendent at the extremity; the neck robust and short; the body long and stout; and the legs short and thick. The bulldog is a slow-motioned, ferocious animal, better suited for savage combat than for any purpose requiring activity and intelligence. For this reason he is often employed as a watchdog. It was formerly used—as its name implies—for the barbarous sport of bull-baiting. The *bull terrier* was originally from a cross between the bulldog and the terrier. It is smaller than the bulldog, lively, docile, and very courageous.

Bullfrog.—The largest species of frog. It occurs through a large part of the United States and has its name from the loud croak which somewhat resembles the low roar of a bull. It is a dusky brown above, yellowish-green beneath, and is spotted with black.

Bullhead.—A common name for several species of fish. In the United States the name is given to some species of catfish or horned pout; in England to a smaller fish, allied to our miller's thumb, but belonging to a different group from the catfish.

Bustards.—Birds of the order *Grallæ*, restricted to the old world, and somewhat closely related to the snipe and plovers. The great bustard, about the size of a turkey, is the largest bird in Europe, and ranges east to Tartary. The little bustard is common in southern Europe. Other species occur in Asia, Africa and Australia. They are vegetable feeders and all are strong runners, and though they are slow to take wing, they fly well.

Butterflies.—A group of insects with broad wings belonging to the order of *Lepidoptera*, which is easily distinguished from the moths by their habit of flying in the daytime and by having the antennæ or feelers at the end of the head ending in a club, and never tapering or feathered. Like many other insects these hatch from the egg with a shape like a worm, the larva or caterpillar. This eats mostly vegetable matter, grows rapidly, molts its skin several times, and at last changes into a resting stage, the pupa or chrysalis, which usually passes the winter. Then the chrysalis case splits down the back and from the opening the butterfly comes out, to lead a short life, in which it lays the eggs which are to go through the same history. There are several thousand species of butterflies known, the majority being inhabitants of the tropics.

Buzzard.—A name applied to several diurnal birds of prey closely resembling the hawks, our common hen hawk being a buzzard. These birds feed on mice, moles, small birds, insects, etc., and on the whole are a benefit to the agriculturist. The common buzzard is spread over the whole of Europe and America. The carrion buzzards feed on decaying animal matter, the bee buzzards or honey buzzards of the old world feed on honey and on the larvæ of bees and wasps.

Camel.—The family of camels includes a few forms of animals that chew the cud but are without horns. In the warmer parts of the old world are two species which have been domesticated by man and serve as beasts of burden. One, the dromedary, has a single hump of fat, etc., upon the back; the Bactrian camel has two humps. There is much exaggeration in the common accounts of their endurance and of their ability to go for a long time without water. Their hair is used in weaving cloth. In Peru and adjacent parts of South America are four members of the family, two of

which, the llama and the alpaca, have been domesticated.

Camelopard.—See giraffe.

Cameo shells.—Certain snail shells from the sea, in which the shell consists of a white and a brown layer which makes these of value for cameos. The manufacture of these is mostly carried on in Genoa and Naples.

Canary.—One of the finches, originally coming from the Canary islands, but domesticated for three hundred years. From their powers of song they are favorites with many, and the best songsters bring high prices. While the usual color in cage birds is canary yellow, the wild birds are a dull green.

Canvasback duck.—An American duck, breeding in the far north and shot in numbers on its migrations. In the Chesapeake they feed on the roots of the *Vallisneria* (wild celery), a marsh plant which gives the flesh a peculiar flavor, and makes these the most esteemed of game birds.

Cardinal bird.—One of the finches, also known as the redbird. It is a native of North America and is a good singer. Its common name is due to the bright red plumage.

Carp.—A group of fishes without spines in the fins. The true carp originated in China and was introduced into Europe three hundred years ago, and much later into America. It has little value as a food supply, aside from the fact that it is readily reared in confinement. The carp has numerous varieties, among them the familiar gold and silver fishes. Less known in America are the leather carp, in which the scales have been lost, and the mirror carp, with only a single row of very large scales on either side of the body.

Carpet beetle.—A small beetle of inconspicuous colors which originally fed upon flowers, but which has taken to animal food, and especially to woolen goods. It is the larva which does the damage.

Catbird.—A well-known species of American thrush, which, during the summer, is found throughout the Middle and New England states. The plumage is a deep slate color above and lighter below, and it is about nine inches in length. In habit it is lively, familiar, and unsuspicious; the song is largely imitative of those of other birds, but it also has the cat-like note which gives it its common name. During the winter it inhabits the extreme south of the United States, and is found also in Mexico and Central America.

Cats.—A large family of animals, including the lion, tiger, panther, leopard, lynx, puma, and a number of other forms, among them our domestic pussy. All have retractile claws, cutting molar teeth and elongate pupils to the eyes. The common cat is probably a native of Egypt. Certain it is that it was domesticated there and that it was an object of worship and was frequently mummied. It was not known to the ancient Greeks and Romans, its place as a destroyer of rats and mice being taken by domesticated martens. The domestic cats are cleanly animals, more attached to places than to persons, and like many domesticated animals, are very variable in color. Besides the ordinary kinds, there are common the tailless Manx cats (coming from the Crimea as well as from the island of Man) and the Angora or Persian cats, with long silky fur. The coon cats are merely a race of the latter. The original of the domestic cat was probably marked with black bar on a ground of tawny and white, these colors rendering them inconspicuous among the grasses and shrubbery where they ranged.

Centipedes.—A group of jointed animals belonging to the order of *Myriapods*, characterized by having numerous segments to the body, each with a pair of walking feet. The head is very like that of an insect, but the remaining segments of the body are not divided into regions. The legs of the first segment behind the head contain a poison gland, and its secretion is forced into the wound made by the sharp tip of the leg. Most of the species are small, but in the tropics are species ten inches in length. The bite of these larger forms causes considerable pain, but authenticated cases of death following the bite are at least rare.

Cephalopods.—A group of mollusks in which the mouth is surrounded by a number of arms, each usually bearing a number of suckers, well developed eyes, a sack enveloping the body, and a shell which may be either external or internal. The group includes the squid, cuttlefish, pearly nautilus and many other forms without common names.

Chameleon.—A genus of lizards, natives of parts of Asia, Africa, and the south of Europe. The best-known species has a naked body six or seven inches long, with a prehensile tail of about five inches, and feet suitable for grasping branches. The skin contains small grains of a bluish-gray color in the shade, but in the light of the sun all parts of the body become of a grayish-brown or tawny color. It possesses the curious faculty of changing its color, either in accordance with its environment, or with its temper when disturbed, the change being due to the presence of clear or pigment-bearing contractile cells placed at various depths in the skin, their contractions and dilations being under the influence of the nervous system. Other lizards have the same power of changing color and the name has been also applied to them. Their power of fasting and habit of inflating themselves gave rise to the fable that they lived on air, but they are in reality insectivorous, taking their prey by rapid movements of a long viscid tongue. In general habit they are dull and torpid.

Chamois.—A species of goat-like antelope inhabiting high inaccessible mountains in Europe and western Asia. Its horns, which are about six or seven inches long, are round, almost smooth, perpendicular and straight until near the tip, where they suddenly terminate in a hook directed backward and downward. Its hair is brown in winter, brown fawn color in summer, and grayish in spring. The head is pale yellow with a black band from the nose to the ears and surrounding the eyes; the tail is black. Its agility, the nature of its haunts, and its powers of smell, render its pursuit an exceedingly difficult and hazardous occupation.

Chimpanzee.—The native Guinea name of a large West and Central African ape belonging to the anthropoid or man-like monkeys, and to the same genus as the gorilla. When full grown it is sometimes about five feet high, with black hair, and is not so large and powerful as the gorilla. It walks erect better than most of the apes. It feeds on fruits, often robs the gardens of the natives, and constructs a sort of nest among the branches. It is common in menageries, where it shows much intelligence and docility.

Chinchilla.—A small animal, about nine inches long, occurring on the west slope of the Andes, and hunted for its beautiful fur. The chinchillas are near relatives of the guinea pigs.

Clams.—Bivalve mollusks which form a considerable element in the food supply. The name is loosely used. On our Atlantic coast it is applied to the quahog, with a heavy shell capable of closing completely, and to the long clam, with lighter shell. The latter buries itself in the sand, sending two long tubes up to the surface, and through these it obtains the food and water necessary for its existence.

Cochineal.—A bug allied to the plant lice, which feeds upon the cactuses in Mexico, and which, when dried and treated with alum, and the extract is dried, gives the brilliant red dye, carmine.

Cockroaches.—Insects of the order *Orthoptera*, some small, others two inches long, which feed upon decaying vegetable matter. Several species have taken up their abode with man, and prove most unwelcome boarders. Many methods have been advocated for their extermination, but none is very satisfactory except the killing of every individual seen, and a continuation of this for months.

Codfish.—A species of marine fishes with barbels about the mouth and with three fins upon the back and all fins without spines. This is probably the most important food fish and is taken in enormous numbers on the coasts of Europe and of eastern North America. It occurs in the northern Pacific as well. It feeds upon other fishes as well as on shellfish, and large specimens weigh over one hundred pounds. Allied to the cod are the haddock, pollack, hake and cusk.

Condor.—A South American bird, one of the largest of the vultures. It resembles the common vultures, differing from them mainly in the large cartilaginous caruncle which surmounts its beak, and in the large size of its oval and longitudinal nostrils. Despite stories of its gigantic proportions, Humboldt met with no specimens whose wings exceeded nine feet in expanse, though it has been known to expand to fourteen feet. It is found in the Andes chain, frequenting regions from 10,000 to 15,000 feet above the level of the sea. They only descend to the plains under stress of hunger, when they attack sheep, goats, deer, and bullocks. They prefer carrion, however.

Coney.—A small animal mentioned in the bible and supposed to be the *Hyrax* of science. Its home is around the eastern end of the Mediterranean, extending down into Africa. The animal is without near relatives.

Coral.—The limy skeleton of certain low animals allied to the sea anemones and grouped by zoölogists as *Cœlenterates*. The coral is secreted by the outer surface of the body and usually shows something of the radiate structure of the animal. As the animals usually form colonies of hundreds of thousands of individuals, the coral may show little cups in which each individual was seated. When the animals die these coral masses are left behind, and so abundant are they in the tropics that coral reefs and islands are formed by them. The precious coral of the Mediterranean and of Japan is very solid and takes a high polish. The price is dependent upon the color and size of the pieces, the pale pink commanding the highest price. Purchasers should be on the lookout for counterfeits, made of marble, and for dyed coral.

Crab.—The common name of a large number of *Crustaceans* in which the abdomen is small and folded under the anterior part of the body—the cephalothorax. Over two thousand species are known, differing greatly in size, shape, and in other respects. The great majority are marine, but there are a few which spend their entire life on land, only going to the water once a year to lay their eggs. The largest is the great spider crab of Japan, whose legs may stretch out a dozen feet. Like all crustaceans, the crabs molt their shell at intervals, and after the molt, their skin is soft. One species on the Atlantic coast is taken at this time in great numbers and forms the favorite soft-shell crab of the table. The hermit crabs have the abdomen soft, and to protect this vulnerable part, they insert it in the shell of some dead snail, and carry this about with them wherever they go.

Crane.—A genus of birds belonging to the order *Grallæ*, remarkable for their long migrations, in which they usually fly in large flocks led by a single leader, the whole assemblage assuming a V form, and the leadership is continually changed. The common crane breeds in the north of Europe and in Siberia, and migrates southward at the approach of winter. It attains nearly five feet in height; with the exception of the neck, which is black, the body is of a uniform ashy-gray; it has a graceful carriage. It frequents large plains and marshes, and feeds on fish, reptiles, frogs, mollusks, worms, insects, and even small mammals. At the breeding season the birds pair for reproduction and rearing the young. The games and dances in which they indulge are interesting. They form groups in various fashions, advance toward one another, make a kind of salutation, and adopt the strangest postures. Two species occur in America, the whooping crane being noticeable for the convolutions of the trachea within the breast bone.

Crayfish.—The common name of the small crustaceans of fresh water which resemble the lobsters in appearance. They usually live in burrows in the banks or bottoms of streams and feed on decaying animal matter. In Europe they form a considerable element in the food supply and are bred in ponds. A large number of species occur in the United States, and in the larger markets they are always to be found.

Crocodile.—A genus, family, and order comprising the largest living reptiles. The characters of the order *Crocodilia* are as follows: The skin is covered with square, bony plates; the tail is long and compressed. The feet are short, and there are five toes on each fore-foot, and four on each hind-foot, the latter more or less webbed. The jaws are long and their gape enormous. The nostrils are at the extremity of the snout, and capable of being closed to prevent ingress of water. The heart is four-chambered. The families now existing are the alligators, crocodiles, and gavials. The alligators are all new world forms. The gavial proper is confined to the East Indies. The crocodile of the Nile is the best-known member of the order; another species is met with in southern Asia, and a third in tropical America. The crocodile is formidable from its great size and strength. It is exclusively carnivorous, and always prefers its food in a state of putrefaction. In Egypt it is no longer found except in the upper or more southern parts. It grows sometimes to a length of thirty feet, and apparently lives to a vast age.

Crow.—The family, widely diffused over the world, includes the common crow, the raven, the fish-crow, the rook, the jay and the magpie. The common crow of North America is remarkable for its gregarious and predatory habits, as well as for its intelligence and cunning. They pair in March; the old repair their nests, the young frame new ones; but they are such thieves that while the one is fetching materials the other must keep watch to prevent the rising fabric from being plundered by their neighbors. As soon as the nest is finished and the eggs produced (five, bluish-green, with dark blotches), the male takes upon himself the care of providing for his mate, which he continues during the whole period of incubation. They frequent the same rookeries for years, but allow no intruders into their community. They feed chiefly on worms and the larvæ of insects; they also eat grain and seeds, whence they have sometimes been supposed injurious to the farmer; but they amply repay him for what they take by destroying the vermin in his fields.

Crustacea.—One of the great groups of animals with external skeleton and jointed feet, including the lobster, crab, barnacle, shrimp, etc. They are characterized by having two pairs of feelers (antennæ) in front of the mouth, by breathing by gills attached to some of the legs, and a ladder-like nervous system. As they have a hard, unyielding external skeleton, they can only increase in size by shedding the external skin at irregular intervals. Several thousand species are known.

Cuttlefish.—One of the mollusks belonging to the class of *Cephalopods*, in which there are ten arms around the mouth. The internal shell is calcified and is used as a supply of lime for cage birds. They have also an ink bag, the secretion of which furnishes the pigment sepia. Cuttlefish are an important article of food in southern Europe.

Deer.—A group of ruminant quadrupeds constituting the family *Cervidæ*, animals of graceful form, combining much compactness and strength with slenderness of limb and fleetness. They use their horns for weapons of defense and offense; but in general they trust to flight for their safety. They have a long neck, a small head, which they carry high, large ears, and large, full eyes. Many have scent glands, usually beneath the eyes, which serve as sexual attractions. Deer are distinguished from all other ruminants by their branching horns (antlers), which in most species exist in the male only; they are solid, fall off annually, and are renewed with increase of size.

and number of branches, according to the kind, until the animal has reached old age. Deer are found in almost all parts of the globe except Australia and the south of Africa, their place in the latter region being supplied by antelopes; the greater number inhabit the warmer temperate countries, and they are chiefly found in wide plains and hills of moderate height. The flesh (venison) of most kinds of deer is highly esteemed for the table, and they have long been regarded as among the noblest objects of the chase. Only one species, the reindeer, can be said to have been fully domesticated.

Dodo.—A large flightless pigeon formerly living in the Mascarene islands in the Indian Ocean. It was larger than a turkey and was killed off by man, the last individual disappearing before 1700.

Dog.—An animal well known for its attachment to mankind, and remarkable for the almost infinite varieties, as to size, form, color, and quality of the hair, which domestication has brought about. It belongs to the order of carnivorous mammals, and to that section distinguished as *digitigrade*. The genus *Canis* includes, besides the dog, the jackal and the wolf. It is a question of considerable interest what was the parent stock of the dog. Some are of the opinion that the breed is derived from the wolf; others that it is a domesticated jackal; all agree that no trace of it is to be found in a primitive state of nature. That there are wild dogs, we know. The dhole of India and the dingo of Australia are examples which exist in a state of complete independence, and throw no light upon the question. The dog will live on cooked vegetable matter, but prefers animal food. In drinking, it laps with the tongue. It never perspires, but the nose is naked and moist, and, when hot, the tongue hangs out of the mouth. The female goes with young sixty-three days, and usually has about six or eight at a litter. The young are blind at birth, and do not acquire their sight until the tenth day. The dog attains its full growth at the expiration of the second year, it is old at fifteen, and seldom lives beyond twenty years.

Dormouse.—Small animals, in some respects intermediate between the squirrels and the true mice. They live in the trees of Europe, but in their hibernations they become so torpid that "he sleeps like a dormouse" is proverbial.

Doves.—A name for several of the more familiar pigeons, like the mourning doves of the United States and the turtle doves of the old world.

Dragon fly.—One of the insects of the order *Pseudoneuroptera*, which has an elongate body and long and slender wings. They lay their eggs in the water, where the young are hatched and feed upon all kinds of aquatic insects. The adults are of great value in destroying mosquitoes.

Duckbill.—A peculiar mammal of Australia, living in the streams, and feeding, like a duck, on the matter contained in the ooze at the bottom. In accordance with these habits the toothless jaws are prolonged into a duck-like beak and the feet are webbed. The animal has many other peculiarities of structure, among them the presence of but a single opening (as in reptiles and birds) for the digestive and urogenital organs. It also does not bring forth living young, like all other mammals, but it lays eggs. It is about a foot in length.

Ducks.—A group of swimming birds, too well known to need description. Most of the species are migratory and some, like the mallard and the shoveller duck, are found in both the old and the new worlds. Among the interesting forms are the eiders, well-known from their soft down. They are found in the colder parts of both continents. The Labrador duck was formerly very abundant, but is now probably extinct. Specimens are far rarer in museums than of the great auk. The wood duck is possibly the most beautiful species.

Eagle.—A genus of birds belonging to the order *Accipitres*, and to the same family as the falcons and the hawks. They are found in all parts of the globe. The size varies according to the species, but all attain imposing dimensions. The golden eagle measures about three feet nine inches in height, and the spread of its wings is nearly ten feet. The eagle soars at great heights, and its sense of vision is very acute. It builds its nests in the clefts of inaccessible rocks, and lays generally two or three eggs; the period of incubation is thirty days. Besides the golden eagle, there are other species, such as the American eagle, whitetailed eagle, the tawny eagle, the booted eagle, and numerous smaller species in tropical regions.

Earthworms.—A group of burrowing worms, found in the earth in almost all parts of the world. They are without eyes or well developed appendages. They live on the organic matter in the soil, and to obtain this they swallow the earth through which they mine, and cast the refuse on the surface. This makes them of great value to the agriculturist, as they work over and loosen the soil. In the winter they burrow down beneath the frost, and the large numbers frequently seen after a storm is not due to their having descended with the rain, but to their having been drowned out of their holes.

Echinoderms.—A great group of animals with a radiate structure, and with a spiny skin. They are all marine. The class includes the starfish, sea urchins, sea lilies, and some other less commonly known forms.

Edentates.—A group of mammals in which the teeth are not always lacking, as the name would imply, but in which they are imperfectly developed. The group is largely American and includes the armadillos, sloths and ant-eaters.

Eels.—Fishes of very elongate form, living in the sea. There are several species belonging in very different groups. The lamprey eels have no true jaws, no limbs, and a large number of gill openings. They ascend the rivers in the spring to deposit their eggs, while the true eels descend from the rivers in the fall to the sea for the purposes of reproduction.

Elephant.—A genus of mammals, the only living representatives of the order *Proboscidæ*, or animals with a trunk or proboscis. They are exclusively confined to the tropical regions of the old world, in the forests of which they live in herds. Only two existing species are known, the Asiatic elephant and the African elephant. In both species the two upper incisors, or front teeth, are enormously developed, constituting long tusks. The lower incisors are absent, and there are no other teeth in the jaws except the large molars, or grinders, of which two are usually in use at one time on each side of each jaw. The molars are very large and are composed of a number of transverse plates of enamel, united together by dentine. The nose is prolonged into a cylindrical trunk, movable in every direction, highly sensitive, and terminating in a finger-like, prehensile lobe. The nostrils are placed at the extremity of this proboscis. The feet are furnished with five toes, but these are only indicated externally by the divisions of the hoof; and the sole of the foot is formed of a thick pad of integument. The Indian elephant is the only species which is domesticated; and, as it will scarcely ever breed in captivity, the demand for it is supplied entirely by the capture of adult wild individuals. The Indian elephant has a concave forehead and small ears, while the African elephant has a convex forehead, and large ears. The African elephant is chiefly hunted for the sake of its ivory, and there is reason to believe that the pursuit will ultimately end in its extinction. The elephants are vegetable feeders, living almost entirely on the foliage of shrubs and trees, which they strip off by means of the prehensile trunk. As the tusks prevent the animal from drinking in the ordinary manner, the water is sucked up by the trunk, which is then inserted in the mouth, into which it empties its contents. Many species of fossil elephants are known, the most familiar of which are the mammoth and mastodons.

Falcon.—A name of various birds of prey, members of the family *Falconidæ*. The falcons proper, for strength, symmetry, and powers of flight, are the most perfectly developed of the feathered race. They are distinguished by having the beak curved from the base, hooked at the point, the upper mandible with a notch or tooth on its cutting edge on either side, wings long and powerful, the second feather rather the longest, legs short and strong. Most prominent of the falcons are the peregrine falcon and the gyrfalcon. These were the principal birds used in falconry during the middle ages, not only in Europe but through the east. At one time the sport was only allowed to the nobility. Falcons were carefully trained, and at a hawking party the birds were loosed and they immediately set upon any other game that might be in sight. The pleasure was in watching the falcon getting the better of birds, sometimes many times their size.

Fishes.—The lowest class of vertebrate or backboned animals. They are adapted for an aquatic life, their shape being such as to permit easy and rapid progress through the water. They breathe by gills placed on the walls of slits in the sides of the neck, and their appendages (fins) are such as to make efficient paddles. There are usually one or more fins in the middle line of the back and one or two in a corresponding position beneath the tail (anal fins); while the tip of the tail is terminated by a caudal fin, the chief organ of swimming. The caudal fin presents three different types. In the diphycercal fin the backbone is straight at the tip, and the lobes of the caudal fin are equally disposed on its two sides. In the heterocercal tail the backbone is turned upward at the tip, this making one lobe, while a smaller second lobe is developed on its under side. This is the type of tail in the sharks. The homocercal tail has the same bent backbone as the last, but the two lobes are equal. Most fishes have the latter type. All of the fins are supported by a skeleton of rays, either horny or spinous in character. There are but two chambers to the heart, and the occurrence of a swim bladder, an organ for regulating or recognition of the depth of the water in which the fish is, is very frequent. There are several great groups of fishes, distinguished by the presence of a cartilage or a bony skeleton, by having the gill slits free or under a gill cover, by characters of the skull, presence or absence of air bladder, and by peculiarities of the digestive tract and nervous system.

Flamingo.—A genus of web-footed birds, in some respects intermediate between the storks and the ducks, their long legs and necks giving them a resemblance to the former, while their webbed feet connect them with the latter. There are nine species of true flamingoes. Their food appears to be mollusca, spawn, grass, water plants, insects, etc. They breed in companies in mud-flats or inundated marshes, raising up the mud into a small hillock, which is concave at the top so as to form a nest. In this hollow the female lays her eggs and hatches them by sitting on them with her legs doubled up under her. The young, which never exceed three in number, do not fly till they have nearly attained their full growth, though they can run very swiftly and swim with ease almost immediately after hatching. The common American species is deep red with black quills. It is peculiar to tropical America, migrating in summer to the Southern, and rarely to the Middle states.

Flea.—A group of wingless insects, mostly parasites on other animals. They have a hard skin, covered with spines so arranged that they can easily work themselves through the hair, legs admirably adapted for jumping, and the mouthparts fitted for piercing and sucking. The fleas breed in the cracks in a floor or some similar place where there is dirt, and when they are mature they attack animals. The irritation and annoyance of their bites are sufficient to make them a nuisance, but now it is known that they are an important agency in the transmission of certain diseases, bubonic plague being communicated to man by their bites.

Flatfishes.—A group of fishes, including the halibut, sole, turbot, flounder, etc., in which the extremely flattened body has undergone a strange modification, both of the eyes of the adult being on the same side of the head. In correlation with this the fishes live on the bottom of the ocean, with the eyed side uppermost, waiting for their prey. The lower, eyeless, side is white, the other colored similarly to the bottom.

Flies.—A term applied to various insects of different groups, but strictly belonging to the two-winged insects, the *Diptera* of science. Besides the number of wings, the group is distinguished by having a metamorphosis, and by its sucking mouthparts. There are some thirty or forty thousand species of flies known, while no other order has so many individuals as this. Some species are closely connected with man, and of these the common house fly is especially noticeable. This lays its eggs in manure or other refuse, these hatching out, passing through all their stages and emerging as perfect insects in a few days. Their uncleanly habits make the house flies most efficient agents in the carriage of different diseases, especially typhoid fever and others which attack the digestive tract. Flies are therefore not merely a nuisance to be deplored but a positive danger to mankind. Among other flies are the carrion flies, black flies, the gnats and the mosquitoes, all troublesome to man, while others attack various plants.

Flounder.—One group of flatfishes of moderate size, common near the shore. They are held in moderate esteem as food fishes.

Flying-fish.—A name common to various fishes which have the power of sustaining themselves for a time in the air by means of their large pectoral fins. Generally, however, the name is limited to the species of the genus *Exocœtus*, which belongs to the family *Scomberesocidæ* (mackerel-pikes). These can pass through the air to a considerable distance, sometimes as much as 200 yards, to escape from the attacks of other fishes, especially the dolphin. They are most common beween the tropics.

Flying-squirrel.—A genus of rodents, family *Sciuridæ* (squirrels), which, by means of the skin of the flank, extending between the fore and hind legs, can support themselves for a moment in the air, as with a parachute, thus making great leaps. The American flying-squirrel lives in the northern parts of North America.

Fox.—Carnivorous animals, of which there are several species, belonging to the same family as the dog. It is characterized by its sharp muzzle, and long bushy tail; as well as by its cunning, which has passed into a proverb. The pupil of the eye is elongated, and not circular as in the dog, and the ears are triangular and pointed. A very powerful scent is emitted from glands near the root of the tail; this odor is so fetid that even other animals avoid its locality. The common fox is an inhabitant of most parts of Europe and America, and extends also into Northern Asia. Its senses are extremely acute. It usually remains concealed during the day in a burrow, and ventures abroad chiefly at night, in search of food. Birds, rabbits, or hares constitute its usual prey, but, when pressed by necessity, it will have recourse to other food, and it has a predilection for certain kinds of fruit, such as grapes. To poultry it is destructive. Though slightly made, the fox has great muscular vigor, and bites with much severity. Even when taken at a very early age, it is never properly domesticated; and adults, when placed in confinement, show great ferocity, and soon die. Its power of endurance and its great speed, as well as the cunning which dictates various expedients for escape, makes the chase of this animal exciting. Among its expedients for

escape is that of feigning death, which is done also by several other animals. Numerous other species of fox exist in the old and new worlds, of which the most important are the arctic, or blue fox, and the American, or red fox. The arctic fox is remarkable for changing its color with the season, being brown or bluish in summer, and white in winter; the soles of its feet are hairy. The red fox, found throughout North America, is very variable in color and marking, and varieties of it are known by different names. The skins of all the species are valuable.

Frog.—A common name for any species of the amphibian genus *Rana*, characterized by a smooth skin, a large ear spot (tympanum), webbed hind feet, and pointed toes. The genus is almost cosmopolitan. The adults lay their eggs in long strings in the water, and from them are hatched out larvæ (the tadpoles) which are fish-like in having a broad, swimming tail and gills on the sides of the neck. The tadpoles feed upon small aquatic plants which they scrape off from sticks and stones with their horny jaws. As they increase in size, the legs grow out and the tail is absorbed. In the growth of the legs, the anterior pair is first formed, but as this pair is at first under the skin, it is usually thought that the hind pair is first formed. With the growth of legs and the loss of tail the gills disappear and the lungs come into use, but most species always remain in close proximity to water throughout their lives. The adults live on animal food—insects, mollusks, small fishes, etc.—and do not hesitate to eat their own species. They do much good in keeping down certain species of insects; they also furnish an article of diet in their hind legs. Frogs are also an important animal for physiological investigations, because of the great vitality of their tissues.

Gallflies.—Insects of several orders, but chiefly of the *Hymenoptera*, which have a boring apparatus at the end of the body, with which they make holes in plants and deposit their eggs. This stimulates the plants to form enlarged structures, the galls, in which the eggs hatch into larvæ which feed on the tissues of the plants. These galls may occur on stems or leaves, and each species of insect and plant forms galls peculiar to the species. Prominent among these are the nut-galls, once used extensively in the manufacture of ink.

Gasteropoda.—A large group of mollusks, including, among others, the forms commonly known as snails. They creep on a broad fleshy portion known as the foot, have a head in front, with one or two pairs of tentacles, and with the mouth beneath. On the back is the shell (some species have none), which is usually coiled in a spiral, though sometimes it is a simple cone. These shells have a great variety of shapes and colors. The snails have a peculiar ribbon just inside the mouth which is armed with numerous minute teeth. With these the snails rasp their food, while some of them bore through the shells of clams, etc., on which they feed.

Gavials.—Alligator-like animals occurring in the rivers of Asia. They have a long head, much narrower than that of the alligator and crocodile. In habits they are all much alike.

Gazelle.—An animal belonging to the antelope family; of very graceful shape, and rather smaller than the chamois. The color is fawn or dun on the back, separated from the white belly by a brown or blackish band. The horns, stronger in the male than in the female, are in the shape of a lyre. The eyes are beautiful and soft in expression, and its movements are elegant and light. It inhabits the large plains and the Saharan region of northern Africa, as well as Arabia and Syria, living in numerous herds. When taken young, the gazelle, though naturally wild and timid, is readily domesticated.

Gila monster.—A large lizard, found in New Mexico and Arizona, colored black and yellow, and remarkable as the only poisonous lizard, though not dangerously so. It reaches a length of three feet.

Giraffe.—The tallest mammal, often called the *camelopard*, because the skin is spotted like the leopard, while the neck resembles that of the camel. It inhabits various parts of Africa, and, together with the recently discovered okapia, form an entire family, belonging to the class *Ungulata*, or hoofed animals. The height ranges from fifteen to twenty feet, the greater part of which is the enormous length of the neck, which, nevertheless, has only the usual number of seven vertebræ, as in the whole class of mammals. The giraffe has an unusually long cylindrical tongue, which is prehensile, and is used for stripping the leaves off the trees on which it feeds.

Goat.—A genus of ruminant quadrupeds closely allied to the sheep, although the common domestic goat and sheep are of widely different appearance. The uses of the goat are numerous. The flesh, especially that of the kid, or young goat, is much used as food, though rather poor in quality. The milk is very rich and nutritious, more easy of digestion than that of the cow, and is often useful to consumptive patients. Some goats yield as much as four quarts of milk daily, although the average quantity is more nearly two. The skin is dressed as leather for many uses, particularly for gloves and the finer kinds of shoes. The horns are used for making knife-handles, etc., and the fat is said to be superior to that of the ox for candles. Goats are found wild in mountainous countries; scrambling among rocks and bushes, are extremely sure-footed, and display great strength and agility in leaping. The Rocky mountain goat is an animal of the antelope family. Its size is about that of an ordinary sheep, and its general appearance is not unlike that of a sheep of the merino breed, its long, straight hair hanging down in an abundant white fleece.

Goose.—A genus of web-footed birds, having the bill not longer than the head, the upper mandible slightly hooked at the tip; the legs farther forward than in ducks, and so better adapted for walking; the neck of moderate length, with sixteen vertebræ, a character which distinguishes them from swans. In general, geese spend more of their time on land than any other of the *Anatidæ*, feeding on grass and other herbage, berries, seeds, and other vegetable food. Although large birds, and of bulky, form, they have great powers of flight. They strike with their wings in fighting, and there is a hard callous knob or tubercle at the bend of the wing, which in some species becomes a spur. The domestic goose is regarded as deriving its origin from the common wild goose, but all the species seem capable of domestication. The graylag goose is almost three feet in length from the tip of the bill to the extremity of the short tail. Its extent of wing is about five feet. The weight of the largest birds is about ten pounds. The color of the plumage is gray, varying in some parts to grayish-brown; the rump amd belly white, the tail grayish-brown and white; the bill is orange, the nail at the tip of the upper mandible white. The young are darker than the adults.

Gorilla.—The largest of the man-like apes from tropical West Africa. It reaches a height of five feet eight inches, and the arms are proportionately shorter than in any other ape. They are very strong, but usually they retire before man. They can climb, but are far less arboreal than their relatives, the orang and the chimpanzee. The gorilla was known to the ancients, but was brought to the knowledge of the modern world by the American missionary, Dr. Savage.

Grouse.—A general term for a number of birds allied to the quail, and, more distantly, to the pheasants. Among them are the ptarmigan of the northern parts of America, which exhibit an interesting example of sympathetic coloration, as they turn white in winter, like many other northern animals. Another grouse is the prairie chicken, once so abundant on our western prairies and plains, but now protected almost everywhere. In the east it has been exterminated everywhere except on the island of Martha's Vineyard. A third example is the partridge of the north, the pheasant of the south.

Guinea pig or cavy.—A small animal belonging to rodents. It is indigenous to South America, and has been introduced into Europe and America, where it is domesticated as a pet. It possesses a very low degree of intelligence; in its natural home it is gregarious, and is usually found living on dry lands covered with low brushwood. The color is variegated, and the tail is rudimentary. It is extremely prolific, and begins to breed at the age of ten months, producing several broods in a year; each litter usually consists of about eight. The popular name is very inappropriate; the animal does not come from Guinea, nor is it a pig.

Gulls.—Large web-footed birds, common about large bodies of water in the northern hemisphere. Their colors are usually white below with the upper parts varying from a light gray to a black. All are much alike in their habits, noisy and quarrelsome, searching the water for any possible scrap of food, and often following ships for days. They breed on uninhabited islands. The closely allied terns are usually smaller and have a forked instead of a square or even pointed tail. Both are strong fliers but the terns are the most graceful.

Haddock.—One of the most important of the food fishes, closely related to the cod, but distinguished by a notched tail and a white line along the side. In habits the two are much alike, being voracious, eating anything edible, but largely clams and the like, a fact indicated in the German name for shellfish given them.

Halibut.—A member of the group of flatfishes, remarkable in having the eyes on the same side of the head and of swimming, not in a vertical position, like other fishes, but on the side, with the eyes uppermost. The very young flatfishes are normal, but when less than half an inch long they turn on the side and at the same time the eye begins its migration which ends by both eyes being on the same side, the twisting even distorting the bones of the skull. The average weight of the halibut is about 120 pounds; the largest known weighed 720 pounds. The flesh is white and most excellent.

Hawks.—A common name of several small raptorial birds, allied to the eagles, but with no one common distinctive character, for the name is applied loosely to buzzards, ospreys and several other forms.

Hedgehog.—A European animal, like a porcupine in having the body covered with sharp spines, but differing much in structure and in food. The hedgehog feeds upon insects, lives in holes in the ground, and, when disturbed, rolls into a ball with the spines sticking out in every direction, and forming a most excellent defense.

Herring.—A small soft-finned fish spread over the whole North Atlantic, of great economic importance. It occurs in large schools, swimming through the sea with open mouths, scooping up the minute life for food. Immense numbers are taken both here and abroad, the annual catch for Europe and America being estimated at a billion and a half pounds. The young are also taken in vast quantities and are preserved as American sardines. With us most of the adults are smoked and dried.

Hippopotamus.—A genus of animals nearly allied to the pigs, hogs, and peccaries, and belonging to the order *Ungulata*. The group is represented by only one living species, the *Hippopotamus amphibius* of Africa. It is enormously bulky and unwieldy, attaining a height of five and a length of twelve feet. The feet are massive, and are terminated by four hoofed toes; the skin is very thick. The hippopotamus feeds upon vegetable substances, such as grasses and shrubs; it dives and swims with great facility.

Hornet.—A common name of the paper-making wasps or yellow jackets, well-known for their stings.

Horse.—An ungulate or hoofed mammal. The horse proper is characterized by the tail with long hairs from its base; the long and flowing mane; a bare callosity on the inner surface of the hind as well as of the fore legs; and by the head and ears being smaller and the limbs longer than in the ass and other related species. The native country of the horse seems to have been central Asia. It became early domesticated in Egypt. It is mentioned throughout the bible. The Greeks and Romans had some covering to secure their horses' hoofs from injury. In the ninth century, horses were only shod in time of frost. Shoeing was introduced into England by William I., 1066. It is believed that the original breed of horses is extinct, and that the half-wild herds existing in many places have descended from animals once in captivity. Thus, when the horse was first introduced by the Spaniards in 1537, at Buenos Ayres, there were no wild horses in America. But individuals escaping ran wild, and, by 1580, their descendants had spread over the continent as far as the Straits of Magellan. More fossil horses have been found in the new than in the old world. The horse may have descended from a striped ancestor, stripes still sometimes remaining, especially in duns and mouse-duns. His age is ascertained by examining first which teeth are developed, and then to what extent they have been worn away by use. Like other domestic animals the horse has run into various breeds. The most celebrated is the Arab horse. Great attention is given in America to the breeding of horses, and American horses have won races both in England and on the Continent.

Humming birds.—A group of small birds, of great delicacy of body and wonderfully brilliant plumage, which are entirely restricted to America. Some four hundred species are known, only three or four entering the United States, one ranging north to Canada. Their common name is due to the humming noise which they make when hovering over a flower. Aside from their beauty there is little else attractive about them. They have little intellect and are exceedingly quarrelsome.

Hyena.—A genus of carnivorous animals, containing three species, from Asia and Africa. These animals are covered with coarse bristly hair, short over the greater portion of the body, but forming a mane along the ridge of the neck. The hind legs are shorter than the fore, giving the body a slope from the withers to the haunches. In size they are somewhat larger than a shepherd's dog. The cheek muscles are greatly developed, and the large grinding teeth have great conical crowns, giving to them the power of smashing the thigh-bones of animals the size of a horse. As carrion feeders they are useful scavengers. All the species are nocturnal in their habits.

Jaguar.—A carnivorous mammal belonging to the cat family. It is rather larger than the leopard, but more elegant in form and in beauty of its skin, the ground color of which is pale brownish-yellow, variegated on the upper parts with streaks and irregular oblong spots of black. This animal is one of the most formidable beasts of prey found in America, being extremely fierce. It extends from the southern regions of the United States, through Mexico, Central America, and Brazil, as far south as Paraguay. Wooded banks of rivers are its favorite haunts, and it is said to frequent the reedy margins of lakes, seeming to have great predilection for water. It preys chiefly upon the water-hog, and is said to catch fish; but occasionally it kills horses and cattle, and even men. The jaguar is a noisy animal, roaring much at night, especially on the approach of bad weather.

Jellyfish.—A common name for numbers of marine animals belonging to the group called by naturalists *Cœlenterates*. All agree in having a more or less bell or umbrella shaped body, with a proboscis hanging down in the place of the handle of the umbrella or the tongue of the bell. The mouth is at the end of the handle and leads into a stomach which divides and sends out branches, like the ribs of the umbrella, to the margin. The

common name is due to its gelatinous consistency. Most of the species start in life as buds from attached animals, which later separate and henceforth lead a free existence, swimming by opening and closing the bell. The jellyfish are the sexual animals, producing the eggs from which the fixed stages arise. None of the jellyfish has any practical value; they have nettling organs which are used for defense and to kill their prey. In some they are strong enough to cause severe irritation to man. A general name for the group is *Medusæ*, while the fixed stages are called polyps.

angaroo.—A family of pouch-bearing or marsupial animals. They are the most highly developed members of the order, and occur in Australia, taking the place of deer and cattle. The family comprises over fifty species, and of these the great kangaroo may be taken as a type. This species was formerly plentiful over the plains, but it is now retiring before the colonist. The fore-limbs are small; the hind-limbs very large and thick; the head small, with rather long ears, and a long, dusky-brown muzzle; the body long, with the fur shortish but thick, and of a gray-brown tint. In height it is as tall or taller than a man. The female carries her young in a pouch on the underside of the belly. When moving quickly the hind-limbs alone are brought into action, and by means of these the animal bounds along in great leaps of from ten to fifteen feet, the body being carried in a nearly horizontal position, and the tail extended to balance it. The fore-limbs are chiefly used in handling, and with these the females lift their young, and place them in the pouch. The kangaroos are vegetable feeders.

amprey eels.—Eel-shaped animals of a very low position, mostly living in the sea, but going to fresh water to lay their eggs. The large sea lamprey is nearly three feet long. It has no lower jaw, but its mouth is permanently open and is lined with horny teeth by which the animal fastens itself to other fishes, on the blood and mucus of which it lives. There is a single nostril and seven gill openings on the side of the neck. They are used as food in some places. Allied are the hag-fishes, which become true parasites, entering the body of a fish through the gills and completely devouring the flesh in a single night. The hag-fishes are not common on our east coast; they are more abundant in Europe and California.

ark.—The common name of birds comprising the genus *Alauda* and *Sturnella*. The skylark of Europe, the most harmonious of this musical tribe, commences its song early in the spring, continues it during the whole summer, and is one of those few birds that sing while on the wing. When it first rises from the earth, its notes are feeble and interrupted; as it ascends, however, they gradually swell to their full tone, and long after it is lost to the sight it still continues to charm the ear with its melody. It mounts almost perpendicularly, but descends in an oblique direction, unless threatened with danger, when it drops like a stone. The meadow-lark of North America, about ten inches long, somewhat resembles the skylark in its habits, but its song is not so sweet.

eeches.—A group of flattened worms found almost entirely in fresh water, though in Asia there are species which live on the land or in trees. At the anterior end is a sucker, and there is a second at the hinder end. The anterior sucker surrounds the mouth, and this, in some species has radiating from it three jaws, each like half of a buzz saw. With these they cut the skin of higher animals, sucking their blood through the wound. Half a century ago leeches were extensively used by physicians in the attempt to relieve certain diseases, but it has since been found out that the system needs strengthening, not weakening, and the use of leeches has ceased.

opard.—The *Felis pardus* differs from the panther by having small spots thickly set, while the panther's spots are large and open. The species is a native both of Africa and Asia. The body of this fierce and rapacious animal is about four feet long. It can take surprising leaps, swim, crawl, and ascend trees.

on.—The largest and most majestic of carnivorous quadrupeds. It is, when mature, of a nearly uniform tawny or yellowish color, paler on the under parts, the young alone exhibiting markings like those common in the *Felidæ;* the male has, usually, a great shaggy and flowing mane, and the tail, which is pretty long, terminates in a tuft of hair. The whole frame is extremely muscular, and the forepartts, in particular, are remarkably powerful, giving, with the large head, bright eye and copious mane, a noble appearance to the animal, which, with its strength, has led to its being called the king of beasts. A lion of the largest size measures about eight feet from the nose to the tail, and the tail about four feet. The lioness is smaller, has no mane, and is of a lighter color on the under parts. The strength of the lion is such that he can carry off a heifer as a cat carries a rat. The lion is chiefly an inhabitant of Africa, although it is found also in Asia, particularly in certain parts of Arabia, Persia, and India. It was anciently much more common in Asia, and was found in some parts of Europe (Macedonia and Thrace), according to Herodotus and other authors. The lion is an inhabitant of open plains in which the shelter of occasional bushes and thickets may be found. It is easily tamed, at least when taken young and when abundantly supplied with food. Lions were made to contribute to the sports of the ancient Romans; a combat of lions was an attractive spectacle, and numbers were imported into Rome, for the amphitheater.

Lizards.—A group of four-footed reptiles occurring in warmer climates, and especially abundant in the tropics. The body is covered with scales on both back and belly, while the head is covered with larger plates, called scutes. This is important when the question comes up regarding a few legless forms, which look like snakes, the presence of scales beneath, instead of broad scutes, showing at a glance their proper position. Most of the lizards are insect eaters and thus do much good. Only a single one, the Gila monster, is poisonous. Some of the larger tropical species are used as food. Some of the species have a great capacity for changing the color to correspond to the surroundings. This is most marked in the chameleons of Africa, and exists to a less extent in some of our American species which are popularly called by the same name. The change of color is due to the enlargement or contraction of small colored bodies in the skin. Among the interesting lizards are the horned toads of our southwest, the glass snakes, footless lizards whose tails are very brittle and break off at slight provocation, and then grow again; the frilled lizard of the East, which has a wondrous collar which he raises when alarmed; and the geckoes of southern Europe, which crawl about on the ceilings of the rooms, uttering the cry which gives them their name.

Llama.—An animal of Peru, allied to the camels in structure and serving as the native beast of burden, as does the camel in the old world. It is about the size of the common deer, with a long neck. It is capable of carrying about one hundred and fifty pounds. Allied is the alpaca, which is kept for the hair, used as a textile material and greatly in vogue some forty years ago. When the hair was first sent to England no one would touch it on account of the difficulty of working it satisfactorily. Titus Salt solved the problem, winning a fortune and the knighthood. Llamas and alpacas defend themselves by spitting and biting, and many a visitor to zoölogical gardens has received a missile from the mouth of one of these beasts. Llamas and alpacas are only known in a state of domestication; wild relatives are the vicuna and the guanaco of Peru. Possibly the tame forms have descended from these.

Lobster.—The most important crustacean, one species occurring on our east coast, another on the coast of northern Europe. The body is divided into two regions, the anterior bearing, besides the parts used in taking food, a pair of large pincers and four pairs of walking feet. At the front of the head are two pairs of feelers, which are sensory, and a pair of eyes on the ends of short stalks. The lobsters are fond of decaying fish and are among the scavengers of the sea. They are caught in large traps, called lobster pots, made out of lath and baited with decaying fish. The number taken is enormous, and overfishing has greatly reduced the numbers in the sea, so that almost everywhere laws have been passed to protect them. The annual catch on the New England coast is estimated at about thirty million pounds, the average weight of a lobster being between two and three pounds. Farther south on our east coast, in California and the Mediterranean a different animal is called lobster.

Macaw.—A genus of beautiful birds of the parrot tribe, distinguished by having their cheeks destitute of feathers, and their tail-feathers long. They are natives of tropical South America. The largest and most splendid is the great scarlet or red-and-blue macaw. The great green macaw and the blue-and-yellow macaw are somewhat smaller.

Mackerel.—An important food fish occurring in the North Atlantic and characterized by the slender shape, the series of little finlets on the tail and the deeply notched caudal or tail fin. It is taken both by hooks and by seines. Some are eaten in the fresh condition and some are salted. Formerly it was very abundant on the eastern coasts of the North Atlantic states, but recently it has been comparatively scarce, possibly the result of overfishing. It goes in large schools. Allied is the Spanish mackerel of our southern waters and the large horse mackerel, which is not very abundant with us, but which is more common in the Mediterranean, where it is called the tunny. Large individuals may weigh over half a ton. It is used extensively as food, the chief fisheries being around Sicily.

Magpie.—A bird belonging to the crow family. There are several species, two of which belong to America. The common European magpie is about eighteen inches in length; the plumage is black and white, the black glossed with green and purple; the bill is stout, and the tail is very long. The magpies continue in pairs throughout the year, and prey on a variety of food, chiefly animal. They are determined robbers of other birds' nests, destroying the eggs and young birds. In captivity they are celebrated for their crafty instincts, their power of imitating words, and their propensity to purloin and secrete glittering articles.

Mammals.—One of the great groups of vertebrates, including the forms commonly called animals. The term animal really has a much wider meaning and includes all living forms that are not plants. Thus corals, snails, clams, insects, fishes and the like are just as much animals as are the mammals. A mammal is readily recognized by the hair (which occurs nowhere else), the warm blood, by bringing forth the young alive and nourishing them with milk secreted by the mother. To the statement that they have living young and do not lay eggs the only exceptions are three small forms found in Australian regions. These form a group called monotremes. Next above them are the marsupials, in which the young are very immature when born. Therefore they are taken into a pouch on the ventral side of the mother, where they remain until able to shift for themselves. To this group belong our opossum; all of the others, including the kangaroos, wombat, sugar squirrel, etc., belong to Australia and the adjacent islands. Next are the insect eaters or insectivores, including our moles and shrews; then come the rodents or gnawers (squirrels, rats, mice, porcupines, rabbits, beaver, etc.), in which the front teeth are fitted for gnawing. The ungulates are the hoofed animals and are subdivided according as the number of toes are odd (horse, ass, tapirs, rhinoceros) and the even-toed group (cattle, sheep, deer, antelope, camels, etc.). The elephants come next, at present restricted to Asia and Africa, but formerly spread over Europe and America in the species known as the mammoth and the allied mastodon. Another group is the bats, the only flying mammals, which have a wing of skin supported on the extremely elongated fingers. All of our species feed on insects, but in South America there is one which is said to suck blood (vampire) and in Asia there are bats which eat fruit. Whales form an additional group, wonderfully adapted for aquatic life, as also are the sirenians (manatee and dugong). The carnivores are the flesh eaters, with teeth adapted to cutting flesh and cracking bones. Here are the bear, weasels, otter, mongoose, dogs, foxes, wolves, and the long line of cats, while the seals and sea lions form an aberrant aquatic side branch. Lastly come the primates, the group including the monkeys, apes and man.

Manatee.—The sea-cow, a gregarious aquatic mammal of the genus *Manatus*, order *Sirenia*, found on the coasts of Florida and tropical America. They generally frequent the mouths of rivers and estuaries, and feed on algæ, such littoral vegetations as they can reach at high tide. Their anterior limbs or swimming paws are furnished with nails by means of which they drag themselves along the shore. They are large, awkward, whale-like animals, attaining a length of eight to ten feet as a rule, but sometimes growing to twenty feet. The skin is grayish-brown, sparsely covered with hairs. Their flesh is excellent, and they furnish a soft, clear oil which does not become rancid. An ally with similar habits is the dugong of Australia.

Mandrill.—A species of baboon distinguished by the short or rudimentary tail, by the elongated, dog-like muzzle, and by the presence of buttock callosities which are generally brightly colored. It has cheek protuberances colored with stripes of brilliant red and blue. The mandrills inhabit western Africa, where they associate in large troops. Full-grown males measure about five feet; they are exceedingly strong and muscular, and fierce in disposition.

Mice.—Small mammals of the group of rodents, belonging to the same genus (*Mus*) as the rats. Our common house mouse is an immigrant from Europe. Its habits are well known. There are some interesting varieties, among them the white or albino mice, which are interesting as pets, since they are less apt to bite than the wild stock. The Japanese dancing mice have the queer habit of turning around every few seconds. The field mice are different species.

Moccasin.—A poisonous snake of the warmer United States, related to the rattlesnake, but lacking the rattles characteristic of the latter. It is more aquatic than its relative the copperhead, frequenting streams and marshy places in search of frogs and other animals on which it feeds. Its bite is dangerous.

Mocking bird.—A genus of the family *Turdidæ*, or thrushes, exclusively American in its distribution, but ranging widely over the continent. These birds are remarkable for their power of song. The best known species is *Mimus polyglottus*, which has marvelous power of voice, and is able to imitate almost any species of animals, as well as noises produced artificially. Its own song is loud, full, and exceedingly varied. In plumage it is decidedly somber, being of a general ashy-gray hue, paler beneath; its sweet and varied notes, and its faculty of imitation, render it a prime favorite.

Mongoose.—One of the small carnivorous mammals of India, noted as a destroyer of snakes and accordingly encouraged. It does not hesitate to attack the most venomous serpents, killing them by agility and having no protection against their poison except its hair and ability to dodge the blows. An

excellent description of their habits is given in Kipling's *Riki-tiki-tavi*. Some years ago mongoose were introduced into Jamaica to rid the island of snakes. The result is an additional evidence of the danger of interfering with nature. The animals killed off most of the snakes and then turned to birds, including the common fowls. Bird and snakes being thus reduced the insects have had it all their own way, and now something is desired to rid the island of the mongoose. The mongoose and its near relative, the ichneumon of northern Africa, are gray and a little larger than a rat. All make interesting pets.

Monkeys.—A common name for certain members of the mammalian group of primates, but no scientific definition is possible, for the term is used with very different meanings. All of the American monkeys are true monkeys, but in the old world there is no line between ape, baboon, gibbon, macaque and monkey. Most of the American species (the marmosets excepted) have one more molar tooth on each side of each jaw than does man, but the forms of the eastern continent are like man in that respect, as they are in having nails rather than claws on at least some of the fingers and toes. Many of the new world species have prehensile tails, but this never occurs in the others, the tail exhibiting a tendency to be reduced, at last disappearing in the man-like apes. Then the American apes have the nostrils widely separated and opening sidewise, while in the others they open in front and downward as in man. Monkeys are extremely interesting because of their caricature of man. Some make most interesting pets, and others are disagreeable, in looks temper and habits. Most of them are vegetarians for most of their diet, but they are fond of eggs and young birds, as well as insects. None stray far out of the tropics and only one enters Europe at Gibraltar.

Mosquitoes.—A group of two-winged (dipterous) insects, distantly related to the common house fly. The animals usually lay their eggs in water; from them hatch out the larvæ, which, from their motion in the water, are commonly called wrigglers. When fully grown, the wrigglers come to the surface, the skin splits down the back, and the perfect insect emerges. As adults they live on blood, which they suck from punctures which they make by the proboscis. In order to stimulate the flow of blood they inject a little of their poisonous saliva into the wound. This causes the itching which was formerly thought to be the worst effect of their bite. Within the past few years it has been found that mosquitoes are the means of inoculating man with malaria, yellow fever and possibly other diseases. They get the germs from some one affected with the disease, and, after a few days, are able to pass them along with the saliva. This discovery has led to warfare against the mosquito and to preventing the attacks by means of screens. Not all species are able to spread these diseases. Thus only *Anopheles* can convey malaria, mosquitoes, which raise the hind end of the body when they bite. In the same way yellow fever is conveyed by *Stegomyia*. The commonest mosquitoes, species of *Culex*, are not known to convey disease. The best ways of eradicating these pests are the emptying of all possible breeding places, and when that is not possible, by covering the top of the water with kerosene.

Moths.—The common name of certain insects belonging to the *Lepidoptera*. Like all *Lepidoptera* they have scaly wings, the fore wings larger than the hind, and a sucking tube on the lower side of the head. They differ from the others of the group, the butterflies, in that the antennæ or feelers on the front of the head never end in a club, but, whether feathered or not, they taper to to a point. When at rest they carry the wings horizontally instead of folded over the back, and with few exceptions they fly at night. Only a very few feed on anything except vegetable matter. The larvæ of the clothes moth eat woolens, silk and other animal matter. With the vegetable food of the larvae, the caterpillars, the group does great damage, the worst pests with us being some of the species that have been recently imported, like the gypsy moth, the brown tail, and the leopard moth. Our older forms, like the codling moth and the army worm, and the various measuring worms, are of far less importance. On the other hand, only a few are of any actual value, among them the silkworm, which more than repays its depredations on the mulberry trees by the silk which it spins from glands near the mouth.

Mule.—See *Ass*.

Mouse.—The name given to certain species of small mammals, belonging to the order *rodentia*, or gnawing animals. The *common house mouse* is too familiar to need any description; the *harvest mouse* is the smallest and at the same time one of the prettiest of mammals. The *longtailed field mouse* frequents fields and gardens. The *dormouse* belongs to another family. *myoxidæ*, of the same order.

Musk-deer.—A genus of deer of the family *Moschidæ*, distinct from the family *Cervidæ*, or true deers. Their habitat is Asia, though one species is found on the west coast of Africa. The typical species is found in the elevated table-lands of central Asia, particularly Tibet. These animals attain the size of a young roe-deer, and the upper jaw bears prominent canine teeth. The males alone yield the musk, which is secreted by an abdominal gland of about the size of a hen's egg. The Tibet musk is most in repute, that known as Russian or Siberian being inferior in quality. Besides its familiar use as a scent, musk is employed medicinally as an antispasmodic. There are six or seven other species of moschus, two of which are very diminutive, and lack the musk gland.

Musk-ox.—An animal closely related to the sheep and only remotely to the ox. Its body is covered with tufted hair, brownish in color and of great length. The hair about the neck and shoulders is so thick as to give the animal a humped appearance. The musk-ox is active and agile. The horns, broad at the base and covering the forehead and crown, curve downward between the eye and the ear, and then upward and slightly backward. The horns of the female are smaller than those of the male. The ears are short, the head large and broad, the muzzle blunt. The average male will weigh about four hundred pounds. The food consists of grass, lichens, etc. The musk-ox inhabits the arctic regions of America north of the sixtieth degree of latitude. The flesh is pleasant to the taste, though it smells strongly of musk, the odor of which is also diffused from the living animal.

Nightingale.—A genus of birds belonging to the order *Passeres*, of which there are two species, very similar in plumage, inhabiting Europe and North Africa. One of these is a summer visitant to the southern and eastern counties of England arriving about the middle of April. The plumage of this delightful songster is of a somber hue, being on the upper surface of a reddish brown, redder on the head and rump; the tail a lighter tint; the throat, lower part of the breast, and abdomen, grayish-white; the lower neck and sides pale grayish-brown. The favorite haunts of this bird are copses and hedgerows, and its food consists of insects. The nest is composed of dry leaves, lined with grass, roots, and hair. The eggs are four or five in number, and of a uniform olive-brown, tinged with grayish-blue.

Nutria.—Another name of the coypu, a South American animal about the size of the beaver, and, like it, furnishing a fine fur; yet it is first cousin to the porcupines. It is semiaquatic, swimming well with its webbed feet.

Octopus.—A genus of mollusks with a rounded body, and a small head bearing a pair of well-developed eyes, the mouth surrounded by eight long arms, each arm bearing numbers of suckers by which the animals hold their prey. Inside the mouth are a pair of jaws, shaped much like those of a parrot. Most of the species are small, possibly averaging a weight of five pounds, but on the Pacific coast (Alaska) which can spread nearly twenty-eight feet. The octopus is eaten extensively in the Mediterranean countries. The stories of large octopi attacking man are very doubtful.

Okapia.—A recently discovered mammal, allied to the giraffe. It is found in the forests of the Kongo (Africa). The head is fawn color, the body dark brown and the legs striped with black and white. The first individual discovered had no horns, but others since found have small horns in both sexes.

Opossum.—A family of mammals, belonging to the order of pouch-bearers, which range throughout the wooded districts of America, from the Middle states to the La Plata river of South America. One species is found from Florida to the Hudson river, and west to the Missouri. They are rat-like in form, the largest species about the size of the common cat; they have a long tail, which is almost destitute of hair, and is very useful from its prehensile nature, enabling the animal not only to hang by it, but also to climb and descend trees. They are sly and live chiefly in trees, lying up in the daytime, and at night roaming in search of their food, which consists of insects, small reptiles, birds' eggs, etc.

Orang-outang.—The Malay name (it means man-of-the-woods) for a large man-like ape found in Borneo and Sumatra. It never reaches a height much over four feet, but the arms of one four feet two inches spread seven feet nine inches, and when erect the hands nearly touched the ground. The orang lives almost entirely in trees. It never jumps, but progresses through the forest by swinging itself from limb to limb. The skin is dark brown and the scanty hair black. The young are more like the human being than is the adult. As the age increases the jaws protrude more and more and the disproportionate length of the arms increases.

Orioles.—A family of birds which inhabit the old world, while one species, the golden oriole, is a summer visitant to central Europe. The male of this species has a brilliant yellow body and black wings and tail. The female is a greenish hue, streaked with dusky lines. It is about the size of the common thrush. The name oriole is also applied to several American birds, of which the Baltimore oriole, a bird ranging from Canada to Mexico, is a well-known example. It has the head, throat, wings, and upper back black; the lower back and all the under parts bright orange, deepening into vermilion on the breast.

Ostriches.—A family of birds inhabiting the southern hemisphere, the true ostrich occurring in Africa, the rhea living in South America, and the emu in Australia. All are flightless birds, and as the wing muscles are reduced there is no keel on the breastbone. The African ostrich has but two toes, the others three. The rheas and the emus may be dismissed with mere mention, the rheas furnishing the feathers used in feather dusters. The African ostriches furnish the well-known plumes and are bred for the purpose, the export of feathers from Africa amounting to over five million dollars a year. There are now ostrich farms in South America and California. The eggs are laid in the sand and in nature are incubated by the heat of the sun. The plumes are cut (not pulled out) once a year.

Otters.—Carnivorous mammals related to the bear, which furnish valuable furs, the skins of the sea otters of the Pacific coast being the most valuable. All are fond of the water, the sea otter spending most of its time in the sea.

Owls.—The popular name of a group of nocturnal birds of prey. This order is a sharply-defined one. The head is extremely large; the eyes huge and directed forward; the bill short and stout; the apertures of the ears very large; the legs feathered; the toes four in number, the outer one capable of being directed backward. The plumage is remarkably soft, the feathers of the face forming disks around the eyes. The owls are cosmopolitan, ranging over the whole globe. They feed on small mammals, birds, fishes, and insects, swallowing the hair, bones, feathers, and scales, which they afterward disgorge in the shape of pellets. They nest on the ground, among rocks, in hollow trees, and in buildings, while some resort to the old nests of other birds. They lay from two to five roundish white eggs.

Oyster.—A familiar shellfish, possibly the most valuable of all of the mollusks. There are various species in all parts of the world, but the best is the American species, which now occurs from Cape Cod to the Gulf of Mexico. Formerly it extended to the coast of Maine, and even now there are scattered beds in the Gulf of St. Lawrence. The oyster grows in shallow water, fastening its shell to some rock or shell, and in this way large beds are formed. They are also planted; that is, the young are taken and placed in favorable situations for rapid growth. The great enemies of the beds are the "drill," a small snail that bores holes through the shell in order to obtain the flesh, and the star-fish, which destroy large numbers. The oyster contains but comparatively little nourishment, though eaten extensively. The European oyster is smaller than ours and has a coppery taste. Our species have the sexes separate, in the European species they are united in the same individual. Allied to the true oysters are the pearl oysters, especially abundant around Ceylon. These have the interior of the shell lined with mother-of-pearl, and when foreign particles get between body and shell they are covered with the same substance, thus forming the pearls used for adornment. These oysters are obtained by diving; the animal matter is allowed to rot, leaving the pearls behind. The shell is also of value, furnishing material for knife handles, buttons, etc., though most of our pearl buttons are now made from the shells of fresh-water mussels from the Mississippi valley.

Pangolins.—A group of ant-eaters from Asia and Africa in which the body is covered with small scales arranged somewhat like those of a pine cone. Some of them are partially arboreal and are aided in climbing by a prehensile tail.

Panther.—Another name for the leopard, a carnivorous animal measuring about six feet and a half from nose to tail, which is itself about three feet long. The manner it seizes its prey, lurking near the sides of woods, etc., and darting forward with a sudden spring, resembles that of the tiger. The puma, or cougar, is sometimes called the American panther.

Parrot.—The name applied in a general sense to all the members of the order *Psittaci*, which comprises the parrots proper, the cockatoos, paroquets, macaws, lories, nestors, etc. The true parrots have the upper mandible toothed, and longer than high, and a short, rounded tail. These birds combine with the beauty of their plumage a nature of great docility, and have the faculty of imitating the human voice in a degree not possessed by other birds. They are found chiefly in Africa, from whence we get the gray parrot, the best talker. South America, which is particularly rich in species, furnishes the well-known green parrot; and North America is the home of a single species, the Carolina parrot. The parrots are forest birds, and are adepts at climbing, using for that purpose both the feet and the bill. Their food consists of seeds and fruits.

Partridge.—A European member of the grouse family, from which the name has been transferred to the quail in the Southern states, the ruffed grouse farther north.

Peafowl.—Members of the group of pheasants, coming from Asia, but now domesticated on account of the brilliant tail feathers of the male in all parts of the world, the female having a smaller tail and more inconspicuous colors.

Peccary.—A genus of quadrupeds, allied to swine, confined to America. In general form they

resemble small pigs. The best-known species are the collared peccary and the white-lipped peccary. The former occurs abundantly in South America, and also extends into North America, living generally in small flocks, which do not hesitate to attack with their tusks any one who meddles with them. Their food consists of maize, potatoes, sugar-cane, and similar materials; and cultivated fields suffer much from their raids. The flesh is savory, and less fat than pigs' flesh. The peccary possesses a glandular sack, situated in the loins, which secretes a strongly-smelling fluid. This must be cut away immediately on killing a peccary, to avoid contaminating the flesh.

Pelicans. — Fish-eating swimming birds of the warmer regions, with a large pouch of skin between the halves of the lower jaw. In fishing they swim, striking the surface of the water with the wings, scooping the fish into the pouch, and later retiring to the shore to devour them. There are two species in the Gulf states, one white, the other brown in color.

Penguin.—The name of birds which form the order *Impennes.* Their wings are very small and hard; are covered with small stiff feathers of a bristly nature, and are absolutely useless for flight; the birds swim well, using both their webbed feet and their wings. There are about eighteen species, entirely confined to the Southern Ocean and the antarctic regions, where they represent the auks and divers of the northern seas. During the breeding season they resort to rocky islands in immense numbers, and stand erect with their eggs under them. Their food consists chiefly of fish.

Perch.—The common name for several species of fish in both fresh and salt water, all of which are characterized by having spines in the fins and hard scales. The name properly belongs to the fresh-water species, which are of some value as food.

Petrels.—A species of birds related to the albatrosses and varying in size from Mother Cary's chickens, six inches long, to the fulmars, three feet in length. All of them live on the high seas, and many of them will follow a ship for days for the scraps thrown overboard. At night they follow close behind the stern of the vessel.

Pigeons.—A group of birds, including some three hundred species, distributed in nearly all parts of the world, all of which are so much alike that no one is in any doubt about the membership of any form in the group. Most of the domesticated varieties, with their great differences in form, differences which in other groups would be considered as distinct species or even genera, are derived from the rock dove. Among the interesting species are the passenger pigeon, which eighty years ago formed immense flocks over the whole of the eastern part of our country, but which are now nearly or quite extinct. The mountain witch of Jamaica is one of the most beautiful of birds. The largest member of the group was the dodo of islands in the Indian ocean, which became extinct before 1700, partly because it lacked the power of flight. It was somewhat larger than a turkey, with the same external appearance but with a head and a part of the legs, like those preserved in the museum at Oxford.

Polecat.—A name common to several species of the weasel family. The common polecat is found in Europe. It is about seventeen inches long, the tail six inches. The color is dark brown. It is nocturnal, sleeping during the day and searching for its prey at night. It is destructive to poultry, rabbits, and game, so that in Britain it is being rapidly exterminated. It has glands secreting a fetid liquor, somewhat like that of the American skunk, which it ejects when irritated or alarmed. Its fur, which is imported in large quantities, is known as fitch. Its hairs form superior artists' brushes.

Porcupines.—A group of large rodents characterized by having some of the hairs modified into large spines or quills. These ordinarily lie flat, but when disturbed the animal rolls itself into a ball, when all of the quills with their sharp points stand outward, forming a very efficient defense. The quills come out very easily but there is no truth in the statement that the animals have any power to shoot them. Our American species has quills about three inches in length. It feeds upon the bark of trees, which it climbs with great ease, and it may do great damage. The species found in southern Europe and northern Africa lives in holes in the ground and has quills a foot in length and as large in diameter as a lead pencil.

Porgy.—A food fish on the eastern coast from Cape Cod south, known also as scup. It should not be confounded with the pogy or menhaden, one of the herrings, which is taken extensively for oil.

Porpoise.—A very small whale belonging to the group of dolphins, usually some four or five feet in length. It is usually blackish above, lighter or even white beneath. It feeds on fish, and schools of porpoises are often seen following shoals of small fishes. Like all of the whales the porpoises are compelled to come to the surface to breathe. They are one of the common sights on an ocean voyage.

Prairie dog.—Small rodent animals of the squirrel family, found on the plains east of the Rocky mountains. They resemble their allies, the marmots, in appearance, and have well-developed claws on all the toes of the fore-feet; shallow cheek-pouches. The best known species is about one foot in length, and has a tail of about four inches. On the upper surface it is reddish-brown variegated with gray. These animals live together in great societies on those portions of the prairies where the buffalo grass grows luxuriantly. Here they excavate burrows in the ground in contiguity to each other, and, when the little creatures are out, quite a busy scene is presented. The name is given on account of a resemblance between its cry and the bark of a small dog.

Puma (or cougar).—A carnivorous animal peculiar to America, where it ranks next to the jaguar in importance as a destructive or dangerous creature. It is known as the American lion, but it is considerably less in size, and lacks a name. Its length is about fifty inches, exclusive of a tail of twenty-six inches; its height is about two feet. The range is extensive, though it is less abundant in North than in South America, where it haunts a variety of situations, equally at home in dense forests, open plains, and the Andes to at least 10,000 feet. It is cowardly, and is not regarded with fear by man. Unlike most of the larger cats it is remarkably silent.

Python.—A genus and family of serpents allied to the family of boas. They are not venomous, but kill their prey by compression. The pythons belong exclusively to the old world, and are of enormous size, sometimes attaining a length of thirty feet. A rudimentary pelvis and traces of hinder limbs exist, terminating externally in a hooked claw. The head exceeds the neck in thickness, and the mouth is extremely large. Aided by their prehensile tails, the pythons suspend themselves from the branches of trees and lie in wait near water for animals which come to drink.

Quail.—A common name of different species of grouse.

Raccoon.—A small family of plantigrade carnivorous mammals, bear-like in appearance and of small size. The raccoons are peculiar to America, where they range from British Columbia and Canada to Paraguay. The common raccoon is a pretty animal, about the size of a cat, but much stouter; it has a long brown or grizzled coat, a ringed and bushy tail, and a turned-up nose. Its legs are short, and are armed with strong claws, useful for digging or climbing. In its attitudes it is somewhat monkey-like, and usually sits upon its haunches when feeding, holding its food in its forepaws. It has a curious habit of washing articles given to it, and of soaking food in water before eating it. Its skin is valued as a fur.

Rats.—The common name of a group of rodents which have accompanied man over the earth. Formerly we were troubled by the black rat, but about two hundred years ago the much fiercer gray rat (also called Norway rat) appeared in eastern Europe from Asia, and has since overrun a large part of the earth, practically exterminating the black rat. White rats are albino varieties of the black rat. The damage done to human possessions has always been so great as to warrant all sorts of measures for their extermination, but more recently the indictment against them has been more severe, as it is found that they are important means of distributing disease, especially the bubonic plague, which is apparently the same as the black death that made such ravages during the middle ages.

Rattlesnakes.—A genus of poisonous snakes of America in which, when the skin is shed each year, a portion of the old skin remains, in a dry condition, attached to the end of the tail, this forming the rattle. When excited the snake vibrates the end of the tail rapidly and the dried rings of skin make the noise. Usually the approximate age of the snake may be known by counting the rings of the rattle, one for each year and one for the button; but this is not always true. The poison is injected by means of the poison fangs, two long teeth in the upper jaw, which are tubular; the poison gland is in the roof of the mouth.

Redbreast.—A bird of the family *Sylviadæ*, familiarly known in the British islands and throughout most of Europe. It is generally designated as the "robin redbreast," or more briefly "a robin." Its length is about five and three-fourths inches, but it is of a rounder and fuller form than many of the *Sylviadæ*, the slenderness of its legs rather strikingly contrasting with the form of the body. The wings are rather short. The tail is scarcely forked. The general color is olive-brown, and the reddish orange-breast is a conspicuous characteristic, particularly of the male. The name robin is improperly given in the United States to a species of thrush.

Reptiles.—A great group of vertebrates, including lizards, snakes, tortoises, crocodiles and a large number of extinct species, some of bizarre shapes and enormous size. Reptiles are characterized by having a scaly skin, breathing by lungs, never by gills, and by having blood which is about the temperature of the surroundings, commonly called cold blood. There are several other peculiarities in internal structure, some of which may be mentioned. Thus the heart has three chambers, the third not being completely divided, except in the alligators. There are two aortic arches carrying the blood back from the heart. The skull articulates to the vertebral column by a single rounded knob (condyle). All produce eggs, but some of the snakes retain them in the body until they are hatched. Reptiles and birds resemble each other in several points, so that they are united in a group of *Sauropsida* (reptile-like). Snakes and lizards are closely related, both having the scales merely horny plates on the outside of the skin; they have a movable bone inserted between the lower jaw and the skull. In the crocodiles and turtles this *quadrate* bone is present but immovable. The turtles have the body inclosed in a bony case, the upper half being formed of the ribs united to the skin, the lower of plates developed in the skin. In the crocodiles the scales are strengthened by the formation of bone beneath the horny portions. Most reptiles have teeth, but all of the turtles lack them, the jaws being covered with horny sheaths. Some of the snakes and a single lizard (the Gila monster) are poisonous, the poison glands being developed in the mouth.

Rhinoceros.—The name of a family of mammals, represented by nine living species, characteristic of Africa south of the Sahara, India, Borneo, and Java. They have large unwieldy bodies; short thick legs, terminating in large pads, with hoof-bearing toes; large elongated heads, with a long horn or horns springing from the snout in existing forms; small eyes and ears, and short tails. Their hide is extremely thick. Five species belong to Africa, all possessing two horns. Of these, the white rhinoceros is the largest, attaining to a length of over twelve feet and a height of nearly six feet; but the black rhinoceros is best known. The Asiatic species are four; the hide has much the appearance of armor plates. They are smaller and two of the species possess double horns, and two a single one. The Indian rhinoceros, a one-horned species, is the one usually seen in menageries in this country. It leads a tranquil, indolent life, wallowing on the marshy borders of lakes and rivers. Owing to the keenness of its smell and hearing, the rhinoceros cannot be easily attacked; but, when brought to bay, it charges with great fury and impetuosity.

Sable.—A carnivorous mammal, nearly allied to the common marten and pine marten, found chiefly in Siberia and Kamchatka, and hunted for its fur. Its length, exclusive of the tail, is about eighteen inches. Its fur, which is extremely lustrous, and hence of the very highest value, is generally brown, grayish-yellow on the throat, and with small grayish-yellow spots scattered on the sides of the neck. It is densest during winter, and owing to the mode of attachment of the hairs to the skin it may be pressed or smoothed in any direction. Two other species of sable are enumerated, the Japanese sable and a North American species. The Tartar sable is the name given to a species of the weasel genus found in northern Russia and Siberia, and the pekan of North America is sometimes known as the Hudson bay sable. The skins of all these varieties are frequently dyed and otherwise manipulated to imitate the true Russian sable. Sable hair is also used in the manufacture of artist's pencils. Sable fur has been of great value from early times.

Salamanders.—A group of amphibians which have four legs and a well developed tail. Like all of the amphibia, they breathe when young by means of gills, some retaining them through life. They may be distinguished from lizards, with which they are often confused, by the smooth skin, in which there are never any scales. Most of the species lay eggs, usually in the water. From these the gilled young hatch out. They are carnivorous or insectivorous. In the adult stage, some are aquatic, but more live on the earth burrowing beneath the soil or under stones, seeking their prey at night. None are poisonous, except that they have glands in the skin which secrete an acrid juice. Our largest species is the mud puppy (*Necturus*) of the Mississippi basin; the largest living species is the giant salamander of Japan, three feet in length.

Salmon.—A well-known fish, forming the type of the family *Salmonidæ*. The salmon inhabits both salt and fresh waters, and ranks among the food-fishes. It generally attains a length of from three to four feet, and an average weight of from twelve to thirty pounds, but these limits are frequently exceeded. The adult fish is a steel-blue on the back and head, becoming lighter on the sides and belly. It usually continues in the shallows of its native stream for two years after hatching, and during this period it attains a length of eight inches. When the season of its migration arrives, the fins have become darker and the fish has assumed a silvery hue. It is now known as a *smolt* or *salmon fry*. The smolts now congregate into shoals and proceed seaward. On reaching the estuary they remain in its brackish water for a short time and then make for the open sea. Leaving its native river as a fish weighing, it may be, not more than two ounces, the smolt, after three months' absence, may return to fresh water as a *grilse*, weighing four or five pounds. In the grilse stage, the fish is capable of depositing eggs. After spawning in the fresh water the grilse again seeks the sea in the autumn, and when its second stay in the ocean is over it returns after a few

months' absence as the adult salmon, weighing from eight to ten pounds. The salmon returns as a rule to the river in which it passed its earlier existence. The fertility of the fish is enormous. Salmon are caught by the rod, and by means of nets, the fishings being regulated by law. There are important fisheries in some European and North American rivers. In Europe the fish is found between the latitudes of 45 and 75 degrees, in North America in corresponding latitudes. The flesh when fresh is of a bright orange color, and is of highest flavor when taken from the sea-feeding fish. In the waters of northwestern America are several salmon belonging to a distinct genus, including the quinnat or king-salmon, blue-back salmon or redfish, silver salmon, dog salmon, and humpback salmon. The quinnat has an average weight of twenty-two pounds, but sometimes reaches 100 pounds. Both it and the blue-back salmon are caught in immense numbers in the Columbia, Sacramento, and Frazer river (especially in spring), and are preserved by canning.

Sand dollar.—A flattened sea urchin on the Atlantic coast. On the upper surface are five petals recalling those of a flower, and the whole body is covered with small spines. These contain a dark brown or purple color, and the fishermen grind them up to make an indelible ink.

Scale insects.—A group of hemipterous insects (bugs) in which the body takes the shape of a scale. All are parasites on other vegetation. They have a slender proboscis with which they bore into the skin or bark, and remain there the rest of their life, sucking the juices of the plant. They do great damage, some, like the recently introduced San Jose scale, attacking all sorts of fruit trees, and killing them in a short time. The scale insects are among the most difficult to combat, and can only be got rid of by sprays and by gases. They are distributed by the feet of birds.

Scorpions.—Spider-like animals in warmer countries. They have four pairs of legs and a pair of large pincers, as well as a small pair on the anterior half of the body, while the hinder portion consists of at first a broad region, followed by a narrower one, the whole terminated with a sting, with which a poison gland is connected. The animal strikes by bending the end of this tail over the back. Its sting is very painful, but rarely if ever is it fatal. Scorpions occur as far north as Nebraska, but are more common in the tropics. They bring forth living young and care for their brood for a while.

Sea anemones.—Marine animals related to the corals, common between tides and lower on all coasts. They are cylindrical animals, with a mouth surrounded by tentacles at one end. Inside there is a single cavity which serves as a stomach and whose branches run to all parts of the body, thus distributing the food like a blood vessel. The colors, especially in the tropics, are variable, and often gorgeous.

Sea cucumbers.—Marine animals, sort of second cousins to the sea urchins and rather more distantly related to the starfish. As the name indicates, they are shaped like a cucumber, and hundreds of little feet on the side heighten the resemblance, as they recall the spines on the vegetable. Inside they have a coiled intestine, usually filled with mud and the contained vegetable and other debris. With us no use is made of the animals, but they are taken in great numbers in the South Seas, and sent to China, where, as *trepang*, they form an ingredient in soups.

Seals.—A family of aquatic carnivores, in which the legs have become modified into flippers, of little use in progressing on land, but, with the tapering body, are well adapted for life in the water. All species are carnivorous, and they make great havoc in schools of fishes. Most of the species have no external ears. To this group belong the common harbor seal of the east coast, which is extensively hunted farther north for the skins, which are used for leather. On the Pacific coast are the eared seals, one of which is the gigantic sea lion, familiar near San Francisco. Another is the fur seal of Alaska. This breeds on one of the Aleutian islands and has been very carefully preserved, but lately has been sadly reduced by piratical pelagic sealing. When removed, the skin has none of the soft appearance so familiar. It has to have all of the long hairs plucked out, leaving the under wool. In order to protect its herds, the United States government absolutely forbids the importation of sealskins or articles made from them.

Sea urchins.—Radiated animals which are usually shaped like a flattened sphere. They have a mouth, surrounded by five chisel-shaped jaws at one pole, while the whole outer surface is covered with slender movable spines. Between the spines are numbers of slender, flexible, tubular feet, which pull the body along, while the spines act more like true feet. The animals feed mostly on seaweeds. They have no economic value with us, but in Europe the eggs of some species are eaten, forming part of the *frutti di mare* of every Italian seaport.

Shad.—A migratory fish of great food value which ascends all of the rivers of the eastern coast every spring to lay its eggs. It is closely related to the herring, but is much larger, and were it not so full of bones it would stand very near the head of food fishes.

Sharks.—A group of very simple fishes, which have only a cartilage skeleton, no bone being developed anywhere in them. They have the gill openings on the side of the neck separate, and in all of the common species the mouth is on the lower side of the head instead of at the tip, as in ordinary fishes. The tail has unequal lobes, the upper lobe being much the largest. There are always four paired fins and one or more on the back. The sizes of the sharks varies from the smaller dogfish, about two feet long, to the great basking shark, some forty feet in length. Most of the species are very voracious, but the tales of man-eating are often exaggerated, although occasionally they may occur. Some of the largest species feed exclusively on shellfish. The flesh of several species is good to eat, but they are mostly neglected in America. The livers are very rich in oil, which commands a good price for use in dressing leather. In some species the skin has small spines and was formerly used (it was called shagreen) instead of sandpaper. Skin with larger plates is sometimes used in the manufacture of pocketbooks, etc.

Sheep.—The common name of the genus *Ovis*, belonging to the hollow-horned ruminant family. Naturalists are by no means agreed as to what was the original breed of this invaluable animal, which is in modern farming almost equally important for furnishing the farm with a dressing of manure, and the community at large with mutton, clothing and other necessaries of life. The leading fact in the geographical history of this genus is that it occurs both in the new and the old world, whereas the goat tribe are naturally unknown in America. It is usually regarded by naturalists as being not only specifically, but generically, distinguished from the goat tribe; but some authorities, on the other hand, are inclined to believe that the generic separation is founded chiefly on characters which have arisen from the influential power of man. In a state of nature, the sheep is scarcely less active or energetic than the goat; its dimensions are greater, its muscular strength at least equal both in force and duration. It is also an Alpine animal, and among its native fastnesses bounds from rock to rock with almost inconceivable swiftness and agility. The four unsubdued races of sheep are as follows; The musmon; the bearded sheep of Africa; the argali, or wild sheep of Asia; and the Rocky mountain sheep of the United States. The latter is larger than the largest varieties of domestic breeds. The horns of the male are of great dimensions, arising a short way above the eyes, and occupying almost the entire space between the ears, but without touching each other at their bases. The hair in this species resembles that of a deer, and is short, dry, and flexible in its autumn growth; but becomes coarse, dry, and brittle as the winter advances. The most important breed of sheep as regards the texture of the wool is the merino, in modern times brought to the greatest perfection in Spain, though their originals probably formed the flocks of the patriarchs thousands of years ago, and have been the stock of all the fine-wooled sheep. They readily form cross breeds, called demimerinos, which have been brought to great perfection in France, whence, as well as from Spain, they have been imported into the United States.

Shipworm.—Not a worm at all but a mollusk, allied to the clams, which has a wormlike body and which lives in timber in the sea. The animal burrows in the wood, nobody knows how, frequently riddling it, and thus doing great damage to piles and to wooden ships.

Shrimp.—The common name of a large number of small crustaceans allied to the lobster, most of them inhabitants of the sea. In many countries they form an important part of the diet, but with us they are little used with the exception of one or two southern species which are used as a basis for shrimp salad. Shrimps are very abundant off our coast and could be made an important fishery.

Silkworm.—A term applied to the larvæ, or caterpillars, of several species of moths. The common silkworm moth, the most important, is a native of China, where it has been cultivated from a remote period. The caterpillar (*silkworm*) is yellowish-gray, and when full-grown is about three inches in length, with a horn-like projection on the last joint of the body. It feeds upon the white mulberry. The *silk* is produced in a pair of glands on the floor of the body which contain a gelatinous substance, and become much enlarged at the time when the animal is about to spin. These silk-glands unite at the mouth to form a common duct termed the *spinneret*, and through this tube the semifluid substance is ejected, and on coming in contact with the air hardens into the fiber so largely used in commerce. The caterpillar employs the silk in constructing a cocoon in which it assumes the pupa state. The pupa is usually killed by plunging the cocoon into hot water, because the natural exit of the moth is injurious to the silk. After the pupa is killed the silk is reeled from the cocoon and sent to the market as raw silk. The color of the silk varies from a bright orange to almost white. In Europe some moths produce one, others two generations annually. A valued variety is the novi race of Italy, which spins a large white oval cocoon. T Japanese have several varieties, including an oa feeding silk-moth, producing a green cocoon, t silk of which is much used for embroidery. The are also different kinds in China and India.

Skates.—A group of fishes, closely related to t sharks, but having the body flattened from abo downward, and with the anterior fins so unit to the side of the head and the body that it h a rhomboid appearance and the tail seems like inconsiderable appendage. The mouth and t gill openings are on the under surface. The a mals are bottom feeders, living on clams and mu sels, buried in the mud. In Europe some of t smaller species are used as food, but in Ameri only by some of the immigrants. One of t species has the front of the head prolonged as long snout, the sides armed with teeth, givi it the name of the sawfish. Another has a lar electric battery on either side of the head, capab of giving very strong shocks. This is called t torpedo. The largest is the manta of the We Indies, which may measure twelve or fifteen fe across.

Skunk.—A carnivorous mammal, usually mark with black and white in a striking manner. is nocturnal, feeding on whatever it may fin and is especially fond of poultry. It is defend by the secretion of a gland near the vent, whi it can eject at will. It is said that this offensi fluid can be destroyed with ammonia.

Sloth.—A large mammal belonging to the ede tates or animals with imperfect teeth. It arboreal, living, back downward, hanging by strong claws from the limbs of trees. It fee upon the leaves, and its slow motions are said give it its common name. It occurs in the fores of tropical America.

Snails.—A common name used for mollusks wi two limitations. In the first sense it includes a mollusk with a coiled shell. In the narrow meaning it includes only those forms which occ on land and especially those embraced in the gro of helices. These land-dwelling forms have slight shell, into which the whole body can retracted. They feed exclusively on vegetatio which they rasp by means of a long ribbon, ju inside the mouth, the surface of which is cover with thousands of minute teeth, so that the whc is a flexible file. The animal creeps about on broad sole, and has four tenacles on the hea one pair of them bearing the simple eyes at t tip. Snails do considerable damage where th are numerous. One species is eaten by many Europe, especially in France and Italy. Ov ten thousand species are known.

Snakes.—A group of limbless reptiles, occurri in almost all parts of the world except the arc regions. They have a rounded body, scaled abo but with broader plates or scutes on the low surface. The mouth is very distensible, and t jaws are armed with teeth pointing backwa which are of great assistance in forcing large a mals down the throat. Most of the species a so colored that they are inconspicuous in th natural surroundings, but most of the poisono species have no such protection. The large of the snakes are the pythons of India and Afric The most poisonous species are the fer de lan of the West Indies and the karet of India. O group is entirely aquatic, living in the middle the Indian and the tropical Pacific Oceans, a bringing forth its young alive. These are al poisonous, and have a flattened tail for swimmin

Sparrow.—A well-known bird of the finch fami which inhabits Europe, and was introduced in North America with the absurd idea that it wou leave its former grain-eating habits and turn cankerworms. It has become everywhere unmitigated pest. Certain buntings are call sparrows in America.

Sparrow-hawk.—The common name of seve hawks of different parts of the world. T American sparrow-hawk is the smallest of o falcons. It often preys on the chickens in poultr yards.

Spiders.—A group of animals with jointed bodi and legs, the bodies divided into two regions, t anterior of these bearing four pairs of legs and t smaller pairs of appendages. The most anteri of these are the poison claws. They have a pois gland in the base, while the end of the claw tape to a point, serving as a hypodermic syringe. T front of the head has from six to eight simp eyes. The hinder half of the body, the abdome is without appendages, save for two or three pa of very small projections, the spinnerets. Ea of these has numbers of openings at the ti through which a fluid is forced at will. T hardens immediately it comes in contact with t air and furnishes the silk of which the web woven. Fine as it is, this silk is really a cab being made of numbers of finer threads, one f each opening in the spinnerets. Spiders breat by means of sacks—so-called lungs—on the low side of the abdomen. They use the silk for ma ing webs, for cocoons for the eggs, nests, and some cases for parachutes for flying. Ea species makes its own type of web. Our comm house spider is the same as that of Europe; t largest species we see is the one found occasiona in banana bunches. The tarantula has t greatest reputation from the unfounded bel

that its bite causes madness which can be cured only by music. So far as is known there is only one species which can cause serious effects by biting man, and even these cases are not sufficiently authenticated.

Squid.—A mollusk nearly related to the cuttlefish. It has a barrel-shaped body, with a head in front bearing ten pairs of tapering tentacles, each with numerous suckers. On the side of the head is a well-developed eye. Squid live largely on small fishes which they catch with the tentacles, biting them with a pair of parrot-like jaws. They are largely used as bait in fishing, and to a limited extent as food. The average length is a foot or two, but in the seas around Newfoundland and Japan giants are occasionally found with bodies a dozen feet in length and tentacles adding thirty feet to this. These were comparatively abundant about 1875, but none has been reported for years.

Squirrels.—A group of rodents, too well known to need description. They are abundant in all of the northern hemisphere, living in trees and feeding largely on nuts, etc. There are several species in the United States, the fur of the larger kinds having considerable value. Nearly related are the ground-squirrels or chipmunks, and the flying squirrels, which really do not fly but glide by means of a parachute of skin extending between the legs of each side.

Stork.—A family of birds, chiefly confined to the old world. The true storks number six species, ranging over Europe, Asia, and Africa, and found also in South America. They resemble the herons, but are more robust, and have larger bills, shorter toes, with a nonserrated claw on the middle toe. They inhabit the vicinity of marshes and rivers, where they find food, consisting of frogs, lizards, fishes, and even young birds. They are migratory, arriving at their breeding haunts in the early spring and departing again in the autumn. The white stork is common in Europe, constructing a large nest, most frequently on the chimney of a cottage.

Swallow.—Any one of 125 species of birds belonging to the family *Hirundinidæ* characterized by the very wide gape of the mouth, to which the common name may allude. All are noted for their graceful flight. They feed almost exclusively on insects and hence are very valuable. Among our common swallows are the purple martin, the cliff swallow, the barn swallow and the sand martin. The so-called chimney swallow is, strictly, not a swallow but a swift.

Swans.—Swimming birds, closely related to the ducks and geese, with long and slender neck, bill about as long as the head, and with a soft cere. Nine species are known, one coming from Chili, the black swan from Australia, and the others from the northern hemisphere. We have two white species, the whistling and the trumpeter swans, but the tame species are all of European origin. Once swans were bred for the table, now solely as ornament.

Tapirs.—A genus of hoofed animals with an odd number of toes on the hind feet. All are tropical, some living in Asia, others in America. All are bulky beasts, recalling somewhat the swine in appearance. They have the snout prolonged into a flexible proboscis with the nostrils at the tip. Their flesh is said to be good.

Thrush.—Any singing bird belonging to the family *Turdidæ*. They are represented with us by the wood thrush, Wilson's thrush, our common robin and several others. The wood thrush is the best singer of our species; the European song thrush is much like our wood thrush but is larger.

Ticks.—A group of semiparasitic animals nearly related to the spiders. The young attach themselves to some higher animal, and then begin to burrow the head under the skin in order to suck the blood. Man and domestic animals are affected by them, and one species is now known to convey the Texas fever to cattle.

Tiger.—The largest and most dangerous of the *Felidæ*; exceeding the lion slightly in size, and far surpassing him in destructiveness. It is purely Asiatic in its habitat, but is not by any means confined to the hot plains of India, though there it reaches its highest development, both of size and coloration. The full-grown male Indian tiger is from nine to twelve, and the tigress from eight to ten feet from the nose to the tip of the tail. The ground color is rufous or tawny yellow, white on the ventral surface, with vertical black stripes or elongated ovals and brindlings. Though possessed of immense strength and ferocity the tiger rarely attacks armed men, unless provoked, but often carries off women and children. When pressed by hunger or enfeebled by age and incapable of dealing with larger prey, like buffaloes, the tiger prowls around villages, and, having once tasted human flesh, becomes a confirmed man eater. In a government report it is stated that "one tigress caused the desertion of thirteen villages, and 250 square miles of country were thrown out of cultivation." The jaguar is sometimes called the American tiger.

Toads.—The common name of any amphibian without a tail, no teeth and a warty skin. They are common in most parts of the world, there being few in the Australian region. They are mostly nocturnal, and, as they feed on insects, they are among the best friends of man and deserve encouragement. The warts are caused by glands in the skin which secrete an acrid fluid, the chief means of defense, as few animals will touch them. It is scarcely necessary to say that they are perfectly harmless to man, and that they cannot cause warts.

Trout.—A common name for several fishes with soft rayed fins and a small fin without rays on the back, behind the large fin. They have very small scales. All are excellent eating and all are regarded as game fish. Our brook trout is typical. This thrives in the coldest and clearest streams, laying its eggs in December or January. Other species in North America are the lake trout and the salmon trout in the east and the rainbow and the Dolly Varden trout in the west. Europe has its own trout. All of the species belong to the northern hemisphere, but they have been introduced into Australia and New Zealand.

Turkey.—A large scratching bird, a native of America, from Canada to Central America. It is chiefly known now in domestication, but is still found wild in some parts of the United States. The tame birds differ some in appearance from the birds in a state of nature. The name was given under the misapprehension that they came from Turkey.

Turkey buzzard.—A large vulture, common in the southern half of our country. It feeds on carrion and thus makes an important scavenger and is protected in some states. It is remarkable for its sustained sailing flight.

Turtles.—The common name of the reptiles known as *Testudinata* or *Chelonia*. They are remarkable for having the body inclosed in a hard case, composed above of the enlarged ribs, below of several large bony plates. In some the head and legs can be retracted inside this shell. Over the outside of the case are horny plates, which, in the hawkbill turtle are of value, as they afford the tortoise shell used for combs, etc. Turtles never have teeth, the edges of the jaws being covered with horny material. Most of the species are carnivorous. Some are terrestrial, some occur in fresh water, and some in the sea. The largest species are the marine leather-backs of the tropics, which occasionally drift north to New England, and the giant species occurring on the Galapagos islands, off the west coast of South America, and on some islands in the Indian Ocean. The marine green turtles are favorites with epicures, as are the terrapins of our east coast. Most species are inoffensive, but our soft-shelled turtles and snapping turtles are savage animals.

Vertebrates.—One of the great groups of the animal kingdom. The vertebrates have a back bone, or vertebral column, which protects the spinal cord, and terminates in front in the skull containing the brain. The alimentary canal lies entirely below this central skeleton, and the organs of respiration are always connected with this, being either gills in openings passing from the throat to the exterior, or lungs connected with the throat by a windpipe. The heart is always below the digestive tract, usually beneath the throat, but in the higher forms it is carried back into the chest. Some lack legs or their equivalent fins, but most have two pairs of these structures, and the aquatic species have also fins in the middle line of the back and belly. All reproduce exclusively by eggs, there being no cases of division or budding, so common in the lower divisions of the animal kingdom.

Walrus.—A marine carnivorous mammal, closely related to seals and sea lions, with enormous downturned tusks, or canine teeth, projecting from the upper jaw, which sometimes reach a length of sixteen inches beyond the sockets. Walruses have a thick clumsy body, deepest at the shoulders, and their feet are adapted for swimming. They reach a length of twelve feet or more and a weight of 2,200 pounds. There are two species, one in the Atlantic and one in the Pacific. The Atlantic form is found on the coast of Labrador and Hudson bay, but formerly extended farther south. They feed largely on clams and other mollusks which they dig from the sea bottom with their tusks. They are hunted for their hides and oil.

Wasps.—A group of insects with two pairs of wings, the hinder part the smaller, and a well developed sting, with a poison gland connected, at the hinder end of the body. It is not easy to frame a definition in common words that will separate them from the ants and the bees. Some are solitary, some form colonies in which the individuals work together for the common good. Among the first are the digger wasps, which excavate holes in the soil, or in wood, which they store with insects that they have paralyzed with the sting, and then lay their eggs in the mass, so that the young, on hatching out will have abundant food. Other solitary forms are the mud daubers, which build nests for the eggs by sticking mud to beams in barns and in other similar places. The social wasps make a nest in common, sometimes in the earth, but the well-known yellow jackets or hornets make paper nests from bits of decaying wood which they chew into a real paper pulp. In the colonies the males die at the approach of winter, but the females live to form a new colony in the spring.

Weasel.—The name of a number of small carnivorous mammals related to the sable, mink, and skunk. They have a remarkably slender, round body with a long neck, which gives the animal the appearance of having the fore legs set back too far. The legs are very short. The common weasel, found both in the old and the new worlds, reaches a length of eight or ten inches; it is light reddish-brown and whitish below, and in northern districts becomes whitish in winter. It feeds on mice, moles, and rats, following them into their holes, and even rabbits fall a prey to it. It rarely visits hen-yards. The stoat, or ermine, likewise inhabits Europe, Asia, and America. It is eight to eleven inches long. In summer its color is mahogany brown, with a black tip to the tail. In winter it changes in northern regions to a pure white except the tip of the tail which, remains black.

Weevils.—A group of beetles in which the head is prolonged into a snout with the jaws at the end. With this they bore into plants of all kinds to lay the eggs, the grub hatching out feeding upon the substance. Hence they are considerable pests. Over 400 species have been described from the United States. Farmers often apply the name to other injurious insects, some of which are not even beetles.

Whale.—The popular name of the larger cetaceans, particularly of all those belonging to the families *Balaenoïdeæ* and *Physeteridæ* or *Catodontidæ*. In the *Balaenoïdeæ* the head is of enormous size, but is entirely destitute of teeth, instead of which the palate is furnished with an apparatus of *baleen*, or whalebone, for the purpose of straining out of the water the small crustaceans, which form the food of these whales. The fibrous structure of baleen, or whalebone, its elasticity, and its heaviness, are well known. The plates of it in the mouth of a whale are very numerous, several hundreds on each side of the mouth, and they are very closely placed together, so that the mouth is filled with them. The head of whales usually occupies from a third to a fourth of the whole length. The lower surface of the true skin extends into a thick layer of blubber, an open network of fibers, in which fat is held. The blubber is from one foot to two feet in thickness, the whole mass in a large whale sometimes weighing more than thirty tons. The most important species is that known as the right whale or Greenland whale. It inhabits the seas of the northern parts of the world, and abounds chiefly in the arctic regions. It attains a size of sixty or seventy feet in length. It was formerly supposed that the Greenland whale was an inhabitant of the southern as well as the northern parts of the world; but the southern or cape whale is now regarded as a distinct species, the head being smaller in proportion than that of its northern congener, and the color a uniform black. The main physical characteristics of the whale are its distorted jaws, with upward directed nostrils, its great bulk, and rudimentary limbs. The huge bulk of the creature is driven forward by the flexible caudal fin, and while the body is rigid in front it exhibits great mobility behind. The blowholes are placed on the top of the head, and the animal can only respire when these are above water. The larger whales travel at the rate of about four miles an hour, but when pursuing their prey or goaded by pain they rush through the water at a much greater pace. They are aided in this by the broad and powerful tail, which is their chief organ of locomotion. Instead of being vertical, as in the fishes, this is horizontal, and the larger species can command immense driving power. The tail is also used as an offensive and defensive weapon. The smooth, shining skin is immediately underlaid by a thick coating of blubber, the great object of the whalers. This is at once dense and elastic, and while it preserves the animal heat it also serves to reduce the mighty bulk of the whale and to bring it nearer to the specific gravity of the element in which it spends its existence. It might be thought that the whale, with its vast bulk, would need sea creatures of a high organization to nourish it; but this is not so. Its chief food consists of minute mollusks, and with these its immense pasture-grounds in the north seas abound.

Whip-poor-will.—A bird widely known on account of its oft-repeated cry of *whip-poor-will*. It is not often seen, although abundant in damp woods of the eastern United States. It usually rests on the ground during the day and is active at early nightfall, sending forth its cry, and also coursing low over the grass in search of insects. It is about ten inches long and of plain colors, being grayish, much variegated with black and buff. Its bill is very broad, its mouth large and provided with a tuft of long bristles. It builds no nest, but deposits its eggs on leaves or a slight depression in the ground. To the same family belong the chuck-will's-widow and the night-hawk.

White ants.—A group of insects which are not at all related to the true ants, but which are so called because they live in colonies like the true ants. So the name termites is better for them. In the colonies there are different kinds of individuals. Only the king and queen (male and female) are winged, and these have only to do with the perpetuation of the species. Then there are the workers and the soldiers, whose duties are indicated by their names. The white ants feed upon wood, burrowing holes in every direction through it and never, if they can help it, coming into the

daylight. In the tropics they are very destructive and they will frequently riddle a house without their ravages being suspected. They are more rare in cooler climates, but they extend into New England. Some of the tropical species build immense nests of clay and chewed wood, ten or fifteen feet high and twice that across.

Wolf.—The name applied to several species of carnivorous animals, belonging to the dog family. The common wolf is about five feet in length including the tail, which is twenty inches, and about thirty-two inches in height at the shoulders. The muzzle much resembles that of a sheep-dog; the ears are upright and pointed, and the eyes are set obliquely. The coat is subject to variation in tint, depending much upon the country the animal inhabits. Perhaps the most usual tint is a yellowish-gray; but it is sometimes almost black. In Europe the animal is still found in Lapland, Norway, Sweden, Russia, Poland, Hungary, and some districts of Germany, France, Italy, Spain, and Greece. In Britain, the last wolf was slain in 1680, but in Ireland the species lingered until 1710. The wolf of India is considered a distinct species, and has a dingy reddish-white fur. The North American wolf has a wide range, extending from Greenland to Mexico, and is closely similar to the European race.

Woodcock.—A famous game bird belonging to the snipe family, and found in northern parts of both the old and new worlds. The American woodcock is about eleven inches long, variegated in black, brown, gray, and rusty colors. The bill is very long and flexible at the end. It is thrust into the soft ground, in search of earthworms, and the presence of woodcocks can often be detected by a cluster of these holes. The European bird is larger.

Woodpecker.—The common name of any of three hundred birds which have climbing feet, stiff tail feathers and which bore into trees for grubs on which they feed, though some of them are fond of fruit and other vegetable food. Most of the species have barbed and pointed tongues with which they spear the larvæ, but in some the tongue is smeared with a sticky substance, secreted by glands in the throat. There are no woodpeckers in Australia or Madagascar, but they occur in all other parts of the world.

Wren.—A genus of birds having a slender, slightly curved, and pointed bill; the wings very short and rounded; the tail short, and carried erect, the legs slender, and rather long. Their plumage is generally dull. They live on or near the ground, seeking for insects and worms among low brushes, and in other similar situations. The European wren is next to the smallest bird in Europe; it is more abundant in the north than in the central and southern parts. It frequents gardens, hedges, and thickets. The North American species of wren are numerous. The house wren is larger than the European wren, and is abundant in the eastern parts of the United States. It often builds its nest near houses, and in boxes prepared for it. The song is very sweet. The male is a very bold, pugnacious bird, readily attacking birds far larger than itself, as the bluebird and swallows.

Zebra.—A name sometimes given to all the striped *Equidæ*, natives of South Africa; but also, in a more restricted use, designating a single species, *Equus zebra*. All resemble more the ass than the horse. The zebra is about twelve hands high at the shoulder. It is light and graceful, with slender limbs; the ground color creamy; the head, neck, body, and legs striped with black; closely related are Burchell's zebra and the quagga, differing in the distribution of the stripes. Zebras are practically untamable, though they have been driven in harness.

WEIGHTS AND MEASURES.—Practically all the commerce of the world is conducted through the medium of two systems of weights and measures, namely, the English system and the metric system. Practically all the engineering work done in the world with the exception of that done in Japan is based upon one or the other of these systems. In the United States and in Great Britain and its possessions both systems are legal and in use, the English being used in all ordinary commercial transactions and the metric in all scientific work and to a lesser extent in technical work.

The English System.—The customary system of weights and measures in use in the United States is the same as the system in everyday use in Great Britain, with some important differences in some of the units which must be noted. For all practical purposes the units of length and mass are identical in value, although the fundamental standards of the two countries are quite different. In Great Britain the standard yard is a bronze bar in the custody of the board of trade and preserved in the standards office, Westminster. Its legal value in terms of the international meter is, one yard equals $\frac{36}{39.370113}$ meters.

In the United States the meter is the fundamental standard and the yard is defined as $\frac{3600}{3937}$ meters. The difference in the value of the two yards in terms of the meter only amounts to a little more than one part in 400,000, which is about the difference found in comparing the imperial yard with its authentic copies at different periods. It is therefore doubtful whether there is a real difference between the length of the English bronze yard and United States yard derived from the meter.

A similar condition exists with respect to the avoirdupois pounds; in England a certain platinum cylinder deposited in the standards office is regarded as the standard pound, while in the United States the pound is defined as 453.5924277 grams, of which the international kilogram contains 1,000. This is the same as the legal value in Great Britain, so that the only difference in the two pounds is one of standards.

On the other hand the capacity measures of the two countries are quite different. The United States gallon of 231 cubic inches and the Winchester bushel of 2150.42 cubic inches have not been legal measures in Great Britain since 1825, having been superseded by the present imperial gallon, which is defined as the volume of 10 pounds of pure water at 62 degrees Fahrenheit, weighed against brass weights in air at the same temperature as the water, and with the barometer at 30 inches. The imperial bushel is defined as the volume of 80 pounds of water weighed under the same conditions as the gallon. The bushel of Great Britain is, therefore, exactly equal to 8 gallons.

The volume of the imperial gallon, according to the most reliable data available at this time, is 277.420 cubic inches and the bushel 2219.36 cubic inches, the first being larger than the United States gallon by approximately 20 per cent, and the latter larger than the United States bushel by 3.2 per cent.

The methods of subdividing and multiplying the yard, pound, gallon, and bushel in the two countries are substantially the same.

Standard Weights and Measures of United States

AVOIRDUPOIS WEIGHT

Dram	dr.	=27½ grains (27.34375).
Ounce	oz.	=16 drams, 437.5 grains.
Pound	lb.	=16oz.,256dr.,7,000grains.
Legal stone	st.	=14 lbs.
Quarter (Eng.)	qr.	=28 lbs.
Quarter (Can.)	qr.	=25 lbs.
Cental or quintal	cent.	=100 lbs.
Hundredwgt.(Eng.)	cwt.	=4 qrs., 112 lbs.
Hundredwgt.(Can.)	cwt.	=4 qrs., 100 lbs.
Ton (Eng.)	T.	=20 cwt., 2,240 lbs.
Ton (Can.)	T.	=20 cwt., 2,000 lbs.

Ton of Coal.—The United States ton is legally defined in some states as 2,000 pounds and in other states as 2,240 pounds. In Arizona, Colorado, Connecticut, Idaho, Indiana, Kansas, Kentucky, Louisiana, Massachusetts, Montana, Nebraska, New Jersey (net ton), New York, Ohio, Rhode Island (net ton), Vermont, Washington, and Wisconsin, it is fixed at 2,000 pounds, and in the District of Columbia, Pennsylvania, New Jersey (gross ton), Rhode Island (gross ton), it is fixed at 2,240 pounds. For tariff purposes Congress has fixed the ton of coal at 2,240 pounds.

TROY WEIGHT

Carat		=3.17 grains.
Pennyweight	dwt.	=24 grains.
Ounce	oz.	=20 dwts., 480 grains.
Pound	lb.	=12 oz.,240dwts.,5,760grs.
Hundredweight	cwt.	=100 lbs.

Troy is the weight used by goldsmiths and jewelers. The grains troy, apothecaries', and avoirdupois are equal, and the same in England, France, the United States, Holland, and in most other countries.

The oz. troy and apothecaries' =1.09714 oz. avoirdupois; but the lb. troy and lb. apothecaries' =only 0.82286 lb. avoirdupois, while 175 lbs. troy and apothecaries' =144 lbs. avoirdupois.

APOTHECARIES' WEIGHT

Scruple	℈ =20 grains	= 20 grains.
Dram	ʒ = 3 scruples	= 60 grains.
Ounce	℥ = 8 drams	= 480 grains.
Pound	℔ =12 ounces	=5,760 grains.

APOTHECARIES' FLUID MEASURE

		Marked
60 minims	♏ (drops).. =1 fluid dram	f ʒ
8 drams	=1 ounce	f ℥
16 ounces	=1 pint	O
8 pints	=1 gallon	G., or Gong.

1 dram	=1 teaspoonful.
2 drams	=1 dessertspoonful.
4 drams	=1 tablespoonful.
2 ounces	=1 wineglassful.
3 ounces	=1 teacupful.

LIQUID MEASURE

		Cubic Inches
4 gills	1 pint (O)	= 28.875
2 pints	1 quart (qt.)	= 57.75
4 quarts	1 gallon (gal.)	=231.0
63 gallons	1 hogshead (hhd.).	
2 hogsheads	1 pipe or butt.	
2 pipes	1 tun.	

DRY MEASURE

		Cubic Inches
2 pints	1 quart (qt.)	= 67.20
4 quarts	1 gallon (gal.)	= 268.80
2 gallons, or / 8 quarts	1 peck	= 537.60
4 pecks	1 struck bushel	=2150.42

HOUSEHOLD MEASURES

120 drops water	=1 teaspoon.
60 drops thick fluid	=1 teaspoon.
2 teaspoons	=1 dessertspoon.
3 teaspoons	=1 tablespoon.
16 tablespoons	=1 cup.
1 cup	= ½pt.
1 cup water	= ½lb.
4 tablespoons flour	=1 oz.
2 tablespoons butter	=1 oz.
3 teaspoons soda	= ½oz.
4 teaspoons baking powder	= ½oz.
2 cups granulated sugar	=1 lb.
2½ cups confectioners' sugar	=1 lb.
2½ cups wheat flour	=1 lb.
3½ cups whole wheat flour	=1 lb.
2½ cups buckwheat flour	=1 lb.
5½ cups coffee	=1 lb.
6½ cups tea	=1 lb.
2 cups rice	=1 lb.
2 cups lard	=1 lb.
2 cups butter	=1 lb.
2 cups graham flour	=1 lb.
2 cups rye flour	=1 lb.
2 cups corn meal	=1 lb.
2 cups rolled oats	=1 lb.
2 cups powdered sugar	=1 lb.
2 cups brown sugar	=1 lb.
2 cups raisins	=1 lb.
2 cups currants	=1 lb.
2 cups bread crumbs	=1 lb.
9 eggs	=1 lb.

CUBIC OR SOLID MEASURE

Cubic foot	=1,728 cubic inches.
Cubic yard	=27 cubic feet, 21,033 bushels.
Cord of wood	=128 cubic feet.
Shipping ton	=40 cubic feet merchandise.
Shipping ton	=42 cubic feet of timber.
Ton of displacement of a ship	=35 cubic feet.

LINEAR MEASURE

3 barleycorns, or / 12 lines, or / 72 points, or / 1,000 mils (mi.)	1 inch (in.).
3 inches	1 palm.
4 inches	1 hand.
9 inches	1 span.
12 inches	1 foot (ft.).
18 inches	1 cubic.
3 feet	1 yard (yd.).
2½ feet	1 military pace.
5 feet	1 geometrical pace.
2 yards	1 fathom.
5½ yards	1 rod, pole, or perch.
66 feet, or / 4 rods	1 Gunter's chain.
40 poles, or / 220 yards	1 furlong (fur.).
8 furlongs, or / 1,760 yards, or / 5,280 feet	1 mile.
3 miles	1 league.

The hand is used to measure horses' height. The military pace is the length of the ordinary step of a man. One thousand geometrical paces were reckoned to a mile.

LAND MEASURE (LINEAR)

7.92	inches	1 link.
100	links, or	1 chain (ch.).
66	feet, or	
22	yards, or	
4	poles	
10	chains	1 furlong (fur.).
80	chains, or	1 mile.
8	furlongs	

LAND MEASURE (SQUARE)

144 square inches	1 square foot (sq. ft.).
9 square feet	1 square yard (sq.yd.).
30¼ square yards	1 sq.pole, rod,or perch.
16 square poles	1 square chain (sq.ch.).
40 square poles, or	1 square rood.
1,210 square yards	
4 square roods, or	
10 square chains, or	
160 square poles, or	1 acre.
4,840 square yards, or	
43,560 square feet	
640 acres, or	1 square mile.
3,097,600 square yards	
30 acres	1 yard of land.
100 acres	1 hide of land.
40 hides	1 barony.

GEOGRAPHICAL AND NAUTICAL MEASURE

6086.44	feet, or	=1 nautical mile.
1000	fathoms, or	
10	cables, or	
1.1528	statute miles	
1	nautical mile per hr.	=1 knot.
60	nautical miles, or	=1 degree.
67.168	statute miles	
360	degrees	=1 circumference of the earth at the equator.
1	league	=3 nautical miles.
1	cable's length	=120 fathoms.

TIME

The unit of time measurement is the same among all nations. Practically it is $\frac{1}{86400}$ of the mean solar day, but really it is a perfectly arbitrary unit, as the length of the mean solar day is not constant for any two periods of time. There is no constant natural unit of time.

1 minute	=60 seconds.
1 hour	=60 minutes, 3,600 seconds.
1 day	=24 hours, 1,440 minutes, 86,400 seconds.
1 sidereal day	=86,164.1 seconds.
1 sidereal month	=27.321661 mean solar days (average).
1 lunar month	=29.530589 mean solar days (average).
1 anomalistic month	=27.544600 mean solar days (average).
1 tropical month	=27.321582 mean solar days (average).
1 nodical month	=27.212222 mean solar days (average).
Mean solar year	=365 d. 5 h. 48 m. 46.045 s. with annual variation of 0.00539.

The change in the length of the mean sidereal day, *i. e.*, of the time of the earth's rotation upon its axis, amounts to 0.01252 s. in 2,400 mean solar years.

ANGULAR MEASURE

There is perfect unanimity as to the standard angle (i. e., the right angle) and practical unanimity as to its subdivision, for the subdivision into grades, etc., once favored by the French, is now abandoned.

1 minute of angle or arc	=60 seconds.
1 degree of angle or arc	=60 minutes.
90 degrees of angle or arc	=1 right angle or ¼ of circumference.
Radian of angle or arc	=arc same length as radius.
Radian of angle or arc	=57.295779513082°.
Length of arc of 1°	= 0.017453292520.
Length of arc of 1′	= 0.015707963268.
Length of arc of 1″	= 0.000290888209.

Time on Shipboard.—The twenty-four hours are divided on board ship into seven parts, and the crew is divided into two parts or watches, designated *port* and *starboard watches*. Each watch is on duty four hours, except from 4 to 8 p.m., which time is divided into two watches of two hours each, called *dog watches*, by means of which the watches are changed every day, and each watch gets a term of eight hours' rest at night. *First watch*, 8 p.m. to midnight; *middle watch*, midnight to 4 a.m.; *morning watch*, 4 to 8 a.m.; *forenoon watch*, 8 a.m. to noon; *afternoon watch*, noon to 4 p.m.; *first dog watch*, 4 to 6 p.m.; *second dog watch*, 6 to 8 p.m. The bell is struck every half-hour to indicate the time, as follows:

1 bell	12.30 a.m.	1 bell	12.30 p.m.
2 bells	1.00 a.m.	2 bells	1.00 p.m.
3 bells	1.30 a.m.	3 bells	1.30 p.m.
4 bells	2.00 a.m.	4 bells	2.00 p.m.
5 bells	2.30 a.m.	5 bells	2.30 p.m.
6 bells	3.00 a.m.	6 bells	3.00 p.m.
7 bells	3.30 a.m.	7 bells	3.30 p.m.
8 bells	4.00 a.m.	8 bells	4.00 p.m.
1 bell	4.30 a.m.	1 bell	4.30 p.m.
2 bells	5.00 a.m.	2 bells	5.00 p.m.
3 bells	5.30 a.m.	3 bells	5.30 p.m.
4 bells	6.00 a.m.	4 bells	6.00 p.m.
5 bells	6.30 a.m.	1 bell	6.30 p.m.
6 bells	7.00 a.m.	2 bells	7.00 p.m.
7 bells	7.30 a.m.	3 bells	7.30 p.m.
8 bells	8.00 a.m.	4 bells	8.00 p.m.
1 bell	8.30 a.m.	1 bell	8.30 p.m.
2 bells	9.00 a.m.	2 bells	9.00 p.m.
3 bells	9.30 a.m.	3 bells	9.30 p.m.
4 bells	10.00 a.m.	4 bells	10.00 p.m.
5 bells	10.30 a.m.	5 bells	10.30 p.m.
6 bells	11.00 a.m.	6 bells	11.00 p.m.
7 bells	11.30 a.m.	7 bells	11.30 p.m.
8 bells	12.00 n'n.	8 bells	12.00 ngt.

Board and Timber Measure.—A board one foot square and one inch thick is the unit of board measure, the number of feet in a board being determined by the number of times its volume equals that of the unit: Thus a board 2 inches thick, 1½ feet wide and 10 feet long contains 30 feet. A board of the same length and width ½ inch thick would contain 7½ board feet.

The Doyle Rule.—Known in some sections as the Connecticut River Rule, the St. Croix Rule, the Thurber Rule, the Moore & Beeman Rule, and the Scribner Rule—is used throughout the entire country and is more generally employed than any other. It is constructed by the following formula: Deduct 4 inches from the diameter of the log as an allowance for slab; square one-quarter of the remainder and multiply the result by the length of the log in feet. It is the usual custom to measure the diameter inside the bark at the small end. One cord of wood is 128 cubic feet.

In metric countries all wood is measured in cubic meters.

Water Measure.—*The Miner's Inch* is usually defined as the quantity of water that will pass through an orifice 1 square inch in cross section under a given head. The head has been fixed in various localities at from 4 to 6½ inches to the center of the orifice. In states where the miner's inch is defined by statute it varies from $\frac{1}{40}$ to $\frac{1}{50}$ of a cubic foot per second. The miner's inch is rapidly becoming obsolete, its place being taken by the cubic foot per second or the gallon per second. The United States reclamation service uses the cubic foot per second.

Visibility Distance at Sea.—Table of elevations of objects above sea level, with their corresponding distances of visibility.

Height in Feet	Distance in Nautical Miles	Height in Feet	Distance in Nautical Miles
5	2.555	110	11.986
10	3.614	120	12.519
15	4.426	130	13.030
20	5.111	140	13.522
25	5.714	150	13.997
30	6.260	200	16.162
35	6.761	250	18.070
40	7.228	300	19.795
45	7.666	350	21.381
50	8.081	400	22.857
55	8.476	450	24.244
60	8.852	500	25.555
65	9.214	550	26.802
70	9.562	600	27.994
75	9.897	650	29.137
80	10.222	700	30.237
85	10.536	800	32.325
90	10.842	900	34.286
95	11.139	1000	36.140
100	11.428		

Metric System.—The unit of length in the metric system is the *meter*, a length originally planned to be equal to the one ten-millionth of the distance between the equator and the pole, measured along a terrestrial meridian. A platinum bar of this supposed length was constructed and deposited in the archives of the French republic in 1799. At the same time a platinum weight was constructed which was made equal to the mass of a cube of pure water at 4 degrees centigrade, the sides of the cube being one-tenth the length of the meter. This weight, which is equal to one thousand units of mass in the metric system, is called the *kilogram*.

Subsequent geodetic measures showed that the lengths of arcs differ on different parts of the earth and also that the value of the arc from which the meter was derived was in error by about one part in a thousand, causing a similar error in the length of the meter. Nevertheless the length of the original meter bar, known as the meter of the archives, has been retained, although its reference to the quadrant has been abandoned.

In 1875 an international bureau of weights and measures was established near Paris, France, by the concurrent action of the principal nations of the world for the purpose of constructing exact copies of the meter and kilogram deposited in the archives. Thirty-one standard meters of iridioplatinum and forty kilograms of the same alloy were constructed and carefully compared with the standards of the archives and with one another.

International Prototypes.—This great work was completed in 1889 and the meter and the kilogram which agreed most nearly with the original standards of the archives were called international prototypes and were deposited at the international bureau, where they are maintained to-day subject to the authority of the international committee on weights and measures.

The remaining meters and kilograms were distributed by lot to the different nations which contributed to the support of the bureau. The United States secured two copies of the meter and two copies of the kilogram, which are in the custody of the bureau of standards at Washington. One of the meters known as No. 27 and one kilogram, No. 40, were selected as the United States standards, while the other meter and kilogram are used as working standards.

Determinations of the Units.—The length of the international meter has been determined in terms of the wave lengths of the red, green and blue radiations of cadmium, so that if every meter in the world were destroyed the length could be reproduced within less than one part in ten million. The number of wave lengths of the different radiations at 15 degrees centigrade and 760 millimeters pressure are as follows:

Red 1 m.	=	1,553,163.5
Green 1 m.	=	1,966,249.7
Blue 1 m.	=	2,083,372.1

The unit of capacity in the metric system is the *liter*, which was intended to be both equal to the volume of a cubic decimeter and to the volume of pure water under normal atmospheric pressure and at the temperature of maximum density (4°C.) that would exactly balance one kilogram in vacuo.

Extent of Use.—The use of the metric system is obligatory in France, Germany, Austria, Hungary, Belgium, Brazil, Bulgaria, Chili, Colombia, Denmark, Spain, Holland, Italy, Mexico, Montenegro, Peru, Portugal, Argentina, Roumania, Servia, Sweden, Norway, Switzerland, and Uruguay. Also in Cuba, the Philippine Islands, Porto Rico, and Guam. Its use is legal in the United States, Great Britain and possessions, in Russia, Japan, Egypt,

Bolivia, Greece, Guatemala, Nicaragua, Paraguay, Venezuela, Turkey, and Siam. The units of length, mass and capacity described are subdivided decimally and the Latin prefixes *milli*, *centi*, and *deci*, are used to indicate the order of the division, and multiplied by powers of ten, the order being indicated by the prefixes *deka*, *hecto*, *kilo* and *myria*.

THE METRIC SYSTEM AND ITS EQUIVALENTS.

Metric System	Equivalents in English Weights and Measures				
Measures of Length (Unit, meter)	Inches	Feet	Yards	Fathoms	Miles
1000 microns = 1 millimeter	0.03937	0.003	0.001	0.000	0.000
10 millimeters = 1 centimeter	0.39371	0.032	0.010	0.005	0.000
10 centimeters = 1 decimeter	3.93708	0.328	0.109	0.054	0.000
10 decimeters = 1 meter	39.37079	3.280	1.093	0.546	0.000
10 meters = 1 dekameter	393.70790	32.808	10.936	5.468	0.006
10 dekameters = 1 hectometer	3937.07900	328.089	109.363	54.681	0.062
10 hectometers = 1 kilometer	39370.79000	3280.899	1093.633	546.816	0.621
10 kilometers = 1 myriameter	393707.90000	32808.991	10936.330	5468.165	6.213
Cubic or Capacity Measure (Unit, liter)	Cubic In.	Cubic Ft.	Pints	Gallons	Bushels
1 milliliter =	0.06103	0.000	0.001	0.000	0.000
10 milliliters = 1 centiliter, 1 decimeter	0.61027	0.000	0.017	0.002	0.000
10 centiliters = 1 deciliter, 1 meter	6.10271	0.003	0.176	0.022	0.002
10 deciliters = 1 liter, or cu. dekameter	61.02705	0.035	1.760	0.220	0.027
10 liters = 1 decaliter, or centistere	610.27052	0.353	17.607	2.200	0.275
10 dekaliters = 1 hectoliter, or decistere	6102.70515	3.531	176.077	22.009	2.751
10 hectoliters = 1 kiloliter, or stere	61027.05152	35.316	1760.773	220.096	27.512
10 kiloliters = 1 myrialiter, or dekastere	610270.51519	353.165	17607.734	2200.966	275.120
Measures of Weight (Unit gram)	Grains	Troy Oz.	Avoir. Oz.	Cwt. = 112 lb.	Ton = 20 Cwt.
10 milligrams = 1 milligram	0.01543	0.000	0.000	0.000	0.000
10 milligrams = 1 centigram	0.15432	0.000	0.000	0.000	0.000
10 centigrams = 1 decigram	1.54323	0.003	0.000	0.000	0.000
10 decigrams = 1 gram	15.43235	0.032	0.002	0.000	0.000
10 grams = 1 dekagram	154.32349	0.321	0.022	0.000	0.000
10 dekagrams = 1 hectogram	1543.23488	3.215	0.220	0.001	0.000
10 hectograms = 1 kilogram	15432.34880	32.150	2.204	0.019	0.000
10 kilograms = 1 myriagram	154323.48800	321.507	22.046	0.196	0.009
Square, or Measures of Surface (Unit, are)	Square Feet	Yards	Perch	Roods	Acres
10000 square centimeters = 1 centiare, or square meter	10.764299	1.196	0.039	0.000	0.000
100 centiares = 1 are, or 100 square meters	1076.429934	119.603	3.953	0.098	0.024
100 ares = 1 hectare, or 10,000 sq. meters	107642.993419	11960.332	395.382	9.884	2.471

Metric Equivalents for English System					
Approximate					Exact
1 acre	= 0.4	hectare			0.4047
1 bushel	=35.0	liters			35.24
1 cubic foot	= 0.028	cubic meter			0.0283
1 cubic inch	=16.0	cubic cent.†			16.39
1 cubic yard	= 0.76	cubic meter			0.7645
1 foot	=30.0	centimeters			30.48
1 gallon	= 3.8	liters			3.785
1 grain	= 0.065	gram			0.0648
1 gram	=15.0	grains			15.43
1 inch	=25.0	millimeters			25.40
1 mile	= 1.6	kilometers			1.609
1 ounce (avoir)	=28.0	grams			28.35
1 ounce (troy)	=31.0	grams			31.10
1 peck	= 8.8	liters			8.809
1 pint	= 0.47	liter			0.4732
1 pound	= 0.45	kilometer			0.453
1 quart (dry)	= 1.1	liters			1.101
1 quart (liquid)	= 0.95	liter			0.9464
1 sq. foot	= 0.093	square meter			0.0929
1 sq. inch	= 6.5	square cent.†			6.452
1 sq. yard	= 0.84	square meter			0.8361
1 ton (2,000 lbs.)	= 0.91	metric ton			0.9072
1 ton (2,240 lbs.)	= 1.0	metric ton			1.017
1 ton (metric)	= 1.1	ton (2,000 lbs.)			1.102
1 ton (metric)	= 0.98	ton (2,240 lbs.)			0.9842
1 yard	= 0.91	meter			0.9144

†Centimeters.

Table I. UNITED STATES LEGAL WEIGHTS (*in pounds*) PER BUSHEL

Prepared by the United States Bureau of Standards

State or Territory	Apples		Barley	Beans		Beets	Blue-Grass Seed	Bran*	Broom-Corn Seed	Buckwheat	Carrots	Clover Seed	Coal	Coke	Corn		Corn Meal*	Corn Meal, Bolted	Corn Meal, Unbolted	Cotton Seed		Cranberries	Flaxseed (Linseed)	Gooseberries	Plastering Hair	Hemp Seed	Herdes Grass
	Apples*	Dried Apples		Beans*	Castor Beans, Shelled										Corn in Ear	Shelled Corn				Cotton* Seed	Sea-Island						
United States			48	60	50					48			80										56				
Alabama		24	47	60											70	56				32							
Arizona			45	a55																							
Arkansas	b50	24	48	a60			14	20	48	52		60			70	56	48			33⅓			56				
California			50							40																	
Colorado			48	60			14			52		60	80		70		50									44	
Connecticut	48	25	48	60		c60		20		48	50	60	80				50			30	44		55				45
Delaware																		44	48								
Florida	b48	24	48	d60	48			20							70	56	48			32	46						
Georgia		24	47	e60			14	f20		52		60	80		70	56	48			30			56		8	44	
Hawaii			48																								
Idaho		28	48							42		60				56							56				
Illinois		24	48	e60	46		14	20		52		60	80		70	56	48						56		8	44	
Indiana		25	48	60	46		14			50		60	80		g68	56	50					33				44	
Iowa	48	24	48	60	46	56	14	20	50	52	50	60	80	38	70	56	50						56	40		44	
Kansas	b48	24	48	60	46	56	h14	20		50	50	60	80		70	i56							56		r8	44	
Kentucky		24	47	e60	*45		14	20		56		60	76		j70	56	50						56		8	44	
Louisiana			32																								
Maine	44		48	60		60				48	50						50								11		45
Maryland		28			50		14	20			50	60	80			56	48						56			44	45
Massachusetts	48	25	48	k60		60		20		48	50	60				l56	50			30	44	32	55				45
Michigan	48	22	48	60	46		14			48		60	80		70	56	50					40	56			44	
Minnesota	b50	28	48	60		50	14		57	50	45	60	80		70	56						36		40	r8	50	
Mississippi		26	48	e60	m46		14	20		48		60	80		72	56	48	44	48	32			56			44	
Missouri	48	24	48	m60	46		14	20		52	50	60	80		70	56	50			33			56			44	
Montana	45		48	60		50	14	20		52	50	60	76		70	56	50						56			44	
Nebraska	48	24	48	e60	46		14	20		52		60	80		70	56	50						56		8	44	
Nevada	b48	24	48	60	46	56	h	20		50	50	60			70	56	48						56			48	
New Hampshire	48	25	48	62		60		20		48	50	60			e50		50					32	56				45
New Jersey	50	25	48	60		60				50	50	64											55				
New York	48	25	48	60				20		48	50	60					50			30	44		55				45
North Carolina	48		48		*46		14		46	50		60					48	48	48	30	44		55			44	
North Dakota	50		48	60		60		20	30	42		60	80		70	56							56				
Ohio	50	24	48	60		56				50	50	60	n80	40	68	56							56			44	
Oklahoma	48	24	48	60		60	14	20	30	52	50	60	80		70	56	50			32			56			44	
Oregon	45	28	46							42		60															
Pennsylvania			47							48		60	o76	40													
Rhode Island	48	25	48	60	46	50		20		48	50	60	80	40	70	56	50			30	44		56			44	
South Carolina																	48	48	48	30							
South Dakota			48	60		60		20	30	42		60	80		70	56							56				
Tennessee	b50	24	48	p60	46	50	14	20	42	50	50	q60	80	40	70	56		50	48	28			56	48	8	44	
Texas	45	28	48	e60				20		42		60	80		70	56				32			56			44	
Vermont	46		48	62		60				48	50	60															45
Virginia	45	28	48	e60			14			52		60	80		70	56	50			32			56		8	44	12
Washington	b45	28	48							42		60											56				
West Virginia		25	48	60						52		60	80										56				
Wisconsin	50	25	48	60		50		20		50	50	60					50			30	44		56		8	44	

Table I. UNITED STATES LEGAL WEIGHTS *(in pounds)* **PER BUSHEL—Continued**

State or Territory	Hungarian Grass Seed	Millet	Oats	Onions: Onions*	Onions: Onion Sets	Orchard Grass Seed	Osage Orange Seed	Parsnips	Peaches*: Peaches	Peaches*: Dried, Peeled	Peaches*: Dried, Unpeeled	Peanuts	Pears*	Peas: Green Peas Unshelled	Peas: Peas*	Potatoes	Sweet Potatoes	Redtop Seed	Rough Rice	Rutabagas	Rye Meal	Rye	Shorts*	Sorghum Seed	Tomatoes	Timothy Seed	Turnips	Wheat
United States	..	..	32	57	..	..	..	..	..	..	..	..	..	..	60	60	..	..	..	..	..	56	..	..	..	..	..	60
Alabama	..	..	32	..	..	..	..	..	..	38	33	..	..	..	60	60	55	..	..	..	..	56	..	..	..	..	55	60
Arizona	..	..	32	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	56	..	..	..	..	..	60
Arkansas	..	50	32	57	..	14	..	..	..	33	33	..	..	..	60	60	50	14	..	..	..	56	..	50	..	60	57	60
California	..	..	32	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	54	..	..	..	..	..	60
Colorado	..	..	32	57	..	..	..	..	..	..	..	..	..	..	..	60	..	..	..	..	..	56	..	..	..	45	..	60
Connecticut	..	..	32	52	..	..	..	45	..	33	33	..	..	..	60	60	54	..	45	60	50	56	20	..	..	..	50	60
Delaware	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	60
Florida	..	50	32	56	..	..	..	..	54	33	..	22	60	..	..	60	60	..	..	..	..	56	..	56	..	..	54	60
Georgia	..	..	32	57	..	..	..	..	..	38	33	..	..	..	60	60	55	..	43	..	..	56	..	..	..	45	55	60
Hawaii	..	..	32	..	..	..	..	..	..	..	..	25	..	..	..	..	..	..	..	..	..	56	..	..	..	..	..	60
Idaho	..	..	36	..	..	..	..	..	..	..	28	..	45	..	..	60	..	..	..	..	..	56	..	..	..	..	..	60
Illinois	..	..	32	57	..	..	..	..	..	..	33	..	..	..	..	60	50	..	..	..	..	56	..	..	..	45	55	60
Indiana	..	50	32	48	..	14	33	55	..	..	33	..	..	..	..	60	55	..	..	..	..	56	..	..	..	45	55	60
Iowa	50	50	32	57	..	14	32	42	48	..	33	20	..	50	60	60	46	14	..	50	..	56	..	50	50	45	55	60
Kansas	50	50	32	57	..	..	..	52	48	..	33	..	..	..	..	60	50	..	..	..	..	56	..	50	56	45	55	60
Kentucky	50	50	32	57	36	14	..	..	..	39	..	24	..	..	60	60	55	..	..	..	..	56	..	..	..	45	60	60
Louisiana	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	32	..	..	..	..	..	60
Maine	..	..	32	52	..	..	..	45	..	..	..	..	..	..	60	60	..	..	..	60	50	50	..	..	..	..	50	60
Maryland	50	50	32	57	..	14	..	..	40	..	..	22	..	..	60	60	60	14	..	..	..	56	..	50	60	45	50	60
Massachusetts	..	..	32	52	..	..	..	45	48	33	..	20	58	..	60	60	54	..	45	..	50	56	20	..	56	45	55	60
Michigan	50	50	32	54	..	14	33	..	..	28	..	..	..	..	60	60	56	14	..	..	..	56	..	..	..	45	58	60
Minnesota	48	48	32	52	..	14	..	42	..	28	..	..	..	..	60	60	55	14	..	52	..	56	..	57	..	45	..	60
Mississippi	50	50	32	57	..	..	..	..	..	33	..	24	..	..	60	60	60	..	..	..	..	56	..	42	..	45	55	60
Missouri	48	50	32	57	28	14	36	44	48	33	..	..	48	56	60	60	56	14	..	50	..	56	..	42	45	45	42	60
Montana	50	..	32	57	..	..	..	50	..	..	..	..	45	..	60	60	..	..	..	..	..	56	..	..	..	45	50	60
Nebraska	50	50	32	57	25	..	32	..	..	33	..	..	..	..	60	60	50	..	..	..	..	56	..	50	..	45	55	60
Nevada	50	50	32	57	..	..	..	50	48	..	33	..	58	..	60	60	50	..	..	..	..	56	..	50	56	45	56	60
New Hampshire	..	..	32	52	..	..	..	45	48	..	33	20	..	..	60	60	54	..	..	..	50	56	20	..	56	45	55	60
New Jersey	..	..	30	57	..	..	..	..	50	33	33	..	..	..	60	60	54	..	..	..	..	56	..	..	..	45	..	60
New York	..	..	32	57	..	..	..	..	..	33	..	..	..	..	60	60	54	..	45	..	50	56	20	..	..	45	..	60
North Carolina	..	50	32	57	..	14	..	..	..	..	..	22	..	..	60	60	56	14	44	..	..	56	..	50	..	45	50	60
North Dakota	..	50	32	52	..	..	..	..	..	..	..	..	..	..	60	60	46	..	..	..	..	56	..	..	..	45	60	60
Ohio	50	50	32	55	..	..	..	..	48	33	..	..	..	..	60	60	50	..	..	..	..	56	..	..	56	45	60	60
Oklahoma	..	50	32	57	28	14	36	44	48	..	33	22	43	56	60	60	55	14	..	50	..	56	..	50	45	45	60	60
Oregon	..	..	32	..	..	..	..	..	..	28	..	..	45	..	..	60	..	..	..	..	..	56	..	..	..	..	..	60
Pennsylvania	..	..	32	50	..	..	..	..	..	..	..	..	..	..	..	56	..	..	..	..	..	56	..	..	..	..	..	60
Rhode Island	50	50	32	50	..	..	..	50	48	33	..	..	..	..	60	60	54	..	..	..	50	56	20	..	56	45	50	60
South Carolina	..	..	..	52	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
South Dakota	..	..	32	52	..	..	..	..	..	..	..	..	..	..	60	60	46	..	..	..	..	56	..	..	..	42	60	60
Tennessee	48	50	32	56	28	14	33	50	50	26	..	23	56	30	60	60	50	14	..	..	..	56	..	50	56	45	50	60
Texas	48	50	32	57	..	..	..	..	50	28	..	..	..	..	..	60	55	..	..	..	..	56	..	..	55	45	55	60
Vermont	..	..	32	52	..	..	..	..	..	..	..	..	..	..	60	60	..	..	..	..	..	56	..	..	..	45	60	60
Virginia	48	50	30	57	28	14	34	..	..	40	32	22	..	..	60	56	56	12	..	..	..	56	..	..	..	45	55	60
Washington	..	..	32	..	..	..	..	..	..	28	..	..	45	..	..	60	..	..	..	..	..	56	..	..	..	..	..	60
West Virginia	..	..	32	..	..	..	..	..	..	33	..	..	..	..	..	60	..	..	..	..	..	56	..	..	..	45	..	60
Wisconsin	48	50	32	57	..	..	..	44	..	33	..	..	..	..	60	60	54	..	45	56	50	56	20	..	..	45	42	60

* Not defined.
a Small white beans, 60 pounds.
b Green apples.
c Sugar beets and mango-wurzels.
d Shelled beans, 60 pounds; velvet beans, 78 pounds.
e White beans.
f Wheat bran.
g Corn in ear, 70 pounds until December 1st next after growth; 68 pounds thereafter.
h English blue-grass seed, 22 pounds; native blue-grass seed, 14 pounds.
i Rice corn.
j Corn in ear from November 1st to May 1st following, 70 pounds; 68 pounds from May 1st to November 1st.
k Soy beans, 58 pounds.
l Cracked corn, 50 pounds.
m Green unshelled beans, 30 pounds.
n Cannel coal, 70 pounds.
o Standard weight in borough of Greensburg, 75 pounds.
p Dried beans; green unshelled beans, 30 pounds.
q Red and white.
r Unwashed plastering hair, 8 pounds; washed plastering hair, 4 pounds.

Table I. COMMODITIES FOR WHICH THE LEGAL WEIGHTS PER BUSHEL HAVE BEEN FIXED IN BUT ONE OR TWO STATES

Article	Weight	States
	Pounds	
Blackberries	30	Iowa. Tennessee, 48 pounds; dried, 28 pounds.
Blueberries	42	Minnesota.
Canary seed	60	Tennessee.
Cantaloupe melon	50	Tennessee.
Cement	80	Tennessee.
Cherries	40	Iowa. Tennessee, with stems, 56 pounds; without stems, 64 pounds.
Chestnuts	50	Tennessee. Virginia, 57 pounds.
Cotton seed, staple	42	South Carolina.
Cucumbers	48	Iowa, Tenn., Mo. Wisconsin, 50 pounds.
Currants	40	Iowa and Minnesota.
Grapes	40	Iowa. Tennessee, with stems, 48 pounds; without stems, 60 pounds.
Hickory nuts	50	Tennessee.
Hominy	60	Ohio. Tennessee, 62 pounds.
Horse-radish	50	Tennessee.
Kaffir corn	56	Kansas.
Kale	30	Tennessee.
Land plaster	100	Tennessee.
Mustard	30	Tennessee.
Plums	40	Florida. Tennessee, 64 pounds.
Plums, dried	28	Michigan.
Popcorn	70	Iowa, Ind., Tenn. Ohio, in the ear, 42 pounds. Iowa, shelled, 56 pounds.
Prunes, dried	28	Idaho; green, 45 pounds.
Quinces	48	Florida, Iowa, and Tennessee.
Rape seed	50	Wisconsin.
Raspberries	32	Iowa, Kansas. Tennessee, 48 pounds.
Rhubarb	50	Tennessee.
Salads	30	Tennessee.
Sand	130	Iowa.
Spinach	30	Tennessee.
Strawberries	32	Iowa. Tennessee, 48 pounds.
Sugar-cane seed	57	New Jersey.
Velvet-grass seed	7	Tennessee.
Walnuts	50	Tennessee, Iowa.

Foreign Weights and Measures.—Japan.—In Japan the kwan, equal to 3.75 kilograms or 8.28 pounds avoirdupois, is the unit of mass. It is divided into 1,000 mommes, the mommes into 10 fuus and the fuu into 10 rins, the rin into 10 mos, and the mo into 10 shis.

The unit of length is the shaku, equal to $\frac{10}{33}$ (0.30303) meter, or 0.9941919 United States foot. The shaku is decimally divided into sun, bu, rin, mo, and shi. Multiples of the shaku are the ken, equal to 6 shaku; the cho, equal to 60 ken, and the pi, equal to 36 cho, or 12,960 shaku.

The shaku (land measure) is equal to 0.00033 are, or 0.988417534 square foot, 10 shaku equal 1 go and 10 gos equal 1 bu or tsubo, 30 bu equal 1 sé, 10 sé equal 1 tan, and 10 tan 1 cho.

The shaku (capacity measure) equals 0.01806 liter, or 0.180616 United States liquid quart, 10 shakus equal 1 go, 10 gos 1 sho, 10 shos 1 to, and 10 tos 1 koku. The metric weights and measures are

recognized as legal in accordance with the table of equivalents.

Russia.—The basis of Russian weights is the funt, equal to 0.40951241 kilogram, or 0.9028 pound avoirdupois. The funt is divided into 96 zolotniks or 32 loths, and the zolotnik is divided into 96 dolias; 40 funts equal 1 pood.

The basis of the length measure is the archine, equal to 28 inches or 0.71120 meter. The archine contains 16 verskops; 3 archines equal 1 sagene and 500 sagenes equal 1 verst.

The dessiatine, equal to 2,400 square soganes, or 2.6997 acres, is the unit for land measure.

The chetvert, equal to 2.09908 hectoliters, or 5.7748 United States bushels, is the unit for dry measure. The chetvert is divided into 8 chetveriks, and the chetverik into 8 garnetz. Twelve chetverts equal 1 lost.

The vedro, equal to 12.2993285 liters, or 3.249 United States gallons, is used for measuring liquids.

Chinese Measures.—The following gives the new system of weights and measures adopted by China in pursuance of the imperial rescript of August 28, 1908:

MEASURES OF LENGTH

Chinese.		Metric.
1 hao	=	0.0032 centimeter.
1 li	=	0.032 centimeter.
1 fen	=	0.32 centimeter.
1 tsun	=	3.2 centimeters.
1 chih	=	0.32 meter.
1 pu	=	1.6 meters.
1 chang	=	3.2 meters.
1 li	=	576.° meters.

MEASURES OF SURFACE

Chinese.		Metric.
1 hao	=	0.006144 are.
1 li	=	0.06144 are.
1 fen	=	0.6144 are.
1 fang pu	=	0.0256 are.
1 mu	=	6.144 ares.
1 ching	=	614.4 ares.

MEASURES OF CAPACITY

Chinese.		Metric.
1 shao	=	0.0104 liter.
1 ko	=	0.1035 liter.
1 sheng	=	1.0355 liters.
1 tou	=	10.355 liters.
1 hu	=	51.7734 liters.
1 tan or picul	=	103.5469 liters.

MEASURES OF WEIGHT

Chinese.		Metric.
1 hao	=	0.0037301 gram.
1 li	=	0.037301 gram.
1 fen	=	0.37301 gram.
1 chien	=	3.7301 grams.
1 liang	=	37.301 grams.
1 chin or catty	=	596.816 grams.

TABLE OF FOREIGN WEIGHTS AND MEASURES

Denominations	Where Used	American Customary Equivalents
Almude	Portugal	4.422 gallons
Ardeb	Egypt	7.6907 bushels
Are	Metric	0.02471 acre
Arobe	Paraguay	25 pounds
Arratel or libra	Portugal	1.011 pounds
Arroba (dry)	Argentine Republic	25.3175 pounds
	Brazil	32.38 pounds
	Cuba	25.3664 pounds
	Portugal	32.38 pounds
	Spain	25.36 pounds
	Venezuela	25.4024 pounds
Arroba (liquid)	Cuba, Spain and Venezuela	4.263 gallons
Arshine	Russia	28 inches
Arshine (square)	Russia	5.44 square feet
Artel	Morocco	1.12 pounds
Baril	Argentine Republic and Mexico	20.0787 gallons
Barrel	Malta (customs)	11.4 gallons
	Spain (raisins)	100 pounds
Batman or tabris	Persia	6.49 pounds
Berkovets	Russia	361.12 pounds
Bongkal	India	832 grains
Bouw	Sumatra	7,096.5 square meters
Bu	Japan	0.119 inch
Butt (wine)	Spain	140 gallons
Caffiso	Malta	5.4 gallons
Candy	India (Bombay)	529 pounds
	India (Madras)	500 pounds
Cantar	Morocco	113 pounds
	Syria (Damascus)	575 pounds
	Turkey	124.7036 pounds
Cantaro (cantar)	Malta	175 pounds
Carga	Mexico and Salvador	300 pounds
Catty	China	1.316 pounds (avoir.)
	Japan	1.31 pounds
	Java, Siam and Malacca	1.35 pounds
	Sumatra	2.12 pounds
Centaro	Central America	4.2631 gallons
Centner	Bremen and Brunswick	117.5 pounds
	Darmstadt	110.24 pounds
	Denmark and Norway	110.11 pounds
	Nuremberg	112.43 pounds
	Prussia	113.44 pounds
	Sweden	93.7 pounds
	Vienna	123.5 pounds
	Zollverein	110.24 pounds
	Double or metric	220.46 pounds
Chetvert	Russia	5.7748 bushels
Chih	China	12.6 inches
Coyan	Sarawak	3,098 pounds
	Siam (Koyan)	2,667 pounds
Cuadra	Argentine Republic	4.2 acres
	Paraguay	78.9 yards
	Paraguay (square)	8.077 square feet
	Uruguay	Nearly 2 acres
Cubic meter	Metric	35.3 cubic feet
Cwt. (hundredweight)	British	112 pounds
Dessiatine	Russia	2.6997 acres
	Spain	1.599 bushels
Drachme	Greece	Half ounce
Egyptian weights and measures	(See Consular Reports No. 144)	
Fanega (dry)	Central America	1.5745 bushels
	Chili	2.575 bushels
	Cuba	1.599 bushels
	Mexico	1.54728 bushels
	Morocco	Strike fanega, 70 lbs.; full fanega, 118 lbs.
	Uruguay (double)	7.776 bushels
	Uruguay (single)	3.888 bushels
	Venezuela	1.599 bushels
Fanega (liquid)	Spain	16 gallons
Feddan	Egypt	1.03 acres
Frail (raisins)	Spain	50 pounds
Frasco	Argentine Republic	2.5096 quarts
	Mexico	2.5 quarts
Frasila	Zanzibar	35 pounds
Fuder	Luxemburg	264.17 gallons
Funt	Russia	0.9028 pound
Garnice	Russian Poland	0.88 gallon

Denominations	Where Used	American Customary Equivalents
Gram	Metric	15.432 grains
Hectare	Metric	2.471 acres
Hectoliter: Dry	Metric	2.838 bushels
Liquid	Metric	26.417 gallons
Joch	Austria-Hungary	1.422 acres
Ken	Japan	5.965 feet
Kilogram (kilo.)	Metric	2.2046 pounds
Kilometer	Metric	0.621376 mile
Koku	Japan	4.9629 bushels
Korree	Russia	3.5 bushels
Kwan	Japan	8.28 pounds
Last	Belgium and Holland	85.134 bushels
	England (dry malt)	82.52 bushels
	Germany	2 metric tons (4,489 pounds)
	Prussia	112.29 bushels
	Russian Poland	11⅓ bushels
	Spain (salt)	4,760 pounds
League (land)	Paraguay	4,033 acres
Li	China	0.0126 inches
Libra (pound)	Argentine Republic	1.0127 pounds
	Central America	1.043 pounds
	Chili	1.014 pounds
	Cuba	1.0161 pounds
	Mexico	1.01465 pounds
	Peru	1.0143 pounds
	Portugal	1.011 pounds
	Spain	1.0144 pounds
	Uruguay	1.0143 pounds
	Venezuela	1.0161 pounds
Liter	Metric	1.0567 quarts
Livre (pound)	Greece	1.1 pounds
	Guiana	1.0791 pounds
Load	England (timber)	Square, 50 cubic feet; unhewn, 40 cubic feet; inch planks, 600 superficial feet
Manzana	Costa Rica	1 5-6 acres
	Nicaragua and Salvador	1.727 acres
Mare	Bolivia	0.507 pounds
Maund	India	82 2-7 pounds
Meter	Metric	39.37 inches
Mil	Denmark	4.68 miles
	Denmark (geographical)	4.61 miles
Milla	Nicaragua and Honduras	1.1493 miles
Morgen	Prussia	0.63 acre
Oke	Egypt	2.7225 pounds
	Greece	2.84 pounds
	Hungary	3.0817 pounds
	Turkey	2.82838 pounds
	Hungary and Wallachia	2.5 pints
Pic	Egypt	21¼ inches
Picul	Borneo and Celebes	135.64 pounds
	China, Japan and Sumatra	133⅓ pounds
	Java	135.1 pounds
	Philippine Islands	137.9 pounds
Pie	Argentine Republic	0.9478 foot
	Spain	0.91407 foot
Pik	Turkey	27.9 inches
Pood	Russia	36.112 pounds
Pund (pound)	Denmark and Sweden	1.102 pounds
Quarter	Great Britain	8.252 bushels
	London (coal)	36 bushels
Quintal	Argentine Republic	101.42 pounds
	Brazil	130.06 pounds
	Castile,* Chili, Mexico and Peru	101.41 pounds
	Greece	123.2 pounds
	Newfoundland (fish)	112 pounds
	Paraguay	100 pounds
	Syria	125 pounds
	Metric	220.46 pounds
Rottle	Palestine	6 pounds
	Syria	5¾ pounds
Sagene	Russia	7 feet
Salm	Malta	490 pounds
Se	Japan	0.02451 acre
Seer	India	1 pound 13 ounces
Shaku	Japan	11.9303 inches; 0.01806 liquid quart

TABLE OF FOREIGN WEIGHTS AND MEASURES—Continued

Denominations	Where Used	American Customary Equivalents
Sho	Japan	1.6 liquid quarts
Standard (St. Petersburg)	Lumber measure	165 cubic feet
Stone	British	14 pounds
Suerte	Uruguay	2,700 cuadras (see cuadra)
Sun	Japan	1.193 inches
Tael	Cochin China	590.75 grains (troy)
Tan	Japan	0.25 acre 9,884 sq. ft.
To	Japan	2 pecks
Ton	Space measure	40 cubic feet
Tonde (cereals)	Denmark	3.94783 bushels
Tondeland	Denmark	1.36 acres
Tsubo	Japan	98.84 square feet
Tsun	China	1.26 inches
Tunna	Sweden	4.5 bushels
Tunnland	Sweden	1.22 acres
Vara	Argentine Republic	34.1208 inches
	Central America	32.87 inches
	Chili and Peru	33.367 inches
	Cuba	33.384 inches
	Curacao	33.375 inches
	Mexico	33 inches
	Paraguay	34 inches
	Spain	0.914117 yard
	Venezuela	33.384 inches
Vedro	Russia	3.249 gallons
Vergees	Isle of Jersey	71.1 square rods
Verst	Russia	0.6629 mile
Vlocka	Russian Poland	41.98 acres

*Although the metric weights are used officially in Spain, the Castile quintal is employed in commerce in the peninsula and colonies, save in Catalonia; the Catalan quintal equals 91.71 pounds.

WEIGHTS AND MEASURES OF THE BIBLE

WEIGHTS

	Avoirdupois Lbs.	Oz.	Drs.		Troy Lbs.	Oz.	Dwt.	Gr.
A gerah	0	0	0.439	=	0	0	0	12
10 gerahs =1 bekah	0	0	4.39	=	0	0	5	0
2 bekahs =1 shekel	0	0	8.78	=	0	0	10	0
60 shekels =1 maneh	2	0	14.628	=	2	6	0	0
50 manehs =1 talent	102	13	11.428	=	125	0	0	0

MEASURES

Long Measure	Feet	Inches
A digit, or finger (Jer. lii. 21)	0	0.912
4 digits =1 palm (Exod. xxv, 25)	0	3.648
3 palms =1 span (Exod. xxviii, 16)	0	10.944
2 spans =1 cubit (Gen. vi, 15)	1	9.888
4 cubits =1 fathom (Acts xxvii, 28)	7	3.552
1.5 fathoms =1 reed (Ezek. xl, 3, 5)	10	11.328
13.3 reeds =1 line (Ezek. xl, 3)	145	11.04

Land Measure	Eng. Miles	Paces	Feet
A cubit	0	0	1.824
400 cubits =1 furlong (Luke xxiv, 13)	0	145	4.6
5 furlongs =1 sabbath day's journey (John xi, 18; Acts i, 12)	0	727	3.0
10 furlongs =1 mile (Matt. v, 41)	1	399	1.0
24 miles =1 day's journey	33	76	4.0

Liquid Measure	Gallons	Pints
A caph	0	0.625
1.3 caphs =1 log (Lev. xiv, 10)	0	0.833
4 logs =1 cab	0	3.333
3 cabs =1 hin (Exod. xxx, 24)	1	2
2 hins =1 seah	2	4
3 seahs =1 bath, or ephah (1 Kings vii, 26; John ii, 6)	7	4.5
10 ephahs =1 kor, or homer (Isa. v, 10; Ezek. xiv, 14)	75	5.25

WEIGHTS AND MEASURES OF THE BIBLE—Continued

Dry Measure	Pecks	Gallons	Pints
A gachal	0	0	0.1416
20 gachals =1 cab (2 Kings vi, 25; Rev. vi, 6)	0	0	2.8333
1.8 cabs =1 omer (Exod. xvi, 36)	0	0	5.1
3.3 omers =1 seah (Matt. xiii, 33)	1	0	1
3 seahs =1 ephah (Ezek. xlv, 11)	3	0	3
5 ephahs =1 letech (Hosea iii, 2)	16	0	0
2 letechs =1 kor, or homer (Num. xi, 32; Hos. iii, 2)	32	0	0

N. B.—The foregoing table will explain many texts in the Bible. Take, for instance, Isa. v, 10. "Yea, ten acres of vineyard shall yield one bath, and the seed of an homer shall yield an ephah." This curse upon the covetous man was that 10 acres of vines should produce only 7 gallons of wine, *i. e.*, one acre should yield less than 3 quarts; and that 32 pecks of seed should only bring a crop of 3 pecks, or, in other words, that the harvest reaped should produce but one-tenth of the seed sown.

TIME

The natural day was from sunrise to sunset.

The natural night was from sunset to sunrise.

The civil day was from sunset one evening to sunset the next; for, "the Evening and the Morning were the first day."

Night (Ancient)	Day (Ancient)
First watch (Lam. ii, 19), till midnight.	Morning till about 10 a. m.
Middle watch (Judg. vii, 19), till 3 a. m.	Heat of day till about 2 p. m.
Morning watch (Exod. xiv, 24), till 6 a. m.	Cool of day till about 6 p. m.

Night (New Testament)		Day (New Testament)	
First watch, evening	= 6 to 9 p. m.	Third hour	= 6 to 9 a. m.
Second watch, midnight	= 9 to 12 p. m.	Sixth hour	= 9 to 12 midday.
Third watch, cock-crow	=12 to 3 a. m.	Ninth hour	=12 to 3 p. m.
Fourth watch, morning	= 3 to 6 a. m.	Twelfth hour	= 3 to 6 p. m.

JEWISH MONEY

With its value in English and American money; the American dollar being taken as equal to 4s. 2d.

	English pound	s.	d.		American Dols.	Cents
A gerah (Exod. xxx, 13)	= 0	0	1.36	=	0	2.73
10 gerahs =1 bekah (Exod. xxxviii, 26)	= 0	1	1.68	=	0	27.37
2 bekahs =1 shekel (Exod. xxx, 13; Isa. vii, 23)	= 0	2	3.37		0	54.74
50 shekels =1 maneh	= 5	14	0.75	=	27	37.50
60 manehs =1 kikkar (talent)	= 342	3	9	=	1,642	50
A gold shekel	= 1	16	6	=	8	70
A kikkar of gold	= 5,475	0	0	=	26,280	0

N. B.—A shekel would probably purchase nearly ten times as much as the same nominal amount will now. Remember that one Roman penny (8½d.) was a good day's wages for a laborer.

The Hebrew maneh, according to 1 Kings x, 17, compared with 2 Chron. ix, 16, contained 100 shekels; though according to one interpretation of Ezek. xiv, 12, it contained 60, but more probably 50. The passage reads thus: "Twenty shekels, five and twenty shekels, fifteen shekels shall be your maneh." This is variously interpreted: (1)20+25+15=60. (2) 20, 25, 15 are different coins in gold, silver, and copper, bearing the same name. It is well to remark the meaning of these names: Shekel=simply, weight: Bekah=split, *i. e.*, the shekel divided into two: Gerah=a grain, as in our weights, a grain and a barleycorn, the original standard weight: Maneh=appointed, equivalent to sterling, a specific sum: Kikkar=a round mass of metal, *i. e.*, a weight or coin. Hebrew names of weights and coins are not found in the New Testament: *mna* in Luke xix, 13, is Greek, though possibly identical with the Hebrew *maneh*.

ROMAN MONEY

	English Pence		American Cents
A "farthing," quadrans (Matt. v, 26) =nearly	0.125	=	0.25
A "farthing," as in 4 quadrantes (Matt. x, 29) =nearly.	0.5	=	1
A "penny," denarius =16 asses (Matt. xxii, 19) nearly	8.50	=	17

The Roman sestertius =2½ asses, is not named in the Bible.

N. B.—Here we learn that:—

Naaman's offering to Elisha of 6,000 pieces (shekels) of gold amounted to more than £10,000=48,000 dollars.

The Debtor (Matt. xviii, 24), who had been forgiven 10,000 talents, i. e., £3,000,000=14,400,000 dollars, refused to forgive his fellow-servant 100 pence *i. e.*, £3 10s. 10d=17 dollars.

Judas sold our Lord for 30 pieces of silver, *i. e.*, £3 10s.8d. =16 dollars 96 cents, the legal value of a slave, if he were killed by a beast.

Joseph was sold by his brethren for 20 pieces, *i. e.*, £2 7s. =11 dollars 28 cents.

Time.—Three kinds of time are recognized by astronomers, *viz.*, sidereal, apparent solar and mean solar time.

Sidereal Time.—The sidereal day is the interval between two consecutive transits of some fixed celestial object across any given meridian, or it is the interval required by the earth to make one complete revolution on its axis. This interval is constant but it is inconvenient as a time unit because the noon of the sidereal day occurs at all hours of the day and night.

Apparent Solar Time.—The apparent solar day is the interval between two consecutive transits of the *sun* across any given meridian. On account of the variable distance between the sun and earth, the variable speed of the earth in its orbit, the effect of the moon, etc., this interval is not constant and consequently cannot be kept by any simple mechanism, such as a clock or watch.

Mean Solar Time.—To overcome the objection noted above, the mean solar day was devised. The mean solar day is the length of the average apparent solar day. Like the sidereal day it is constant, and like the apparent solar day its noon always occurs at approximately the same time of day.

The sidereal or astronomical day begins at mean noon and the hours run from one to twenty-four, while the civil day (mean solar) begins twelve hours earlier, at midnight, and the hours run from one to twelve, and then repeat from noon to midnight. The hours are in both cases divided into sixty minutes, and the minutes into sixty seconds.

The Year.—In dealing with longer periods, such as the life of a man, the day is too small a period, and for all chronological purposes the year has always been employed.

There are three different kinds of year used—the sidereal, the tropical, and the anomalistic.

The Sidereal Year is the time taken by the earth to complete one revolution around the sun from a given star to the same star again. Its length is 365 days 6 hours 9 minutes 9 seconds.

The Tropical Year is the time included between two successive passages of the vernal equinox by the sun, and since the equinox moves westward 50.2 seconds of arc a year the tropical year is shorter by 20 minutes 23.5 seconds in time than the sidereal year. As the seasons depend upon the earth's position with respect to the equinox, the tropical year is the year of civil reckoning.

Anomalistic Year.—The third kind of year is the anomalistic year—the interval between two successive passages of the perihelion, namely, the time of the earth's nearest approach to the sun. The anomalistic year is only used in special calculations in astronomy.

The Calendar.—Various attempts were made by the ancients to reconcile the month, which originally depended upon the changes of the moon, with the tropical year, but a satisfactory solution is not possible, and the calendars of civilized nations now disregard the moon entirely. The Mohammedan nations, however, still use a lunar calendar with a year of twelve lunar months, which alternately contain 355 and 356 days. According to their method of reckoning the same month falls

in different seasons, and their calendars gain one year on ours every thirty-three years.

The Julian Calendar, which was established 45 B. C., by Julius Cæsar, discarded all consideration of the moon and adopted 365¼ days as the true length of the year. He ordained that every fourth year should contain 366 days, and transferred the beginning of the year from March to January 1. The Julian calendar is still used in Russia and generally by the Greek church.

The Gregorian Calendar.—The true length of the tropical year is not 365¼ days, but 365 days 5 hours 48 minutes 45.5 seconds, a difference of 11 minutes 14.5 seconds by which the Julian year is too long. This amounts to a little more than three days in four hundred years, and consequently the date of the vernal equinox had in Pope Gregory's time fallen back to March 11th instead of occurring on March 21st as it did at the Council of Nice, A. D. 325. The pope therefore decreed that the calendar should be corrected by dropping ten days, so the day following October 4, 1582, should be called October 15th instead of October 5th, and also in the future only such century years shall be leap years as are divisible by 400. Thus 1700, 1800, 1900, etc., are not leap years, while 1600, 2000, 2400, etc., are. The change was immediately made by all Catholic countries, but it was not until 1752 that the Gregorian calendar was adopted by England.

Standard Time.—Prior to 1883 each city had its own time, which was determined by the time of passage of the sun across the local meridian. Consequently the traveler going from one city to another had to continually change his watch to the local time. Largely through the efforts of the railroads a system of standard time was introduced. According to this system the United States, which extends from 65 degrees to 125 degrees west longitude, was divided into four sections, each of 15 degrees longitude.

The *first* (or eastern) section includes all territory between the Atlantic coast and an irregular line drawn from Detroit, Mich., through Pittsburg to Charleston, S. C., its most southern point. The time of this section is that of the 75th meridian, which is five hours slower than Greenwich time.

The *second* (central) section includes all territory between the line mentioned and an irregular line drawn from Bismarck, N. D., to the mouth of the Rio Grande.

The *third* (mountain) section includes all territory between the last-named line and a line which passes through the western part of Idaho, Utah and Arizona.

The *fourth* (Pacific) section covers the rest of the country to the Pacific Ocean. Standard time is uniform in each of these sections, but the time in one section differs by exactly one hour from the section next to it. Thus the time of the first section is five hours slower than Greenwich time, the time of the central section six hours slower, the time of the mountain seven hours, and the time of the Pacific section is eight hours slower than Greenwich mean time.

In cities situated on the border line of two sections, as, for instance, Pittsburg and Atlanta, the standard times of both sections are used; for example, if at Pittsburg it is 7 a.m. eastern time, it is 6 a.m. central time, and in such cities when the time is given, it should be specified as eastern, central, etc.

The system of standard time has been practically adopted in almost all civilized countries. All continental Europe, except Russia, uses a time one hour faster than that of Greenwich; in Japan and Australia the time is nine hours faster, etc.

Temperature Scales.—Temperature is the term used to designate the state of a body as regards hotness or coldness. Two bodies are said to have the same temperature if, when they are put in contact, there is no tendency for one to get hotter while the other gets colder; if there is such a tendency, the one which tends to cool off is said to have the higher temperature.

A Scale of Temperature is a system of numbering temperatures, the numbers being larger as the temperatures are higher. Such scales are based upon two fixed temperatures, *viz.*, the "ice-point" or temperature at which pure ice melts, and the "steam point" or temperature at which pure water boils, both under the standard barometric pressure of 760 millimeters or 29.92 inches of mercury. Three such systems or scales are in use—the centigrade or Celsius, the Fahrenheit, and the Reaumur.

Centigrade.—On the centigrade scale, which is used almost universally in countries which have adopted the metric system of weights and measures, as well as in scientific work everywhere, the ice-point is numbered zero degrees (0° C.) and the steam-point one hundred degrees (100° C.), the unit of measurement, or the centigrade degree (1° C.) being the one-hundredth part of this interval.

Fahrenheit.—On the Fahrenheit scale, which is generally used in English-speaking countries, except among scientific men, the ice-point is numbered 32° F. and the steam-point 212° F., the difference being 180°, and the Fahrenheit degree (1° F.) being the one-hundred-eightieth part of this interval. The Fahrenheit degree is thus $\frac{100}{180}$ or $\frac{5}{9}$ as large as the centigrade degree. The Fahrenheit zero, at 32° below the ice-point, corresponding to $-\frac{5}{9} \times 32 = -17.8$°C., is approximately the lowest temperature that can be obtained with ordinary freezing mixtures of ice and common salt.

Reaumur.—The Reaumur scale is used in a few European countries, but is fast being superseded by the centigrade. It has 0° at the ice-point and 80° at the steam point, so that the Reaumur degree (1° R.) is $\frac{5}{4}$ of the centigrade degree or $\frac{9}{4}$ of the Fahrenheit degree.

Conversion.—*To convert from one scale to another* we have, in accordance with the above definitions, the following practical rules:

Centigrade to Fahrenheit; multiply by $\frac{9}{5}$ and add 32°.

Centigrade to Reaumur; multiply by $\frac{4}{5}$.

Fahrenheit to centigrade; subtract 32° and multiply by $\frac{5}{9}$.

Fahrenheit to Reaumur; subtract 32° and multiply by $\frac{4}{9}$.

Reaumur to centigrade; multiply by $\frac{5}{4}$.

Reaumur to Fahrenheit; multiply by $\frac{9}{4}$ and add 32°.

Care should be taken to make the addition or subtraction algebraically, *i. e.*, taking account of the negative sign when the temperature in question is below zero.

Absolute Temperature.—*By the absolute temperature* of a body is meant its temperature, measured in either of the three kinds of degrees, not from the ice-point or from the Fahrenheit zero, but from a point known as the absolute zero, which is at about −273.1°C. or −459.6°F. or −218.5°R. This mode of numbering temperatures is frequently convenient in scientific and engineering work. To convert centigrade temperatures into centigrade-absolute temperatures add 273.1°.

To convert from Fahrenheit to Fahrenheit-absolute add 459.6°. To convert from Reaumur to Reaumur-absolute add 218.5°. To convert in the other direction, subtract the same amounts. The Reaumur-absolute scale is seldom or never used, and the Fahrenheit-absolute scale only by engineers in English-speaking countries. When the term "absolute temperature" is used without further qualification, it usually means the centigrade temperature plus 273°, though this value, which may also be looked upon as the centigrade-absolute temperature of the ice-point, is sometimes taken as high as 274°.

Barometric Measurements. — By barometer reading is meant the height in inches or millimeters of the column of mercury, under standard conditions, that exactly balances the pressure exerted by the atmosphere at the instant the reading is made. The pressure exerted by a given column of mercury depends upon the altitude of the barometer, and upon the latitude, and it is customary, in order to get accurate comparisons, to refer the readings to latitude 45°, and to sea level. Also since the density of the mercury is affected by the temperature it is usually referred to 0° centigrade.

Since all air movements are the result of difference in pressure, important conclusions regarding the weather to be expected may be deducted from barometric readings, hence their use by mariners and weather experts.

Their value in determining altitudes depends upon the fact that the pressure of the atmosphere decreases with the altitude according to a fairly well established law, which is illustrated by the following table:

PRESSURE OF THE ATMOSPHERE AT DIFFERENT ELEVATIONS

Elev. Feet	Barom. Inches	Elev. Feet	Barom. Inches	Elev. Feet	Barom. Inches
0	29.9	600	29.25	4000	25.81
50	29.845	700	29.14	5000	24.88
100	29.79	800	29.03	6000	23.98
200	29.68	900	28.92	7000	23.11
300	29.57	1000	28.82	8000	22.28
400	29.46	2000	27.78	9000	21.48
500	29.35	3000	26.78	10000	20.70

Beaufort's Wind Scale.—The Beaufort Scale is used by seamen for recording the force of wind. For the guidance of those unaccustomed to its use, the corresponding velocity per hour in statute miles and in nautical miles is added. The force of wind varies from 0, a calm, to 12, a hurricane.

Intensity or Force of Wind — Beaufort's Scale	Velocity Statute miles per hour	Velocity Nautical miles per hour
0. **Calm.** Full rigged ship, all sail set, no headway	0 to 3	0 to 2.6
1. **Light Air.** Just sufficient to give steerageway	8	6.9
2. **Light Breeze.** Speed of 1 or 2 knots, "full and by."	13	11.3
3. **Gentle Breeze.** Speed of 3 or 4 knots, "full and by."	18	15.6
4. **Moderate Breeze.** Speed of 5 or 6 knots, "full and by."	23	20.0
5. **Fresh Breeze.** All plain sail, "full and by."	28	24.2
6. **Strong Breeze.** Topgallant sails over single-reefed topsails	34	29.5
7. **Moderate Gale.** Double-reefed topsails	40	34.7
8. **Fresh Gale.** Treble-reefed topsails (or reefed upper topsails and courses)	48	41.6
9. **Strong Gale.** Close-reefed topsails and courses (or lower topsails and courses)	56	48.6

Intensity of Force of Wind — Beaufort's Scale	Velocity Statute miles per hour	Velocity Nautical miles per hour
10. **Whole Gale.** Close-reefed main topsail and reefed foresail (or lower main topsail and reefed foresail)	65	56.4
11. **Storm.** Storm staysails	75	65.1
12. **Hurricane.** Under bare poles	90 and over	78.1 and over

The word "force" used in connection with this scale has no relation to pressure, but refers to speed or velocity.

Speed of Winds in the United States.—United States weather bureau records of the average speed of wind in miles per hour at selected stations, and the highest speeds ever reported for a period of five minutes.

Station	Average	Highest
Abilene, Texas	11	66
Albany, New York	6	70
Alpena, Michigan	9	72
Atlanta, Georgia	9	66
Bismarck, North Dakota	8	74
Boise, Idaho	4	55
Boston, Massachusetts	11	72
Buffalo, New York	11	90
Charlotte, North Carolina	5	55
Chattanooga, Tennessee	6	66
Chicago, Illinois	9	84
Cincinnati, Ohio	7	59
Cleveland, Ohio	9	73
Denver, Colorado	7	75
Detroit, Michigan	9	76
Dodge City, Kansas	11	75
Dubuque, Iowa	5	60
Duluth, Minnesota	7	78
Eastport, Maine	9	78
El Paso, Texas	5	78
Fort Smith, Arkansas	5	74
Galveston, Texas	10	*84
Havre, Montana	11	74
Helena, Montana	6	60
Huron, South Dakota	10	72
Jacksonville, Florida	6	75
Kansas City, Missouri	9	74
Keokuk, Iowa	8	60
Knoxville, Tennessee	5	84
Louisville, Kentucky	7	60
Lynchburg, Virginia	4	50
Memphis, Tennessee	6	75
Miles City, Montana	6	62
Montgomery, Alabama	5	54
Nashville, Tennessee	6	75
New Orleans, Louisiana	7	66
New York, New York	9	83
North Platte, Nebraska	9	96
Omaha, Nebraska	8	66
Palestine, Texas	8	60
Philadelphia, Pennsylvania	10	75
Pittsburg, Pennsylvania	6	69
Portland, Maine	5	61
Red Bluff, California	7	60
Rochester, New York	11	78
St. Louis, Missouri	11	80
St. Paul, Minnesota	7	102
Salt Lake City, Utah	5	66
San Diego, California	6	40
San Francisco, California	9	64
Sante Fe, New Mexico	6	53
Savannah, Georgia	7	80
Spokane, Washington	4	52
Toledo, Ohio	9	72
Vicksburg, Mississippi	6	62
Washington, D. C.	5	66
Wilmington, North Carolina	7	72

*Anemometer blew away at a velocity of 84 miles per hour, September, 1900.

Values of Foreign Coins.—The following values of foreign coins in terms of the United States gold dollar were established by the treasury department in October, 1910, for estimating the value of all foreign merchandise exported to the United States:

VALUE OF FOREIGN COINS

Country	Standard	Monetary Unit	Value in Terms of U. S. Gold Dollar	Coins
Argentine Republic	Gold	Peso	$0.965	Gold: argentine ($4.824) and ½ argentine. Silver: peso and divisions.
Austria-Hungary	Gold	Crown	.203	Gold: 10 and 20 crowns. Silver: 1 and 5 crowns.
Belgium	Gold	Franc	.193	Gold: 10 and 20 francs. Silver: 5 francs.
Bolivia	Gold	Boliviano	.389	Gold: *Silver boliviano and divisions.
Brazil	Gold	Milreis	.546	Gold: 5, 10, and 20 milreis. Silver: ½, 1, and 2 milreis.
British Possessions, N. A. (except Newfoundland).	Gold	Dollar	1.000	
Central American States—				
Costa Rica	Gold	Colon	.465	Gold: 2, 5, 10, and 20 colons ($9.307). Silver: 5, 10, 25, and 50 centimos.
British Honduras	Gold	Dollar	1.000	
Guatemala, Honduras, Nicaragua, Salvador	Silver	Peso	.383	Silver: peso and divisions.
Chili	Gold	Peso	.365	Gold: escudo ($1.825), doubloon ($3.650), and condor ($7.300). Silver: peso and divisions.
China	Silver	Tael: Amoy	.629	
		Canton	.627	
		Cheefoo	.601	
		Chin Kiang	.614	
		Fuchau	.581	
		Haikwan (customs)	.640	
		Hankow	.588	
		Kiaochow	.609	
		Nankin	.622	
		Niuchwang	.589	
		Ningpo	.604	
		Peking	.613	
		Shanghai	.574	
		Swatow	.581	
		Takau	.633	
		Tientsin	.609	
		Dollar: Hongkong	.413	
		British	.413	
		Mexican	.416	
Colombia	Gold	Dollar	1.000	Gold: condor ($9.647) and double condor. Silver: peso.
Denmark	Gold	Crown	.268	Gold: 10 and 20 crowns.
Ecuador	Gold	Sucre	.487	Gold: 10 sucres ($4.8665). Silver: sucre and divisions.
Egypt	Gold	Pounds (100 piasters)	4.943	Gold: pound (100 piasters), 5, 10, 20, and 50 piasters. Silver: 1, 2, 5, 10, and 20 piasters.
Finland	Gold	Mark	.193	Gold: 20 marks ($3.859), 10 marks ($1.93).
France	Gold	Franc	.193	Gold; 5, 10, 20, 50, and 100 francs. Silver: 5 francs.
German Empire	Gold	Mark	.238	Gold: 5, 10, and 20 marks.
Great Britain	Gold	Pound sterling	4.866½	Gold: sovereign (pound sterling) and ½ sovereign.
Greece	Gold	Drachma	.193	Gold: 5, 10, 20, 50, and 100 drachmas. Silver: 5 drachmas.
Hayti	Gold	Gourde	.965	Gold: 1, 2, 5, and 10 gourdes. Silver: gourde and divisions.
India (British)	Gold	Pound sterling†	4.866½	Gold: sovereign (pound sterling). Silver: rupee and divisions.
Italy	Gold	Lira	.193	Gold: 5, 10, 20, 50, and 100 lire. Silver: 5 lire.
Japan	Gold	Yen	.498	Gold: 5, 10, and 20 yen. Silver: 10, 20, and 50 sen.
Liberia	Gold	Dollar	1.000	
Mexico	Gold	Peso‡	.498	Gold: 5 and 10 pesos. Silver: dollar § (or peso) and divisions.
Netherlands	Gold	Florin	.402	Gold: 10 florins. Silver: 2½, 1 florin and divisions.
Newfoundland	Gold	Dollar	1.014	Gold: 2 dollars ($2.028).
Norway	Gold	Crown	.268	Gold: 10 and 20 crowns.
Panama	Gold	Balboa	1.000	Gold: 1, 2½, 5, 10, and 20 balboas. Silver: peso and divisions.
Persia	Silver	Kran	.072	Gold: ½, 1, and 2 tomans ($3.409). Silver: ¼, ½, 1, 2, and 5 krans
Peru	Gold	Libra	4.866½	Gold: ½ and 1 libra. Silver: sol and divisions.
Philippine Islands	Gold	Peso	.500	Silver peso: 10, 20, and 50 centavos.
Portugal	Gold	Milreis	1.080	Gold: 1, 2, 5, and 10 milreis.
Russia	Gold	Ruble	.515	Gold: 5, 7½, 10, and 15 rubles. Silver: 5, 10, 15, 20, 25, 50 and 100 copecks.
Spain	Gold	Peseta	.193	Gold: 25 pesetas. Silver: 5 pesetas.
Straits Settlements	Gold	Pound sterling¶	4.866½	Gold: sovereign (pound sterling). Silver: dollar and divisions.
Sweden	Gold	Crown	.268	Gold: 10 and 20 crowns.
Switzerland	Gold	Franc	.193	Gold: 5, 10, 20, 50, and 100 francs. Silver: 5 francs.
Turkey	Gold	Piaster	.044	Gold: 25, 50, 100, 250, and 500 piasters.
Uruguay	Gold	Peso	1.034	Gold: peso. Silver: peso and divisions.
Venezuela	Gold	Bolivar	.193	Gold: 5, 10, 20, 50, and 100 bolivars. Silver: 5 bolivars.

NOTE.—The coins of silver-standard countries are valued by their pure silver contents, at the average market price of silver for the three months preceding the date of this circular.

*Gold standard adopted December 31, 1908, 12½ bolvianos equal the pound sterling or Peruvian pound ($4.866½).

†The sovereign is the standard coin of India, but the rupee ($0.3244⅓) is the current coin, valued at 15 to the sovereign.

‡Seventy-five centigrams fine gold. § Value in Mexico, $0.498.

¶The current coin of the Straits Settlements is the silver dollar issued on government account and which has been given a tentative value of $0.567758⅓

ELECTRICAL UNITS

Name	Symbol	Unit of	How Obtained	CGS*	Equivalent
Ohm.....	R	Resistance	The electrical resistance of a column of mercury 106 centimeters long and of 1 square millimeter section.	10^9	1 true ohm=1.0112 British Association ohms.
Ampere...	C	Current	Is that current of electricity that decomposes 0.00009324 gram of water per second.	10^1	Deposits 1.118 milligrams of silver per second.
Volt.....	E	Electromotive force	One ampere of current passing through a substance having 1 ohm of resistance=1 volt.	10^8	0.926 of a standard Daniel cell.
Coulomb..	Q	Quantity	A current of 1 ampere during 1 second of time.	10^1	Deposits 1.118 milligrams of silver.
Farad.....	K	Capacity	The capacity that a current of 1 ampere for 1 second (=1 coulomb) charges it to potential of 1 volt.	10^9	2.5 knots of D. U. S. cable.
Microfarad	K		1-millionth of farad.	10^{15}	
Watt	Pw.	Power	Power of 1 ampere current passing through resistance of 1 ohm.	10^7	0.0013405(or$\frac{1}{746}$)of a horse-power.
Jou.....	W.j.	Work	Is the work done by 1 watt of electrical power in 1 second.	10^7	0.238 unit of heat (Therm).

*CGS—Electro-magnetic units.

Specific Gravity.—By the specific gravity of a body is usually meant the ratio of the mass of the body to an equal volume of water at some standard temperature. At the present time 4 degrees centigrade is almost exclusively used, although much important older data is given in terms of water at other temperatures, such as 15 degrees centigrade, 20 degrees centigrade and 62 degrees Fahrenheit, etc. Also the specific gravity of gases is frequently expressed in terms of hydrogen.

The density of a body is its mass per unit volume. If the gram is used as the unit of mass and the cubic centimeter as the unit of volume, the density of a body is the same as its specific gravity referred to water at 4 degrees centigrade.

The following table gives the specific gravity or density of some of the more common substances:

DENSITIES OF MISCELLANEOUS SOLIDS

Substance	Density (Grams per Cubic Centimeter)
Aluminium, cast	2.56 – 2.58
Aluminium, wrought	2.65 – 2.80
Apple wood	0.66 – 0.84
Ash	0.65 – 0.85
Birch	0.51 – 0.77
Brass (yellow, 70 Cu + 30 Zn, Cast)	8.44
Brick	2.0 – 2.2
Cedar	0.49 – 0.57
Cherry	0.70 – 0.90
Coal, anthracite	— —
Coal, bituminous	1.2 – 1.5
Cork	0.22 – 0.26
Copper, cast	8.80 – 8.95
Copper, wrought	8.85 – 8.95
Copper, liquid	8.217
Gold, cast	19.26 – 19.34
Gold, wrought	19.33 – 19.34
Glass, flint	2.9 – 4.5
Glass, common	2.4 – 2.8
Hickory	0.60 – 0.93
Ice	0.88 – 0.91
Iridium	21.78 – 22.42
Iron, wrought	7.80 – 7.90
Iron, gray, cast	7.03 – 7.13
Lead, cast	11.340
Limestone	2.46 – 2.86
Locust	0.67 – 0.71
Mahogany	0.50 – 0.85
Maple	0.62 – 0.75
Marble	2.5 – 2.8
Nickel	8.30 – 8.90
Oak	0.60 – 0.90
Opal	2.2
Paraffin	0.87 – 0.91
Platinum	21.2 – 21.7
Poplar	0.35 – 0.50
Silver, cast	10.4 – 10.5
Silver, wrought	10.50 – 10.57
Slate	2.6 – 2.7
Steel	— —
Sycamore	0.40 – 0.60
Teak, Indian	0.66 – 0.88
Teak, African	0.98
Tin, wrought	7.300
Walnut	0.64 – 0.70
Willow	0.40 – 0.60
Zinc, wrought	7.190

DENSITIES OF MISCELLANEOUS SOLIDS —Continued

Substance	Density (Grams per Cubic Centimeter)
DENSITY OF LIQUIDS	
Alcohol, ethyl	0.791
Alcohol, methyl	0.810
Chloroform	1.480
Ether	0.736
Gasoline	0.68
Kerosene, 76° Bé	0.79
Mercury	13.596
Olive oil	0.918
Petroleum	0.878
Sea water	1.025
Turpentine	0.873
DENSITY OF GASES	
Acetylene	0.00118
Carbon dioxide	0.001974
Chlorine	0.003133
Hydrogen	0.000090
Hydrogen sulphide	0.001476
Nitrogen	0.001257
Oxygen	0.001430

Latitude and Longitude.—Latitude.—The latitude of any point on the earth's surface is the angle, measured in the plane of the meridian, between the line connecting the point in question to the center of the earth and the plane passing through the earth midway between the poles. Such a plane is called the equatorial plane and all points lying in the plane and on the earth's surface are said to be on the equator and have zero latitude. Since the angle between the poles and the equatorial plane is 90°, it follows that the latitude of the poles is 90°. Latitude as defined above is called geocentric latitude.

The geographical latitude is the angle between the direction of the plumb line and the plane of the earth's equator, it being understood that the plumb line is corrected for local disturbances. If the earth were a true sphere and did not rotate on its axis, geocentric and geographical latitude would be the same. The differences are so small that they may be neglected for purposes of navigation since on the scale of ordinary maps they would be insensible.

Latitude between the equator and the north pole is designated as north and between the equator and the south pole south latitude. Also any plane passing through the earth parallel to the equator defines with the earth's surface a parallel of latitude, from which it follows that all points on the earth's surface that have the same latitude; *viz.*, are this same angular distance from the equator, lie on the same parallel.

Longitude.—The longitude of any point on the earth's surface is the angle between the plane passing through the earth's poles and the point and another similar plane passing through some other point on the earth's surface arbitrarily selected as the initial point or place of zero longitude. Such planes are called meridians and the one passing through the observatory of Greenwich, England, is used as the initial or standard meridian by practically all nations except the French who use the meridian of Paris. Longitude is measured both east and west of Greenwich for 180° and may be expressed either in angular measure or in time.

For example the longitude of Washington may be expressed as 77° 3m 55.s5 or as 5 hrs. 8 min. 15. s71, west of Greenwich, the latter being the time required by the earth to turn on its axis through the equivalent angle. The method of determining the longitude of any point therefore is to determine the difference between the local time of the point and Greenwich time.

To determine longitude at sea dependence must be placed upon chronometers which are set to Greenwich time before the ship leaves port, the rate of the chronometer having been previously determined by observation extending over some days. By observation upon the sun the mariner determines the time of its transit across his meridian. If, for example, he should find after applying the correction to his chronometer that this occurred at, say 4 p. m. Greenwich time, he knows immediately that his longitude is 4 hrs. or 60° west of Greenwich.

Since meridians converge and pass through the poles the distance between any two meridians decreases as the poles are approached.

Since all sailing charts have the parallels of latitude and meridians on them it is a simple matter to plot the position of a vessel when the latitude and longitude are known. Moreover it is an easy matter to compute the distance between two points if the latitude and longitude of both are known.

References—See *The Nautical Almanac* (annually, several years in advance); Bowditch's *American Navigator;* Raper's *Practice of Navigation;* Martin's *Navigation and Nautical Astronomy;* Inman's *Nautical Tables;* Bowditch's *Useful Tables;* Lecky's *Wrinkles in Practical Navigation* (1881); Gill's *Textbook on Navigation* (1898); Sturdy's *Practical Aid to the Navigator;* Norie's *Epitome of Practical Navigation* and Henderson's *Elements of Navigation* (1903).

Railway Gauge. The gauge, or distance between the steel rails on railway tracks, varies very much with the gradient and with the supply of materials and other causes. Of course, there can be no through transport of goods unless all the lines in a country or on a continent are of the same gauge; but in some places this is, or might be, politically dangerous, because troops might suddenly be run through from one country to another. This accounts for the difference of gauge which used to exist all over Europe, and which still exists on some frontiers. Sometimes, however, the difference of gauge is due to the character of the ground, and sometimes to motives of economy. Up very steep inclines, *e. g.*, in Switzerland and India, the line must be either on a very narrow gauge or on a zigzag, to enable the engine to climb. Across a desert, *e. g.*, from Karachi to Lahore, there is a great scarcity of wood. The gauge up to Darjiling, in Northern India, is 2 feet, the Norwegian lines are 3 feet, 6 inches, the British is 4 feet, 8½ inches, the Indian is 5 feet, 6 inches, and the old Great Western Railway had a 7 foot gauge. The standard gauge in America is 4 feet, 8½ inches.

RELIGION AND PHILOSOPHY

RELIGION is the feeling of reverence which men entertain toward a supreme being or to any order of beings conceived by them as demanding reverence from the possession of superhuman control over the destiny of man or the powers of nature; more especially the recognition of God as an object of worship, love, and obedience.

Religion, as distinguished from *morality*, denotes the influences and motives to human duty which are found in the character and will of the deity, while morality is concerned with man's duty to his fellows. As distinguished from *theology*, religion is subjective, inasmuch as it relates to the feelings; while theology is objective, as it denotes the system of beliefs, ideas or conceptions which man entertains respecting the God whom he worships.

Various estimates have been made of the diffusion of the different religious creeds over the world. These are necessarily very loose and often differ widely from one another. A recent estimate is the following:

Creeds	No. of Followers
1 Christianity	494,250,000
2 Confucianism	
3 Brahmanism (Hinduism)	260,000,000
4 Mohammedanism	190,000,000
5 Buddhism	200,000,000
6 Taoism	160,000,000
7 Shintoism	43,000,000
8 Judaism	14,000,000
9 Polytheism	11,650,000
10 Zoroastrianism (Parsees)	118,000,000

Christianity	Total Followers
Catholic church	240,000,000
Protestant churches	150,000,000
Orthodox Greek church	105,000,000
Church of Abyssinia	3,000,000
Armenian church	1,000,000
Coptic church	100,000
Nestorians	80,000
Jacobites	70,000

Christianity is the religion instituted by Jesus Christ, and the Christian church consists of his followers. Its first great increase was at Pentecost, when three thousand were converted and shortly afterward five thousand were added to the church. Stephen was the first to suffer martyrdom. Paul made three great missionary tours, and the result was the unity of the church in its first period.

Ancient Period, A. D. 30-750.—The first part of this period was distinguished by great simplicity of doctrine and life, and zeal in extending the kingdom of Christ. Important centers were established, and the gospel was largely confined to the middle and lower classes. Controversies arose between the gentile and Jewish Christians, but not to such an extent as to arrest steady progress. The heretical sects, with Saturninus, Basilides, and others at their head, were of no serious injury. The chief defenders of Christianity were Aristides, Justin Martyr, Melito, Tatian and Hermas.

This was the time of great persecutions. There were ten in all; the most serious being under the emperors Nero, Decius, and Diocletian. The scriptures were collected into a canon, and the church made great advance in numbers and territory. The most important writers were Ignatius, Irenæus, Origen, Tertullian, and Clement of Alexandria. The more serious schisms were produced through Felissimus, Novatus, and Miletus. The doctrinal controversies related chiefly to eschatology, human depravity, and the divinity of Christ.

The Council of Nicea, in A. D. 325, was a great triumph for orthodoxy. It declared the essential trinity of the godhead, and settled for all time the divinity of Christ as a fundamental doctrine of Christian faith. The heresy of Arius was condemned. Persecution ceased, through the sympathy of the Emperor Constantine, who, in 313, removed all disabilities from Christians, and in 323 made Christianity the state religion of the Roman empire. Monasticism, a reaction against worldliness, increased rapidly. Julian the Apostate endeavored to revive paganism, but without avail. Leo the Great, bishop of Rome, extended the authority of the western church in opposition to the claims of the patriarch of Constantinople.

Mohammedanism paralyzed the eastern church for a time. Its leaders conquered all northern Africa, western Asia, and gained a foothold in Spain, and the south of France; but it was finally arrested in western Europe by Charles Martel, by the victory of Tours, in 732.

Gregory the Great, bishop of Rome, ruled from 590 to 604. He greatly extended the power of the Roman church, organized monastic orders, elaborated the church festivals, and reënacted purgatory as a Roman church doctrine. He organized a mission among the Anglo-Saxons. The gospel spread rapidly through Britain and Germany. Christian art was patronized liberally by the Roman bishops. The close of the ancient period found the Latin, or western church, very vigorous and aggressive, but the eastern church in a stagnant condition.

Mediaeval Period, A. D. 750-1517.—This period falls into three great divisions—from Charlemagne to Gregory VII. (750-1073); from Gregory VII. to removal of papal see to France (1073-1305); from removal of papal see to Reformation (1305-1517). The middle ages were the transition from the ancient to the modern period.

The most important political events, all of which had a bearing on the church, were the end of the Greek exarchate in Italy, the destruction of the Lombard kingdom, the organization of the Frank empire under Pepin, rise of the new Germanic church, division of the Mohammedan caliphates, decline of the Greek empire, and development of the new Roman empire in the west.

Charlemagne was the greatest mediæval ruler. He was victorious over many northern tribes, and increased the territory of the church to vast proportions. He was a liberal patron of learning, and authorized a Latin version of the scriptures. Alfred the Great of England reigned from 871 to 901, and was as distinguished for learning as for his power to rule. The Russian monarchy was founded by Rurik, in the middle of the ninth century. At this time, evangelization of heathen nations progressed rapidly. The Hungarians, Bulgarians, Bohemians, Moravians, Wends, and Scandinavians accepted Christianity.

Crusades. The violent rule of the Mohammedans over Palestine excited the wrath of western Europe, and crusades were organized for the rescue of the country from the Moslems. There were seven crusades, extending from 1096 to 1272. Christian Europe failed, finally, to hold the country, but the general effect of the crusades was beneficial to Europe in the development of commerce, introduction of oriental thought, and the growth of liberty.

Reformatory Movements were inaugurated through the Waldenses (1170), Wycliffe (1324), John Huss (1373), the Moravian Brethren (1417), the Mystics (Tauler, Suso, Ruysbroek, Groot, Thomas à Kempis), and Savonarola (1480-97). Mendicant orders were established. The Inquisition, established to arrest reform, was decreed in 1215.

The Modern Period, 1517-1880.—Martin Luther began the Reformation by publishing ninety-five theses against Rome. He translated the scriptures into German, gained the coöperation of the German princes, and published sermons and other works against the errors of Romanism. Melanchthon was the chief doctrinal writer of the Reformation. Erasmus labored in the department of New Testament criticism. The leading Swiss reformers were Zwingli in East Switzerland and Calvin in the west. Farel stood next to Calvin in Geneva.

The English Reformation had King Henry VIII. on its side, through no pious motives, but because the pope would not sanction his frequent marriages. This was the great opportunity for which the reformers of England had been waiting. Protestant sentiment grew rapidly. Ridley, Latimer, Cranmer, Hooper and Taylor fell victims to Queen Mary's religious zeal. Under Elizabeth the Reformation was placed on a firm foundation.

The Puritans were a reaction against Romanism and sympathy with it in the church of England. They preserved, under Cromwell, the liberties of the English nation.

Arminius, in Holland, opposed the chief tenets of Calvinism. The synod of Dort resulted in the political triumph of the Calvinists, and the expulsion of the Remonstrants, until the death of Maurice (1630). The Thirty Years' war (1618-48) was confined to the continent, and established the territorial boundaries of the Protestant and Catholic nations. The Huguenots of France were persecuted, 1572, and 70,000 people were killed on St. Bartholomew's night. The Jesuits, organized by Ignatius Loyola, 1540, were established as an offset to the aggression of Protestantism.

Deism prevailed to an alarming extent in England, its chief promoters being Hobbes, Herbert, Shaftesbury, Tindal, Bolingbroke, Hume and Gibbon. They had strong antagonists in Baxter, Cudworth, Taylor, Wateland, Leland, Butler and Paley, but the general condition of the people was irreligious.

Methodism, which arose from John Wesley, was a fervent religious movement. Charles Wesley, Whitefield, John Fletcher, Joseph Benson and Adam Clarke were strong coadjutors.

German Rationalism arose in 1750, through the teachings of Wolf and Semler and the example of the Prussian court. It then declined, through the labors of Tholuck, Neander, Hengstenberg, Ullmann, and others.

The Evangelical Alliance has promoted the unity of orthodox Christians in all parts of the world, and, to a corresponding degree, the victory over skepticism. The Old Catholics, a Roman church reaction against the vatican council of 1869, were organized into a church in 1870, with Döllinger, Huber, and Friedrich at their head. They have made great progress in certain parts of Germany and in Switzerland.

The American Church, A. D. 1607-1911.—The colonization of North America sprang from religious motives. The colonists sought freedom here because of oppressions at home. *Periods of American Church History.*—1. From 1607-60, revival and progress. 2. 1660-1720, trial, disputes with Great Britain, religious decline. 3. From 1720-50, great revivals. 4. From 1750-83, political agitation, freedom from British rule. 5. From 1783-1911, extensive revivals, separation of church and state, abolition of slavery, evangelization.

Christian Denominations.—The three great branches of Christianity are the Roman Catholic church, the Greek church and Protestantism.

ROMAN CATHOLIC CHURCH.—The designation "Catholic," meaning universal, is first found applied to the Church in St. Ignatius' Epistle to the Smyrnæans (about 110 A. D.). "Roman" was added later to signify that its criterion of membership is communion with the pope, the bishop of Rome.

Origin and Growth.—During the early centuries of its life, the church developed chiefly within the limits of the prevailing Greco-Roman civilization, at first in conflict, later in alliance with the state. The primitive christian propaganda had its headquarters naturally at Jerusalem; from thence it spread through Palestine, and soon found an especially propitious soil in Asia Minor. By 100 A. D., hardy christian colonies, with their focal point now at Rome, studded the Mediterranean coasts. The progress of the infant church was opposed by two stubborn antagonists, persecution and heresy. Refusal to recognize Cæsar's gods was construed as treason to Cæsar. After two centuries of ineffectual, intermittent repression of christianity the Roman state, under Decius and Valerian, and finally under Diocletian declared war *à outrance;* but the policy of extermination had been resolved on a century at least too late. Meanwhile within the church a host of heresies appeared, eddies created mostly by lingering currents of inherited Jewish and pagan habits of thought. In the ensuing confusion, the faithful, guided by their deep sense of universal brotherhood, recognized the voice of Christ in the voice of those bishops who were in communion with the church at large under the presidency of Peter's successor. As a result the church emerged from the prolonged conflict a vigorous, compact, firmly-knit society with a membership not improbably of ten million souls or more.

Alliance with Empire.—By the Edict of Milan Constantine granted freedom to the christians. Great multitudes under state protection turned to the Gospel, but long years passed and even generations before the Gospel leaven permeated the whole mass of society. Between the fourth and seventh centuries the faith was firmly planted in Persia, Armenia and Abyssinia, and gained a foothold even in India and China. In the West the Visigoths and Ostrogoths entered the fold through the gate of Arianism. Not less momentous was the conversion of the Kelts of Ireland, and later of the Franks and Anglo-Saxons.

Middle Period.—The fall of the Empire opened a new period for the church, during which she was called on to act as nurse and mistress to the rising barbarian states through their infancy and adolescence. Her missionary activity, dammed up on the South and East by the disastrous conquests of Islam, flooded into Northern, Central and Eastern Europe, penetrating even to Iceland and Greenland. By A. D. 1000, most of the Germanic and Slavic peoples were christian. On the other hand the political isolation and superior culture of the Byzantine empire led up gradually to the breach between Roman and Greek catholicism, which became practically final in A. D. 1054. The tense struggle of the Papacy to escape enslavement, first by the Italian barons, and later by the mighty emperors of the North, was followed by the golden era of the twelfth and thirteenth centuries. Gothic art flowered: universities as centres of an eager intellectual activity arose largely under ecclesiastical initiative and patronage: popular liberties grew: the widespread and crying evil of private warfare was suppressed: the passing of the ordeal and the wager of battle signalled the birth of modern legal procedure. But at the same time the severities of the Inquisition were ushered in to check the anti-christian, anti-political and anti-social Catharan heresy.

Modern Period.—In the fourteenth and fifteenth centuries religious life waned. The revival of Hellenic ideals, growing restiveness under intellectual control, delay of needed church reforms "in head and members," were so many seeds that fructified in the Reformation. Under the ægis of powerful princes, the new movement inaugurated by Luther swept away most of Northern Europe from allegiance to the mother church. For awhile, even France, Italy and Spain were threatened, but the Counter-Reformation following the Council of Trent turned the tide. A new life began to pulsate through the arteries of catholicism; apostolic men succeeded to the See of Peter; new orders, most prominent among which were the Jesuits, arose and engaged eagerly in needed educational, missionary, and charitable works. Not only were large multitudes rewon, but the loss of Northern Europe was offset by enormous gains in South and parts of North America, as well as in India, China, Japan and Africa.

New Political and Intellectual Conditions.—In the eighteenth century a new storm appeared. State absolutism and the anti-christian encyclopædic agitation, culminating in the French revolution, for a time sapped the vitality of the church in most of catholic Europe. She has not yet fully recovered in these regions. Since the dawn of the nineteenth century there has been a fairly uniform quickening of her activity throughout the world. She has adjusted herself to the profoundly modified political conditions, and, where left free to work out her own destinies, as in the United States, has prospered notably under popular constitutional government. While deprived of her temporal dominions since 1870, her supreme Pontiffs have been worthy and able men, and under their guidance catholic life and labors have flourished nearly everywhere. Her greatest gains have been in the United States, in England following the Oxford movement, in the English colonies, and in mission fields of Asia, Africa and Oceanica. The catholic education of her young and the defense of the supernatural in religion perhaps the two greatest problems she is being called on to meet to-day.

Form of Government and General Polity.—The Roman Catholic church teaches that she is the visible Kingdom of God on earth, founded by Jesus Christ as a worldwide, definitely organized society. Her authority is therefore derived not from her members but from her Founder, not from below but from above; any male member is however eligible to ecclesiastical office. The church while charged to apply to particular circumstances of time, place and person Christ's precepts, may not change them; she may of course dispense from, modify or annul her own enactments.

Pope.—Christ the Rock and Shepherd named Peter rock and shepherd in His place. In the pope, therefore, as successor of Peter and Vicar of Christ, is centralized the supreme authority, legislative, judicial and administrative, over the whole church. The pope is elected by a two-thirds vote of the cardinals assembled in conclave. He may resign but cannot be deposed. He is assisted in the administration of the church by the Roman Curia, the directing members of which are the cardinals (seventy in all when their number is full). The Curia is divided into three sections: (1) the Congregations or Advisory Committees, of which there are eleven: the Consistorial and Ceremonial Congregations, the Congregations respectively of the Holy Office, of the Discipline of the Sacraments, of the Council of Trent, of Religious Orders, of the Propagation of the Faith, of the Index, of Rites, of Extraordinary Ecclesiastical Affairs and of Studies: (2) the three tribunals or courts of the Penitentiaria, Rota and Segnatura; and (3) the six executive offices, the Chancery, the Datary, the Camera Apostolica, the Secretariate of State, and the Secretariates of Letters to Princes and of Latin Letters. The personal representatives of the pope in the capitals of the world are called nuncios or Apostolic delegates accordingly as they have official diplomatic relations with the civil powers or not.

Bishops.—The church's territorial unit is the diocese governed by a bishop, who is elected by the pope and who appoints pastors for parishes, legislates for and administers the revenues of his diocese. He may be assisted by a coadjutor or an auxiliary bishop. Dioceses are usually grouped into provinces or archdioceses, presided over by an archbishop or metropolitan; his authority over his suffragan bishops is quite restricted. Bishops are practically responsible only to the pope. The incumbents of certain very ancient sees are called patriarchs.

Priests and Laity.—The diocese is subdivided into parishes, in charge of pastors appointed by their bishop. The pastor ministers to the spiritual needs of his flock. He may have one or more assistant priests. In the regulation of parish finances he is usually aided by a lay advisory board. Both pastor and bishop have jurisdiction only within their respective territories. The faithful have the right without distinction of person, to the sacraments, to religious instruction, to christian burial and to the services of the priest whenever needed. They are in duty expected to support their parish church and pastor.

In missionary fields, a similar territorial division and subdivision obtain, but the framework is somewhat more elastic. Admission to the priesthood is given after a six-year seminary course to candidates who manifest mental and

moral fitness. The title monsignor is an honorary one carrying with it no jurisdiction. The religious orders are not a part of the hierarchy. They are bodies of men or women banded together to strive after Christian perfection by prayer, meditation and active work. Religious orders also take a triple vow of chastity, poverty and obedience.

In the United States a cardinal is addressed "Your Eminence"; an archbishop, "Your Grace"; a bishop, "Bishop" (in other English speaking countries "Your Lordship"); a monsignor, "Monsignor"; a priest, "Father." Letters are addressed respectively to His Eminence, N. ..... Cardinal N. .....; Most Reverend N. N. .....; Rt. Rev. N. N. .....; Rt. Rev. Mgr. N. N. .....; Rev. N. N.....

Basal Principles.—Roman Catholics believe that Christ committed the perpetual custodianship of revealed truth to the Apostles and their successors. Their voice is His voice; who hear them hear Him; they teach what He taught by His authority and in His name. In the Roman Catholic system, the ultimate court of appeal is a body of men; in other Christian systems it is a book, the Bible; and the difference is fundamental. Further, men as such being fallible, Christ promised the Apostles and the bishops their successors, the Spirit of Truth to preserve them from teaching error. Given a live belief in Christ's teaching, doctrinal development was and will ever be a psychological necessity. Two dangers beset this development: (1) part of the original teaching might atrophy: (2) into the original teaching foreign elements might be introduced: in the first case integrity, in the second purity would suffer. It is the province of infallibility to check these two dangers, while leaving the original doctrinal embryo to attain healthy legitimate growth. The infallible teaching authority is, like the governing authority, centralized in the pope. He may exercise it either alone or concurrently with the universal episcopate. Infallibility attaches only to decisions promulgated as final definitions of faith for the whole church. Such final definitions are rare. Roman congregations, individual bishops or groups of bishops may err; so may the pope in his private views, or non-final decisions.

Bible.—The Holy Scriptures not only contain but are the word of God. They do not necessarily contain the whole of revealed truth. They are inspired, but the exact nature and limits of inspiration have not yet been defined. The sacred writers are inerrant in what they formally and *ex professo* teach: yet "the Holy Ghost who spoke by them did not intend to teach men these things [*i. e.*, of profane science] in no way profitable to salvation" (St. Augustine. *De Genesi ad litteram*, bk. 2, ch. 9, 20). Where they have demonstrably in the judgment of the church borrowed statements from profane science or profane history, they do not necessarily assume responsibility for them.

Central Doctrines—So much for the basal principles; the central doctrines in detail follow:

The Trinity.—There are three equal divine persons in one God, the Father, the Son and the Holy Ghost.

Creation.—God created all things, spirits, man, matter. Man's soul at least is not derived by evolution from the brute. Apart from this, cosmic and biological evolution are not contrary to Catholic teaching.

The Fall.—It is evident that over and above the natural endowments of man God gave our first parents certain gratuitous supernatural gifts; by their sin they forfeited for themselves and for their descendants the latter only. Free will and reason were weakened, not destroyed, by original sin.

The Incarnation.—To regain man's lost supernatural life, the Second Person of the Blessed Trinity came on earth, assuming true human nature in the womb of the Virgin Mary through the power of the Holy Ghost. In view of her dignity as mother of the Word-made-flesh, Mary was conceived free from original sin by the privilege of her Immaculate Conception. Catholics honor her as the Mother of God and as the holiest of God's creatures.

The Redemption.—By His death Christ regained for all men the supernatural life, by which the soul, while retaining its own natural faculties and individuality, is elevated to participation in the life of God. This elevation, or Justification as it is called, is brought about through the forgiveness of sin and the infusion of sanctifying grace. Besides this permanent abiding life, Christ merited for us other transient helps or graces to prepare the soul for, or to preserve in the soul, supernatural life. Though He died for all men without exception, supernatural life and grace must be applied or imparted to the individual soul; this is done mainly through the channels of prayer and the sacraments.

Sacraments.—Seven sacraments were instituted by Jesus. Baptism removes original sin and infuses supernatural life Every human being must be baptized. A child dying unbaptized will enjoy natural happiness without suffering, but not the supernatural bliss of Heaven. Confirmation strengthens faith and gives the grace to profess it before men in word and deed. Penance forgives sins committed after baptism. Besides confessing his sins to a priest, the penitent must have sincere sorrow for having offended God and a firm purpose with His grace not to sin again; without such sorrow the priest's absolution is of no avail; the priest absolves from sin by Christ's commission as God's human agent. From the power of forgiving sin and its eternal punishment follows the power of remitting the remaining temporal punishment; such a remission, called an Indulgence, is not a remission of the guilt of sin nor permission to commit sin. In the Eucharist Jesus Christ is really present as God and Man under the appearances of bread and wine. The change, called Transubstantiation, of the substance of bread and wine into the body and blood of Christ is wrought during the sacrifice of the mass by the priest acting as Christ's representative. The consecrated bread received by the faithful as Holy Communion nourishes and strengthens the soul as food does the body. Extreme Unction is the anointing with oil of a person who is dangerously ill to prepare him spiritually against the supreme moment of death or to restore him to health if God sees fit. By Holy Orders men are raised to the priesthood; only bishops can ordain. Christian matrimony is by Christ's institution a sacrament; absolute divorce with right of remarriage is never permitted; separation from bed and board is permitted only for very grave reasons; direct prevention of conception is intrinsically immoral.

Prayer.—Efficacious prayer must be heartfelt or interior, but it is helpful and instinctive for us to give it external expression whether in words or in acts (*e. g.*, sign of the cross). The church's official external expression of her prayers is the liturgy, which, though of ecclesiastical institution, follows from and clusters about the sacramental system. All prayer is offered to God either directly or through His saints; we may pray for our fellow-men, living or departed; at the basis of this interchange of good offices is God's will that love should reign between His children in heaven, in purgatory and on earth, and love to be living should be beneficent as well as benevolent.

Eschatology.—The true supernatural life lived in faith, hope and love leads after death to eternal happiness. The soul on earth is free to choose God or by sin to reject Him. Sin is of two kinds: mortal sin is a willful, deliberate grievous offense (*e. g.*, adultery, perjury) against God, involving total rejection of His love and friendship: venial sin is a lesser offense (*e. g.*, slight willful anger) involving a minor degree of disloyalty to Him. Those dying with venial sin unrepented must be purified by temporary suffering in purgatory: those who die with mortal sin unrepented are lost forever. Heaven is the beatific vision in which the soul sees God "face to face"; hell is chiefly the deprivation of the beatific vision but involves also corporal suffering. Beyond this little is known of the precise nature of either heaven or hell. Both are eternal. At the last judgment our bodies will rise again, not necessarily atom for atom, but sufficiently identical to be called our own. The relative proportion of saved or lost is purely conjectural. God wishes the salvation of all men, giving each sufficient grace to be saved; if a soul be lost it is by its own deliberate, free choice. Finally the church teaches that membership in it is by Christ's command a condition to salvation. Those outside the church will however be saved if, sincere in their belief, they truly repent of the sins of which they may be guilty and do God's will as they understand it.

THE GREEK CHURCH taken in its widest sense, comprehends all those Christians following the Greek or Greco-Slavonic rite, who receive the first seven general councils, but reject the authority of the Roman pontiff, and the later councils of the Western church. The Greek church calls itself "the Holy Orthodox Catholic and Apostolic church," and it includes three main branches—the church within the Ottoman empire, subject directly to the patriarch of Constantinople; the church in the kingdom of Greece; and the Russo-Greek church in the dominions of the czar.

History.—The proper history of the Greek church as a separate body dates from the commencement of the Greek schism, or rather the commencement of the efforts on the part of the church of Constantinople to establish for itself a distinct jurisdiction, and an independent headship in the eastern division of the empire. The ecclesiastical preëminence of Constantinople followed when it became the seat of the imperial residence, and the center of the imperial government. The first dispute on matters of doctrine between the rival churches occurred in the ninth century. The Greeks denied the procession of the

Holy Ghost from the Father and the Son; the Latins asserted and defined it as an article of faith. The latter, however, continued powerful in the East until A. D. 1054, when a final separation took place.

Doctrines.—The Greek church recognizes the Bible and tradition as rules of faith; it holds in common with the Roman Catholic the doctrines of seven sacraments, of the sacrifice of the mass, of the veneration of the Virgin Mary, the saints, images, and relics, of the meritoriousness of fasting and other works, the hierarchical degrees of ecclesiastical orders, and monasticism.

Its peculiar tenets are mainly the following: It disowns the authority of the pope, and, in controversies of faith, acknowledges the infallibility of Ecumenical councils. It administers the Lord's supper in both kinds. It denies the existence of a purgatory, yet prays for the dead, that God would have mercy on them at the general judgment. It maintains that the Holy Ghost proceeds from the Father as principal, through the Son as medium. It admits of no images in relief or embossed work, but uses paintings and engravings in copper or silver. It approves of the marriage of priests, provided they enter into that state before their admission into holy orders.

Church Edifices and Liturgy.—The churches are mostly built in the form of a cross. The altar stands toward the east, and is separated from the nave by a partition containing three doors. At the beginning of the canon of the mass the doors are closed, and are not opened again until after the communion of the priest and deacon. The people stand during divine service. Only one mass a day is said in each congregation, and that before the rising of the sun. The sermon, which is considered unessential, was formerly very rare; but in Russia preaching is now common. Instrumental music is forbidden in the churches. The language used at divine service among the Greeks of Turkey and Greece is the old Greek, among the Russians and other Slavic nations the old Slavonic, and among the Georgians the old Georgian.

The total number of adherents of the entire Greek church is about 105,000,000, of which 87,000,000 belong in Russia; 5,000,000, in Austria-Hungary; 4,800,000 in Roumania; 2,000,000 each in Greece and Servia; 3,000,000 in the Ottoman empire; and 1,400,000 in Bulgaria.

PROTESTANTISM is the name given to that body of religious doctrines which grew out of the movement inaugurated by Luther in 1529 in *protestation* of the supremacy in spiritual things claimed by the Church of Rome. Though at first confined to the followers of Luther, the name was afterward extended to the Calvinists, and is now common to all who belong to the reformed churches. The great principles upon which all Protestants depend, however they may differ in other respects, are: *first*, the right of private judgment, and the rejection of any infallible head of the church or ultimate authority in pope or council; *second*, recognition of the authority of conscience, enlightened by the Word of God, as the ultimate revelation of God to man, as his rule of faith and life. (See Reformation.)

The following are the chief Protestant bodies or denominations represented in the United States and Canada:

BAPTISTS.—This name was originally given to a group of English separatists, opposed to infant baptism, about 1644, and was subsequently extended until it now covers one of the largest bodies of Protestants.

In the United States, Roger Williams is generally regarded as the founder of the body, when, in 1638, he established a little community on the shores of Narragansett Bay on the basis of what he held to be apostolic Christianity. Almost contemporaneously another Baptist church was founded at Newport, R. I. During the latter part of the seventeen and throughout the eighteenth centuries, Baptist churches were founded in other parts of NewEngland, South Carolina, Virginia, New York, New Jersey, Delaware, and Pennsylvania.

The First Baptist Association in America was that of Philadelphia, founded in 1707. Its confession of faith, modeled on the Westminster Confession, became the determining theological influence among the Baptists of the United States and served to confirm the churches in Calvinism. This Association was extended, and for a while included the churches in New England, New York, Virginia, and Maryland. The Baptists of this association, although numbering only 1,318, obtained a liberal charter in 1764 for a college in Rhode Island, which, in 1844, became Brown University. With the growth of the denomination various other associations of churches were formed in New England and in the South.

The Baptists contributed many of their numbers to the Revolution and the provision for religious liberty of the United States Constitution can be directly traced to their influence.

Baptist Church, South. — Controversy over the slavery question continued within the denomination from 1843 to 1845 and at last all attempts at conciliation failed, and in the latter year the Southern Baptists organized the Southern Baptist Convention, the denomination in the United States being thus broken into two great sections, which still exist. Until 1907 the Northern Baptists maintained independent societies without any unifying body. In that year, as a result of long continued agitation, there was adopted tentatively a constitution for a Northern Baptist Convention which was ratified in the following year at the convention in Oklahoma City. In 1910 the constitution in its final form was adopted at the convention held in Chicago, according to which the various societies are continued but are brought under contractual relations into coöperation with and control by the Northern Baptist Convention.

In these national conventions the denomination has not erected institutions having doctrinal or ecclesiastical control over individuals or local churches, but agencies for carrying on missionary and other undertakings in which the churches as a body are engaged.

Doctrinal Position.—The fundamental doctrinal position of the Baptists is that of loyalty to Jesus Christ. They have no authoritative creed, although there are a number of confessions which are used as a basis for a particular association of churches. Strictly speaking there is no Baptist church, in the sense that there is a Roman Catholic church. There are only churches in close association, etc. This absence of an authoritative creed renders it impossible to detail the Baptist position with the same precision as in the case of more closely organized religious bodies, but the following doctrinal positions are commonly held and give a characteristic bond of union to the churches with their six million and more members:

(1) Belief in the New Testament as the standard of faith and practice, but subject to individual interpretation.

(2) In consequence Baptists hold to immersion as the only form of baptism. Almost universally such immersion is held necessary for church membership.

(3) Church membership is limited to those who are conscious and immersed but not necessarily adult, believers in Jesus Christ. In various sections of the United States it is common to have a Society associated with the church and unimmersed Christians are admitted.

(4) Absolute religious liberty and the absolute separation of church and state have always been fundamental Baptist positions.

(5) The "Priesthood of all believers." While Baptists ordain their pastors these do not form an "order" and is intended primarily to insure the proper qualifications for the ministry.

(6) Baptists are generally moderately (the chief exceptions are the Free Baptists) calvinistic, always trinitarian, and in academic theology are at one with the general evangelical position.

(7) The churches are democratic and independent, each church having power to conduct its own affairs, ordain its ministers and administer the rites of the church. This power, however, is usually exercised after a council has been called composed of representatives of other Baptist churches and its advice has been given. The churches unite for the general denominational work in local and state associations and national societies and conventions.

(8) As a matter of strict logic the Baptists have practiced what is known as close communion, that is, the limitation of participation in the Lord's Supper to those who are members of Baptist churches. There is a growing tendency among Northern Baptists of America, however, to open communion, participation being left to the consciences of the participants.

(9) Churches are organized with deacons, property being held by some duly constituted board, in the United States members of such boards being usually known as Trustees. The pastor is simply a member of the church who has been set aside for the work of Christian ministry.

(10) Discipline is wholly in the hands of each independent local church, but failure to act in what is deemed necessary cases may result in the withdrawal of Associational fellowship from the church.

Education.—In the matter of education the Baptists of America are in advance of those of the rest of the world. This is due very largely to the fact that the religious liberty accorded the citizens of the United States and Canada has made it possible for the various denominations to found schools, colleges and theological seminaries freely.

In the United States the Baptists have founded such strong colleges and universities as Colby College (Me.); Brown University (R. I.); Colgate University, Rochester (N. Y.); Bucknell (Pa.); Denison (O); Kalamazoo (Mich.); Franklin (Ind.); University of Chicago, Shurtleff (Ill.); William Jewell (Mo.); Des Moines Central (Ia.); Ottawa (Kas.).

In addition there are promising institutions on the Pacific Coast, at McMinnville (Ore.), and Redlands (Calif). In the

South, among the stronger institutions are Richmond College (Va.); Furman University (S. C.); Wake Forest (N. C.); Mercer (Ga.); John B. Stetson (Fla.); Georgetown (Ky.); Baylor University and Simmons College (Tex.). The Baptist Theological seminaries both in equipment and standard of scholarship are among the best in the United States. They are: Newton Theological institute, Newton Center (Mass.); Rochester seminary and the Theological seminary of Colgate University in New York, Crozier seminary, Chester (Pa.); The Divinity school of The University of Chicago, and the newer Kansas City Theological seminary, K. C. (Mo.), and that at Berkeley (Calif). In connection with the Southern Convention, there are the Southern Baptist seminary, Louisville, Ky., and the Southwestern Theological seminary, formerly of Baylor University, but now transferred to Ft. Worth, Texas.

CHRISTIAN SCIENCE was founded by Mrs. Mary Baker Eddy, who was born in 1822 and died 1910. Respecting the origin of the teaching and movement, it may be said that in the year 1866, as set forth in her text-book, "Science and Health, with Key to the Scriptures," Mrs. Eddy arrived at her first definite conclusions concerning the principle of divine healing, although from childhood she had passed through numerous experiences which had proved to her the possibility of utilizing spiritual power in the cure of disease, and for twenty years she had been trying to "find a mental cause" for all phenomena. In the preface of the Christian Science text-book, page viii., Mrs. Eddy says:

"As early as 1862 she (the author) began to write down and give to friends the results of her Scriptural study, for the Bible was her sole teacher; but these compositions were crude,—the first steps of a child in the newly discovered world of Spirit."

On page ix. of Science and Health, Mrs. Eddy declares that her "First pamphlet on Christian Science was copyrighted in 1870; but it did not appear in print until 1876, as she had learned that this Science must be demonstrated by healing, before a work on the subject could be profitably studied." She says that "From 1867 until 1875, copies were, however, in friendly circulation," and that before writing her book, Science and Health, she "made copious notes of Scriptural exposition which have never been published. This was during the years 1867 and 1868. These efforts show her comparative ignorance of the "stupendous Life-problem up to that time, and the degrees by which she came at length to its solution; but she values them as a parent may treasure the memorials of a child's growth, and she would not have them changed."

After her discovery of the fundamental propositions of Christian Science, Mrs. Eddy spent some years in Scriptural research and in testing her ideas in the treatment of sickness. Her success during these years, according to the testimony of those who were her beneficiaries, was very convincing. In 1875 Mrs. Eddy had arrived at a sufficiently definite and conclusive understanding of her subject to warrant the statement of her ideas in a text-book which she first named Science and Health, but which is now known as "Science and Health, with Key to the Scriptures." On page 109 of this book, she declares:

"I knew the Principle of all harmonious Mind-action to be God, and that cures were produced in primitive Christian healing by holy, uplifting faith; but I must know the Science of this healing, and I won my way to absolute conclusions through divine revelation, reason, and demonstration."

Mrs. Eddy established the Metaphysical College in Boston in 1881, having taught her system to a number of students previous to that date. She chartered the first Christian Science church in June, 1879, and became its first pastor. She also personally instituted every pioneer movement of the Christian Science church and framed all of its by-laws, its rules and regulations.

The Teachings of Christian Science.—The fundamental propositions of Christian Science are the Scriptural teachings that God is Spirit, Mind, Life, Truth, Love, the only Cause and Creator; that the real universe, including man, is the infinite manifestation, reflection or expression of infinite Spirit, God, and is therefore spiritual, and that matter is nothing more than an erroneous belief regarding the nature of substance, the false sense that the universe is material. To say there is no matter is to declare the falsity of the belief that the universe of God's creating is material. To declare for the reality of matter would be equivalent to the declaration that the manifestation or reflection of Spirit, is its opposite, which would be a scientific monstrosity since like always begets like. The declaration of Christian Science that there is no matter does not mean that what one sees does not exist, but that it is not what it seems to be to the uneducated human sense, to that sense which has not learned to regard creation from a spiritual point of view. It does not repudiate the universe but corrects the mortal concept of it. It teaches that the universe with all its marvels will be infinitely more wonderful to us than it is now when we shall have attained to a spiritual realization of the truth of being, when we shall have gained a true understanding of God and His creation.

It also further teaches that man is created in the image of God and manifests every characteristic of his Maker including the eternity and immutability of divine Mind. "God saw all that He had made and behold it was very good." Sin, sickness and death being no part of the very good things which God created are declared to have only a seeming, not a real existence. The real man forever expresses the nature and essence of Deity of which he is the "image" or idea, hence, he cannot be sick nor sinful. In Christian Science the term reality is attached only to that which is of God and hence immutable and eternal. Christian Science is believed by its adherents to be the Christ method of healing sin and sickness. A definite idea of its *modus operandi* is conveyed by the following statement from Science and Health, page 476:

"Jesus beheld in Science the perfect man, who appeared to him where sinning mortal man appears to mortals. In this perfect man the Saviour saw God's own likeness, and this correct view of man healed the sick."

Applicants for Membership.—Members of the Christian Science church are required to subscribe to the following religious tenets found on page 497 of Science and Health. They clearly state the teaching of Christian Science respecting the Scriptures, the Christ, the Holy Ghost, the forgiveness of sin, the punishment of sin, the crucifixion, the resurrection, the atonement, salvation, eternal life, Christian conduct and Christian fellowship.

1. As adherents of Truth, we take the inspired word of the Bible as our sufficient guide to eternal Life.

2. We acknowledge and adore one supreme and infinite God. We acknowledge His Son, one Christ; the Holy Ghost or divine Comforter; and man in God's image and likeness.

3. We acknowledge God's forgiveness of sin in the destruction of sin and the spiritual understanding that casts out evil as unreal. But the belief in sin is punished so long as the belief lasts.

4. We acknowledge Jesus' atonement as the evidence of divine, efficacious Love, unfolding man's unity with God through Christ Jesus the Way-shower; and we acknowledge that man is saved through Christ, through Truth, Life and Love, as demonstrated by the Galilean Prophet in healing the sick and overcoming sin and death.

5. We acknowledge that the crucifixion of Jesus and his resurrection served to uplift faith to understand eternal Life, even the allness of Soul, Spirit, and the nothingness of matter.

6. And we solemnly promise to watch, and pray for that Mind to be in us which was also in Christ Jesus; to do unto others as we would have them do unto us; and to be merciful, just and pure.

For a full explanation of the teaching of Christian Science, one should make himself familiar with the Christian Science text-book, "Science and Health, with Key to the Scriptures," and also with Mrs. Eddy's lesser writings; a full list of which is given in the bibliography at the close of this article.

Present Status of the Church.—In 1906 the membership of the Christian Science denomination, according to the Special Report on Religious Bodies by the Bureau of the Census, was 85,717. At that date the membership of The Mother Church in Boston, The First Church of Christ, Scientist, was 40,011. Since then no statistics have been compiled, but it is well known that the membership of Christian Science churches as a whole, is steadily and rapidly increasing. The fact that the congregations attendant upon Christian Science church services are much in excess of the actual membership and the fact that there are over 500,000 copies of the Christian Science text-book in circulation are evidences that only a small minority of those who are interested in Christian Science are actual members of the church. Reports show that during the past year an average of one new church has been organized every three and one half days, and the directory of the denomination shows 721 regularly organized churches and 506 societies holding public services, not chartered churches.

There are several thousand Christian Scientists who are engaged in the work of healing the sick and teaching Christian Science. These are known as practitioners. In greater Boston about 7000 persons are in regular attendance upon church services. New York City has seven churches with regular services. Chicago has nine. There are groups of Christian Scientists in many foreign lands, including Holland, Germany, England, Ireland, Scotland, France, Switzerland, Italy, China, Japan, Egypt, South Africa, Australia, New Zealand and Hawaii. Great Britain bids fair to rival America in the growth of the movement.

The Christian Science denomination owns church property valued between nine and ten million dollars. The most expensive church edifice is that of The Mother Church in Boston. The First Church of Christ, Scientist in London, England, owns a fine church edifice on Sloane Terrace.

Form of Service.—The Sunday services in Christian Science churches are conducted by readers, one reading selections from the Bible, the other reading correlated passages from the Christian Science text-book. A Wednesday evening meeting is devoted to testimonials, experiences and remarks on the subject of Christian Science.

In addition to those who are authorized by the church as qualified teachers of Christian Science, there is a lecture board of fifteen, who are authorized to lecture on Christian Science. The members of this board are subject to the call of all the churches of the denomination, each church being privileged to call the lecturer of its choice and at its discretion.

The official periodicals of the Christian Science church are the *Christian Science Journal*, the *Christian Science Sentinel*, the *Christian Science Quarterly*, published in English, and *Der Herold der Christian Science* published in German. All of these periodicals were formerly owned by Mrs. Eddy and were donated to the church by her. They afford a liberal income which is used in forwarding the cause of Christian Science. The *Christian Science Monitor* was instituted by Mrs. Eddy and is also the property of the Christian Science Publishing Society. It is not a denominational periodical but a regular daily newspaper, devoted to the interest of the general public. It is distinguished by the entire absence of sensational matter, by the elimination of the details of crime and casualty, by its carefully selected educational matter, and by the appearance of no questionable advertisements.

The following is a full list of Mrs. Eddy's publications on Christian Science: *Science and Health, with Key to the Scriptures; Miscellaneous Writings*: 1883-1896; *Concordance to Science and Health; The Church Manual; Retrospection and Introspection; Pulpit and Press; Unity of Good; Christ and Christmas; Rudimental Divine Science; No and Yes; Messages to The Mother Church*, 1900, 1901 *and* 1902; *Christian Science versus Pantheism; Two Sermons, Christian Healing, and The People's Idea of God.*

CONGREGATIONALISM.—The Congregational church of the United States is a misnomer: there is no national ecclesiastical organization of Congregationalists which has the right to call itself the Congregational church. This results from the fundamental principles of Congregationalism, which are thus briefly stated by Dexter who is a recognized authority:

Polity.—1. Any company of people believing themselves to be and publicly professing themselves to be Christians, associated by voluntary compact on Gospel principles for Christian work and worship, is a true church of Christ.

2. Every member of such a church has equal rights, powers and privileges with every other; and the membership together, by majority vote, have the right and duty of choosing all necessary officers; of admitting, dismissing and disciplining members and of transacting all other appropriate business of a Christian church.

3. Every such church is independent of any outward jurisdiction and control, whether from Popes, Bishops, Assemblies, Synods, Presbyteries, Conferences, Associations or Councils, being answerable directly and only to Christ, its head; and every such church is on a level of inherent genuineness, dignity and authority with every other church on earth.

4. A fraternal fellowship is yet to be maintained among these independent churches, and when insoluble difficulties arise or specially important matters claim decision, such as the formation of a new creed or the settlement or dismission of a pastor, it is proper that the advice of other churches be sought and given in council.

These principles forbid the assumption of ecclesiastical power by any other than the local church. Every church frames its own confession of faith, makes its own rules of order, shapes its own ritual of worship, sometimes calling councils of neighboring churches to give it advice. In most cases this advice is heeded; if it is not the neighboring churches may withdraw fellowship from the church which disregards their council.

Officers.—The officers of the local church are, ordinarily, a pastor or pastors, deacons, a clerk and a treasurer and necessary committees. In most churches women vote and hold office, on an entire equality with the men. The deacons and the clerk, sometimes with additional members, form a kind of pastoral committee, who examine candidates for membership and recommend them to the church, and who also take preliminary action in cases of discipline. The deacons serve at the communion table and also have the care of the needy members. In many of the New England churches they are elected for life: in most of the churches further west their term is a limited one.

Rituals.—The forms of worship are generally simple, though there has been a tendency in recent years to "enrich" the services of the church by responsive readings, chants, the repetition of the Lord's Prayer in unison, and the recitation of the Apostle's Creed. The sermon keeps the central place in public worship. The only sacraments recognized are Baptism and the Lord's Supper. All believers present are usually invited to partake of the Supper. Infant baptism is practised, but not enjoined.

During the early years of the twentieth century a movement has been in progress, in many of the states west of the Alleghanies, looking toward a more perfect coöperation of the churches. The principle of the fellowship of the churches has been but imperfectly developed hitherto; this movement is designed to make amends for the neglect and to provide methods by which the churches, without sacrificing their autonomy, may unite in the furtherance of Congregational interests.

Education.—The work of Christian education has always been a leading interest of Congregationalists; Harvard College was established by them in 1636, only six years after the first colonists landed in Massachusetts Bay, "to educate the English and Indian youth in knowledge and godliness." When the Unitarian separation occurred two centuries later, Harvard came under the control of the Unitarians. Other New England colleges which the Congregationalists have built are: Yale in Connecticut, Williams and Amherst in Massachusetts, Bowdoin in Maine, Dartmouth in New Hampshire, and Middlebury in Vermont, besides the three great colleges for women, Smith, Wellesley and Mount Holyoke. Farther west they have Oberlin and Marietta in Ohio, Olivet in Michigan, Illinois and Wheaton in Illinois, Beloit and Ripon in Wisconsin, Carleton in Minnesota, Grinnell and Tabor in Iowa, Washburn in Kansas, Doane in Nebraska, Drury in Missouri, Yankton in South Dakota, Fargo in North Dakota, Colorado in Colorado, Whitman in Washington, Pomona in California, and several others, including the institutions for the negroes in the South to which reference has been made.

The foundations of the public school system of America were also laid by Congregationalists.

History.—In the early years of the seventeenth century persecution was raging in the English church against all those who worshipped in any other manner than that prescribed by the national church. Little companies of Christians were gathered together, here and there, some in London and some in the Eastern counties, who maintained the right to worship God in simpler fashion; to study the Bible by themselves; to choose their own teachers, make their own rules of order, and pray to God in their own words. One such small company, meeting by stealth in an old manor house in Scrooby, Nottinghamshire, after suffering much for their faith, managed to escape to Holland, where their pastor, John Robinson, a graduate of Cambridge University and a man of fine scholarship and culture, greatly commended himself to the Dutch Christians, becoming one of the teaching staff of the great University at Leyden. After a few years of residence in Leyden the younger half of the little congregation migrated to America, and established itself as a church at Plymouth, on Cape Cod Harbor, in 1620. This Scrooby-Leyden-Plymouth church was the first Congregational church in America, and the first church of any name in what is now New England. Ten years later a large colony of Puritans arrived in Massachusetts Bay. It was not their first intention to separate themselves from the church of England, but the logic of the situation was leading them in the direction of independency and before long they found themselves in substantial agreement with their brethren of the earlier colony. Other colonies in Connecticut worked along the same lines of polity and the principles of Congregationalism were thus planted in the soil of New England.

Doctrine.—The original Congregational churches were strongly Calvinistic. The Presbyterians and the Congregationalists were united in the early days of the English Commonwealth; in the great Westminster Assembly, which framed the Westminster Confession, there were a few Congregationalists; and later, in 1658, a synod of English Congregationalists adopted in substance this historic confession, which was afterward, in 1680, reaffirmed by a synod in Massachusetts. This action, of course, did not supplant the creeds of the individual churches; it was published rather as an educational than as an eccleciastical manifesto, yet it served to indicate the general belief of the Congregationalists of that day which was a rigid type of Calvinism.

Before the middle of the eighteenth century liberalizing tendencies began to appear in England, and in the early years of the nineteenth century the controversy arose which resulted in the separation of the Unitarians from the Congregational fellowship. This division affected the churches of Massachusetts, and specially of Eastern Massachusetts; out of 361 churches in that state, more than one hundred became Unitarian and a large share of the wealth, culture, and political and social influence went out with the Unitarians. The recovery of the Congregationalists from this loss was, however, rapid and complete; within ten years they had more churches than were counted by both wings before the division.

Since that day the doctrinal development of Congregationalism has been going forward at a moderate pace; the rigidities of Calvinism have been gradually softened; the present consensus of doctrinal belief would be generally described as a type of Liberal Orthodoxy, though there are many who still adhere to the older formularies.

Ethical and Social Tendencies. — The Congregationalists have always been interested in the application of Christian truth to human affairs; in the various reformatory and philanthropic movements they have had an active part. Many of their churches in the cities are engaged in what is known as "institutional work;" and most of their younger men are in full sympathy with the idea that society, as well as the individual, needs to be christianized; that these processes must be carried forward together, and that neither must be emphasized at the expense of the other.

THE DISCIPLES OF CHRIST, OR CHRISTIANS.—History.—This religious body celebrated its centennial at Pittsburg, Pennsylvania, October, 1909. The movement began during the great religious awakening of the last years of the eighteenth century and the first of the nineteenth, following a period in the history of the United States which was notorious for infidelity, low moral standards and denominational bitterness. It came from a profound desire on the part of many leaders in various parts of this country and Great Britain for the union of all christians and the restoration of primitive christianity to the end that the world might believe in Christ.

In Kentucky, Barton Warren Stone and four of his fellow-ministers were dismissed from the Presbyterian church for preaching a simple message that did not harmonize with the extreme calvinistic doctrine then prevalent. These men saw that the source of their difficulties lay largely in the creed to which they had subscribed and consequently abandoned the Westminster Confession and resolved to accept the Bible only as their rule of faith and practice. Churches were organized which bore only the name "Christian."

Similar movements were started in the Methodist church in Virginia and the Baptist church in Vermont and resulted in forming independent congregations with no authoritative documents save the Holy Scriptures and wearing only the name "Christian."

The most distinguished men in the movement for union were Thomas and Alexander Campbell, father and son, who came from the northern part of Ireland to this country in 1807 and 1809 respectively. They were ministers of the Seceder branch of the Presbyterian church.

Coming to western Pennsylvania, Thomas Campbell found the scattered members of many warring sects and attempted to bring them together for worship and the observance of the communion. His action was obnoxious to the leaders of the Presbyterian church and led to an almost forced separation from that body. Shortly afterward the historic document known as the *Declaration and Address* was prepared for the Christian Association of Washington. This document is the *Magna Charta* of the movement.

Thomas Campbell, disappointed that men and women did not desert their denominational standards and unite, soon saw that in order to maintain the principles which he advocated, it was necessary to form an independent body.

The first congregation was organized from members of the Association on May 4, 1811, at Brush Run, Pennsylvania.

The *Declaration and Address* had for its keynote the principle contained in the statement that nothing is to be inculcated as a matter of christian faith or duty for which there cannot be produced a "thus saith the Lord, either in express terms or by approved precedent." The thought stated in another form is found in the motto of Thomas Campbell, "Where the Scriptures speak we speak, and where the Scriptures are silent we are silent."

Not being able to secure admittance to the Presbyterian church, the Brush Run congregation, very early becoming an immersionist body, entertained overtures in 1813 to unite with the Baptists. A union was effected which lasted until 1830, when there was a separation of those who held strictly to the traditions of the Baptist church and those who were determined to establish what they termed the "ancient order." These reformers desiring to be known only by Scriptural names were called "Disciples of Christ."

Immediately after the separation of the Disciples and the Baptists came the union of the reformers and christians, the latter being the followers of the movement under Stone.

Walter Scott was the greatest evangelist of the early days of the movement. A vigorous evangelism has always characterized the Disciples and it was not long until the principles of the Restoration were carried throughout Ohio, Kentucky, western Pennsylvania, West Virginia and into the adjacent territory. In the middle West and South the movement has been especially successful.

Doctrine.—The Disciples of Christ accept all the cardinal teachings of evangelical christians but refuse to be bound by any formulated human confession or creed. They are not averse to the systematic statement of doctrine but they do not allow any such statement to take the place of the New Testament Scriptures as their guide. Early in the history of the movement Alexander Campbell delivered a sermon on the Law, which clearly distinguished between the Jewish and the christian dispensations and showed that christians are not under the law of Moses but are to be governed by the teachings of Christ and his Apostles.

The following items of doctrine are condensed from a tract entitled "Our Position" by Isaac Errett, for many years editor of *The Christian Standard*. It is generally endorsed by the Disciples; but neither these statements nor any others of human origin, are used as tests of fellowship.

1. The inspiration of the Old and New Testaments.
2. The revelation of God in three persons, Father, Son and Holy Spirit.
3. The all-sufficiency of the Bible as a rule of faith and practice.
4. The divinity of Jesus and his official authority as Prophet, Priest, and King, to instruct, redeem from sin and rule his followers. We accept the religion of the New Testament embracing the following:
   (a) The incarnation of the Word in Jesus.
   (b) The life and teachings of Jesus as the complete unfolding of the divine character in its relation to our perishing race.
   (c) The death of Christ as a means of procuring forgiveness of sin.
   (d) His resurrection from the dead.
   (e) His ascension to heaven and Mediatorial reign.
   (f) His supreme authority as Lord of all.
5. The continuous personal mission of the Holy Spirit to convict the world of sin and to dwell in believers as the Comforter.
6. The alienation of the race from God and its dependence upon the grace of God through Christ for salvation.
7. The necessity of faith and repentance in order to enjoy salvation here and a life of obedience in order to the attainment of eternal life.
8. The perpetuity of Baptism and the Lord's Supper, as divine ordinances.
9. The obligation to keep the first day of the week as the Lord's Day in commemoration of the death and resurrection of Jesus by acts of worship taught in the New Testament.
10. The Church of Christ, a divine institution composed of obedient believers with appointed rulers, ministers, and services, for the edification of christians and the conversion of the world.
11. The necessity of righteousness and holiness on the part of christians for their own salvation and that of the world.
12. The fullness and freeness of the salvation of the gospel to all who comply with its requirements.
13. The future punishment of the wicked.

Polity.—The form of government is congregational and ecclesiasticism is rigidly avoided. The congregation elects elders and deacons and sometimes deaconesses. In many instances the minister is elected by vote of the congregation, though often a committee of the board is authorized to call a preacher. The officers of the church are usually called the Official Board.

There is no uniformity in regard to the ordination of ministers, each congregation being free to call to its pulpit anyone whom it may deem worthy, whether formally set apart to the ministry or not.

The coöperation of congregations in cities, countries, states and the nation is altogether voluntary and the Church of Christ is noted for its largely attended state and national conventions. Thus far these have been only for coöperation in missionary, educational and philanthropic activities, but never for ecclesiastical legislation.

Educational Institutions.—The Disciples of Christ have been active in promoting higher education from the beginning is their history. In 1840 Bethany College was founded by Alexander Campbell. The other chief schools with the date of their founding are:

Transylvania University, Lexington, Ky., 1798. Eureka College, Eureka, Ill., 1855. Hiram College, Hiram, O., 1850. Christian College, Columbia, Mo., 1851. Christian University, Canton, Mo., 1858. Texas Christian University, Ft. Worth, Texas, 1873. Drake University, Des Moines, Iowa, 1881. Oklahoma Christian University, Enid, Okla., 1907. Butler College, Indianapolis, Ind., 1850.

Some of the most important books on the history and doctrine of the Disciples of Christ are the following: *Memoirs of A. Campbell*, Robert Richardson; *Historical Documents*, C. A. Young; *The Christian System*, A. Campbell; *On the Rock*, D. R. Dungan; *History of the Disciples of Christ*, B. B. Tyler; *Old Faith*

Restated, J. H. Garrison; *Life of John Smith*, J. A. Williams; *The Disciples of Christ*, Errett Gates; *Office of the Holy Spirit*, R. Richardson; *Comprehensive History of the Disciples of Christ*, *Plea of the Disciples*, W. T. Moore.

THE EPISCOPAL CHURCH.—The Episcopal church of the United States is the daughter of the Church of England. Thus its ancestry goes back through the Reformation and the middle ages into the first christian centuries.

Origin.—The Reformation, on the continent of Europe, was a debate between the Bishop and the Bible. The bishops stood for church authority and for the maintenance of existing conditions. The German and Swiss reformers, preferring what they read in the scriptures to what they saw in the contemporary church, withdrew from the ecclesiastical organization and established societies of their own. Thus, on the continent, religion was in two camps, the catholic camp holding to the Bishop, and the protestant camp holding to the Bible. In England this unhappy alternative was not presented so distinctly. There the bishops for the most part accepted the Reformation and were leaders in the new allegiance to the Bible. The people who would have been catholics and the people who would have been protestants in Europe, remained in England in the same church. The time came, indeed, when some catholics at one extreme and some protestants at the other withdrew from the inclusive English church; but the two elements continued, and their combination is to this day the distinctive characteristic, both of the Church of England and of the Episcopal church of America. These churches differ from their catholic neighbors in that they are protestant, and from their protestant neighbors in that they are catholic.

The fact is popularly represented by the party names "high church" and "low church." A high churchman is one whose distinctive interests are ecclesiastical; he cares for the institutional side of religion, for rites and sacraments and orders. A low churchman is one whose distinctive interests are evangelical; he cares for the individual side of religion, for a direct approach to God without dependence on external means. Two modern enthusiasms—the desire to bring religion into relation with the industrial and social sides of life, and the desire to bring theology into relation with modern knowledge—make the broad churchman, who may at the same time be either "high" or "low." This inclusion of various opinions and temperaments within the one religious society is the most notable difference between the Episcopal church and other ecclesiastical organizations.

History.—The history of the Episcopal church in America begins with the settlement of Jamestown in 1607. Religion and civilization had already been planted in Florida and in Canada, but these were of the Latin type. They differed from the English order in their idea as to the right residence of power. According to the Latin theory, power in Church and State ought to be centralized; according to the English theory, it ought to be distributed. The Latin stood for autocracy, the English for democracy.

Thus in 1619, the year before the settlement of Plymouth, the first representative assembly in American history met in the Jamestown church. "The most convenient place we could find to sit in," says the official record of the meeting, "was the Quire of the Church, where Sir. George Yeardley, the Governor, being set down in his accustomed place, those of the Council of Estate sat next him on both hands. But forasmuch as men's affairs do prosper little where God's service is neglected, all the burgesses took their places in the quire till a prayer was said by Mr. Bucke, the minister, that it would please God to guide and sanctify all our proceedings to His own glory, and to the good of this plantation." Thus sat the mother of all the American Congresses, the progenitor of all free and representative institutions on the American continent. And thus, made up of churchmen and enjoying the hospitalities of the church, it continued to hold its sessions in that place for twenty years.

In 1635, the year before the founding of Harvard College, the churchmen of Jamestown accomplished the first American revolution. Sir John Harvey, the governor, having refused to transmit to the King the protest of the colony against an attempt to monopolize the tobacco trade, was seized by the Council and shipped back to London.

Early Difficulties.—This religious and political leadership of the Episcopal church in America was presently given over into other hands by reason of two serious disabilities. These both proceeded from the dependence of the church upon the mother country. The church was disabled religiously by the fact that it had no bishop. In the absence of episcopal authority there was no adequate discipline. The standard of clerical learning and character was lowered. The church was disabled politically by its association with the losing side in the Revolution. The ministry among the Puritans was largely made up of men who were born in America, and had grown up under the conditions of colonial life, and understood the times. But the Episcopal clergy, for the most part, were of English birth and education and had made their first acquaintance with the colonies after their habits and opinions were pretty definitely formed. Accordingly, when the War of Independence came on, the clergy were mostly on the British side.

The clergy having thus brought the church to the edge of destruction, one of the first steps taken toward the new and independent organization which the Revolution made necessary was to call the laity to council. In the assembling of the conference which led to the first General Convention laymen were invited to join with the clergy in representing the parishes; and this became an important part of the established order. Thus the church, which now became known as Protestant Episcopal, improved upon the administration which it had inherited from England, and kept in step with the constitutional changes which were determining the future of the new United States. Indeed, the constitution of the church and the constitution of the Republic were drawn up by much the same men, and were signed in the same year, 1789, and in the same room in the State House at Philadelphia.

Organization.—The civil and ecclesiastical organizations thus put in order—the free church in the free state—present many interesting correspondences. The unit of one is the town, the unit of the other is the parish. A number of parishes make a diocese as a number of towns makes a state. A diocesan convention answers to a state convention; and the general convention, with the House of Deputies and its House of Bishops, answers to the Federal Congress, with its House of Representatives and its Senate. And through all runs the principle of representation. The individual parish elects a vestry of laymen; the vestry chooses the rector; the rector and certain lay delegates represent the parish in the diocesan convention; the diocesan convention elects the bishop, the clergy nominating, the laity accepting or rejecting; the bishop and eight delegates—four clergymen and four laymen—represent the diocese in the general convention; the general convention legislates for the whole church, but no act of prime importance becomes law without the concurrent approval of the bishops, the clerical delegates, and the lay delegates, each voting separately, and a negative majority in any one of them preventing the passage of the bill. Thus the lay representatives may veto a measure upon which both bishops and clergy are agreed. These provisions remain in force to this day.

The historic episcopate, under the limitations of this clerical and lay copartnership, gives to the bishop somewhat less authority than is the case under either the Roman or the Methodist systems, but his moral influence is very considerable. All the clergy when they are ordained promise to render willing and glad obedience to his "godly admonitions." He is the general missionary and the general manager of the diocese. He attends to the common interests, arbitrates all serious differences, is the official adviser of vestries and clergy, and is in responsible charge of the local missions. The office is conditioned by the large liberty of the clergy and by the independence of the local congregations. It signifies unity and order rather than authority.

The Praying Church.—The liturgical worship, which is another feature of the Episcopal church, is inherited through the Church of England from the devotions of the long past. The prayer-book is substantially identical with that which is in use in England. The book, which came into the present form in the middle of the sixteenth century, is a translation and amendment of the prayers of Greek and Latin liturgies. Those ancient services had generally been taken from the people and had become clerical rather than congregational. The unique achievement of the English revisers was to restore to the people their primitive share in the worship. They provided forms of "common prayer," which, while retaining the ancient order, divided the service between the minister and the people. The Book, like the Bishop, kept the church in vital relation with the past; while official revision and individual discretion keep it in effective touch with the present. One of its uses is to protect the congregation from the eccentricities of the minister.

The Working Church.—The Episcopal church now comprises eighty-two dioceses and missionary jurisdictions in the United States, including therein every part of the country. The difference between a diocese and a missionary jurisdiction is somewhat akin to the difference between a territory and a state. The jurisdiction is not yet strong enough to be a diocese. Meanwhile its bishop, instead of being chosen by the people, is appointed by the General Con-

vention; and in that body it has seats but not votes. There are also missionary jurisdictions in Honolulu, the Philippine islands and Porto Rico, and in Brazil, Cuba, Mexico, Cape Palmas, Hankow and Shanghai, Kyoto and Tokyo. These districts, each with its bishop, are the church's foreign field. The money for the work of the extension of religion at home and abroad is raised by a system of apportionment, whereby every parish in the church is notified as to the definite amount which it is desired to contribute.

Both at home and abroad, the church maintains schools, colleges, theological seminaries and hospitals. Its secondary schools, especially those for boys, are notably successful. Much attention has been paid, during the past twenty-five years, to institutional work. The parish house, which is now a part of the usual equipment of an active parish, is a place of social industry and recreation, intended to improve the conditions of living, especially in crowded communities.

The Believing Church.—The working faith which is at the heart of these activities is briefly expressed in the Apostles' and Nicene creeds. The Articles, printed at the end of the prayer book, record the positions taken by the English church in the controversies of the Reformation touching the freedom of the will and the nature of the sacraments. The church catechism, which is used in the instruction of children and in preparation for confirmation, expounds the Creed, the Lord's Prayer and the Ten Commandments, and Baptism and the Lord's Supper. But the church emphasizes for the understanding of these formulas the reading and study of the Bible. Several chapters are read aloud at the usual services, together with the responsive saying of Psalms. The clergy, at the time of their ordination, make a declaration of allegiance to the scriptures, and promise both to study the same with unfailing diligence and faithfully to teach the people what they find therein.

FRIENDS, OR QUAKERS.—This christian sect was founded by George Fox in England about the middle of the seventeenth century under the Protectorate of Cromwell. They adopted the name of the "Religious Society of Friends" by which they are always known among themselves. The origin of the name Quaker is uncertain.

Fox denounced the coldness and insufficiency of all existing forms of religion, asserted that the office of a christian teacher had become a mere trade, denied the necessity of any special education for it, and opposed a paid ministry. He denounced war even when waged in self-defence. He asserted the equality and brotherhood of all men, and used the second person singular in addressing all persons of whatever rank. He would not uncover his head in any presence, and declared every form of oath to be a profane violation of the express command of the Lord.

From 1652 until the death of Fox in 1691 the sect rapidly increased. Among them were many persons of high social standing, the most prominent being William Penn and Robert Barclay, in whose writings the distinctive views of the Friends found scholarly expression.

The age in which the sect originated was a very fanatical one, and the persecutions to which its members were subjected have hardly a parallel in the last three centuries. The missionary zeal of the early Friends took them to many countries; and Fox himself traveled in the American colonies, the West Indies, Germany and Holland.

In America.—In 1681 William Penn obtained from Charles II. a grant of the colony of Pennsylvania, in which he proposed to show that Quaker principles could be applied to political affairs. In the following year he sailed with his unarmed colonists, and signed his famous treaty with the Indians. This treaty was faithfully kept, and it is stated that no Quaker was ever killed by an Indian in Pennsylvania.

Organization was early effected, the first Yearly Meeting being held in 1661, in Rhode Island, and till 1878 it was regularly held at Newport. John Woolman, an American Friend of singularly beautiful character, labored for the liberation of the slaves, and the Friends, roused by his efforts, warmly supported the movement. By 1780 the society had freed itself from the reproach of slave-owning, and in 1783 it sent up the first petition for the abolition of slavery. In the long struggle for emancipation that followed the Friends took a prominent part. They also supported many other philanthropic movements.

The Friends in the United States are divided into two principal bodies:

The Orthodox, the largest body of Friends in the United States are essentially "evangelical" in their belief concerning the Trinity, the Scriptures, the fallen state of man, the atonement, and eschatology. They reject the principle of an inherent spiritual life, substituting for it the Holy Spirit as a gift from God through Jesus Christ. There are twelve Yearly Meetings, each with its own jurisdiction, but fellowship is maintained between them by correspondence. In several sections of the United States and Canada there is a professional ministry, and regular services with music, prayer and sermon have been adopted for the silence and free speech of the old-fashioned meeting.

The Hicksites. In 1827 a rupture occurred in the Society of Friends in the United States, caused principally by the preaching and influence of Elias Hicks, who had been a noted preacher in the society since the commencement of the Revolutionary war. He was a man of great energy, purity of character, and natural eloquence. The opponents of Hicks charged him with denying, or at least holding lightly, a belief in the true divinity of Christ and the atonement. The followers of Hicks were about one-third of the whole society. Both parties claimed to be the true representatives of the society and continued to call themselves Friends, but they are generally known by the names "Orthodox" and "Hicksites." The division never extended beyond the United States.

Doctrines.—Professing themselves to be guided by the "light, grace, and spirit of Christ, inwardly revealed," the Quakers advocate entire freedom of opinion and expression for Protestant and Catholic, for Christian and infidel. The theological views expressed in their official documents do not differ materially from those embodied in the Apostles' Creed. They contain, however, two distinct schools of thought, which may perhaps be described as "mystic" and "evangelical." The former aims at maintaining intact the principles of Quakerism with regard to the spiritual character of religion; the latter is especially concerned with mission work.

Form of Worship.—A devotional silence forms the basis of the Society's meetings for worship; but any member of the congregation may deliver an address or offer prayer, and in some meetings it has become usual to read a passage of Scripture. In the "mission" meetings held by the Society its ordinary procedure is considerably modified, and the singing of hymns is allowed.

There are no paid or specially trained ministers, but Friends whose addresses are felt to be edifying are "recorded" as ministers, as a recognition of their gifts. The duty of watching over the ministry is entrusted to "elders," who were first nominated in 1727; and the general oversight of the meeting is provided for by the appointment of "overseers," whose office dates from 1752. These three classes of officers hold special meetings for the consideration of their duties.

Government.—The Society is governed by its own code of discipline, which is enacted and supported by meetings of four degrees, for discipline; namely, *preparatory, monthly, quarterly,* and *yearly meetings.* The preparatory meetings serve to prepare the business for the monthly meetings, in which the executive power is principally lodged, subject however to the revision and control of the quarterly meetings, which again are subordinate and accountable to the yearly meeting, and subject to its supervision and direction. Its authority is paramount, and it possesses the sole power to make or amend the discipline.

LATTER DAY SAINTS, OR MORMONS.—The Mormon church was founded by Joseph Smith, a Vermont farmer's son, at Manchester, New York, in 1830. Smith's parents removed to Palmyra, New York in 1815, and in 1827, according to his account, an angel of the Lord placed in his hands certain golden plates and the Urim and Thummim, two transparent stones in silver bows. From these plates Smith read off, with the aid of these stones the Book of Mormon, or Golden Bible, as it has been erroneously called, to Oliver Cowdery, who wrote it down as it was read; and it was printed in 1830, in a volume of more than six hundred pages.

The names of Oliver Cowdery, Martin Harris, and David Whitmer were appended to a statement that an angel of God had come down from heaven and shown them the original plates. Eight other witnesses testified that they were shown the plates by Smith. The majority of these witnesses afterward left the church, but always maintained the truthfulness of their statements.

History—Although the first Mormon converts were made in the state of New York, Smith and his followers moved in 1831 to Kirtland, Ohio. Their missionaries were full of zeal, converts were made in great numbers, and churches were established in Ohio, Pennsylvania, Indiana, Illinois, and Missouri.

At Nauvoo—In the early part of 1839, the whole body of Saints, about 15,000 were expelled from Missouri and took refuge in Illinois, where they built the city of Nauvoo, or the "City of Beauty." Here for some years the Mormons lived in quietness, gathering to themselves many new converts, but ultimately their neighbors, jealous of their prosperity, and bitterly opposed to their faith, held meetings and determined to drive the people out of the State. When a paper, "The Nauvoo Expositor" was published, the City Council considered it libelous, declared it a nuisance and had the plant destroyed. Joseph Smith, who was then Mayor, and several members of the

City Council were indicted on the charge of causing a riot and taken to Carthage to be tried. Here Joseph Smith and his brother Hyrum were shot by a mob, June 27, 1844.

The Exodus—After this event the persecution of the Saints continued until at last it became unbearable to them, and to save their lives they agreed with the leaders of the mob to leave their beautiful city, homes and fields. This exodus began in February, 1846, under the leadership of President Brigham Young. They crossed the State of Iowa enduring untold sufferings through the severity of the weather. They made temporary settlements at Mount Pisgah, Council Bluffs and Winter Quarters (now Florence, Nebraska). Next year President Young led a band of one hundred and forty-three men, three women and two children to Salt Lake, where he arrived July 24, 1847. This company was followed the same year by a large number of the members of the church.

President of the Church—Brigham Young was chosen to succeed Joseph Smith and was the leader of the people until 1877. He was followed by John Taylor, who died in 1887. His successor, Wilford Woodruff, issued a manifesto to the church requesting the people to obey the law of the land in regard to polygamous marriages, and since then the church has not sanctioned plural marriages. President Woodruff died in 1898 and was succeeded by Lorenzo Snow, at whose death, in 1901, Joseph F. Smith, nephew of the Prophet, succeeded to the presidency of the church.

The headquarters of the parent church are at Salt Lake City. At Independence, Missouri, is a sect calling themselves the Reorganized Church of Jesus Christ of Latter-day Saints.

Doctrine—The present-day doctrines as outlined by the head of the Mormon church are as follows:

Articles of Faith.

1. We believe in God, the Eternal Father, and in His Son, Jesus Christ, and in the Holy Ghost.
2. We believe that men will be punished for their own sins, and not for Adam's transgression.
3. We believe that through the atonement of Christ, all mankind may be saved, by obedience to the laws and ordinances of the Gospel.
4. We believe that the first principles and ordinances of the Gospel are: First, faith in the Lord Jesus Christ; second, repentance; third, baptism by immersion for the remission of sin; fourth, laying on of hands for the gift of the Holy Ghost.
5. We believe that a man must be called of God, by "prophecy and the laying on of hands," by those who are in authority, to preach the Gospel and administer in the ordinances thereof.
6. We believe in the same organization that existed in the primitive church, namely, Apostles, Prophets, Pastors, Teachers, Evangelists, etc.
7. We believe in the gift of tongues, prophecy, revelation, visions, healing, interpretation of tongues, etc.
8. We believe the Bible to be the word of God, as far as it is translated correctly; we also believe the Book of Mormon to be the word of God.
9. We believe all that God has revealed, all that He does now reveal, and we believe that He will yet reveal many great and important things pertaining to the kingdom of God.
10. We believe in the literal gathering of Israel and in the restoration of the ten tribes. That Zion will be built upon this continent. That Christ will reign personally upon the earth, and that the earth will be renewed and receive its paradisical glory.
11. We claim the privilege of worshiping Almighty God according to the dictates of our conscience, and allow all men the same privilege, let them worship how, where, or what they may.
12. We believe in being subject to kings, presidents, rulers and magistrates, in obeying, honoring and sustaining the law.
13. We believe in being honest, true, chaste, benevolent, virtuous, and in doing good to all men; indeed we may say that we follow the admonition of Paul, "We believe all things, we hope all things," we have endured many things, and hope to be able to endure all things. If there is anything virtuous, lovely, or of good report or praiseworthy, we seek after these things.

LUTHERANS.—The Lutheran church is the oldest and largest denomination in the Protestant communion.

History.—Its first official expression of faith, still valid, was given at the Diet of Augsburg 1530 in the Augsburg Confession. The early history of the Lutherans is closely interwoven with that of Luther, who reformed the church, and, although to a less extent, with that of his co-laborer Melanchthon, who reformed its theology. In 1520 the Protestants gave an account of their faith by drafting and presenting the Augsburg Confession, the *magna charta* of Lutheranism.

They did not adopt the name of Lutherans or Lutheran church until long after Luther and Melanchthon had passed away. The first time the expression "Lutheran church" is met with in literature is in 1585. Up to that time the adherents of the Lutheran movement designated themselves as "Evangelical" or "Reformed."

The creative period of Lutheranism closing with the Formula of Concord, drawn up to settle doctrinal controversies, the most contested of the Lutheran Symbols, was followed by the era of polemic orthodoxy (1580-1689) in which the spiritual life of the congregations was at a low ebb. Much of the theology was in Latin, hence not intelligible to the people. The sermons were controversial. The church was a church of pastors and professors, servants of the state which practiced the impious principle of *cujus regio illius religio.* The people were passive. As a reaction against orthodoxy the era of pietism and rationalism followed, lasting from 1689 to 1814.

The nineteenth century produced a variety of schools of theological thought which, through the German universities, exerted much influence upon Reformed theology.

The development of church life and theology in the Scandinavian countries was much the same as in Germany. The Lutheran national church of Denmark and Norway dates from 1536. Holland became Lutheran in 1539. Sweden had become Lutheran in 1527 and was enabled to express its gratitude to the land of the Reformation by sacrificing in the Thirty Years' war its great king Gustavus Adolphus, the savior of Protestantism.

There were also Lutherans in Bohemia, Poland, Finland, Austria, Hungary, Russia, France and other countries of Europe not hitherto mentioned.

Less complicated than the history of German Lutheranism, though more involved than that of Scandinavia, is the history of Lutheranism in America.

In America.—The Swedish Lutherans who founded the colony of New Sweden, now Delaware, began to have their first worship in America between 1640 and 1643. But long before the arrival of the Swedish colonists in Delaware, the nucleus of what came to be the first Lutheran congregation in New York had arrived. This nucleus did not consist of—as has been hitherto maintained—Dutch, but of Germans, Norwegians, Danes, Swedes and Dutch, the latter being, as it seems, in minority, though the language of worship was the common language of New Netherland, the Dutch. The eighteenth century brought a very large number of German Lutherans to the New World, though few Scandinavians. The nineteenth century witnessed the largest immigration of Germans as well as the arrival of Norwegians, Danes and Swedes in large number. Their zeal is attested in the large and numerous churches, schools and institutions, especially in the West.

Central Doctrines.—The confessions or creeds of the Lutheran church are collected in the *Book of Concord* of 1580. They are the three so-called ecumenical creeds (Apostles', Niceno-Constantinopolitan, Athanasian) and the six particular creeds: Augsburg Confession, the Apology of the Augsburg Confession (both by Melanchthon, 1530), the larger Catechism, the smaller Catechism (both by Luther, 1529), The Schmalkald Articles (by Luther, 1537), finally the Formula of Concord.

Not all Lutherans accept these nine creeds. In fact only one-third of the Lutherans accept the entire Book of Concord as symbolically binding. The genuine Lutheran creeds, *i. e.*, those especially influenced by Luther were written 1529-1537. The Formula of Concord is the most contested creed. The most favored creeds are the Augsburg Confession and the smaller Catechism. The Augsburg Confession is the only universal symbol of the Lutheran church, making and identifying it always and everywhere, setting forth with classic precision the claims of Lutheranism. The creeds are interpreted historically, not juridically. They are "not judges, as is Holy Scripture, but only witnesses and explanations of the faith, according to the way at any time Holy Scripture has been understood and expounded by those then living, and as opposing doctrines have been cast aside and condemned."

The great central doctrine in the Lutheran church is Justification for Christ's sake alone, by faith alone. This is the material principle. Next to this in importance is the formal principle: The sole authority of Scripture as the only form of all revealed doctrine.

By means of the Word the Holy Spirit alone creates saving faith, without a mediating hierarchy and tradition between the individual and Scripture. The Lutheran system is conservative in spirit, preserves a rational, historical continuity with the past, where no confliction with the Word of God is involved. It lays stress on unity in doctrine, not on unity in government. Membership in the visible church is no warrant for salvation. It is the member of the invisible church who is saved. The invisible church knows no denominational preference. All in every land and church who are true believers belong to the invisible church. Infant baptism is practiced, and baptized persons are regarded as members of the church, though full membership usually follows confirmation or public confession. The Lutherans believe in the real presence of the Lord's body in the sacrament. They believe the real body and blood of the Lord are present "in, with and under" the earthly elements in the Lord's Supper, and that these are received sacramentally and supernaturally.

Liturgy.—In ritual and worship there is much latitude. In a church like that of Württemberg the ritual is very simple, as is also the case in the English General Synod and in the Norwegian Lutheran Free church, both of America. The liturgy of the Church of Sweden and of the General Council in America is very elaborate. The various general festivals of the Christian church year are observed.

Polity.—As the Lutheran church prescribes no universally binding form of liturgy, it likewise permits any form of church polity

by whose operation provision is made for the rightful administration of Word and Sacrament. This polity is to be determined according to circumstances. In Europe the Lutheran churches are national or state churches, as in Norway, Sweden, Denmark, or in the various states of Germany. The form of government is accordingly consistorial or presbyterial-synodal.

In the United States, where the congregations are grouped into synods and associations, modified presbyterian and congregational forms of polity are followed. The Norwegian Lutheran Free church is strictly congregational, the local congregations being autonomous, the annual council having only advisory power. The local church has, as a rule, a church council consisting of the pastor and church officers, who are laymen. These are elders and deacons, though in some cases they are deacons and trustees.

Where there are elders and deacons, the elders care for the spiritual concerns of the congregation and the deacons have charge of the temporal affairs. Where there are deacons and trustees, the former have care of spiritual matters, the latter of temporal affairs. This institution of elders is one of expediency and is not regarded as a requirement in the Word of God. The Lutheran church believes that only one office is instituted, that of preaching the word, the subdivisions of the work pertaining to this office being a matter of expediency. Most of the local churches, though congregational in theory, have delegated many of their rights to synods, which often exercise their legislative and judicial power to the detriment of congregational liberty. In many of the national churches in Europe there is really more liberty—at least personal—than in some of the synods on American soil.

METHODISM.—The world movement called Methodism began in 1729 by some dozen students in the University of Oxford, England, seeking to know God and the phenomena of the spiritual nature of man. They sought to know this not so much by metaphysical reasoning as by the modern methods of experiment. They put to the test the statement of the spiritual leader of the world "If any man willeth to do God's will he shall know of the teaching, whether it is of God." They felt that the yearning of the universal heart of man to know God might be satisfied. Hence they took the practical methods of prayer, instructing the children of the poor, visiting the sick and those in prison, helping every kind of human need after the manner of him who said "The spirit of the Lord is upon me because he anointed me to preach good tidings to the poor, he hath sent me to proclaim release to the captives, the recovering of sight to the blind, to set at liberty them that are bruised, to proclaim the acceptable year of the Lord." They hoped that it would have the same effect on them that it did on him.

They taught the rules of health and right living, furnished vast quantities of literature, made it accessible to the poorest people, inaugurated the system of selling second-hand books, introduced means of religious and social intercourse, developed thousands of men, made them "apt to teach" and filled all the British Isles with this new physical, intellectual, moral and spiritual life. It was the life of God imparted to the children of men.

This new moral uplift revolutionized the British Isles and led such an acute essayist as Macaulay, and such a philosophical historian as Leckey to endorse it in the highest terms and declare that it saved England from a French revolution. At the time of Wesley's death there were in England three hundred preachers, one thousand local preachers, and eighty thousand members in societies. But he said "I regard the world as my parish."

This new life was so virile and intense that it spread not only in the British Isles but to America, English dependencies, heathen lands and to all parts of the habitable world, so that to-day there is hardly any part of the world, civilized or barbarian, Christian or pagan, where the doctrines, usages, intellectual uplift and spiritual life of what is called the Wesleyan or Methodistic movement are not preached and known. They accepted the command of Christ "Go ye into all the world and preach the gospel to every creature."

Doctrines.—What are the prominent doctrines? They are what are commonly known as Arminian, as distinguished from Calvinistic and what are at present deemed evangelical.

(a) That man is a child of God, made in the likeness and image of the great First Cause; that he was made to have dominion over all the forces of nature; that he was made to know his Father, read his multifarious manifestations in earth, air and sky; and besides to have spirit communion with him by prayer, by meditation on his works and his word, given to holy men of old and by his incarnated Son.

(b) But by sin man lost this aptitude to see God in his works, and to commune with him as sympathetic natures should.

(c) Because of atonement made by the Son of God the original creator offered to forgive the sin, and to restore the lost faculty by a new birth, so that "if any man is in Christ Jesus he is a new creation." Old things pass away, all things become new.

(d) This forgiveness and new creation is attained by repentance, consecration to a holy life, prayer and faith in Jesus Christ.

(e) This forgiveness and new life may be consciously and vividly known because "the love of God is shed abroad in our hearts by the Holy Ghost given unto us."

(f) This new nature, born of God, will have ability to so love God that one may be made perfect in love, and so fulfill the divine command to "be perfect" in this respect, and act as an aid to seeking perfection in other respects.

(g) This high and joyous life may be kept forever, and is worth keeping. It goes through death as unscathed as Christ did. The doctrine of the conservation of forces teaches that every force survives. Even the flitting sunshine of ages gone is preserved in the coal; much more should man, largest outcome of all the forces and ages, survive.

(h) All this fit and joyous outcome is brought to completion by man's best endeavor coöperating with the gospel, which is *the* power of God energizing all the powers of the life of man.

Organization.—Classes and societies to meet weekly were everywhere organized to originate and develop this kind of life. All who desired to continue in them must evidence their desire, "First, by doing no harm, by avoiding evil of every kind, 'especially' in eighteen specified particulars of those generally practiced"; and "secondly by doing good of every possible sort"; and "Thirdly, by attending upon all the ordinances of God" of which half a dozen particulars are specified.

For inculcating these doctrines and developing these lives, a double system of teaching was inaugurated. First, a class of men to give their whole time and strength was educated in schools specially adapted to that end. These men must specially feel called of God to this work, have a clear religious experience, "Speak justly, readily and clearly and have fruit among those to whom they preached." They were to preach daily as they itinerated from place to place, where there were church buildings, and where there were none, establish classes and societies on regular circuits. But besides these a vast number of so called local preachers was employed. These men were in regular secular business and remained in one place. But having experience and teaching ability they were employed in a regular system to propagate and keep alive the growing interest. *Annual conferences* were held to fix the definite appointments of the itinerant, and to some extent the local preachers.

Of a kindred nature has been the development of the order of *deaconesses*—a class of women doing work without pay for the poorest and most needy. A single branch of the Methodist church has 1354 deaconesses who helped in hospitals and homes 21,553 sick people in a single year, and taught nearly 100,000 children in industrial schools.

Methodism has always utilized to a high degree the fine perceptions and spiritual devotion of woman. There are various organizations of educational and charitable help in all the denominations. The Woman's Foreign Missionary Society of a single branch raises and administers nearly $700,000 a year.

Methodism has been everywhere pervaded with a desire and effort to suitably provide for its worn out preachers, their widows and orphans. The profits on publications is one of six sources of income for this purpose in the Methodist Episcopal church.

Government.—The government of this growing body had to be definite and masterful. Israel, led out of Egypt to be developed into a nation, must be put at once under law and definite administration or it would become a mere mob. So this new movement. It was the intense desire of Mr. Wesley, the leader, to keep the movement under the ecclesiastical authority of the established church. But it was soon seen that this was not desired by that church, and a *Conference* was formed with Mr. Wesley as president. In England he has been succeeded by an elected president ever since. But when America was separated from the mother country it became necessary to establish an independent form of government. The episcopal form was chosen and Mr. Coke and Mr. Asbury were ordained bishops. These general superintendents were to travel at large through the connection and in foreign countries, hold conferences, appoint the preachers, and especially to appoint district superintendents over what might be termed dioceses of from twenty to seventy churches, which they were to visit every quarter.

Methodism has developed into many different organizations in different countries (eighteen in the United States) according to the tastes of the leaders, but with no essential variations in doctrine,

and but few in policy, some preferring a more congregational form of government.

In 1844 because of the decided opposition of the Methodist Episcopal church to slavery, a large number withdrew and constituted themselves the Methodist Episcopal Church South, retaining the doctrines, polity and usages of the church unchanged.

All these branches have been pervaded by the same missionary zeal for spreading the kingdom of God in all the earth and preaching the gospel to every creature. For example, the Methodist Episcopal church has flourishing missions in South America, Mexico, Porto Rico, China, Korea, the Philippines, Africa and India. In the last named country there are over 58,453 members with 43,000 youth in their schools. This single branch of the church has school and university property to the amount of $40,000,000. Dispensaries, hospitals and schools are regarded by all the churches as a necessary part of the gospel propaganda in heathen lands.

The parent body of Wesleyans in England possesses its pristine vigor and zeal for right living, intellectual development and religion. It has spread to Ireland, France, Germany, China, India, to the islands of Tasmania, Australia, etc., and turned the savagery and degradation of Fiji into civilization and christianity. What hath God wrought!

PRESBYTERIAN.—American Presbyterianism as a whole is as diverse in its origin as are the peoples who have blended to form the American nation.

History.—The earliest American Presbyterian churches were established in New England, Maryland, Delaware and Virginia, from about 1630 to 1680, and were in large part of English origin, their pastors as a rule being Church of England ministers holding Presbyterian views.

The Rev. Francis Makemie, of Ireland, was the apostle of American Presbyterianism, settling in Maryland in 1683. He succeeded in bringing into organic unity the scattered Presbyterian churches in the middle colonies, the first Presbytery being organized in March, 1706, at Philadelphia, Pa. Forty years later the institution now known as Princeton University was established for the purpose of securing an educated ministry. In 1768 John Witherspoon was called from Scotland, and was installed as president of Princeton. He was a member of the Continental Congress, and the only clerical signer of the Declaration of Independence. The opening of the Revolutionary struggle found the Presbyterian churches to a man on the colonial side.

With the restoration of peace in 1783, the need of further organization was deeply felt. The Synod, in 1788, adopted the Westminster Confession of Faith, with the Larger and Shorter Catechisms, and also a Form of Government, a Book of Discipline, and a Directory for Worship, as the Constitution of the church. Certain changes were made in the Confession, the Catechisms, and the Directory for Worship, in the line of liberty in worship, of freedom in prayer, and above all of liberty from control by the state. The first General Assembly met in 1789, at Philadelphia, Pa.

The most important movement in the church after the adoption of the constitution was the formation, in 1801, of the "Plan of Union," with the Congregational Associations of New England. It remained in force until 1837.

What is known as the Cumberland separation also took place during this period as the result of local issues, which ended in 1810, in the establishment of the Cumberland Presbyterian church. The reunion of these bodies was accomplished in 1906.

Presbyterian Church South.—For political and ecclesiastical reasons, the Presbyterians in the Southern states withdrew from the Old School body in 1861 and constituted a new church organization. In 1863 this church was enlarged by the accession of the United Synod South, a body which had withdrawn in 1857. The name of these united churches was changed in 1865 to that of the Presbyterian Church in the United States, which was further strengthened by additions from the Synods of Kentucky and Missouri. Both the Church North and the Church South now enjoy cordial fraternal relations, and, 1889, adopted a plan for coöperation in Mission and Freedmen's work.

Recent Events.—Since the year 1870, the church has made steady progress along all lines, and its harmony was seriously threatened only by controversy (1891-94) as to the sources of authority in religion and the authority and credibility of Holy Scripture, a controversy which terminated in the adoption by the General Assembly at Minneapolis, Minn., 1899, of a unanimous deliverance affirming the loyalty of the church to its historic views on these subjects. The church entered heartily into the organization in December, 1908, at Philadelphia, Pa., of the Federal Council of the Churches of Christ in America, composed of thirty-four denominations, having about 18,000,000 communicants, and representing a majority of the people of the United States.

Doctrine.—The controlling idea of the Presbyterian or Calvinistic system of thought, both theoretically and practically, is the doctrine of the unconditioned sovereignty of God. By this sovereignty is meant the absolute control of the universe in all that it contains, whether visible or invisible things, by the one supreme, eternal, omniscient, omnipresent, and omnipotent Spirit, for wise, just, holy and loving ends, known fully alone to Himself. This divine sovereignty finds practical expression in the Presbyterian system through its organizing principle, the sovereignty of the word of God as the supreme and infallible rule of faith and practice.

Since 1729 the Westminster Confession of Faith and Catechisms have been the doctrinal standards of the church, with the exception that the chapters dealing with the civil magistrates were modified in 1729 and in 1788 so as to conform to the American doctrine of the absolute separation of the church from control by the state. In 1903 the Confession was revised in several particulars, and chapters 34 and 35 were added, respectively on "The Holy Spirit" and "The Love of God and Missions." The revision accomplished in 1903 was for the expressed purpose of the disavowal of certain inferences drawn by persons outside the church as to the doctrines of the church on God's eternal decree, the love of God for all mankind, and his readiness to bestow his saving grace on all who seek it. The church also officially declared that all persons dying in infancy are included in the election of grace, and are regenerated and saved by Christ through the Spirit, who works when and where and how he pleases.

Government.—The essential factors in the government of the New Testament church, as applied in Presbyterian government, result in views of the church, her officers and judicatories as follows:

The universal church consists of all persons who profess the true religion, together with their children. The power of the church is simply declarative and spiritual. There is but one order in the ministry. Ruling elders, elected by the congregations are united in the government of the churches with ministers. The temporal affairs are managed by deacons or trustees. The judicatories in successive order are (1) the Session, governing the particular church, and consisting of the pastor and the ruling elders; (2) the Presbytery, governing all the congregations within a limited territory and consisting of all the members and one elder from each congregation; (3) the Synod, consisting of at least three Presbyteries, exercising supervisory authority over both Presbyteries and the congregations, and consisting of both ministers and elders, and (4) the General Assembly, having supervisory power over the general interests of the whole denomination.

The power of these church courts is both legislative, executive and judicial and the higher courts have authority over the lower courts, in accordance with the terms of the Constitution of the Church. The details of this system of church polity are found in the Church's Form of Government and Book of Discipline adopted in 1788 and amended from time to time.

The Presbyterian church holds that the terms of admission to the visible church for members are the same as the conditions of salvation revealed in the Holy Scriptures *viz:* belief in one God, the Father Son and Holy Spirit and faith in the Lord Jesus Christ as the divine and all-sufficient Savior, joined with the declaration of a sincere purpose to lead a life acceptable to God in Jesus Christ. No church has a right either to add to or take from these terms or conditions. Church members as to their conduct are under the control of the Session of the particular church, providing, however, that every member deeming himself aggrieved may appeal or complain to a higher court.

Worship.—Presbyterian worship is based as to its character on the facts that a human priesthood is unknown to the New Testament, and that the only priest of the new dispensation is the Lord Jesus Christ. Ministers are not priests, but preachers. Sacerdotalism, therefore, whether in connection with the sacraments, or enforced liturgies, or priestly vestments, has no place in the worship of the Presbyterian churches. The sacraments are simply ordinances, wherein by sensible signs Christ and his benefits "are represented, sealed, and applied to believers." Prayer is the free intercourse of the soul with God and is therefore to be voluntary. Ministers are not mediators between God and man, possessed of a delegated divine authority to forgive sins, but simply leaders of the people in all that constitutes the worship of and fellowship with the triune God. True worshipers worship the Father neither in Samaria nor in Jerusalem, but in spirit, and in truth. God is nigh to every penitent and believing soul.

By its doctrine the Presbyterian system honors the divine sovereignty without denying human responsibility; by its polity it exalts the headship of Christ while giving full development to the activities of the Christian people; and in its worship it magnifies God while it brings blessing to man, by insisting upon the right of free

access on the part of every soul to Him whose grace cannot be fettered in its ministrations by any human ordinances whatsoever.

The missionary, evangelist, and benevolent work of the church is conducted by eight boards, the names of which, with the dates of organization, are as follows: Home Missions, 1816; Education, 1819; Foreign Missions, 1837; Publication, 1838; Church Erection, 1844; Ministerial Relief, 1855; Freemen, 1865; Colleges, 1883.

The theological seminaries for training ministers were established as follows: Princeton, N. J., 1812; Auburn, N. Y., 1819; Western, Alleghany. Pa., 1827; Lane, Cincinnati, Ohio, 1829; McCormick, Chicago, Ill., 1830; Lebanon, Tenn., 1852; Danville, Ky., 1853; German, Dubuque, Ia., 1856; Biddle (for colored students), Charlotte, N. C., 1868; German, Bloomfield, N. J., 1869; San Francisco, Cal., 1871; Lincoln (for colored students), Pa., 1871. The Union Theological Seminary at Richmond, Va., established in 1824, and the Columbia Seminary, Columbia, S. C., established in 1831, have been in connection since 1861 with the Presbyterian Church South.

UNITARIANISM.—Unitarianism is the religious belief which is condensed in the affirmation of "The Fatherhood of God; The Brotherhood of Man; The Leadership of Jesus; Salvation by Service and Character; The Progress of Mankind onward and upward forever." In a more limited sense it is the religious faith of all people who affirm the unity, as against the trinity, of the Godhead.

Principles. Unitarians maintain the New Testament doctrine of one God, the Father. They lay emphasis on the teaching of Jesus embodied in the Beatitudes, the Golden Rule, and the two great Commandments. They hold that Christianity is not an assent to any creed, or an allegiance to any institution, but a habit of mind and a principle of conduct.

The Unitarians of America in the Constitution of their National Conference declare that "These churches accept the religion of Jesus, holding, in accordance with his teaching, that practical religion is summed up in love to God and love to man." The American Unitarian Association, which is the executive body of the Unitarian churches in America, has for its constitutional purpose "To diffuse the knowledge and promote the interests of pure Christianity."

History. The seeds of modern Unitarianism were sown in the Reformation period. The study of the Bible at that time brought to men a new understanding of the original teachings of Jesus. A declaration of the doctrines now called Unitarianism was made in Vicenza, in Italy, in 1546, when a company of Italian scholars came together and made affirmation of their belief in the Unity of God as against the orthodox dogma of the Trinity. These Unitarians were quickly overthrown and dispersed. Some of them found refuge in Switzerland, Poland, and Transylvania. In Poland two of these Italian scholars, Laelius and Faustus Socinus, established a number of societies for the promotion of a rational interpretation of Christianity. The activity of the Socini gave to the movement the name Socinian. At the close of the sixteenth century there were more than four hundred Socinian churches in Poland and they maintained a college at Rakow with more than one thousand students. In 1605 there was published at Rakow the so-called "Racovian Catechism", which is the earliest definite statement of the Unitarian theology of the Reformation period.

In 1553 a Spanish scholar, Michael Servetus, published an epoch making book, *The Restoration of Christianity* and this book is notable among the earlier affirmations of Unitarianism. Servetus pleaded not only for the reformation of the church, but the reformation of Christian principles and a return to the original teachings of the New Testament. Servetus was burned at the stake in Geneva, October 27, 1553, but his books were widely circulated.

England. Unitarianism is first heard of in England early in the 17th century. In 1614 Parliament ordered all the existing copies of the Racovian Catechism to be seized and burned. A later decree made denial of the Trinity punishable by death. Unitarians continued to be imprisoned or burned for heresy in England as late as 1662. In spite of these persecutions the Unitarian doctrines took root in England and while no public organization was possible, a number of the great men of the seventeenth century, such as John Milton, John Locke, and Sir Isaac Newton, recorded themselves in favor of the Unitarian interpretations of Christianity.

In 1794, Theophilus Lindsey organized in London a Unitarian Society which was called the Essex Street Chapel. It stood upon the site now occupied by Essex Hall, the Headquarters of the British and Foreign Unitarian Association. This was the first religious society in England to formally adopt the Unitarian name, but a number of progressive English Presbyterian churches, as well as a number of liberal churches in the General Baptist connection, gradually allied themselves with the Unitarians and made common cause with them.

America. The Unitarian movement here may be said to have begun when King's Chapel in Boston—the first Episcopal church established in New England—modified the Episcopal Prayer Book by the removal of all reference to the Trinity. This action was indicative of a change that had been going on for nearly fifty years in the religious thought of New England. The Puritan churches were, as a rule, founded without a creed. They were organized upon the basis of a Covenant, and these Covenants were written in such a broad and liberal spirit that they are still retained, though the Societies which originally adopted them have become Unitarian in their thought and fellowship. It was among these old Congregational churches in New England that American Unitarianism had its origin and the strength of the organized life of Unitarianism of America is still in New England.

It was the election of Henry Ware, in 1805, as Professor of Divinity in Harvard College, that drew attention to the fact that the college had come under the control of the liberal party in the Congregational churches. In 1819 William Ellery Channing, minister of the Federal Street church, in Boston, preached a sermon at Baltimore, which drew the lines of demarcation and in a few years nearly two hundred Congregational churches in New England had openly declared their adhesion to Channing's interpretation of Christian doctrines. In 1825 the representatives of these churches united and established the American Unitarian Association.

Thus early even Unitarianism is to be studied not as an organized form of faith but as an intellectual and spiritual movement. It is the effort to rationalize and simplify theology, to reaffirm the teaching of Jesus, and to emphasize the saying that "by their fruits ye shall know them." It seeks to interpret religious facts and experiences according to the best scientific knowledge and to square them with the rule of Right and the dictates of reason. It makes religion an everyday affair. It practices a rational theism, a spiritual idealism, a reasonable service, an enthusiasm for humanity. Unitarianism is an appeal from outward authority in matters of faith to inward witnesses. It seeks to put men in right relations with each other and to the power that is implanted in human nature but which transcends human knowledge. It finds in humanity, in the imperatives of conscience, in the correspondences of reason, in the sentiments of awe, reverence and love, the witness of a divine origin and an open way to an immortal fellowship.

Unitarianism has been a potent influence in modern life. It has permeated all the churches with broadening and unifying thoughts and led them from the control of traditional formulas into larger interpretations of spiritual truth and more generous activity. It has rationalized theology and made the great christian denominations more genuine in thought and beneficent in deed. It has contributed high ideals of public service. It has vitalized literature. The great majority of the American poets, historians, scholars, and men of letters of the first rank, have been Unitarians. Almost all of the great humanitarian and philanthropic movements for which the nineteenth century was famous found their origin in the vision and labor of men and women of the Unitarian habit of mind.

Organizations. The growth of Unitarianism cannot, be judged by statistics. Unitarians have not been ambitious to build up a denomination. Nevertheless, and often in spite of itself, Unitarianism in America has been embodied in certain organizations. The National Conference of Unitarian and other christian churches was organized in 1865, the National Alliance of Unitarian Women in 1890, the Young Peoples Religious Union in 1896, and the International Council of Unitarian and other liberal Religious Thinkers and Workers in 1900.

The chief training schools for the Unitarian ministry in Europe are the Unitarian College, Klausenburg, Hungary; the Manchester College, at Oxford, England; the Unitarian Home Missionary College, Manchester, England, and the Presbyterian College, Carmarthen, Wales. In America the Unitarian ministry is chiefly supplied from three divinity schools, which were founded by Unitarians and are maintained largely by Unitarians, but which require no dogmatic tests and welcome, alike in the faculty and in the student body, members of all denominations. These schools are: (1) the Harvard Divinity school, situated at Cambridge, Mass., in connection with Harvard University, (2) The Meadville Theological school, founded in Meadville, Pa., in 1844, (3) The Pacific Unitarian school for the Ministry established at Berkeley, Cal. in 1905.

CHIEF RELIGIOUS BODIES OF THE

Name of Denomination	When and Where Founded as an Organized Body	By Whom or How	Number of Churches
Adventists			
Evangelical	Albany, N. Y., 1845	Rev. William Miller	18
Advent Christians	Boston, Mass., 1861		550
Seventh-Day	Washington, N. H.	Elder Bates and Mr. and Mrs. White.	
Church of God	Stanberry, Mo., 1866		20
Life and Advent Union	New York City, 1848		12
Churches of God	Philadelphia, 1888		62
Baptist	Outgrowth of long period and of widespread anti-pardobaptist, anti-Romanist movements. Name first used (apparently) in 1644. English Baptist history distinct after 1641.	No single founder	
Northern			9,715
Southern	In 1844	Due to anti-slavery agitation	22,795
Freewill	New Hampshire, 1780	Separated from regular Baptists because of close communion.	1,926
Seventh-Day	Newport, R. I., 1671	Nicholas Brand—Separated from the Baptists in England, and observed the seventh day.	82
Dunkers, German Baptist	Pennsylvania, 1719	Alexander Mack—Originated in Germany, 1708, in Westphalia, at Schwarzenau.	1,188
Primitive		Called by themselves Old School Baptists, having no missions, Sunday-schools, or educative institutions.	2,922
Church of God	Pennsylvania, 1830	John Winebrenner—Winebrenner was previously a minister of the German Reformed church in Harrisburg.	48
Colored, regular			18,000
Church of Christ, Scientist	Founded in Boston in 1879	Mrs. Mary Baker Eddy	1,306
Congregational	The Congregational church was founded in Scrovby, England: emigrated to Leyden, Holland; came across the Atlantic in the Mayflower and began its life in America December 22, 1620. This was the beginning of Congregationalism in America.	"By the apostles in Jerusalem." Congregational (independent) church originated in England in 1555.	6,050
Disciples of Christ or Christians (Church of Christ or Christian Church)	First congregation at Brush Run, Pa., May 4, 1811. The movement was merged with the Baptists in 1813, but a separation occurred in 1830, and it has been an independent body since that time.	The movement was led by several men, the chief among whom were Thomas Campbell, Alexander Campbell, Barton W. Stone and Walter Scott.	13,929
Friends	North Carolina, 1672	George Fox—Fox began his work in England in 1647, and spent two years in America.	1,167
Jewish Church	At Ur, in Chaldea, about twenty-first century B. C. In America, by Synogog Teshnat Israel, Newport, R. I., 1658.	Abraham	1,770
Latter Day Saints or Mormons	Fayette, N. Y., 1830	Joseph Smith	1,350
Lutherans in the United States	Hagerstown, Md., 1820	From a number of scattered congregations traceable to the original society founded in New Amsterdam, by Jacob Fabricius, in 1669.	14,321
1. General Synod of the Evangelical Lutheran church in the United States of America.	Hagerstown, Md., 1820		1,785
2. United Synod of the Evangelical Lutheran church in North America.	Roanoke, Va., 1886		468
3. General Council of the Evangelical Lutheran church in North America.	Ft. Wayne, Ind., 1867		2,298
4. Evangelical Lutheran Synodical Conference of America.	Milwaukee, Wis., 1872		3,356
5. United Norwegian Lutheran church in America.	Minneapolis, Minn., 1890		1,464
6. Evangelical Lutheran Joint Synod of Ohio and other states.	Somerset, Ohio, 1818		784
7. Lutheran Synod of Buffalo.	Milwaukee, Wis., 1845		42
8. Hauge's Norwegian Evangelical Synod.	Jefferson Prairie, Wis., 1846		347
9. Evangelical Lutheran church in America, Eielsen's Synod.	Jefferson Prairie, Wis., 1846		26
10. German Evangelical Lutheran Synod of Texas.	———, Texas, 1851		32
11. Evangelical Lutheran Synod of Iowa and other states.	St. Sebald, Iowa, 1854		940
12. Synod for the Norwegian Evangelical Lutheran church in America.	East Koshkonong, Wis., 1853		1,000
13. Evangelical Lutheran Synod of Michigan and other states.	———, Mich., 1897		55
14. Danish Evangelical Lutheran church in America.	Neenah, Wis., 1872		119
15. Icelandic Evangelical Lutheran Synod in North America.	Mountain, N. D., 1885		39
16. Immanuel Synod of the Evangelical Lutheran church of North America.	Wall Rose, Pa., 1885		6

UNITED STATES, TABULATED

Number of Adherents	Number of Clergy	Value of Church Property	Form of Government	Central Doctrines Briefly Stated
481	8		Congregational, excepting the Seventh-Day Adventists, who are Presbyterian; they are organized in local and general conferences and hold annual meetings, often in connection with camp-meetings.	The bible is their creed, which they accept as inspired; the second coming of Christ; observance of the seventh day of the week as Sabbath; all fundamental doctrines of the Christian system, except a millennial era prior to Christ's advent.
26,799	528			
65,122	518			
611	32			
509	12			
2,124	56			
		$133,530,000	Democratic, local churches formed into associations, with general denominational conventions.	Supremacy of bible in faith and practice; churches independent; church membership dependent on regulation and immersion; anti-sacramentarian; generally Calvinistic; priesthood of individual believers; liberty of conscience and denial of all final religious authority except that of Jesus Christ.
1,211,500	8,223			
2,305,000	14,635			
114,114	1,898			
8,239	98			
122,847	3,429			
102,311	1,500			
1,323	75			
986,222	12,602			
Not tabulated, hence indefinitely known.	Each church has two readers in lieu of a pastor	Approximately 9,000,000	The existence of branch churches is provided by the rules and regulations of the mother church, and the mother church stipulates the form of service, but each branch church is independent of the mother church as regards its business affairs.	Christian Science plants itself unreservedly upon primitive Christianity as taught and exemplified by Christ Jesus. Its corner-stone is the scriptural teaching that God is Spirit and is the only power.
741,400	6,045		Democratic. The local church is autonomous; the fellowship of the churches brings them together for coöperation in Christian work.	Protestant evangelical.
1,533,962	8,545	30,364,000	Congregational. The minister, elders and deacons usually constitute the official board, through which body the business of the congregation is often transacted, though matters of importance are sometimes brought before the congregation.	Sovereignty of God; divinity of Christ; the indwelling power of the Holy Spirit and its agency in conversion; Old and New Testament scriptures as the inspired word of God; the future punishment of the wicked and the future reward of the righteous; the institution of the Lord's supper for all the Lord's children; finally, the personal Christ as its only creed, and the bible as its only rule of faith and practice.
123,71[illegible]	1,456		Independent Congregational	Evangelical; the "inner light" or "grace of God" is the cardinal point of belief.
145,000	1,100		Congregational	The unity of God. Rejects doctrine of original sin. Salvation for all through repentance and good works. Moral consecration and social righteousness. Rejects eternal punishment. Israel, God's chosen people.
400,65[illegible]	2,483	3,500,000	Apostolic. Two orders of priesthood exist—the higher that of Melchizedek, the lower that of Aaron. To the former belong apostles, seventies, high priests, elders, patriarchs; to the latter, bishops, priests, teachers, deacons. The first presidency (*e. g.*, the president of the church and two counselors) forms the highest authority, followed by the twelve apostles and seventies—a hundred councils of seventy each. These bodies supervise generally the church, which locally is organized into fifty stakes, further subdivided into wards. Each stake has a president and two counselors; each ward a bishop, teachers, and deacons.	The Book of Mormon and Doctrine and Covenant form the basis of a belief which looks for a continuance of revelation and miracles, an American Zion, a millennium, and the palingenesis of earth under Christ's rule. Other Mormon tenets are universal tolerance of other faiths, the literal resurrection of the body, baptism by immersion, and (by proxy) of the dead.
2,290,000	8,774	83,600,000	Modified Presbyterian	Justification by faith alone in the merit and righteousness of Christ; atonement; eternal rewards and punishments; Christ very God and very man. In the Eucharist the Lutherans believe in the real presence of the Lord's body in the sacrament. The doctrinal system of the Lutheran church is contained in the Augsburg Confession and other documents, including the two catechisms of Luther.
302,440	1,333	18,344,453	1. Modified Presbyterian	
48,921	248	1,714,140	2. Modified Presbyterian	
459,224	1,507	23,288,909	3. Modified Presbyterian	
766,281	2 713	22,000,000	4. Modified Congregational	
161,964	550	3,668,588	5. Modified Presbyterian	
127,430	5[illegible]6	4,797,560	6. Modified Congregational	
5,200	28	130,000	7. Modified Presbyterian	
36,357	150	682,135	8. Modified Presbyterian	Cardinal doctrines of minor Lutheran denominations are practically the same.
1,130	6	15,900	9. Modified Presbyterian	
2,800	21	30,050	10. Modified Presbyterian	
106,593	527	3,713,944	11. Modified Presbyterian	
100,000	382	2,469,713	12. Modified Presbyterian	
9,697	37	184,700	13. Modified Congregational	
13,052	58	248,700	14. Modified Congregational	
4,700	13	126,252	15. Modified Presbyterian	
2,500	32	89,300	16. Modified Congregational	

CHIEF RELIGIOUS BODIES OF THE

Name of Denomination	When and Where Founded as an Organized Body	By Whom or How	Number of Churches
Lutherans—Continued			
17. Finnish Evangelical Lutheran Church of America, or Suomi Synod.	Calumet, Mich., 1890		170
18. Norwegian Lutheran Free Church.	Minneapolis, Minn., 1893	The number of separate church organizations is due to difference of language rather than to difference of doctrine.	375
19. United Danish Evangelical Lutheran Church in America.	Minneapolis, Minn., 1896		176
20. Slovak Evangelical Lutheran Synod of America.	Braddock, Minn., 1902		30
21. Finnish Evangelical Lutheran National Church.	Ironwood, Mich., 1900		40
22. Apostolic Lutheran Church (Finnish).	———, 1872		73
23. Church of Lutheran Brethren of America (Norwegian).	Milwaukee, Wis., 1900		16
24. Evangelical Lutheran Jehovah Conference.	————		11
25. Independent Congregations.			205
Mennonites	Lancaster Co., Pa., 1683	By invitation of Wm. Penn. Name derived from Menno Simon, who preached in Friesland.	606
Methodist	At Oxford, England, 1729; in America by Thomas Coke, under deputation by Wesley, Baltimore, 1784.	John Wesley and a group of Oxford students.	
Methodist Episcopal	Baltimore, 1784	John Wesley—Mr. Wesley deputed Dr. Thomas Coke as superintendent or first bishop to organize a separate church.	28,458
Methodist Episcopal South	Louisville, Ky., 1845	By the separation of the church in the South under separate jurisdiction.	16,772
Methodist Protestant	Baltimore, 1830	By separation from M. E. church at a convention formally opened Nov. 2, 1830.	2,432
American Wesleyan	Utica, 1843	By separation from M. E. church, separate societies were organized in 1835.	571
African Methodist Episcopal	Philadelphia, 1816	Richard Allen—By withdrawal of colored members into separate organizations.	5,527
African Methodist Episcopal Zion	New York, 1816	Christopher Rush, first president—By withdrawal of Zion church congregation from M. E. church: first conference held 1821.	3,298
Colored Methodist Episcopal in America	————, 1874	By separation of most of the colored members from M. E. church South.	2,857
Evangelical Association	Pennsylvania, 1800	Jacob Albright—Composed of German Methodists and those who are followers of Albright.	2,678
Free Methodists	Western New York, 1860	Benjamin T. Roberts—By separation from Methodist Episcopal church.	1,163
Moravians	Near Savannah, Ga., 1736	Anthony Seifferth—Established by Count Nicholas de Zinzendorf, at Herrnhut, in Saxony, 1722.	142
Presbyterian Northern	Philadelphia, Pa., March, 1706	Seven ministers, the leader, Rev. Francis McKemie.	9,931
Southern	Augusta, Ga., 1861	Cumberland Presbytery—By separation of the southern churches from the northern at the opening of the Civil war.	3,384
Cumberland Presbyterian	Tennessee, 1810	Chiefly because the old church refused to allow nongraduates to be ordained to the ministry.	1,760
Colored Cumberland Presbyterian		By peaceful separation of the colored church from the old body.	196
United Presbyterian	South Carolina, 1858	By union of the Associate and Associate Reformed churches.	995
Associate Reform Synod of the South	————, 1802	By those in the south who declined to unite with the new organization.	158
Protestant Episcopal	Became independent of the church of England in 1789.	On account of the change of government the church which came with the colony of Jamestown, 1607, adopted a constitution of its own.	7,701
Reformed		Reorganization of Anglican church, which became fragmentary and scattered.	
Reformed Episcopal Church	New York, 1873	Bishop G. D. Cummins—By separation from Protestant Episcopal church.	80
Reformed (Dutch) Church	New York City, 1619	By ministers sent from Holland by request of Governor Minuit.	684
German Reformed Church	Pennsylvania, 1727	Geo. Michael Weiss—The first church was composed of about 400 Palatines from Europe.	1,730
Roman Catholic Church	Pentecost day at Jerusalem	Jesus Christ	14,312
Salvationists	London, England, 1865; United States, 1881	William Booth	916
Unitarians	Boston, 1783	James Freeman—By self transfer from the Anglican church.	402
United Brethren	Pennsylvania, 1800	Philip W. Otterbein—Composed chiefly of Germans at first. Similar to Methodists in doctrine and polity.	4,266
Universalists	Gloucester, Mass., 1779	John Murray—Under name of "The Independent Christian church." Murray had been a Methodist in Ireland.	886

UNITED STATES, TABULATED—Continued

Number of Adherents	Number of Clergy	Value of Church Property	Form of Government	Central Doctrines Briefly Stated
17,500	32	$264,090	17. Modified Presbyterian	
20,000	175	660,310	18. Strictly Congregational	
11,994	114	569,500	19. Modified Presbyterian	
9,500	17	219,300	20. Modified Congregational	
6,000	20	95,150	21. Modified Presbyterian	
11,000	62	62,856	22. Modified Congregational	
1,800	12	16,400	23. Modified Presbyterian	
1,100	9	21,550	24. Modified Congregational	
26,000	35			
55,007	1,008		Independent Congregational	Similar to Reformed church.
		230,000,000	Episcopal. The general law-making bodies are: The General Conference; the Judicial Conference; the Annual Conference; the District Conference; the Quarterly Conference; and the Ladies and Stewards' Meeting. Wesleyan Methodist ministers change their circuit every three years, save under exceptional circumstances. Several unsuccessful attempts have been made to alter this rule, and there is a growing conviction that the term should be extended. Lay or local preachers fill an important place in Methodism, the pulpits in many villages being almost wholly occupied by them.	Armenian or Evangelical as distinguished from Calvinistic. Wesley thus defines the doctrines of the denomination: "The points we chiefly insisted upon were four: "First, that orthodoxy, or right opinions, is at least but a very slender part of religion, if it can be allowed to be any part of it at all; that neither does religion consist in negatives, in bare harmlessness of any kind, nor merely in externals, in doing good, or using the means of grace, in works of piety or of charity; that it is nothing short of or different from 'the mind that was in Christ,' the image of God stamped upon the heart, inward righteousness attended with the peace of God, and 'joy in the Holy Ghost.' "Secondly, that the only way under heaven to this religion is to 'repent and believe the gospel'—or (as the apostle words it), 'repentence toward God, and faith in our Lord Jesus Christ.' "Thirdly, that by this faith 'he that worketh not, but believeth on Him that justifieth the ungodly, is justified freely by His grace, through the redemption which is in Jesus Christ.' "And, lastly, that, 'being justified by faith,' we taste of the heaven to which we are going; we are holy and happy; we tread down sin and fear, and 'sit in heavenly places with Christ Jesus.'"
3,186,862	18,280			
1,831,946	7,179			
188,437	1,393			
19,178	598			
500,000	6,353			
57,216	3,488			
234,721	2,901			
182,065	1,489			
32,112	1,119			
18,711	136		The entire body of Moravians is organized into three provinces, German, English, and American, governed from Herrnhut, Germany, by a general synod which meets decennially.	The Moravian Church does not differ from other evangelical churches, so far as the main points of Christian belief are concerned. On minor points it allows a difference of opinion.
1,328,714	8,980	151,000,000	Presbyterian, *i. e.*, by a body of presbyters or elders elected by the various church organizations, together with the clergy. It claims to reproduce the forms of the apostolic age, and to safeguard the church against passing prejudice on the one side and against prelatical assumption on the other.	Holds to the theological system known as the Calvinistic. Unconditional sovereignty of God; the Holy Spirit, the only infallible rule of faith and life; the supreme headship of Christ; the equality of believers and the parity of the ministry.
281,920	1,694			
115,000	917			
18,000	375			
135,010	1,012			
14,017	106			
938,390	5,380	125,000,000	Episcopal	The Trinity, the Incarnation, and the Atonement.
		31,000,000	Reformed Churches, those bodies which are in their standards and confessions markedly Calvinistic, and which, generally speaking, adhere to the presbyterial in preference to the episcopal form of church government.	In doctrine, Reformed churches adhere to the Heidelberg catechism, and are, therefore, Calvinistic.
9,610	94			
116,815	728			
297,116	1,226			
14,619,000	16,550	300,000,000	Organized society with power to teach and govern from Christ. Composed of Roman Catholic colonists from England. L. Calvert's father, Lord Baltimore, was a convert from the Anglican church.	Trinity; Jesus Christ, god and man, died for all men; founded a church; instituted seven sacraments; future life of eternal happiness or suffering.
27,286	3,196	3,500,000	Military, organized into corps, officers, and outposts. The work of evangelization is effected through rescue houses, slum posts, prison brigades, food depots, shelters for the destitute, inebriate houses, labor bureaus, etc., and open air services.	Identical with those of the Methodist bodies. The Army seeks to attract attention; to inspire hope; to bring about repentance, abandonment of sin, and faith in Christ. Its motto is "The World for God."
70,542	558	15,400,000	Congregational	The fatherhood of God; the brotherhood of man; the leadership of Jesus; salvation by character; the progress of manhood upward and onward forever.
303,319	2,193	9,000,000	Episcopal	In general agreement with the main doctrines of Evangelical Christianity.
52,150	730	11,000,000	Congregational	The universal fatherhood of God; the spiritual authority and leadership of his son, Jesus Christ; the trustworthiness of the bible as containing a revelation from God; the certainty of just retribution for sin; the final harmony of all souls with God.

NON-CHRISTIAN RELIGIONS. — The ratio of non-Christian religions throughout the world to Christianity is practically as 2 to 1. The chief creeds in the order of their numbers are Confucianism, Brahmanism (Hinduism), Mohammedanism, Buddhism, Polytheism, Taoism, Shintoism, Judaism, and Zoroastrianism (Parseeism).

Brahmanism, one of the three chief religions of the Hindus, is founded on the ancient religious writings known as the *Vedas*. It is both a religious and a social system; because, in time, the Brahmans, who were the custodians and interpreters of the *Vedas*, became the dominant Hindu caste. The *Vedas* were written in Sanskrit, and it was by the Brahmans that the Sanskrit literature was developed; they were not only the priests, theologians, and philosophers, but also the poets, men of science, lawgivers, administrators, and statesmen of the Aryans of India.

The worship represented in the oldest Vedic literature is that of natural objects: the sky, personified in the god Indra; the dawn, in Ushas; the various attributes of the sun, in Vishnu, Surya, Agni, etc. These gods were invoked for assistance in the common affairs of life, and were propitiated by offerings which, at first few and simple, afterward became more complicated and included animal sacrifices.

In the later Vedic hymns a philosophical conception of religion and the problems of being and creation appears struggling into existence; and this tendency is systematically developed by the supplements and commentaries known as the *Brahmanas* and the *Upanishads*. In some of the *Upanishads* the deities of the old Vedic creed are treated as symbolical.

Brahma, the supreme soul, is the only reality; the world is regarded as an emanation from him, and the highest good of the soul is to become united with the divine. The necessity for the purification of the soul in order to insure its reunion with the divine nature gave rise to the doctrine of transmigration of souls.

This philosophical development of Brahmanism gave rise to a distinct separation between the educated and the vulgar creeds. While from the fifth to the first century B. C. the higher thinkers among the Brahmans were developing a philosophy which recognized that there was but one god, the popular creed had concentrated its ideas of worship round three great deities—Brahma, Vishnu, and Siva, who now took the place of the confused old Vedic pantheon.

Brahma, the creator, though considered the most exalted of the three, was too abstract an idea to become a popular god, and soon sank almost out of notice. Thus the Brahmans became divided between Vishnu, the preserver, and Siva, the destroyer and reproducer, and the worshippers of these two deities now surpass those of all other religious sects in India. Siva, in his philosophical significance, is the deity mostly worshipped by the conventional Brahman, while in his aspect of the Destroyer, or in one of his female manifestations, he is the god of the low castes, and often worshipped with degrading rites. But the highly cultivated Brahman is still a pure theist, and the educated Hindu in general professes to regard the special deity he chooses for worship as merely a form under which the One First Cause may be approached.

But great changes in belief have taken place in the progress of time, and the most learned Brahman is even unable to explain fully the great majority of the rites and articles of belief.

Buddhism was founded by Buddha Gautama, probably in the sixth century B. C. Between the fifth and seventh centuries A.D. it came into sharp conflict with Brahmanism and was submerged by it in India proper. It has become, however, the prevailing creed of the peninsula of India beyond the Ganges, Tibet, Ceylon, China and Japan. In China the name of Buddha has been corrupted into *Fo-ta*, or *Fo*. After the death of Buddha, and to fill his place, a succession of perfectly virtuous souls have descended upon earth, and assumed human forms, for the welfare of mankind; and it is believed in Tibet that the Grand Lama of Tibet is his successor for the time being.

The sacred writings of the Buddhists are very numerous; they were originally composed in Sanskrit, from which they were afterward translated into other tongues.

It would seem that there was a belief in a primeval deity named Adi-Buddha, or the First Buddha, and he was the first person of the trinity, the other two persons being Dhurma and Sunga, answering to Brahma, Siva, and Vishnu, of the Brahmans. The trident borne by the priests is emblematical of this trinity.

Teachings.—The principal tenets of Buddhism are, that the world and all it contains are manifestations of the Deity, but of a transient and delusive character; that the human soul is an emanation of the Deity, and, after death, will be bound to matter, and subjected to the miseries of life, unless the individual to whom it belongs, by the attainment of wisdom through prayer and contemplation, secures its re-absorption into the Deity. The authority of the *Vedas*, the sacred books of the Brahmans, is rejected, as well as the sacrifices, ceremonies, and other religious observances of the Hindus.

There is no distinction of caste, and the priests, who are not forbidden the use of animal food, are derived from all classes. Monasteries and nunneries abound wherever Buddhism flourishes. The ceremonies have some resemblances to those of the Roman Catholic church.

Among the characteristics of Buddhist temples are the pagodas, and the images of Buddha. The former are stone structures, of a hemispherical or pyramidal form, supported on cylindrical pedestals. The images represent a human form standing, reclining, or sitting, with curly hair, and ears drawn downward.

Confucianism is founded chiefly upon the writings and teachings of Confucius, the celebrated Chinese philosopher, generally called by his disciples Kung-fu-tse, or "The Teacher King."

The Chinese classics in which the Confucian system is found, comprise what are called the *Wu-king* and the *S-shu*, "The Five Classics and the Four Books." These books are almost exclusively, the textbooks in all the schools of China, and are regarded as the *summum bonum* of knowledge and literary excellence. They have moulded the minds and characters of the Chinese race, and are the ultimate standard to which all moral, governmental, historical, and religious questions are referred. The contents of these books may be represented in general as made up of ethics, history, political economy, biography, and poetry.

The religious element is almost entirely wanting. It is distinctly stated by the disciples of Confucius that he did not discourse on the gods. When asked by one of his disciples about death, his sad answer was, "Imperfectly acquainted with life, how can I know of death?"

A correct general idea of his system may be obtained from the "Five Relations," which form the basis of it, and the "Five Virtues," which were the subject of his most frequent conversations. The Five Relations are those subsisting between emperor and officer, father and son, husband and wife, older and younger brothers, and friends.

The principles and duties connected with the first relation present, as they are developed and explained, the Chinese system of government and political economy, which forms a large part of Confucius' teachings. The next three relations belong to the family, which is justly regarded as the true foundation of the state. Here are to be inculcated lessons of respect, obedience, and regard for law; and habits of subjection to lawful authority are formed which fit the individual for being a good citizen.

Filial piety stands first in the category of human duties, and is an important part of the religion of the Chinese. Disrespect or disobedience to parents is sometimes punished with death. It is regarded as one of the strongest motives to a virtuous and honorable life to avoid disgracing and offending departed ancestors, and to live in such a manner as to reflect honor upon them.

The Five Relations cover the whole sphere of human duties. The relation between God and man is neglected and unknown, while almost divine honors are awarded to the emperor and to ancestors.

The Five Virtues of the Confucian system are "Benevolence," "Righteousness," "Propriety," "Knowledge," and "Faith." It is worthy of remark that in this system, as in the Christian, "Benevolence" stands first and foremost. Of this virtue and excellence Confucius seems to have had so high a conception, or ideal, that he did not regard any contemporaries, and but few of the ancient worthies, to have fully attained to it. The following is his definition of it. When asked by one of his disciples, "Is there any word which may serve as a rule of practice for all one's life?" his answer was, "What you do not want done to yourself, do not to others." The one word for the government of the whole life is, "all the law" of the Confucian system, and is, to say the least, the nearest approximation to the Golden Rule of Christianity which has ever been reached by any ancient sage.

"Propriety"—outward forms and ceremonies—brings to view a characteristic feature of this system. Every inward state of feeling is supposed to have a proper outward expression. While the inner feeling naturally gives rise to its external manifestation, so the habitual cultivation of the outward forms of propriety tends to foster and develop the inner virtue. The rules of propriety are regarded as the great balance-wheel which gives harmony and unity to society, or as one of the chief corner-stones on which society and government rest, and without which mutual understanding and respect would give place to confusion, lawlessness, and anarchy.

"Knowledge" relates to general learning and intelligence, but especially to a knowledge of men, a knowledge of one's self, and practical wisdom in dealing with others.

The system of ethics and morality which Confucius taught is the purest which has ever originated in the history of the world independent of the Bible, and he has exerted a greater influence for good upon the race than any other uninspired sage of antiquity.

Judaism may be defined as the religion of the Jews, for constructively every Jew is a devotee to Judaism. In recent times, especially in Germany, and then in the United States, a religious division arose among Jews known as the *Orthodox* and the *Reform* wings.

Orthodox Judaism believes that it represents the religion which Abraham, Isaac and Jacob were the first to confess and which subsequently was revealed by God in the divinely instituted Law to their descendants under Moses, their leader, at Sinai. This Law was given in two forms:

(1). The *written*, or Torah (Pentateuch).

(2). The *oral*, or traditional, originally not intended to be reduced to writing but to be transmitted from generation to generation by prophets and teachers, and reduced to writing as the *Mishna*, and later as the *Gemara* and, finally, as the *Talmud*. The *Torah*, then, or Pentateuch, and the *Talmud* are broadly the authoritative books held to be revealed for the orthodox Jews.

Yet the teachings of Jewish orthodoxy have in many details modified the convictions found in the Biblical and Talmudic writings. It must be remembered that through interpretation of the Bible the letter was given flexibility and while *practice* was fixed in keeping with Pentateuchal law as amplified and modified through the application of certain accepted rules of exegesis in the rabbinical schools, the belief of religious and ethical philosophy of Judaism, while regarding Scripture as its divine source, was developed and deepened with the progress of the centuries. The Aramaic versions of the Biblical books, the rabbinical commentaries and homilies on Scripture called the *Midrashim*, the *Prayer-book*, and the books of Jewish philosophers, from about 900-1300 A. D., must be consulted would one gain insight into the teachings of orthodox Judaism.

The following is a summary of these teachings:

(1). God is one, incorporeal, of pure spiritual essence. He is the author of all that is; having created the universe out of His own free volition and out of pure love. His being is root and sustenance of all other being. He is timeless, absolute, independent. There is none other to be likened unto Him or to be associated with Him. He rules and guides the world in His wisdom. He is the father of all men. Man, He created in His image. He is not the author of evil. He endowed man with the freedom to choose between good and evil. As a father He disciplines His children that they may learn to know Him and walk in His ways. The thirteen attributes which He revealed to Moses (Exod. 32) are principles of conduct, inviting man to walk after Him. As He is merciful so should man strive to be merciful.

(2). He breathed into man soul. Pure and uncorrupted the soul came from Him. Judaism rejects the doctrine of original sin.

(3). Righteousness is not dependent on belief. It is within the reach of all human beings. Righteousness and love and obedience are the service which is acceptable before God. Prayer, sacrifice, ritual are disciplinary means; in themselves of no value but helpful to lead man to God. Repentance and doing the right is the way that conducts the sinner again to God who demandeth the death of *sin*, not that of the *sinner*. No one is beyond the reach of God's pardoning grace.

(4). Israel was given the Law and thus chosen to be God's priest people not on account of any inherent merit but because of the love God bore to Abraham who had loved Him. Israel is placed under greater obligations than are others but no prerogatives go with its being chosen. Israel as God's people is expected to be the pattern for all others.

Once a nation, in Palestine, God sent it into exile that under the chastening discipline of suffering it might be cleansed of its sins, but in the fullness of time, *i. e.*, when in God's wisdom Israel's probation shall be at an end, God will restore Israel to the land of promise, there the Temple will re-arise, the sacerdotal service be resumed and Israel dwell in peace—a kingdom of priests and a holy nation under the sceptre of God's anointed, the messianic king.

The Jewish messiah is *not* a redeemer from sin. He is in no other sense the son of God than is every other man. He is the redeemer, *i. e.*, the liberator from political bondage, the restorer of Israel's national independence. Coincident with the coming of this king, peace will reign over all earth and justice be established everywhere. In Israel, the dead will rise from their graves, for God's justice shall bring it about that they who waited for this glorious time but did not see it shall share in the joy of the fulfillment.

While immortality of the soul is taught and more especially urged by mediæval thinkers as a correlative of God's justice, the picture of the future state is kept in indefinite outlines. Paradise and Gehenna being terms of vague content. The doctrine of eternal suffering however is rejected. The "world to come," while it connotes the future state, always carries with it the implication of new social order on earth.

Orthodox Judaism insists on the binding character of the ritual law yet it is strenuous in emphasizing the vital importance of morality above all. The "sanctification of God's name" is the solicitude of its ethical system, and by the term is understood such conduct and thinking as in itself betokens man's and the Jew's reverence for God, who is all truth, love and holiness.

In orthodox Jewish services, the Hebrew language predominates, men and women are separated, because in fact, orthodox Judaism is at least ritually under the oriental view of woman's inferiority.

Reform Judaism, prevails mostly in the United States and accepts many of the foregoing principles. The more radical among its adherents, accept the philosophy of evolution and the "higher criticism." Revelation in their opinion is a steady process away from error into fuller truth. The biblical books represent the literature of ancient Israel. Myth, legend, history, law and poetry are mingled therein. But this is the distinguishing glory of this literature, that it places the emphasis of religion in moral consecration and social righteousness. The rabbinic books are products of the age in which they were compiled.

Religion is not a matter of Law. Therefore Reform Judaism, with the prophets of old, lays all stress on the moral factor and retains of old ceremonial ritual only such symbols as are dowered with power to inspire moral consecration. In the prayer service, extensive use is made of the vernacular. Some congregations have instituted services on Sunday to meet the needs of those—and they are the majority—who cannot attend services on the historic Sabbath-day. But the main point of departure is involved in the doctrine of Israel's destiny.

Reform Judaism does not look forward to a return to Palestine. It hopes and prays for the coming of the messianic age. It eliminates the person messiah altogether. It looks upon Israel as the people called to influence the world through its own life in a way to bring all men into one covenant of service and love to the one God who at the end will be worshipped by all as the one Father, the righteous Ruler of all men and whose name shall be *One*. It agrees with orthodox Judaism in rejecting any conception of the Deity in which God's *unity* is obscured. *Ethical monotheism* is central to the faith of Judaism.

Mohammedanism is the religion founded by Mohammed, and is frequently called Islam or Islamism. In Europe it is confined almost wholly to Turkey; and even in European Turkey it is confessed by a minority of the people. It prevails in Asiatic Turkey, Persia, Afghanistan, Beluchistan, Arabia, and is largely represented in India, Asiatic Russia, and the Malay archipelago.

Its teachings are contained in the *Koran*, which is made up of revelations which Mohammed professed to have received direct from Allah. This sacred book of Islam was carefully revised by Ottman, the third caliph, and in that form has been used ever since.

Its fundamental principles are contained in the two articles of belief: "There is no God but Allah; and Mohammed is His Apostle." The Mohammedan doctrine of God's nature and attributes coincides with the Christian, in so far as he is by both taught to be the Creator of all things in heaven and earth, who rules and preserves all things, without beginning, omnipotent, omniscient, omnipresent, and full of mercy. Yet, according to the Mohammedan belief, he has no offspring: "He begetteth not, nor is he begotten." Nor is Jesus held to be other than a prophet and apostle, although his birth is said to have been due to a miraculous divine operation. As the *Koran* superseded the *Gospel*, so Mohammed superseded Christ.

The crucifixion is said to have been executed upon another person, Christ having been taken up unto God before the decree was carried out. He will come again upon earth, to establish everywhere the Moslem religion, and to be a sign of the coming of the day of judgment.

Next to the belief in God, the principal dogmas of Mohammedanism are the belief in angels; in divine revelation; in the resurrection and day of judgment; in God's absolute decrees, and predestination of good and evil.

There are besides some negative precepts and institutions of the *Koran*, in which several things are prohibited; such as usury, the drinking of wine, all games of hazard or chance, the eating of blood and swine's flesh, and of whatever dies naturally, or is strangled, or is killed by accident or by conflict with another beast.

There are many laws and images of

ceremonial purity suggestive of Hebrew and Jewish custom. Ablutions are always necessary before prayer. Circumcision is universally practised, though not commanded by Mohammed.

Polytheism, or belief in a plurality of gods, was the dominant religion of the great nations of antiquity—Assyria, Babylonia, Egypt, Greece and Rome—and is still, in the form of naturism and animism, the religion of more than a hundred million beings.

In its highest form, the gods were first personifications of natural phenomena, and then personal beings of superhuman power holding sway over nature and even beyond. This was especially true with the Greeks and Romans whose gods, now passed into the realm of mythology, animate some of the greatest works of literature.

It is still a matter of debate whether polytheism is a *primary* form of human belief, or a *degeneration* of an original monotheistic idea. It is argued, on the one hand, that the sense of personal dependence, the feeling that there was an undefined power, a mysterious *something* around and above him, did not primarily present itself to the mind of man except under a form of unity. His earliest religion would therefore be of a monotheistic character, but of a highly unstable nature, and eminently liable, among races of rude faculties and little power of abstraction, to assume a polytheistic form, the idea of one Supreme Being being readily obscured by the multiplicity of the visible operations of that Being on earth.

Those who affirm that polytheism was a primary form of religious belief argue that man, ignorant of the nature of his own life, and of the nature, origin, and properties of other objects, could at first only attribute vaguely to all visible things the same kind of conscious existence as that which belonged to himself. Thus the sun, moon, and stars would all be living beings; and their influence, from the absence of any idea of a natural order, would be seen in the working of the material world, and in all the accidents of human life. As being beyond human control, and as affecting the condition of men, they would be loved or feared; and with the growth of the idea that they might be propitiated or appeased the system of polytheism would be complete.

The forms of worship are almost as varied as the number of gods.

Shintoism, also called *Kami-no-Michi,* or "The way of the Gods," is the indigenous cult of the Japanese. It has no ethical nor doctrinal code, no idol worship, no priests nor priestcraft, no teachings concerning a future state. It consists entirely of a deification of heroes, emperors and great men, the divine ancestors of the Mikado and his people, together with the worship of certain objects and forces in nature.

The divine ancestors, the spirits which inhabit heaven or still reside in temples and wayside shrines, controlling the affairs of mortals, are known as "kami." The word is usually translated "deity" or "god," but our language has no proper equivalent. Kami are only superior beings. It is doubtful if immortality is one of their attributes. Some of them, we are told, die or disappear. They are by no means always good or virtuous, but they possess many human characteristics.

The principal divinity is the sun-goddess Amaterasu, from whom the Mikado is held to be descended. When Buddhism arrived from the West in the sixth century, it swallowed Shintoism entire, adopting wholesale the Shinto pantheon, but substituting for the simple form of worship a gorgeous ritual and magnificent temples. When the Shogunate was put down and the Mikado restored to power in 1868, efforts were made to restore Shintoism to its original simplicity, and it became the only state religion. Buddhist temples were stripped, "purified," and handed over to Shinto keeping. The revived religion, however, proved too feeble to supplant Buddhism and quickly lost ground.

Shinto temples are quite destitute of ecclesiastical paraphernalia. A metal mirror generally stands on the altar, but even this is a Buddhist innovation. The spirit of the enshrined deity (if so he can be called) is supposed to be in a case, and exposed to view on the day of his annual festival only. The worship consists in washing the face in a font, striking a bell, throwing a few coins into the money-box, and praying silently for a few seconds. Nevertheless, to perform these simple rites long pilgrimages are often taken to famous shrines and the summits of sacred mountains. The fact is that Shintoism is principally an engine of government.

Taoism is a Chinese religion with a large admixture of philosophy. It dates from the sixth century B. C., and was taught by the philosopher Lao-Tse. Its basis is the book *Tao-teh-king,* or "Classic of the Way of Virtue."

It teaches that silence and the void produced the Tao, the source of all action and being. Man is composed of two principles, the one material and perishable, the other spiritual and imperishable, from which he emanated, and to which he will return on the subjugation of all the material passions and the pleasures of the senses. By non-resistance and inaction man may harmonize his moral and physical natures with their surroundings, and in this negative way overcome all obstacles to happiness and continued life. It teaches that there are three "Pure Ones," not unlike the Christian trinity, and that there is a moral system of rewards and punishments in the universe.

Lao-tse's moral code is pure, inculcating charity, benevolence, virtue, and the free-will, moral agency, and responsibility of man. From the insight and deep wisdom of his moral code it has been supposed that Lao-tse had been indebted to western teaching, but there is no clear proof of this.

Taoism has adopted Buddhist forms, and has temples, monasteries, idols and an hereditary pope.

Zoroastrianism, so named from its founder, Zoroaster, was the religion of the ancient Persians, and is the present religion of the Parsees of India. Its bible is the *Zend-Avesta* to which is now added the more modern code of morals contained in the *Revelations of Arda Viraf.*

Originally, Zoroastrianism was a protest against polytheism, idolatry and the licentiousness of the age. Its founder was the earliest systematic expounder of spiritual *dualism,* the existence of two powerful agencies—the creative and the destructive, the good and the evil; the soul in conflict with the body, the spirit warring against the flesh. Fire and light were taken to represent the beneficent agent, and darkness the evil, *Ormuzd* and *Ahriman*—God and the devil; and in this he most probably reproduces an older mythology of the Parsee race. The founder made no attempt, however, to reconcile man's liberty with God's providence, or man's suffering with God's rectitude; but declared that everything was for the best for every individual.

The strongly marked characteristics of the faith are hospitality, philanthropy, and benevolence. Zoroastrianism had no active missionary agency; its founder seems to have been concerned with the reclamation of his countrymen, and to have treated other forms of faith with a large-hearted tolerance. It spread extensively throughout India and higher Asia; but, as usual, it became a superstition. Schism followed on the death of Zoroaster, who, any more than other great men, had no true successor.

After the Mohammedan invasion of Persia in the seventh century, the sect was driven to the western coast of India, where they took the name of Parsees, from Parsis, a province in Persia. In India the community has developed business aptitude and commercial enterprise, and not a few have acquired reputation in the learned professions. They are also distinguished for their public spirit as shown in the establishment and maintenance of educational institutions.

The Parsees have an hereditary priesthood, regard fire as an emblem of purity and good, and expose their dead in lofty buildings called "towers of silence." They seek no proselytes, but a few "Gentiles" have been admitted into the faith by marriage.

SCHOOLS OF PHILOSOPHY.—To bring a sketch of the philosophical schools within manageable limits it is necessary: First, to exclude oriental thought which, despite its wealth, has not affected western reflection profoundly; Second, as an indispensable preliminary, the reader must understand, once for all, that the succession of schools by no means represents a mere maze of irreconcilable theories. For, like poetry and religion, philosophy is a direct, symptomatic expression of the civilization whence it comes. Men inevitably think about life and the universe no less than they sing songs and cherish characteristic beliefs concerning their spiritual destiny. Thus, as poems and faiths differ, so do philosophies. Divergent interests mark various peoples and successive epochs, with the result that old questions reassert themselves in new guises. The shift of contemporary emphasis, the organization of knowledge, and the disturbances of the social balance lie behind the medley of the schools. The thinkers are never detached from the common lot of their folk. Thus, just as one nature pervades the species of mankind, so two or three main problems dominate the history of philosophy. In fundamentals philosophy is one, not many. This primary fact renders it both possible and advisible to group the schools according to epochs; the influences formative of any period are at once presupposed and find vent in its philosophy. Accordingly we have:

Hellenic Philosophy—which divides itself naturally as follows:

The Cosmological Period (*c.* 600–450 B. C.). Centuries of effort antedate this beginning of European thought, and, toward the close of the seventh century reflection asserted itself in the maxims and laws of the Seven Wise Men. But the proverbial wisdom preserved to us in Hesiod's *Works and Days* is hardly philosophy. The impulse to critical thought came

rather from attempts at an explanation of the physical universe connected with religious tradition. Pythagoras (*c.* 530 B.C.) was probably decisive in bridging over the gulf between picturesque mythology and serious reflection. In any case, he was the founder of the *school* as the organ of philosophical thought. His religious brotherhood became the model for the Greek scientific guild.

Milesians.—Greek thought set out from mythology, and the first thinkers are cosmologists, because they try to substitute critical study of natural phenomena for the fables of the myth-makers. Miletus was the home of the earliest school. We find three leaders here—Thales (*fl.* 570 B. C.), Anaximander (*fl.* 545 B. C.), Anaximenes (*fl.* 505 B. C.). All confronted the same problem: To what can the physical world be traced ultimately? Their speculations, of which we know little, were supplemented from the religious side by Xenophanes of Colophon (*fl.* 500 B. C.), who conceived the original ground of things to be a transcendent god, and so made the World-all of the Milesians conceptual, not perceptual.

Eleatics.—Then followed the two metaphysical schools, of Heraclitus (*fl.* 480 B. C.) and Parmenides, the Eleatic (*fl.* 470 B. C.). Here the two possible views of the constitution of the universe came into sharp conflict. For Heraclitus the world presented a scene of continuous change, therefore the final solution is to be found in the mutual transformation of all things. Fire, ever in motion, dominates all cyclic change, and everything passes into its opposite. For Parmenides, on the contrary, Being is invariably self-identical, and the abstract Being, common to all things, is the sole existence. The changeful world of the senses is an illusion for the Eleatics, just as the substantial world of the senses is an illusion for Heraclitus. Each thinker, as happens so often, had grasped a great half-truth. Empedocles (*fl.* 445 B. C.), Anaxagoras (*fl.* 435 B.C.), Leucippus, the atomist (*fl.* 435 B. C.), and Philolaus the Pythagorean (*fl.* 430 B.C.) tried to mediate between the inimical metaphysical views, and prepared the way for

The Greek Enlightenment (*c.* 460-350 B. C.). Many events combined to produce this new era. Greek literature and science were making rapid advances. The issue of the Persian war (479 B. C.) had consolidated Hellenic nationality and rendered it keenly self-conscious. Above all, public life had acquired enhanced significance, and demanded a preparation such as the old education could not furnish. The Sophists appeared to meet the need. They were not technical philosophers, but popular teachers who used intellectual theory and rhetorical practice as means to fit their pupils for a political career. Professors of the art of persuasion, they naturally raised questions about the human mind, and thus began to turn Greek thought away from exclusive attention to the physical universe. Their theory of knowledge was sceptical, being based on the deceitfulness of the senses, and this, together with the altered conditions of Greek life, led men to challenge ancient social standards.

Sophists.—These tendencies and the doctrines of Protagoras, Prodicus, Hippias and Georgias, the Sophistic leaders, elicited the opposition of Socrates (469-399 B.C.), from whose seminal personality ethical philosophy arose. While a representative of the intellectual freedom of the Enlightenment, Socrates held that general propositions express valid truth for all men and, by his self-sacrificing devotion to duty, exerted incalculable influence.

The Enlightenment movement was continued into the fourth century by three schools—the Megarians, Cynics and Cyrenaics, the first scientific, the others ethical—usually known as the "imperfect" Socratics but inheritors rather of the Sophistic tradition. Lacking the balance of Socrates, and failing to grasp the constructive principle of his teaching, they fell into untenable, sometimes absurd, exaggerations. The ferment created in this period produced

The Epoch of the Great Systems (*c.* 387-323 B. C.). As its name implies, the essential feature of the systematic period consists in the effort to overtake the whole problem of experience, mental and moral no less than physical.

Atomists.—There is some ground to infer that, at the beginning of the period, the older nature-philosophy was continued in the system of Democritus (*c.* 460-365 B. C.), the great atomist, who united the doctrines of the earlier physicists with those of the Sophists. Unfortunately, his works have not come down to us—an irreparable loss. His philosophy was essentially a form of materialism, in that he traced psychological processes to motions of atoms. As with Heraclitus, fire animates things, particularly organisms. Hence, the life of the soul depends upon the differences of fire-atoms, and is extinguished at death. His theory of knowledge and ethics is based on this physical principle. On the other hand, he seems to depart from materialism in so far as he contends that principles are known only by thought. His mechanical theory appears to have exerted no profound influence over the Hellenic mind, which found its consummation in the idealism of Plato (427–347 B. C.), the foremost thinker of antiquity—of all time, as some would urge.

Plato was one of the most potent originating forces in history, and this makes it almost impossible to adjust his obligations to Greek civilization as a whole. He owed something to Heraclitus, much to the Pythagoreans, not a little to the opposition of the "Socratics," the Cynics especially, something to association with Euclid, most of all to the companionship and example of his illustrious master, Socrates. These, together with the subtle influences emanating from the Hellenic artistic temperament and socio-political outlook, he passed through the medium of his superb intellect—the result was "Plato." The central doctrine of his philosophy is identical with that of all idealistic theory. It may be put thus: Truth exists independently of the contentious judgments of men; human approval or disapproval has nothing to do with its validity. This truth is the basis of the possibility of science, of the authority of ethics and of the social order. Immanent in the sensuous world, and accessible to the humane spirit by means of dialectic, is the ideal realm which elevates man above the strife and imperfection of things. Hence human activity finds its sure basis in human insight. Plato applied this principle, with endless fertility, to all departments of experience—to morality, to social relations, to religion, to science, and to the destiny of the individual. No other thinker has exerted so much power to vivify and unite the select minds of the ages.

Aristotle.—Plato's work was continued, amplified and systematized by Aristotle (384-322 B. C.), the foremost scholar of antiquity, possibly the most wonderful mind that our race has yet produced. The creative originality of Greek thought ended with Plato; Aristotle's task was to assimilate the wealth of Hellenism, to systematize it for preservation and transmission. Consonant with this, he divided philosophy into special disciplines, as follows: Theoretical (metaphysics, physics, mathematics); Practical (ethics, politics); Poetical (philosophy of poetry and other arts); Analytic (logic) had no place as a distinct division, but was preparatory to the others. According to his own definition, philosophy is the science of the universal essence of the actual. That is to say, it pierces through the world of sense to constitutive Being and its principles. The genuine portions of his "Metaphysics" form a classical investigation of this subject, with a criticism of previous views; while his special studies mark an epoch in man's effort to penetrate to the laws of nature, mind, morality, art, government and society. Aristotle employed his vast store of particular cases to give firm basis to the rational concepts which guarantee the common truth of knowledge and reality. In so doing, he formulated the doctrine that all nature develops according to a definite plan, wherein outer and inner play reciprocal roles. The main office of philosophy is to discern and sketch out this plan as it presents itself in every aspect of human experience. Liberated by the circumstances of his upbringing and career from the direct personal pressure of Greek ideas, Aristotle was able to view them objectively, to overlook them calmly and to anneal them, once for all, in a single whole. He thus became the first great technical philosopher, his system so impersonal as to reach the level of science.

The battle of Chaeronea (338 B. C.) marks the close of the golden age of Hellenism.

Hellenistic - Roman Thought. — This is particularly the epoch of warring schools, even sects. On the whole, three of these dominate the era—the Epicurean, Stoic, and Skeptic, known significantly as the Individualistic schools. The Peripatetics (Aristotlians) and the Academics (Platonists) also exerted influence.

Epicureans.—Epicurus (342–270 B.C.), a superficial thinker, but a personality of great persuasiveness, taught that the individual must seek happiness as the aim of life. Such theoretical philosophy as he and his school developed was incidental to the ethical question. The primary purpose of philosophy was to render men independent of the accidents of life and of the world. Therefore, painlessness, or absence of want, constituted the state in which the soul found happiness, its true goal. He who attains this imperturbability is the Wise Man, because he is able to enjoy his own elevation above the natural ties of kin and country with their disturbing claims.

Continued at Athens, after the death of Epicurus, by Hermarchus, Polystratus and others, Epicureanism was carried to Rome probably by Amalfinius (*c.* 150 B.C.) where it found its chief interpreter in the eminent Latin poet Lucretius (95–51 B.C.), whose *De Rerum Natura* remains our principal source of information regarding it. At Rome the school degenerated, and the word Epicurean came finally to have the doubtful significance which it now bears.

Stoics.—Stoicism left a more permanent mark upon the development of culture.

Founded by Zeno of Cittium (350-258 B. C.), a pupil of the Cynics, the school was continued, after his death, by Cleanthes, and by its most eminent representative, Chrysippus (280-206 B. C.). of Rhodes (180-110 B. C.), introduced the other philosophical parties. Posidonius (135-150 B. C.) carried the same process further, making an amalgam of Plato Aristotle and Zeno.

Later still, under the Roman empire, Stoicism almost took the place of religion with many of the most influential among the educated classes. Seneca (4-65 A. D.), Epictetus (c. 90 A. D.), and the 'philosopher upon the throne,' Marcus Aurelius (121-180 A. D.) represent this period.

Distinguished for scholarship, and for their division of philosophy into logic, physics and ethics, the Stoics nevertheless subordinated the theoretical to the practical, elaborating ethics into a scheme of specific doctrines. They aimed to produce the Wise Man—wise because independent of the passions and of the chances of the world. They formulated the conception of conscience which later exercised great influence upon the history of moral philosophy; of natural law as superior to the enactments of nations, a view that modified the course of jurisprudence profoundly; of a common of humanity, afterward absorbed and expanded by Christianity. And although their system fell away at length into more or less operose moralizing sometimes, its professors paved the way for Christianity by their faithfulness to the inner light amidst a civilization which had become rotten-ripe and irreverent. The story of the 'Stoic opposition' from Nero down, would rebound to the credit of any society. In many ways they rendered the necessity for a new religion strongly apparent, because they insisted so much upon the independence of the individual.

Sceptics.—Greek Scepticism, the sequel to the squabbles of the schools, found its leader in Pyrrho (c. 365-275 B.C.). Through Arcesilaus (315-241 B. C.) and Carneades (c. 210-129 B.C.) it became dominant in the Middle (Platonic) Academy had later independent representative in Aenesidemus and Agrippa, and finally attained its full literary expression in Sextus Empiricus (c. 200 A.D.). The sceptics attacked the other schools contending especially against philosophical dogmas, and showing that knowledge cannot be more than probable at best, and that a standard criterion of truth cannot be found. They also evinced inclination to mutual borrowing—a sure index of decline. The philosophical works of the Roman publicist Cicero (106-43 B.C.) furnish an admirable illustration in point. Philosophy was about to give place to something else, new conditions were stimulating new interests.

The Theosophical Period.—Between Cicero and Seneca a new trend developed. The results of philosophical and religious commingling made themselves felt. In especial, the external glories of the Roman empire failed to satisfy and its internal poverty caused widespread unrest. Men yearned for assurance about the meaning of life, and sought light upon the world beyond. Religion was becoming the central interest; paganism evinced vitality, and the Mediterranean peoples were ready to embrace any creed that seemed to promise aid. The wisdom of Greece, the superstitions of the orient, and the faith of the Jews, overflowed one another. Plutarch's (50—120) *Moralia* signify no less from the pagan side while on the part of the Jews, Philo (c. 20 B. C.—55 A. D.) attempted a reconciliation between Greek thought and Jewish doctrine, employing the philosophical generalizations of the one and the historical events and spiritual intensity of the other, to comprehend man's relation to Deity (theosophy). The mystical notion of ecstatic union with God played an important part, not only in Philo, but in Neo-Pythagoreanism and the Pythagoreanizing Platonists, like Numenius of Apamea (c. 270), who gave early impulse to the final important Greek philosophical school.

Neo-Platonism was created by Plotinus (205-70), the last great constructive thinker of the ancient world. His works were edited by his disciple Porphyry (233-304), while the doctrines of the school were spread and modified, in Syria, by Iamblichus (c. 320), in Athens by Proclus (410-85). Hypatia of Alexandria, in the fifth century, whose romantic story is famous, was possibly its last representative. In 529, the Emperor Justinian closed the Athenian schools, the Platonists emigrated to Persia, and Christianity held the field alone.

The theosophical schools were dualistic in their metaphysics—they separated God from the world; theological and ascetic in their ethics—ethics teaches a way of salvation, which lies through escape from the world; pantheistic in their cosmology—all things emanate from the original One. Proclus offers the most systematic account of this process. Their general problem, then, and their attitude toward it, have essential kinship with the Christian movement.

The Ages of Faith.—The writings of Philo, Seneca, Epictetus and Marcus Aurelius are contemporary with those of the New Testament. In other words, the theosophical schools of pagan civilization developed alongside Christianity, they were products of the same movement. So far as Christianity issued in philosophical schools dominated by its outlook and, later, by its organization, the following periods may be distinguished:

Patristic Philosophy.—The coexistence of pagan thought with Christianity led some early Christian thinkers to adopt non-Christian solutions of Christian speculative problems.

The Gnostics (Cerinthus, Marcion, Basilides, Valentinus) who arose in the second century, held that Jesus had taught a hidden doctrine to his select disciples; this they termed 'Gnosis'; it is identical fundamentally with the teaching of Philo and Plotinus, affected of course, by distinctive Christian ideas. In the third century, the Persian, Manes, founded the Manichæan school, introducing Zoroastrian dualism into Christian thought. These, together with certain purely theological schools, such as the Monarchians, Apollinarians and Arians, are known as the 'heretical' sects. It is well to note this title as indicative of their theological, as distinguished from philosophical, tendency—for, obviously, there can be no such thing as heresy in philosophy. The Gnostics influenced the Alexandrian school of theology, the Manichæans, to whom Augustine belonged in youth.

Within the direct Christian line it is usual to distinguish two periods—the Ante-Nicene and the Post-Nicene Fathers.

The Ante-Nicene Period begins with the apologists (Justin-Martyr, Athenagoras Theophilus, Irenæus, Hippolytus and Tertullian), who defended Christianity against pagan criticism. It culminates in the catechetical school of Alexandria, represented, in the third century, by Clement, Origen and Lactantius. Clement was a Christian gnostic, while Origen was a theological metaphysician who systematized the creationist, as against the emanational theory of the origin of the universe.

Post-Nicene Period.—The early fathers are dominated by the Trinitarian controversy (Athanasius, Gregory of Nyssa, Basil, Gregory Nazianzen, Cyril). Pseudo-Dionysius, the last Christian Neo-Platonist, is important because of the influence he exerted upon early Scholasticism, and John Damascene for his discussion of the relation between faith and knowledge. Through Hilary, Ambrose and Jerome Hellenistic-Christian thought was gradually absorbed into the Roman spirit and presented in the Latin tongue.

Augustine.—This important change culminated in Augustine (354-430) whose place in systematic Christian thought may be likened to that of Plato in later Greek reflection; or we may say that he is to Roman Christianity what Calvin was to be for Protestantism. His formative influence was enormous. He concentrated his genius upon the problems of God and the human soul, subordinating the philosophical disciplines to their solution. He opposed scepticism and tended to support the reliability of the intellect. To this extent he was a rationalist, but always with the *proviso* that God is the sole source of truth. He classified the 'faculties' of the soul giving, in particular an important presentation of Will. He set forth a philosophy of history, and sketched a Christian ethic. His main debt is to Plato, and, for this reason, his philosophy is not free from Greece, but is rather the indispensable preparation for the distinctive contribution of Mediæval Christianity.

The Scholastic Philosophy.—After Augustine's suggestive, if immature, system came the so-called 'Dark Ages'—darkened by the Vandals, Burgundians, Huns and Franks, which plumbed their depths in the eighth century. Men there were who kept alight a feeble flame of philosophy: Boethius (470-526), Cassiodorus (477-575), and Bede (674-735). Better times appeared with Charlemagne (742-814), Alcuin and Rhabanus Maurus (784-856). The name Scholasticism, indeed, had its origin in the Carolingian schools, where a cleric (*Scholasticus*) taught the higher branches and supervised the inferior teachers (*Informatores*). This theological philosophy revolved round two questions—the Reality of Ideas, and the precise relation between theology and philosophy.

In a general way, its history presents three periods: (1) Of origins, from John Scotus Erigena (c. 815-86) to Alesius (a. 1245); (2) Of completion, from Albert the Great (1193-1280) to Duns Scotus (c. 1280-1308); (3) Of disintegration, from Occam (c.1280-1349) to Saurez (1548-1617).

Realism and Nominalism.—Erigena, a Neo-Platonic thinker, and therefore of pantheistic leanings, taught that universals (ideas) have a real essence, and was the founder of Realism. Roscellinus, who opposed him, founded Nominalism, and taught that universals are mere names; Anselm, known chiefly for his ontological proof of the being of God, replied to him from the

standpoint of a moderate Realism, and the central controversy of Scholasticism was thus set. Platonism and Augustinianism were the main influences till this date. The implicit rationalism of his predecessors was seized and developed by Abelard (1079–1142), whose independence and disaffection toward authority found a kindred spirit in Roger Bacon. Platonism reasserted itself in the Mystic schools, especially those of Chartres and of the Victorines, while Petrus Lombardus emphasized the claims of Christian dogma.

Thomism.—As a result of these cross-currents, together with the influx of Aristotle by way of Mohammedan (Arabian-Spanish) thought, the age of the methodized systems (*Summae*) of Aristotelian Scholasticism arose, associated closely with the history of the Mendicant Orders (Franciscans and Dominicans) and of the new-born universities. The Aristotelian method was first applied fully in the *Summa Theologiae* of Alesius (or Alexander of Hales), a work completed by his pupils in 1252. The supreme Summists are Albert the Great and especially Thomas Aquinas, who gave final form to Christian dogma systematized from the standpoint of Realism according to Aristotelian dialectic, and based on a working agreement between faith and reason—to the effect that the domains of the two are distinct, and that the former goes farther than the latter. The scope of Thomism may be inferred from the following conspectus of its contents: (a) theory of knowledge, and doctrine of the universals; (b) logic; (c) anthropology; (d) cosmology; (e) metaphysics and natural theology; (f) morals and politics.

Franciscans and Dominicans.—After the death of Thomas Aquinas controversies broke out between Thomists and Anti-Thomists; in particular, the Franciscans espoused Duns Scotus, the Dominicans, Thomas Aquinas. Then with Occam, Nominalism regained influence, leading in the direction of scepticism, which became full blown in Nicholas of Autrecourt (c. 1347), by whose time faction, tradition, and artificial subtlety had done not a little of their deadly work. All its best Scholasticism produced able theological metaphysics, developed unprecedented power in the distinction of ideas, and remarkable logical acuteness. On the other hand, it fell into frivolous puerilities, and was unable to adjust itself to the scientific spirit which ushered in the modern world. Thanks to undue emphasis upon the principle of authority, which has no place in philosophy, the mere weight of the system hindered natural and indispensable readjustments.

Modern Thought.—The Modern era falls naturally into four periods: (1) the Age of Transition, from the capture of Constantinople (1453) to Hobbes' "Leviathan" (1651); (2) the Age of the Enlightenment, from Descartes' "Discourse on Method" (1637) to Kant's Inaugural Dissertation (1770); (3) the Epoch of the Idealistic System, from Kant's "Critique of Pure Reason" (1781) to the rupture of the Hegelian school (1831-50); (4) the nineteenth century, from the German controversy about Materialism (1852) till the present time.

The Age of Transition.—Very many reasons, besides the inanition of Scholasticism, conspired to produce a transition. Classical Humanism the principles of the Reformation, awakened sense for Nature, geographical discovery, the inventions of gunpowder and printing, the rise of nationalities, all told their tale. Thus, Italy first, then France and Holland, then England and Germany and, finally, Scotland, took up the torch. And the contrasts between the schools were affected not a little by national temperament. In any case, the unity of Mediævalism had perished. Already in the 14th century, Ruysbroeck and other Mystics were "Reformers before the Reformation," while Eckhardt was naturalizing speculative philosophy in the German tongue. The open revolt against Scholasticism broke forth in the next century, with the Humanistic movement—the Platonic Academy at Florence, Valla, Ficio, the Mirandolas, uncle and nephew, attacked Aristotelianism bitterly; Stoicism reappeared in Schoppe; Epicureanism in Gassendi; Scepticism in Montaigne, Charon and Sanchez. Pomponazzi and Ramus increased the ferment, which began to show signs of settlement in Nicholas of Cusa (1401–64), and precipitated the Italian nature-philosophy of Campanella and Bruno (1548–1600), the most characteristic monument of Renaissance thought. Bruno's remarkable prevision, that Nature furnishes her own explanation, partook more of enthusiasm than of science. But it signalized the scientific trend, carried immediately to splendid issues by Copernicus (1543), Tycho Brahe, Kepler, Galileo, Bacon, Boyle and Newton ("Principia." 1687).

Meanwhile, in the region of politico-sociological thought, Machiavelli, More, Bodin, Hobbes and Grotius (1625) were revealing the tendencies of the new order. Indeed, it was a time of tendencies and drifts rather than of set schools, and the systematization of the new ideas must be dated from Descartes. When the primary passed from Italy to France, the age of Enlightenment began.

The Age of Enlightenment.—When regarded from the practical side, this period might be termed aptly, the Age of Liberation. In it man designed to free himself from past standards of judgment and social institutions, especially those developed and held authoritative in and after the reign of Charlemagne. He broke with history "set life in a timeless present of Reason," and, therefore, "diametrically opposed all historical tradition," and "all systems of life that are based upon authority."

Rationalism, a product of continental Europe mainly, and Empiricism, a product of British thought mainly, exploited respectively the timeless Reason and the scientific view that substituted direct experimental evidence for tradition. Descartes and his school, with certain lapses into mysticism, Spinoza, Leibnitz and Wolff, represented the former. Locke and Berkeley, with their French kin, represented the latter; while Hume settled the account of both, thus preparing the way for the great protest of Kant and the constructive systems of the Idealists, which ushered in the 19th century, with the consequence that the evolutionary-monistic view of the universe took the place of the mechanical-dualistic.

Rationalism. Although it was his weakness to disclaim obligation to others, Decartes (1596-1649) was influenced strongly by the contemporary scientific movement. Accordingly, he begun by renouncing the unscientific material of common experience and, by his method of doubt, arrived at the immediate certainty of Reason. Leaving Reason uncriticised (the capital defect of Rationalism), he held it to be a property of internal "thinking substance." By inference, he also found external "substance," characterized by extension, and incommensurable with thought. Absolute dualism resulted, and the problem was to discover the means whereby the two incommensurables became related in the unity of experience. Man's thought of God supplies the link. It is "innate," and therefore dogmatic, philosophically speaking. For it depends upon the conception of cause, unripe as yet for analysis. The strength and weakness of Rationalism thus become apparent forthwith. Its strength roots in its insistence upon the doctrine that man is the centre of his own experience; its weakness in its insistence upon a something beyond experience, and therefore unknowable by its very nature.

The rift for the entering wedge of Mysticism lies here, because Descartes was unable to free his system from survivals of theosophical thought. So, it is nowise surprising that churchmen like Bossuet, Fénelon, Arnauld, and even Pascal, should have depended upon him. It is in his philosophical disciples, however, that the mystical tendency proves dominant. Geulincx (1623–69) attempted to overcome Descartes' deficiencies on cause by the theory of Occasionalism, according to which the body and material things are merely the occasions of conscious acts, which are produced actually by God. Malebranche (1638–1715), familiar with Augustine, also adopted Occasionalism, and found the final guarantee of certainty in religious faith.

Spinoza.—Cartesianism, then, tended to theological spiritualism. It was reserved for Spinoza (1632-77), the greatest thinker since Plato, to draw the fuller conclusions. A Jewish student of Maimonides and the Neo-Platonists, he stood above the institutional and local considerations which had hampered Descartes, and was thus able to carry out his principles with complete freedom. "Look not to the particular," he says, "but to the universal." He would deliver Descartes from his abstractness and from his imagination; *i. e.*, from his explicit dualism and his implicit mysticism. His aim, then, is absolute unity. Reason "proceeds from the adequate idea of certain of God's attributes to an adequate knowledge of the nature of things." Things are thus 'modes' of the Infinite, while the thinking 'substance' and the extended 'substance' are 'attributes' of the Infinite. Man apprehends the Infinite in two parallel 'attributes,' mind being thus the 'idea' of body, and the body the 'object' of mind. The logical result is the disappearance of everything in abstract Being. But Spinoza believed that he was discovering the universal within human knowledge, that he was asserting the claims of nature, consequently, he is, in intention at least, a modern of the moderns. But he reached his conclusions too easily, and his system contains elements which he never could reconcile. At the same time, he anticipated later philosophy of religion, the historico-genetic method, and the monism of latter-day science. Moreover, by the sublimity of his thought he soared above the limitations of the Enlightenment, and came to lead men out from it.

Leibnitz (1646-1716), probably the greatest scholar since Aristotle, reacted against the mechanical view latent in Descartes,

manifest in Spinoza, and attempted to surmount it. Like his predecessors, he was an accomplished mathematician, acquainted with the outlook of science at first hand. His main concern was to preserve the individual, the human soul especially, s against the compulsion of an ironclad system. His theory of self-contained 'monads' resulted. In material things, if a tendency be not transformed into motion, it lasts but a moment; in a thinking being it may maintain itself indefinitely; so, if we look for permanence, we must have recourse to the mental, not to the material. For, activity of representation is the touchstone of reality, and God alone represents clearly. His 'Pre-established Harmony', so adapts unconscious and conscious 'monads' to one another that the universe is maintained. Briefly, a physico-theology, Platonic in character, furnishes the rational solution. Idealism has begun to try its wings.

Empiricism.—John Locke (1632-1704) undertook a critical examination of knowledge without primary reference to the metaphysical problem. Starting from the English counterpart of mystical Cartesianism (the Cambridge Platonists, Herbert of Cherbury), he denied 'innate' ideas, but retained Cartesian dualism. Cognition consists of 'simple' and 'complex' ideas, the former "furnished" by sense and reflection, the latter "made" by combining the former; the mechanical standpoint is everywhere manifest. Bodies have 'primary' (really existent) qualities, such as figure, and 'secondary' (existent in mind) qualities, such as color. Now, the question arises, How can simple ideas be conjoined so as to form complex substance? Locke answers, the substance underlies and upholds the qualities. The nature of knowledge compels us to presuppose it. His philosophy thus falls into two unrelated halves—a sensational psychology and materialistic metaphysic. If the psychology be true, the metaphysic is superfluous—really irrational; if the metaphysic be true, the psychology is false. In a word, he introduced critical (epistemological) inquiry, but failed to carry it far enough.

Berkeley (1680-1753) set out to rid philosophy of Locke's hypothetical substance. "There exist nothing but spirits and their modes," *i. e.*, thinking beings and the processes of their consciousness. A thing is only as it is perceived. But how do these modes, pertaining to separate individuals, combine in a universal world-order? This is caused by an "incorporeal substance or spirit"—God. Berkeley failed to see that a 'spiritual' substance is just as unknownable as a material one, just as vulnerable to the assaults of scepticism. Further inquiry was necessary to bridge the gulf between his earliest and his latest views— between the propositions that "mind is a congeries of perceptions," and that "sense or soul, so far forth as sensitive, knoweth nothing."

Despite most doubtful conclusions, the British school prepared the way for later developments by its clearness and its common sense; in particular, it won an independent place for ethical inquiry. Its omnipresent individualism was highly suggestive and, at the time, essential, in order that the factors of the problem might be rendered evident.

Hume (1711-76) stood above Empiricism much as Spinoza stood above Rationalism. Accepting the premises of his predecessors, which he adopted without examination, he sought to educe the inevitable conclusions without flinching. If mind and matter be incommensurable (dualism), if ideas be furnished by the senses (sensationalism), and if knowledge be confined to states of individual consciousness (phenomenalism), what ensues. The entire realm of knowledge fades away, nothing has any clear, substantial truth in reality; the synthetic conceptions, like self and cause, are double-dyed fictions. So thoroughly did Hume pursue his sceptical regress that he closed the first period of modern thought once for all. Hence he stands forth most significant of English-speaking thinkers.

Meanwhile, varieties of Empiricism were flourishing luxuriantly in France. Sensationalism (Condillac, Helvetius) Scepticism (Voltaire and the Encyclopædists), and Materialism (La Mettrie, d'Holbach, Cabanis) held the field. In Germany, the 'philosophy for the world' had eviscerated Leibnitz of his speculative vitality and breadth; Wolff (1679–1734), in particular had reduced the Leibnitzian theory to dogmatism, but had effected notable preparatory work in teaching philosophy 'to speak German.' The advent of Kant was to end the long-drawn, indecisive strife between the embattled forces of Rationalism and Empiricism; what we now understand by modern thought was to begin.

The Epoch of the Idealist Systems.—*Kant* (1724-1804) developed his thought unusually late in life. This was the result of abortive attempts to find satisfaction in the Rationalist position, which he had acquired from his teachers, or from the Empiricist position which he learned from study of Newton. On the intellectual side, he was influenced by the Leibnitz-Wolff school, by Newton, and by Hume. His strong moral convictions rooted in the pietistic associations of his family, and were affected later by Rousseau.

His examination of the Pure Reason (1781) led him to conclude that rational experience consists of two independent factors—a formless matter derived from sense, and forms supplied by the mind. As a consequence, man knows phenomena only, the 'thing-in-itself' eludes knowledge completely. Intellectually, then, an agnostic position must be adopted toward reality, as also toward such components of experience as stand out of relation to sense material (*e. g.*, God, self).

In the moral life, on the contrary, analyzed in the "Critique of Practical Reason," man is free, because he constructs his aims from within, being thus delivered from the stress of the mechanical world (natural law). But this construction is without objective validity.

In artistic judgment, man seems to light upon a union of the real and the ideal. An organism, for instance, appears to exist in the world of nature and, at the same time, to dictate its own end. But, after all, this is no more than a subjective impression.

Kant thus arrived at a theory of the limits of experience which, however, remains ideal in certain parts. The effort of the great post-Kantian Idealists was directed toward the construction of a self-consistent system, including the worlds both of the ideal and the real so-called, on the basis of the principle of ideal activity presupposed, but not squarely developed, by Kant.

Fichte (1762-1814), concentrating upon the moral consciousness, makes the self the condition of all experience, theoretical no less than ethical. This self is the Absolute Ego whence, by an internal 'shock', the self that knows and acts, and the object known are derived. But an Absolute of this sort is essentially unknowable, and the Kantian position has not been turned.

Schelling (1775-1854), a romantic lover of nature, of brilliant intuitive genius, set out from an unconscious reason in nature parallel to the same reason, now conscious, in man. He traced both back to an ideal 'Neutrum', an existence in which there is neither subject nor object, thus following a line of thought comparable with that of Spinoza. But, here too, the basis of all remains unknowable, and Kant's agnosticism is not exorcised.

Hegel (1770-1831), the greatest intellectual force in the first half of the 19th century, and still one of the main influences, holds that the whole universe is the concrete expression of an absolute thought-process. The object of knowledge and the knowing mind are inseparable. The solution of every problem connected with their differences is therefore to be found in the prior principle of their indissoluble unity. This is the background of all possible events. The business of philosophy is to trace scientifically the various steps in the universal process of differentiation as they are to be found in the manifestations of human experience. There is antagonism everywhere, and flux also, but all this development is the expression of a pervasive, rational (ideal) unity. "The great men of history are those whose personalities embody the will of the World-Spirit." Throughout the welter of existence this Spirit is a "circle rounding back upon itself, and presupposing its own beginning, though it attains it only in the end." Philosophy is the articulation of this timeless process by the human intellect.

Apart from divergent views for or against Hegelianism, Hegel may be said to have performed two notable services. He enunciated the principle that, if human experience is to be explained, it must be explained from within its own resources. He also fathered the historical method on which scientific investigation of human achievement (the 'human' sciences) now proceeds. Probably no thinker ever dominated a country as Hegel ruled Germany at his death and, since 1860, he has reconstructed the standpoint of philosophy in the English-speaking world.

Pessimism. Contemporary with Hegel was Schopenhauer (1788-1860) who excogitated a system of voluntaristic, non-rational pantheism, identifying reality with the aimless insurgence of a 'Blind Will.' Man, a creature of this Will, "ought to be miserable, and is." This Pessimism was developed further, thanks to elements derived from Fichte and Hegel, by Hartmann (1869) in the last great system produced in the 19th century. Nietzsche (1844–1900), who stands too near us for final judgment, was influenced by Schopenhauer. On the whole, the Pessimists are notable, like their contemporary Wagner (1813–1883), the composer, for their contribution to Esthetics.

The Mid-Nineteenth Century (1830-70). After Hegel's death, contentions rent his school, and the primacy passed for a little to another type of thought. Indeed, French Positivism (Comte) and Eclecticism (Cousin), British Utili-

tarianism (Bentham, the Mills) and Evolutionism (Spencer), Scottish Common Sense (Stewart, Hamilton), and German Materialism (Vogt, Büchner) show, the world was aweary of systematic construction, because its interests were taking another direction.

The change, due in things practical to political and economic transformations, is traceable in the intellectual world to the advance of the positive sciences. Chemistry (Dalton, Liebig, Wöhler, Pasteur), Biology (Schleiden, Schwann), Physiology (Js. Müller, Virchow), Physics (Weber, Helmholtz, Thomson, Rankine) were extending the mechanical view of the universe with amazing rapidity. And the consequent opposition to Vitalism, a sequel of Schelling's nature-philosophy, eventuated in the controversy about Materialism (1852), when it seemed as if this hybrid, born of bad science and worse metaphysics, was about to inherit the kingdom of thought.

The leading thinker of the period, Lotze (1817-81), peculiarly competent to estimate the claims alike of Idealism and Materialism, essayed to stem the tide with a mediating system of Ideal-Realism, which has exerted no little influence, especially upon theological opinion. But, despite his unique command of scientific and philosophical knowledge, he failed to deflect the course of thought, which took its own way in the direction of a return to Kant.

The Later Nineteenth Century is a story of trends rather than of systems. Setting aside feeble and freakish tendencies, four influential movements may be detected. From 1866 German Neo-Kantianism and Anglo-American Neo-Hegelianism, both based upon Kant, are contemporary and opposed movements—the one swinging in the direction of Positivism, the other of Idealism.

From about 1895, French epistemological Spiritism (Boutroux, Bergson), and American Pragmatism (James) assume importance. While, throughout the whole period signs multiply that the scientific camp is not at ease in the zion of its crude philosophy (Romanes, Pearson, Lodge, Ostwald).

At the same time, too, the development of the historical sciences and their application to philosophy, as in German Kant 'philology' and in learned monographs upon periods and individual thinkers, substituted scholarship for original philosophical thought, a process against which Nietzsche entered violent protest.

Conclusion.—Finally, so far as we—who "cannot see the wood for the trees"—can now judge, the principal schools at the outset of the 20th century are the following:

The implicit Positivism of the Neo-Kantians is growing more explicit and, as it represents a standpoint already overpassed, this movement is either flagging or losing its initial unity.

The Neo-Hegelian movement, though shorn of its great personalities (the Cairds, Green, Wallace, Morris), is still entrenched strongly in the British and American universities, where it is exerting influence more, perhaps, on the practical (ethical, religious, politico-sociological) side than upon that of pure metaphysics.

The French Spiritist school of Bergson dominates France already, and is attracting attention in other lands particularly from men whose work lies ahead. Pragmatism has met success chiefly in criticism of orthodox academic Idealism, and its own investigation of its philosophical presuppositions belongs to the future. Finally, under the leadership of Eucken, the most widely read of contemporary German thinkers, a new form of Idealism, strongly sympathetic toward ethics and religion, is making itself felt powerfully.

The near future belongs probably to an Idealist school of this type, and to the French Spiritists, who are to be carefully distinguished from the English-speaking Pragmatists on account of their greatly superior analysis of their philosophical position.

PSYCHOLOGY is the name given to the scientific study of the mind; it takes the place of the old speculative theory which was called "mental philosophy."

The following great topics are all fruitfully developed in modern psychology, and all legitimately represent the newer movements of contemporary thought:

(1). *General Psychology*, or the general principles of mental action, considered from the *Experimental*, *Genetic* and *Social* points of view.
(2). *Experimental Psychology.*
(3). *Physiological Psychology.*
(4). *Variational and Statistical Psychology.*
(5). *Child Psychology.*
(6). *Comparative and Animal Psychology.*
(7). *Social Psychology.*

All of these, it should be added, are concerned with the normal or healthy mind. A corresponding series of investigations are conducted upon the abnormal or diseased mind. Mental Pathology or Abnormal Psychology also pursues the same methods of positive scientific investigation, and it is now, as never before, making profound and far reaching discoveries, not only in the realm of mental disturbances as such, but also indirectly in that of normal psychological functions.

In addition to all this, the science of Practical or Applied Psychology is now finding itself. It will in the future tell us how to apply psychological principles in the practical matters of Education, Law (Testimony, Punishment, etc.), and Practical Life in General.

General Psychology.—By General Psychology is understood the general points of view, together with the general principles of mental action, which we make out after all the details of the special branches of work are duly taken account of. These properly come last, that is last in the order of formulation; but it is well to state them, as they are stated in the text books, as justified by the detailed researches of many investigators. We shall accordingly select the most generally admitted and safest conclusions for presentation here.

Intellect, Feeling and Will.—It is generally conceded that we must, at any rate for convenience, recognize as valid the division of mental processes and states into three classes. We have in our states of mind generally three sides or phases which seem distinguishable, although not actually separated from each other. "We know something" and this function of knowing is called "Intellect" or the "Intelligence"; "we do something" and this function of action or purpose is called "Will"; and "we feel somehow" a state called "Feeling" or "Emotion." The principles or laws of mental activity are formulated about these three great functions or concern their relation to one-another. In many of the textbooks these are taken up in order for separate consideration. The genetic point of view has come, however, to cause a quite different method of approach to the subject. It is that of tracing out the movement of the mind as a whole, as it grows in complexity and organization, and at each stage of its development pointing out the actual contents and motives then present. This enables us, also, to discover when and how new modes of process come into being and what parts they respectively play in the constitution of the whole.

First Stage of Mental Life.—By this plan, we can say that in general the earliest stages of the mental life are given over to a mass of sensations, colored by high feeling, and that with this there is consciousness of the play of instinct and reflex muscular action. The child lives a life of movement, largely of an unintelligent kind, made in response to stimulation from the world about him. Of this more will be said under the heading of Child Psychology; here we may simply point out that he has a certain consciousness of his own activity, which comes to represent his interest and that this is directed outward toward the external world which in turn comes to represent the things or objects which interest him.

If we analyze these two factors further we find that the active factor, the side of "interest" includes the Instincts, Impulses, the Appetites, and the native emotional Expressions—giving, when considered together, a great mass of active muscular processes of response which the child does not have to learn, but with which his organism is naturally equipped.

The Instincts are inborn ways of acting, inherited, and generally necessary to life: such as the sucking instinct, for example.

The child is not so well off as the animals are in such Instincts, for the reason probably that in the course of evolution the organism has become more plastic and less fixed, to enable the human being to learn intentionally to do things for which the animals must rely upon their instincts. Intelligence, that is, has taken the place of fixed instinct.

Impulse and Appetite. The child has, however, many Impulses which he inherits—promptings to a certain sort of action—and his education perfects and refines these impulses.

His appetites, however, are definite and strong, and these are provided in his hereditary equipment. The fundamental appetites of a physical sort—hunger, thirst, need of exercise, and later on sexual craving—are supplemented in time by the intellectual and sentimental appetites, such as emulation, jealousy, curiosity, pride, etc.—all of which provide for the intellectual and emotional life, the impulsive power that appetite proper does for the physical.

With instinct and appetite we find a third great class of active or impulsive tendencies coming at the outset into play—and destined never to leave the growing individual—the native emotional tendencies and Expressions.

Emotional Expressions. There are certain great fundamental emotional reactions given us by nature: fear, anger, hatred are typical, and with each there is a native inborn kind of physical expression. Darwin's book *The Expression of Emotion in the Animals and Man* gives cuts showing these expressions of face and figure: and from these illustrations, one can see their sameness for man and the lower animals.

Darwin, too, pointed out that these expressions are no doubt due to gradual evolution, since they are useful attitudes to the animal, and originally grew up for the purposes of defense and offense.

Interest. Treating these sorts of native actions together—as being the response the organism makes to a stimulation— we call them the "Interest." It varies in kind and amount, of course, with the sort of sensation which calls it forth. A sound calls out one mass of impulse for interest, a sight another, a taste a third. So in each case the sort of stimulation is as important as the activities it arouses. Nature plays upon the organism and upon the mind in a variety of ways; but she finds the organism and with it the growing mind responding with a reaction suited to the sort of strokes she makes. Food starts the appetite of hunger and a mass of reactive processes associated with it; and so with each sort of stimulation.

This is the state of things then at this early period of the mental life, in respect to feeling and will; they are present in a mixed mass of inherited active and muscular tendencies adapted to meet the great stimulations of the environment.

Intellect. Over against this we find the beginnings, equally crude, of Knowledge or Intellect. It belongs not to the interests, but to the object upon which the interest goes forth; for knowledge always refers to an object.

In its earliest stages knowledge seems to be limited to a very vague and uncertain discrimination. Some hold that a discrimination is necessary to enable the creature —say the child—to react appropriately. But the truer view is probably that the organism reacts appropriately by its native response, and it is this accomplished reaction that constitutes in consciousness a germ of discrimination. Having acted differently in two cases, as his organism is equipped spontaneously to act, the child feels the difference between the two situations.

But it is still true that there are complexities and differences within the sensations or other stimulations themselves; the senses are fitted to report complex stimulation. The smallest field of vision is an extended and complex surface. The datum given in sensation is probably a more or less uneven and discontinuous mass; and this is sufficient to serve as the beginning of differentiations and relations for consciousness. In other words, the simplest state of knowledge or cognition is probably a complex thing; and objects are distinguished on the basis of their differences of make-up.

This is the sort of thing, then, the child's mind is at the earliest stages; that is, these are its contents: a complex presentation or something presented before it and projected upon the screen of consciousness, and a mass of obscure, gross, highly pleasurable or painful muscular sensations, due to appetite, impulse, emotional reaction upon this object, the latter constituting a dawning interest. It seems a meagre start—but it is a start.

Second Stage.—Later on, the individual comes into conscious possession of himself; and the processes which were at first merely instinctive and organic take on a deliberate and intentional character.

On the side of action, the impulses and instincts are in some measure regulated with a view to conscious ends and the immediate cravings of appetite are controlled under the leadings of social convention and personal self-control. In psychological terms, "ideo-motor" action, (action guided and controlled by ideas) takes the place of "sensory-motor" action (action made in immediate response to sensation).

But in the period which is still relatively early in the life history of the individual, impulses of a distinctively novel and most interesting sort come forward; notably those of Imitation and Play, by both of which the social life of the individual is enormously advanced.

Imitation.—Next we have a sort of action, controlled by ideas or presentations, by which the imitator reinstates the same result as that which he imitates. It has been called a "circular" or self-repeating reaction, since it reinstates its own model, and tends to perpetuate itself. It is by this type of action that most of the active learning of the individual proceeds: he seeks to do himself, in an imitative way, what his lesson or model requires. Thus it may be said not only that the practical learning processes are imitative, but also that imitation is the essential means and method of all learning. Even the deliberate or voluntary action of the later stage proceeds upon this, since volition is only the conscious adoption by the individual of the copy or end as his design, and his action is the attempt to realize it, actively and imitatively.

In Play another remarkable engine of advance is seen. The children and the animals play not merely for pastime, not merely for fun, or to use up their surplus energies, as was formerly supposed; but for something much more important. They play in order to exercise their growing powers while in their imperfect and incipient stages, and so to prepare for the serious and strenuous life which awaits them. All the plays of the young animals are crude endeavors in the line of the serious life activities of their kind. Play, then, becomes an impulse of the first importance. Through its exercise, the essential habits of a species are trained beforehand, and the individuals made ready for their parts in the life of the group.

Emotion.—Along with these developments in the life of action we find a deepening and widening of the range of Feeling. The fundamental emotions—fear, anger, etc.—lose their compelling and violent character, as they become refined and controlled by the play of ideas and deliberate ends. New emotions appear, due to the complications of life, principal among them being the great series of self-emotions, which spring up as the consciousness of self becomes clear and defined. Of this great fact of self-consciousness we are to refer again under the heading of Social Psychology; but here we may assume its reality and point out its emotional accompaniments.

These emotions terminate upon one's self and upon other selves. They seem to begin in certain native reactions coming down probably from ancestral social life; such as bashfulness, timidity, social sensitiveness, the rudiments of personal pride, and the beginnings of feelings of rivalry, jealousy, etc. They go through very interesting developments, which the psychologists have traced out, and flower in the personal emotions which play so enormous a part in our active lives. Pride, humility, conceit, self-depreciation, vanity, timidity, modesty, shame, jealously, remorse, hope, emulation, wrath, indignation, and a hundred other shadings of emotion which reflect states of mind about one's self and one's place in the mind and esteem of others—all these come to enrich our life and to torment our ease.

Here then is a second great stage in the envelopment in the life of feeling and will. It is characterized by a loosening of the bonds of the organic and instinctive and the beginning of a free organization of the factors of emotion and desire under their own rules of procedure. The mental life becomes more spontaneous, self-conscious, personal, in the agent's own thought of it, and the material is prepared for the final stretch, still to come, when the agent finds himself taking hold of his own nature and showing himself an active and deliberate master of his subjective forces.

On the side in the intellect, the function of knowledge, the transformation is no less striking. Knowledge becomes, in its way, also free; free from control by the present facts of the world.

We saw that at first knowledge consisted of a complex presentation or sensation, due to the presence of a real thing or stimulus. This is now succeeded by a series of functions by which the real thing becomes more and more remote, and the knowledge proceeds by a series of images or mental symbols that stand in place of the thing.

Memory and Imagination.—Memory images, first of these, are revived in the mind and treated as representing the actual things they stand for. They are also convertible again into the real things: for I can prove my memory to be correct in a given instance by going to the thing and finding it as my memory reports it. Memory then serves to enable us to carry about with us a fairly good picture of the world, and of the past; and so to react well and adjust our conduct to what is distant in time and in space.

With memory comes a further freeing of the knowledge faculty in Fancy and Imagination. We build up a fancy world, as well as reproduce a real one. By this faculty we are able to extend our experience in the way of anticipation and assumption of what novelties may lie still before us; and be armed for the possible and the unforeseen. This becomes extremely important also later on, for in it by this exercise of the imagination—in erecting schemes or anticipatory pictures of what may be true—that the use of hypotheses and conjectures in science and art, as well as in practical life, is made possible. By anticipation in imagination we meet the world half-way, and discount its meaning. All the great discoveries of science, and all the great creations of art are due to the imagination, which projects its forecasts into the unknown and predicts what is still unconfirmed. Darwin imagined the law of natural selection; Newton imagined the principle of gravitation; and hundreds of men have busied themselves in confirming what these men imagined. Columbus imagined that the earth was round and Leverrier that the planet Neptune existed where it did; and the actual discoveries were motived entirely and alone by their predictions.

These great modes of mental function, Memory and Imagination, constitute together what we may call the Imaging Faculty. Psychologists have worked out to some extent its laws of operation.

Association of Ideas.—First of all, we note the principle of the "Association of Ideas," a principle imagined by Aristotle, the Greek, in almost its present form and confirmed through all the course of development of psychological science. According

to this principle, ideas, or states of mind generally, which have once been in the mind together tend to recall each other. You meet a man and you think at once of the conditions under which you saw him before. It is a principle that has many forms—association of things that resemble each other, of things which are in contrast one to the other, of things which stirred up similar emotions, etc.—but all of the cases come back to the one principle, which I may state as follows: A whole state of mind tends to come up again as a whole, so that when any part of it comes up, the rest of it tends to come up also.

Thus stated we have the general law of the revival of mental contents. It is subject to many variations and inconsistencies in actual life; but in general we may say that, but for interfering processes, this is the law we expect the revival of ideas to follow. It is seen at its best when our thought is comparatively lax and we allow the mind to go as it will; then we find things "popping up," as we say, simply and purely because of their association with other things. A white goat suggests a white horse, and the white horse a red-headed girl!

But we have seen the operation of the law of association is interfered with in actual life; the interference is a thing of the first consequence. It introduces a second great principle of the movement of knowledge which we may now state under the heading of the principle of Apperception or of Interest.

Apperception or mental Synthesis, recognizes the presence of the active process pointed out above as present in the simplest knowledge and constituting a dawning personal interest. All the active processes of our being—instinct, impulse, desire, active temperament, etc.—become consolidated in certain great habits and interests which represent the direction of personal preference and probable choice. Now these tendencies and interests are present all the time and ideas always stir them up. The mind is not merely a platform for the play of ideas which are associated; not a theater merely for "pictures" of fancy and memory. On the contrary, it is an active function, a series of responses of the self to its experience: and there results, from the presence at any time of a bit of knowledge, an organization about this knowledge of the acts which the interest and habit of the individual select and hold. All the possible associations have not the same chance; some are not found interesting, others are. Those which are interesting to one person would not be to another whose habits and interests are different. So we have to recognize that there is a selection, a preferential working over of the material of association in each case, with reference to the interests and purposes of the individual.

Looked at on the positive side, this may be called Apperception or Synthesis. The items which do receive entertainment and attention are organized, apperceived, made up in a sort of synthesis characteristic of the person, and of the present state of that person. For example, I see a bit of china, and I think of my collection of porcelain, and the possible acquisition of this bit for the collection; a merchant thinks of sales and market prices of china; and a servant girl thinks of broken bits and scoldings by angry mistresses, while a potter has in mind processes of manufacture and means of molding and coloring clay. All these are different apperceptions, each due to the individual's habitual interests, and all differing from one another. If I need china my apperception changes from the collector's to the purchaser's interest; if I break it, I come under the reign of the servant's interest of terror and concealment; if I visit a porcelain factory, I take up the maker's interest, and so on.

Putting this as succinctly as possible, we may say that each case of a new state of mind is a new organization of selected material of association, taking place under the dominance of a personal and active interest. Knowledge progresses by a series of such organizations, constantly reforming and recasting the materials of the imaging faculty in new synthetic forms.

Attention.—The instrument of this organization, as of all mental selection and construction, is the Attention. The attention is most easily caught in the line of interest; and on the other hand, the interest follows that which has been or is attended to. So many think the attention is an organ of the life of active interest; a sort of focusing and magnifying glass of the active life, by which the interests and preferences of the person are emphasized and fixed, and by which new material is selected and sifted out from the mass of neutral and uninteresting details.

This sketch of the mental processes involved in the second stage shows an advance in two ways: a wonderful freeing of the contents of knowledge from the direct presence of objects themselves and a corresponding freeing of the inner activities from the organic fixity of instinct and native reaction. The result is a new mode of organization in which the free material of association is sifted and selected, and adapted to the requirements of a developing personal interest. In this latter fact, we find the growth of an inward control by the mind over its materials, in contrast with the external control formerly exercised by the objects themselves. This may serve as point of departure for a characterization of the third and crowning stage.

The Third Stage.—The mind, however, does not stop with the partial conquest of itself and its contents described as achievments of the second stage: it goes on to better things. It does not even become free from its need of thinking true to the facts, but still it comes to know the meaning of the facts and to enjoy the values these facts may be made to embody.

Truth.—The new departure on the side of knowledge may be first spoken of.

It consists in the sort of knowledge we call truth — this is now attained. Truth is, of course, simply confirmed ideas, ideas found to hold good; but in this simple statement there is wrapped up a mass of psychological process, as a little analysis will show.

In the first place there must be the process of holding ideas up critically before the the mind, recognized as equally ideas, and of passing judgment upon them—deciding on evidence which of them are reliable, which are fit to accept, which are true. This is the great process of reflection. It involves the sort of knowledge called "judgment," in which the advance is made from simple acceptance, simple agreement to a suggestion, or supposition, to the reasoned and reasonable conviction of truth. This is the prime faculty of man, and it is probably true that the animals have at best only the rudiments of it, as the next statement to be made will make plain.

This statement concerns what is called the "general" notion or conception. We find that the mind does not judge, pass upon, reflect upon, each case of experience for itself: that would be endless and ineffective. It treats its knowledge under headings, classes, general terms, by which a group of cases are hit off as deserving the same treatment and having the same standing. What is true of "horse" is true of each horse. So our process of judgment proceeds by setting up a "general" concept, with the conditions under which it is found true, and then assigning cases, as they come up, to their proper general classes. Thus knowledge is greatly abbreviated and in its extent enormously advanced.

It is this capacity that the animals seem to lack, at least in its full workings—the power to select out the salient features of a lot of cases and to treat the single cases apart from their individual details, applying to each the general meaning.

Under this all the processes of logical thought follow. The human mind becomes a thinking function, projecting hypotheses, confirming general notions, and establishing truths for its edification and guidance. This on the side of knowledge or intellect.

With progress in the sphere of Intellect go corresponding advances in Feeling and Will. The emotions of the grosser sort are followed by refined sentiments aroused by the ideals of the imagination: the sentiments of Art, Religion, Morals. On the side of Will, remote and distant ends, projected by the imagination, succeed to and supplement the more direct motives of personal advantage and social prudence. The whole mental life, in short, takes on those forms of generality and ideality which mean for human beings the best things and the best conduct.

Experimental Psychology.—As this title indicates, Experimental Psychology proceeds by actual experiment. Laboratories for such experimentation may be seen in operation in any of the larger universities of the United States—this country being well in the lead in the matter of equipment and amount of work done in this subject.

Psychological experimentation consists in so arranging conditions that the mind of the "subject" (the person experimented upon) is affected by definite stimulation (such as lights, colors, sounds, words, etc.,) and as variations are made in these stimulations in definite ways the resulting variations in the mind are reported verbally or recorded on special apparatus. The method depends upon the constant relation between stimulation made through the nervous system and the senses, and the mind or consciousness of the subject—a principle spoken of again hereafter in the notice of physiological psychology.

By this general method many different and interesting problems have been investigated: duration of mental states, qualitative changes of sensation, intensity variations with variations of intensity of stimulus, fidelity and time conditions of memory, rhythm and time perception, force, direction, and co-ordination of movement, etc., for the details of which the text-books of experimental psychology should be consulted.

Results.—It must be admitted that the expectations of remarkable discoveries by this method have not been realized: the results have been mainly the establishment of facts of detail in the matter of sensation and of the simpler processes of ideation, such as memory and association. The limitations are so definite that the more complex processes can not be brought

within them—the more subtle changes of feeling, desire, suggestion, etc., producing such variations that the experiments can not be well controlled. Furthermore, the results stated in figures or plotted in curves, have to be interpreted in terms of introspection or direct consciousness.

The subject has to decide when such and such conditions of the experiment are fulfilled—when colors are the same, when the intensity of a sound changes, etc.—and all these determinations are subject to striking individual differences. Indeed, one of the most interesting results in experimental psychology has to do with the establishment of the laws of individual variation called in astronomy "personal equation."

The most valuable results so far attained are those in which physiology and psychology have joined hands: that is, in the investigation of the laws of sensation. Fairly complete and very valuable accounts are now possible of the physiology and psychology of the special senses, and of muscular action. At the basis of this co-operation between physiology and psychology lie certain principles of Physiological Psychology, our next topic.

Physiological Psychology.—The association together of the two terms of this heading is sufficient to indicate the main problem of this line of work; it proceeds upon the assumption that the mind is connected in some regular way with the body, and that changes in the one are regularly associated with changes in the other.

This assumption is in fact definitely made: it is formulated in the principle known as the "Uniform Psycho-physical Connection," or as "Psycho-physical Parallelism." It serves simply to state that there are many observable facts serving to show that all brain states—states of the "cortex," with which consciousness is in some way associated—have along with them states of mind; and the reverse, that all states of mind have with them states of the brain: and further, that this connection is uniform in the sense that the pairing is always the same term for term, it remains uniform or constant. The same state of mind has the same brain concomitant yesterday and today, in me and in you; and it can be counted upon whenever either one of the two is capable of being observed.

Mental Parallelism.—If we indicate the passing series of states of your mind at any time by the letters a, a′, a″, etc., we may then say there is a series of states of your brain going along with these states of the mind each for each: these we may designate by the letters b, b′, b″, etc. The term "parallellism" is used for the relation of the two series to one another. If we write one series so as to make a line we may write the other in a parallel line, thus:

Dotted line, mental states a a′ a″ etc.
Solid line, brain states b b′ b″ etc.

each line being made up of the terms of the two series in pairs.

This diagram illustrates the principle of parallelism in the individual organism, the lines run parallel from birth to death.

But there is another interesting application of the principle due to the adoption of the genetic point of view. Not only does it hold for the individual's growth, but if mind and body have evolved together in the animal world, it should hold also for the relation of each animal's grade of mind—its relative organization and capacity—and the grade of body or brain of the same animal species. That is, a dog's mind and no other is found in a dog's body; an oyster's mind in an oyster, etc. Taking this for granted, we may arrange the animal species in a series, from lower to higher, again letting the mind terms be denoted by A, A′, A″, etc., and the brain terms by B, B′, B″, etc., the two being again parallel. If we erect these two lines vertically, then the place of any particular animal will be higher or lower on the vertical, and the parallelism of that animal's mind and brain may be indicated by the parallels drawn horizontally across the verticals, thus:—

For example, dog, let us say, illustrates parallelism as shown in the horizontals, and his place in the larger racial parallelism is shown by the place at which the horizontals cut the vertical lines.

These two applications are known as "individual" and "racial" parallelism respectively; they are the two great applications, as I have said, of the principle of "uniform psycho-physical connection."

It is evident that with these suppositions, all sorts of investigations may go forward, since experiments on either of the two, mind or body, may be made in order to note the results on the other. For example, emotional changes may be experimented upon through measurements of blood-pressure; experiments upon the brain centres may lead to important discoveries in connection with the sensations correlated with these centres, etc. Indeed, certain of the most remarkable results of modern diagnosis and surgery have resulted from this method of research. Visual indications or symptoms justify operations on the brain, and defects of speech justify far-reaching deductions in the way of diagnosis of nervous and mental troubles. The fruitfulness of result in this department is in striking contrast to the meagreness of result of experiments conducted in the laboratory upon normal subjects.

Variational and Statistical Psychology.—As the foregoing lines of work assume a certain normal and average psychology, common to all individuals, so there is a sort of investigation which assumes variations or differences among individuals and sets out to investigate these variations.

It has two important lines of investigation in hand: first to establish the amount and kind of variations, and then to discover the laws of variation, by the use of which the differences may be allowed for in the theory and treatment of the normal. The former of these investigations gives Variational, the latter Statistical Psychology.

The study of variations has led to certain interesting results. Mankind, it is found, shows certain types more or less distinct, in temperament, in memory (the sort of images preferred by memory), in the relative dependence upon muscular processes (the "motor" being contrasted with the "sensory" types), hereditary and impulsive vs. deliberate and habitual agents (as in the classification of criminals), etc. The differences are of great importance in practical life, and when this line of work is better developed, the basis will be found for practical measures in education, penology, etc., suited to individuals of different heredity and training.

Statistical psychology, on the other hand, reaches the conclusion that such variations occur in certain relative numbers and are of certain definite magnitude—like biological and other natural variations—and that the laws of the "average" apply about as well to the mind as to the body or to events of the physical world. This department of work affords striking proof of the validity of the application of experimental and positive methods to the study of psychology.

Child Psychology.—The introduction of the evolutionary or genetic point of view has made it plain that the child is, in a true sense, father to the man; and that, in an equally true sense, the animal is father to both. This was recognized earlier for the body than for the mind. It has sometimes been made a point of pride, human pride, to reserve the mind, with its extraordinary faculties, from the concession which allowed animal ancestry to man.

It is evident, however, that if we once admit the concomitant growth of mind and body together in the individual, and the truth of a uniform connection between them, the conclusion must follow that mind has evolved in the animal world along with the body. This we have seen illustrated above in the statement of racial parallelism.

Through the confirmation of this supposition we find established two departments of mental study, Child and Animal Psychology.

About *Child Psychology*, we now know a great deal, both in detail as to the order of development of the faculties in correlation with the physical powers, and in general as to the principles of mental development. The former can not be given here: although many of our statements in the section on General Psychology are founded directly upon such details. But in the theory of mental development, as resulting from the study of child-life, certain principles stand out with great clearness.

The principle of *Imitation*—so marked in some animals and in the child—has been formulated in a way that places it at the basis of mental advance. All learning by the child being imitative, there is no other road to mental acquisition. Speech, writing, acts of skill, all active functions of hand and limb, are evidently so: but it is not so clear on the surface—what psychology now teaches—that it is only through functions of the same type, functions that serve to secure the reproduction of a model within the mind—that is imitative functions—that all are acquisition, held and made habitual. Even volition, that apparently independent act of self-determination, is found to be a complicated case of the holding up before the mind of a model or end, and the endeavor to realize it, that is, to imitate it. The rise of the very sense of Self, the centre of the person and his interests, is found to require the imitative absorption of the models of the social environment—as our notice of Social Psychology hereafter will explain. Through imitation, great habits are laid down and the mental life is entrained in lines of permanent and conservative activity.

Over against this, there is another great principle, that of *Invention*, requiring accommodation and change of habit and the bringing forth of what is new. This is formulated genetically as due to Variations; and these variations are subject to selection through the principle called that of Trial and Error.

An example will make it plain. The child tries hard to do something—imitates its performance. His hard trying, repeated again and again, produces all sorts of muscular changes and variations—excessive movements—that approximate the combination he is striving to produce.

From these excessive discharges those "happy hits" are secured that bring him nearer his goal; and so, by nearer and ever nearer approximations, he improves and refines his result. Thus the act is gradually learned and perfected by pain and effort.

This is called the process of "trial and error": the child or animal tries and tries again, and so reduces and finally eliminates his error. This has come to be considered the universal method of the acquisition of new actions—imitation with variation. New muscular coördinations are not at first possible, but are gradually shaped by trial.

One has only to observe the child's convulsive movement, of hand, limb, body, and tongue in trying to copy a new word, or perform a new act of skill, to see the process going on. One's own efforts to pick up a new action, such as type-writing, reveal this gradual shaping process in operation.

These two principles of development dominate the child's growth, and most of the more detailed operations of his career may be considered as illustrations of them.

The main lines of acquisition achieved by the child have already been sketched under the heading of General Psychology.

Animal and Comparative Psychology.—The second great department of Genetic Psychology, springing from the fruitful application of the theory of evolution to the mind, is Animal Psychology, and with it goes the comparative study of the minds of the animals of different grades of mental endowment among themselves, and with man—Comparative Psychology.

This sort of work has recently undergone the transformation that the other departments of psychological work also show: it has passed from the stage of mere analogy and anecdote about animals—the wonderful performances of pet dogs and the discourses or profane ejaculations of caged parrots—to scientific observation of animals' behavior and habits under regular and carefully planned conditions. The experiments have included the observation of young birds from the hatching onwards, the teaching to cats, rats, dogs, monkeys, etc. of problems under conditions of carefully tabulated and controlled experiment, the testing of instincts, such as the homing and migrating instincts, observation on color and other sensations of animals, indeed, a variety of exact and painstaking researches have been made. The older interpretation of the actions of animals, after analogy with similar appearing conduct of men, and the supposition of high mental faculties wherever the result seems to allow it—all this has given way to interpretations based on the presence of mixed organic and conscious functions, largely instinctive, and the rule to adopt always the simplest and most direct explanation. This may be carried of course to fanatical extremes—as in cases where the psychological explanation of an animal's behavior is the simplest and most direct—but it has brought in an era of caution and care, under which the growth of sound work on the animals has been rapid.

In general we may say that the results confirm the principles of psychophysical connection and of trial and error which have been stated above; and also that the evolution theory has again vindicated itself in this work.

Social Psychology.—One of the currents of modern thought which has tended to work the revolution of psychological study is that of Collectivism. This point of view emphasizes the normal relationship of every man to his fellows, and refuses to consider him as an isolated and unsocial being except in unusual and exceptional conditions.

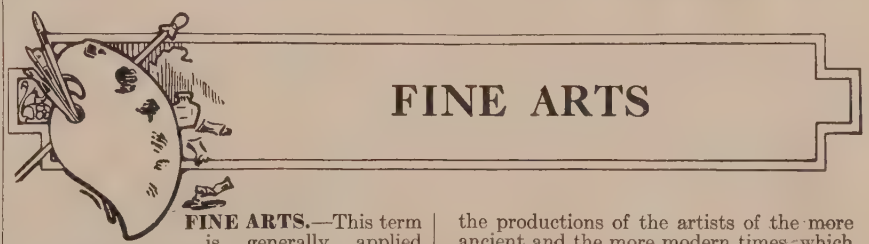
This point of view has not only influenced psychology; it is to investigations in social psychology that its establishment is principally due. Careful and minute study of the child's mental development has shown that in the most essential phases of his growth he is dependent upon the presence and stimulation of his fellows, and that he can not grow up to be a normal adult without becoming at the same time a social fellow and companion. This may be made more clear by pointing out certain of the important lines of indebtedness that every individual contracts to his social group.

The Sense of Self.—The materials of the sense of self lie in his social environment: he absorbs the characters of personality from his experience of the actions of others, and so comes to understand himself. He reads the happenings of his own inner life—his pains, pleasures, efforts, struggles, etc.—as constituting within himself an agency like that of the other person. By this give-and-take with the personalities of his family, social group, and kind generally, he gradually forms a thought of self, the material of which has been taken over from others and read in subjective terms. This in turn is again read into the others as a self identical with his own.

The result is an intimacy of relation—a very identity, in fact—between the self and the social fellow. It comes by natural processes of growth. The individual thinks of himself as involved in a network of social relationships, and all his personal emotions and interests terminate upon this socially determined self. It is only later on, in his mature reflection, and in special circumstances, that he comes to think of himself as a separate individual whose interests are different from and opposed to those of the social group as such. Individualism is a later thing and derived; collectivism is the natural thing and original. The family tendencies, the racial proclivities, the natural solidarities of group life, the *esprit de corps* of school, church, fraternity, all testify to the naturalness and spontaneous formation of the social sentiment.

Social Heredity.—Second, in the principle of social heredity, psychology has made another important advance. According to it, the contents of civilization, culture of collective life however crude, are socially handed down and imitatively absorbed. Every child inherits by this absorption all the riches of the past as completely as if it were all physically transmitted to him.

Third, there results *a common value and meaning*, in the mind and estimation of the members of a group, attaching to all the things of life and knowledge. This is reflected in two great sorts of "Community," "Community of Interest" and "Community of Knowledge." The former of these furnishes the foundation for the current political and social theories which emphasize the collective interests and agencies of society. The latter enforces the same point of view in logic and philosophy, finding that even the individual's knowledge is not "private" to himself, but that both in acquisition and confirmation, all the judgments and convictions of the individual are socially prepared for and socially vindicated.



FINE ARTS

FINE ARTS.—This term is generally applied to those arts in which the artist seeks chiefly to give pleasure by the immediate impression produced on the mind by his work. These arts are thus distinguished from arts which are designed to answer some practical purpose, and so have been termed *useful*. By some, the term fine arts, which is generally taken to include those which appeal to the eye and ear alike, has been limited to the arts of *painting*, *sculpture*, *architecture*, and *music*.

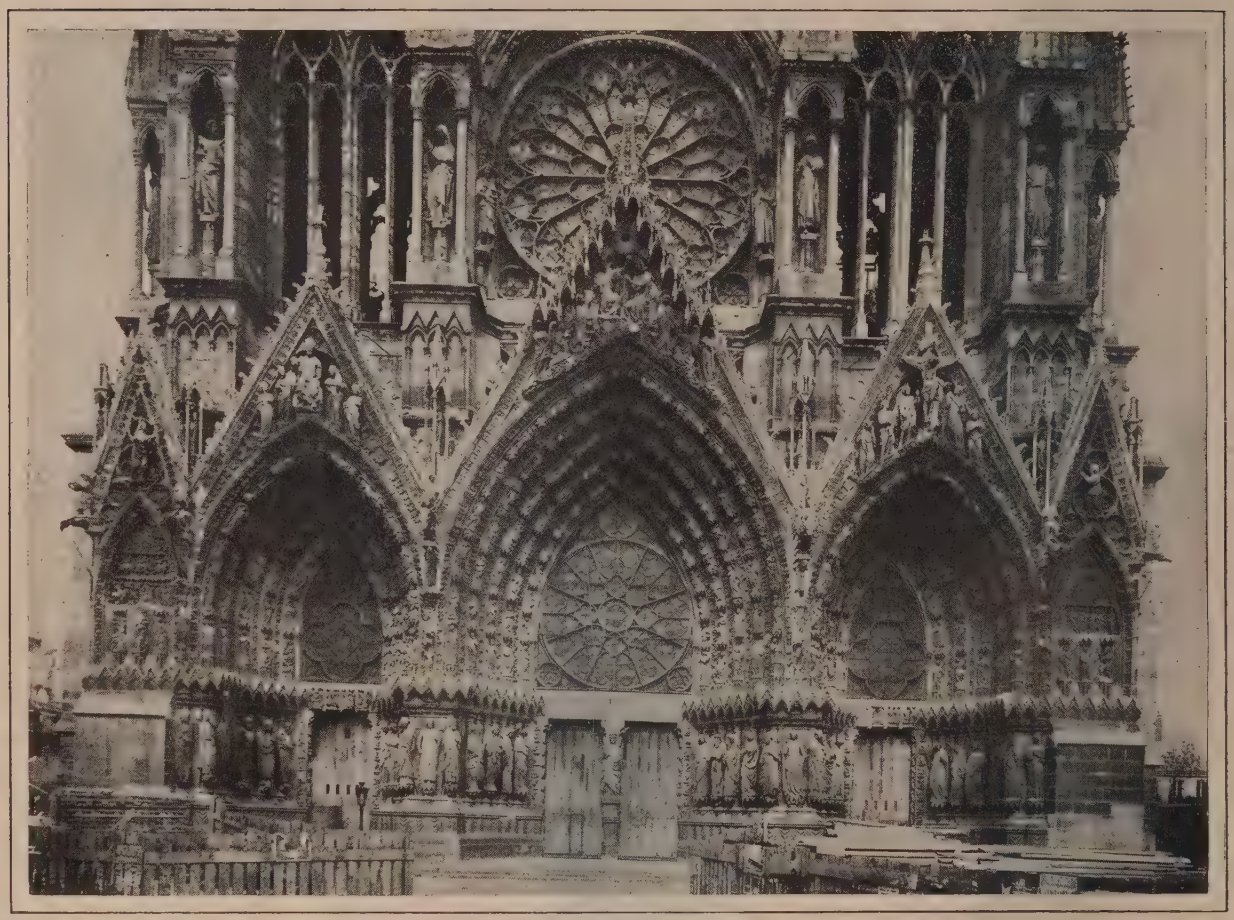
The minor fine arts may be defined as those dexterities and industries which add to the quality of usefulness certain elements of pleasure and beauty, such as embroidery, ceramics, glassmaking, goldsmiths' work, jewelry, and cabinet-makers' work. Poetry, dancing, acting, and studied eloquence, inasmuch as they are related, are classed as fine arts.

Antique Arts.—In its general acceptation the term *antique art* is understood to be that of a period antecedent to the revival of the classical studies in western Europe, or before *renaissance* of the arts from their assumed period of lethargy. There was, in fact, a distinct character about the productions of the artists of the more ancient and the more modern times, which was sufficiently marked to produce in the best of them a separate style of art, and which has lead to the establishment of the schools of the so-called antique and modern styles; the mediæval arts form, as it were, an intermediate class, which was as distinctly marked as any of the other styles. The antique school was distinguished by an anthropomorphism and a divination of the human form.

Mediaeval Art was formed upon, and characterized by, a species of contempt for the human figure, and an inspiration after an ideal perfection, and therefore there is something vague and undefined in its efforts to represent the objects it copied.

Modern Art has united the indefiniteness of its aim with that clearness of the perception of its objects which is so marked a characteristic of its productions.

The antique schools date from the dawn of civilization to the end of the tenth century; the mediæval schools date from the tenth to the fifteenth century; and the modern schools have continued the traditions of the masters of art to the present time.



RHEIMS CATHEDRAL, FRANCE

One of the grandest Gothic structures in Europe, built 1212-1430. It contains splendid rose windows, and a mass of beautiful statues and monuments. Charles VII. was crowned here, with Joan of Arc standing by his side.

ARCHITECTURE.—The art of building or constructing is coeval with the earliest dawn of civilization, and may be said to present largely the history of the human family written in stone, brick, or other durable material.

Architecture is divided into three classes —civil, military and naval:

Civil architecture has for its object the construction of any public or particular buildings intended to meet the requirements of an organized society. It is sometimes divided into *domestic, rural* and *monumental.*

Military architecture relates to the erection of works necessary to the defence or attack of cities, harbors, or countries.

Naval architecture relates to the construction of marine vessels, whether intended for purposes of war or commerce.

Of these classes most general importance attaches to civil architecture, which usually finds a place as one of the branches of the so-called Fine Arts.

Greek and Roman Orders.—To Greece we are indebted for the three orders of architecture, the *Doric*, the *Ionic*, and the *Corinthian;* Rome added two others, both formed out of the former, the *Tuscan* and the *Composite.* Each of these has a particular expression; so that a building, or any parts of one, may be rude, solid, neat, delicate, or gay, accordingly as the Tuscan, the Doric, the Ionic, the Corinthian, or the Composite are employed. The columns of these several orders are easily distinguishable to common observers, by reason of the ornaments that are peculiar to their capitals; but the scientific difference consists in their proportions.

The Doric Order is the oldest, strongest, and simplest of the three Grecian orders, and the one that is best represented among the remains of ancient Greek architecture. The Doric column, is distinguished by its want of a base (in the more ancient examples, at least), by the small number of its flutings, and by its massive proportions, the true Grecian Doric having the height of its pillars six times that of the diameter. The capital was small and simple, and the architrave, frieze, and cornice were rather plain and massive.

The Ionic Order is distinguished by the volutes of its capital. In the *Grecian Ionic* (1) the stylobate consists of three receding equal steps, the combined height of which is from four-fifths to a whole diameter; (2) the column, which includes band, shaft, and capital, is rather more than nine diameters in height, the shaft being fluted with twenty-four flutes and alternating fillets; while (3) the entablature is rather more than two diameters in height. The volutes are connected on the flanks by a peculiar roll-moulding, called the baluster or *bolster.*

In the *Roman Ionic*, a modification of the latter style, the stylobate is lofty and not graduated; the shaft diminishes one-tenth of a diameter and has twenty fillets and flutes; the capital, which is two-fifths of a diameter, has its volutes a little lower than the other, and a square abacus with moulded edges covers the whole. The chief examples of the Grecian Ionic are those of the Athenian Acropolis; while those of the Roman Ionic are found on the Temple of Fortuna Virilis and the Colosseum at Rome.

The Corinthian Order has the capital of the column adorned with beautifully carved acanthus leaves, but varies considerably in minor details. The column is generally fluted, with a fillet between the flutings, and stands upon a base. The entablature is variously decorated, especially the cornice; the frieze may be quite plain, or sculptured with foliage and animals. The Corinthian order was not very common in Greece before the time of Alexander the Great; among the Romans it was much employed.

The Tuscan Order admits of no ornaments, and the columns are never fluted. Otherwise it differs so little however, from the Doric, that it is generally regarded as being only a variety of the latter.

The Composite Order is so called because the capital belonging to it is composed out of those of the other orders, borrowing a quarter-round from the Tuscan and Doric, a row of leaves from the Corinthian, and volutes from the Ionic. Its cornice [illegible] simple modillions or dentil[illegible] also the *Roman* or the [illegible]

There are, besides t[illegible] of architecture, such a[illegible] Moorish, etc., but th[illegible] orders, being styles [illegible]

Early Period.—The Egyptians are the most ancient nation known to us among whom architecture had attained the character of a fine art. Other ancient peoples among whom it had made great progress were the Babylonians, whose most celebrated buildings were temples, palaces, and hanging-gardens; the Assyrians, whose capital, Nineveh, was rich in splendid buildings; the Phenicians, whose cities, Sidon and Tyre were adorned with equal magnificence; and the Israelites, whose temple was a wonder of architecture. But comparatively few architectural monuments of these latter nations have remained till our day.

Egyptian.—This is not the case with the architecture of Egypt, however, of which we possess ample remains in the shape of pyramids, temples, sepulchres, obelisks, etc. Egyptian chronology is far from certain but the greatest of the architectural monuments of the country, the pyramids of Ghizeh, are at least as old as 2800 or 2700 B. C.

THE SPHINX AND GREAT PYRAMID, AT GIZEH, EGYPT

The Sphinx is considered older than any of the pyramids, and is hewn from the natural rock. It was a local personification of the sun-god.

The Egyptian temples had walls of great thickness and sloping on the outside from bottom to top; the roofs were flat, and composed of blocks of stone reaching from one wall or column to another. The columns were numerous, close, and very stout, generally without bases, and exhibiting great variety in the designs of their capitals. The principle of the arch though known was not employed for architectural purposes. Statues of enormous size, sphinxes carved in stone, and on the walls sculptures in outline of dieties and animals, with innumerable hieroglyphics, are the decorative objects which belong to this style.

Greek Architecture.—The earliest architectural remains of Greece are of unknown antiquity, and consist of massive walls built of huge blocks of stone. In historic times the Greeks developed an architecture of noble simplicity and dignity. This style is of modern origin compared with that of Egypt, and the earliest remains give indications that it was in part derived from the Egyptian. It is considered to have attained its greatest perfection in the age of Pericles, or about 460-430 B. C. The great masters of this period were Phidias, Ictinus and Callicrates. All the extant buildings are more or less in ruins. The style is characterized by beauty, harmony and simplicity in the highest degree.

Distinctive of it are what are called the [illegible] architecture, by which term are [illegible] certain modes of proportioning [illegible] the column and its superstructure. The Greeks had [illegible] called respectively the *Doric*, [illegible] *Ionian*. Greek buildings [illegible] adorned with sculptures,

TEMPLE OF THESEUS AT ATHENS

Erected about 460 B. C. It is a Doric structure, built of Pentelic marble, whose columns are 19 feet high. The sculptures are lost.

and painting was extensively used, the details of the structures being enriched by different colors or tints. Lowness of roofs and the absence of arches were distinctive features of Greek architecture, in which, as in that of Egypt, horizontality of line is another characteristic mark. The most remarkable public edifices of the Greeks were temples, of which the most famous is the Parthenon at Athens, though the best preserved is the Temple of Theseus. Others exist in various parts of Greece as well as in Sicily, Southern Italy, and Asia Minor, where important Greek communities were early settled. Their theatres were semi-circular on one side and square on the other, the semi-circular part being usually excavated in the side of some convenient hill. This part, the auditorium, was filled with concentric seats, and might be capable of containing 20,000 spectators. A number exist in Greece, Sicily, and Asia Minor, and elsewhere. No remains of private houses are known to exist. By the end of the Peloponnesian war, or about 400 B. C., the best period of Greek architecture was over; a noble simplicity had given place to excess of ornament. After the death of Alexander the Great, 323 B. C., the decline was still more marked.

ARCH OF TITUS, ROME

Commemorated the destruction of Jerusalem, 70 A. D., and is considered first of the Roman arches in beauty of execution. It was constructed of marble and adorned with beautiful reliefs of scenes connected with the captivity of the Jews by Titus.

Roman.—Among the Romans there was no original development of architecture as among the Greeks, though they early took the foremost place in the construction of such works as aqueducts and sewers, the arch being in early and extensive use among this people. As a fine art, however, Roman architecture had its origin in copies of the Greek models, all the Grecian orders being introduced into Rome, and variously modified. Their number, moreover, was augmented by the addition of two new orders—the *Tuscan* and the *Composite*.

The Romans became acquainted with the architecture of the Greeks soon after 200 B. C., but it was not till about two centuries later that the architecture of Rome attained (under Augustus) its greatest perfection. Among the great works now erected were temples, aqueducts, amphitheatres, magnificent villas, triumphal arches, monumental pillars, etc.

The *amphitheatre* differed from the theatre in being a completely circular or rather elliptical building, filled on all sides with ascending seats for spectators and leaving only the central space, called the *arena*, for the combatants and public shows. The Colosseum is a stupendous structure of this kind. The *thermæ*, or baths, were vast structures in which multitudes of people could bathe at once. Magnificent tombs were often built by the wealthy.

COLOSSEUM, ROME

This famous arena was Rome's chief marvel. It was founded by Vespasian and finished by Titus 80 A. D., and became the scene of countless fights of gladiators and wild beasts, as well as of the magnificent celebration of the 1000th anniversary of Rome's foundation—248 A. D. It would accommodate 87,000 spectators.

Remains of private residences are numerous, and the excavations at Pompeii in particular have thrown great light on the internal arrangements of the Roman dwelling-house.

Almost all the successors of Augustus embellished Rome more or less, erected splendid palaces and temples, and adorned, like Hadrian, even the conquered countries with them. But after the period of Hadrian (117-138 A. D.) Roman architecture is considered to have been on the decline. The refined and noble style of the Greeks was neglected, and there was an attempt to embellish the beautiful more and more. This decline was all the more rapid latterly from the disturbed state of the empire and the incursions of the barbarians.

Byzantine.—In Constantinople, after its virtual separation from the Western empire, arose a style of art and architecture which was practiced by the Greek church during the whole of the middle ages. This is called the Byzantine style. The church of St. Sophia at Constantinople, built by Justinian (reigned 527-565), offers the most typical specimen of the style, of which the fundamental principle was an application of the Roman arch, the dome being the most striking feature of the building. In the most typical examples the dome or cupola rests on four pendentives.

After the dismemberment of the Roman empire the beautiful works of ancient architecture were almost entirely destroyed by the Goths, Vandals, and other barbarians in Italy, Greece, Asia, Spain, and Africa; or what was spared by them was ruined by the fanaticism of the Christians.

St. Sophia, Constantinople

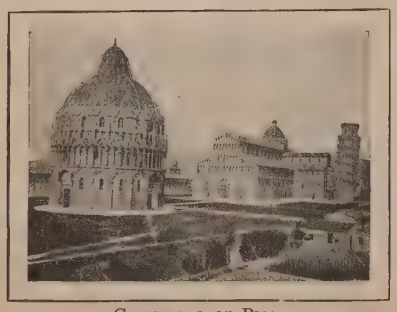
Rebuilt by Justinian in the 6th century, is probably the finest example of Byzantine architecture. The principal dome was supplemented by minor domes, and when converted into a mosque after the conquest of Constantinople by the Turks, minarets were added. Henceforth it became the model for all Turkish mosques.

Mediaeval Period.—A couple of centuries after the fall of Rome, a new style of architecture arose, two forms of which the Lombard and the Norman Romanesque, form important phases of art. The Lombard prevailed in North Italy and South Germany from the eighth or ninth to the thirteenth century; the Norman Romanesque flourished, especially in Normandy and England, from the eleventh to the middle of the thirteenth century. The semicircular arch is the most characteristic feature of this style. With the Lombard Romanesque were combined Byzantine features, and buildings in the pure Byzantine style were also erected in Italy, as the Church of St. Mark at Venice. The best example of the

St. Mark's Cathedral, Venice

Begun in the 10th century to receive the relics of the Apostle brought from Alexandria, it was transformed in the 12th and 13th centuries into the finest type of a richly colored Byzantine basilica. Rich in carved details, gleaming pinnacles, colored marbles and mosaics, bronze reliefs and sculptures, the whole structure is dominated by the grand figure of St. Mark above the chief archway.

Tuscan Romanesque is the Cathedral of Pisa (1063-1118) with its Baptistry and celebrated Leaning Tower. A peculiar variety of Romanesque originated in Southern Italy and Sicily, the finest example of which is the Cathedral of Monreale in Sicily.



Cathedral of Pisa

with the Baptistry in the foreground and the Leaning Tower in the background. The Baptistry is the finest of the group. The edifice was begun in 1152 and the main structure completed in 1278. It is built almost entirely of white marble, and one arcaded story succeeds another, surmounted with a conical dome. It contains Nicolo Pisano's world-famous marble pulpit.

Moorish Type.—The conquest of the Moors introduced a fresh style of architecture into Europe after the eighth century—the Moorish or Saracenic. This style accompanied the spread of Mohammedanism after its rise in Arabia in the seventh century. The edifices erected by the Moors and Saracens in Spain, Egypt, and Turkey are distinguished, among other things, by a peculiar form of the arch, which forms a curve constituting more than half

Court of Lions

in the Alhambra, perhaps the most celebrated portion of the Moorish palace at Granada. It contained 128 white marble columns supporting galleries. In the center was an alabaster basin flanked with twelve lions, from which the court takes its name. It has been extravagantly lauded in both romance and poetry.

of a circle or ellipse. A peculiar flowery decoration, called *arabesque*, is a common ornament of this style, of which the building called the Alhambra is perhaps the chief glory. The Giralda cathedral at Seville is also a fine example.

The Germans were unacquainted with architecture until the time of Charlemagne (or Charles the Great, 742-814). He introduced into Germany the Byzantine and Romanesque styles. Afterward the Moorish or Arabian style had some influence upon that of the western nations, and thus originated the mixed style which maintained itself till the middle of the thirteenth century.

Gothic.—The modern Gothic style grew up in France, England, and Germany. Its striking characteristics are its pointed arches, its pinnacles and spires, its large buttresses, clustered pillars, vaulted roofs, profusion of ornament, and, on the whole, its lofty, bold character. Its most distinctive feature, as compared with the Greek or the Egyptian style, is the predominance in it of perpendicular or rising lines, producing forms that convey the idea of soaring or mounting upward. Its greatest capabilities have been best displayed in ecclesiastical edifices.

The Gothic style is divided into four principal epochs: the *Early Pointed*, or general style of the thirteenth century; the *Decorated*, or style of the fourteenth century; the *Perpendicular*, in vogue during the fifteenth and early part of the sixteenth centuries; and the *Tudor*, or general style of the sixteenth century. This style lasted in England up to the seventeenth century, being gradually displaced by that branch of the Renaissance or modified revival of ancient Roman architecture which is known as the *Elizabethan style*, and which is perhaps more purely an English style than any other that can be named.

Notable examples of Gothic architecture during the thirteenth and fourteenth centuries are as follows:

In Germany. Cathedrals at Strasburg, Cologne and Freiburg; the churches at Nuremberg and the minster at Ulm.

In Italy a modified form of Gothic is represented by the cathedrals at Milan, Siena and Florence; while in France, Germany, the Netherlands, and Italy are to be found many examples of secular Gothic in the ducal palaces, castles and private mansions.

Built 1386-1500: se[illegible] stained windows, many [illegible] roof is marble, with 98 Go[illegible]

n Cathedral, Italy

[illegible] Seville cathedrals in size. It contains 6,000 statues, superb [illegible] of St. Carlo Borromeo), and vast granite monoliths. Its [illegible]eds of pinnacles. The whole edifice is white marble.

In France, Cathedral of Notre Dame, Paris; the cathedrals at Rheims, Amiens, Chartres, Beauvais and Rouen; and the churches of St. Ouen and St. Malcom at Rouen, St. Jacques at Dieppe, and St. Wulfraud at Abbeville.

CATHEDRAL OF NOTRE DAME, PARIS
A famous example of the Pointed Gothic style. It was begun in 1163 but was built chiefly in the 13th century, and restored by Viollet-le-Duc, 1866, and following. The façade, with its rich Gothic sculptures, is very imposing; while the long range of windows and flying buttresses is highly effective. The fine pulpit and rood-spire were built by Viollet-le-Duc. Cathedral contains 37 chapels.

In England. Westminster Abbey, London; cathedrals at Lincoln, Salisbury, Wells, Litchfield, Exeter, Winchester, York and Carlisle; the series of abbeys with Melrose as chief; St. George's chapel, Windsor, and King's College chapel, Cambridge.

The Renaissance.—The rise of the Renaissance style in Italy is the greatest event in the history of architecture after the introduction of the Gothic style. The Gothic style had been introduced into the country and extensively employed, but had never been thoroughly naturalized. The Renaissance is a revival of the classic style based on the study of the ancient models; and having practically begun in Florence about the beginning of the fifteenth century, it soon spread with great rapidity over Italy and the greater part of Europe. The most illustrious architects of this early period of the style were Brunelleschi, who built at Florence the dome of the cathedral, the Pitti Palace, etc., besides many edifices at Milan, Pisa, Pesaro and Mantua; Alberti, who wrote an important work on architecture, and erected many admired churches; Bramante, who began the building of St. Peter's, Rome, and Michelangelo, who erected its magnificent dome. On St. Peter's were also employed Raphael, Peruzzi, and San Gallo. The noblest building in this style of architecture in Great Britain is St. Paul's, London, the work of Sir Christopher Wren; and seconded by the Banqueting Hall of Whitehall, executed by Inigo Jones.

In France the Renaissance style is shown in Lescot's court of the Louvre, Paris; the palace of Versailles; the Invalides; and the colonnade of the Louvre.

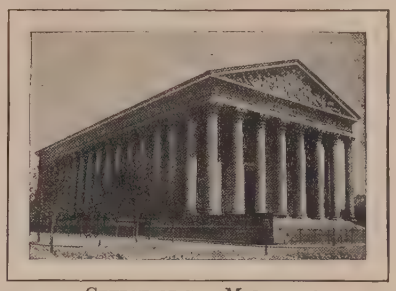
In Germany the most important monuments are the castle of Heidelberg, and the town halls of Augsburg, Rothenburg and Bremen.

In Spain the Renaissance period produced the Cathedral of Valladolid, and the Escorial.

ST. PAUL'S CATHEDRAL, LONDON
Was built 1675-1710 by Sir Christopher Wren, in the form of a Latin cross, and is next in size to Milan Cathedral. The interior is vast and contains numerous monuments and crypts. Wellington and Nelson are buried here and several famous artists. The dome of the cathedral is probably the most imposing in existence.

Modern Period.—Since the Renaissance, architecture has been marked by two sets of influences—the *Classic Revival* and the *Gothic Revival.* The former received its first impulse in France and the latter in England. The former was a reaction against the extravagances practiced during the Renaissance, and the latter was a reaction against the imitations of classic forms.

In France, Roman models were followed, and the type is represented in the Church of the Madeleine and the Arc de Triomphe, Paris. In Great Britain we have the British Museum, London, and St. George's Hall, Liverpool; in Germany, the Old Museum at Berlin, the Walhalla near Ratisbon, and the Glyptothek at Munich; and in Austria by the Parliament House at Vienna.



CHURCH OF THE MADELEINE
Built by Vignon and finished 1842, is the most beautiful edifice in Paris. It is a vast Corinthian temple lighted from above, and richly adorned with painting and sculpture. The south façade contains a colossal group of sculpture representing the LAST JUDGMENT. There are many exquisite side chapels with sculptures by Bouchet, Pradier, Rude, and others.

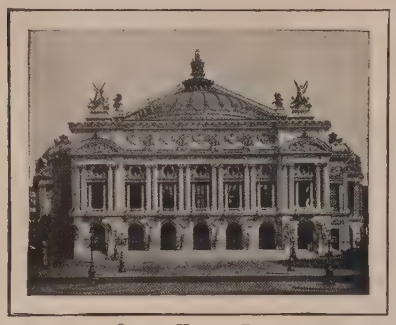
The Gothic Revival has its best examples in the British Houses of Parliament and in the Natural History Museum at South Kensington, London. In Germany and Austria the building of a number of important churches resulted, especially the Votive Church, at Vienna.

VOTIVE CHURCH, VIENNA
A superb modern Gothic structure, built by Ferstel, commemorating the Emperor's escape from assassination in 1853. It abounds in statues, and wonderful stained windows and possesses finely decorated twin spires.

ST. PETER'S, ROME
Built 1450-1626, is the largest church edifice in the world: [illegible]itars, many vast and beautiful chapels, tombs of popes, and statues by Michelang[illegible]rwaldsen. 138 popes were buried in St. Peter's. It took 176 years to build, and [illegible]e Doric colonnades surrounding St. Peter's square were built by Bernini in 1667.

Recent European Architecture.—There has been no dominating style of architecture apparent for more than a half century, though there has been an undoubted tendency toward a refined Renaissance. This was especially signalized in France by the completed Louvre, the new Opera House, the new Hotel de Ville, the Sorbonne and the church of Sacré Coeur, all in Paris. In Germany and Austria the same tendency is to be observed in the theater at Dresden; the opera house and new Burgtheater at Vienna; and the new Parliament house, Protestant cathedral, and Bauschule at Berlin. Both Renaissance and Gothic styles have been followed in Great Britain, the former being represented by the Albert Memorial Hall, and

the Victoria and Albert museums, London; and the latter by the imposing Westminster Catholic cathedral, and the Liverpool cathedral.



OPERA HOUSE, PARIS
Largest theater in the world, built 1861-74 by Garnier. The façade is exceedingly rich in statuary. The grand staircase of white marble, with balustrades of red antique marble, is the finest in Europe. The interior is adorned with sculptures, frescoes and mosaics by the first of French artists.

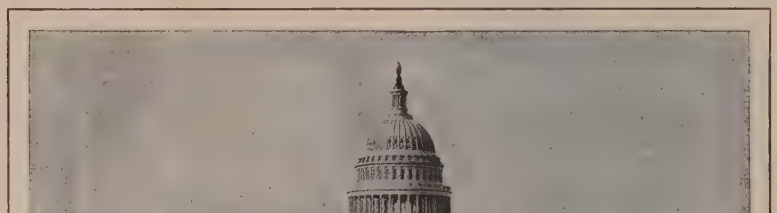
The great industrial and commercial activity of the people have stimulated the construction of the most palatial commercial and financial buildings in the world. Among multitudes of these the most striking are the Auditorium and Peoples Gas buildings in Chicago; the Majestic building in Detroit; the *Times*, Trinity, Stock Exchange, Flatiron, and World buildings in New York; and many large and luxurious hotels, particularly in New York, Philadelphia, Chicago, Boston and Washington. Notable, too, are many railway terminals—the Grand Central and Pennsylvania in New York, the Pennsylvania in Washington, the new Northwestern in Chicago, and the South Station in Boston. Domestic architecture is original and characteristic, ranging from the colonial manor house of the South through many eclectic styles, to the classic mansion of upper Fifth avenue or Lake Shore boulevard. As compared with the older European countries, the United States possesses little purely historical architecture of merit. More history than art

TRINITY CHURCH, BOSTON
Built by H. H. Richardson, and completed 1877. The style is Romanesque and was suggested by the Cathedral at Salamanca, Spain. The harmony of both exterior and interior proclaims this edifice one of the few of first rank in America.

attaches to Old South church and Faneuil hall, Boston, St. Paul's in New York, Christ's church and Independence hall in Philadelphia.

India and China require brief notice. Although many widely differing styles are to be found in India, the oldest and only true native style of Indian ecclesiastical architecture is the Buddhist, the earliest specimens dating to 250 B. C. Among the chief objects of Buddhist art are *stupas* or *topes*, built in the form of large towers, and employed as *dagobas* to contain relics of Buddha or of some noted saint. Other works of Buddhist art are temples or monasteries excavated from the solid rock, and supported by pillars of the natural rock left in their places. Buddhist architecture is found in Ceylon, Tibet, and Java, as well as in India. The most remarkable Hindu or Brahmanical temples are in Southern India. They are pyramidal in form, rising in a series of stories. The Saracenic architecture latterly introduced into India is of foreign origin.

The Chinese have made the *tent* the elementary feature of their architecture;



CAPITOL AT WASHINGTON
Built from designs of several architects (including Bulfinch, Walter, and Crawford), 1818-65, of white marble and stone. Its greatest length from north to south is 751 feet; its greatest width, 350 feet. Its imposing dome is one of the finest in the world, and the interior is replete with statues and historical paintings. It contains the Senate chamber, the Representatives Hall, Supreme Court rooms, Law Library, a Hall of Statuary, and numerous offices and committee rooms. The architecture is classic Renaissance.

United States.—Architecture in the United States has received its strongest influences from the classic revivals of Europe. To such influences belong the Capitol at Washington; the University of Virginia; Girard College, Philadelphia; the White House, and much of the federal architecture. The Gothic revival is notable in St. Patrick's cathedral and the Cathedral of St. John the Divine, New York, and Romanesque influences in the works of Richardson, such as Trinity church, Boston, and the County Buildings at Pittsburgh. The new and splendid buildings of the University of Chicago are close imitations of academic Gothic, while the newer Medical and Law buildings of Harvard University follow classical lines. Many imposing buildings have been erected by educational institutions and municipalities, notably the Boston public library, the Congressional library at Washington, the New York library, the National academies at West Point and Annapolis, Columbia University, N. Y., the University of California, Princeton University and the Museum of Fine Arts, Boston.

HARPER MEMORIAL LIBRARY, UNIVERSITY OF CHICAGO
Fine example of English Gothic architecture, suggested by King's College Chapel, Cambridge, and Magdalen College and Christ Church, of Oxford, England. Designed by Shepley, Rutan and Coolidge, and built at a cost exceeding $1,000,000.

and of their style any one may form an idea by inspecting the figures which are depicted upon common chinaware. Chinese roofs are concave on the upper side, as if made of canvas instead of wood.

The imperial palaces are of great extent; consisting of a series of courts with galleries and halls of audience, beautifully painted. The temples differ greatly in form and size, but, in many points of architectural construction and decoration, they resemble the dwelling-houses of a higher class. The ordinary temples, or *joss-houses*, consist each of one chamber containing an idol. The Buddhist temples are larger and more elaborate, consisting of a vestibule, which leads to courts containing temples, sometimes two stories in height, in which are seated colossal images of Buddha.

The pagodas, which form a conspicuous feature in Chinese scenery, are either monumental records, or are intended for the reception of some relic of Buddha. They are generally octagonal in form, and nine stories in height, and surmounted by a conical roof, from which an ornamental pole rises. Each story is less in size than the one below it, and is surrounded by a balcony, from which a sort of penthouse projects, ornamented with bells at the corners. These pagodas are built of brick, and the exterior of some of them is coated with porcelain tiles.

The most famous architectural structure in India is the Taj Mahal at Agra, a splendid mausoleum of the seventeenth century built by the Emperor Shah Jehan to his favorite queen.

TAJ MAHAL, AGRA, INDIA

Famous marble mausoleum erected by Shah Jehan to his favorite wife, Nur Jehan. 20,000 men were employed on the work for 22 years at a cost of $15,000,000. It was built by Florentine artists about the middle of the 17th century, and is inlaid with jasper, agate, cornelian, and other precious stones.

SCULPTURE.—While the term "Sculpture" would, strictly, refer only to works carved or cut by hand in some solid substance, it is extended to include all plastic forms, cast, moulded, hammered, carved or engraved; everything, in fact, where a surface is changed by man's intervention directly or indirectly.

Materials. — Almost every imaginable material has been used, the most popular being gold, silver, bronze, ivory, all kinds of marble, stone, wood, precious and semi-precious stones, clay, enamel, wax, plaster. Sometimes several materials are combined. In the so-called chrysel-ephantine sculpture of the Greeks, some parts of a statue were of gold, others of ivory. In Limoges enamel there are portions where the precious metals are not enameled. In many mediæval and Renaissance wood-carvings the wood surface is entirely concealed by a thin coating of plaster which in its turn, is colored; silver was often gilded; stone and terracotta coated with stucco.

Polychromy.—We are so accustomed to a colorless sculpture in marble and stone, that we forget how large a part was played in the past by polychromy or the custom of giving a colored surface to sculpture. This was particularly the case among the Babylonians, Egyptians, Assyrians, Persians and early Greeks. It even survived through the best Greek periods, and was continued by Etruscan, Roman, mediæval and Renaissance art. Of course, most of this coloring was evanescent, when exposed to the weather; and this makes it difficult for us to understand exactly how a great deal of sculpture looked when it came from the artists hand. One method was permanent, the glazed and colored terracottas. The lions and other animals and figures built up of enameled tiles in relief, which have been found at Babylon, Susa and Khorsabad show how familiar this method was to the ancient Orient. The most famous later examples are the terracottas of the Italian Renaissance called "Robbia" ware. Many mediæval and Renaissance ivories, woodcarvings and stuccoes also preserve a rich coloring. The polychromatic remains of Greek sculpture are, naturally, much less well preserved, but there is enough to show that brilliant and heavy coloring was used at an early date especially in architectural sculptures. As soon as marble replaced stone it was not necessary to stucco and paint the entire surface and the polychromy was gradually restricted to patterns and borders, to shading the eyes, the hair and other details. The interesting statues of priestesses found on the Athenian Acropolis, after being buried there since about 490 B. C., show the most exquisite of the early coloring; while the so-called *Sarcophagus of Alexander* in Constantinople is the best preserved example of the latest and most delicate work. Even so great a painter as Nikias was accustomed to complete the surfaces of the masterpieces of Praxiteles.

Surface Treatment.—There is great variety in the treatment of surfaces, from sculpture in the round, at one end, to intaglio at the other. In the process of intaglio or incavo, used particularly in precious or semi-precious stones, the design is excavated and often reversed. Sometimes the design is merely scratched or outlined in the surface, as in Greek and Etruscan bronze mirrors or jewel cases. Next comes work in which the back-ground is only slightly lowered (stiacciato), the figures being kept flat, with cameo-like unreality, mainly in connection with figures in higher relief in the same composition.

Low relief follow, used singly or together. In early work, whether Oriental or Greek, it was the custom to carve all figures on the same plane. The Romans added the idea of combining figures on different planes in a single composition in which the figures in the foreground are so nearly detached as to be held only by one or two members to the figures behind them, giving practically the effect of statuary.

Statuary and sculpture in the round is where the surface is free standing on all sides. Its most perfect embodiments are of course the equestrian or other statues that stand out on pedestals, to be viewed from any point. But the majority of such works in the past have been made to stand against some background, in a niche, in the gable of a temple, the portal of a Gothic cathedral, and the like, and were often left unfinished in the parts that could not be seen. It is curious that statuary should be both the most clumsy and primitive and again the ultimate and most perfect form of sculpture. The stiff Babylonian seated figures, the miraculous wooden images of the prehistoric Greeks, the puppet-like Virgins with the Child of the Romanesque middle ages, are the least skilful products of their respective ages. And yet, at the other extreme, the majority of masterpieces of Greece and Rome, Gothic and Renaissance, are statues either single like the *Phidian Zeus* and *Athena*, the *Hera of Polyclitus*, the *Aphrodite*, or a group like the *Laocoon*, or *Praxiteles*. Nothing in relief can equal such works as the *Venus of Milo* or Verrocchio's equestrian statue of *Colleoni*.

Mission of Sculpture.—Sculpture as embodying human form, had a triple mission: to express plastic beauty of form; to embody thought and feeling; to act as a chronicler of facts. It was not always able to carry out this triple mission; in fact it did so only during three periods, the Greco-Roman, the Gothic and the early Renaissance. The particular genius of sculpture assigned to it certain limitations. It could not, of course, tell a story with

the same detail as painting. On the other hand it could embody better than painting the deeper, broader moods of typical humanity. Consequently sculptors are often tempted to resort to figures embodying general ideas or types, such as allegorical and symbolic figures of Peace, of War, Labor, Commerce, Charity, the embodiments of Virtues and Vices, Occupations and Trades, Inventions and Beliefs. In our day this tendency has produced many insipid works.

At the other extreme is sculpture turned into pictorial channels: this was mainly in relief work, especially when the Romans had, as we have already seen, opened up the way by using a multiplicity of figures in several planes. *The Farnese Bull* group is an example of it in statuary. The so-called Alexandrine reliefs of Greco-Roman art, with their backgrounds of landscape and architecture and the spiral narrative of Trajan's column lead up to such elaborate compositions as the early renaissance scenes in Ghiberti's *Gates*.

Periods.—Considering its broad historic lines we find that sculpture has had a history of nearly six thousand years. For the first three thousand five hundred years, from about 4000 to 500 B. C., it remained a form of narrative, an embodiment of certain facts or persons. It was instructive but not intended to convey any pleasure. It had little or no æsthetic value. Such was the sculpture of Egypt, Babylonia, Assyria, Persia and other Eastern nations.

In about 500 B.C., the Greeks began to make of it not only a vehicle of thought and feeling but an end in itself, a thing of beauty and interest. Sculpture then became in every way an art. The Romans continued this idea, with variations and a gradual loss of beauty until the final downfall in about 300 A. D. Sculpture had therefore been of æsthetic value for about eight centuries. It then lapsed into being once more an embodiment of fact, but more than in the earliest stage of its history, it was used to express thoughts and beliefs, though with infirmity of technical ability. This æsthetic eclipse, this dark age lasted for nine centuries from about 300 to 1200 A. D.

Then, with the Gothic revival came a new birth similar to that of Greece, combining in the same way love of nature and artistic imagination, perfection of technique and a wealth of ideas to be expressed. Sculpture once more was complete and practiced for its own sake. During the Renaissance there was a decay in imagination and an emphasis on naturalism. Types were displaced by individuals. Post-Renaissance work becomes somewhat artificial and spectacular, leading to the simplicity of the neo-classic revival as a reaction. But, dissatisfied with its cold artificiality, the leading sculptors of the nineteenth century have in various different ways sought the secret of plastic expression mainly through naturalism, simplicity and occasionally by a forceful realism that is inspired as if by the primitive passions of earth.

Egypt.—Aside from the crude figures of prehistoric animals outlined on rocks by cave-men, the earliest sculptures are those of Egypt. To the uninitiated there is a monotonous uniformity in Egyptian sculpture during the four thousand years of its history; but a real vitality appears at two periods,—at its beginning and during its closing stages under the Ptolemies. This shows itself especially in portraiture. The heads may be rigid but they are certainly realistic; this realism was less a matter of art than of religion. It was believed that the soul of the deceased would return to inhabit at intervals the body, and in case anything should have happened to the body, portrait statues were provided with heads so realistic that the soul would be sure to recognize it. Hence the fanatic pains to reproduce every smallest peculiarity. Hence the filling of the chamber tombs of Egypt with such statues. With the waning of religious belief came also a waning of this realism. The famous squatting Scribe in the Louvre, the kneeling washwoman, and the Mayor of the Village at Cairo, are perhaps the most extraordinary works thus far found in this style.

But Egyptian sculpture may also be credited with the ability to express an idealistic impressiveness of an impassive type in royal and divine figures. The statue of King Khufu, of the Great Pyramid, at Cairo, and the colossal rock-cut statues at Ipsambul are plastic embodiments of the genius of Egypt and rise to the dignity of works of art. They are the exceptions. But, while in these seated figures we do not notice the ability to express the human form, this is clear as soon as the sculptor attempts to put figures in movement or carve them in relief. Of course there is decorative value and delicacy of detail in Egypt relief work, especially in the Middle empire, but the ignorance of perspective and action are lamentable.

Babylonia, Assyria and Persia.—Although sculpture commenced in Babylonia almost as soon as in Egypt,—not long after 4000 B. C.,—it never equalled it either in amount or value. The sculptors suffered from lack of adequate material, and the hard diorite that was imported gave an even more disagreeable stiffness to statuary than was the case in Egypt. The statues from Telloh in the Louvre are typical of this fault.

In Assyria, Babylonia's successor in the artistic leadership of Western Asia, numerous quarries of soft limestone gave an opportunity to develop relief sculpture, and to spread the exploits of the Assyrian Kings on the inner palace walls, in the same way as the walls of tombs and temples had been covered in Egypt. While sculpture is still in the main narrative and still ignorant of perspective and free movement, we must confess to receiving a distinct impression of force from the muscular and energetic Assyrian warriors and of animal vitality from the hybrid monsters who guard the palace-portals, winged bulls and lions. The Assyrians were great sportsmen and hillmen. They therefore knew and studied animal life and could reproduce animals far more faithfully than men. The lions, wild asses, deer and hounds that we see in the royal hunts, wounded, slain or led, are full of character and realism. In fact, in the opinion of some critics, one must jump twenty-five hundred years to the modern work of Barye to find superior understanding of animals in action. One wounded lioness, with paralyzed spine, dragging herself along, is famous.

All the other oriental peoples practiced sculpture to a certain extent, but among the numerous works of Persian, Hittite or Phenician artists, nothing emerges as of especial interest. Nearly everything is a more or less lifeless imitation of Babylonia and Assyria, or, occasionally, of Egypt.

Greece.—In Greek sculpture there are four periods: (a) the archaic style, before c. 480 B. C.; (b) the grand style of the fifth century; (c) the beautiful style of the fourth century; (d) the dramatic and picturesque style of the Hellenistic age.

First Period.—The Greeks long carved symbols, far inferior to Oriental art; formless statues in wood or stone to be worshipped, or lifeless reliefs. But during the sixth century their plastic sense was stirred. Two distinct racial schools were formed, the Ionic, originating in Asia Minor, and the Doric, with its centre in Greece, in the Peloponnesus. We are accustomed to these styles in architecture; they were quite as real in sculpture. The Ionian school developed relief work and the draped female figure, and showed poetry and imagination in types of gods, heroes, legends and myths. The Dorian school studied particularly the nude male figure and statuary, were greater realists, and perfected the athletic type. Both schools made an attempt at portraiture and realism in details, which proves considerable power of observation, though as yet there was no sense of life. It was an age of incubation. The most interesting exceptions are those fascinating priestesses from the Athenian Acropolis, each a different character study. The curious smile on some of them, with the up-curved lips, gives an almost Leonardesque aspect to their faces, which make up in quaintness what they lack in mystery. Their polychromy is the most artistic and best preserved of the archaic age.

The famous statues of the gables of the Temple of Ægina, now at Munich, are the best works of the pure Doric school. At the west end was the Fight over the body of Patroclus, and in the east the earlier expedition against Troy. Here the attempt is made to bring the athletic single figures into a composition in the awkward triangular space formed by the gables. The fallen helmeted warrior is full of repressed anguish, the stooping figure reaching out with both arms, like a football quarterback, is full of eagerness. All the figures are those of athletes trained to the minute, and the effect is of bronze statues.

The recent discoveries at Delphi have given superb works of both schools to this age; the unique great bronze charioteer, purely Doric, and a series illustrating the development of relief sculpture during the century preceding the Parthenon (550–450). There are friezes and metopes of the treasury-buildings of various Greek cities built within the sacred precincts; especially interesting as a prototype of the Parthenon is the frieze of the treasury of Siphnos. These are mainly Ionian.

The reaction against the stiffness of the early athletic figures, with arms glued to their sides, already evident at Aegina, is emphasized in the group of the tyrannicides, Harmodius and Aristogiton, carved by Critius and Nesiotes, of which a copy is in Naples. They are rushing forward vehemently to strike the tyrant Hipparchus. This vehemence is itself eliminated in the works of the greatest predecessor of Phidias, Myron (c. 470-460 B. C.), in which mastery of physical form in action is complete and yet repressed

in which one may say that Hellenic and Roman peculiarities were combined. The emperors were represented often as gods, and as nude or slightly draped figures of Hellenic type. They were also given as orators and benefactors, in statues of a kind similar to those of Sophocles, or Demosthenes produced by later Greek art. But they also appear as generals, in full military panoply, like the Vatican Augustus, and this form is typically Roman. It is a general fact that there never was a time in the history of sculpture when so many honorary portrait statues of persons of every sort, men and women, were erected. The squares of every town, the basilicas and porticos, the villas, the baths, the theatres and hippodromes, were all peopled with hundreds of these works, so that we may say that the Romans throughout the world were surfeited with sculpture to an extent unknown even to the Greeks.

AUGUSTUS, AS GENERAL,
in Vatican, Rome. A superb portrait statue somewhat idealized. It was found, in 1863, at the Villa Livia, near Rome. The finest imperial statue that has come down to us.

Historic Relief Sculpture was the second peculiarly Roman field. This was made possible by the new form given to work in relief. Roman artists revolutionized the art. Their realism seized on sculpture as a medium for expressing national and political life as well as mythological scenes. They attempted at first to do this without radically breaking away from Greek methods. We see this in the reliefs covering the marble parapet that encircled the famous Altar of Peace erected in the Field of Mars at Rome in 12 A. D. to celebrate the pacification of the world by Augustus. This was the greatest work in its class, covering a length of about one hundred and fifty feet. The procession on its two unbroken sides—the other two have doorways—has been called the Roman version of the Parthenon frieze and is a fair type of the Roman individual, realistic way of treating a theme. Compared to the Hellenic symbolism, that left out the personality of Pericles and the other Greeks whose position corresponds to that of the Romans, we see here the imperial family headed by Augustus on their way to the great commemorative sacrifice.

Out of this graceful semi-Hellenic Augustan style it took a century to develop what was characteristically Roman, forceful, dramatic, picturesque and storytelling. A half-way stage was marked in 81 A. D. by the well-known reliefs on the Arch of Titus, with its triumphal procession and the carrying of the seven-branched candlestick. It was in 114, in the reliefs of the Arch of Trajan at Beneventum, that the final stage was reached and perfectly expressed. In them nearly all the principal events in Trajan's reign were represented: his triumph over the Dacians, his Eastern wars, his army reforms, his efforts to restore prosperity by the encouragement of agriculture and commerce. In order to tell these stories effectively the sculptor has adopted the method of placing his figures in three planes, in perspective, one behind the other. The figures in the front plane are sometimes almost detached, being held by an arm so that they have almost the effect of statues; while the figures in the background are almost flat and sink back. This gave the sculptor an opportunity for the greatest variety of pose and direction, of groupings and composing. There is great play of light and shade and this helps to give dramatic effect. To us this may seem almost a commonplace, but until then these had all been unknown factors in sculpture. So carried away were the Romans of this time by the storytelling possibilities of relief-sculpture that the same men who decorated this arch, carved a continuous spiral band that unwinds itself on the column of Trajan in Rome, the entire history of his two Dacian wars. It is in very low relief and local touches are given by details of architecture and landscape; while originally its effectiveness was increased by brilliant coloring.

Equestrian Statues were used by Greek sculptors before the time of Alexander, whose figure on a prancing steed, engaged in battle, was a famous work often copied by Roman artists. In the Naples museum there are two bronze Equestrian statues of men of the Augustan age named Balbus, found at Herculaneum: they sit well and the horses are more graceful and Hellenic than the heavier animals that were modelled by later Roman artists. The colossal bronze Marcus Aurelius in the square of the Capitol is the most famous Equestrian statue in the world, and served as model for many artists during the Renaissance and later. It is a powerful work, and dramatic in a somewhat heavy style.

Decorative Sculpture.—Quite as interesting as innovation was the creation of a varied system of decorative sculpture lavishly used and fantastically varied. Greek carved decoration had been so simple and serene that we did not need to consider it in connection with the history of sculpture especially as the line of demarcation between figures and ornament had been strictly maintained. But with Roman art, encouraged by late Hellenistic suggestions, there came a rank exuberance, a richness of decorative work, a charming mingling of figures and ornament. What could be more exquisite than some of the carved marble vases and altars in the Vatican museum or than many of the pilasters that served as models for the fanciful designs of the Italian Renaissance.

Even figures alone were made to serve a decorative purpose, as in the charming stuccoes in the walls of certain tombs on the Via Latina and in the Terme museum at Rome. The artist would sketch in the wet stucco on the walls with a hand admirably sure, little genre scenes that have never been surpassed in delicacy and effectiveness.

The history of Roman sculpture has not yet been written but its outlines are clear. Semi-Hellenic and Eclectic in the age of Augustus, it assumed increasingly Roman characteristics until the time of Trajan, though Attic grace and Hellenic idealism often prevades it. Hadrian, for a time gave it an increase of Greek characteristics, but under Marcus Aurelius there was a distinctly Roman reaction, with an infusion of the dramatic traits of the Hellenistic school of Pergamon and Rhodes. The free use of the drill helped to cheapen dramatic effects and there was a gradual decline during and after the reign of Septimius Severus. At the close of the third century, under Diocletian, figure sculpture has become lifeless and almost puppet-like.

Early Christian and Mediaeval.—It was the natural result of the decay of Roman society rather than enmity to sculpture that eliminated it from the field of art at about the time when Christianity became the religion of the State under Constantine. The friezes of the arch of Constantine,—about the only parts of its sculpture that was not robbed from the earlier monuments—and the figures of Consuls of this time found in the Roman Forum, show that the growing incapacity of sculptors is a sufficient explanation, without bringing in the idea that the Christian church proscribed the art because it so frequently represented the "idols" of paganism. The decay was general throughout the Roman world, both East and West.

For a short time the Christian sarcophagi were able in their reliefs to tell in a mechanical way the story of Christian belief in the Bible and immortality, but even this phase, which left sculpture without æsthetic value and on the same storytelling plane as in the pre-Hellenic days of Egypt and Assyria, came to an end in the fifth century. Painting was then used alone to teach the people the facts of faith and history.

After this, sculpture remained in eclipse for nearly seven hundred years, while the world went through many changes: the crumbling of the old world, the invasion of the northern races, the rise of Mohammedanism, and the gradual growth of the nationalities and the culture of European peoples under the guidance of the Church. Architecture and painting fluctuated yet survived; but sculpture did not rise above the level of industrial carving until, in the twelfth century, the later Middle Ages awoke once more to the joys of æsthetic beauty, in a manifold and glorious effort to rejuvenate the world. It was merely one phase of the combination of hard practical work and self-denial under the guidance of idealism which ruled the twelfth and thirteenth centuries and led to the crusades, the great Monastic movement, the age of chivalry, and the formation of States and communes.

Gothic Style.—It was at the close of this age we call "Romanesque" that sculpture, after having been reduced to decorating book-covers and reliquaries, once more assumed a really monumental role, and began an evolution that has no parallel except that of Greece. Even the Greeks and Romans has succeeded less completely in making of the plastic art an integral element a logical

coadjutor of architecture. This happened when the new art reached its efflorescence in the Gothic style of the thirteenth century. This new union was fundamental because the Gothic architects were usually sculptors as well, and not only furnished the drawings for a cathedral but carved its portals or its capitals with their own hands. By doing this they went further than either the Greek or Renaissance artists in a practical amalgamation of the two arts.

France was not only the birthplace of the Gothic style but established its purest and best forms. The new sculpture was used to express the knowledge and the ideas then current throughout Europe. The age was one of extraordinary culture. Universities were making education quite general; encyclopaedias were being written; a multitude of teachers were trying to give ideals and facts to the masses. Artists and men of letters were aiding each other in the work. The propaganda among the masses had to be carried on largely through the eyes, and as the cathedrals usually were the one place where all the people congregated not only for worship but for plays, for fairs, for public and political meetings, the cathedrals were used as the means for instructing the masses. Their walls and portals were carved with figures and relief which systematically summed up this encyclopedic teaching—all the knowledge of the time. We see in thousands of figures a system of doctrine and morality explained and illustrated; the history of the world set forth; the law and the various phases of labor, both manual and intellectual. **"Man, know thyself and thy God."**

It took more than a half century to achieve this result. The figures set in the old porches of the cathedrals of Chartres and Le Maus have a similar architectural stiffness to an archaic Apollo or Artemis. They are intentionally elongated and straightened in order to give them almost the function of a column or a caryatid. In some faces we even see a reflex of the archaic smile. The artist is at the same pains to reproduce exactly the details of the face and costume of his models. He aims at a portrait rather than a type and like the Greek sculptor before Phidias, he misses the sentiment of life. The statue of a queen from Corbeil now at St. Denis, illustrates this stage. This realistic phase was just as necessary with the French as it had been with the Greeks in order to enable the artist by careful study and observation to attain to that perfection of technical execution and knowledge of nature that will let him use his art freely. The sculptor is once more a man with a mission as he was in Greece in the fifth century B. C. Each cathedral is a museum of masterpieces, beginning at Notre Dame in Paris and continuing at the cathedrals of Chartres, Rheims, Amiens, Auxerre, Troyes and many more.

The perfection of the early French style is shown in the exterior of Rheims cathedral. We have here a breadth of style, a grand treatment of drapery and a majesty of pose that reminds of the Parthenon gables. At the same time there is the greatest versatility. A sense of humor is shown in many heads, as in the St. Joseph, and a capacity for grotesque effects that is quite Leonardesque, appears in many of the corbel masks. One of the apostles recalls an antique philosopher or poet—a Sophocles or Aeschines; a St. Elisabeth is like a Juno. The figures are superbly posed and we must believe that they were often studied from the nude and draped afterward,—a thing which critics have thought was not done until the middle Renaissance. Another Greek analogy is that the leading Gothic masters sought to establish canons for figured sculpture, in the same way as had been done by Polyclitus and Lysippas. These canons were geometric and based on triangles or rectangles, and were more elaborate than the Greek because they took account of all the main poses of the body.

While it is true that most of the heads are rather types than portraits, there is an evident study of nature. For instance in the charming youthful head of the Virgin, and in the piquant angel at Rheims. This is even true in such works as the Saint Theodore at Chartres, a figure which may be considered the typical knight of the Crusades. Though the costume hardly lends itself to artistic effect, it is made charming by ease and grace of pose, by skilful play of light and shade and by perfect naturalness. It does not suffer at all by comparison with the famous statue of St. George by Donatello, which typefies the more self-conscious champion of the Renaissance. Some of the finest statues are those dividing the main portal. The "Beautiful Christ" at Amiens, and the severer one at Chartres, the dignified Virgin at Notre Dame, the smiling and coquettish Virgin at Amiens and the rather self-conscious Grande Dame at Rheims are all masterpieces. As a composition, one of the most symmetrical and artistic is the tympanum of the left doorway at Notre Dame, with the Ressurection and Coronation of the Virgin. Mannerisms and studied richness in drapery appear later in the century, as in the apostles at the Sainte Chapelle, and the sculptors became more and more artificial as the fourteenth century advances, until from the north, especially Flanders, comes a wave of realism and character study, which can be studied in the school of Burgundy, in the monuments of Dijon, ending in nearly 1500, with two masterpieces—the monuments of the Duke of Burgundy and the Pulpit called the Well of Moses.

Spain.—French artists carried to Spain their decorative system and subjects. There are fine portals at Burgos, Leon and Toro, in the thirteenth century and sculpture was more abundant here than in Italy or Germany: but though the designs were good, we seldom find the beauty of French work.

Germany. — The Gothic movement reached Germany from France quite as soon if not sooner than the corresponding architectural wave. Germany had begun an interesting use of monumental sculpture in the Romanesque age, especially in Saxony and neighboring provinces, and it was here that, in the middle of the thirteenth century, one finds the first works of real genius, with a mastery of technique and expressoin to rival the French works. These are the Golden Gate of the cathedral of Freiberg, the portals of Magdeburg cathedral and especially the statuary and portals of Bamberg, where the crudity of Germanic realism is modified. The most famous single figure is the Equestrian statue of the Emperor Conrad III at Bamberg. There is little of the French idealism or love of pure beauty, or creation of types; but rather a strong personality, sometimes artificial and clumsy. This art reaches great force in certain large figures in the choir of the cathedral at Maumburg, especially the twelve statues of the great nobles; bold, free, strong and full of life, they have all the qualities and none of the defects of German naturalism and are the most perfect embodiments of the feudal pride of the Saxons. Perhaps the finest are the Margrave Eckardt and his wife Uta. Their date is about 1270.

STATUE OF THE "SYNAGOGUE"
From the façade of Strassburg Cathedral. This façade was designed by Erwin of Steinbach, and is rich in sculptures after the French Gothic school. These sculptures are in stone.

A few years later we find at Strassburg Cathedral other great German masterpieces though in this Rhenish School, French influence is much more domi-

nant. Perhaps the earliest part is the extraordinary angels' pillar inside the transept, which is still archaic; and the most perfect are the two famous statues of the church and the Synagogue, outside the south transept. The Synagogue especially, with its gauze-like simple drapery, bent head and curving lines, is one of the most gracefully poetic figures conceived by the sculpture of any age. On the main facade the statues of the Wise and Foolish Virgins and of the Prophets are less perfect but very striking and dramatic. They show the approach of the rather exaggerated art of the fourteenth century. The grand style now disappears, the center of production shifts to Nürnberg, to Cologne, and Ulm.

Beside architectural sculpture the Germans were active in sepulchral monuments and shrines, which are better preserved there than in France, where the Revolution destroyed so much. Terra cotta and wood, also, were more generally used than in France, and here we can see more traces remaining of the polychromy which originally covered almost all Gothic sculpture.

Pre-Renaissance.—We usually speak of the "revival" of art, in the sense of an early Renaissance, as beginning in Italy during the thirteenth century, with Giotto in painting and Nicola Pisans in sculpture. Yet Italy was far inferior to France during the Gothic age in the amount and quality of her sculpture. Nicola Pisano, was her first great sculptor, and the famous pulpit in the Baptistery at Pisa, carved in 1260, his earliest masterpiece. In its fine bas-reliefs we see an interesting adaptation of Roman, Byzantine and French Gothic models. In the Adoration of the Magi, the Virgin is a Juno, the angel seems taken from some work of the Emperor Justinian. The figures have none of the Gothic vivacity and slenderness, but are majestic and heavy, and an occasional nude figure shows plainly the study of the antique. Another pulpit at Siena is the work of the master with the help of his son Giovanni and several scholars. Here enters a dramatic element which was developed by Giovanni, who is far more of a typical Gothic artist than his father: his pulpit at Pistoia, in S. Andrea, is his best. The great fountain of the square at Perugia is a joint work. Giovanni entered into the spirit of Gothic symbolism, as is evident in the caryatid figure of his pulpit for the cathedral at Pisa. He became overdramatic in his later works, but several of his statues of the Virgin with the Child are full of dignity.

This school of the Pisani spread over the entire peninsula. A spectacular work in the north, at Milan, is the shrined S. Peter Martys; another at Bologna, is the shrine of S. Domenico; while the royal tombs in Naples prove how quickly it conquered the south. In Florence and Orvieto, however, are the schools' two most extensive undertakings. The façade of the cathedral of Orvieto is unique in Italy. Four broad piers separate the portals and are covered with a series of low reliefs representing a vast Christian poem in four scenes: Genesis, the Tree of Jesse, with a choir of the Prophets of the Redemption; the Life of Christ; the Last Judgment. This epitome of the world from Creation is given in a charming poetic and at times dramatic style. The scene of the Last Judgment is particularly grand, and the Creation scenes the most exquisitely beautiful. There is nothing like it even in France. It is the incarnation of a poet's dream.

Giotto's tower in Florence has many five sided reliefs (fifty-four in all), which were planned by Giotto himself, mainly in the spirit of allegory. The Virtues and Vices, the Arts and Sciences, the glorification of labor, of commerce and industry, of organized society. They are interesting to compare with the different representations of similar subjects on the French cathedrals. Of greater beauty and grace are the reliefs in the bronze doors of the Baptistery by Andrea Pisano, mainly devoted to the life of John the Baptist. These charming framed and grouped scenes are of a classic simplicity, and are quite perfect in their drapery and grace. They remind one of the best French work, which they certainly equal. The last notable master of this school was Andrea Orcagna whose tabernacle at Or San Michile in Florence is an extraordinarily successful combination of architectural design and color with sculpture. This brings us to the eve of the Renaissance.

Of English Gothic sculpture there is little to be said. It is very abundant at Wells cathedral and fairly so at Lichfield and Salisbury, but not well arranged and too much addicted to isolated statuary. There are no individual statues and scenes of great artistic beauty as in France or Italy.

Renaissance.—Italy now wrests the leadership from France. The Renaissance was born in Tuscany at the beginning of the fifteenth century, and the revolutionary movement invaded all the arts almost simultaneously. Three men took the lead in the field of sculpture: Ghiberti, Donatello and Jacopo della Quercia.

Donatello was by far the greatest and exercised the widest influence. His St. George, is one of the famous statues of the world, standing solidly and earnestly though with a touch of self-consciousness. In his charming bust of the youthful Christ and in St. John, Donatello really recreated the child in art, at least in Italy, where children had always seemed like little men in mediæval art. Nothing more rollicking and joyous can be imagined than his dance of plump but active children on the pulpit at Prato. His wonderful versatility appears in his equestrian statue of Gattamelata at Padua, his Brancacci tomb at Naples, with its wealth of decorative design, and his bronze statue of David in Florence.

Ghiberti, his contemporary, is chiefly famous for the bronze gates of the Florentine Baptistry. He is a connecting link with the Gothic past. In the first gate he imitates so closely the neighboring gate of 1330 by Andrea Pisano, with its small simple compositions, that he seems thoroughly mediæval. A few years later he adopted an absolutely opposite scheme for his second gate, which Michelangelo thought worthy of Paradise. Here the scenes were few and large, the figures numerous and small. These reliefs with their vanishing planes, their vivid picturesqueness and elaborate scenario struck an entirely new note in sculpture.

Jacopo della Quercia, the third in this early trio, was the precursor of Michelangelo in his love of anatomy and his dramatic bravura. This is especially evident in his work at S. Petronio, in Bologna, in the reliefs of the portals in the façade and the group of the Virgin holding the Child. He was at the same time master of a delicate and penetrating charm, which he shows in the exquisite reclining figure of Ilaria del Carreto, on her tomb at Lucca, on a cenotaph decorated with children holding a long wreath, the most beautiful instance of a favorite motif copied from some Roman original.

TOMB OF ILARIA DEL CARRETO
In Lucca Cathedral, by Jacopo della Quercia. Perhaps the most beautiful composition of sepulchral art.

Later Italians.— The latter part of the fifteenth century is so crowded with talent, not only Florentines (and other Tuscans), but Lombards, that it is difficult to single out special men and works. Fiesole's bust of Bishop Salutati, with its keen and rather pleasantly ascetic face, is a highly finished example of Tuscan verve. Among the numerous sepulchral monuments in which decoration and figures were more happily combined than in any other class of works, perhaps the Marsuppine tomb by Desideris da Settignano, stands supreme. He was Donatello's greatest pupil. Among the pulpits the most harmonious is that in Santa Croce in Florence by Benedetto da Majano. It has a relief in each face and here the pictorial style inaugurated by Ghiberti is adopted with its use of perspective and scenario—in exactly the same way that it was adopted at the same time by painters like Mantegna. Among altarpieces, the most spectacular are perhaps two: that at Padua by Donatello in bronze and that at Pistoia (S. Jacopo) by several artists. This last is of silver and not only covers the face of the triple altar but surmounts it with a high structure. The whole is made up of lines of compositions in relief and statues in niches. It is the largest work of its kind and the most varied and interesting.

Robbia School.—Next came Luca della Robbia, a serene religious artist, most noted as the creator of that form of relief sculpture in polychromatic glazed terra cotta known from him as "Robbie ware." It was extremely popular throughout Tuscany and further south. His nephew Andrea almost equalled him in talent and productiveness. The Resurrection of Christ at S. Marco in Florence is an early and simple study in white and blue. The coloring became more and more elaborate until under Luca's grandson Giovanni, it was at times crude. The Robbie school was the great representative of religion in the Italian sculpture of the Renaissance, as Fra Angelico and the Sienese artists were in painting.

MADONNA AND CHILD WITH ANGELS
In Via dell' Agnola, Florence, by Luca della Robbia. A beautiful lunette, in glazed terra cotta with figures of singular simplicity, directness and purity, mainly white and blue.

As the culminating work of the early Florentine school came the very greatest equestrian statue the world has seen, the Bartolommeo Colleone in Venice by Andrea del Verrocchio, the *beau ideal* of a fearless Renaissance adventurer or *condottiere*. It is in every way superior to the Marcus Aurelius, its only antique rival. Horse and man are one and full of force and life.

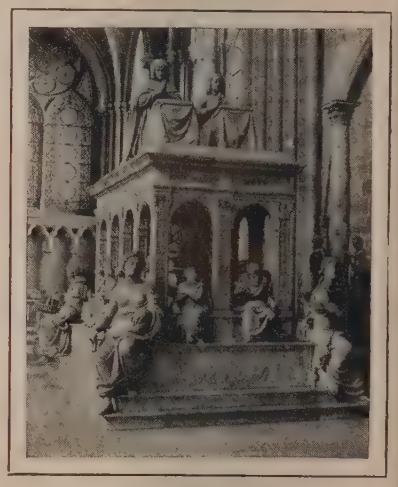
EQUESTRIAN STATUE OF COLLEONI
At Venice, by Andrea del Verrocchio. It was finished by Leopardi, and is the greatest equestrian statue in the world. It is vibrant with energy and personality.

However, the days of masterpieces passed away for a short time, even the men who led the Florentine school just before Michelangelo, such as Sansavino and Rovezzano were second-rate men.

Michelangelo was essentially a plastic genius. It is evident even in his works of architecture and painting. He was more original and varied than Donatello, in his conceptions if not in his style. We might call him the Browning of Sculpture so difficult is it sometimes to explain him, so subtle and wise is his thought. He cut himself lose from traditions and schools. At first he steeped himself in classic sculpture and imitated it so well in his Faun as to deceive the best critics. Then he passed through a phase of normal religious themes, as we see in his *Pieta* at St. Peter's, where the highly-finished surface is also a passing phase in his technique, which affected afterward greater sketchiness. Michelangelo reached the full realization of his colossal talent in two works: the tomb of Pope Julius II, which was never completed, and of which the famous powerful statue of Moses belongs; and the monuments of the Medici at S. Lorenzo in Florence, of which the tombs of Guiliano and Lorenzo were almost finished. We have in these works primitive, elemental sculpture used to convey generic ideas of life and death. The mystery that has enveloped the reclining figures that we call *Dawn* and *Twilight*, *Day and Night*, has been continuous since the day of their execution. The Lorenzo, popularly called *"Il Penseroso,"* is far more than a portrait, it is brooding introspection. No artist before Michelangelo had so openly played with the human form, and yet none had been so completely an idealist. His heads, especially the David, the Brutus, the Lorenzo make an undying and vital appeal.

After him, the Decadence. Benvenuto Cellini, to be sure, was an extraordinary technician. His *Perseus* with the head of Medusa shows that he could produce other things than the works of delicate and decorative beauty for which he was famous. Baccio Bandinelli was an inflated and debased follower of Michelangelo's Baroccio mood. Giovanni da Bologni had better taste and was the last classicist of any merit.

France — Though Italy certainly overshadowed the rest of Europe during the Renaissance, a great deal of interesting sculpture was produced in France, and its national character is now being more clearly seen. Its greatest representative was Jean Goujon (1520-1566), whose influence transformed the French school, combining with it characteristics both Italian and Flemish. His most famous figures are the water nymphs for the Fountain of the Innocents, in Paris, and the Diana of the Fountain for the Chateau at Anet. There is a touch of artificiality in pose and drapery, a self-conscious grace that is not at all disagreeable. His predecessor, Michel Colombe, was more classic and truly graceful, and his work, while quite different from the Italian style is more closely related to it. There is a great deal of picturesqueness and atmosphere to his relief of St. George fighting the Dragon made for the Chateau of Gaillon. Another and somewhat later master, Germain Pilon, left masterpieces in the tombs of Francis I. and Henry II. at St. Denis. So also did Jean Juste in his tomb of Louis XII.



TOMB OF LOUIS XII.
At St. Denis, by Jean Juste, of Tours. One of the finest royal tombs at St. Denis whose sculptures have escaped destruction.

Germany. — The German Renaissance hardly ever reached a high level. Something seemed to prevent its sculptors from passing beyond a rather commonplace naturalism. The one great exception was

MOSES
By Michelangelo, now in S. Pietro in Vincoli, Rome. Designed to adorn the tomb of Pope Julius II., intended to be erected in St. Peter's. It is an extraordinary expression of the sublime and terrible.

ian loss of supremacy, other schools sprang up, Ionian, Sikyonian, and Theban-Attic. There are few remains extant. Four slabs in the Naples museum have on them red outline drawings from which the color has scaled, but there are many Greek vases with paintings on them of various sorts, generally monochromatic work that still remains as complete as when first painted.

Roman Painting followed rather slavishly Greek methods, originating little if any, though it assumed perhaps, a more decorative quality and what has been preserved is more the work of mechanical decorators than men with large creative faculties. The name of Fabius Pictor (300 B. C.) is celebrated in historical painting, and in portraiture there were in the last century of the republic, Sopolis, Dionysius and Antiochus, the latter the most famous. Rome and Naples contain many specimens of mural work of this time and the great museums have examples, while there are some in America. Ancient painting practically ends with the destruction of Pompeii, A. D. 79.

Italian Painting—200-1250 A. D. Christianity came out of the decadent civilization of the Roman empire, was to change its art as it did all other things and, during its time of persecution, art struggled on feebly, starting Roman in form, but ending Christian, and its two principal motives were religion and decoration, the first being of the greater importance. The walls of the Catacombs in Rome contain the earliest Christian painting, in chronology very much mixed, and with degeneracy from the beginning; but with Constantine, Christianity being recognized as the national religion, it came out of the Catacombs and gave itself over to illuminations, church decorations and mosaics, declining during the sixth and seventh centuries, due to the influence of Byzantium. In 1250 came an awakening. From then to 1400, known as the Gothic period, though Italy was torn by political wars, art became the servant of the church and the chief theme was the Bible story. Work during this period was executed in fresco on the walls of churches.

The Florentine School.—Cimabue is a notable example of a man trained in the Byzantine methods, who improved upon the traditions. He gave more life to his figures than had his predecessors and his most eminent pupil was Giotto (1266?-1337) whose art was the best of its time. A half a century later, Fra Angelico was born (1387-1455) the last inheritor of the Giottesque traditions, whose religious sentiment was the strong feature of his art. He was the last of the great religionists in painting. The early Renaissance in Italy was from 1400 to 1500 and then painting became the color thought and form-language of the people. A revival of antique learning took place and after the fall of Constantinople, there came an influx of Greek scholars into Italy. Masaccio (1401?-1428?) was the first great nature-student of the early Renaissance and, in the front rank, a monk, Fra Filippo Lippi (1406-1469) who was possibly his pupil was at least his legitimate successor. He was the first to use the faces of the people about him as subjects for his religious characters, clothing them in the garb of the day, and his tendency was to materialize his sacred characters.

In Botticelli and Ghirlandajo (1449-1494) we find traits of imagination and originality not surpassed by others of the early Florentines. The first was a pupil of Lippi and a man of deep religious feeling. His figures, always tall and willowy are delicate and refined in drawing and full of tenderness and grace. Ghirlandajo was the greatest technician of his time, drawing wonderfully and composing well, though occasionally his results were somewhat prosaic, even if he was an undisputed master of his trade. Perugino, Leonardo da Vinci and Lorenzo da Credi were the distinguished pupils of Verrocchio (1435-1488), the greatest being di Vinci, (1452-1519), whose *Last Supper* in Milan, and *Mona Lisa* at the Louvre, in Paris, are among the most famous paintings in the world. He was as well a distinguished mathematician, a scientist and a man of many attainments. Piero di Cosimo was of this period (1462-1521), a painter of classical and mythological themes.

LAST SUPPER

Painted by Leonardo da Vinci, 1496-98, in the Refectory adjacent to the Church of Santa Maria delle Grazie, Milan. In force of conception, harmony of detail, and delicacy of touch, this is among the finest works ever painted. Through the ravages of time little now remains of the original.

The Umbrian and Perugian Schools included Foligno (1430-1502), Piero della Francesca (1420-1492), and Signorelli (1441-1523). Finally, there was Giovanni Santi, (1434-1494), the father of Raphael. Perugino (1446-1524) showed more of the old religious feeling, his sentiment was very human, his compositions were graceful and his color was rich. He was among the first to employ the medium of oil in his painting. He had as pupils Raphael and Lo Spagna (1530?). Pinturricchio (1454-1513) did not use oils, but his frescoes were unusual in their artistry and charm, in their effectiveness and masterly qualities. He was a varied and interesting painter. In the schools of Ferrara and Bologna, were Cosimo Tura (1425-1498?), Francesco Cossa (1450-1536), and Lorenzo Cossa (1460-1536?), Francis (1450-1518) and Ercole di Giulio Grandi (1531?). Of the Lombard schools may be mentioned Vincenzo Foppa (1455-1492) and Borgongnone (1523?).

The Paduan School, the greatest representative of which was Andrea Mantegna (1431-1506), a pupil of Francesco Squarcione (1394-1474), a good teacher, but an indifferent painter. Mantegna however was a deep student of nature, one of the greatest of the early Renaissance and was scientific in his perspective. Other men were Pizzolo (about 1470) and Marco Zoppo (1445-1498). In the schools of Verona and Vicenza were Vittore Pisano, called Pisanello, (1380-1456), the earliest of note; Liberale da Verona (1451-1536), Francesco Bonsignori (1455-1519), Francesco Caroto (1470-1546) and perhaps best of all, Bartolomneo Montagna (1450?-1523). The Venetians, being of a worldly spirit demanded a similar art. Their painting was largely decorative and colorful and its early manifestation, in the fifteenth century, was in the making of mosaics and altar pieces after the Greek or Byzantine manner. Of this date was Jacobello del Fiore, and Semitecolo Gentile de Fabriano, painting with Pisano, as assistant in the Ducal Palace about 1420, was possibly responsible for a change in Venetian art. He taught there and was possibly the master of two Vivarinis, Antonia and Bartolommeo (1450-1499?). The latest of the family was Luigi Vivarini (1461-1503). A pupil was Carlo Crivelli (1430?-1493).

Venetian Painting dates from the Bellinis, two families working about the same time. Jacopo Bellini (1400-1464?), his two sons Gentile (1426-1507?), and the greatest of the family, Giovanni Bellini (1428-1516?) made a strong trio. The last named was the epoch making man of early Venice, being superior to all his contemporaies in technical strength. He had many followers. Other men were Carpaccio (-1522?), Cima da Conegliano (1460-1517?), Catena (-1531?), Basaiti (1490-1521?), Previtali (1470-1525), Bissolo (1464-1528), Rondinelli (1440-1500?), Diana (-1500?), Mansueti (about 1500) and finally Antonello da Messina (1444-1493?). Messina it was who introduced the use of oil medium in Venice, having learned it from the Van Eycks, the Flemish painters who discovered it. He was an excellent portrait painter. A Florentine painter was a monk of San Marco, Fra Bartolommeo (1475-1517), follower of Savonarola, the last of the pietists in art, who worked in collaboration with Albertinelli (1474-1515), in the workshop of Cosimo Rosselli. Other men; Fra Paolino (1490-1547), Bugiardini (1475-1554), Granacci (1447-1543), and Ridolfo Ghirlandajo (1483-1561). Andrea del Sarto (1486-1531) called "the faultless painter" was the best draughtsman and colorist of the Florentine school, painting many madonnas and altar pieces. He had many pupils, most of whom deserted him later to follow Michelangelo. The best of these were Pontormo (1493-1558) and Franciabigio (1482-1525).

Michelangelo (1474-1564) was the great artist of the Renaissance. His long life was a succession of triumphs and he is universally acknowledged as the greatest man in art in the world's history. More sculptor than painter, a magnificent

draughtsman, a master of composition, Michelangelo Buonarroti, to give him his full name, was born at Castle Caprese, a small town near Florence, on March 6, 1475. At thirteen he was apprenticed to the painters Domenico and Ghirlandaio. Pope Julius II. commissioned him to paint in fresco the Vault of the Sistine Chapel in the Vatican, and it was for Pope Paul II. that he did his *Last Judgment* which was almost the last work in painting he was called to undertake, though later he did do two frescoes in the Pauline chapel of the Vatican. In addition to being sculptor and painter, he was an architect, engineer and poet, and the great dome of St. Peter's was raised from his plans. His *Last Supper* contains no less than 314 figures and was the labor of over six years. He was the supreme master of Italian art. Among his immediate followers;—Daniele da Volterra (1509-1566), Marcello Venusti (1515-1585?) and Sebastiano del Piombo (1485-1547), the last a remarkable portrait painter.

DESCENT FROM THE CROSS

The masterpiece of Volterra, now in the Church of Triniti de Monti, Rome. Considered by Poussin one of the three great pictures of the world, and by Lanzi as among the finest pictures of Rome. Volterra was the most successful follower of Michelangelo.

Raphael Sanzio (1483-1520) often has been called "the Harmonist of the Renaissance", the very opposite of Michelangelo, a very personal painter, of grace, purity, serenity and loftiness, whose themes were religious and mythological, rendered in a calm, intellectual manner. The European galleries are full of his works among the most prominent of which are *The Sistine Madonna*, at Dresden; *Marriage of Virgin Brera*, at the National gallery, London, *Madonnas St. Michael and St. George*, at the Louvre, Paris, and many more. His influence was largely felt and he had many followers and imitators, among them;—Francesco Penni (1488-1528?), Giulio Romano (1492-1546), Primaticcio (1504-1570), Giovanni da Udine (1487-1564), Perino del Vaga (1500-1547), Andrea Sabbatini (1480-1545), Innocenza da Imoli (1494-1550?) and Timoteo di Viti (1469-1523). Bernardino Luini (1475-1533?), was a follower of da Vinci, and other men of that school were Salaino (1495-1518), Beltraffio (1467-1516), Marco da Oggiono

SISTINE MADONNA

Painted by Raphael for the monastery of San Sisto, Piacenza, Italy; hence its name. It is now in the Dresden Gallery, and is regarded by many critics as the FIRST painting in the world. No work compares with the beauty, dignity and grandeur of the Virgin, and the two enchanting angel boys, leaning on the lower division of the picture, give the last touch of beauty to this magnificent work. On the left is Pope St. Sixtus, on the right St. Barbara.

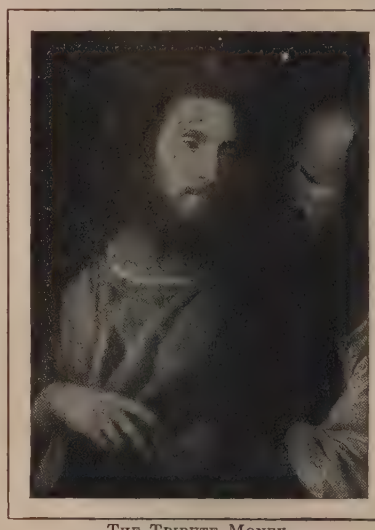
(1470-1530?), Solario (1458-1515?), Giampietrino (1520-1540), Cesare da Sesto (1485-1523) and Gaudenzio Ferrara (1481-1547?). One of his best pupils settled in Sienna. He was Sodoma (1477-1549?) and he built there a new school though its influence was slight. Among Sodoma's followers;—Pacchiarotta (1474-1540?), Girolamo della Pacchia (1477-1535), Peruzzi (1481-1536) and Beccafumi (1488-1551). Men of the Ferrara and Bolognese schools feeling the influence of Raphael were;— Dosso Dossi (1479-1542), Garofolo (1481-1559), Mazzolino (1480-1528?) and Bagnacavallo (1484-1542).

HOLY NIGHT

A famous example of the poetry of light and shadows by Correggio, now in the Dresden Gallery. The picture is a portrayal of the scene of the Saviour's birth: "But on a sudden the cloud became a great light in the cave, so that their eyes could not bear it. But the light gradually decreased, until the Infant appeared."

Antonio Allegri, more commonly called Co reggio, was born near Mantua in 1494. writer has called him "the Faun of th Renaissance" His appeal was sensuou and artistic rather than religious, historic or intellectual. He is said to have forme his style on that of Mantegna. He painte many religious and mythological subject as well as some famous pictures of "Led and the Swan," and he was more allied t the schools of Venice than with the severe intellectual schools of Florence. He ha the most delicate perception of light an shade and his figures are endowed wit every human charm, æsthetic perfectio obviously having been his sole aim. H died March 5, 1534. Among his pupil who however did him small credit, were;— his son, Pomponio Allegri (1521-1593? Michaelangelo Anselmi (1491-1554?) an Parmigianio (1504-1540).

The Venetians.—Beauty of color was the not of the school of Venice adopted by the artist of the sixteenth century there. Th light and shade on the nude figure, the pre



THE TRIBUTE MONEY

Painted by Titian, and in Dresden Gallery. Or of the highly prized pictures of that gallery, perfe in finish and detail, bringing out the illimitable co trast of soul between Christ and the crafty Pharise It has for ages given a new meaning to Christ answer: "Render therefore unto Cæsar the thing that are Cæsar's; and unto God the things that a God's."

sentation of rich brocades, the richness robe and adornment, the fulness of ma terial life, the portrayal of the glories of nation given to display held these men The work of Giorgione had a great influenc on his contemporaries. He was born i 1477 and died at the age of thirty-four. H adopted the oil medium, then little know and he introduced scumbling and glazin to produce depth of color. Easily th first painter in the whole range of Italia art was Tiziano Vecelli, known as Titia (1477-1576), a pupil of Bellini. He live ninety-nine years and worked to within few months of his death, having been fa mous and practically independent since hi thirty-fifth year. His theme was humanit whether in classical or religious compo sitions and his art dignified all who sat t him for in himself he was an epitome of a the excellences of painting.

Tintoretto (1518-1592), was a fecun worker, a great draughtsman, a fine colori and a master of light. Paolo Verones (1528-1588), the fourth of this quartette

the great Venetians was a brilliant colorist and a decorative painter of the highest order. He turned scenes from scripture and legend into pageants of Venetian glory and his art was the most gorgeous of all his contemporaries. Other men of the school;—Palma il Vecchio (1480-1528?), Lorenzo Lotto (1480-1556?), Rocco Marconi (1505-?), Pordenone (1483-1540), Bonafazio Veronese (-1540?), Paris Bordone (1495-1570), Jacopo Bassano (1510-1592) and his son Francesco (1550-1591). From Venetian territories were;—Savoldo (1480-1548?), Romanino (1485-1566), Moretto (1498-1555?) and his pupil Giovanni Moroni (1520-1578), who was a masterful painter of portraits and a prolific workman. It is said Titian used to send clients to him. At Verona were Girolamo dai Libri (1474-1555), Torbido (1486-1546?) and Cavazzola (1486-1522).

Decadence of Italian Art.—From the first of the seventeenth century, Italian art began its decadence. Men became imitators and art may be said to have been under the rule of the Jesuits. The decoration of the churches was continued, but in a more or less prefunctory manner and without the serious piety of previous times and though there were earnest men among the artists, the spirit had fled. Agnolo Bronzino (1502-1572?) was an imitator of Michelangelo, as were Vasari the art writer (1511-1574), Salviati (1510-1563) and Federigo Zucchero (1543-1609). Baroccio (1528-1612) was an imitator of Raphael. The family of Caracci, in about 1585, sought to revive art. There were five of the Caracci, three of whom led the school: Ludovico (1555-1619), Agostino (1557-1602), and Annibale (1560-1609), the last being the most famous. Among their pupils was Domenichino (1581-1641). Guido Reni (1575-1642) ran to excessive sentiment and pathos. Other men were:—Albani (1578-1660), Guercino (1591-1666), Sassoferrato (1605-1685), Carlo Dolci (1616-1686), Cristofano Allori (1577-1621), Berrettini (1596-1669) and Maratta (1625-1713).

Neapolitan School of Naturalists. — The Neapolitan school of Naturalists was led by Caravaggio (1569-1609), who represented sacred themes by employing models from the street life about them and their use of dark shadows caused them to be referred to as the "Darklings." Other men;—Giordana (1632-1705) and Salvator Rosa (1615-1673). Among the late Venetians were Palma il Giovine (1544-1628), and Padovanino (1590-1628), while the last great Italian painter was Tiepolo (1696-1770), who with an art founded on that of Paolo Veronese, produced decorative ceilings and panels of rare beauty of color and charm. He left a son, Domenico Tiepolo (1726-1795). Two painters of Venetian canals and architecture were Canaletto (1697-1768) and Guardi (1712-1793).

Modern Italian Art has been notably without any of the grand elements that characterized the earlier workers. It has been mainly prefunctory and clever, the names of Michetti, DeNittis, Favretto, Tito, Nono and Simonetti standing rather for brush facility than any deep thought. Exception may be made in favor of Giovanni Segantini (1858-1899), an astonishingly original and personal painter who made many pictures of the high Alps and the peasantry, in a manner entirely his own, with long brush strokes of interesting pigments in effective juxtaposition. An admirable draughtsman and a master of composition, his pictures are full of allegory and human interest.

French Painting has always been strongly decorative. As early as the fifth century the artists produced mural paintings. Byzantine influences were at work in the eighth century, while in the eleventh, twelfth and thirteenth centuries, stained glass work appeared, and many missal paintings and furniture decorations. René, of Anjou, King of Naples (1409-1480), was a painter of considerable merit who gave an impetus to art, his work showing Italian influence. A contemporary was Jean Fouquet (1415-1480?) who did illuminations and painted portraits. His pupils were Jean Pèreal (-1528?) and Jean Bourdichon (1457-1521?) who formed a school at Tours. Four members of the Clouet family were painters, the most noteworthy being Jean (1485-1541?) and François (1500-1572?). They painted portraits, and the latter was said to have been a pupil of Holbein whose work his own resembled. François I. having during his travels invited many Italian painters to his court, their influence was felt on the French work. Jean Cousin (1500-1589?) and Toussaint du Breuil (1561-1602) were thus impressed.

THE BROKEN PITCHER

Painted by Greuze, and now in the Louvre, Paris. The most celebrated picture by this artist; nor has any been so often copied. This young girl, so naive and charming, has capivated the public taste from the time she was first painted down to the present day.

The Seventeenth Century discloses great development as well as production. It was the time of the founding of the French Academy of Painting and the formation of many collections. Among the earliest men of that century was Fréminet (1567-1619), as well as Vouet (1590-1649), both having studied in Italy. Nicolas Poussin (1593-1665), a Frenchman who spent most of his life in Italy, was the founder of the classic and the academic in French art, and he was strong in heroic landscapes. A more famous landscape man however was Claude Lorrain (1600-1682). He was perhaps the first one to get something of the truth and light of out-of-doors. With Louis XIV. French art took on a national character. Lebrun (1619-1690) was court painter and flattered his patron. LeSeur (1616-1655) was better and more sincere. Sebastian Bourdon (1616-1671) was a painter of history, and the leaders of portraiture were; Philip de Champaigne (1602-1674), Pierre Mignard (1610-1695?), Largilliere (1656-1746) and Rigaud (1659-1743). The frivolities of the times were responsible for the themes given out by Antoine Watteau (1684-1721), who may be said to have been the first great French painter. His work was original, decorative, of great brilliancy and charm. His best pupils were; Lancret (1690-1743), and Pater (1695-1736). Later came Van Loo (1705-1765), Boucher (1703-1770) much after the manner of Watteau, and Fragonard (1732-1806). Claude Joseph Vernet (1712-1789) was a painter of landscape and marines, Chardin (1699-1779), painted genre themes of humble life and the name of Greuze (1725-1805) is associated with sentimental heads of young girls, executed with dexterity and cleverness, works as a rule, of much charm.

French Classicism was a strong protest against the flippant and licentious art of such men as Boucher and Van Loo and which, in a way, was a revival of Greek form in art, came in first with Vien (1716-1809), and was carried on by his pupil David (1748-1825), who became the leader of the school. David painted military pictures after having studied the marbles at Rome, and he reproduced scenes from Roman and Greek life in an elevated and sculpturesque style. His portraiture was admirable. A friend of the Emperor Napoleon I. he reigned a long time as the supreme authority on art. His drawing was faultless though his color was hard and unsympathetic. His best pupils were; Jean Baptiste Regnault (1754-1729), Vincent (1746-1816), and Prudhon (1758-1823), whose themes were mythological and allegorical. Others were; Girodet (1766-1824), Léthiere (1760-1832), Guérin (1774-1833), and Gerard (1770-1837).

The most distinguished of the pupils of David, were Jean Ingres (1780-1867) and Jean Gros (1771-1835). In single figures and portraiture Ingres was at his best for he was a remarkable draughtsman who gave his greatest attention to form and line to the subordination of color and emotion. Gros too, was a superlative draughtsman with a strong sense of realism at the beginning and a deep love of color, light and air. In his art we may find the beginnings of the school of romanticism, a movement in French art that began in the early part of the nineteenth century. Landscape art of the time of Ingres continued along the traditions of Claude and Poussin. Its exponents were; Watelet (1780-1866), Bertin (1775-1842). Michallon (1796-1822), and Aligny (1798-1871). Madame Vigée-Lebrun (1755-1842) stood apart from contemporary influences and was a successful portrait painter, royalty and nobility sitting to her. Similarly Horace Vernet (1789-1863) painted battle scenes successfully, irrespective of any classic influence.

The Realists. With a famous picture, *The Raft of the Madusa,* Géricault (1791-1824) broke completely away from the traditions of the classic. It was realism so uncompromising that France was divided into two parties as far as the artists were concerned. Géricault dying young, his fellow pupil Delacroix (1799-1863) continued the new movement and his picture *Dante and Virgil*, created scarcely less of a sensation than *The Raft of the Medusa.* Other men of this period were; Deveria (1805-1865), Champmartin (1797-1883), Sigalon (1788-1837), Cogniet (1794-1880), Robert-Fleury (1797-?), Boulanger (1806-

SUNSET

Painted by Theodore Rousseau, and now one of the glories of the Louvre, Paris. This masterpiece, writes Sensier, "gives all the forceful harmonies, the forms, the accents of the autumn day upon the border line of a wood; the sun of gold and rubies throws its last flames in a sheaf of brilliant light." It was painted on the outskirts of the Forest of Fontainebleau.

1867) and Delaroche (1797-1856). Acy Scheffer (1797-1858), Dutch born, became identified with French art, but he was not among the great, his merit being rather poetic charm than individuality. Decamps (1803-1860), was among the first of the French painters to visit the Orient. Others going there were Marilhat (1811-1847), Fromentin (1820-1876), who wrote as well as he painted, and later, Gérome (1824-1904) and Cabanel (1823-1889). Other men of the time: Flandrin (1809-1864), Gleyre (1806-1874), Hamon (1821-1874), Aubert (1824-) and Couture (1815-1879), the last a mingling of several influences. His large picture, *The Romans of the Decadence*, made him famous in a day and was a departure in semi-classic realism.

The Barbizon School.—The year 1830 saw a new school of landscape art in France, the result of the study of the old Dutch landscapists and the Englishmen Constable and Bonnington, culminating in the Fontainebleau-Barbizon school of which the leader was Theodore Rousseau (1812-1867), undoubtedly the greatest landscapist of the century. Corot was earlier (1796-1875), a painter of great poetic charm and delicacy, his work being in a light, silvery key. Others of this group were. Jules Dupré (1812-1878), Diaz (1808–1876,) Daubigny (1817–1878), Francais (1814- .), Cazin (died 1901), Pelouse (died 1890) and Harpignies, the last still living at the age of ninety-one. Animal painters of this epoch were Troyon —the greatest—(1810-1865), Van Marcke (1827-1890), his pupil, Jacque (1813-1890), Rosa Bonheur (1822-1899) the famous woman painter, and her more talented brother, Auguste (1824-1875). Jean François Millet (1814-1875) was the figure painter of the Barbizon group, rendering the peasant life about him with

OXEN PLOWING

Painted by Rosa Bonheur, and now in the Luxembourg, Paris. As an animal painting, this picture stands second to none. The character given to these patient oxen, and the natural beauty of the plowed field have never been surpassed.

rare fidelity and force. Another, though not a follower, was Jules Breton (1827–1906). Billet, Legros and Lerolle are other figure men still living. Decorative painters of this epoch were Paul Baudry (1828–1886) and Puvis de Chavannes (1824–1898) the last one of the greatest of modern men whose mural work in the Sorbonne, and at the Boston Museum of Art is world-famous. Other men: Hebert (1817–), Henner (1829–1905), Lefebvre (1834–), Bonnat (1833–), the portraitist Carolus-Duran (1837–), Laurens (1838–), Cormon (1845–), Benjamin-Constant (1845–1902) and Henri Regnault (1843–1871) who died in battle at the age of twenty-seven, but who left several notable canvases, his portrait of *Marshal Prim* in the Louvre, being most distinguished. Gustave Courbet (1819–1878) the realist, had to do with modifying the romantic and classical tendencies, and Bastien-Lepage (1848–1884) established a school of out-of-door painting, having a large following. Meissonier (1815–1891) was a distinguished painter of military scenes rendered in great detail after the manner of the Little

DANCE OF THE NYMPHS

Painted by Corot in his most characteristic style—and of idyllic grace and poetic softness. Light and air were the two great essentials of his art. It is here in all its perfection, with the added troop of Nymphs with which he was often wont to people his landscapes. This picture is hung in the Louvre, Paris.

Dutchmen of the seventeenth century. He had one remarkable pupil, Charles Bargue (d. 1883), who even excelled his master in dexterity. Military painters include DeNeuville (1836–1885), Détaille (1848–), Berne-Bellecour (1838–) and Aime-Morot (1850–). Other men Ribot (1823–), Roybet (1840–), Bonvin (1817-1887) and Vollon (1833-1900) the last two having been admirable painters of still life. Fantin-Latour (1836–1904) an allegorical-romantic painter, brings us to the impressionists of which Manet (1833–1883) was the leader, his followers and adherents including Degas, Pissarro, Renoir, Sisley, Boudin, and most famous of all, Claude Monet, who in his exploitation of nature's lights quite revolutionized the palette of the century and raised the key of all contemporaneous painting.

Spanish Painting.—Spanish art before the fourteenth century is entirely conjectural, practically no facts being obtainable. That of the fifteenth century was a reflex of Italy and the Netherlands. The bulk of it was always done under church domination. The earliest school was at Toledo, of artists who embellished the cathedral. This was merged into the Castilian school with headquarters at Madrid, its founder unknown, but the first painter of importance was Antonio Rincon (1446–1500) referred to as the "father of Spanish painting," a pupil of Ghirlandajo, in Italy. He painted chiefly at Toledo and left portraits of Ferdinand and Isabella. A pupil of Michelangelo, Berruguete (1480–1561?) was the first to introduce pure Italian methods in Spain. Others; Becerra (1520–1570?), Morales (1509–1586), Sanchez-Coello (1513–1590) and a dumb painter, Navarette (1526–1579), a pupil of Titian. Theotocopuli (1548–1625) was called "El Greco" (the Greek) and had much of the Venetian influence, his work being unusual in color and drawing. A pupil was Tristan (1586-1640).

Velasquez (1599–1660) was the great man in Spanish painting. Though he studied in Italy, he was thoroughly original and Spanish to the core. He was a realist, a great master in all the technical variations of his art and one of the greatest portrait painters of all times. He made himself independent of the church and with him Spanish painting reached its climax. Although there are many examples by him in the world's galleries, his best work is in Madrid where are his famous portraits of royalty and his great compositions. Mazo (1610–1667) was his son-in-law and imitator. An assisstant was Carreño de Miranda (1614-1685). Other men; Claudio Coello (1635-1693), a wonderfully facile workman, DeCastro (about 1454), Vargas (1502–1568), Cespedes (1538–1608?), Roelas (1558–1625?), Pacheco (1571–1654), Herrera the Elder (1576–1656?) and Zubaran (1598–1662) a painter of dismal themes, with monks in tortured rapture. From his dark shadows he was referred to as the Spanish Caravaggio. Cano (1601–1667), was another.

The Andalusian School was headed by Murillo (1618–1682), a painter of great religious fervor and often sentimentality, with Madonnas that had a great appeal. Other men; Juan de Joanes (1523–1579), Francisco de Ribalta (1550-1628) and Ribera (1588-1656) known as Lo Spagnoletta. A pronounced mannerist, Ribera was a painter of great strength in a dark key and with subjects of almost repulsive character; his influence spread in Italy as well as in Spain. It was Goya (1746–1828) who stood out prominently among the decaying Spanish art which languished after the passing of Valasquez and Murillo. Essentially Spanish, his themes were rather brutal and bloody, of the Inquisition, the bull ring and battle pieces, but his portraits form a historical record of his countrymen and women.

IMMACULATE CONCEPTION

Painted by Murillo, and now in the Louvre, Paris, is a copy of his finest work at Seville, Spain. A fascinating picture of tender, caressing beauty, and eloquent of sensual piety. This was a favorite subject of Murillo. Another replica of note is hung in the Hermitage, St. Petersburg.

Modern Spanish Art. — Mariano Fortuny (1838–1874) attracted the greatest attention with genre subjects treated airily and with enormous charm, for the man was a superb technician and a consummate lover of the beautiful. Nor were his landscapes less alluring. One of his famous works, now owned in America, was *The Choice of a Model*. His brother-in-law is Madrazo (1841) a painter of portraits and genre works. Zamaçois (1842–1871) painted genre works in great detail, one of his famous pictures being *The Education of a Young Prince*, and men of unusual cleverness include Villegas, Pradilla, Alvarez, Luis Jiminez Aranda, Domingo and Martin Rico, the last identified with Venetian scenes. Two modern men have had not only a strong influence on the art of Spain, but on the art of Europe as well. They are Sorollo and Zuloaga, the first a painter of both figure and landscape, who portrays the brilliancy of Spanish sunlight, the activity of the city streets, the fisherman on the seashore and the happenings of refined social life. He is a portrait painter as well, having for his patrons the King and his court, and all these themes he renders in attractive color, with wonderful facility. Zuloaga, on the contrary, while painting portraits as well, has in his figure work devoted himself largely to the portrayal of the more sombre side of the Spanish character, in the most modern manner and technique. Both are able craftsmen and represent the best in modern art.

Flemish Painting.—If the earliest history of Flemish painting is lost, that country at least was not indebted to other lands for means and methods which were always quite original. Hubert van Eyck (died 1426) and his brother Jan van Eyck (died 1440) were celebrated painters, the elder being the more famous, though both did altar pieces in great detail, with rare skill. They are said to have been the first to introduce the medium of oil painting, though this is more or less apochraphal since the method was known before, but certainly they were the first to have introduced it into panel pictures. While little is known of the personality of either man, it is certain that they left a serious influence on the artists who succeeded them, among whom were Peter Cristus (1400–1472?) and Roger van der Weyden (1400–1464?), both of whom followed their style. The last founded what is known as the school of Brabant. Other men: Van der Goes (1430–1482?), Justus van Ghent (1450?) and Dierick Bouts, who though Dutch, founded a school in Louvain and his art was essentially Flemish.

Memling (1425–1495?) one of the greatest of this school, was strong, not alone in portraiture, but in the landscape as well. He had for followers Van der Meire (1427–1474?) and Gheeraert David (1450–1523). A prominent figure in Flemish art was Quentin Massys (1460–1530) who though a Dutchman, was Flemish by influence and the most important man in his profession in Antwerp. He, with Mostert (1474–1556?) was the last of the Gothic school in Flanders. Men disclosing the Italian influences now appeared, among them Mabuse (1470–1541), Franz Floris (1518–1570), Barent van Orley (1491–1542?), Cocxie (1499–1592), Lambert Lombard (1505–1584), and the portrait painters, Peeter Pourbus (1510–1584?) and Antonio Moro (1512–1578). Two brothers Brueghel, flourishing toward the end of this century were known, the one painting merrymakings, as "Droll," or "Boeren-Brueghel," and the other painting fearsome things, as "Hollen or (Hell) Brueghel."

The School of Rubens.—Flemish painting was greatest in the seventeenth century. Rubens founded a new art, on Italian methods, yet distinctly northern in character. Rubens (1577–1640) and his pupil Van Dyke were destined to leave their stamp on the art of all time. The first was eclectic in his choice of theme and to all he did he gave renaissance splendor. No one excelled him in technique and many of his subjects were religious, seen through eyes of his day, with an unction in the painting, a masterly drawing and modeling and an artistic grasp of his personages. He was well born and his life was a succession of triumphs for he was ennobled by his king, having not only the patronage of the highest, but the unstinted praise of his fellows. His masters Van Noort (1562–1641) and Vaenius (1558–1629) were far inferior to him. But in Van Dyke (1599–1641), Rubens had a worthy successor whose best work was in portraiture and who was one of the most materially successful of any of the painters. Style and great charm he had to a marked degree. He painted the famous men and women of his time, having a large studio with a great number of pupils. Other men; Diepenbeeck (1596–1675), Jordaens (1593–1678), Crayer (1582–1669), Janssens (1575–1632), Zegers (1591–1651), Rombouts (1597–1637) and Cornelius de Vos (1585–1651) the last a highly gifted painter, whose portraiture was of a high order. Snyders (1579–1657), and Fyt (1609–1661),

were painters of still life and landscape, of great detail and fidelity. Snyders sometimes painted the landscape in the figure-pieces of Rubens.

Genre Painters.—About this time a group of men were drawn to pictures of the commonplace life about them, of peasants at their household tasks and pleasures, among them being Teniers the Younger (1610–1690), whose wit was inclined to be coarse, though allowance must be made for the times. Another was Brouwer (1606–1683?) and, though in a slightly different vein, Gonzales Cocques (1618–1684). A later man was Verhagen (1728–1811), a talented portrait painter. Still later men: Francois Navez (1787–1869), Wappers (1803–1865), Louis Gallait (1810–?) and the Baron Leys (1815–1869), who developed a quaint Gothic style founded on the German, Cranach. His distinguished pupil, Sir Alma-Tadema, (1836–) now a naturalized Englishman and member of the English Royal academy, caught much of his manner and even exceeded his master in technical dexterity. Tadema has become identified with the rehabilitation of the life, customs and manners of ancient Rome, compositions of which he has made after great research and investigation. Alfred Stevens (1828–1906) one of the most charming of the moderns, a painter of genre, long a resident of Paris, was identified with French art for many years. Verboeckhoven (1799-1881) a sheep painter, but not of the first rank; Clays (1819), an admirable painter of marines; Robie, flower painter, and Van Beers, genre painter, make up another group. The name of Wiertz (1806–1865) stands for that of an eccentric but talented artist whose work is seen in a museum by itself in Brussels and discloses a strong, artistic mind, somewhat unbalanced and full of vagaries.

CLEOPATRA MEETING ANTONY

Painted by Alma-Tadema, and representing the historic scene at the moment when Antony yielded to the fatal fascination of this captivating and artful Egyptian Queen. The picture is minutely finished, and is a fine example of sensuous, Egyptian portraiture by a noted contemporary artist.

Dutch Painting.—Dutch art, like the Dutch people, has ever been sober, sturdy, honest, at times perhaps a little coarse, mostly depicting home life and its joys or sorrows, a little matter of fact, realistic occasionally to grotesqueness, but invariably true to itself and of sterling quality. Even where the theme was of sacred character, the artists used the people about them as personages in their compositions. Mainly these compositions were of a few figures engaged in card playing, carousing, seated by the hearthstone, at meals, or in the mild amusements of a social nature that made up the entertainment of these staid people. Albert van Ouwater is the first known painter, the founder of the Dutch school, and yet no picture has been definitely settled as being by him though some are ascribed to his hands, one, bearing date 1480 which might be later than he flourished. Tradition however credits him with strong landscape work. A pupil was evidently Geertjen van St. Jan (about 1475) who painted some altar pieces, and Bosch (1460–1516), painted some fantastic purgatory pictures that are known through engravings. The leading artist of the early period was Lucas van Leyden (1494–1533), pupil of Engelbrechsten (1468–1533). He was a friend of Albrecht Dürer whose manner he copied. First influenced by the art of Flanders and in late life by the Italians, van Leyden's middle period was distinctly Dutch and he was quite the strongest painter of his times.

The Sixteenth Century imitated the Italian during which time the artists included such men as: Scorel (1495–1562), Heemskerck (1498–1574), Cornelis van Haarlem (1562–1638) and Steenwyck (1550–1604?), the last two being much the stronger of the group. In the seventeenth century the profession of the painter in Holland was crowded and the work was essentially Dutch in character. There was a noble group of portrait painters of which Mierevelt (1567–1641) was one of the earliest. All of the men were thoroughly trained craftsmen, having learned their trade under excellent masters at an early age. Mierevelt was prolific, elegant, smooth, polished, agreeable in color, and had for patrons the aristocratic people of his time. Ravesteyn (1572–1657) and De Keyser (1596–1679) were accomplished workers, but the names of Hals and Rembrandt stand out with such prominence as to overshadow their contemporaries among the portrait men. Of this pair, the elder was Franz Hals (1584–1666), one of the greatest painters for the manipulation of pigment the world has ever seen, ranking with Velasquez and, with the last known as a painter's painter. He swept on his surfaces with great freedom, with certain hand, and generally in admirable color.

Rembrandt (1607 – 1669) is the greatest name in all Dutch art. He painted in Amsterdam and had a large following. His earliest work dates from 1627, and he painted till the end of a life full of vicissitudes, changes and at the last bitterness for, as Rembrandt grew old, his fellow townsmen turned to younger men. Yet there was nothing he touched in painting that he did not glorify for he was a supreme master of his trade, with exquisite artistic taste and judgment, with invention and absorbing interest. And he etched as well as he painted, producing marvelous drawing in line. He was most fecund and his pictures are scattered all over Europe and this country. He also had a far-reaching influence not alone on Dutch art, but on the art of all Europe. Yet though many followed him, sometimes blindly, none equalled his magic touch. Some however came reasonably close. An admirable portrait painter was Bol (1611–1680), as were Flinck (1615–1660), Eeckhout (1621–1674) and Maes (1632-1693). Other men were Poorter (painting from about 1635 to 1643), Victoors (1620–1672), Koninck (1619–1688), and Frabitius (1624–1654). A fine portrait painter was Van der Helst (1612–1670), a craftsman of much elegance and style and very capable in his arrangements of the figure. And too, he was different from the rest of the school, in his precise manner.

The Little Dutch Masters, a coterie of painters, included genre painters who did their pictures on a small scale, with great attention to detail and careful finish. One of these men was Gerard Dou (1613-1675). He was a pupil of Rembrandt with whose manner he disclosed no affiliation though he rendered his panels with great charm and grace, in a masterly manner. Metsu (1630–1667), was another of the little Dutch masters; perhaps the best of them was Terburg (1617–1681), whose little panels of interiors, portraits and genre pictures are in their way, marvels of consummate skill and extraordinary artistic finish. This group has never since been equalled though it has been the inspiration of many a painter. Other men of the time: Van Mieris (1635–1681), Netscher (1639–1684), Schalcken (1643–1706), Van Ostade (1610–1685), Steen (1626–1679), Pieter de Hooghe (1632–1681), and Jan van der Meer (1632–1675), one of the best of these genre men.

Landscape Painting made considerable progress among the Dutch painters of this time, one of the earliest seventeenth century men being Van Goyen (1596–1656), whose pictures of the canals, streams, windmills and houses were most successful. He had a characteristically low sky line and obtained agreeable color. Two of the important men in this direction were Salomon van Ruisdael (1600–1670), and his nephew Jacob van Ruisdael (1625–1682) who was better than his uncle. He found themes that were rather Norwegian than Dutch, consisting of glens, waterfalls and the like, and but little is known of him, save that he lacked patrons

and died in an almshouse. Other men: Molyn (1600–1661), Wynants (1615–1679), Van der Neer (1603–1677), and Everdingen (1621–1682). The great man of the period in landscape however was Hobbema (1638–1709), probably a pupil of Jacob van Ruisdael, painting with greater freedom than his master. His favorite theme was a road leading through a woodland and he was a master in his interpretation of nature. He too, was little appreciated during his life, but he has influenced the art of landscape ever since. Of the men painting animals, the most famous was Paul Potter (1625–1654),

THE YOUNG BULL

Painted by Paul Potter, and now in the Hague Gallery. One of the great masterpieces of animal painting. This picture was carried by the French to Paris and regarded as the fourth in value in their collections. Admired for its truth, taste, and general arrangement of the masses and forms. Potter has been called the "Raphael of animals."

with a reputation not entirely merited, though his *Young Bull* at The Hague gallery is one of the best known pictures in the world. Other men: Adrien van der Velde (1635–1672), Albert Cuyp (1620–1691), Both (1610–1650), Berchem (1620–1683), Du Jardin (1622–1678) and Van der Heyden (1637–1712). Among the marine painters were, Willem van der Velde (1633–1707), perhaps the best of them all, and Backhuisen (1631–1708) and Simon de Vlieger (1601–1660). The best of the Dutch flower painters was Van Huysum (1682–1749). Jan van Heem (1600–1684) and Hondecoeter (1636–1695) rendered poultry, while Weenix (1640–1719) and Van Aelst (1620–1679) painted dead game. Adrian van der Werff (1659–1722) and Philip van Dyck (1683–1753) were of a later epoch, their work being of but modest importance.

The Modern Dutch Painters are excelled by none of their contemporaries in Europe. The *doyen* of the group is Joseph Israels, painting his own country people with rare sympathy and charm, in a masterly manner. His canvases are eagerly sought and bring enormous prices in the auction rooms. Something in his work is akin to that of the Frenchman, Millet, but he is a more able craftsman and he is still living at the age of ninety-two. Anton Mauve (1838–1888) famous for his sheep and cattle, though his landscapes were no less important, was an entirely personal painter, also of great charm and refinement, a prolific worker both in the medium of oils and water-colors. Only fairly appreciated before his death, when he passed away his work was eagerly sought after, at fabulous prices. Three brothers Maris are James, (1835–), Matthew (1835–) and Willem (1839–1910) the last named being the best of the group though all are eminent men in their profession. Willem was a portrayer of cattle in landscapes, of seashore with great skies, or of rich meadowland and he gave distinction to his canvases which are in great vogue with the collector. Weissenbruch (1822–1880), another of the group, was highly esteemed and a most capable, personal renderer of nature. Other men in the figure: Artz, (1837–1890), Blommers (1845–), Neuhuys (1844–) and Bosboom (1817–1891), with Keever, Poggenbeek and Bastert. Mesdag (1831) is a marine painter of some popularity.

German Painting.—Early art in Germany, as in the rest of Europe, received its impulse of Christianity through Italy. Always however, from the beginning it has remained distinctly Teutonic, somewhat material, to an extent awkward, and without the refinement of the Italian. Yet in its robustness it is very characteristic of the country and it thus acquired a force that has ever been one of its merits. And from the earliest times the Germans painted the peoples and the material about them. Missal illumination and the decoration of walls were the first forms their art took. Some of the latter are yet extant and date back to the tenth century. They are at Oberzell. Work of the twelfth century may be still seen in the Lower church of Schwarsrheindorf, while work of the next century is in the Brunswick cathedral. About the thirteenth century, panel painting came into vogue and was used almost entirely for altar decorations. Some of these are in the Berlin museum. The earliest of the painters of the panel was known as "Meister Wilhelm," at Cologne. Stephen Lochner, flourishing about the middle of the fifteenth century, was known as "Meister Stephen." A painting by him, *Madonna of the Rose Garden*, is at the Cologne museum. In the same museum are works by the "Master of the Lyversberg Passion," of date about 1463–1480.

The Bohemian School flourished in the last half of the fourteenth century, under the patronage of Charles IV., near Prague. Among the men were Theodorich, of Prague (about 1348-1378), Wurmser and Kunz. Their art while original, was heavy, awkward, and their attempt at realism was not successful. Little is known of the early school of Nuremberg painters though some of their work remains, the chief of which is the Imhof altar piece. At Nuremberg lived Plydenwurff, who flourished about the same time as Wolgemut (1434–1519) and is said to have collaborated with this master in certain altar pieces. Wolgemut's principal fame unfortunately, for he was in himself a great artist, is that he was the master of the famous Albrecht Dürer (1471–1528), one of the world's greatest artists both in painting and engraving. Portraits, religious pieces and altar panels Dürer did with skill, sincerity, originality and distinction. His influence on German art was powerful and he had many pupils and followers. Travelling much over Europe he broadened his knowledge without losing any of his personal methods and never lacked for thorough recognition while he lived. His pupils and followers: Schäufelin (1490–1540?), Hans Baldung (1476–1552?), Hans von Kulmbach (–1522?), Altdorfer (1480–1538?), Barthel Beham (1502–1540), Sebald Beham (1500–1550), Penez (1500–1550), Aldegrever (1502–1558) and Bink (1490–1569?). Martin Schongauer (1446–1488), painter and engraver is better known by the latter work which he did in a masterly manner, beginning at a very early age. He was known among his contemporaries as "Martin, the Beautiful," by reason of his exquisite work. Other men: Zeitblom (1484–1517), Schaffner (1500–1535) and the portraitest, Bernard Strigel (1461–1528).

The Holbeins.—Hans Burkmair (1473–1531) founded at Augsburg, the Swabian school, and he was contemporaneous with Holbein, the Elder (1460–1524), the two men being the best of their time; but the son of the latter, Hans Holbein, the Younger (1497–1543), surpassed all the men of his nation and holds the highest place in German art, remaining one of the greatest art products of all times. He was an engraver, too, of the first rank and traveled much, becoming court painter to Henry VIII. of England. Though his life was comparatively short, he accomplished an enormous amount of work. Yet he always remained thoroughly German, absolutely original and there was no direction in an art way in which he was not superlatively good. Louis Cranach (1472–1553) and his son, Louis Cranach the Younger (1515–1586), were also of this time, but after Holbein there was a decline in German painting, the Italian school finding many imitators. Among these were: Rottenhammer (1564–1623), Elzheimer (1574–1620), Denner (1685–1749), Mengs (1728–1779) and Carstens (1754–1798). Angelica Kauffman (1741–1807), famous during the Georgian period in England whither she came at the age of twenty-three, was a friend among others there of Sir Joshua Reynolds and she painted with great material success being made a member of the Royal academy, but her art was of a very modest quality.

VESTAL VIRGIN

Painted by Angelica Kauffman, and now in the Dresden Gallery. The purity of conception and pleasing beauty raised this picture to a high standard. Goethe said: "No living painter excels her in dignity or in delicacy of taste."

Modern German Art.—The nineteenth century saw a revival of art in Germany, leaders seeking to introduce some of the spirit of the Italians therein, but they failed to accomplish good results. The men: Overbeck (1789–1869), Cornelius (1783–1867), Veit (1793–1877) and Schadow (1789–1862), had studied in Rome and elsewhere. Kaulbach (1805–

1874) and Piloty (1826–1886) were more important, the last being one of the best of the Munich men. He was unusually clever technically, made enormous compositions, and had a great influence on the young men about him. Easily the two great painters of this epoch were Menzel (1815–1905) and Leibl (1844–), both distinguished draughtsmen, entirely original and excellent colorists, their work possessing great qualities of composition, craftsmanship and charm. Lenbach (1836-1904), was one of the great

PRINCE BISMARCK

Painted by Franz von Lenbach. An admirable portrait by one of the most notable of German portraitists.

portrait painters of the men of his time in Germany. Other men were Liebermann, Gabriel Max, Thoma, von Uhde and Stuck, and Heinrich Hoffmann, whose Biblical pictures bear high repute.

Among men of foreign birth painting in Germany were Makart (1840–1884) an Austrian, using brilliant color on large canvases; Munkacsy (1846–1900) a Hungarian, who subsequently left Germany for Paris and whose *Christ before Pilate* created a great sensation; and Bocklin (1827–1901) a Swiss, of enormous talent and charm, much originality and intellectual force.

The English School.—The early art in England was brought to it largely by the foreign element of painters who came from Italy, Germany, Holland and elsewhere, many of these men being attached to the court and having a strong influence on the lesser artists of British birth. The first distinctly English painter of note was Hogarth (1697–1764), an able technician, an illustrator, above all a moralist and a satirist, who attacked the vices of his day with scathing brush. In the National gallery of London is his famous series of cartoons, *Marriage a la Mode* and *The Rake's Progress*, and though these are famous rather for their satire than for their æsthetic qualities, Hogarth was nevertheless a most distinguished painter along purely artistic lines.

Georgian Portrait Painters.—This great school is headed by Sir Joshua Reynolds (1723–1792), a pupil of Hudson (1701–1799) whom he greatly surpassed. Reynolds was a serious student of the earlier Italians, but it is as a portraitist that he is best remembered. He was the first president of the newly formed Royal academy, a colorist of rare charm and a man who caught the human side of his sitters with unusual fidelity. Gainsborough (1727–1788), was his great rival, one of the most original of the British school, painter of the landscape as well as the portrait, excelling in both directions and obtaining beautiful color. Others of the group; Romney (1734–1802), Beechy (1753–1839), Raeburn (1756–1835), John Hoppner (1759–1810) and Lawrence (1769–1830), the last celebrated in his day, very popular, clever and effective, but less able than some of his school. Other names include,

CHRIST BEFORE THE DOCTORS

Painted by Heinrich Hoffmann, and now one of the noted pictures of the Dresden Gallery. One of the most beautiful of all conceptions of the youthful Jesus, it shares with the Sistine Madonna the greatest popularity of the Dresden Gallery.

Etty (1787–1849), somewhat academi but colorful; Moreland (1763–1804), painter of farm life; Sir David Wilk (1785–1841) painter of home life; Landse

SHOEING THE BAY MARE

Painted by Landseer, and now in the Natior Gallery, London. A prime favorite of this not animal painter. Though frequently accused endowing his animals with too great a perfectic yet this thoroughbred evidently has a poetic rig to give the farrier advice—as her attitude here plainly implies.

(1802–1873), whose pictures of anima gave him great fame, and Mulrea (1786–1863), painter of village childre

British Landscapes. — Here the Engli were strong. Richard Wilson (1713–178 was the first of originality and importan though he did not attempt any realis and was more or less a reflection of t art of Claude Lorrain. Old Crome (176 1821) was the leader of what was know as the Norwich school, of men paintir in that section of England and he had strong influence on his time. After Crom was Cotman (1782–1842), but the be of all the Englishmen in landscape w John Constable (1776–1837), son of miller of wealth and himself known "the handsome miller." A student the Academy schools, he shortly afte ward went to nature and devoted himse to portraying scenes out of doors for t rest of his life. It was reserved for t French first to appreciate him, in 182 His manner was broad, quite differe from the then existing fashion in Englan and he had a strong influence on the me who subsequently formed the Barbizo school in France. Callcott (1779–184 was inclined to the manner of Claud but Bonnington (1801–1828) was ve original in color and manner and in h short life did many excellent picture Turner (1775–1851) a great name British landscape painting, was a colori of rare originality and force. He possesse an extraordinary imagination, unusu facility and was a fecund worker in bo the mediums of oil and water color. Pro (1783–1852), Cox (1783–1859), and Dewi (1784–1849) were famous water colorist

Pre-Raphaelites.—Holman Hunt (1827–191 was associated with this school ar Sir John Millais (1829–1896) and Rosset (1828–1882) along with him, were t founders. Hunt painted religious pictur in great detail, more intellectual tha

artistic, in dry, hard color, and much over-elaboration. Millais soon broke away from the school and gave himself to the painting of genre pictures and portraits with which he achieved enormous success, eventually becoming president of the Royal academy. Rossetti, more of a poet than a painter, took many of his themes from Dante, was neither an agreeable colorist, nor a well trained draughtsman, but he had a large following among whom may be mentioned Burne-Jones (1833–1898) painter of mystic themes and famous designer of stained glass, his color dry, though at times rich, and his drawing distinguished. Madox-Brown (1821–1893) had much dramatic power. Sir Frederick Leighton (1830–1896) who succeeded Millet as president of the Royal academy, was an accomplished draughtsman, but possessed little sense of color as such. He painted many classic themes and decorative works of great merit and charm. Albert Moore (1840–1893) was a graceful decorative painter of delightful originality and Watts (1818–1904) an original painter of portraits and allegorical pictures of deep thought and originality if at times of indifferent technical achievement. Other men: Orchardson (1835–1910), Erskine Nicol (1825–), Faed (1826–), Holl (1845–1890), Herkomer (1849–), Vicat Cole (1833–1893), Cecil Lawson (1833–1893), W. L. Wyllie, and Henry Moore (1831–1895). The younger modern men in England and Scotland have been strongly influenced by the art of Whistler and the modern Dutch painters.

A school known as the modern Scotch school includes such men as: James Guthrie, E. A. Walton, James Hamilton, George Henry, E. A. Hornell, John Lavery, Alexander Roche and others. An Irishman, William Orpen, has struck an original note in recent years in portraiture and figure work.

nerican Painting.—Early American art was in portraiture, largely borrowed from England, from which country came many itinerant portrait painters. Of these foreigners, the first were: Smibert (1684–1751), a Scotchman who settled in Boston, and a fellow countryman, Watson (1685–1768), who settled in New Jersey.

John S. Copley (1737–1815) and Benjamin West (1738–1820) were the first distinctively American painters though they learned their art in England and were under the domination of the then prevailing British fashions in art. Copley practiced in Boston and was the early pictorial historian of the New England families. West remained abroad where he enjoyed the favor of the English king and so succeeded to the presidency of the Royal academy. Many of these early men painted General Washington. Among them were C. W. Peale (1841–1827), Trumbull (1756–1843), Rembrandt Peale (1787–1860) and others. The best of the early American group, was Gilbert Stuart (1755–1828), a fine colorist and admirable draughtsman, and a man of intensely interesting personality whose portraits of Washington are quite the most famous. Other early men: Vanderlyn (1776–1852), Washington Allston (1779–1843), Jarvis (1780–1834), Sully (1783–1872) who painted a celebrated portrait of Queen Victoria, and Doughty (1793–1856), the first of the American landscapists. In this direction followed Thomas Cole (1801–1848) and A. B. Durand (1796–1886).

The Hudson River School.—Cole was the painter of a famous series known as *The Voyage of Life* and *The Course of Empire*, which were engraved and had a wide popularity. For the times both were excellent painters and they may be said to have founded what was known as the Hudson river school, of which Kensett (1818–1872) was a follower. Frederick E. Church (1826–1900) pupil of Cole, was famous for his pictures of mountain scenery, of natural phenomena, rendering great stretches of country with rare fidelity and skill. He enjoyed much material, as well as artistic success and was a prolific workman. Bierstadt (1830–1902) painted the western country, mainly the Rocky mountains. Other portrait and genre painters: Chester Harding (1792–1886), Inman (1801–1846), Page (1811–1885), Elliott (1812–1868), Baker (1821–1880), Healey (1808–1894), and Huntington (1816–1906), the last being one of the founders and a president of the National academy of design. Leutze (1816–1868), who came early to this country from Germany, painted many historical scenes, the most famous being *Washington Crossing the Delaware*.

William M. Hunt (1824–1879) was a pupil of Couture and a friend of Millet, at Barbizon. He introduced the work of Millet to this country and was himself an able painter as well as a popular teacher. Some of his portraits were rendered in a masterly manner, notably that of Judge Story, at Salem. Hunt had a strong influence on his followers. Uniquely American was George Fuller (1822–1884), lacking in his early art training but with an originality in his color and choice of theme that made him one of the interesting figures of his time.

A trio of landscape men that were strongly to influence the men of their time and the art that followed, consisted of George Inness (1825–1894) A. H. Wyant (1836–1892) and Homer D. Martin (1836–1897). Inness, influenced in turn by the Men of Thirty, at his best a powerful renderer of nature and a poet of the dramatic order; Wyant, more lyrical, was essentially of the soil, painting tender, dreamy bits of nature, while Martin was intensely personal.

Foreign Influences.—The foreign art that came to America at the time of the Centennial Exhibition in Philadelphia, in 1876, had much to do with stimulating the men and many students went to Europe to study, Munich and Paris being the most popular places. There still remained a group of strong men, most of them already having had the best of European influences. Among these were Eastman Johnson (1824–1896), a strong painter of portraits and genre; Elihu Vedder (1836–) a man with rare imagination; John LaFarge (1835–), distinguished for his decorations and designs for stained glass, and Winslow Homer (1836–1910) home trained, early in his career painting scenes from the American civil war, but later developing into a great marine painter, a man of large talent and virile artistic personality. John S. Sargent (1856–) though of American parentage, is European by birth and training, one of the most distinguished of living portraitists: he has decorative panels in the Boston public library. William M. Chase (1849–), pupil of Piloty and Munkacsy, is a painter of portraits, landscape and still life, excelling in all directions and Thomas W. Dewing (1851–) following along the lines of the little Dutch masters, holds a unique place among the moderns by reason of his skill and exquisite taste. Among landscape men, Willard L. Metcalf holds a commanding position because of his fidelity to nature's forms and his abiding skill in their representation. Other Americans include, J. Alden Weir, Abbott H. Thayer, E. C. Tarbell, Robert Reid, Charles H. Woodbury, Wyatt Eaton (1849–1896), Childe Hassam, Walter Shirlaw (1838–1909), E. L. Blashfield. Joseph De Camp, H. S. Mowbray, George De F. Brush, I. R. Wiles, the brothers Harrison, Alexander and Birge, and Robert Blum (1857–1903).

CARMENCITA

Painted by Sargent, and now in the Luxembourg, Paris. One of his best delineations, portraying this dancing girl in all her insolent beauty and charming grace as the acme of the dancer's art. The original shows the sparkle and glitter of the deliciously colored gown in all the hues of a brilliantly lighted stage.

James MacNeill Whistler (1834–1903) American only by birth and preliminary education, a cadet at the U. S. Military academy at West Point for a while, but during all his art life a resident of Europe, was at his best a master, strongly influenced by the art of Japan. He painted as a rule in low tones and had an extensive following leaving a strong influence on the art of his time. As an etcher he was second only to Rembrandt. His portrait of his mother, in the Luxembourg, Paris, is a work of surpassing charm and excellence.

Edwin A. Abbey (1852–1911) made England his home for many years, being a Royal academician. He executed much work in historical and decorative compositions. His panels *The Quest of the Holy Grail* are at the Boston public library and he has done decoration the State Capitol at Harrisburg, Pennsylvania. He also painted the official ture of the Coronation of the late King Edward VII. of England. Other Americans living, mainly, abroad are: Frederick A. Bridgman, Gari Melchers, Jules Stewart, W. T. Dannat, and Eugene Vail. John W. Alexander, P. N. A., is a painter of

portrait and decorations (in the Carnegie Institute, Pittsburg) of strong originality and distinction. Other men and women include John Francis Murphy, D. W. Tyron, Horatio Walker, Bruce Crane, John H. Twachtman, Henry W. Ranger, E. E. Simons, Childe Hassam, Arthur B. Davies, J. W. Freer, Frank Duveneck, John C. Johansen, Cecilia Beaux, Mary Cassatt, George Bellows, R. A. Blakelock, Emil Carlsen, Kenyon Cox, Thomas Eakins, C. W. Hawthorne, E. W. Redfield, H. O. Tanner, Douglas Volk, Edward C. Steichen, Albert Sterner, E. J. Waugh, Hugo Ballin, F. S. Church, C. M. Dewey, Robert Henri, W. L. Lathrop, Carlton Wiggins, Frank Benson and H. H. Breckenridge.

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How to Look at Pictures.—It is a mistake to suppose that age is any indication of the value of a picture. This is an error into which many laymen fall, with the result that discouragement ensues because the work under consideration does not appeal. Indifferent work is by no means a monopoly of the modern painter. There have been poorly equipped craftsmen since the world began. But, because a picture is not immediately understood, is by no means to say that it is lacking. Art, like the study of literature or music, is a profound study, requiring the most serious application, investigation, research and experience. The average person prefers rag-time to the symphonies, nocturnes and grand compositions of musical masters, just as trashy reading appeals to the minds of the uncultivated. This is not, however, for a moment to admit that the works of the great composers and authors are not of higher importance than the meretricious tunes of the hurdy-gurdy, or the ephemeral novels of the day. But one, by a systematic course of study, can so train the ear and mind that only the best will satisfy in the end. And so it is with pictures. It is the story of all great collectors that their collections are gradually weeded out as their tastes improve and a higher standard is demanded.

Intuitively some minds are attracted to the best in art, as in music and literature. They are, however, the exceptions, not the rule. Even such minds are improved and strengthened by study and experience. The average man can only hope to achieve reasonable discretion in the matter of art by serious investigation and much sober reading. Some one has said that a work of art means a combination of two people—he who did it and he who looks at it. A picture is one man's conception of nature, and though twenty painters render the same subject, each according to his endowment and altogether differently from his fellow, each will be right, according to his convictions and power of transferring his thought to canvas. For it is a matter of seeing, no less in the layman than in the artist, and one may be taught to see, as one may be taught to do other things. A good picture must say something; not necessarily tell some trite anecdote, or record some trivial incident, but must strive to convey some truth, even it be but the truth of humanity, as for instance in Titian's *Man With the Glove*, in the Louvre, one of the grandest portraits ever painted, or in the *Mona Lisa*, the most successful single figure piece ever offered to the world. In both cases the artists gave an epitome of the man and the woman of their day, and did so in the last terms of craftsmanship. Veronese gave the glory of color and the sumptuousness of apparel in his *Marriage at Cana*, which, as a record of the biblical event, was utterly false; but his genius carried it beyond facts and made of it a superb composition. The extraordinary piety in many of the older men among the Primatives atoned for other shortcomings, while the absolute and convincing sincerity of the Little Dutchmen, and their technical skill, made up for many a stupid composition.

A masterpiece must be all things to all men. You may have it dark in key, like a Ribera; glorious in light and shade, like a Rembrandt; full of poetry and graceful beauty, like a Raphael; colorful, like a Titian; elegant, like a Van Dyke; faithful and analytical, like a Holbein; unctuous and rich, like a Rubens, a poem in tone, like a Turner; or full of the glories of light and air, as a Monet, for each of these men had a mission to convey and he conveyed it seriously, earnestly, and according to the best that was within him. So when you stand before a canvas, seek first to know what was the object of the creator. If his aim was color, try to analyze his accomplishments in that direction; if to portray the glory of out of doors, follow him there; or, if the human form attracted him most, endeavor to put yourself in touch with such an ambition on his part. And if at first there is no appeal, engage in a little introspection and possibly you may discover the fault is your own, not that of the artist. But above all, approach a work of art, one that has stood the test of time, with reverence and the genuine endeavor to get the good, not the bad out of it, to get the viewpoint of the painter, and so to try and enter with him into his general trend of thought.

They have an inscription above the doors of the picture gallery at the South Kensington museum, in London. It reads, "That which has pleased long and many must have some merit." It is advice to be remembered. Da Vinci, Botticelli, Rembrandt, Velasquez and the whole nobility of art are not where they are because of the critical opinions of the few, subject to changes of fashion, but because their art was founded on the eternal truths. They were great craftsmen as well, and they had something worth the world's listening ear, each in his own way, and each according to his own lights; but it was always truth, the truth of humanity, nature, beauty—always truth. The spectator may not understand them, but the fault is not theirs, and it is up to the spectator to reorganize his point of view, for no ignorance, no stupidity, no false arguments, can for one moment dislodge truth, which despite all efforts yet remains as firm as the rock of ages—as truth, eternal, unassailable, inviolate. So, read of art. Listen to what the best judges have said about pictures. Get from these writers their point of view, the point of view of men who by study and experience are better qualified than you to judge, and so, in a humble spirit, and with a child's openness of mind, approach the work of these great men whom heaven has endowed with beauty of thought, precision of hand, and splendor of imagination. Do this reverently and with the genuine desire to learn, and the reward will be yours. It will repay a thousand fold, for if we may not all be creators, at least we may get an intelligent satisfaction from the creation of those more gifted, alas, than are we.

Terms in Fine Arts

Amphitheater.—A building for gladiatorial and other shows, generally elliptical in form.

Angels.—In mediaeval art divided into nine degrees: Seraphim, Domination, Princedom, Cherubim, Virtues, Archangles, Thrones, Powers, Angels. The Cupid-like angels were only introduced in the time of the Renascence.

Antae.—Rectangular pilasters forming the ends of the walls of the cella of a Greek temple, and supporting the extremities of the architrave. A temple of this form was called a temple "in antis."

Apse.—The extremity of a church, generally semicircular in form and surmounted by a semi-dome.

Aquatint.—A process of engraving by acid laid on in even washes with a brush, upon a broken surface formed by a crackled film of resin on the copper.

Arabesque.—An ornament composed of stems, foliage, leafage of plants, scrolls, and fantastic animals. Not, as its name implies, an Arab invention but found in Greek and Roman architecture.

Arch.—A curved structure, generally a segment of segments of the circle. Semicircular arches were used by the Romans; horseshoe arches by the Byzantines and Moors; pointed arches formed of two intersecting segments of circles by the Gothic builders.

Architrave.—The horizontal part of a structure resting immediately on the capital of column or pilaster.

Atlantes.—Human male figures, employed instead of columns to support the architrave.

Atrium.—A covered court in a Roman house, with an opening in the center (compluvium) and roof sloping inwards.

Baldachino.—A canopy over seats and other places of honor.

Baroque.—Rococco.

Base.—The lower division of a column on which the shaft is placed; absent in the Doric order.

Basilica.—A rectangular ball divided by rows of columns into three naves, and used by the Romans as a court of justice. Adopted as the typical form of early Christian churches.

Bas Relief.—(Basso relievo.) Figures sculptured on panel projecting less than half their proportions from the surface.

Body Color.—In water-color painting, color made opaque by intermixture with white.

Buttress.—A piece of wall built at right angles to the wall of a building to strengthen the structure, either immediately against the wall or connected by an arch called a flying buttress.

Byzantine.—The style of architecture and painting in use at Constantinople from the sixth to the twelfth century.

Capital.—The, usually ornamented, member which crowns the top of a column or pillar, and by the form of which the different orders are characterized.

Caryatides.—Female figure, employed instead of columns to support the architrave.

Cella.—The internal part inclosed by the walls of a Greek temple.

Chevron.—A zigzag molding used in Romanesque architecture.

Chevet.—A form of apse inclosed by an arcade with a series of chapels round it, common in Romanesque and Gothic churches in France.

Chiaroscuro.—The distribution of light and shade.

Cinquefoil.—An ornamental foliation, consisting of five projecting cusps.

Cloister.—A quadrangular covered walk, forming a portion of a monastic building.

Clustered Column.—A pier formed by a number of shafts clustered together, either united, or separate.

Column.—A column consists of three principal parts: base, shaft, and capital.

Cornice.—The horizontal molded projection terminating a building.

Corona.—A molding forming part of a conical, with lower part grooved to form a dripstone.

Crypt.—A subterranean chapel beneath a church.

Cusp.—Pointed foliations in architectural tracery.

Damascened.—Metal ornamented by inlaying another metal.

Decorated.—The second of the pointed or Gothic styles of architecture in England.

Dentils.—Ornaments in the form of small cubes or teeth.

Dormer.—A gable window in the sloping side of a roof.

Dry-Point.—Direct engraving upon copper with the etching needle.

Entablature.—The horizontal superstructure which lies upon the columns in classic architecture.

Etching.—Engraving by the action of acid on a copperplate covered with a wax ground on which lines have been scratched by the etching needle.

Fan Tracery.—Elaborate carved work spread over an arched surface.

MRS. SIDDONS—*Gainsborough*
British School

MONA LISA—*Leonard da Vinci*
Venetian School

MADONNA DEL GRAN DUCA—*Raphael*
Italian School

SYNDICS OF THE CLOTH MERCHANTS' GUILD—*Rembrandt*
Dutch School

PORTRAIT OF MY MOTHER—*Whistler*
American School

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THE SCHOOLMISTRESS—*Fragonard*
French School

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Terms in Fine Arts.—Continued

et.—A plain band used in architecture to separate rnaments and mouldings.
ial.—An ornament of carved work representing oliage on a pinnacle or spire.
mboyant.—The style of French architecture peculiar to the fifteenth century, contemporary with erpendicular in England.
tes.—Small semicircular grooves or channels cut n the shafts of columns or pilasters.
sco.—Painting executed on a freshly laid ground f stucco.
t.—An angular, interlaced architectural ornament.
eze.—(1) The middle division of an entablature which lies between the architrave and cornice. (2) Any horizontal sculptured band.
saille.—A style of painting in gray by which solid odies are represented as if in relief.
oin.—The angular curve formed at the intersections of a vaulted roof.
nnasium.—A large building used by the Greeks n which gymnastics were taught and practiced.
postyle.—A roof supported by columns.
asto.—The thickness of the body of pigment laid n to a painting.
aglio.—A stone in which the design is sunk beneath the surface, and gives impression of a bas elief.
ft.—A royal Egyptian headdress forming a kind f hood and terminating in two flaps, which form ver the breast.
cet.—A pointed arch, obtuse at the point, resembling a surgeon's lancet.
tern.—A small turret above the roof of a building aving windows all round it.
tel.—The stone or beam placed across the top of a oor or window.
gia.—The gallery or corridor of a place.
is.—A water lily. In Egypt and India held acred.
nsard.—A roof with two sets of rafters of which he upper part is less steep than the lower. Named fter a French architect.
quetry.—Inlaid work of ornamental woods and tones of various colors.
dallion.—A circular or oval tablet on the face of a uilding.
Metope.—A kind of panel between the triglyphs in the Doric frieze..
Mezzo Relievo.—Sculpture in relief in which half of the figure projects.
Mezzo Tinto.—A method of engraving by smoothing away tne lights from a ground mechanically roughened.
Monolith.—An object formed of a single block of stone.
Mosaic.—An imitation of painting by joining together minute pieces of hard substances of different colors.
Nave.—The middle part or body of a church from the choir to principal entrance between the aisles.
Nimbus.—A halo or circular disk around the head of sacred personages.
Ogee.—An arch described with four centers so as to be concave in lower and convex in upper part.
Ogive.—A pointed arch.
Oriel.—A projecting angular window, generally triangular or pentagonal in shape.
Ovolo.—A convex molding much used in classical architecture.
Pagoda.—A religious building of the Hindoos.
Palaestra.—A place for wrestling, formerly part of the gymnasium.
Pediment.—A triangular crowning of a portico usually supported by a row of columns.
Pendentive.—The part of a vault between two arches supporting a dome.
Peristyle.—A building, the interior of which is surrounded with columns.
Perspective.—The art of representing on a flat surface the appearance of objects from one given point of view.
Pilaster.—Square pillar on a wall partly imbedded in it, less than one fourth of its thickness projecting.
Pinnacle.—A small spire.
Piscina.—A stone basin usually placed in a niche in the wall of the chancel at which the priest might wash his hands.
Plinth.—The lower projecting base of a column.
Pronaos.—The portico situated in front of a temple.
Propylaea.—Gateway or entrance to an Egyptian temple.
Quatrefoil.—An ornament in pointed architecture, consisting of four foils.
Rococo. A style of decoration distinguished by a Superfluity of confused and discordant detail.
Romanesque.—The debased style of architecture and ornament adopted in the later Roman empire, and the styles founded upon it.
Rose Window.—A large, circular window divided into compartments by curved mullions.
Rubble.—Rough stones and broken bricks, used to fill up between walls.
Rustication.—Hewn stone masonry, the joints of which are rendered conspicuous by grooves or channels.
Sarcophagus.—A stone coffin.
Scumbling.—The process of going over a painting with a brush, nearly dry, to soften and blend the tints.
Stylobate.—The common base of a row of columns.
Taenia.—A band which separates the Doric frieze from the architrave.
Tempera.—Painting with pigments mixed with chalk or clay, and diluted with size.
Torso.—The trunk of the statue of a human figure.
Tracery.—Geometrical ornament.
Transept.—A transverse nave, passing in front of the choir, and crossing the longitudinal nave of a church.
Trefoil.—An ornament of three foils.
Triforium.—The second or middle story of the nave wall of a Gothic church, consisting of a gallery over the ceiling of the side aisle and below its roof.
Triglyph.—An ornament, consisting of three flutings or upright groupings, separating the metopes in a Doric frieze.
Triptych.—A form of pictures in three panels.
Tympanum.—The triangular space between the horizontal and sloping cornices. The name is also given to the space included between the lintel of a door and the arch over it.
Vault.—An arched ceiling or roof of stone.
Volute.—A spiral scroll.
Voussoirs.—The wedge-shaped stones used in constructing an arch.
Zoophorus, Zophorus. (Lit. bearing animals.) A continuous frieze, decorated with figures of animals, conventional and real.

WORLD'S FAMOUS PAINTINGS

I. In the Rijks Museum, Amsterdam

Title of Painting	Painter	School	Observations
Night Watch.	Rembrandt (1607-1669).	Dutch.	Captain Banning Cock's company of musketeers coming out of the guard house. Wonderful arrangement of light and shade on figures.
ectors of the Cloth-Makers' Guild.	Rembrandt (1607-1669).	Dutch.	A masterpiece of portrait arrangement.
quet of the Guard.	Van der Helst (1612-1670).	Dutch.	On the occasion of the peace of Westphalia in 1648. Sir Joshua Reynolds called this canvas "the first picture of portraits in the world."
Night School.	Gerard Dou (1613-1675).	Dutch.	Remarkable in the treatment of candle-light and exquisite in finish.
ady.	Netscher (1639-1684).	Dutch.	Marvelous rendering of textures and stuffs.

II. In the Antwerp Museum

cifixion.	Peter Paul Rubens (1577-1640).	Flemish.	Considered one of this master's chef d'œuvres. Sir Joshua Reynolds ranked it as one of the first pictures in the world.
Entombment.	Quinten Matsys (1466-1531).	Flemish.	One of his celebrated works, containing ten figures, with the dead Christ in the center.
Water Wheel.	Hobbema (1638-1709).	Dutch.	Excellent rendering of water in movement, by one of the great landscape painters of all times.
Mandolin Player.	Terburg (1617-1681).	Dutch.	Exquisite treatment of surfaces and intimate surroundings of a Dutch interior.

III. In the Berlin Museum

a and the Swan.	Correggio (1494-1534).	Parmese.	A theme the artist painted many times, with great success.
dren of Charles First.	Van Dyke (1599-1641).	Flemish.	Justly considered one of the greatest of all the world's portraits of children.
Wings of the Adoration.	The brothers Hubert and Jan Van Eyck (1390-1440).	Flemish.	One of the most elaborate altarpieces ever painted.
Blowing Bubbles	Vermeer (1632-1675).	Dutch.	Highly representative work of a most brilliant craftsman, one of the best of the coterie known as "the Little Dutchmen," and of recent years more fully appreciated at his true worth.
t Anthony and the Infant Christ.	Murillo (1618-1682).	Spanish.	One of the best of a long series of such pictures painted by this distinguished Spaniard.

IV. In the Borghese Gallery, Rome

onna.	Botticelli (1446-1510).	Florentine.	Botticelli was famous for his deep religious sentiment as expressed in his paintings and for exquisite finish.
and the Swan.	Leonardo da Vinci (1452-1510).	Florentine.	It is fair to say that modern critics contest this attribution and in fa there are but few authentic works extant by Da Vinci.
ed and Profane Love.	Titian (1477-1576).	Venetian.	An undisputed masterpiece, full of glorious coloring and of spl conception and execution.
mbment.	Raphael (1483-1520).	Umbrian.	A highly i mportant example containing eleven figures.
ae.	Correggio (1494-1534).	Parmese.	Graceful arrangement of four nude figures.
onna.	Bellini (1428-1516).	Venetian.	Naively painted, and of deep religious feeling.

VII. In the Dresden Gallery

Sistine Madonna.	Raphael (1483-1520).	Umbrian.	One of the most famous and popular of all the world's pi
otte.	Correggio (1494-1534).	Parmese.	This picture, *The Night*, is a representation of the Ador Shepherds and was formerly known as *Madonna de Reggio*.

WORLD'S FAMOUS PAINTINGS—Continued

VII. In the Dresden Gallery—Continued

Title of Painting	Painter	School	Observations
Marriage at Cana.	Veronese (1528-1588).	Venetian.	Painted many times by Veronese, the most important canvas b the Louvre, Paris.
Tribute Money.	Titian (1477-1576).	Venetian.	The last is a sumptuous work in rich, glowing color.
Cupid Crowning Venus.			
Sleeping Venus.	Sassoferrato (1605-1685).	Roman.	A fine canvas, for many years attributed to Titian.
Venus Reposing.	Palma Vecchio (1480-1528).	Venetian.	
Fortune Teller.	Caravaggio (1569-1609).	Roman.	This artist painted many pictures of this same theme.
Saint Mary of Egypt Kneeling at The Grave.	Ribera (1588-1656).	Spanish.	The artist, known as Lo Spagnoletto, painted much for church religious houses.
Saint Rodriguez.	Murillo (1618-1682).	Spanish.	
Virgin and Child.			
Charles I. of England.	Van Dyke (1599-1641).	Flemish.	Official portrait painter to the English court, Van Dyke limned a people many times.
The Children of Charles I.			
Henrietta Maria, Wife of Charles I.			
The Artist's Wife.	Rembrandt (1607-1699).	Dutch.	This gallery contains a wonderful collection of Rembrandt's work.
The Artist and His Wife.			
Manoah's Sacrifice.			
Judgment of Paris.	Rubens (1577-1640).	Flemish.	
Madonna.	Holbein the Younger (1497-1543).	German.	One of the most important compositions by this master, contain less than eight large figures.
Reading Magdalen.	Correggio (1494-1534).	Parmese.	One of the most popular and most reproduced religious pictures world, though of recent years its attribution has been questioned.
Crowned With Thorns.	Guido Reni (1575-1642).	Italian.	This work is familiar through many reproductions.
Lady in Satin.	Terburg (1617-1681).	Dutch.	Characterized by his usual detail and finish, a beautiful example.

VIII. In the Academy of Fine Arts, Florence

Allegory of Spring.	Botticelli (1446-1510).	Florentine.	World famous for its graceful arrangement of beautiful nudes.
Crucifixion.			This gallery is particularly rich in the pictures of its townsman, Bo
Coronation.			
A Predella.			
Many Madonnas.			
An Angel.	Da Vinci (1452-1510).	Florentine.	This is in a painting by Verrocchio, and was painted when Da Vi his pupil.
The Nativity.	Ghirlandajo (1449-1494).	Italian.	

IX. In the Royal Museum, The Hague

The Young Mother.	Gerard Dou (1613-1675).	Dutch.	One of his very best examples.
The Anatomical Lecture.	Rembrandt (1607-1669).	Dutch.	One of the great paintings of all time, containing many figures s seven students listening to a lecture by the famous Dr. Nicolla who is dissecting a dead body. Rembrandt's fame dated fro picture. It was painted for the Guild of Surgeons, Amsterdam ously enough, several famous painters have rendered the same among them:—Aert Pietersen, Thomas de Keyser, Nicolas Eli Pieter van Mirevelt. There are several other important exam Rembrandt in The Hague gallery, notably, *The Presentation Temple* and *The Flight Into Egypt*.
The Young Bull.	Paul Potter (1625-1654).	Dutch.	The most famous cattle picture in the world, painted when the was but twenty-seven. The animal is the size of life, another is lying near a tree by which are some sheep, and to one side is a p Back of them there is a familiar Dutch landscape. Recent qualify the earlier profound admiration for this work.
Protrait of Paul Potter.	Van der Helst (1612-1670).	Dutch.	

X. In the Museum of Haarlem

Banquet of Officers of Arquebusiers of Saint George.	Frans Hals (1580-1666).	Dutch.	This large canvas contains twelve figures and is justly famous greatest claim this museum possesses is its superb collection work of its eminent townsman.
Banquet of Officers of Arquebusiers of St. Andrew.			All of these works may be considered as masterpieces.
Assembly of Officers of Arquebusiers of St. Andrew.			
Officers and Sergeants of Arquebusiers of St. George.			
Governors of the Elizabeth Hospital.			
Governors of the Hospital for Old Men.			
Lady Governors of the Hospital for Old Women.			

XI. In the Hermitage, St. Petersburg

Holy Family.	Raphael (1483-1520).	Umbrian.	
The Descent From the Cross.	Rembrandt (1607-1669).	Dutch.	This gallery is wonderfully rich in examples of Rembrandt's work.
Portrait of an Old Jew.			
Soldier			
His Mother.			
The Farm Yard.	Paul Potter (1625-1654).	Dutch.	A celebrated work ranking next to the artist's picture of *The Bull*.
	Van Dyke (1599-1641).	Flemish.	There are fourteen important canvases by this artist in the gallery.
	Rubens (1577-1640).	Flemish.	Represented by six notable canvases.
	Murillo (1618-1682).	Spanish.	Fourteen important canvases represent this painter here.

XII. In the Louvre, Paris

onna of the Cradle.	Raphael (1483-1520).	Umbrian.	
eorge and the Dragon.			
elle Jardiniere.			
rait of Himself.			
ait of Himself.	Rembrandt (1607-1669).	Dutch.	
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maritan.			

WORLD'S FAMOUS PAINTINGS—Continued

XII. In the Louvre, Paris—Continued

Title of Painting	Painter	School	Observations
Erasmus.	Holbein, the Younger (1497-1543).	German.	One of the world's famous portraits of deep human interest.
Soldier and Maiden.	Terburg (1617-1681).	Dutch.	A cabinet picture of great charm and delicacy of finish.
Officer Addressing a Lady.	Metsu (1630-1667).	Dutch.	A graceful composition by a master of genre work.
The Dropsical Woman	Gerard Dou (1613-1675).	Dutch.	Very famous as being of a somewhat repulsive theme which the painter has by sheer force of craftsmanship made most interesting.
The Immaculate Conception.	Murillo (1618-1682).	Spanish.	This artist, as well as his contemporaries, painted this theme frequently, but this picture is the most famous of all and is a large canvas full of figures, exquisitely rendered.
La Maitresse du Titian.	Titian (1477-1576).	Venetian.	
The Entombment.			A world-famous picture of deep religious significance.
The Man With the Glove.			Universally considered one of the greatest masterpieces of portraiture that the world has ever seen.
Crowned with Thorns.			
The Holy Family			The collection is particularly rich in the work of this masterly Venetian.
Mona Lisa.	Leonardo da Vinci (1452-1510).	Florentine.	Perhaps the greatest single figure piece ever painted. It is a portrait of the wife of Zanobi del Giocondo, and the canvas is sometimes referred to as "La Gioconda." Da Vinci is said to have spent four entire years on the picture, which he sold to Francis I. for the then extravagant price of four thousand gold florins, a terrific amount for those days. It has been the shrine for art worshipers and students for many years. Many copies of this work, some by pupils of Da Vinci are in the various galleries of Europe. Reported stolen summer, 1911.
Saint Anne.			Among the few authentic pictures by this great artist.
Saint John, the Baptist.			
The Marriage at Cana.	Paul Veronese (1528-1588).	Venetian.	The Louvre is full of masterpieces and this is one of its most famous, being an enormous canvas, of sumptuous coloring, containing portraits of Frances I. and his queen, Mary of England, the Emperor Charles V., and many painters, including the artist himself, Titian, Tintoretto and others.
Betrothal of Saint Catherine.	Correggio (1494-1534).	Parmese.	
Antiope and Jupiter Disguised as a Satyr.			
The Music Lesson.	Terburg (1617-1681).	Dutch.	One of the famous gems of painting executed in great detail.
Shooting Match.	Van der Helst (1612-1670).	Dutch.	
Children of Charles I.	Van Dyke (1599-1641).	Flemish.	Van Dyke gave the greatest distinction to his portraits, of which, though he died at the early age of forty-two, he did many.
Charles I., at Full Length, With Horse and Suite.			
Isabella of Spain.			
The Duke of Richmond.			
Saint Sebastian.	Guido (1575-1642).	Italian.	A most representative collection of the work of this popular painter.
Mary Magdalen.			
The Holy Family.			
Portrait of the Infanta Margarita.	Velasquez (1599-1660).	Spanish.	A comprehensive representation of this great master's methods of work.
Maria.			
The Infanta Maria Theresa.			
Philip IV.			
Meeting of Gentlemen.			
Laughing Girl.	Frans Hals (1584-1666).	Dutch.	All are excellent examples, but this Dutch master is seen at his best in the gallery of his native place, Haarlem.
Portrait of a Lady.			
Portrait of the Beresteyn Family.			
The Embarkation for Cythera.	Antoine Watteau (1684-1721).	French.	Considered one of the most beautiful pictures in the world, of great charm, originality and poetic feeling.
Gilles of the Comedie Italienne.			
L'Indifferent.			
The Broken Pitcher.	Greuze (1725-1805).	French.	A very popular work, well known through reproduction.
The Raft of the Medusa.	Gericault (1791-1824).	French.	An epoch-making picture, being a great departure in realism and a protest against the prevailing academic manner. The work when first shown created a great sensation.
Portrait of Mme. Recamier.	David (1748-1825).	French.	Very distinguished canvases and both well known by reproduction.
Portrait of Himself.			
Oath of the Horatii.			These are hard, academic compositions, the figures rigid and unsympathetic, but drawn with distinction, though the manner of painting is of a curiously artificial period in French art.
Rape of the Sabine Women.			
Œdipus Explaining the Riddle of the Sphynx.	Ingre (1780-1867).	French.	The picture *La Source* was painted when the artist was seventy-five and is one of the great works of his time, while some of his portraits are of most distinguished excellence.
Apotheosis of Homer.			
La Source.			
Portrait of Himself.			

XIII. In the National Gallery, London

Madonna and Child.	Cimabue (1240-1302).	Florentine.	Archaic and charmingly naive in its religious earnestness.
Madonna and Child.	Filippo Lippi (1457-1504).	Florentine.	Unusually fine landscape background to a well-balanced composition of deep religious feeling, characteristic of the times.
Saint Jerome and Saint Dominic.			
Madonna and Child.	Botticelli (1446-1510).	Florentine.	Of distinguished treatment and original composition arrangement, rendered in alluring detail and with conviction.
Reclining Venus.			
The Ansidei Madonna.	Raphael (1483-1520).	Umbrian.	Sometimes known as *The Blenheim Madonna* because it once belonged to the Duke of Marlborough. It is a noble composition, with the Virgin enthroned, St. John on one side and St. Nicholas of Bari on the other. There are other examples by Raphael in this gallery.
Our Lady of the Rocks.	Leonardo da Vinci (1452-1510).	Florentine.	This is a masterpiece pure and simple, one of the few authentic known works of Da Vinci, and there is a study for it at the Castle at Windsor. For finish, beauty of conception and profound skill of execution, it is unsurpassed in the world.
The Family of Darius at the Feet of Alexander.	Paul Veronese (1528-1588).	Venetian.	A grand, sumptuous composition, eminently characteristic of the master colorist.
Portrait of the Doge Leonardi Loredano.	Giovanni Bellini (1428-1516).	Venetian.	A most remarkable human document, full of deep sincerity.
A Tailor.	Giovanni Moroni (1525-1578).	Bergamese.	One of the world's famous portraits, full of character.
Mercury, Venus and Cupid.	Correggio (1494-1534).	Parmese.	Extraordinary painting of the nude forms of a man, woman and child.
Portrait of Jean Arnolfini and His Wife.	Jan van Eyck (1390-1440).	Flemish.	A remarkably painted portrait of two hideously ugly Dutch people, almost ludicrously naive in its selection of arrangement, but masterly in its rendering of light, shade and detail.
Portrait of an Old Lady.	Rembrandt (1607-1669).	Dutch.	A famous canvas, showing a seated woman in white cap and ruff.
La Chapeau de Paille.	Rubens (1577-1640).	Flemish.	The portrait of a beautiful young woman, thought to have been Mdlle. Lunden, wearing a black Spanish beaver hat. The picture was once known as *The Spanish Hat*. Rubens obviously admired this work, for he never parted with it, and when he died it went to his widow, who also retained it during her life.

WORLD'S FAMOUS PAINTINGS—Continued

XIII. In the National Gallery, London—Continued

Title of Painting	Painter	School	Observations
The Ambassadors.	Hans Holbein (1497-1543).	German.	One of the world's masterpieces, showing two gentlemen standing in handsome robes, by a table which is littered with various still-life, minutely painted. The floor is of intricate design, and cast diagonally thereon is the object that has been the subject of much speculation. It is apparently a human skull elongated, though for what reason no one seems able to determine. The work is of superlative greatness, however.
Charles the First.	Van Dyke (1599-1641).	Flemish.	A great portrait of the monarch on horseback, of rare excellence.
Portrait of Gevartius.			A man with a pointed beard, wearing a ruff about his neck, very famous and popular in reproduction.
The Peace of Munster.	Terburg (1617-1681).	Dutch.	Important composition, with many figures gathered about a table.
The Avenue-Middleharnais.	Hobbema (1638-1709).	Dutch.	One of the great landscapes of all time, by a man who received little appreciation during his life.
Interior of a Dutch House.	Pieter de Hoogh (1630-1684).	Dutch.	Interesting arrangement of light, shade and dexterous rendering of textures.
Philip IV. of Spain.	Velasquez (1599-1660).	Spanish.	One of the Spanish master's famous portraits of his king.
Marriage a la Mode.	William Hogarth (1697-1764).	English.	A series of six cartoons or pictures of the fashionable life of the artist's time, telling satires on the weakness, extravagance and dissipation of the nobility. These and other works here by Hogarth are world-famous.
Portrait of Mrs. Siddons.	Thomas Gainsborough (1727-1785).	English.	The famous actress seated in graceful pose, in large picture hat.
Portrait of Two Gentlemen.	Sir Joshua Reynolds (1723-1792).	English.	All of these portraits are human documents of the first order.
Doctor Johnson.			
Boswell.			
Admiral Keppel.			
Himself.			
George IV. as Prince of Wales.			
The Age of Innocence.			A very popular work of girlhood, known through reproduction.
Derby Day.	W. P. Frith (1819-1909).	English.	A popular picture full of infinite detail, representing England's famous race track on Epsom Downs, on its fête day.
The Valley Farm.	John Constable (1776-1837).	English.	A famous landscape, which, with others by Constable, made a profound impression on the French artists who founded the Barbizon school, largely on the work of Constable.
The Fighting Temeraire.	J.W.M.Turner (1775-1831).	English.	An extraordinary colorful painting of the famous battleship being towed to her last berth; as a landscape allegory, not excelled.

XIV. In the Old Pinakothek, Munich

Saints John and Peter.	Albrecht Dürer (1471-1528).	German.	Wonderfully drawn and painted and full of engaging detail.
Saints Paul and Mark.			
Crucifixion.	Wohlgemuth (1434-1519).	German.	A marvelous composition, with many figures in the costumes of the artist's own time, with the dead Christ on the cross against a background of a mediæval city, all rendered in infinite detail.
Sacrifice of Isaac.	Rembrandt (1607-1669).	Dutch.	
Descent From the Cross.			
Mary and Saints.	Ghirlandajo (1449-1494).	Italian.	
Madonna Canigiani.	Raphael (1483-1520).	Umbrian.	A beautiful pyramidal composition that came originally as a part of the dowry of the Princess de Medici, to Elector Wilhelm, about 1507.
Street Boys.	Murillo (1618-1682).	Spanish.	There are in this gallery five other similar themes by Murillo.
The Physician.	Mieris (1635-1681).	Dutch.	This gallery contains fifteen other examples by this artist.
The Quack.	Gerard Dou (1613-1675).	Dutch.	This picture shows the artist at a window. In all there are twelve paintings in this gallery by Dou.
Dutch Interior.	Pieter de Hoogh (1632-1681).	Dutch.	
Battle of the Amazons.	Rubens (1577-1640).	Flemish.	
Abraham and Hagar.	Van der Werff (1659-1722).	Dutch.	
The Entombment.			
The Scourging.			
Ecce Homo.			
The Crucifixion.			

XV. In the Prado, Madrid

Las Lanzas (the Surrender of Breda).	Velasquez (1599-1660).	Spanish.	Unquestionably the finest historical military picture in the world. There is a group of soldiers to the right with lances (*las lanzas*) which gives the picture its name. On the extreme right is a portrait of the artist, with wide collar and hat with plumes.
The Spinners.			Known as *Las Hilanderas* or *Tapestry Weavers*, a group of several women about a spinning wheel, and a great doorway in the center, in which are seen several more figures. A great and enduring masterpiece, showing the master at his best. There are over fifty pictures and portraits by Velasquez at the Prado, where his work is seen in its finest flower.
The Adoration of the Magi.	Rubens (1577-1640).	Flemish	
The Supper at Emmaus.			
Rape of Europe.			
Adam and Eve.			
Portrait of Marie de Medici.			
The Temptation of St. Anthony.	Teniers (1610-1694).	Flemish	
A Village Festival.			
The Ninepin Player.			
A Surgical Operation.			
The Martyrdom of St. Bartholomew.	Ribera (1588-1656).	Spanish.	
Jacob's Ladder.			
St. Jerome Praying.			
St. Francis of Assisi in Ecstasy.			
Women Fighting in a Circus.			
The Adoration of the Shepherds.	Murillo (1618-1682).	Spanish.	
The Penitent Magdalen.			
Christ and St. John (Ninos de la Concha).			
Immaculate Conception (Four examples).			
Venus Listening to Music.	Titian (1477-1576).	Venetian.	
The Entombment.			
Venus and Adonis.			
The Fall of Man.			
Mater Doloroso.			
Portrait of Charles V. on Horseback.			
Portrait of Charles V. on Foot.			
King Philip II.			
Empress Isabel of Portugal.			
Charles V. at the Battle of Muhlberg.			

Title of Painting	Painter	School
The Chastity of Joseph.	Tintoretto (1518-1594).	Venetian.
Visit of the Queen of Sheba to Solomon.		
Susanna and the Elders.		
Death of Holofernes.		
Tarquin and Lucretia.		
An Allegory of Venus.		
The Finding of Moses.		
Venus and Adonis.	Paul Veronese (1528-1588).	Venetian.
Christ at the House of the Centurion.		
Susanna and the Elders.		
The Marriage at Cana.		
A Youth Between Vice and Virtue.		
Cain Wandering With His Family.		
The Sacrifice of Abraham.		
The Vision of St. Peter Nolasco.	Zurbaran (1598-1662).	Spanish.
The Sleep of the Child Jesus.		
Saint Casilda.		
The Labors of Hercules.		
The Madonna del Pesce.	Raphael (1483-1520).	Umbrian
Lo Spasimo de Sicilia.		
Portrait of a Cardinal.		
Madonna la Perla.		
The Holy Family Under the Oak.		

WORLD'S FAMOUS PAINTINGS—Continued

XVI. In the Pitti Gallery, Florence

Title of Painting	Painter	School	Observations
Consequences of War.	Rubens (1577-1640).	Flemish.	
Two Landscapes.			
Portrait of Pope Leo X.	Raphael (1483-1520).	Umbrian.	The last is the *Madonna of the Chair* and has long enjoyed a great world-wide popularity, being perhaps the best known of the many Raphael madonnas. It has been reproduced in engraving and color, in every possible medium, and has had an enormous sale through Europe and America.
Portrait of Pope Julius II.			
Madonna Doni.			
Madonna dell' Impanata.			
Madonna del Granduca.			
Madonna della Segiola.			
Mary Magdalen.	Titian (1528-1588).	Venetian.	
Supper at Emmaus.	Palma Vecchio (1480-1528).	Venetian.	A theme that has always had a fascination for painters.
Charles I. of England and His Queen, Henrietta Maria.	Van Dyke (1599-1641).	Flemish.	
Three Ages of Man.	Lotto (1480-1556).	Venetian.	A very human composition, with age to the left and a handsome youth in the center, attending the reading of a man of middle age.
A Concert.	Giorgione (1476-1511).	Italian.	The three figures are said to be a portrait of Calvin, Luther and Melanchthon.
Madonna and Saints.	Fra Angelico (1387-1455).	Italian.	
Eve.	Albrecht Dürer (1471-1528).	German.	Naive in both conception and rendering.
Adam.			

XVII. In the Uffizi Gallery, Florence

Title of Painting	Painter	School	Observations
Holy Family.	Del Sarto (1486-1531).	Florentine.	The figures of St. Francis and St. John are contained within the composition. This is said to be Del Sarto's masterpiece.
La Fornarina.	Del Piombo (1485-1547).	Venetian.	This is a portrait of a very beautiful woman and for years was thought to have been by Raphael.
Portrait of Pope Julius II.	Raphael (1483-1520)	Umbrian.	A work most spiritual in its conception.
Virgin at the Well.	Botticelli (1446-1510).	Florentine.	
Birth of Venus.			
Venus and the Graces.			
Virgin and Child.			
Judith With the Head of Holofernes.			
Adoration of the Magi.			
The Annunciation.			
Portrait of Sir Robert Southwell.	Holbein (1497-1543).	German.	Both are world-famous portraits, of the first order.
Portrait of the Artist.			
Portrait of Elizabeth Brandt.	Rubens (1577-1640).	Flemish.	
Henry IV. at Ivry.			
Adoration.	Van der Werff (1659-1722).	Dutch.	
Entombment.	Van der Weyden (1400-1464).	Flemish.	Very naive and full of great sincerity, in the manner of the Van Eycks.
Madonna Enthroned.	Memling (1430-1492).	German.	
Man Praying.			
Madonna.	Fra Angelico (1387-1455).	Italian.	In all a very comprehensive showing of the work of this interesting painter.
Coronation of Virgin.			
Naming of John the Baptist.			
Marriage of the Virgin.			
The Assumption.			
Virgin and Child.	Titian (1477-1576).	Venetian.	The Uffizi gallery contains portraits of artists painted by themselves at the request of the directors of the gallery, a distinguished honor that is not limited to men of Italian birth but includes the world's greatest artists, among them Rubens, Masaccio, Perugino, Raphael, Michel-Angelo, Leonardo da Vinci, Titian, Dürer, and other modern Europeans and Americans.
Venus.			

XVIII. In the Vatican Gallery, Rome

Title of Painting	Painter	School	Observations
Communion of St. Jerome.	Domenichino (1581-1641).	Italian.	A famous work by a famous painter of altarpieces.
Dead Christ and Magdalen.	Raphael (1483-1520).	Umbrian.	
Faith, Hope and Charity.			
Transfiguration.			
Coronation of the Virgin.			
Adoration of the Shepherds.	Murillo (1618-1682).	Spanish.	A very effective rendering of the theme.
Coronation of the Virgin.	Pinturicchio (1454-1513).	Umbrian.	A fine painter who worked in "tempera," for he never mastered oils. His most famous work is a decoration for the library of the cathedral at Sienna.
Nativity.	La Spagna (——1530).	Umbrian.	
Madonna Enthroned With Saints.	Perugino (1446-1524).	Umbrian.	This artist was a pupil at the schools with Da Vinci, and was the master of Raphael, Lo Spagna and Pinturicchio.
Vision of St. Helena.	Paul Veronese (1528-1588).	Venetian.	
Madonna With St. Sebastian.	Titian (1477-1576).	Venetian.	
St. Jerome.	Da Vinci (1452-1510).	Florentine.	Cardinal Fesch had only the head of the saint, which had been cut out of the wood panel, but the rest was found at a dealer's shop in Rome and joined together with the original.

XIX. In the Venice Academy

Title of Painting	Painter	School	Observations
Virgin in the Temple.	Titian (1477-1576).	Venetian.	An old woman in the picture, selling eggs, is said to be a portrait of the mother of the artist.
Assumption of the Virgin.			A grand work containing many figures.
The Entombment.			This was the last work of this great artist, begun in his ninety-ninth year and completed by Palma Vecchio.
Virgin and Child and Senators.	Tintoretto (1518-1594).	Venetian.	
Holy Family, With St. John.	Paul Veronese (1528-1588).	Venetian.	An astonishing piece of realistic flesh painting.
Procession in St. Mark's Square.	Bellini (1428-1516).	Venetian.	Highly interesting historically as showing the square as it existed in 1496.

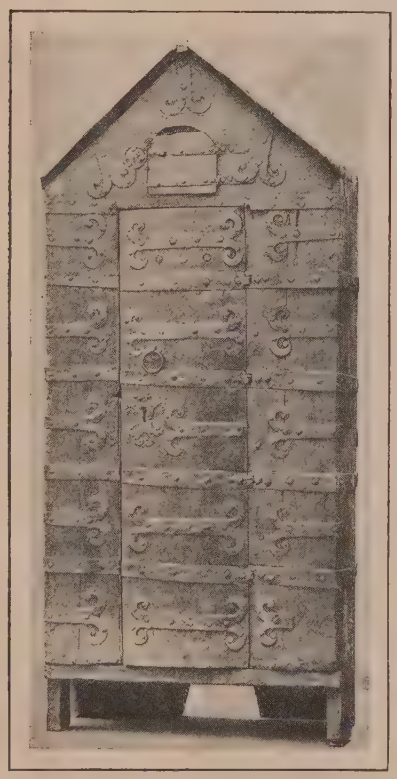
XX. In the Vienna Academy

Title of Painting	Painter	School	Observations
Portrait of Maximilian I.	Albrecht Dürer (1471-1528).	German.	Maximilian was a great patron of Dürer, though he did not invariably pay the artist's charges promptly.
Madonna and Saints.			
Himself at Forty-Five.	Rembrandt (1607-1669).	Dutch.	Rembrandt painted himself many times in various costumes.
Himself in Age.			
Young Man in Armor.	Van Dyke (1599-1641).	Flemish.	
Crucifixion.	Van der Weyden (1400-1464).	Flemish.	
Virgin and Saints.	Paul Veronese (1528-1585).	Venetian.	
Family of Velasquez.	Velasquez (1599-1660).	Spanish.	
A Venetian Lady.	Titian (1477-1576).	Venetian.	Very sumptuous in the color and remarkable treatment of stuff.

FURNITURE—It was not until the Gothic period, roughly spanned by the twelfth and fifteenth centuries, that furniture making was raised to an art, a crude art at first, heavy and clumsy as if the designers were awakening to new forms of beauty and in doubt as to how they should be expressed —but one of steady development until in the fourteenth century it reached a high degree of perfection.

Gothic.—The leading characteristics of this early style, as applied to furniture designing, were the pointed arch, the trefoil, the quatre-foil and simple tracery. Furniture was massive and Gothic motifs were confined to ornament. Construction was at first little affected by the style.

The leading characteristics of the later Gothic style as expressed in furniture were the divided Gothic arch, the quatre-foil, the cinque-foil, and an intricate scheme of tracery. The number of pieces in actual use at this period were chests of many varieties, cupboards, presses, dressoirs and armoires, stools, benches, chairs, bedstocks and bedsteads.



Peasant Cupboard of the Early Thirteenth Century

The Hall.—During the twelfth and thirteenth centuries, both in England and France, the hall was the main room in the house, in many cases the one room of the dwelling. In the homes of the nobility it was a lofty apartment which served the purpose of both kitchen and dining-room, and afforded the only living-room of the house. Meals were served on long trestle tables, the lord and lady of the manor sitting on a dias, which elevated them a few inches above their guests.

Below the dias the long and narrow table was set with viands less costly than those served to the master and the mistress. Here were gathered the baron and retainers. The placing of the salt divided the guests from the serving people. "Below salt" is an expression which has endured until today. On the dias were chairs with high backs and canopies. The latter were convenient in case of rain, for the raftered roof was not always proof against the weather. Benches without backs for the guests, and stools for the servants constituted the rest of the dining-room furniture. Between meals the tables were placed against the wall and the chairs were drawn to the fire. At night the serving-men slept on pallets of straw on the hearth.

Drawing-Room.—The next century added another room in the home of the affluent—a "withdrawing" room for the ladies—the beginning of our modern drawing-room. Here the mistress of the house with her ladies-in-waiting could retire when the music from the minstrels' gallery became too loud, or the jester's jokes too broad, or the drinking and fun too boisterous.

The Fifteenth Century was an important milestone in the march of progress. By this time the hall had lost its early character. It was large and often a meeting place for the owner and his friends, but as rooms multiplied, it ceased in turn to be parlor, kitchen and dining-room. It was gradually approaching the great entrance-hall of the seventeenth and eighteenth centuries. It retained its fine proportions, its lofty dimensions, but the raftered roof had given place to a beamed or vaulted ceiling. The big fire-place had grown more architectural, though still retaining its generous hearth. The rough walls were gone and in their place were oak panels and fine tapestries, the latter imported from Flanders, for the day of the French looms had not arrived.

During this period, furniture was of two general types—movable articles which could be transported with ease, and massive pieces which could be left behind with safety. It would be a bold thief who would try to escape with a heavily carved chair weighing several hundred pounds and made more unwieldy by a wooden canopy. In the same way the bedstead of the day was also quite immovable, for it, too, was well incased in wood and finished with a canopy. Both canopies had the same origin—namely, to protect the occupant from rain in case the roof should not be sufficient shelter. And while the wooden canopies in a milder form survived long after better building methods came into existence, they had their beginning in defective house building. When houses became water-tight and air-tight, furniture gradually assumed different aspects.

Origin of Modern Chair.—In the late fifteenth century, except in ecclesiastical chairs, the canopy was discarded. This straight back design was the ancestor of our everyday chair—although three centuries of furniture making intervened between the two. Flemish designers in the sixteenth century had an active hand in its evolution. They remodeled or revised the chair on new lines and sent it to England where, in the seventeenth century, it underwent other changes. But the part the old Gothic designers had in making all this possible must not be forgotten. They took the crude pieces of the dark ages—the bench, the chest, the bedstock and transformed them into things of beauty. They made not only objects of beauty, but, in comparison with earlier efforts, articles of real comfort and convenience. Their constructive work was built for centuries rather than years, while the delicacy and charm of their carving, now almost as perfect as when it left their hands, still stand as models for the world.

St. Peter's Chair, St. Peter's Church, Costello, Italy
One of the earliest examples of wooden furniture

Classic Renaissance.—With the sixteenth century came a transformation in living. The Renaissance, beginning in Italy, gradually spread throughout Europe. The house was no longer a stronghold; it had become a home.

Periods.—Broadly, the Renaissance had three distinct styles: The trecento, quatro-cento, and cinque-cento. The first was developed between the years 1300 and 1400 and its influence was confined to architecture and sculpture. The quatro-cento belonged to the fifteenth century and was a more classic style than its predecessors. The cinque-cento was the culmination of the art of the Renaissance. The former styles were but preparation for the architecture, sculpture, painting, and decorative arts of the sixteenth century.

It was not until the cinque-cento period that furniture showed traces of the classic revival. Wood-workers clung to Gothic designs long after stone-cutters had discarded them. Thus some of the tre-cento and quatro-cento motifs are exhibited in the furniture of the sixteenth century. It is well in studying the wood-work of this epoch to keep in mind the leading features of the three styles. The tre-cento consisted of interlacing lines combined with simple tracery and conventionalized foliage. The quatro-cento blended the festoon, the garland, the band, and the cartouche with naturalistic fruit and flowers. The cinque-cento was a restoration of classic details and included the fret, the arabesque, the anthemion, or honeysuckle, the scroll, and the acanthus.

The Renaissance raised furniture-making to an equality with the other industrial arts. Pupils were apprenticed to a master and studied with him until they had perfected their craft, when they opened work-

shops of their own. The pieces produced in these great studio-shops united beauty with utility. For the first time designs were made with reference to their setting. The furniture of the private dwelling was suggestive of neither cathedrals nor abbeys. It was made with a careful regard for the needs of the owner, his station and manner of living. Thus houses possessed a harmony which had hitherto been absent.

rench Renaissance.—"The new birth" in France may be divided into the following epochs: First Transition, 1453–1515, including the reigns of Charles VIII. and Louis XII.; second, Francois I., 1515–1547; third, Henri II. and Henri IV., 1547–1610; fourth, Louis XIII., 1610–1643. Under Charles VIII. the great tide of the Renaissance extended northward.

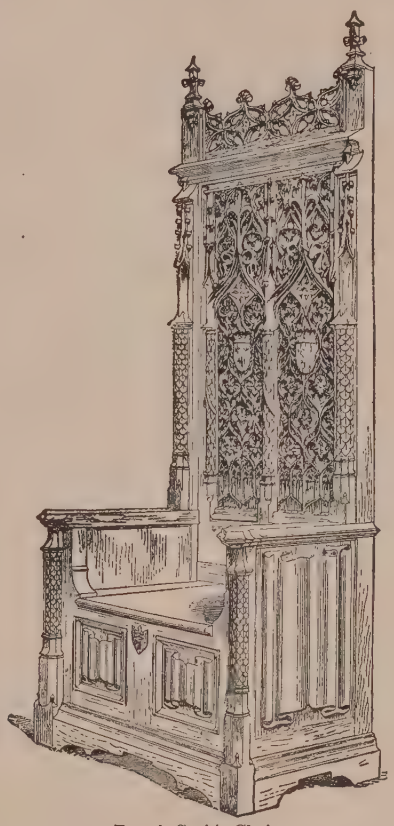
rancis I.—The reign of Francis I. was one of great activity in all lines of artistic achievement. This monarch, unwilling to be outdone by Henry VIII. of England and Charles V. of Germany, summoned to his court the greatest architects, painters, designers, and wood-carvers of Italy and Flanders. Under his patronage were erected many beautiful buildings, which in part, at least, give some hint of what the 'rench Renaissance really was.

His Successors.—France has had but one other such royal patron, Louis XIV. Both sovereigns were nearly equal in power. Francis had the advantage of coming to the throne at a more interesting period of the world's history. His reign, a little more than a quarter of a century in length, 1515 to 1547, represented extraordinary achievement. The combined reigns of the five succeeding monarchs, Henri II., Francis II., Charles IX., Henri III. and Henri IV., completed the century and brought to a close the most important years of the French Renaissance. Of these sovereigns, so different in character, four of whom represented the many virtues and vices of the House of Valois, Henri II. and Henry IV. only were worthy successors of the great "Francois Premier." They exerted a helpful influence on the fine and industrial arts, and left much to testify to their taste and generosity. Both have been immortalized in a "Style," the "Henri Deux" being the more celebrated.

Renaissance Details, at first were combined with Gothic construction. It was not until the sixteenth century was well under way that the real force of the Renaissance was felt. France was the birthplace of Gothic art and the transitional period was of longer duration than in Italy.

Chairs. In the reign of Francis I., chairs became more varied in treatment. The cane design of Flanders was early adopted; the plain high Dutch chair was also a favorite, but it was somewhat reconstructed. The seat was lowered, and it was comfortably upholstered. The French seem at all times to have been very keen about comfort, far more so than the English, who until the seventeenth century were more or less indifferent to many of the refinements of life. And it was then by way of France that many minor comforts reached England.

Cabinets. As the 16th century advanced, French cabinets developed on high and narrow lines. Those of the Francis I. period show carved panels, moldings, and pilasters, but seldom anything ponderous—although at this time presses and armoires were built on heavy models. Distinctions between these pieces of furniture were always made in France where subtle dividing lines were recognized. French furniture-makers also made a distinction between designs for the *salon famille* and the *salon campagnie*, and this is the reason why so much French furniture which comes to this country is so unfitted for living-rooms. It was never intended for anything but gala apartments, and naturally looks out of place elsewhere.



French Gothic Chair

Henry II., in many ways did as much for France artistically speaking as Francis I. He did not build in the lavish way of his father, but two very clever women ruled his court, and each in different ways had a tremendous influence on the arts of the day. One was Catherine de Medici, whose tastes were naturally Italian, and the other was Diane de Poitiers, the most remarkable woman of her time. Diane's emblem, the crescent, is found combined with Henri's monogram in one of the most beautiful rooms in Fontainebleau. The chimney-piece has interlaced lines and shows the early stages of that beautiful Renaissance pattern known as "strapwork" so popular with workers in stone, wood, and silver in both France and England. It is found in woodwork, in furniture, in the Grolier book-bindings, and in the Oiron pottery, better known as "Henri Deux" ware.

Between the reigns of Henri II. and Henri IV., the latter better known as Henry of Navarre, no marked changes took place in handicraft. By the time the latter came to the throne a good deal of the beauty of early Renaissance ornament had disappeared. The simple arabesques, seen to such charming advantage in the Francois I. style, and the equally simple strapwork of the Henri II. style, lost favor with decorators and wood-carvers. Shell ornament, which was destined to play such an important part in the decorative arts of France for nearly two centuries, came into great prominence during the Henri IV. period, although known at an early date.

Upholstery. During the reign of Louis XIII. came many changes in domestic comfort. The upholstered chair in the modern meaning of the term came into existence. It was an arm-chair, and the seat was lower and broader, and the upholstery instead of being any rich and sumptuous material which the designer of the chair could command, or the owner happened to possess, was an especially selected covering so designed as to correspond with other chairs or to harmonize with the wall treatment. Window draperies were also selected with greater care; they were more than a mere protection against air and sunlight. The age of upholstery had arrived.

Wall Treatment received especial attention, and was carried to a very elaborate point in France during Louis XIII.'s reign. Simon Vouet, who bore the same relationship to Louis XIII. that his famous pupil, Le Brun, did to Louis XIV., was responsible for most of the florid decoration of the day. Furniture-makers were always a little behind the decorators, and while many of the wall schemes of the day are too ornate from the modern view-point, the beautiful chairs, tables, and cabinets are well worth studying. Flemish influence was strong in the early part of the seventeenth century, due indirectly, it is said, to Rubens' visit to the French Court.

The Characteristics of the French Renaissance are briefly as follows:

A transitional period similar to that of Italy but of longer duration, for Gothic art was more firmly rooted in France than in the south. The ornament of the French Renaissance was in a lighter vein than that of the Italian, and less dependent on antique models. Delicate arabesques and pierced shields were used by furniture-makers and decorators. Later in the sixteenth century wood-carvers combined an interlaced ribbon or strap ornament with the lozenge and the cartouche, which was followed by the introduction of the shell and the ornate scroll. From that date wood-carving lost much of its charm.

Flemish and Dutch Renaissance.—The Renaissance reached Flanders and Holland tardily. Gothic traditions lingered late in the north and the long transitional period lasted well into the sixteenth century. Holland was always more independent politically than Flanders and her work was less influenced by outside conditions. This fact makes Dutch work comparatively easy of identification, while that of the Flemish, being more mixed, sometimes raises a question. Spanish and French influences are often present in the early Flemish work. Charles, King of Spain, and Emperor of Germany, was also Count of Flanders, and Duke of Burgundy. The intercourse between these countries and provinces was decidedly intimate at this period. The Italian Renaissance was on the wane when the Flemish Renaissance was at its height.

Holland and Flanders were far enough away from Italy to be quite independent of her influence. When Italian influence reached Flanders it was by way of France, with a strong mixture of French feeling added. When this complex influence was carried into England it had gained another element in addition to the Franco-Italian, and this is one reason why the English Renaissance swings so far from the classic. In the former the Flemish tincture is decidedly marked. In the sixteenth century, particularly, English work showed far more Flemish influence than either French or Italian. In the seventeenth century it was more Dutch than Flemish in feeling and remained so until the pendulum swung once more toward French designs, this movement giving way to the classic revival of the late eighteenth century.

Dutch Chair of the Renaissance, Museum of Fine Arts, Boston

Flemish Carving.—Primarily the Flemings were great carvers. They had carved for centuries, and having carried Gothic ornament to a fine point it was quite natural that they should continue to carve, when a totally different style was in vogue. They were less bound by classic traditions than the Italians, and they maintained a simpler mode of living. The Flemings in their work had always used the human figure. Heads of men and women decorate many of their pieces, particularly cabinets, cupboards, sideboards, etc., and where there are large expanses of wood to be covered. Some of the pieces are too heavily carved to suit our present ideas, but we must, at least, pay tribute to their skill.

Paneling, ribbon-bandeaux, swags of fruit and flowers, strap work, and kindred things are more harmonious in a modern dining-room or living-room than masks, animal heads, or the human figure, clever as they may be in execution. The linen fold pattern, sometimes called the "parchment scroll," really a survival of Gothic ornament, is found in a good deal of Flemish furniture of the sixteenth century and is one of the simplest and best of the patterns of that day—so attractive that it is a wonder that it is not used more in modern furniture constructed on Flemish lines and in the paneling of rooms built in Flemish style.

Many Flemish ideas exist in our everyday furniture which we have long since accepted as entirely modern. They do not suggest to the casual observer anything bordering on period styles and are only "period" through long years of transforming and adapting. Flemish furniture makers did much in promoting the evolution of the chair. They rebuilt, as it were, the beautiful Gothic chair, lowering the seat as well as the back and substituting horizontal braces for the heavily carved arched braces of the fifteenth century. Flemish chairs were of several varieties, but two types were prominent—the upholstered chair with turned legs and braces, and the carved chair with a cane back and a cane seat.

The Dutch at this time were achieving fame in different lines, They were not a nation of carvers. They were great in a different way. Marquetry and inlay were favorite Dutch methods of ornamenting furniture during the seventeenth century.

The special value of the Flemish and the Dutch Renaissance from our viewpoint is the effect it had on the furniture-making of England, for by this time, late seventeenth century, we of America had our own furniture interests. If we date the colonial period from the time when it really began 1620, our own era had come into existence, and though no one knew it, least of all ourselves, we were making furniture history.

Characteristics.—In summing up the contributions of Holland and Flanders to furniture making, special emphasis should be laid on the cane work of the first country and the marquetry of the second. But Dutch marquetry, beautiful as it is, pertains to decoration rather than construction, and it is to Flemish designers that the greater glory belongs.

German and Spanish Renaissance.—Two phases of the Renaissance, German and Spanish, terminate the great Classic Revival on the Continent. In Germany there was a long transitional period during which the lingering traditions of Gothic art died slowly. The early phases of the Renaissance show the grafting of the new upon the old. This mixture of Gothic and Renaissance was less successful in that country than in France where a happier union prevailed.

The best examples of German woodcarving of the early sixteenth century were of ecclesiastical origin. Choir stalls and altar pieces were richly decorated in the manner of the day. In domestic furniture the combination of Gothic construction and Renaissance ornament was less successful.

The great presses of this century are the most characteristic pieces. Made of oak and walnut with carved panels and heavy doors they are as substantial today as when they came from the hands of their maker. The press illustrated among our pictures, is made of walnut with an unusually fine scheme of decoration. The plain surfaces are well distributed and the ornament, although elaborate, is neither heavy nor fantastic. The lock is concealed in the carving, while the key repeats the lines of the ornament. The ball-feet are worthy of note, as they indicate a new feature of furniture-making.

Carved Press of the German Renaissance

Spanish Contributions.—From her oriental colonies Spain imported ebony and ivory and other costly adjuncts to furniture making. The elaborate metal work which today is the most interesting part of a great deal of this furniture is Spain's most important contribution to furniture making.

The Moors. Damascening, *nielo*-work, and kindred crafts had long belonged to Spain, following closely on the Moorish invasion. In Granada, the city of the Moors, were fashioned many of the most elaborate chests and coffers, and long after the Moorish expulsion, Granada was still the center of fine cabinet work. Those who visit the Alhambra today can trace many similarities between the wall decorations of this famous palace and the embellishments of old Spanish furniture. The Gate of Justice and the Gate of Judgment recall in a grander, bigger way certain motifs in inlay and metal relief, and the whole architectural and decorative scheme brings to mind the comparison that it is all a grandiose kind of jewelry.

The cabinet elevated on high turned or carved columns was a characteristic piece and as one or more examples are usually found in every museum and in many private collections, it is as typical a specimen as could be selected. One type is quite plain apparently but the whole front lowers at the turn of a key and reveals an exquisite inlay of ivory and metals with ornamental bosses. And there are many variations of this beautiful style. Iron is used most attractively at times and the inlay includes bone, horn, shell, and occasionally painted decorations. Color is sometimes introduced beneath the horn.

The Leather Chair. The influence of the Flemish cane chair on the furniture-makers of Europe has been mentioned. The leather chair of Spain equaled it in importance. Both had high backs and carved legs and braces, but there the resemblance ended. The Spanish design consisted of a sturdy frame of oak, chestnut or walnut, a back completely encased in leather, turned stretchers, a carved underbrace and hoof feet. English furniture makers of the 17th century gained inspiration from both Flemish and Spanish models in their famous Jacobean designs of wood and cane.

English Renaissance.—By the middle of the seventeenth century, French and Italian furniture, like the wall treatments of that day, became heavy and ornate.

The vitality of the Renaissance in these countries was over. It was the age of beautiful surfaces; of elaborate ornamentation. Constructively neither the Italian nor the French had as much to their credit as in the previous century. Craftsmen were painting the lily and gilding refined gold.

English craftsman never interpreted the Renaissance as did furniture-makers of the continent. When the classic wave reached England it had gained and lost much on the way. There were French and Flemish influences, and there were, moreover, English traditions too firmly planted to be uprooted.

The Characteristics of the 16th and 17th Century in designing were:

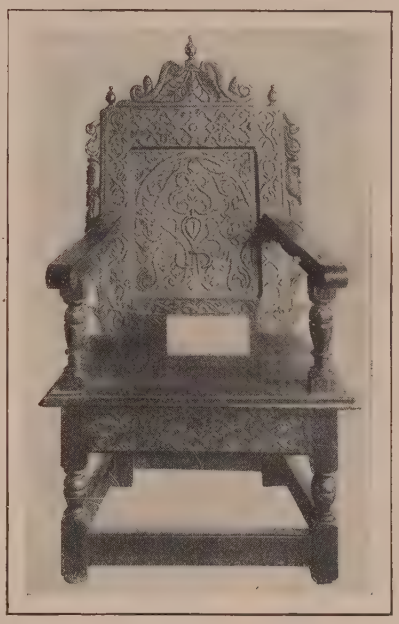
First, the English Renaissance or Tudor, which was a mingling of Flemish and Italian grafted upon Gothic; second, late Tudor or Elizabethan, showing greater unity (strapwork and paneling were features of this period); third, Jacobean, covering nearly a century, and including many types. Furniture was paneled and carved until walnut was introduced, when veneer and marquetry became popular. Among Jacobean characteristics were the spiral leg, the rising panel, and spindle ornaments. With the accession of William of Orange, in 1688, Dutch influence became paramount, and English furniture was slowly developed on more graceful lines.

Historic Periods.—English Renaissance, Tudor, Elizabethan and Jacobean, are terms associated with the 16th and 17th centuries, a long period to sum up in a sentence, but one, which in spite of "mixed motifs," was remarkably homogeneous. Queen Elizabeth was, of course, very much a Tudor, but having been honored by a style all her own, the term "Tudor" is often applied to the reigns of Henry VII., Henry VIII., and Mary.

Tudor Cupboard of Oak

Henry VII.'s reign began in 1485 and was contemporaneous with the reigns of Charles VIII. and Louis XII. Elizabeth's long term ended in 1603, while Henri of Navarre was on the French throne. The early and late Tudor periods thus covered one hundred and eighteen years, the Virgin Queen appropriating nearly fifty. In company with Victoria, she is quite entitled to her own "style."

The Henri II. period is very closely allied to the Elizabethan, through the strap-work motif in wood carving which was popular in Flanders, England and France. It is seen in many English cupboards of the late sixteenth century and also in chimney breasts and wall treatments. It is one of the most valuable contributions of the Elizabethan period to design, and ranks with the linen fold motif of an earlier day and the "rising panel" of a later one.



Wainscot Chair of Elizabethan Design

Styles in English furniture were of slow growth, with much overlapping and intermingling. The Jacobean period was well under way before there were many changes in design, and it was not until Charles I. was on the throne that the popularity of certain Elizabethan patterns completely waned. Even then the outlines of furniture changed little. The court and livery cupboards were modified a trifle to suit a simpler scheme of carving, but oak was still the chief wood, and so long as it remained in use "massive" furniture continued to be made. The Protectorate caused a break in the crafts and by the time it was over, and Charles II. was safely placed on the throne, 1664, many new influences shaped and developed English handiwork.

Jacobean Furniture is roughly divided into two parts—"early" and "late." "Early Jacobean" preceded the Commonwealth, covering the reigns of James I. and Charles I. "Late Jacobean" followed the Commonwealth, including the reigns of Charles II. and James II. The Commonwealth or Protectorate with Oliver Cromwell at its head was too turbulent to be very productive of the arts.

After the Restoration, all English furniture became more graceful. Charles II. had been brought up at the court of Louis XIV. and returned to England with French ideas of comfort and refinement.

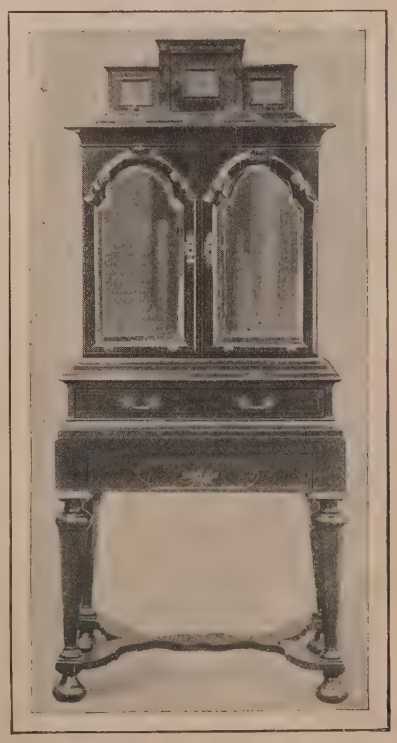
The furniture of Charles II.'s time is worthy of its present renaissance. Designers retained the best of the many motifs bequeathed from the earlier part of the century, combined with newer schemes. Paneling remained in favor, but it was diversified by nail-head and spindle ornaments, in the very late sixteenth century.

The introduction of walnut brought about a decided change in English furniture. It made possible a lighter, more graceful construction and an entirely different scheme of decoration. Carving was largely superseded by marquetry, which was well adapted to walnut and to the Dutch designs which William introduced.

The William and Mary period was brief, but it is an important link between seventeenth-century oak and eighteenth-century mahogany. During this reign the revocation of the Edict of Nantes caused many Huguenots to take refuge in England. A large portion were of the craftsman class and readily found employment. This added another element in furniture designing.

Walnut was used during Queen Anne's time and continued in favor until mahogany was well established, which was between 1720 and 1730. The cabriole leg is credited to William and Mary—to their reign, that is to say, and a most valuable accessory it proved to be. Inasmuch as William and Mary ruled jointly, a share-and-share-alike plan, unique, in English history, their brief period has an additional claim to consideration.

Louis XIV., Louis XV. and Louis XVI.—When Madame de Maintenon wrote to a friend, "The King will have us buried in symmetry," she expressed one of the most characteristic features of the Louis XIV. style. It was symmetrical, balanced, beautifully proportioned, cold, formal, lacking in imagination, and from modern viewpoints oppressively grand—like the monarch for whom it was named. Thirty



Charles II. Cabinet—Late Jacobean

years ago, there were probably fifty rooms in this country furnished in Louis XV. to one in Louis XIV. The latter had not been popularized by the professional decorator. It belonged to that remote century, the seventeenth, which for some strange reason has always seemed several hundred years away from the eighteenth.

Characteristics of Styles: French styles may be briefly characterized as follows:

Louis XIV: A formal rococo in which proportion and balance were salient features. Important details were the shell, the classic acanthus, the ram's head, the mask, and the satyr. In the early period furniture was massive and the designs of the Louis III. style were perpetuated. Carving was largely superseded by marquetry and by chiseled mounts of ormolu and bronze. Boulle furniture belongs to this reign and is now the most highly prized of Louis XIV. designs.

Regency. The rococo division of French designing is known as the Regency—the output of that brief period between the death of Louis XIV. and the coming of age of Louis XV., when the Duke of Orleans was regent. The Regency is an important period when viewed from the historic side of interior decoration. It forms an important link between the Louis XIV. style and the real Louis XV., which later in the century became once again extremely rococo. It is, however, the least worthy of admiration of any of the French epochs.

Ormolu Table of the Regency—1715-1723

Louis XV: Balance and symmetry were less important in the eyes of furniture-makers than richness of ornament and faultless execution. Angles gave place to curves, and the talents of the goldsmith and the painter were utilized in designing furniture which, in point of workmanship, has never been surpassed.

Louis XVI: Simplicity of construction and severity of ornament. Rococo details disappeared and classic emblems replaced them. Important features were the fluted column, the bay leaf, the oak and acorn, the Bell Flower or "Corn Husk," the Greek band, and the plain acanthus. Straight lines superseded curves and ornament was a means, not an end.

Louis XVI. Table

The long reign of Louis XIV. witnessed many changes and developments in furniture designing. The reign of the next Louis was briefer, but quite long enough to make any one phase impossible, but with the final Louis—if we leave out Louis XVIII., who does not count when it comes to "periods"—the designing of the eighteenth century seems to have been crystallized. All the furniture of these three great epochs shows marvelous execution. Whether it be a Louis XIV. cabinet of boulle, a Louis XV. chair, or a Louis XVI. table, the workmanship is unsurpassed.

Metal played a very important part in many of the designs and added tremendously to their cost. Furniture decorated with insets of porcelain, usually of Sèvres, formed one class of Louis furniture; and fine upholstery of Beauvais and Aubusson were important accessories in both Louis XV. and Louis XVI. designing.

English Furniture of the Eighteenth Century.—The Early Eighteenth Century.—In our devotion to the late eighteenth century we are apt to overlook the rich legacy bequeathed to us by the early eighteenth, or to confuse it with other periods.

Yet the first half of this fascinating century was almost as important; a period of great variety of design, of many men working in many veins, of old ideas slowly giving way to new. If less unified than the latter half it was full of picturesque vigor and of sturdy simplicity, partly Dutch, and partly a survival of Jacobean traditions which lingered in spite of changed conditions.

The perpetuation of Dutch motives—such as the cabriole-leg and the web-foot continued until the fourth decade of the century. The web-foot or flat-foot we find in most of the furniture of Queen Anne's time, and a charming adjunct it is to the designing of the day. Chippendale preferred the ball-and-claw foot and it is seen in most of his early chairs, also at times in his later and elaborate "ribbon backs." He was one of the first English furniture makers to use the square leg, also one of the first to adopt the curving French leg of the Louis XV. period, but he clung to the cabriole or bandy leg in its various forms until about 1740.

Chippendale was the first important English furniture maker to have his name perpetuated by a style. Celebrated designers had preceded him but their identity is submerged in that of their sovereign. Chippendale raised his craft to such a point of excellence that his own name became associated with it.

What furniture of the eighteenth century would have been if mahogany had been unknown is a difficult question to answer. It is impossible to imagine Chippendale's designs in oak—just as it is impossible to conceive of the heavy furniture of the seventeenth century being executed in mahogany.

The Chairs and Settees from the Chippendale shop in Martin's Lane comprised at least six different styles—the early Dutch types with ball-and-claw feet and plain slats; the same with pierced slats. These two distinct backs were also combined with straight legs and later there were other variations. The curved leg of the Louis XV. style was a favorite with Chippendale, but was usually conbined with an elaborate back. There were several distinct "ribbon" styles, a rather uncommon one having an intricate leaf pattern carved with the ribbons. After 1740 the "Gothic manner" and the "Chinese taste" fascinated Chippendale, and about 1750 he became extremely rococo. The English designer is not at his best in copying the Frenchman, and Chippendale pleases us least in his rococo furniture; nor do we like him nearly so well in his Gothic and Chinese absurdities as in his earlier and simpler things.

Chippendale's great point of excellence was his ability to take the designs he found at hand and so improve them that they took on new life and meaning. He was a past master at adapting; not so much an originator as a free and most successful translator of all that came to his hand. That he has had more than his just reward is perhaps true. That he did not make or even design half the furniture bearing his name must also be conceded, but that he gave permanent fame to much that would have perished but for his indefatigable efforts must always be placed to the credit of "T. Chippendale of St. Martin's Lane."

The Later Eighteenth Century.—Thomas Sheraton, Thomas Shearer, George Hepplewhite, and Robert Adam are the names which stand out brightest in the roster of the late eighteenth century. Possibly Robert Adam should come first and Shearer fourth. Transpose them as you will, but place Sheraton near the top. It might be well to mark both Adam and Sheraton "one" for it is hard to divide the honors.

Robert Adam, fresh from his studies in Italy, returned to England at an opportune time. With him came Bartollozi, the engraver, and the painters, Pergolesi and Cipriani, both destined to play an important part in English furniture making.

We recognize the urn and the oval pateræ as Adam; also certain motifs like the acanthus, the ribbon band, the arabesque and the garland, as both Adam and Louis XVI. There is a good deal of similarity between the two styles. We find in the English style a greater slenderness and a totally different treatment of the wood. The Adams used carving very sparingly; many of their finest pieces have not a trace of it. They also brought

to great perfection painted furniture, employing Pergolesi and Cipriani for the finer work; also that gifted and erratic woman, Angelica Kauffman.

In Adam furniture a charming light green is often seen; there is also a burnished gold which almost equals Vernis-Martin. Cipriani had many Italian secrets of mixing colors and a good deal of this work is from his hand.

Cane Furniture was designed by Adam and is today the type most frequently reproduced by American furniture makers. The chair backs are usually oval and the cane webbing usually follows the lines of the frames. By this time the square leg has been to a large measure discarded. Hepplewhite, however, preferred the square to the round one; Shearer did likewise; Sheraton used both the plain round leg and the square leg; he also had a strong preference for the fluted leg of the Louis XVI. style. In most of the Sheraton furniture in this country the fluted leg is found. In the sideboards especially it is a characteristic feature.

Inlaid Work.—By the last decade of the century, the fancy was no longer for carved mahogany; in many instances it was no longer for mahogany of any kind. Inlaid furniture of satin-wood and painted furniture of satin-wood represented the taste of the hour. Many writers have credited to Sheraton the introduction of satin-wood. If this be true he gave almost as much to the Adam Brothers as they gave to him.

Sheraton's furniture creations may be divided into three classes—carved, inlaid and painted. His sideboards and chairs come usually under the first head; his cabinets and tables, the latter found in great variety in England, to the second; and to the third, belongs a large portion of the work he did for the Adam Brothers, which is extremely scarce in this country. Some of his inlay has as much color as if executed with the brush. Sycamore was a favorite wood with him and under the name of "harewood" was given a beautiful golden brown. Combined with satinwood or white mahogany, it was extremely effective. Whitewood was stained apple green, that lovely tone which Kauffman and Cipriani were so successful in securing. Other woods Sheraton used with consummate skill. He was thus able to give to his simplest designs a real color value.

Hepplewhite's greatest contribution to furniture-making of the late eighteenth century was his masterly use of heart and shield shaped motifs. Most of his chairs have shield-backs, but it was in his dress-tables and kindred things that this motif is seen in its most charming guise. Charm is the word to give his work. The strength of Chippendale; the proportions of Sheraton we do not find. His range is limited. He repeats one theme over and over. His knowledge of woods did not equal Sheraton's—he had none of Chippendale's mastery of construction—but he had a fine intuitive feeling for beauty and he expressed it in his work. He was not a carver of note, like Chippendale, not a master inlayer like Sheraton, yet so great was his popularity that he employed many men to help him fill his commissions and his reputation was so well established that after his death in 1875 his widow was able to carry on his business for years.

Their Comparative Merits. — Neither Sheraton nor Hepplewhite could rob Chippendale of his supremacy as a chair maker. Sheraton's designs with straight legs and rectangular backs are not his most attractive work. In Hepplewhite's chairs his famous shield seems to lack constructive force. Chippendale still held his field. Sheraton's sideboards, cabinets, tables and bedsteads reach high water mark. Hepplewhite's sideboards and tables are also greatly to his credit. To Sheraton we accord a grasp of proportion, a feeling for restraint which were not equaled in his generation. If we place him at the head of the furniture makers of his century it is because he expresses the ideals of our own day—simplicity, proportion and reserve. Chippendale produced a far greater variety of designs, not alone because variety of design appealed to him, but because he lived at a time when fashions in furniture were extremely diversified. The last quarter of the eighteenth century was a remarkably unified period and here tribute must again be paid Robert Adam, for he was largely responsible for producing it.

Thomas Shearer must be mentioned as a designer of mark—particularly successful with sideboards and book-cases. The serpentine sideboard is supposed to have been originated by him. Hepplewhite gave this type distinction and it is his name that we associate with it.

The French Empire.—The Empire style marked the last of the great historic epochs in furniture and decoration. It was cold and formal, reflecting the personality of the man—Napoleon—so closely identified with it. The Revolution brought chaos to the industries of France which had so flourished under the old regimé. Furniture-makers and metal-workers were thrown out of employment. Many suffered imprisonment or death by the guillotine. With few exceptions the artist-artisans of the Louis XVI. period had little part in the handicraft of the Empire. The Directory and the Consulate were periods of construction. In the arts the process of rebuilding is slow. David's name is associated with this transition from old forms to the new, and with him must be mentioned Charles Percier and Pierre Fontaine. Percier was architect to Napoleon during the Consulate and ranks with Fontaine as a celebrated craftsman of the period. Napoleon was not a patron of the arts, yet no monarch of the old regimé had so dominated a style. The letter "N" is stamped over the entire decorative scheme of the Empire.

Designers of Louis XVI's day lauded the classics, but seldom to the extent of the Empire artists and never to the glory of one man. The laurel leaves of the preceding style were rearranged and twisted into a victor's wreath. The fluted column upheld a torch. Roman and Grecian emblems were used lavishly. "Paris was to become a new Athens, Napoleon a Cæsar, and France a second Roman empire." The craze for the antique transformed the dress of the day. Statesmen wore togas and court ladies donned the gowns of Grecian goddesses. Architects, decorators, and furniture-makers were imbued with the spirit of the hour. The classic lived again and, if somewhat inconsistent, the enthusiasm of the day overlooked all shortcomings.

The Chief Characteristics of the Empire Style were the wreath and the torch, the Roman eagle, the Athenian bees, the Greek fret, and the honeysuckle. After the campaign in Egypt the sphinx was added to the medley and became a conspicuous feature in both furniture and decoration. Distinctive qualities of the furniture of the period are few and easily mastered. Constructively the plain column and the claw-foot are the most salient features; decoratively the wreath and torch are most prominent. Marquetry was discarded and plain surfaces were covered with ornamental mounts of chiseled brass and ormolu. Chairs showed a square frame with a plain round leg, ornamented with mounts of characteristic patterns.

In its plainer form the Empire style was full of dignity. If it lacked the charm of the graceful Louis XVI. style it had, on the other hand, qualities of repose and stability which placed if far above some of its predecessors. One of the most interesting phases was the strong influence which it exerted upon American furniture-making of the early nineteenth century.

American Empire Table

American Empire and Colonial.—After pioneer days the colonists modeled their homes on those of their native land. Early furniture was the heavy oak of the old country or pine and hickory made in the colonies. Toward the end of the seventeenth century the transition from massive to more graceful forms took place. The introduction of mahogany in England soon influenced furniture-making on this side of the water, and for fifty year Chippendale, Hepplewhite, and Sheraton were the guiding stars of American designers. Early in the nineteenth century English patterns declined in favor and French influence became paramount. The Empire style marked the end of colonial furniture-making.

Colonial Furniture.—The term used in its literal sense, includes the household effects of the colonists from the time of the settlement at Jamestown until the war of the Revolution. This restricted definition excludes the work of the great English cabinet-makers of the late eighteenth century, and all pieces which owe their origin to the style known as the Empire. Thus the furniture of Sheraton and Hepplewhite, and the later designs of Chippendale, are debarred from the category, together with those massive mahogany shapes having carved columns and claw-feet which have long been the stronghold of colonial collections. Correctly speaking, these pieces should be classed as late Georgian and American Empire. To limit the adjective "colonial" to the furniture imported or made by the colonists prior to 1776 would disqualify

more than half of the old mahogany in this country. The word has been used so long in a wider sense and has been applied so continually to everything in furniture, from the earliest possessions of the Pilgrims to the designs in vogue as late as 1820, that it is doubtful if the literal meaning is ever accepted. From one point of view the broader use of the term is the right one. It was not until 1830 that American furniture-makers ceased to be governed by the standards of the Old World. English taste in house-furnishing prevailed long after English supremacy was at an end. The colonial period in furniture outlived the colonial period in history fifty years.

In the accepted definition two centuries of furniture-making are covered. 1620-1820. The first hundred years may be called the age of oak, and the second the age of mahogany. During the earlier period the history of all handicraft in this country was closely allied to that of England and Holland. In the later epoch Dutch influence lessened, and England shared with France the honor of molding taste in America.

After the War of 1812 English patterns declined in favor and furniture-makers turned to France for inspiration. The American development of the Empire style is a lasting credit to the designers of this country, and forms a fitting close to the second century of colonial furniture-making.

While the Empire style in America followed in a general way the trend of the movement in France, it was free from the incongruities which marred many of the foreign pieces. Carved columns, claw-feet, pine-apple finials, and ornamental brasses were the hall-marks of the American empire. Realistic heads of lions and griffins, and the many Egyptian details to which French furniture-makers resorted, were happily absent from the work of the day on this side of the water.

By 1830 the Empire style in this country had run its course. Designs lost their vitality and became heavy and ponderous. When black walnut superseded mahogany the characteristics which had made furniture-making an art for more than a hundred years ceased to exist. Varied as were colonial types there were certain features common to all. Whatever extravagances marked English and continental styles, designs in this country leaned toward simplicity. It is this quality that renders colonial furniture as satisfactory to-day as when it came from the hands of its makers.

Modern Furniture.—In the past there has been a survival of the fittest in furniture. The transitional Gothic and traditional Renaissance pieces are not nearly so numerous as pure specimens, and so it is with Elizabethan furniture, with Charles II. pieces, with Queen Anne designs, with examples of Chippendale and his contemporaries. The experimental pieces —the failures have apparently disappeared. Modern furniture makers have rendered marked assistance in reproducing the best, the most typical specimens and thus perpetuating the good. The value of a correct reproduction both as an example of style, and as a well made piece of work must be conceded.

Reproductions are usually more successful than adaptations—faithful copies rather than free translations. This is particularly true of mahogany designs. The oak furniture of the seventeenth century can sometimes be more freely interpreted, if there be skill of hand, and taste and discrimination back of the skill. But with the furniture of the succeeding century, he is wisest and most successful who does not alter a line but reproduces as truthfully as is possible.

Variety versus Harmony.—We have so much to choose from that we do not always choose wisely. The matter is not so simple as it was in the old days. Again in the tremendous gain we have made in certain lines we have lost in others. Allowing a good deal for the glamour that time gives, it is doubtful if in the twenty-second century, our own age will present that harmony and grace, that perfection of detail which we find in the eighteenth century. Even the costumes of the period fit into the background and it seems to us like a gigantic stage setting, in which white paneled walls and mahogany furniture, powdered hair, brocades, and lace ruffles all make a consistent picture.

It is this harmony of wall treatment, furniture, and costumes that charms us in all historic styles. In the seventeenth century the dark oak paneling seems to be just the needed background for sturdy oak furniture and for the brighter, more picturesque costumes. This is a more vigorous period of the world's history. It lacks the repose, the refinement, of the eighteenth century but it charms us with its own harmony. Turning the years of the calendar back to the sixteenth century we find cruder furniture, cruder walls, the furniture massive, the walls partially paneled, and finished with tapestries or molded plaster—all brave and strong in color—just the setting we immediately see for the heavily carved oak and for the brave apparel of the period. We shudder to think what conflict would arise if the backgrounds were shifted; if the white paneled walls formed the setting for the dark oak, or if the refined mahogany were placed against the paneled oak. In the same way the transposing of the costumes would mar the harmony. The gorgeous apparel of Elizabeth's day would be out of focus against the background of the Georgian period. The delicate brocades and laces of the latter would be lost without a dark oak setting. The Jacobean costumes fit best their own century, and so in each case the right relation is maintained.

Claims of Colonial Style.—Colonial styles more than any others seem to fit the long popular American house. The expensive carved pieces in "Flemish" or "old English" were too elaborate for the average room and had little meaning except in rooms especially designed for them. It was not until "Mission" furniture became popular that oak really held its own with mahogany. The "Mission" fad had a great deal to do with the present revival of seventeenth century oak, although, like other furniture happenings, it was of slow growth.

Mission.—The simplicity of Mission or "craft" designs won instant approval and to a certain extent revolutionized living-room and library furniture. It suited certain backgrounds far better than mahogany being particularly in line with severe trims and plastered walls. That a great deal of it was unnecessarily heavy and awkward was at first overlooked. A little later many people realized that it was impossible to have simplicity without going to such extremes. Several craftsmen modified the earlier designs, while several furniture makers turned their attention to the seventeenth century, reproducing the plainest of Jacobean patterns in the way of tables, cabinets, and chairs.

It would be folly to hint that mission furniture, or its adaptations, will fit all places. But it can be claimed that it fits many places exceedingly well and that it has been a real factor in making many homes more comfortable, more attractive, and far more livable. It emphasizes the structural idea in cabinet-making and gives point to the theory that the less the grain and texture of the wood are treated, the better. Oak is especially adapted to its use, and the present interest in that wood is largely due to the mission movement.

Period Furniture.—The seventeenth century opened up a mine of material for our furniture makers and as the demand for such furniture increased other types were added. It is now possible to furnish entire rooms in Jacobean and Elizabethan, and with the right settings these new-old styles are wonderfully interesting. There was a time when the interest in the Chippendale designs was greater than that in the Jacobean, but that can hardly be said to be the case to-day. William and Mary patterns are also in demand and are now receiving greater attention in this country.

When our own furniture makers undertook the reproducing of period designs in earnest a new era was possible. It brought well made furniture of correct pattern within reach of moderate incomes. The price limitation worked for good, for it made impossible the most elaborate designs. The plainer phases of the French styles were carefully studied and faithfully reproduced. Naturally, the pieces were not cheap, but relatively speaking—and such comparisons must be relative—they were not more costly than well-made colonial reproductions, or, coming to more modern designs, finely executed pieces in oak. Skilled labor and the best of materials were a necessity and these factors make cheapness impossible. But the word "cheap" is also relative, and the phrase "more economical in the end" as true as it is trite.

What the furniture of the future will be it is impossible to say. Perhaps it will combine the strength of mission the grace of colonial, the beauty of the old French styles with the enduring qualities of Gothic.

CERAMICS.—In the broadest sense the term ceramics includes the whole field of the compounds and mixtures of which the foundation is silica and to which solidity and permanence are given by the action of fire, or briefly, the field of the igneous silicates. In this term, therefore are included not only pottery and porcelain but bricks, tiles, terra-cotta, stoneware, glass, the hydraulic cements and enamels for steel ware and for use in jewelry. The principles of composition and the technical treatment of these are similar in character though differing widely in detail.

The study of ceramics may be approached from many points. The historical view concerns itself with the gradual development of the nations as expressed in fictile wares; the artistic is founded upon the historical and deals with clay, glaze and color as means of art expression; the technical and scientific considers the methods by which results are produced

and the industrial or utilitarian view deals with the production of wares upon a large scale and as a commercial proposition.

Materials.—Certain rocks and minerals are the foundation of all ceramic work. Clays of all kinds, feldspars, quartz, limestone, steatite, cryolite, and fluorspar are used more or less, together with, for glazing, the compounds of lead, zinc, boron, potash and soda. Some of these substances are easily fusible, others resist the action of very high temperatures and the remarkable variety of ceramic products is due to the possibility of wide variation in the nature of the compounds. Two things are, in the main, necessary, a sufficient resistance to the action of fire and a sufficient yielding to produce the solidity due to partial fusion. Some clays, such as those used for brick or terra-cotta, possess both these properties naturally balanced, others, such as the white clays used for porcelain and fine earthenware, possess only the refractory nature, the yielding to heat must be supplied by an admixture. Thus all porcelains are more or less artificial in that the material is not found in nature ready for use. Hard porcelain is a mixture of natural substances, soft porcelain is a mixture of substances which have, for the most part, been prepared artificially.

Evolution.—The progress of clay-working among the nations has been through similar phases in all parts of the world although in some cases the beginning has been with the brick, in others with the pot. Broadly speaking the brick was evolved from adobe and was manufactured only under climatic conditions such as make sun-dried clay a possibility. The pot was evolved from the basket or bark vessel and was made by such peoples as the British and the North American. Possibly sun-dried pots were made at the first but no specimens remain. The origin of burning or baking the clay is unknown. The British placed pots in the funeral pyre and afterward collected the bones and buried them in one of the vessels, using others to contain food and water. The Red-man made large numbers of earthen vessels and baked them in the open fire. All these wares were built by hand and shaped finally when nearly dry.

The potter's wheel, whereby symmetrical form is given to plastic clay, was used by Egyptians, Greeks and Romans but does not belong to the Bronze age in which the hand-built ware is placed.

The Greeks.—As producers of pottery from natural clays the Greeks stood first. Many thousands of their vases are now to be seen in museums. The work is classified under certain well marked styles. The earliest wares were plain or simply decorated with black bands; then came the Geometric style in which, as the name implies, the pieces were covered, more or less completely, with lines arranged in angular patterns. This was succeeded by the black figured ware in which animals, birds and human figures were painted in black silhouette upon the brown or red clay. The finest period was that of the red figured ware in which the black pigment was used as a background the figures being reserved in the natural red. All these wares are once fired the pigment being laid upon the unburned clay.

Romans.—The Roman potters carried their art into many lands using often local clay. The black ware commonly known as Upchurch from the locality in England where much of it has been found was made of a common red clay and was turned black in the burning by the action of smoke. Castor ware is a variety which is characterized by painting in white clay upon a black or brown body. Samian or Aretine ware was molded from a bright red clay the source of which is unknown.

Chinese Influence.—None of these ancient wares has been perpetuated with the possible exception of the Castor ware which may have been the remote ancestor of the early English slip decorated wares. The treatment is similar though there does not seem to have been any continuity of production. The whole trend of the pottery idea was changed by the influence of Chinese porcelain upon the Western world. Up to this time dark colored wares from natural clays had been made exclusively but as soon as the porcelains of the Chinese became known through the channels of trade the whole ceramic world strove for the production of white pottery. In the near East the expedient was adopted of coating the dark clay with a white veneer of ground quartz mixed with a little pipe-clay. The knowledge of this process was confined to the Persians, Arabs and Moors but upon the invasion of Spain by the last named people the ware known as Majolica was originated. The characteristic feature of this is a glaze rendered opaque by the use of tin oxide which serves, as did the earlier white veneer, to conceal the dark colored clay of the body. Nearly every country in Europe participated in this development. The Majolica of Italy, the Delft of Holland, and the different styles of faience made at Nevers, Rouen, Moustiers and other places in France are technically almost identical. Wide differences are, of course, apparent in design and form but the essential technique is the opaque tin enamel.

Majolica derives its name from the island of Majorca in the Mediterranean whence these wares were first exported. The term was first applied only to the lustered pottery which originated in Spain and was afterward made with such great success in Italy, but it is now generally used for all wares with the stanniferous enamel. Whether the knowledge of this was carried from Spain to Italy or was communicated to the Italian potters by Oriental workmen is a debatable point. In any case it was in Italy that the art reached its fullest perfection. The names of Luca della Robbia, Giorgio Andreoli and even Michelangelo himself are connected with this product while it is from the town of Faenza that the word faience is derived. The world is fortunate in possessing a manual of the potter's art in Italy during the sixteenth century by Piccolpasso, a contemporary writer. In this most exhaustive work detailed information is given as to the production of the wares of the time and every modern writer has drawn liberally upon this source.

Soft Porcelain may be said to have grown naturally from Majolica, first in Italy where the rare Medici porcelain was made about the year 1580, and afterward in France at St. Cloud in 1695, at Chantilly in 1725 and at Vincennes the forerunner of Sevres. The aim of the early porcelain makers was to produce a translucent white ware which should approach the Chinese masterpieces in appearance. No pure white clay had then been discovered in Europe so that the result had to be accomplished by artificial means. A mixture was made of sand, gypsum, salt, alum and niter and was fused in crucibles to a solid slag known as "fritt." This was then ground to a fine powder and to it was added a small portion of a plastic calcareous clay. This clay tended to darken the color so that it was not possible to use enough to impart a working plasticity to the mass. Hence the porcelain makers were driven to use such emollients as soap and mucilage before the paste could be shaped. So tender was this ware in its resistance to fire that heavy losses were experienced in the kilns and it was eventually superseded by the hard porcelain which now constitutes the staple European product. No more beautiful ware than the French "pate tendre" has ever been made. The glaze was a very fusible glass composed largely of lead oxide and, consequently, the paintings, which were executed with consummate skill by artists of repute, sank into the glaze in the burning and acquired their lustrous beauty. To this fact is also to be attributed the superb quality of the ground colors, the inimitable turquoise, the apple green, the rose du Barri and the blue du Roi.

Development in France.—France gave birth, in the sixteenth century, to two notable departures from the established methods. These were the faience known as Henri II. and the ware of Bernard Palissy. The former has been the subject of much discussion as to its place of origin. It was first attributed to Hekene de Hangest who was a woman of refined taste, the chatelaine of the Chateau of Oiron. It was said that she and her librarian together made this pottery as a labor of love. Only about sixty pieces are now known to exist. The characteristic feature of the ware is that a light, yellowish clay is inlaid, somewhat after the method of a bookbinder, with clays of darker color, the whole being covered with a transparent glaze. Other locations have been given to this ware but the name Henri Deux is accepted as the most satisfactory.

Bernard Palissy was born in 1510 and his life has inspired many a theme. His aim was to make a perfect white enameled pottery and though he struggled for fifteen years he never realized his purpose. He made, however, the beautiful colored glazes which will always be associated with his name. Being a devoted student of nature he modeled reptiles and fishes on his platters and covered the clay with glazes in the natural colors.

Neither of these two wares had any appreciable effect upon the ceramic industry nor is either of them made at the present time.

Continental Development. — Chinese porcelain is generally conceded to be the criterion, as it is the prototype of this class of ware. The ingredients are the pure clay known as kaolin, feldspar and quartz. The glaze is composed of lime, feldspar and quartz. Both body and glaze are burned together at a very high temperature. The highest perfection of the work of the Chinese potters was reached between the fourteenth and the seventeenth centuries to which period most of the finest pieces are referred. It was this porcelain which inspired the European connoisseurs as already stated. France led the way at St. Cloud with a purely artificial ware but the first hard porcelain made in Europe must be accredited to Saxony. In the year 1709 one Johann Friedrich Böttger, being employed as chemist by the Elector of Saxony, was shown some infusible, white earth. He had become interested in porcelain

through the fine collection of Chinese and Japanese wares in the possession of the Elector and at once essayed its production. The result was the famous porcelain of Meissen, also known as Dresden. The production of porcelain now became the passion of princes. One after another the rulers of the German states established studios or small factories in which the fashionable art could be pursued. Vienna, Höchst, Berlin, Nymphenburg and many other places became centers of production but in the majority of cases the work ceased upon the death of the patron. Meissen, Vienna, and Berlin still flourish together with a large number of modern manufactories which are successfully producing commercial wares.

English Porcelains.—England soon became involved in the passion for porcelain, three manufactories being established within a very brief period. These were Bow, 1744, Chelsea, 1748 and Worcester, 1751. The work of each was in almost close imitation of the French in technical treatment but influenced by the Chinese as to motif. The china made at Bow contained as one of the ingredients a white earth which was imported from America, from the "back of Virginia" a locality whence china-clays are now procured. There was a factory in Derby which was flourishing in 1756 though the exact date of its origin is unknown. Worcester, now known as "Royal Worcester" is the only one of these old establishments which survives, though a new factory has been set up at Derby.

Hard porcelain in England has had but two exponents. When, in 1756, William Cookworthy discovered china-clay in the county of Cornwall he set up a factory at Plymouth, the nearest important town, for the purpose of using the clay. He made a kaolinic porcelain after the manner of the Chinese but so imperfect were his methods that a piece of Plymouth poreclain without a flaw is almost unknown. The venture did not succeed and in 1770 was removed to Bristol where Richard Champion was already engaged in making a similar porcelain. The works at Bristol are now engaged in the manufacture of earthenware only.

About this time the characteristic English china was perfected. This is known as "bone china" from the fact that the paste contains about forty per cent calcined bone. This differs from both soft and hard porcelains and may be regarded as a compromise. It is not as tender as the French soft paste and is glazed with a compound which is much softer than that necessary for hard porcelain. Much of the success of English table wares may be attributed to this china for there is nothing better for the finest services.

English Types.—While the manufacture of porcelain came to England as an alien the production of pottery is indigenous to the soil. From the days of the ancient Britons there were potters in the land. They wrought the native clays and evolved the slip painted wares, the combed and marbled wares, the tortoise shell the agate and the mottled of modern museums. They also made a beautiful white stoneware, glazed with salt after the German fashion and decorated with transparent colors. From the ranks of these men arose Dwight and Toft and Astbury and Wheildon to be topped in turn by Josiah Wedgwood. The potters foregathered in North Staffordshire where clays and coal were abundant and thus were founded the Staffordshire potteries, a federation of small towns which have separate entities but one interest. Here are the famous Minton, Copeland, Wedgwood, Doulton, Meakin, Johnson and a hundred other flourishing factories whose wares are on every table. Nearly all of the English potters make both china and earthenware. The latter is a white ware, light and porous, which is much cheaper than china. Native clays are almost exclusively employed but feldspar is imported from Sweden.

The types of ware known as "Gros de Flandres" originated in Germany and was exported from the low countries, hence the name. It was also, from its hardness, known as stoneware and was the forerunner of the recent wares of this type. The first glazing was by a unique and hitherto unknown process. When the pottery was in the kiln and at a glowing heat a quantity of common salt was thrown upon the fire. This was vaporized by the heat and the fumes attacked the hot clay forming a glassy coating over the surface. This process, while still in demand for decorative wares has been superseded in the manufacture of common jars by a cheaper method.

Kaolin or porcelain clay was discovered in France in the year 1768 and after some experiments the manufacture of hard porcelain was begun. For some years both wares were produced at Sevres but in 1804 the soft paste was finally abandoned.

Pottery in America.—The aboriginal pottery of the United States constitutes a rich field of study to those who are specially interested but it has no connection whatever with the product of the present day. American pottery apart from the work of the Indian began with the industries of the early settlers in Virginia and Pennsylvania. Brick and roofing tile were probably the first to be made for there is evidence that in Virginia brick were burned in the year 1612 and Prof. Morse states that the German immigrants to Pennsylvania introduced the manufacture of roofing tile after the German pattern. Very early in the settlement of the country white or light colored wares were made by those who brought with them a knowledge of the potter's art. Native clays were used but at that time the country had been so little explored that the finer clays were unknown. Naturally the potters settled where the clays were found and so the pottery centers were established. As a foil to the importation of American clays by English potters it is related that Joseph Wedgwood was greatly exercised in mind over the fact that an English workman named Bartlem emigrated to South Carolina in 1766 and attempted to establish a pottery there. Wedgwood, in a private letter, deplored this, stating that "an amazing quantity of white stoneware" was being exported to the "continent of North America" and expressing the fear that if English potters should begin to practice their art in the "colonies" the trade of the mother country would suffer. Recent developments have shown that his fears were without foundation.

Eighteenth Century.—During the eighteenth century a number of small potteries were established in the Eastern counties of Pennsylvania, mainly by the German settlers. Dr. E. A. Barber has made a special study of the wares produced in this district and has written a good deal upon the subject. He thus describes the process of 'sgraffiato' as practised by the Pennsylvania potters—"The decorative process consisted in covering the red clay with a thin layer of lighter colored slip, through which the designs were scratched with a style to expose the darker color below. A coating of transparent glaze, slightly clouded with green and yellow oxides, was then applied to the surface, and, after the final firing, the ware presented the appearance of a rich red intaglio beneath a greenish or mottled-yellow ground."

The slip decoration which was a contemporary of this consisted in using a fluid clay as a pigment. It was usually a light clay painted upon a darker surface but the reverse was also used. Many interesting pieces of these wares are to be found in most museums.

Nineteenth Century.—During the opening years of the nineteenth century attempts were made in many parts of the Eastern states to establish the industry of pottery manufacture. At first the potters paid but little heed to the location of the clays, thus departing from the practice of their predecessors. Stoneware was attempted in more than one place in New York state where no stoneware clays are to be found. Gradually, however, the matter of the raw material prevailed and segregation began. The first pottery in East Liverpool, Ohio, now one of the most important seats of the industry, was built in 1839 by James Bennett who selected this location on account of the superior quality of the clay for the manufacture of yellow ware. It is interesting to note, as an evidence of the progress of the art, that while this clay is still used, the bulk of East Liverpool wares are now made from clays found elsewhere. Mr. Bennett was joined by his three brothers one of whom the late Edwin Bennett of Baltimore was in 1851, the originator of the well known teapot with the bas-relief of Rebeckah at the well, a design which has been copied by teapot makers all over the world. The next few years saw some important developments. Men bearing the now well-known names of Harker, Taylor, Goodwin, Knowles, Vodrey and Lee settled on the Ohio river and built their kilns until there are now in East Liverpool nearly fifty establishments engaged in the manufacture of clay products.

The first kiln in Trenton, New Jersey, was set up in the year 1852 by Taylor and Speeler, according to Barber. As in the Ohio field the first product was yellow ware made from local clay. In order to improve the quality of the wares extensive search was made for better material with the result that kaolin deposits were found in Delaware and Pennsylvania. Feldspar was also found in Pennsylvania and quartz in Maryland. The potters, coming for the most part from England, were able only with difficulty to adjust themselves to the new materials and heavy losses resulted. Gradually, however, the obstacles were overcome and distinctive wares developed. One of these, known as "Hotel China" is a fine earthenware which closely approaches hard porcelain in character, being white and translucent. This ware is in constant demand wherever

severe usage is expected and under such conditions has no superior. The body is composed of kaolin or porcelain clay, a plastic clay known as ball-clay, feldspar and quartz. The glaze is a compound of lead oxide, lime, potash, soda, boron sesquioxide, alumina and silica. These ingredients, when melted, form a hard glass which protects the body and offers great resistance to wear. The decoration is usually printed beneath the glaze and therefore lasts as long as the china itself.

Belleek.—Another development was the soft porcelain known as "Belleek." The name refers to a village in Ireland where a porcelain of similar character was formerly made. Not finding any natural substance which would fuse at a sufficiently low temperature the experimenters, Messrs. Brewer and Bromley, constructed an artificial feldspar or "fritt" to which they added a sufficient amount of plastic clay, thus following the plan of the early workers in France. Belleek ware is of a soft yellow color and is made extremely thin. It is much in demand for decorative pieces but is too tender for severe use on the table. Two or three factories are now making this ware in Trenton. The demands of recent years have given rise to the manufacture of sanitary goods in large quantities, some important concerns being exclusively engaged in their production. A strong earthenware which goes by the name of "granite" is extensively made for general trade, constituting, in fact, the bulk of the household pottery used in the country.

American Decorative Pottery.—In pottery which claims to be decorative and ornamental America has achieved some notable results. The general type of wares made is best defined as faience, that is, glazed earthenware produced at a low or moderate temperature. The glazes are both brilliant and matt and the decorations are either beneath the glaze or consist in colors added to the glaze itself. The pioneer in this field has been the Rookwood Pottery Company of Cincinnati, Ohio.

Rookwood has become, by reason of the variety and technical excellence of its products, a household word among ceramists and a study of the career of the concern will prove to be very instructive. In addition to the production of rare and beautiful vases in the standard brilliant glaze, Iris, Matt glaze and the inimitable vellum, Rookwood has embarked in the manufacture of tiles and architectural faience. Some very important works in interior decoration have been carried out in the cities of the middle West and it is evident that there are unlimited opportunities for development.

The Grueby Faience Co. of Boston, Mass., has devoted itself chiefly to the production of vases, wheel made and modeled, in a sober Matt green. Some other colors have been attempted but the green is the most successful. The glaze possesses an interesting reticulated surface which is peculiar to itself. Tile are also made in the same glaze. The Newcomb pottery as a department of Tulane University, New Orleans, has established a reputation for a decoration in blues and greens, under the glaze, which is now well recognized.

Commerical and Structural Pottery. On commercial lines large numbers of pieces are being made at Zanesville, Ohio, and elsewhere. This so called "art pottery" has a large sale but can scarcely be classed with the above named as both shapes and decorations are repeated again and again according to the demand.

In structural pottery, brick, roofing tile and terra cotta, great progress has been made in America in recent years. Common brick, made from soft clay in wooden molds, stands first as to quantity for all structural work needs it in the concealed parts. Many alluvial clays are used in the manufacture.

Refractory wares such as fire-brick, tuyeres, locomotive blocks, gas retorts and furnace linings in general form an important section of the ceramic field.

Architectural Terra Cotta is now recognized as the most satisfactory fire-proof building material. Red clay or shale is sometimes used but for the most part the same coal-measure clays are the best because of the demand for light colors. These clays are buff colored when burned and therefore do not destroy the light surface tints as red clays would. All terra cotta, except the red, is either glazed with a dull face or coated with a thin film of prepared clay which both secures uniformity of tint and also the desired color effect. The surface is impervious to water and is self cleansing. The weight of the pieces makes it impossible to dip them in the liquid so that the coating is sprayed on by means of compressed air.

Recent advances in the use of electric power have made it necessary to transmit high tension currents for long distances. This has created a large demand for insulators capable of resisting the strain. Glass, while suitable for currents of low voltage will not, on account of the irregularities of structure caused by rapid cooling, stand the heating which is inseparable from the transmission of currents at high pressure and recourse has been had to porcelain. The body structure is the same as that used for all porcelain wares except that color is not of great importance. It is found, however, that the white porcelains are the best because they can be burned at a higher temperature than those of impure color, in fact the color of the ware is an indication of the purity of the clay. The wares are generally burned at a low heat at first to insure safety in handling, the pieces are then glazed with the lime-feldspar compound already mentioned and are burned at an intense heat, approximating 1400 C., and are tested under an enormous voltage for the detection of flaws.

TABLE I—POTTERY AND EARTHENWARE

Country	Date	Nature of Product	Remarks
Egypt	B. C circa 300	Unglazed pottery.	Household vessels, mostly wheel made.
Egypt	1900	Glazed stoneware.	Rich blue glaze. Figures and charms molded.
Assyria	800	Unglazed pottery	Utensils both hand and wheel made.
Assyria	700	Inscribed tablets.	Cylinders and slabs with impressed letters.
Babylonia	700	Unglazed pottery.	Utensils.
Greece	800	Pottery both rough and polished.	Primitive style. Simple bands of dark color. Wheel made.
Greece	700	Polished pottery, also called Mycenæan.	Geometric style. Interlaced lines in dark color. Wheel made.
Greece	600	Polished pottery, also called Mycenæan.	Wheel made. Archaic style. Birds and animals in black silhouettes, the tails scratched in.
Greece	600	Polished pottery, black figured ware.	Wheel made. Human figures in black, faces in profile, eyes fronting.
Greece	500	Polished pottery. Red figured ware. Finest period.	Wheel made. Background in black, figures in natural color of clay. Faces and eyes in profile; drapery in detail.
Greece	400	Polished and ornamental ware. Decadent period.	Figures and embossments in color.
Rome	100 to A. D. 40	Black and gray ware, called "Upchurch" from the English locality where much is found. Found also in France and Germany.	Wheel made. Lines polished. Black color produced by smoke in burning.
Rome	B. C. 50	Dark ware with white decoration. Called Castor from the English locality.	The beginning of "slip" painting. Hunting scenes and scrolls.
Rome	400	Samian ware from the island of Samos; also called Aretine.	Bright red glazed pottery. Molded with decorative scenes and scrolls.
India	900 et seq.	Pottery of natural clay with colored glazes.	Wheel made. Decorated with floral arabesques under the glaze.
Japan	A. D. 200	Common pottery glazed and unglazed.	The art introduced by Korean potters.
Persia	1300	Eryobe or slip coated pottery.	A natural dark clay covered or veneered with a white coating, colored and glazed.
Persia	1200	So-called "Gombroon ware," attributed by some to the Chinese.	A porcelanous earthenware of fine quality. Perforated and filled in with semitransparent glaze. Sometimes decorated in blue.
Syria and Arabia	1400	Eryobe ware of the same general type as the Persians.	Decorated under the glaze with fine arabesques in color.
Rhodes and Asia Minor	1500	Eryobe ware of the same general type as the Persians.	Characterized by the use of a red earth as a pigment.
Spain	1320	Tin enameled ware, known as Majolica.	A dark natural clay covered with an enamel opacified by tin oxide. Lustered and decorated in color.

TABLE I. POTTERY AND EARTHENWARE,—Continued

Country	Date	Nature of Product	Remarks
Italy	1350	Tin enameled ware, known as Majolica. A most extensive and important product which emanated from many centers.	Elaborately decorated in color and embellished with rich paintings. Lustered and sometimes with a brilliant overglaze.
Italy (Luca della Robbia)	1450	Architectural modeled work coated with the characteristic tin enamel.	Luca della Robbia is believed to have greatly improved the quality of the enamel.
Italy (Giorgis Andreoli)	1520	Ruby pots, dishes and platters.	The Maestro Giorgis worked at Gubbie and his ruby lusters are unique.
France (Nevers)	1580	Tin enameled wares in Italian style.	The maker of these wares came from Faenza, hence the term "faience."
France (Rouen)	1540	Tin enameled wares of superior quality.	The style is entirely French. Figures and conventional ornament.
France (Moustiers)	1680	Tin enameled wares of superior quality.	Painted with hunting and domestic scenes on a very pure enamel.
France (Henri Deux)	1520	Glazed cream-colored pottery, inlaid with dark clays.	Also called Faience d' Oiron from the supposed place of origin. A very rare and valuable ware; only 53 pieces are known.
France (Palissy)	1560	Light colored earthenware with richly toned glazes.	Modeled embossments of natural objects glazed in proper colors. Also some modeled figures.
Germany	1540	Salt glazed stoneware.	Brown, gray or cream clays, embossed and sometimes decorated in blue.
Holland	1600	Tin enameled pottery decorated in blue.	The well-known Delft ware.
England	B.C.400	Primitive hand-formed pottery.	Found in burial mounds used in funeral ceremonies.
England	A.D. 490	Anglo-Saxon pottery.	Crude and unglazed.
England (Malvern and other places)	1250	Encaustic tiles. Parti-colored clays.	Made for church use, by the monks.
England (Tulham, Mortlake and Staffordshire)	1550	Salt glazed ware.	The knowledge derived from Germany.
England (Staffordshire)	1610	Lead glazed pottery on colored clays.	Primitive in character. Either wheel made or shaped by hand.
England (Wrotham and Staffordshire)	1620	Slip decorated wares.	A characteristic English product. Dark clay with ornamentation in light-colored slips.
England (Lambeth, Staffordshire, Liverpool)	1635	Tin enameled wares.	Introduced from Holland.
England (Staffordshire)	1680	Combed and marbled wares in parti-colored clays.	A domestic pottery largely made in cottage homes.
England (Etruria)	1762-1776	Wedgwood wares, queensware and jasper.	The beginnings of modern manufacture.
England (Leeds)	1770	White earthenware.	Perforated and glazed.
England (Staffordshire)	1784	Willow pattern, introduced by Spode.	Spode was the forerunner of the house of Copeland.
England (Lambeth (Doulton)	1818 (still working)	Stoneware.	A salt glazed ware, decorated in Sgraffiato and otherwise commonly known as "Doulton-ware."
England Staffordshire (Furnivals)	The date of origin of these factories is unknown. They developed from the domestic industry of the seventh century		A fine quality of earthenware for table use.
England Staffordshire (Meakin's)			An excellent earthenware, largely in demand for table services.
England Staffordshire (Johnson's)			One of the best of the English earthenwares.
China	Circa B.C. 185	The first hard porcelain.	It is quite uncertain when porcelain was invented; the Chinese themselves assign a much earlier date.
China	A. D. 583	Hard porcelain, decorated under the glaze in blue.	The blue of cobalt is quite indestructible by fire and has been universally employed as a pigment.
China	618–907	Pure white hard porcelain (Ihang dynasty).	The early porcelains were rather dark in color.
China	954	The first "celadon" porcelain.	This tint was called "the sky after rain" and was produced from iron.
China	1368	Minz dynasty. The finest period.	The works of this time constitute the crowning glory of Chinese porcelain.
China	1661	"Famille vert." (Jacquemart).	The porcelain was finished and glazed in the usual way, then decorated in black and covered with a fusible green enamel.
China	1723	"Famille rose" (Jacquemart).	Overglaze decoration in which a rose color made from gold is the characteristic feature.
Italy (Florence)	1580	A semihard porcelain with blue decoration.	The famous and rare Medici porcelain. Only 26 pieces are known.
Italy (Capo di Monte near Naples)	1743	Soft porcelain.	Modeled figures colored over the glaze.
Spain (Buen Retiro)	1760	Soft porcelain.	Removed from Capo di Monte when king Charles of Naples became King Charles III. of Spain.
France (St. Cloud)	1695 to 1773	Soft porcelain.	The first French porcelain and the first distinctive soft porcelain.
France (Vincennes)	1745	Soft porcelain.	Vincennes was the forerunner of Sèvres. In 1753 the king of France purchased one-third of the stock and gave the title "Royal" to the factory.
France (Sèvres)	1756	Soft porcelain (pâte tendre).	Removed from Vincennes. In 1759 Louis XV. became sole proprietor.
France	1769	Hard porcelain (pâte dure)	Kaolin or porcelain clay was discovered at St. Yrieix in 1768 and the production of hard porcelain followed. The pâte tendre was finally discontinued in 1804. The factory still exists as the most important national porcelain works in the world.
France (Limoges)	1779 et seq.	Hard porcelain	The famous works of Haviland, Guerin, Pouyat and others now manufacture very large quantities of the well known French china.
Germany (Mussen or Dresden)	1709	Hard porcelain.	No porcelain was made in Germany until the discovery of kaolin. Böttger was the first man to make hard porcelain in Europe.
Germany (Vienna, Anspach, Bayreuth, Höchst, Fürstenberg, Berlin, Frankenthal, Nymphenburg, Ludwigsbury, etc.)	1718 to 1758	Hard porcelain	Nearly every German prince desired a porcelain works during this period. There is not much to choose between the wares as regards quality, but the decorations, largely over the glaze, bore different characteristics. Few of these factories are now in existence.
Denmark (Copenhagen)	1760	Soft porcelain.	This factory was closed in 1768. The paste is good and the painting of excellent quality.
Denmark	1772	Hard porcelain.	Became a royal manufactory in 1779. Is now noted as one of the first in the world.
England (Bow)	1744	Soft porcelain.	Bow was at one time called "New Canton." It is believed that bone ash was here first used in English china. The factory was closed in 1776 when Duesbury removed the equipment to Derby.
England (Chelsea)	1745	Soft porcelain.	Patronized by the king and the duke of Cumberland. The style of treatment was French. Purchased in 1769 by Duesbury and the equipment removed to Derby.

TABLE I. POTTERY AND EARTHENWARE—Continued

Country	Date	Nature of Product	Remarks
England (Derby)	1750 (uncertain)	Soft porcelain.	Derby was concerned in the making of china probably as early as 1745. In 1769 Duesbury combined with the Derby works the resources of Bow and Chelsea. Hence the term Chelsea-Derby.
England (Derby)	1877	Bone porcelain and other wares.	Mr. Edward Phillips of the Worcester factory built the new Derby works and began the manufacture of "Royal Crown Derby" porcelain. The factory now stands among the foremost in England.
England (Worcester)	1751	Soft porcelain. Ivory porcelain. Bone porcelain.	Founded by Dr. Wall and for a time occupied chiefly in producing Chinese patterns. Consolidated with Chamberlains in 1840. The present company formed in 1862 and now manufactures the famous Royal Worcester wares.
England (Coalport)	1814	Soft porcelain. Bone porcelain.	The successor of Jackfield and Caughley. This factory is still in existence and produces fine wares.
England (Plymouth)	1768	Hard porcelain.	This, the first factory in England for the manufacture of hard porcelain, was established by Cookworthy as a consequence of the discovery of porcelain clay in Cornwall. Removed to Bristol in 1771.
England (Bristol)	1768	Hard porcelain.	Champion began to make porcelain in Bristol and in 1771 purchased the Plymouth patent. The works still exist, but for the production of earthenware only.
England Burslem (Doulton)	1880 (still working)	Bone porcelain, and other wares.	The factory of Pindar, Bourne, etc., was purchased by the firm of Doultons, Lambeth, and the work produced now ranks with the first of English wares.
England Stoke-on-Trent (Mintons)	1793 (still working)	Bone porcelain, earthenware and pottery.	Begun as a manufactory of earthenware, the house of Minton, under the leadership of Campbell and Arnoux, took the lead in the well known Staffordshire potteries. The wares are of the finest.
England Stoke-on-Trent (Copeland)	1779 (still working)	Bone porcelain, ironstone china and other wares.	Copeland was the successor to Spode. Considerable success has been achieved in all kinds of table services. Ornamental wares have been made also.
England Cauldon Place (Brown-Westhead, Moore, etc.)	1794 (still working)	Bone porcelain and earthenware.	The present house is the successor of Ridgway & Sons. They are noted for china dinner ware.
England Etruria (Wedgwood)	1762 (still working)	Bone porcelain and earthenware.	The original house of Wedgwood has taken up and developed all the modern styles with much success.

TABLE II. GLASS

Locality or Country	Date	Nature of Product	Remarks
Egypt	Circa B.C. 2400	Dark blue glass. Semi-opaque.	The earliest dated specimen is a small lion's head in the British Museum.
Egypt	1450	Transparent green glass.	A bead found at Thebes.
Nineveh	712	Pale green transparent.	A small vase in the British Museum bears the name of Layon, king of Assyria.
Greece or **Phenicia**	Circa 400	Colored glass. Waved, striated and sometimes carved.	Numerous small bottles. Beads and ornaments.
Rome	Circa 30 B. C. to 309 A. D.	Common green glass. Colored and ornamental glass, carved, cut and woven glass.	Enormous quantities of glass of every description, even including window glass, were produced.
China	Circa B. C. 140	Small vessels ornamented and embossed.	The statements regarding early glass in China are very uncertain. But few specimens remain.
Constantinople (Byzantium)	A. D. 800 to 1200	Heavy molded glass in dark colors. Some window glass.	Classic models were followed, but the wars of the period caused much interchange of plunder, and the origin of many specimens is doubtful.
Damascus and the East	1200 to 1400	Vessels of clear glass often richly ornamented.	Many lamps and vessels for religious use are found in mosques.
Italy (Venice and (Urviano)	1090	Every description of fancy glass.	Glass mosaics preceded the general manufacture of glass in Venice. The furnaces were removed to Murano probably about 1300. Venetian glass is the model for the world.
Italy (Murano)	1490	Mille fiore glass.	This had been made by the Romans. Canes of colored glass were cut into short lengths and these, with the cut ends showing, were fused into the body of the vessel.
Italy (Murano)	1500	Vitro di Trina (lace glass)	Threads of opaque white glass were fused in a geometric pattern into the clear glass of the vessel.
France	A. D. Circa 500 to 800	Glass vessels.	Scarcely any specimens remain. The work was probably of Roman origin.
France	1400 to 1600	Utensils of various sorts colored and decorated. Window glass.	Small manufactories of glass existed in many parts of France but most of the product was unimportant.
Spain	Circa 500 to 800	Cups, vials and bottles.	As in the case of France, the Roman influence was felt in Spain.
Spain	1400 to 1600	Utensils and drinking cups.	Some Spanish glass bears evidence of Venetian influence. Colored and reticulated forms are found.
Germany	Circa 700	Drinking cups.	The influence of Rome is apparent here also.
Germany	1400 et seq.	Steins and goblets. Window glass.	The stein was even then a feature in Germany. A great variety of form and treatment is found. Some highly ornate pieces are preserved.
Great Britain	Circa 600	Beads, crude cups, window glass.	Both Roman and Saxon specimens are found. The original "tumbler" was a glass drinking horn which could not be set down until empty.
Great Britain	1300 to 1600	Cathedral glass. Vessels of many sorts.	English stained glass for church windows is of the finest. The vessels were generally plain and useful.

Modern Productions

Venice and Murano	The glass made is much on the old style. Every description of colored, blown, woven and reticulated glass is produced. The material is still of the lime-soda mixture.
France	A great deal of modern French glass is crystal of the lead-potash compound. The molded glass is very fine. Some French craftsmen have produced wonderful effects in colors.
Bohemia	This glass is well known in the small and inexpensive bric-a-brac of the stores. A good deal of it is decorated in color and gold.
Germany (Jena)	In optical and chemical glass the Jena works lead the world.
England	The English glassmakers are surpassed by none. Table glass of pure crystal, cut glass and ornamental pieces are made in great variety. The Stourbridge district is the most famous.
America	Much of the American glass is molded in the form of tumblers and household vessels. Fine cut glass is made at Corning, Toledo and other places. Plate glass is an important part of the industry.

MUSIC AND MUSICIANS

MUSIC.—No definition of music has ever been found that would satisfy musicians, to say nothing of explaining the art to the laity. Emotionally, it is based upon the outcry, the audible expression of grief, joy, love, and infinite varieties of agitation or contemplation. To make an art of these noises some sense of form and design is necessary. For its record, some form of writing is necessary. For its reproduction, numberless mechanical devices are required.

Music, therefore, includes dramatic expression, structural form, mathematical measurement, machinery, its construction and repair, and visual writing. Though it is founded upon an appeal to the ear, it has other elements and one of the greatest of composers, Beethoven, wrote some of his best work after he became deaf; while a trained musician can be almost as deeply stirred by merely casting his eye over a score, as an ordinary reader is moved by reading a book.

Music is familiarly called "the universal language" and it has flourished in some form in every age among every people. But music, as we understand it today, is the newest and youngest of the high arts. It is perhaps the only art in which the modern European and American civilization does not pay homage to Grecian ideals and achievements.

There is not a single truly great name in music until we come down to the Belgian Orland di Lassus and the Italian Palestrina, in the sixteenth century. The compositions of these men were of such simplicity and grandeur that many of them are still in occasional use after nearly four centuries.

Forms of Music.—There were three careers open to an ambitious composer at that time, the church, the opera, and the salons of nobility and royalty. From these sources rose the chief of the larger forms of music; the mass, the opera, the symphony, the overture, the oratorio, suite, sonata and the song.

The Mass is the most ponderous and elaborate form of religious music. It accompanies the consecration of the Host, and derives its name from the dismissal of those not permitted to assist in this service: "Depart, the congregation is dismissed," or in Latin, "*Ite, missa est (ecclesia).*" The Latin word for mass is "*missa*" and our word is a corruption from it.

Divisions.—The mass is divided into four or more portions of the liturgy. They take their names from the first words of the text: first, the *Kyrie*, which is subdivided into the *Kyrie Eleison*, the *Christe Eleison*, and the *Kyrie Eleison;* second, the *Gloria*, or Doxology, which is subdivided into the *Gratias agimus*, the *Qui tollis*, the *Quoniam*, and the *Cum sancto spiritus;* third, the *Credo*, which is subdivided into the *Et incarnatus*, the *Crucifixus*, and the *Et resurrexit;* fourth, the *Sanctus*, subdivided into the *Benedictus* and the *Hosanna;* fifth, the *Agnus dei*, and the *Dona Nobis.*

At its best, the mass is a peculiarly sublime expression of human emotion, performed as it is in the resounding vault of a cathedral with the awe of adoration.

When the Mass is for the dead it is known as a Requiem Mass from the opening words, *Requiem aeternam dona eis, domine.*

Composers of Masses. Nearly every ambitious composer has written one or more masses. Dufay (1400-1474) is said to have invented white notes. His pupil was Okeghem (1430-1495) founder of the second Netherland School. His great pupil was Josquin Deprès (1450-1521) whom Burney called "the father of modern harmony" and of whom Ambros says, "he was the first musician who impresses us as being a genius." He was one of the many eminent Flemish composers who carried their gifts into Italy. Orland di Lassus (1520-1594) was another and he was the most notable composer of his time except Palestrina. Palestrina's own teacher was Claude Goudimel (1505-1572) a Frenchman, who went into Italy and became the "Father of the Roman School," before he went back to France to perish in the Saint Bartholomew massacre.

Palestrina.—It was in 1564 that the Council of Trent and a committee of eight cardinals determined to purify church music of its ribaldry and its frippery and commissioned Palestrina (1514-1594) to write a mass which should serve as a model. He wrote three, all of them wonderful, and won the name "the savior of music." The best of his masses is known as the "*Missa papae Mercelli.*" He would generally be accounted the greatest of all composers for the church.

Later Composers. There followed the great J. S. Bach who wrote four small masses and his Grand Mass in B. minor. Haydn wrote fourteen masses including The Seven Words on the Cross. Mozart wrote fifteen and was engaged at his death on his wonderful *Requiem* which he left unfinished, but which is rated among the immortal works. Beethoven composed two masses, including the famous *Missa Solennis.* Schubert left six including the *Deutsche Messe.* Schumann a *Missa sacra* and a *Requiem Mass* with orchestra. Even Liszt wrote his *Graner* festival mass, and a requiem. Cherubini wrote a famous mass for the Prince of Chimay. Verdi wrote a noble *Requiem.* Among the French contributions are the masses of Gounod, Saint-Saëns, Widor and others. In America John Knowles Paine composed a fine mass. Doubtless the greatest of modern attainments in this field is Brahms' tremendous *German Requiem* (1867).

Oratorio.—Between the mass and the opera exists a third great form, which serves as a bridge between them. This is the oratorio, dramatic in its story, but meant for performance in a church, or at least without the theatrical effects.

The oratorio gained its name from the chapel or "oratory," because St. Philip of Neri (1515-1595) seeing the inroads of the Reformation upon the populace by the use of simple hymn-tunes, resolved to interest the common people in Catholic music. He commissioned the composition of short songs and gradually of short sacred legends, often enacted in costume. These were performed in the oratorio.

Early Composers. Dramatic recitative was just gaining favor and it fell in with his purposes. Cavaliere's allegory *The Soul and the Body* was the first oratorio along modern lines. Other Italians, Carissimi, Cesti, and Alessandro Scarlatti (1659-1725) carried it on toward perfection.

Simultaneously the Protestants in Germany found it of immense power. Heinrich Schütz, called "the father of German music," studied in Italy and brought inspiration back to Germany. He composed *The Seven Words of Christ on the Cross* and a *Passion* for use in Passion Week.

Under the name of Passion-Music, J. S. Bach (1685-1750) wrote his immortal *Passion according to St. Matthew* and *according to St. John.* His *Christmas Oratorio* and many cantatas both sacred and secular, are also the masterpieces of a master.

Handel. The Passion form, however, lost its vogue with composers, and music followed rather the outlines established by the greatest of oratorio composers, George Frederick Handel (1685-1759) who became a national institution in England. He anglicised his name from Händel to Handel, but he managed to Handelize English music forever after.

With Handel, who was born in the same year as Bach, oratorio became more epic and dramatic, for he took it up after a glorious career in opera, which ended in a sudden disfavor and bankruptcy. His *Messiah*, first produced in Dublin in 1742, made him a new fortune, and to this day it is still one of the most popular of all musical compositions. His powers of declamatory vigor, and of choral thrill have hardly been approached. His *Judas Maccabæus, Israel in Egypt* and *Samson* are among his other famous works in this form.

His Great Successors. The next great oratorios were Haydn's *The Creation* (1795) and *The Seasons* (1801). They are still beautiful. Beethoven's *Mount of Olives* does not rank among his best works, but Mendelssohn's *St. Paul* (1836) and his *Elijah* (1846), attained the heights of achievement. *Elijah* has at times a fire and an exaltation quite equal to Handel at his best, and it has also the infinitely human and homely pathos of the widow whose son has died, and of the prophet in his dejection.

Gounod wrote successful oratorios and the *Samson and Delilah* of Saint-Saëns has been sung both as an opera and as an oratorio. Berlioz' *The Damnation of Faust* a great and greatly popular work wears the rather ill-fitting title of oratorio, yet includes a burlesque of Handel's *Amen* fugue. Liszt's *St. Elizabeth* and Rubinstein's *Moses* are also nearer the theatre than the church.

Recent Oratorios. In Italy a young priest Lorenzo Perosi made a sensation in 1897 by a number of works which promised to restore oratorio to a more religious frame of mind; but his vogue was brief.

England has been more successful in oratorio than in any other musical form, among the most important of the composers being Benedict, Bennet, Sullivan, Parry, Stanford. Most successful of all is perhaps Sir Edward Elgar's *The Dream of Gerontius* (1900).

America has contributed a splendid achievement in Horatio Parker's *Hora Novissima* (1893).

The Cantata is a smaller oratorio, usually far less ambitious, and frequently entirely secular. Thus, J. S. Bach wrote a coffee-cantata (a humorous protest against drinking too much) as well as many religious cantatas. Haydn set a Greek subject *Ariadne at Naxos*, while Mozart composed a Masonic cantata (as well as a Masonic opera).

The mere list of genuinely delightful or deeply impressive works in this easy and elastic form would fill pages.

Opera.—In the field of opera the composer must be song-writer, symphonist, choir-master, and dramatist. Opera is the most popular of all forms of music, and has been from earliest times. The classic Greek tragedies were always sung; and when opera had its renaissance in 1594, the composers Peri and Caccini definitely announced that their intention was to revive the Greek tragic art. The first opera was called *Dafne*. It was followed in 1600 by *Eurydice*.

Early Impulses. The once popular and historically important operas of Monteverde, Scarlatti, Pergolesi, Sacchini, Piccinni and others carried Italian influence all over Europe. Practically all the singers were Italians and the librettos in Italian.

Even the staunch Germanic-British Handel was trained in Italy, and wrote in the Italian manner, however greatly his personality tinged everything. All the capitals were battle grounds of rival Italian operas. In London Handel and Buononcini almost provoked civil war. The exquisite influence of England's one native genius in opera, Henry Purcell (1658-1695), who wrote to English text in a English manner, was smothered forever by the Italian tidal wave.

Opera in France. The Italian composer Lulli, who, after Handel's fashion, naturalized himself as a Frenchman and became Lully (1633-1687) is looked upon as the founder of French opera, under the patronage of Louis XIV. Later, Rameau (1683-1764) Lesueur (1764-1837) Méhul (1763-1817) Boieldieu (1775-1834) Grétry (1741-1813) Auber (1782-1871) Hérold (1791-1833) Halévy (1799-1862) and others established, developed and sustained a natural French opera with French texts and spirit.

But Paris was still a center of Italian influence and when the Austrian Glück (who had Marie Antoinette for pupil and protectress) essayed to purge opera of its insincerities and artificial vocalization, he was opposed by the Italian devotees of Piccinni.

History has awarded Glück the victory and dealt rather unfairly by Piccinni, who was a good man, a sincere artist and an unwilling opponent. But his work is in oblivion while Glück's *Orfeo* is still beautiful, and still heard about the world.

Living opera, however, begins for us really in what Rockstro calls its "thirteenth period."

Mozart. While Paris was shaken with the Glück-Piccinni war, another Austrian, young Mozart, was in the city, suffering from complete neglect. He had travelled in Italy and his first operas were in the Italian style. His greatest successes, indeed, were his settings of the librettos of an Italian, Da Ponte; but Mozart wrote also German operas.

He was a wonderful being. In his thirty-five years of life (1756-1791) were crowded supreme triumphs as an infant prodigy, a piano virtuoso, a composer of sonatas, symphonies, suites, songs, church-music and operas. He faced poverty and his art with a certain boyish ingenuousness of joy and of sorrow, of bravado and of superstitious dread, that gives all his work an eternal youthfulness. His greatest operas *Don Giovanni* and *Le Nozze di Figaro*, one of them epic, the other high comedy bordering on farce, are fascinating in the highest degree, to this day. Both of these works are Italian in text, but his *Magic Flute*, a Masonic opera, of uneven merits, is German in book and spirit.

Famous Failures. Haydn, Schubert, Schumann, and Mendelssohn, could not succeed in opera, and Beethoven found only one libretto, *Fidelio*, that interested him, and this failed twice before it succeeded. It has a German libretto but its scenes are Spanish.

Strictly German opera found its world-wide success first in the *Der Freischutz* of Weber (1786-1826), which is Teutonic in every idea, and has had enormous vitality. In Germany, Marschner, Lortzing, and others gained national success, but had little hearing abroad. It remained for Wagner to place German opera on the general height of German music.

Meanwhile came another tidal wave of Italian opera—a wave that has not yet ceased to penetrate the farthest reaches of music. Wagner's success overtopped it, but never set it back, and since his death it still sweeps on.

Great Italian Operas. There are few corners of our civilization that have not resounded with Rossini's *Barber of Seville* and his *William Tell;* with Donizetti's *Elixir of Love, Lucia di Lammermoor, Daughter of the Regiment* and *La Favorita;* with Bellini's *I Puritani, La Sonnambula,* and *Norma;* and with Verdi's *Ernani, Rigoletto, Il Trovatore, La Traviata, Aida, Otello* and *Falstaff*.

The most world-wide successes in opera today are again written by Italians. Mascagni's *Cavalleria Rusticana*, Leoncavallo's *I Pagliacci*, Puccini's *La Boheme, Madame Butterfly*, and the like. Neither England nor America has ever contributed to world-literature a really great opera, though both countries have made excellent audiences.

French School. During the last century French composers also have managed to create several world-conquering operas in addition to the numberless works, successful only to native audiences.

Meyerbeer (1791-1864), though of German birth, failed in Germany as a composer, and established himself at Paris, writing French works for the French. His *Robert le Diable* founded the wealth of the Opera, and was heard throughout the world. His *Les Huguenots, Le Prophète*, and *L'Africaine* have been among the most successful of operas. Wagner owed much to their influence, and had personal help from Meyerbeer in his earlier struggles.

Meyerbeer belongs to French opera, and so does Gounod (1818-1893) whose setting of the German legend *Faust* has been sung innumerable times and is still almost the staff of life of an opera troupe. His *Romeo and Juliet* has also had great success, though not so much as the *Carmen* of Bizet (1838-1875) which has rivalled the greatest successes in the entire operatic field. Among contemporaries Massenet (1842–1912) has enjoyed most cosmopolitan vogue, though a new note has been struck by Charpentier's *Louise*, a realistic story of the Paris of today, and by Claude Debussy, whose extraordinarily original music found its opportunity in Maeterlinck's *Pelléas and Mélisande*.

Wagner. Of all operatic names, however, the greatest remains that of Richard Wagner (1813-1833). He wrote his own librettos and revolutionized the art in nearly every detail, including scenic effect, and orchestral management and development.

In opera, Wagner is as supreme as Beethoven in the symphony. He met an inconceivably bitter opposition, which provoked riots in Paris and threatened revolution in Bavaria. The chief hostility to Wagner was aroused by his theory of harmonic flow and continuous melody. Though it seems natural enough to us now, it was completely bewildering to his early hearers who found his continuous melody continuously non-melodic.

It is difficult to single out any of Wagner's operas, where all are so great. His earlier works, *The Flying Dutchman, Tannhauser,* and *Lohengrin*, seem today so melodious that they are played at popular concerts and ground out by the very barrel organs. To the critics of their own day they were chaos and poison. His *Tristan and Isolde* is perhaps the most intensely passionate expression of love ever given voice. His comic opera, *Die Meistersinger* is unsurpassed in its field, and his *Parsifal* is the loftiest of efforts at religious opera. His monument is the cycle summing up German myth, the so-called *Ring of the Nibelungen*, divided into four evenings: *The Rheingold, The Valkyrs* (or *Die Walkütre*) *Siegfried* and *The Twilight of the Gods*, (or *Götterdammerung*).

Wagner's great figure typifies German operatic ambitions and has overshadowed subsequent composers; almost the only personality emerging into foreign notice being Humperdinck, with his delicious children's opera, *Hänsel and Gretel*.

Strauss. More recently, however, Richard Strauss (born 1864), who stirred the world with his daring symphonic music has provoked an almost Wagnerian war with his opera *Salome*, and his *Elektra*. Curiously enough the Wagnerians are his chief enemies and they fling at him the very same taunts of non-melodic cacophony and immoral sensationalism that were formerly hurled at Wagner. The end of this war is not yet, but the victory will probably rest with Strauss, since the innovator, and the darer usually overwhelm the conservative and the cynic.

Lesser Forms. There remain untouched the fields of the chorale, the hymn, the part-song, and the solo song, not to mention the entire realm of comic opera. It seems inadvisable to include comic opera here, though many of its masterpieces are not inferior in ingenuity or in ultimate value, to more solemn works.

As for attempting to describe the composers of short songs, it were as easy to catalogue the sounds of the sea. Some of the most perfect have been written by unknown composers, and there is hardly a respectable musician who has not been moved to write at least one fine lyric. Even America has contributed splendid songs. The foremost important place would be given probably to Schubert, always a melodist, yet intensely dramatic and true to his text. Robert Schumann and Robert Franz (1815-1892) would come next in importance.

But, admitting, as one should, that a perfect song is as much better than a slovenly opera, as a perfect sonnet or a perfect short story is better than a limping epic or a loose-jointed novel, let us leave the infinite field to itself. The best songs have a way of promulgating their own virtues.

Instrumental Music. In turning to instrumental music, we might first take the piano. Though believed to be less expressive than the violin and other instruments, because less like the voice, it is more nearly universal, and, above all, is the only home instrument that is self-supporting. The violin, 'cello, flute and even the voice sound thin when they are alone. The piano is sufficient unto itself. The number of perfect works for the piano would rival the stars, many of the most exquisite being written by minor composers. We, however, cannot deal with the Milky Way. The planets are more than enough.

John Sebastian Bach wrote vastly for the piano and had immense influence on all subsequent music. His monumental work is *The Well-Tempered Clavier*, made up of four compositions, preludes and fugues for each of the twelve keys, both in major and minor. It has immense historical and technical value to the professional musician, and includes many single compositions and numberless passages which will appeal to the laity by their tenderness, solemnity, grace and wit, or by that peculiar and indescribable felicity of expression that keeps Bach hale and hearty to this day. In his *Chromatic Fantasia and Fugue* he wrote a composition that is more modern and pianistic in its treatment and nobility of expression.

A fugue, it may be well to say, is a composition in which a melody is chosen that may be accompanied by a perfect imitation of itself. It is hard to explain it without using terms that must themselves be explained; but everybody has sung *Three Blind Mice* or some other "round," in which different voices strike in with the same tune at different points. On such a principle of "imitation" is built up what is called a "canon." A fugue is a freer and more elaborate canonic structure.

For the orchestra, as in Mozart's *Jupiter* symphony, and for the organ with its different instrumental colors, as in many of Bach's great organ fugues, there are cumulative and variegated effects which render the fugue a noble form.

Sonata. The popularity of the fugue gave way to the vogue of the sonata, which is itself going out of use. The word "sonata" originally meant merely something "played," as contrasted with something "sung," or "cantata." But gradually the term crystallized, just as the poetic term "sonnet" assumed a definite and restricted meaning.

A sonata, as it is now understood, is a group of three or four somewhat related pieces. The first and the last are built on a certain formula; the other two are for contrast's sake and may be, first, a sad little elegy or a funeral march, or something sombre: second, a lighter piece, as a minuet, a rondo or a waltz.

The formula which is strictly called the "sonata form" is easily explained. It is simply a close welding of two melodies with an effort at variety of key and treatment. Thus, a melody is selected and played through; then a second melody in a contrasting rhythm and another key is played through; then follows a so-called "development" of these two melodies in as many keys and as many moods and with as many embellishments or dissections as one pleases; then, to bind all together, the first melody is played over again in its original key; the second melody is repeated in this same key; there are a few bars of conclusion and that is all. It is as logical and natural as anything could well be.

But this is only the first movement. There usually follow, to repeat, two different compositions—one sad, one usually more brilliant. This group of four (sometimes three) movements is the completed sonata. It is a form of great elasticity and great scope.

Adaptations and Variations. Sonatas have been written not only for the piano but for almost every other instrument in combination with it. A String Quartet is a sonata for two violins, a viola and a 'cello. An *Overture* is only an orchestral work based on the same form as the first movement of a sonata. A *Concerto* is a brilliant sonata for some instrument, as piano or violin, with orchestral accompaniment. A *Symphony* is simply a sonata for the full orchestra with the enlargements natural to the enlarged resources.

Composers of Sonatas. "The father of the sonata" was Carl Philip Emmanuel Bach (1714-1788). He was the son of J. S. Bach, "the father of modern music." His compositions are more lyrical, therefore more modern, than those of his father, though not so deep. Joseph Haydn (1732-1809) developed the sonata-form more completely and made such further use of it that he is called "the father of the string quartet and the symphony." If Haydn was lyrical, Mozart was more so. He had a singularly gracious spirit and it is shown in his fascinating melodies, though he added nothing to the form.

Beethoven's Sonatas. It was Beethoven who reached the highest point in this field, and his sonatas are far more dramatic, passionate and resourceful than any before him. He substituted the scherzo ("joke") for the minuet, and some of the wittiest things ever said were said by him in the scherzos he put into his sonatas and symphonies. He took great liberties with both the sonata and symphonic forms and in both stands supreme. His so-called *Moonlight* and *Appassionata* sonatas for the piano are perhaps best known.

Since his time, many composers have written sonatas. Even Chopin wrote one, in which he included his famous funeral march, as Beethoven had included in one of his own *A funeral march on the death of Hero.* Schumann, Brahms and others wrote sonatas of the highest importance and among the few real contributions made by America to really important piano music are the *Tragic, Heroic* and *Celtic* sonatas of Edward MacDowell (1861-1907).

The sonata, however, has suffered some obsolescence because its formality became somewhat oppressive to the freer flights of the modern spirit.

Chopin. About 1810 were born several composers who developed intensely romantic tendencies and let the mood shape the form rather than compress the mood into a rigid mold. Among these was Frédéric Chopin (1809-1849) son of a Frenchman, but born in Poland of a Polish mother. Chopin's music is so beautiful that it is hard to think of him as one of the most radical innovators in musical history. But he was none the less a revolutionist for being a gorgeous one; no less an earthquake for not wrecking buildings. He certainly altered the landscape and the very harmonic materials of music. He transformed all future piano music by his harmonic and melodic richnesses. It would be impossible to say which of his works are best where almost all are best: nocturnes, ballades, valses, preludes, polonaises. He gave his dances passionate meaning, and even his finger exercises, or études, are more important than the iceberg symphonies of most composers.

Robert Schumann (1810-1856) also wrote with absolute novelty and individuality a multitude of piano works, hardly two of them alike in shape or spirit. Mendelssohn (1809-1847) conceived his *Songs without Words.* Liszt (1811-1886) developed unheard-of skill as a pianist and wrote his tremendous *Hungarian Rhapsodies* for the piano, as well as great program symphonies and symphonic poems. Rubinstein (1830-1894) who was inferior only to Liszt as executant, composed much that caught the world's ear. Paderewski, equally brilliant as a pianist, has also written splendid music for the instrument.

The Norwegian, Edvard Grieg (born 1843) has been among the most individual of piano composers since Chopin, and has written superbly in nearly every form. Edward MacDowell, the American, also developed a distinct and distinguished personality in writing lyrics and poems for the piano.

Of recent years, the piano seems rather to have suffered the neglect of the most ambitious composers. While there is the usual rain of compositions, no personality is commanding wide attention.

Other Instruments. Every instrument has a literature of its own, but the pipe-organ, while its resources are greater far than the piano's, is too unwieldy to have its popularity. The violin has perhaps the richest library, next to the piano. It includes a bewildering series of compositions, from the time of Corelli (1653-1713) "the father of violin music," through such work as Tartini's *Devil's Trill Sonata* (which was inspired by a dream in which the devil played for him with black magic), and on through such of Beethoven's as the *Kreutzer Sonata*, to the uncanny works of Paganini (1782-1840) and the inspired fabrics of Mendelssohn, Spohr, Vieuxtemps, De Bériot, Sarasate, and Brahms.

Chamber Music. One of the most delightful fields is that of so-called "chamber music," written for a small string orchestra, usually a quartet, or, with some other instrument, a quintet. Human ingenuity has never been more gracious than in this form, which Haydn developed, Mozart improved, and Beethoven, Schubert and Brahms reveled in. But as these pieces are usually labelled with uncouth titles such as "C sharp minor," "B flat major" and the like, it would be unprofitable to name them here.

The Orchestra is employed to its fullest capabilities in opera and oratorio and often in church music, but it has also a field of its own, and here it finds one of the sublimest realms of human art and invention.

The difficulties of expressing one's self at all through the medium of sixty or a hundred instruments are great enough. To wield these as a painter wields his brushes, but without seeing how the canvases will look, or hearing them sound; and to retain a unity of idea and a dramatic thrill and progress to climax—these things place orchestral music on a plane with cathedral architecture.

Orchestral Works are chiefly *overtures*, *symphonic poems* or *symphonies*. Haydn is called the father of the modern symphony and the overture. He composed one hundred and twenty-five works in these forms, some of them very simple and even humorous, such as the *Toy Symphony* for toy drums, trumpets and the like, and the *Surprise Symphony*, which was written "to keep the King awake and make the ladies jump." He removed the piano from the orchestra and added the minuet to the four movements, but it is a long walk from his *Surprise* to the *Fate* symphony of Beethoven.

Mozart gave his symphonies further depth and breadth. He composed no less than forty-one of them, including the superb *Jupiter*. But it remained for Beethoven (1770-1827) to set the high-tide mark, beyond which nobody has gone. He took such liberties with the hallowed form that he was called a madman, but time has justified and dignified his every explosion of the great emotional frenzy that made him Beethoven.

Beethoven's Symphonies. Like Shakespeare, Beethoven sounded the depths of tragedy, reached the heights of joy and travelled the sunny levels of contentment. His third symphony, the *Eroica* was written "to celebrate the memory of a great man," meaning Napoleon, whom Beethoven thought of as already dead in 1804 because he had by then betrayed the great cause of freedom. His fifth symphony opens with the tremendous idea of "Fate knocking at the door," and typifies the individual in deadly combat with that destiny which visited Beethoven with deafness and despair. His sixth is the open-air *Pastorale* in which he set "all outdoors" to music. His seventh is the most romantic. The most massive is his ninth or *Choral Symphony* in which he reinforced the orchestra with an army of voices to chant Schiller's *Hymn to Joy*, with which the symphony concludes.

Schubert. Of the symphonies of Schubert there are two which are of heavenly beauty, the *Unfinished* and that in *C Major* in both of which melody of most popular appeal is joined with majestic profundity of thought.

Schumann wrote four important symphonies; Mendelssohn three (named the *Scotch*, *Italian*, and *Reformation*, this last ending with Luther's sonorous hymn). The brilliant French composer, Berlioz, (1803-1869) wrote two famous symphonies, the *Fantastic* and *Harold in Italy*. Raff is celebrated for his *Forest* and his *Lenore*, and Brahms reached the highest of recent levels with his four works, the last the best.

Tschaikowsky. From Russia came the *Pathetique Symphony*, perhaps the most emotionally appealing of all works in this form. It was the work of the most eminent of Russians, Tschaikowsky (1841-1893) who composed five other symphonies; seven famous symphonic poems on such subjects as *The Tempest*, *Manfred* and *Hamlet;* also various overtures, suites songs, and operas.

The Bohemians Smetana and Dvorak (1841-1904) achieved important symphonies, the latter after a sojourn in America, composing his *New World Symphony*, based on negro melodies.

The best of Italian symphonies is that of Pietro Floridia, also one of the foremost of Italian operatic composers, now domiciled in America.

Richard Strauss is undoubtedly first of living composers, and his *Domestic Symphony*, portraying a day of family life, has opened a new field for "program" music. In the symphonic poem he has also written marvelous works, such as his *Death and Transfiguration*, his *Heldenlebe*, *Don Quixote* and *Thus Spake Zarathustra*, in which he has enormously enlarged orchestral resources, as Haydn, Beethoven and Wagner did before him.

An American symphonist is Edgar Stillman Kelley (born 1857) who has created a humorous masterpiece in his *Gulliver*. Edward MacDowell never wrote a symphony, but in the kindred form of the symphonic poem his *Hamlet and Ophelia* and his *Launcelot and Elaine* are notable, while his *Indian Suite* magnificently employed themes drawn from the American Indians.

Musical Instruments have had long and elaborate evolutions, but a glance at the instruments in use today will suffice to acquaint us with the media of interpretation.

Pianoforte. Most popular is the pianoforte, an almost ubiquitous instrument, developed from the one-stringed monochord, and the harp, through different stages when the strings were plucked with quills, down to Cristofori's invention of the *fortepiano* with a hammer-mechanism, in 1711.

The piano has a compass of about seven octaves. A new value has been given to it by the recent invention of various forms of piano-player, by whose aid the difficulties of performance are overcome while leaving the control of expression in the hands of the veriest tyro.

The educational value of this is incalculable, and it is possible now to enjoy the most complicated forms of music without the years of finger-training previously required.

The Organ originated in some form of Pan's pipes. Two centuries before Christ, it already had a keyboard and bellows supplying the pipes with air. Pedals were invented about 1325, and in the fifteenth century the reed-pipe was invented. This made possible the cheap melodeons and "American organs" which preceded the piano in the home of the more modest sort.

The Pipe-Organ exists in almost every form, extending to huge mechanism run by electricity and compressed air, with from one to five keyboards and almost unlimited combination-effects known as "stops," imitating almost every other instrument and permitting effects that rival a full orchestra.

Other Wind Instruments are usually classified according to their material, as "woodwind" and "brasswind."

The *windwood* are subdivided into those sounded by a reed and those sounded through a side-hole. Of the latter are the *flute* and the *small flute*, or *piccolo*. It was to the invention of the system of keys by Theobald Boehm (1794-1881) that the flute owes its modern facility and range.

Of the instruments sounded by a single reed, are the various *clarinets* and the *saxophones* (made of brass, but classified with the woodwind) invented by Adolphe Sax (1814-1894), who may be called the Christopher Columbus of metallic instruments. The saxophone combines the tone qualties of the 'cello, the English horn and the clarinet.

The double-reeded wood instruments are the *oboe*, an instrument of quaintly pastoral tone capable of exceeding pathos; the *alto oboe* (or English Horn, or Cor-anglais); the *bass oboe* (or fagot, or bassoon) a nine-foot conical tube doubled on itself and played with a long mouthpiece; the *double bassoon* (or contrafagot); and the *sarrusophone*, which was invented by Sarrus in 1863; it looks like a bassoon, while sounding like a trombone.

Brasswind. The brass instruments originally could play only in one key, the length of the tube determining the key. Later the plan was evolved of inserting extra portions or crooks to lengthen or shorten the tube. This required a pause, and immediately altered the key. In 1790 and 1813 Claggett and Bluhmel developed the valve idea. By this means, stationary crooks are so arranged on the instrument that the pressure of a valve cuts off one crook and opens another. By the use of three valves the horn can play in any key. Valve instruments are practically universal now.

The *cornet* is the high tenor of the brasswind, and one of the most familiar of instruments. The *trumpet*, *horn*, and *trombone* are equally well known. The *tuba*, a huge instrument invented by Sax, and the *bass tuba* (Saxhorn or Bombardon) carry the lowest notes. The term *Saxhorn* usually includes a series of instruments much used in street-bands.

Stringed Instruments. These are the *piano* played with hammers, and the *harp* in which the fingers pluck the strings. Sebastian Erard in 1820 perfected the double-action harp of seven pedals enabling quick shifts to all the keys.

Of stringed instruments played with a bow, the modern orchestra uses great numbers of *violins*, *violas*, *violincellos*, and *double-basses*, each supplementing the other. The *violin* holds perhaps the first place in the affections, because of its singing qualities. These are influenced by minute details of construction and the qualities of the wood. There has risen an almost religious reverence for the work of certain violin-makers, particularly those flourishing at Cremona in the sixteenth, seventeenth and eighteenth centuries. First came the famous family of Amati, of whom Niccolo trained Andrea Guarneri and Antonio Stradivari, each of whom founded an equally famous family. The violins of these makers are cherished as treasures of fabulous value, and they are constantly forged.

The *human voice* may be called a wind instrument with a double reed. It is the original musical instrument, and the more nearly other instruments suggest the human speech or outcry, the more immediate is their appeal. As the human voice can express almost every mood of interest of the soul, so music can hardly be denied any subject. It was for centuries hampered by restrictions and rules and imaginary laws. Its chief need now is for enlarged resources. As the youngest of the arts, perhaps it has the greatest future.

Imitative music suggests something external to the mere melody and harmony, as *motion*, *noises*, and objects of sight. By ascending and descending strains and cadences modern composers express soaring, sinking, etc. The varied sounds of battle, funeral processions, domestic sounds, tempests, notes of birds, etc., are produced by variations of tone.

References — For general histories of music see those by Burney, Hawkins, Fetis, Ritter Naumann, Rockstro, and Parry; also *The Oxford History of Music;* Chappel's *Popular Music of the Olden Time;* Hullah's *Modern Music;* Davy's *History of English Music;* Riemann's *Dictionary of Musicians;* Grove's *Dictionary of Music and Musicians;* and Hughes' *The Musical Guide*

GOVERNMENT AND LAW

GOVERNMENT, in its political signification, denotes the power by which communities are ruled, and the means by which, and the form and manner in which this power is exercised. It represents the supreme power or sovereignty of the state, and is thus capable of subjecting every other will in the community, whether it be that of an individual, or of a body of individuals, to its own. The sovereign power with which government is thus armed may be an expression either of the general will of the community itself, as in free states, or of the will of a conqueror and of the army which supports him, as in subject states. In the power which government possesses of controlling every other will is implied the power of protecting every separate will from being needlessly or wrongfully controlled by any other will or number of wills, the will of the government always excepted. With a view to the exercise of this latter power, government possesses a right, which politically is also unlimited—the right, namely, of inquiry into the relations between citizen and citizen. It is of its essence that its scrutiny should be as irresistible as the execution of its decrees.

Division of Powers.—Every government comprises within itself three distinct powers—the *legislative*, *judicial*, and *executive*. In its legislative capacity, it lays down the laws by which its subjects are to be governed; its judicial power is exercised in deciding, by means of various courts and judges, all questions connected with these laws; and its executive power, in carrying out or putting into execution its legislative enactments and judicial decisions.

Forms.—There are three distinct forms of government, *monarchy*, *aristocracy* and *democracy*.

Monarchy, in its abuse, becomes *despotism*; aristocracy tends to *oligarchy*; and democracy to *ochlocracy*, or mob government. The mixed form of government is that which combines all, or at least two, of these forms, and is an attempt to combine the good qualities of each, and to guard against their evil tendencies.

Pope said with much truth:

"For *forms* of government let fools contest,
Whate'er is *best administered* is *best*."

Monarchy is that form of government in a community by which one person exercises the soverign authority. It is only when the king, or chief magistrate of the community, possesses the entire ruling power, that he is, in the proper acceptation of the term, a monarch. Most of the oriental governments in the past and Russia, Spain and France as they were in the last century, were in this strict sense monarchies. When the head of the state, still possessing the status and dignity of royalty, shares the supreme power with a class of nobles, with a popular body, or with both, as in England, the government is called in popular language a *mixed* or *limited monarchy* the term *absolute monarchy* being applied to a government properly monarchical.

Aristocracy means, etymologically, the power or government of the best, noblest, or most worthy, and in the sense which it originally bore, had reference to a form of government in which the sovereignty was placed in the hands of a minority of the citizens of the state, exclusive altogether of the slave population, which generally existed in antiquity. It is used in this sense when we speak of the Italian states of the middle ages as aristocracies. In order to constitute an aristocracy it was further necessary that the minority which composed it should consist of the highest class, in point not of wealth alone, but of birth and culture; the government of a minority in *numbers alone* known by the more odious name of oligarchy.

Democracy, in Greece, was understood to mean a commonwealth so constituted that the power was exercised by the body of the citizens (the *demos*), and not by an individual or by a dominant caste. Democracy therefore, stood opposed both to monarchy and aristocracy. Most of the republics of Greece, more especially that of Athens, were democracies in this sense. The name by no means implied the notion of an absolutely equal right in all citizens, still less in all men, to the exercise of political power. Neither the total absence of rights of all kinds on the part of the larger half of the population, the slaves, nor the distinctions recognized by law among citizens proper, were considered incompatible with the nature of a democracy. The continually growing force of the democratic principle tended, however, to the gradual extinction of inequalities among citizens, and to the transference of power to the mass of citizens without distinction.

Republic is popularly interpreted as synonymous with *democracy*, though strictly it is a political community in which the sovereign power is lodged either in certain *privileged members* of the community, or in the *whole* community. According to the constitution of the governing body, a republic may therefore vary from the most exclusive oligarchy to a pure democracy. The several republics of Greece and that of Rome were, at the outset at least, aristocratic communities. Those of Venice, Genoa, and the other Italian towns were also more or less aristocratic. The soverign power was held to be vested in the franchised citizens, and every function—legislative, executive, or judicial—not exercised by that body, could only be exercised by parties deriving their authority from it. But the extent of the franchise, and the mode of exercising it, varied much in these civic communities; the most prosperous and long lived was Venice, which was also the most aristocratic of them all.

In the sixteenth century, the Seven Provinces of the Netherlands, on their revolt from Spain, adopted a republican form of government, as did Switzerland on becoming independent of the German Empire. Great Britain was nominally a republic for eleven years (from 1649 to 1660). France was a republic from 1793 to 1805, from 1848 to 1853 and since 1870. The government of Spain between February, 1868, and December 31, 1871, was of a republican form. Switzerland has been a republic since 1848, and the other republics of Europe are Portugal and the diminutive states of San Marino and Andorra; and in certain respects the free cities of Hamburg, Bremen, and Lubeck. The most important of modern republics is that of the United States of America—dating from its separation from Great Britain. Except during the short-lived empire from 1863-67, Mexico has been a republic since 1824. All the states of South America are republics, and, most surprising of all, China. Switzerland, Mexico, and the United States and China are *federal* republics, consisting of a number of separate states bound together by a constitution, and with a central government, which has the power of enacting laws and issuing orders which are directly binding on the individual citizens.

(For forms of government of the various countries of the world, see page 564).

GOVERNMENT OF UNITED STATES

Origin and Development.—1. The fundamental fact about the government of the United States is that it forms a federal state, a union which has developed from separate colonies or territories. The colonies, from the geographical conditions of climate and soil and from varying circumstances under which they had been settled, differed greatly from one another both in type of government and in social conditions. In New England they had settled in villages with a church, and the form of government was popular, the town-meeting type, the meeting deciding policies and electing men to carry them into effect. In Virginia, owing to the ease of traffic by water courses and to the nature of their agricultural products, tobacco and others adapted to cultivation on a large scale, great estates had been formed, the government was not popular, but by the gentry speaking for all and in counties rather than in towns. Elsewhere either one of these or later a type combining the two was adopted.

In relation to the mother country the colonies differed, two (Connecticut and Rhode Island) having received charters which enabled them to choose their governors; others (Pennsylvania, Maryland, Delaware) having their governors appointed by the proprietor who had received the grant of land and power from the crown; while the governors of the other eight were appointed directly by the king and were responsible to him.

The pressure of danger from the Indians, the Dutch and the French, and later from the mother country, with the disadvantages of inharmonious action on commercial matters and the benefits and power to be derived from uniform regulations and united action, led by a series of steps to a firm united state, of which the form was adopted largely from the governments of Great Britain and of the different states that had been formed from the colonies in 1776 and the following years after the separation from Great Britain.

2. **Important Steps Toward Union.**—(a) From 1643 to 1684 Massachusetts Bay, New Plymouth, Connecticut and New Haven colonies formed the New England Federation to strengthen their defense against the Indians, Dutch and French, representatives being sent from each. After that in time of need intercolonial conferences were held from time to time.

(b) In 1754 a Congress of twenty-five members from seven colonies met at Albany to arrange a treaty with the Iroquois Indians and to consider other common interests. The Congress adopted Franklin's plan for a permanent federation, but it was rejected by all the colonies.

(c) In 1765, in consequence of the passage of the Stamp act in Great Britain, at the instance of the Massachusetts house of representatives nine colonies sent representatives to the Stamp act congress at New York, which issued a declaration that the rights of natural born English subjects belonged to the colonists and framed petitions to the English government for relief.

(d) Further acts of England, especially the Townshend acts, led to the formation of *committees of correspondence* among the colonists, who thus fostered unity of sentiment against England and for their common interests.

(e) *The First Continental Congress* was called by Massachusetts in 1774 when the English government passed the acts providing for the coercion of that colony. All the colonies except Georgia sent delegates to Philadelphia, who drafted the

Declaration of Rights of the colonies, adopted articles of association, advised resistance, and provided in case of need for the meeting, May 1775, of the Second Continental Congress.

(f) *The Second Continental Congress.*—This met, delegates from all the colonies being present. In the meantime England had passed other measures of coercion, and in attempting to seize the war supplies of the colonists, had brought on the battle of Lexington. It therefore became necessary for the Congress to make provisions for continuing resistance. In fact it became a governing body, and with adjournments from time to time, until May 1, 1781, it directed the war of the Revolution, and really organized and managed a new state. It issued the Declaration of Independence, recommended the colonies to provide for themselves state governments, instituted relations with foreign countries and did other needed work.

(g) *The Articles of Confederation,* first sketched out and presented by Franklin July 21, 1775, after long delays and many amendments, were adopted by the last state, Maryland, March 1, 1781. The desire of each state to control its own affairs, the lack of experience of the difficulties of separate action and of the consequent need of a central body which had the powers necessary to secure harmony, resulted in leaving the government so weak and ineffective that only the overwhelming needs of war time at first secured harmony. Later, disputes and hostile interests, especially commercial, brought the country to the verge of civil war.

(h) A meeting of commissioners from Maryland and Virginia in 1785 to discuss a commercial dispute led Virginia to call a meeting of delegates of all the states at Annapolis in 1786 to consider commercial relations. Representatives of only five states came, but among them were several far-sighted statesmen, and before adjourning they adopted a resolution offered by Alexander Hamilton calling a convention to amend the Articles of Confederation.

(i) This *Constitutional Convention* met at Philadelphia May 25, 1787. Representatives of all the states except Rhode Island were present, among them the most noted and ablest men of the time. Different plans were proposed, important compromises, especially to settle controversies between large and small states and those concerning slavery, were made, and at length the Constitution was adopted and signed September 17, 1787.

(j) It was then submitted to Congress and by it sent to the states to be ratified. On June 21, 1788, New Hampshire, the last of the nine states whose ratification was needed, adopted it. The last state, Rhode Island, ratified it May 29, 1790. Congress provided an act by which it went into operation in 1789.

(k) *Amendments.*—To satisfy the wishes of several of the states, a Declaration of Rights was provided in the first ten amendments, which were ratified by the state legislatures soon after the adoption of the Constitution. Amendments XI. and XII. were passed to settle practical difficulties in administration, while Amendments XIII. XIV. and XV. were passed to clinch the results of the Civil war on the question of slavery.

The Federal Government.—I. Congress; General Powers.—The Congress which has been created under the Constitution as the law-making body, consists of the Senate and the House of Representatives and has several general powers granted it: To pass laws, to judge the elections and qualifications of its own members, to determine its own rules of procedure, to lay and collect taxes, duties, imports and excises, to pay the debts and provide for the common defense and general welfare, to borrow money on the credit of the United States, to regulate commerce with foreign nations and among the several states and with the Indian tribes, to coin money and provide for certain substitutes for coin, and make provisions for controlling the value and purity of both, to fix standards of weights and measures, to establish uniform rules of naturalization, and uniform laws of bankruptcy, to establish and maintain a postal system with all needed equipment for efficient service, to make provision for the encouragement of inventors and authors by patent and copyright laws, to define and punish piracies and felonies committed on the high seas and offenses against the law of nations, to declare war and make full provision for carrying on war by land and sea by regular army and navy or by militia, and to exercise exclusive jurisdiction over all districts that are acquired for the use of the federal government in its civil or military capacities. Besides these special powers, the right to make all regulations necessary to carry these into effect is granted and by decisions of the Supreme Court has been fully established.

Scarcely less important than the powers granted to Congress are the restrictions placed upon the government. It shall not suspend the writ of *habeas corpus* except in cases of rebellion or invasion if the public safety requires it; shall not pass bills of attainder or *ex post facto* laws. No money shall be drawn from the treasury but in consequence of appropriations made by law, and regular accounts thereof shall be published; no titles of nobility shall be granted by the United States, and presents and titles from foreign governments or rulers are forbidden to office holders without the consent of the Congress.

These prohibitions are all in the interest of the people as against possible encroachments by the government.

To give needed unity of action in matters of national import the several states are forbidden to enter into any relations with foreign states and are restricted closely in their actions regarding money, the law of contracts, and some other important matters. Especially rigid are the provisions forbidding state interference with interstate or international commerce and relations with foreign powers.

Sessions of Congress begin the first Monday in December. In the years following a congressional election the term ends on March 3d; in other years it extends until it decides to adjourn, usually early in the summer. The president may call special sessions.

Bills are introduced by private members, referred to committees, appointed by the speaker of the House and elected in the Senate, that consider and amend at will and report with such recommendations as they see fit. The committees often suppress bills, and their report has great weight in determining the action of Congress.

The Senate.—(a) Consists of two members from each state chosen by the state legislatures, each senator to have one vote, which he is to cast independently.

(b) The term is six years, the senators being divided into three classes so that one-third retire every two years, securing thus a continuing body. In case of a vacancy the place may be filled by appointment of the executive of the state until the state legislature meets, when it elects a senator.

(c) A senator must be thirty years of age, have been nine years a citizen of the United States and an inhabitant of the state from which he is chosen.

(d) Senators receive a salary of $7,500 a year, mileage of 20 cents a mile each way from their homes to attend sessions, stationery, $1,800 a year for clerk hire, and certain uses of rooms and secretaries of committees.

(e) The Senate, over which the Vice President is the regular presiding officer, chooses a president *pro tempore* to act in the absence of the Vice President, acts as a court for the trial of impeachment cases, a two-thirds vote of the members present being required for conviction. When the President of the United States is impeached the chief justice of the United States presides.

(f) The Senate must approve the appointment of the higher officials made by the President and must approve by a two-thirds vote treaties negotiated by him with foreign powers if they are to go into effect.

The House of Representatives.—(a) Consists of 435 members chosen by the voters of districts in the several states made up as nearly as practicable in proportion to the number of inhabitants.

(b) For a period of two years.

(c) A representative must be 25 years of age, have been seven years a citizen of the United States, and a resident of the state from which he is chosen. By custom the representative is usually a resident of his district, but this is not necessary; and sometimes, especially in the large cities, a representative resides beyond the boundaries of his district.

(d) The salary, mileage and emoluments of representatives are the same as those of senators except that senators from their smaller numbers have a more liberal use of rooms; the allowance for secretary is only $1,500 to a representative.

(e) The House of Representatives elects its speaker, judges the elections and qualifications of its members, makes its own rules of procedure, and has the sole right of impeachment of executive and judicial officials before the Senate sitting as a court of impeachment. Bills for raising revenue must originate in the House of Representatives; but, as the Senate has an unlimited right of amendment, the privilege is of little value.

Both representatives and senators are frequently consulted by the President and other executive officers in making appointments to office. Moreover, committees of either house, if duly authorized, may, during times when Congress is not in session, make investigations at home or abroad in connection with legislative measures. In such cases, while expenses are paid, no additional salary is given to members.

II. The Executive.—The chief executive is the *president* (a) chosen for a period of four years (b) by an electoral college elected by the voters of the several states usually on a general ticket, so that all electors from a state are generally from the same political party; the electors are in some states chosen by congressional districts. (c) The President must be 35 years of age and a natural-born citizen of the United States. (d) His salary is $75,000 a year. In addition Congress has for some years voted $25,000 for traveling expenses. He is given also secretaries, his residence, the White House, which is fur-

nished at public expense, stables, vehicles, and other minor emoluments necessary for his position and work. (e) The President is commander-in-chief of the army and navy and of the militia when in actual military service of the United States; he grants reprieves and pardons; he makes treaties with the concurrence of two-thirds of the Senate; he nominates and by and with the advice and consent of the Senate appoints ambassadors and other foreign representatives, judges of the federal courts, and other high officials, some others being appointed by him alone or by heads of departments; he makes reports and recommendations to the Congress concerning the state of the nation and legislative action; he calls special sessions of Congress, receives ambassadors and public ministers of foreign powers; and takes care that the laws are faithfully executed. The President approves bills passed by the Congress, or, in event of disapproval, returns them to the branch in which they originated. In case of such veto they must be repassed by a two-thirds vote of both houses to become effective. If he does not disapprove them within ten days (Sundays excepted) they become laws unless by adjournment in the meantime the Congress prevents their return, in which case they fail.

The Vice President has the same qualifications and is chosen for the same term and in like manner as the President. Unless the President dies or is removed or incapacitated, his sole duty is to preside over the Senate. In case of the vacation of the President's office, he succeeds. If the Vice President dies, the members of the cabinet succeed in the order of the establishment of the departments, beginning with the Secretaries of State and the Treasury. Salary, $12,000.

The Cabinet consists of the Secretaries of State, Treasury, War, Attorney-General, Postmaster-General, Secretary of the Navy, Secretary of the Interior, Secretary of Agriculture, Secretary of Commerce and Labor. They are (a) appointed by the President, confirmed by the Senate and (b) serve really at the pleasure of the President, usually for his term unless their resignation is sooner brought about. (c) Their salary is $12,000 a year, and while their office expenses are covered, their personal emoluments are only incidental to the official work. (d) The members of the cabinet are the official advisers of the President in both administration work and political policy. In administrative matters each member exercises much discretion in the management of his department and usually really controls the selection of his subordinates who are not under civil service regulations. In matters of policy and making important decisions, his personal judgment is of prime importance. Routine business is frequently managed by subordinates whose tenure of office is practically during good behavior and efficiency.

The Civil Service is made up of (a) those officials appointed without competitive examination—generally higher officers, those whose services are personal or confidential in their nature, like private secretaries, unskilled laborers, or temporary employes, as employes of special commissions; and of (b) the classified service, the members of which are appointed after a competitive examination. Such appointees are apportioned among the states in proportion to population so far as possible, and the positions are permanent during efficiency. The President may extend by order the classified service, which now includes some 200,000. Examinations are held regularly twice a year at various places throughout the country, as designated by the civil service commission, a board of three members appointed by the President to administer this law, free from the influence of partisan politics.

III. **The Judiciary** consists of the Supreme Court of the United States and such inferior courts as Congress may establish. All United States judges are appointed by the President, to hold their office during good behavior. Their salaries shall not be reduced during their term of office

1. The Supreme Court consists of the chief justice, whose salary is $15,000, and of eight associate justices with a salary of $14,500 each.

2. Nine circuit courts of appeal have been established which consist of three judges each. Eligible to sit in this court are the Supreme Court justice assigned to the circuit, the circuit judges (of which there are two to four in each circuit), and the district judges within the circuit. The salaries are $7,000.

3. The territory of the United States has been divided into some 901 judicial districts, none of them crossing state lines. There is usually one in each district, though at times a judge is assigned to two districts. The salaries are $6,000.

A judge who is 70 years of age and has served ten years may retire on full pay for life.

4. The United States courts have (also appointed by the President) district attorneys and marshals to prepare and prosecute cases in behalf of the government and to execute processes and other orders of the courts.

5. The jurisdiction of the federal courts pertains to matters concerning the federal government, such as the post office, coinage laws, etc., and to cases which might involve the states in disputes with one another or with foreign countries.

6. Besides the courts mentioned for the disposal of controversies, there has been established (a) the court of claims, before which come claims of various kinds (excepting pensions) against the United States, and (b) the customs court, which settles controversies arising in connection with the collection of our customs duties.

The States. 1. The original thirteen states, at the suggestion of the Continental Congress, each in its own way and time adopted a state constitution. It is customary of late years for the Congress to pass an act admitting a state under prescribed conditions of boundaries, population, etc., with the provision that it shall frame and adopt a constitution satisfactory to the Congress. These are all modeled in part after the Constitution of the United States and of the older states. Of late years there is a tendency to make them longer and to include in the constitution subjects usually left to the legislature.

2. (a) All the states have legislatures consisting of two houses. The members of the larger, or lower, house are elected from districts and meet in six states annually; in the others the legislature meets only biennially. Members of the upper house are usually chosen for a period of two or more years. (b) Salaries are paid to all but vary from annual salaries to a per diem for days actually served. In several states the sessions are limited in time to sixty or ninety days. (c) In most of the states there are restrictions upon the powers of the legislatures, such as prohibitions of special legislation, and limiting the borrowing power of cities. Provisions against corrupt lobbying, blackmail and other abuses are common. In the main, the laws that touch most closely our daily life, those regarding contracts, crimes, marriage and divorce, inheritance, etc., are left to the states. Of late there is a movement in some of the states toward direct legislation by the people under the initiative and referendum.

3. The executive department of the state consists of a governor, lieutenant-governor, secretary of state, auditor or controller, treasurer, attorney-general and others needed to carry out the laws. The terms and compensation vary in the different states. The most important difference between the state and federal executive departments is that in the states the other officers are elected and not appointed by the governor, so that there is not the unity of action that comes from an appointive cabinet.

4. The judiciary department consists of a supreme court, and sometimes a court of appeals, and of such subordinate courts as the size of the state and the nature of its business and customs have made suitable. There are great similarities throughout the country. The judges are usually elected and for terms of two to fourteen years.

5. The county, town and city governments are all under the control of the state, but the forms vary widely, usually there being a tendency, as regards the rural districts especially, to follow models of some of the older states as indicated in the brief historical introduction. Each local subdivision has, of course, some body with minor legislative or ordinance powers, an executive and a judiciary.

Territories and Dependencies.—The territories and the insular dependencies of Hawaii, Porto Rico and the Philippine islands are under governments established by Congress and approved by the President and subject to change by regular legislative procedure.

All have governors and administrative and judicial officers appointed by the President. To them Congress has given a legislative body to make new laws under the powers granted. In Porto Rico and the Philippines the members of the upper house are appointed by the President and consist in part of the administrative officers mentioned. The lower house is elective. In event of a deadlock the revenue and appropriation laws of the preceding year continue in force. No new laws can be made without the assent of both houses. There seems to be an inclination to increase the powers of self-government of the territories and insular possessions as rapidly as the people, hitherto not accustomed to self-rule, shall show themselves fit to take it.

In all cases Congress retains under the constitution the right to modify to any extent the method of governing these territories and possessions.

SPEAKERS OF THE HOUSE OF REPRESENTATIVES

Congress	Years	Name	State	Born	Died
1	1789–91	F. A. Muhlenburg	Pa....	1750	1801
2	1791–93	J. Trumbull.....	Conn.	1740	1809
3	1793–95	F. A. Muhlenburg	Pa....	1750	1801
4–5	1795–99	J. Dayton.....	N. J.	1760	1824
6	1799–1801	Theo. Sedgwick	Mass..	1746	1813
7–9	1801–07	Nathaniel Macon	N. C..	1757	1837
10–11	1807–11	J. B. Varnum....	Mass..	1750	1821
12–13	1811–14	Henry Clay.....	Ky....	1777	1852
13	1814–15	Langdon Cheves	S. C...	1776	1857
14–16	1815–20	Henry Clay.....	Ky....	1777	1852
16	1820–21	John W. Taylor.	N. Y..	1784	1854
17	1821–23	P. P. Barbour...	Va....	1783	1841
18	1823–25	Henry Clay.....	Ky....	1777	1852

SPEAKERS OF THE HOUSE OF REPRESENTATIVES—Continued

Congress	Year	Name	State	Born	Died
19	1825–27	John W. Taylor	N. Y.	1784	1854
20–23	1827–34	A. Stevenson	Va.	1784	1857
23	1834–35	John Bell	Tenn.	1797	1869
24–25	1835–39	James K. Polk	Tenn.	1795	1849
26	1839–41	R. M. T. Hunter	Va.	1809	1887
27	1841–43	John White	Ky.	1805	1845
28	1843–45	John W. Jones	Va.	1805	1848
29	1845–47	John W. Davis	Ind.	1799	1850
30	1847–49	R. C. Winthrop	Mass.	1809	1894
31	1849–51	Howell Cobb	Ga.	1815	1868
32–33	1851–55	Linn Boyd	Ky.	1800	1859
34	1855–57	N. P. Banks	Mass.	1816	1894
35	1857–59	James L. Orr	S. C.	1822	1873
36	1859–61	Wm. Pennington	N. J.	1796	1862
37	1861–63	Galusha A. Grow	Pa.	1823	1907
38–40	1863–69	Schuyler Colfax	Ind.	1823	1885
41–43	1869–75	James G. Blaine	Me.	1830	1893
44	1875–76	Michael C. Kerr	Ind.	1827	1876
44–46	1876–81	S. J. Randall	Pa.	1828	1890
47	1881–83	Joseph W. Keifer	Ohio	1836	....
48–50	1883–89	John G. Carlisle	Ky.	1835	1910
51	1889–91	Thomas B. Reed	Me.	1839	1902
52–53	1891–95	Charles F. Crisp	Ga.	1845	1896
54–55	1895–99	Thomas B. Reed	Me.	1839	1902
56–57	1899–1903	D. B. Henderson	Ia.	1840	1906
58–61	1903–1911	J. G. Cannon	Ill.	1836	....
62	1911–....	Champ Clark	Mo.	1850	....

JUSTICES OF THE U. S. SUPREME COURT

Name	Service Term	Service Yrs.	Born	Died
John Jay, N. Y.	1789-1795	6	1745	1829
John Rutledge, S.C.	1789-1791	2	1739	1800
William Cushing, Mass.	1789-1810	21	1733	1810
James Wilson, Pa.	1789-1798	9	1742	1798
John Blair, Va.	1789-1796	7	1732	1800
Robert H. Harrison, Md.	1789-1790	1	1745	1790
James Iredell, N. C.	1790-1799	9	1751	1799
Thomas Johnson, Md.	1791-1793	2	1732	1819
William Paterson, N. J.	1793-1806	13	1745	1806
John Rutledge, S. C.	1795-1795	..	1739	1800
Samuel Chase, Md.	1796-1811	15	1741	1811
Oliver Ellsworth, Conn.	1796-1800	4	1745	1807
Bushrod Washington, Va.	1798-1829	31	1762	1829
Alfred Moore, N. C.	1799-1804	5	1755	1810
John Marshall, Va.	1801-1835	34	1755	1835
William Johnson, S. C.	1804-1834	30	1771	1834
Brock, Livingston, N. Y.	1806-1823	17	1757	1823
Thomas Todd, Ky.	1807-1826	19	1765	1826
Joseph Story, Mass.	1811-1845	34	1779	1845
Gabriel Duval. Md.	1811-1836	25	1752	1844
Smith Thompson, N. Y.	1823-1843	20	1767	1843
Robert Trimble, Ky.	1826-1828	2	1777	1828
John McLean, Ohio	1829-1861	32	1785	1861
Henry Baldwin, Pa.	1830-1844	14	1779	1844
James M. Wayne, Ga.	1835-1867	32	1790	1867
Roger B. Taney, Md.	1836-1864	28	1777	1864
Philip P. Barbour, Va.	1836-1841	5	1783	1841
John Catron, Tenn.	1837-1865	28	1786	1865
John McKinley, Ala.	1837-1852	15	1780	1852
Peter V. Daniel, Va.	1841-1860	19	1785	1860
Samuel Nelson, N. Y.	1845-1872	27	1792	1873
Levi Woodbury, N. H.	1845-1851	6	1789	1851
Robert C. Grier, Pa.	1846-1870	23	1794	1870
Benj. R. Curtis, Mass.	1851-1857	6	1809	1874
John A. Campbell, Ala.	1853-1861	8	1811	1889
Nathan Clifford, Me.	1858-1881	23	1803	1881
Noah H. Swayne, Ohio	1861-1881	20	1804	1884
Samuel F. Miller, Iowa	1862-1890	28	1816	1890
David Davis, Ill.	1862-1877	15	1815	1886
Stephen J. Field, Cal.	1863-1897	34	1816	1899
Salmon P. Chase, Ohio	1864-1873	9	1808	1873
William Strong, Pa.	1870-1880	10	1808	1895
Joseph P. Bradley, N. J.	1870-1892	22	1813	1892
Ward Hunt, N. Y.	1872-1882	10	1811	1886
Morrison R. Waite, Ohio	1874-1888	14	1816	1888
John M. Harlan, Ky.	1877-1911	34	1833	1911
William B. Woods, Ga.	1880-1887	7	1824	1887
Stanley Matthews, Ohio	1881-1889	8	1824	1889
Horace Gray, Mass.	1881-1902	21	1828	1902
Samuel Blatchford, N. Y.	1882-1893	11	1820	1893
Lucius Q. C. Lamar, Miss.	1888-1893	5	1825	1893
Melville W. Fuller, Ill.	1888-1910	22	1833	1910
David J. Brewer, Kan.	1889-1910	21	1837	1910
Henry B. Brown, Mich.	1890-1906	20	1836	1913
George Shiras, Jr., Pa.	1892-1903	18	1832	....
Howell E. Jackson, Tenn.	1893-1895	2	1832	1895
Edward D. White, La.	1894-....	..	1845	....
Rufus W. Peckham, N. Y.	1895-1909	14	1838	1909
Joseph McKenna, Cal.	1898-....	..	1843	....
Oliver W. Holmes, Mass.	1902-....	..	1841	....
William R. Day, Ohio	1903-....	..	1849	....
William H. Moody Mass.	1906-1910	4	1853	....
Horace H. Lurton, Tenn.	1909-1914	5	1844	1914
Charles E. Hughes, N. Y.	1910-....	..	1862	....
Willis Van Devanter, Wyo.	1910-....	..	1859	....

JUSTICES OF THE U. S. SUPREME COURT

Name	Service Term	Service Yrs.	Born	Died
Joseph R. Lamar, Ga.	1910-....	..	1857	....
Mahlon Pitney, N. J.	1912-....	..	1858	....
James C. McReynolds	1914-....	..	....	....

The Government and the Indians.—The relations of the Indians with the United States government are controlled and directed by the secretary of the interior through the commissioner of Indian affairs. There are about 6,000 government employees in the Indian service, of whom about 2,000 are Indians. In twenty-six states about 200 bonded superintendents of Indian schools discharge the duties of supervision and administration which formerly devolved upon the Indian agents. Almost the entire Indian service has been brought under the civil service regulations. Approximately two-thirds of the Indians are now citizens of the United States.

Indian Population.—The number of Indians enrolled as in relations with the federal government has not materially decreased for the last hundred years. In the United States proper, exclusive of Alaska, 300,545 Indians are officially reported in 1909. But "fullblood" Indians are outnumbered by the "mixed bloods" in many tribes, individuals with only one-sixteenth or one thirty-second of Indian blood, and with no distinguishing Indian features or traits, standing on the rolls as "Indians." Thus 101,469 "Indians" are on the tribal lists of the "Five Civilized Tribes" (Cherokees, Chickasaws, Choctaws, Creeks and Seminoles) in Oklahoma (old "Indian Territory") and of these, only 24,705 are fullbloods, while 50,775 are mixed-bloods, and 25,989 are intermarried whites and negroes —all enrolled as "Indians."

Indian Legislation.—Upon the whole the last thirty years has shown in its general trend and at its critical points, a determination upon the part of congress and the executive to treat the Indians with that consideration for their rights and their best interests which ought to mark the relations of a kind and just guardian to his ward.

Education.—It has built up for the Indian children a great system of schools with valuable features of industrial training. Appropriations by the United States government for Indian schools began with $20,000 in 1877, and have increased steadily to $4,008,825 for 1909. The average attendance of Indian children in schools in 1877 was 3,598; while for 1909 the average attendance was 25,568. These figures do not include the five civilized tribes which have had a more or less efficient system of tribal schools of their own. The government boarding-schools for Indian children, in which 20,000 Indian children in 1909 were clothed, fed and taught by the government, are 82 in number on reservations, and 27 off Indian reservations.

Industrial Schools.—Such schools as that at Carlisle, Pennsylvania, and Haskell Institute at Lawrence, Kansas, have led the way in industrial training along lines and by methods which are being introduced into the "white" public schools of many states.

The Outing System inaugurated by Captain Richard H. Pratt at Carlisle, Penn., has placed hundreds of Indian boys and girls one by one in carefully selected farmer's homes, where for months or years such children have learned the ways of civilized Christian homes, and have been brought into touch with civilized life as they could never have been in schools on the reservations.

Day and Mission Schools.—One hundred and ninety-four Government day schools for Indians in 1909 gave instruction to 6,286 Indian school children. Christian mission schools not under contract with the government furnished instruction to 3,684 Indian children; and Mission boarding schools at which the government contracts to pay from tribal funds for the board and teaching of Indian children enrolled 1,050 pupils.

Reduced Area of Reservations.—As the pressure of increasing population has made it unreasonable to leave unoccupied the vast area of land which was included in the Western Indian reservations, Indian reservations have been reduced in size. Sometimes great sections have been bought by congress from Indian tribes at a nominal price, the proceeds held for the Indians in trust. When an Indian tribe is "allotted," and a homestead has been secured to each member of the tribe, frequently the rest of the reservation has been sold for the benefit of the Indians. In 1909 the unallotted area of all the Indian reservations (in about twenty states) was 48,477,796 acres (about 75,000 square miles). On July 1, 1909, there were $38,537,679.42 in the United States treasury of "Tribal funds held in trust by the government in lieu of investment" and annual interest, at either 3 per cent, 4 per cent, or in some instances 5 per cent, paid on certain of these funds amounts to $1,892,179.35 annually.

The New Policy.—The recognition of the family, not the tribe, as the social unit, and the responsibility of the individual to the law, underlie the wise policy of allotting homesteads to families, and giving an individual holding of land to each Indian. The steady improvement of the Indian in habits of industry, and in responsibility to law, has followed. It is believed by wise friends of the Indian that his personality should now be further strengthened by breaking up tribal funds into individual holdings upon the books of the United States treasury; that each Indian should be credited with his own proportionate share, such share to be administered for him by the government only so long as he is incapable of caring for it himself, principal and interest to be paid to each man and woman as rapidly as ability to care for property is demonstrated by the individual Indian.

Present Conditions.—The amount of rations and clothing bought by the government for Indians is rapidly decreasing; school accommodations are now provided for five-sixths or seven-eights of the Indian children of school age; and the number of Indians under forty years old who are not now self-supporting is rapidly decreasing. No Indian tribe is now in "abject savagery." On the scale from savagery to civilization, the different tribes are scattered at irregular intervals through barbarism and Navajo semi-civilization (as the 30,000 Navajo, shepherds, with blanket-weaving and artistic silver work, with increasing agriculture,) the Sioux, cattle-raisers and rude farmers, the Pincus and Pueblos, for many generations peaceful agriculturists farming by irrigation;—to the leading families of the five civilized tribes, some of whose sons are now the third generation of college-bred men.

PRESIDENTIAL ELECTIONS AND INAUGURATIONS

Year	Presidential Candidates	State	Party	Vote: Total Vote	Vote: Electoral Vote	Vote: Popular Vote	Candidates for Vice President: Name	Candidates for Vice President: State	Facts Concerning the Inauguration of the Presidents	Age of Presidents at Inauguration
1789*	**George Washington**	Va.	.....	73	69	.....	*John Adams*	Mass.	I. **George Washington** was inaugurated President of the United States on a portico in front of the Senate chamber, Thursday, April 30, 1789, in the Federal building, facing Broad Street, in New York. The oath of office was administered by Robt. R. Livingston, chancellor of the state of New York, who exclaimed when the oath was taken, "Long live George Washington, President of the United States."'	57
	John Adams	Mass.	.....	...	34	.....				
	John Jay	N. Y.	.....	...	9	.....				
	R. H. Harrison	Md.	.....	...	6	.....				
	John Rutledge	S. C.	.....	...	6	.....				
	John Hancock	Mass.	.....	...	4	.....				
	George Clinton	N. Y.	.....	...	3	.....				
	Samuel Huntington	Conn.	.....	...	2	.....				
	John Milton	Ga.	.....	...	2	.....				
	James Armstrong	Ga.	.....	...	1	.....				
	Benjamin Lincoln	Mass.	.....	...	1	.....				
	Edward Telfair	Ga.	.....	...	1	.....				
	‖Vacancies	.....	.....	...	4	.....				
1792	**George Washington**	Va.	Fed.	135	132	.....	*John Adams*	Mass.	II. **George Washington,** for a second term, in the Senate chamber, Monday, March 4, 1793, in the Old Federal hall, in Philadelphia. Oath of office administered by William Cushing of Massachusetts.	
	John Adams	Mass.	Fed.	...	77	.....				
	George Clinton	N. Y.	Rep.‡	...	50	.....				
	Thomas Jefferson	Va.	.....	...	4	.....				
	Aaron Burr	N. Y.	.....	...	1	.....				
	‖Vacancies	.....	.....	...	3	.....				
1796	**John Adams**	Mass.	Fed.	138	71	.....	*Thomas Jefferson*	Va.	III. **John Adams,** in the chamber of the House of Representatives, Congress hall, Saturday, March 4, 1797, in Philadelphia. Oath of office administered by Oliver Ellsworth, chief justice of the United States.	61
	Thomas Jefferson	Va.	Rep.	...	68	.....				
	Thomas Pinckney	S. C.	Fed.	...	59	.....				
	Aaron Burr	N. Y.	Rep.	...	30	.....				
	Samuel Adams	Mass.	Rep.	...	15	.....				
	Oliver Ellsworth	Conn.	Ind.	...	11	.....				
	George Clinton	N. Y.	Rep.	...	7	.....				
	John Jay	N. Y.	Fed.	...	5	.....				
	James Iredell	N. C.	Fed.	...	3	.....				
	George Washington	Va.	Fed.	...	2	.....				
	John Henry	Md.	Fed.	...	2	.....				
	S. Johnson	N. C.	Fed.	...	2	.....				
	C. C. Pinckney	S. C.	Fed.	...	1	.....				
1800	**Thomas Jefferson**	Va.	Rep.	138	73	.....	*Aaron Burr*	N. Y.	IV. **Thomas Jefferson,** in the Senate chamber of the Capitol, Wednesday, March 4, 1801, in the city of Washington. Oath of office administered by John Marshall, chief justice of the United States.	57
	Aaron Burr	N. Y.	Rep.	...	73	.....				
	John Adams	Mass.	Fed.	...	65	.....				
	C. C. Pinckney	S. C.	Fed.	...	64	.....				
	John Jay	N. Y.	Fed.	...	1	.....				
1804	**Thomas Jefferson**	Va.	Rep.	176	162	.....	*George Clinton*	N. Y.	V. **Thomas Jefferson,** for a second term, in Senate chamber, Washington, Monday, Mar. 4, 1805, by Chief Justice John Marshall.	
	C. C. Pinckney	S. C.	Fed.	...	14	.....	Rufus King	N. Y.		
1808	**James Madison**	Va.	Rep.	176	122	.....	*George Clinton*	N. Y.	VI. **James Madison,** in the chamber of the House of Representatives, Washington, Saturday, March 4, 1809. Oath of office administered by Chief Justice John Marshall.	58
	C. C. Pinckney	S. C.	Fed.	...	47	.....	Rufus King	N. Y.		
	George Clinton	N. Y.	Rep.	...	6	.....	John Langdon	N. H.		
							James Madison	Va.		
	‖Vacancy	.....	.....	...	1	.....	James Monroe	Va.		
1812	**James Madison**	Va.	Rep.	218	128	.....	*Elbridge Gerry*	Mass.	VII. **James Madison,** for a second term, Thursday, March 4, 1813. Oath was administered by Chief Justice Marshall.	
	De Witt Clinton	N. Y.	Fed.	...	89	.....	Jared Ingersoll	Pa.		
1816	**James Monroe**	Va.	Rep.	221	183	.....	*D. D. Tompkins*	N. Y.	VIII. **James Monroe,** Tuesday, March 4, 1817. Oath administered by Chief Justice John Marshall, on a platform erected for the purpose, in front of the eastern portico of the Capitol at Washington.	59
	Rufus King	N. Y.	Fed.	...	34	.....	John E. Howard	Md.		
							James Ross	Pa.		
	‖Vacancies	.....	.....	...	4	.....	John Marshall	Va.		
1820	**James Monroe**	Va.	Rep.	235	231	.....	Robert G. Harper	Md.	IX. **James Monroe,** for a second term, in the House of Representatives, Monday, March 5, 1821. Here the 4th of March came on Sunday, and he took the oath of office in the hall of the House of Representatives at 12 o'clock on Monday next, March 5, 1821. Oath administered by Chief Justice Marshall.	
	John Q. Adams	Mass.	Rep.	...	1	.....	*D. D. Tompkins*	N. Y.		
							Richard Stockton	N. J.		
							Daniel Rodney	Del.		
							Robert G. Harper	Md.		
							Richard Rush	Pa.		
1824	**John Q. Adams**	Mass.	Rep.	261	84†	108,740	*John C. Calhoun*	S. C.	X. **John Quincy Adams,** in the hall of the House of Representatives, Friday, March 4, 1825. Oath of office administered by Chief Justice Marshall.	58
	Andrew Jackson	Tenn.	Dem.	...	99†	153,544	Nathan Sanford	N. Y.		
	Henry Clay	Ky.	Rep.	...	37	47,136	Nathaniel Macon	N. C.		
	W. H. Crawford	Ga.	Rep.	...	46	46,618	Andrew Jackson	Tenn.		
							Martin Van Buren	N. Y.		
							Henry Clay	Ky.		
1828	**Andrew Jackson**	Tenn.	Dem.	261	178	647,286	*John C. Calhoun*	S. C.	XI. **Andrew Jackson,** on the eastern portico of the Capitol, Wednesday, March 4, 1829. Oath administered by Chief Justice Marshall.	62
	John Q. Adams	Mass.	Nat. Rep.	...	83	508,064	Richard Rush	Pa.		
							William Smith	S. C.		
1832	**Andrew Jackson**	Tenn.	Dem.	288	219	687,502	*Martin Van Buren*	N. Y.	XII. **Andrew Jackson,** for a second term, in the hall of the House of Representatives, Monday, March 4, 1833. Oath administered by Chief Justice Marshall.	
	Henry Clay	Ky.	Nat. Rep.	...	49	530,189	John Sergeant	Pa.		
	John Floyd	Ga.	Ind.	...	11	.....	Henry Lee	Mass.		
	William Wirt	Md.	Anti-M.	...	7	.....	Amos Ellmaker	Pa.		
	Vacancies	.....	.....	...	2	.....	William Wilkins	Pa.		
1836	**Martin Van Buren**	N. Y.	Dem.	294	170	762,678	*R. M. Johnson*	Ky.	XIII. **Martin Van Buren,** on the eastern portico of the Capitol, Saturday, March 4, 1837. Oath administered by Chief Justice Taney.	55
	Wm. H. Harrison	Ohio	Whig	...	73		Francis Granger	N. Y.		
	Hugh L. White	Tenn.	Whig	...	26	735,651	John Tyler	Va.		
	Daniel Webster	Mass.	Whig	...	14		William Smith	Ala.		
	W. P. Mangum	N. C.	Whig	...	11					
1840	**Wm. H. Harrison**	Ohio	Whig	294	234	1,275,016	*John Tyler*	Va.	XIV. **William Henry Harrison,** on the eastern portico of the Capitol, Thursday, March 4, 1841. Oath administered by Chief Justice Taney.	68
	Martin Van Buren	N. Y.	Dem.	...	60	1,129,102	R. M. Johnson	Ky.		
	James G. Birney	N. Y.	Lib.	...	...	7,069	L. W. Tazewell	Va.		
							James K. Polk	Tenn.		
							Thomas Earle	Pa.	**John Tyler,** inaugurated 12 noon, Tues., April 6, 1841, at Brown's Indian Queen hotel, Washington. Oath administered by Judge Cranch.	51
1844	**James K. Polk**	Tenn.	Dem.	275	170	1,337,243	*George M. Dallas*	Pa.	XV. **James Knox Polk,** on the eastern portico of the Capitol, Tuesday, March 4, 1845. Oath administered by Chief Justice Taney.	50
	Henry Clay	Ky.	Whig.	...	105	1,299,062	T. Frelinghuysen	N. J.		
	James G. Birney	N. Y.	Lib.	...	...	62,300	Thomas Morris	Ohio		
1848	**Zachary Taylor**	La.	Whig	290	163	1,360,099	*Millard Fillmore*	N. Y.	XVI. **Zachary Taylor,** on the eastern portico of the Capitol, Monday, March 5, 1849. Here for the second time March 4th came on Sunday. Oath administered by Chief Justice Taney.	65
	Lewis Cass	Mich.	Dem.	...	127	1,220,544	Wm. O. Butler	Ky.		
	Martin Van Buren	N. Y.	F. S.	...	...	291,263	Chas. F. Adams	Mass.		
									Millard Fillmore, in the hall of the House of Representatives, 12 noon, Wednesday, July 10, 1850. Oath administered by Judge William Cranch.	50

*Prior to 1804 each elector was entitled to vote for two candidates for President. The candidate receiving the greatest number of votes was declared elected, while the candidate receiving the next highest vote was declared Vice-President. †As there was no election the choice was decided by the House of Representatives. ‡It is claimed that the first Republican party was the progenitor of the present Democratic party. ‖Electoral votes not cast.

PRESIDENTIAL ELECTIONS AND INAUGURATIONS—Continued

Year	Presidential Candidates	State	Party	Vote: Total	Vote: Electoral	Vote: Popular	Vice-Pres. Candidates: Name	Vice-Pres. Candidates: State	Facts Concerning Inauguration	Age at Inaug.
1852	**Franklin Pierce**	N. H.	Dem.	296	254	1,601,274	*William R. King*	Ala.	XVII. **Franklin Pierce,** on the eastern portico of the Capitol, Friday, March 4, 1853. Oath administered by Chief Justice Taney.	49
	Winfield Scott	N. J.	Whig	...	42	1,386,580	Wm. A. Graham	N. C.		
	John P. Hale	N. H.	Fed. D.	...	...	155,825	George W. Julian	Ind.		
	Daniel Webster	Mass.	Whig	...	...	1,670				
1856	**James Buchanan**	Pa.	Dem.	296	174	1,838,169	*J. C. Breckenridge*	Ky.	XVIII. **James Buchanan,** on the eastern portico of the Capitol, Wednesday, March 4, 1857. Oath administered by Chief Justice Taney.	66
	John C. Fremont	Cal.	Rep.	...	114	1,341,264	Wm. L. Dayton	N. J.		
	Millard Fillmore	N. Y.	Amer.	...	8	874,534	A. J. Donelson	Tenn.		
1860	**Abraham Lincoln**	Ill.	Rep.	303	180	1,866,452	*Hannibal Hamlin*	Me.	XIX. **Abraham Lincoln,** on the eastern portico of the Capitol, Monday, March 4, 1861. Oath administered by Chief Justice Taney.	52
	J. C. Breckenridge	Ky.	Dem.	...	72	847,953	Joseph Lane	Ind.		
	Stephen A. Douglas	Ill.	Union D.	...	39	1,375,157	H. V. Johnson	Ga.		
	John Bell	Tenn.	Amer.	...	12	590,631	Edward Everett	Mass.		
1864	**Abraham Lincoln**	Ill.	Rep.	314	212	2,213,665	*Andrew Johnson*	Tenn.	XX. **Abraham Lincoln,** for a second term, on the eastern portico of the Capitol, Saturday, March 4, 1865. Oath administered by Chief Justice Chase.	
	Geo. B. McClellan	N. J.	Dem.	...	21	1,802,237	G. H. Pendleton	Ohio	**Andrew Johnson,** in his rooms at the Kirkwood House, Washington, D. C., 10 a. m., Saturday, April 15, 1865. Oath administered by Chief Justice Chase.	57
1868	**Ulysses S. Grant**	Ill.	Rep.	317	214	3,012,833	*Schuyler Colfax*	Ind.	XXI. **Ulysses Simpson Grant,** on the eastern portico of the Capitol, Thursday, March 4, 1869. Oath of office administered by Chief Justice Chase.	47
	Horatio Seymour	N. Y.	Dem.	...	80	2,703,249	F. P. Blair Jr.	Mo.		
1872	**Ulysses S. Grant**	Ill.	Rep.	366	286	3,597,132	*Henry Wilson*	Mass.	XXII. **Ulysses Simpson Grant,** for a second term, on the eastern portico of the Capitol, Tuesday, March 4, 1873. Oath administered by Chief Justice Chase.	
	Horace Greeley	N. Y.	D. & L.	...	†	2,834,125	B. Gratz Brown	Mo.		
	Charles O'Conor	N. Y.	Dem.	...	...	29,489	John Q. Adams	Mass.		
	James Black	Pa.	Temp.	...	...	5,608	John Russell	Mich.		
	Thos. A. Hendricks	Ind.	Dem.	...	42	.....	Geo. W. Julian	Ind.		
	B. Gratz Brown	Mo.	Dem.	...	18	.....	A. H. Colquitt	Ga.		
	Charles J. Jenkins	Ga.	Dem.	...	2	.....	J. M. Palmer	Ill.		
	David Davis	Ill.	Ind.	...	1	.....	T. E. Bramlette	Ky.		
	Not counted	....	.....	...	17	.....	W. S. Grosbeck	Ohio		
							W. B. Machen	Ky.		
							N. P. Banks	Mass.		
1876	**Ruth'd B. Hayes**	Ohio	Rep.	369	185	4,036,298	*Wm. A. Wheeler*	N. Y.	XXIII. **Rutherford Birchard Hayes,** privately in the White House, at 7:05 p. m., Saturday, March 3, 1877. Oath administered by Chief Justice Waite. Here again Sunday came March 4th, and the oath of office was publicly taken March 5, 1877.	54
	Samuel J. Tilden	N. Y.	Dem.	...	184	4,300,590	T. A. Hendricks	Ind.		
	Peter Cooper	N. Y.	Grb.	...	...	81,737	Samuel F. Cary	Ohio		
	Green Clay Smith	Ky.	Pro.	...	...	9,522	G. T. Stewart	Ohio		
	James B. Walker	Ill.	Amer.	...	...	2,636	D. Kirkpatrick	N. Y.		
1880	**James A. Garfield**	Ohio	Rep.	369	214	4,454,416	*Chester A. Arthur*	N. Y.	XXIV. **James Abram Garfield,** on eastern portico of the Capitol, Friday, March 4, 1881. Oath administered by Chief Justice Waite.	49
	Win'd S. Hancock	Pa.	Dem.	...	155	4,444,952	Wm. H. English	Ind.		
	James B. Weaver	Iowa	Grb.	...	...	308,578	B. J. Chambers	Tex.		
	Neal Dow	Me.	Pro.	...	...	10,305	H. A. Thompson	Ohio	**Chester Alan Arthur,** at his residence, 123 Lexington avenue, New York, 2 a. m., Tuesday, September 20, 1881, the oath being administered by Jno. R. Brady, a justice of the New York supreme court. The oath was repeated in the vice-president's room at the Capitol, Washington, September 22, 1881; administered by Chief Justice Waite.	51
	John W. Phelps	Vt.	Amer.	...	...	707	S. C. Pomeroy	Kan.		
1884	**Grover Cleveland**	N. Y.	Dem.	401	219	4,874,986	*T. A. Hendricks*	Ind.	XXV. **Grover Cleveland,** on the eastern portico of the Capitol, Wednesday, March 4, 1885. Oath administered by Chief Justice Waite.	47
	James G. Blaine	Me.	Rep.	...	182	4,851,981	John A. Logan	Ill.		
	John P. St. John	Kan.	Pro.	...	...	150,369	William Daniel	Md.		
	Benjamin F. Butler	Mass.	People's	...	...	175,370	A. M. West	Miss.		
	P. D. Wigginton	Cal.	Amer.	...	...	.....				
1888	**Benjamin Harrison**	Ind.	Rep.	401	233	5,439,853	*Levi P. Morton*	N. Y.	XXVI. **Benjamin Harrison,** on eastern portico of the Capitol, Monday, March 4, 1889. Oath administered by Chief Justice Fuller.	55
	Grover Cleveland	N. Y.	Dem.	...	168	5,549,309	A. G. Thurman	Ohio		
	Clinton B. Fisk	N. J.	Pro.	...	...	249,506	John A. Brooks	Mo.		
	Alson J. Streeter	Ill.	U. L.	...	...	146,935	C. E. Cunningham	Ark.		
	R. H. Cowdry	Ill.	N'd L.	...	...	2,808	W. H. Wakefield	Kan.		
	James L. Curtis	N. Y.	Amer.	...	...	1,591	James B. Greer	Tenn.		
1892	**Grover Cleveland**	N. Y.	Dem.	444	277	5,554,437	*A. E. Stevenson*	Ill.	XXVII. **Grover Cleveland,** on eastern portico of the Capitol, Saturday, March 4, 1893. Oath administered by Chief Justice Fuller.	55
	Benjamin Harrison	Ind.	Rep.	...	145	5,175,287	Whitelaw Reid	N. Y.		
	James B. Weaver	Iowa	People's	...	22	1,041,028	James G. Field	Va.		
	John Bidwell	Cal.	Pro.	...	...	264,133	James R. Cranfill	Texas		
	Simon Wing	Mass.	S. L.	...	...	21,164	C. H. Matchett	N. Y.		
1896	**William McKinley**	Ohio	Rep.	447	271	7,102,272	*Garret A. Hobart*	N. J.	XXVIII. **William McKinley,** on the eastern portico of the Capitol, Thursday, March 4, 1897. Oath administered by Chief Justice Fuller.	54
	William J. Bryan	Neb.	Dem. }	...	176	6,273,624	Arthur Sewall	Me.		
	William J. Bryan	Neb.	People's }				Th. E. Watson	Iowa		
	John M. Palmer	Ill.	Nat. Dem	...	...	133,148	Sim. B. Buckner	Ky.		
	Joshua Levering	Md.	Pro.	...	...	132,007	Hale Johnson	Ill.		
	Chas. H. Matchett	N. Y.	So. L.	...	...	36,274	Matthew McGuire	N. J.		
	Chas. E. Bentley	Neb.	Nat.	...	...	13,969	J. H. Southgate	N. C.		
1900	**William McKinley**	Ohio	Rep.	447	292	7,219,101	*Theo. Roosevelt*	N. Y.	XXIX. **William McKinley,** for a second term, on the eastern portico of the Capitol, Monday, March 4, 1901. Oath administered by Chief Justice Fuller.	
	William J. Bryan	Neb.	Dem.&P.	...	155	6,357,054	A. E. Stevenson	Ill.		
	James G. Woolley	Ill.	Pro.	...	...	208,187	Henry B. Metcalf	R. I.		
	Eugene V. Debs	Ind.	S. D.	...	...	.....	Job Harriman	Cal.		
	Wharton Barker	Pa.	M. R. P.	...	...	51,585	Ignatius Donnelly	Minn.	**Theodore Roosevelt,** at residence of Ansley Wilcox, Buffalo, N. Y., September 14, 1901, at 3:32 p. m. Oath administered by Judge John R. Hazel, of the United States district court.	42
	Jos. F. Malloney	Mass.	S. L.	...	...	99,613	Val. Remmel	Pa.		
	Seth H. Ellis	Ohio	U. R.	...	...	33,413	Sam. T. Nicholson	Pa.		
	J. F. R. Leonard	Iowa	U. C.	...	...	1,059	John G. Woolley	Ill.		
1904	**Theodore Roosevelt**	N. Y.	Rep.	476	336	7,623,486	*Chas. W. Fairbanks*	Ind.	XXX. **Theodore Roosevelt,** on the eastern portico of the Capitol, Saturday, March 4, 1905. Oath administered by Chief Justice Melville W. Fuller.	
	Alton B. Parker	N. Y.	Dem.	...	140	5,077,971	Henry G. Davis	W.Va.		
	Eugene V. Debs	Ind.	Soc.	...	...	402,283	Benjamin Hanford	N. Y.		
	Silas C. Swallow	Pa.	Pro.	...	...	258,536	George W. Carroll	Texas		
	Thomas E. Watson	Ga.	People's	...	...	117,183	Thomas H. Tibbles	Neb.		
	Charles H. Corrigan	N. Y.	Soc. L.	...	...	31,249	William W. Cox	Ill.		
1908	**William H. Taft**	Ohio	Rep.	483	321	7,637,676	*James S. Sherman*	N. Y.	XXXI. **William Howard Taft,** in the chamber of the House of Representatives, Washington, March 4, 1909. Oath administered by Chief Justice Fuller.	51
	William J. Bryan	Neb.	Dem.	...	162	6,393,182	John W. Kern	Ind.		
	Eugene V. Debs	Ind.	Soc.	...	...	420,393	Benjamin Hanford	N. Y.		
	Eugene W. Chafin	Ill.	Pro.	...	...	241,252	Aaron S. Watkins	....		
	Thomas L. Hisgen	Mass.	Ind. L.	...	...	83,183	Jno. Tem. Graves	Ga.		
	Thomas E. Watson	Ga.	People's	...	...	33,871	Samuel Williams	Ind.		
	August Gilhaus	N. Y.	Soc. L.	...	...	15,421	Donald L. Munso	Va.		
1912	**Woodrow Wilson**	N. J.	Dem.	531	435	6,282,542	*Thos R. Marshall*	Ind.	XXXII. **Woodrow Wilson,** on eastern portico of the Capitol, March 4, 1913. Oath administered by Chief Justice Edward D. White.	56
	Theodore Roosevelt	N. Y.	Prog.	...	88	4,114,585	Hiram Johnson	Cal.		
	William H. Taft	Ohio	Rep.	...	8	3,480,479	*James S. Sherman	N. Y.		
							Nicholas M. Butler	N. Y.		
	Eugene V. Debs	Ind.	Soc.	...	...	820,606	Emil Seidel	Wis.		
	Eugene W. Chafin	Ill.	Pro.	...	...	181,762	Aaron S. Watkins	Ky.		
	Arthur E. Reimer	.....	Soc. L.	...	...	28,641	August Gillhaus	N. Y.		

*Died Oct. 30, 1912, just prior to the election Nov. 5. †Owing to the death of Horace Greeley the Democratic electors scattered their vote.

TABLE I—PERSONAL FACTS RELATING TO

No		Presidents	Born: Date	Born: Birthplace	Parents: Father	Parents: Mother	Paternal Ancestry	Father's Business
1	1–2	**George Washington**	Fri., Feb. 22, 1732	Bridges Creek near Fredericksburg, Va.	Augustine	Mary Ball	English	Planter
2	3	**John Adams**	Wed., Oct. 30, 1735	Quincy, Mass.	John	Susanna Boylston	English	Farmer
3	4–5	**Thomas Jefferson**	Tues., April 13, 1743	Shadwell, Va.	Peter	Jane Randolph	Welsh	Planter
4	6–7	**James Madison**	Fri., Mar. 16, 1751	Port Conway, Va.	James	Nellie Conway	English	Planter
5	8–9	**James Monroe**	Fri., April 28, 1758	Westmoreland Co., Va.	Spence	Elizabeth Jones	Scotch	Planter
6	10	**John Quincy Adams**	Sat., July 11, 1767	Quincy, Mass.	John	Abigail Smith	English	Lawyer
7	11–12	**Andrew Jackson**	Sun., Mar. 15, 1767	Waxhaw Settlement, N. C.	Andrew	Elizabeth Hutchinson	Scotch-Irish	Farmer
8	13	**Martin Van Buren**	Thurs., Dec. 5, 1782	Kinderhook, N. Y.	Abraham	Mary Hoes	Dutch	Farmer
9	14	**William Henry Harrison**	Tues., Feb. 9, 1773	Berkeley, Va.	Benjamin	Elizabeth Bassett	English	Statesman
10	14	**John Tyler**	Mon., Mar. 29, 1790	Charles City Co., Va.	John	Mary Armistead	English	Jurist
11	15	**James Knox Polk**	Mon., Nov. 2, 1795	Mecklenburg Co., N. C.	Samuel	Jane Knox		Farmer
12	16	**Zachary Taylor**	Tues., Nov. 24, 1784	Orange Co., Va.	Richard	Sarah Strother	Scotch-Irish	
13	16	**Millard Fillmore**	Tues., Jan. 7, 1800	Summer Hill, N. Y.	Nathaniel	Phebe Millard	English	Farmer
14	17	**Franklin Pierce**	Fri., Nov. 23, 1804	Hillsborough, N. Y.	Benjamin	Anna Kendrick	English	Farmer
15	18	**James Buchanan**	Sat., April 23, 1791	Stony Batter, Pa.	James	Elizabeth Speer	Scotch-Irish	Merchant
16	19–20	**Abraham Lincoln**	Sun., Feb. 12, 1809	Nolin Creek, Ky.	Thomas	Nancy Hanks	English	Farmer
17	20	**Andrew Johnson**	Thurs., Dec. 29, 1808	Raleigh, N. C.	Jacob	Mary McDonough	English	Sexton
18	21–22	**Ulysses Simpson Grant**	Sat., April 27, 1822	Point Pleasant, Ohio	Jesse Root	Harriet Simpson	Scotch	Farmer
19	23	**Rutherford Birchard Hayes**	Fri., Oct. 4, 1822	Delaware, Ohio	Rutherford	Sophia Birchard	Scotch	Merchant
20	24	**James Abram Garfield**	Sat., Nov. 19, 1831	Bedford, Ohio	Abram	Eliza Ballou	English	Farmer
21	24	**Chester Allan Arthur**	Tues., Oct. 5, 1830	Fairfield, Vt.	William	Malvina Stone	Scotch-Irish	Clergyman
22	25	**Grover Cleveland**	Sat., Mar. 18, 1837	Caldwell, N. J.	Rich'd Falley	Anne Neale	English	Clergyman
23	26	**Benjamin Harrison**	Tues., Aug. 20, 1833	North Bend, Ohio	John Scott	Elizabeth Findlay Irwin	English	Farmer
24	27	**Grover Cleveland**	Sat., Mar. 18, 1837	Caldwell, N. J.	Rich'd Falley	Anne Neale	English	Clergyman
25	28–29	**William McKinley**	Sun., Jan. 29, 1843	Niles, Ohio	William	Nancy Allison	Scotch-Irish	Iron Mnfr.
26	29–30	**Theodore Roosevelt**	Wed., Oct. 27, 1858	28 E. 20th St., New York City	Theodore	Martha Bullock	Dutch	Merchant
27	31	**William Howard Taft**	Tues., Sept. 15, 1857	Cincinnati, Ohio	Alphonso	Louise M. Torrey	English	Lawyer
28	32	**Woodrow Wilson**	Sun., Dec. 28, 1856	Staunton, Va.	Jos. Ruggles	Janet Woodrow	Irish-English	Clergyman

TABLE II—PERSONAL FACTS RELATING TO

Name	Residence when Elected	Term of Office: From	Term of Office: To	Subsequent Career	Died	Cause of Death
Washington	Mt. Vernon, Va.	Apr. 30, 1789	Mar. 4, 1797	Agricultural pursuits; appointed commander-in-chief (1798) because of threatened war with France.	1799	Acute laryngitis
Adams	Quincy, Mass.	Mar. 4, 1797	Mar. 4, 1801	Member of the Massachusetts Constitutional Convention of 1820.	1826	Natural decline
Jefferson	Monticello, Va.	Mar. 4, 1801	Mar. 4, 1809	Retired to his plantation at Monticello, Va.; devoted much time to the University of Virginia.	1826	Chronic diarrhœa.
Madison	Montpelier, Va.	Mar. 4, 1809	Mar. 4, 1817	Retired to Montpelier, Va.; contributed large service to University of Virginia; served in the Virginia Constitutional Convention, 1829.	1836	Natural decline.
Monroe	Oakhill, Va.	Mar. 4, 1817	Mar. 4, 1825	Retired to private life in Virginia; served as a member of the Virginia Constitutional Convention in 1830.	1848	Natural decline
J. Q. Adams	Quincy, Mass.	Mar. 4, 1825	Mar. 4, 1829	Was returned to Washington as a member of the House of Representatives; served from 1830 to his death.	1848	Paralysis.
Jackson	Hermitage, Tenn.	Mar. 4, 1829	Mar. 4, 1837	Retired to the "Hermitage," near Nashville, Tenn.; Always took a deep interest in public affairs.	1845	Dropsy.
Van Buren	Kinderhook, N. Y.	Mar. 4, 1837	Mar. 4, 1841	Was renominated in 1840, 1844, and 1848 for the presidency.	1845	Asthma.
W. H. Harrison	North Bend, Ohio	Mar. 4, 1841	Apr. 4, 1841	Died in office.	1841	Pleurisy fever.
Tyler	Williamsburg, Va.	Apr. 6, 1841	Mar. 4, 1845	Retired to his estate in Virginia; presided at the peace convention held in Washington in 1861.	1862	Bilious attacks with, bronchitis.
Polk	Nashville, Tenn.	Mar. 4, 1845	Mar. 4, 1849			Chronic diarrhœa
Taylor	Baton Rouge, La.	Mar. 4, 1849	July 10, 1850	Died in office.	1850	Cholera morbus and typhoid fever.
Fillmore	Buffalo, N. Y.	July 10, 1850	Mar. 4, 1853	Was candidate for president in 1852 and in 1856; spent his remaining years at Buffalo, N. Y.	1874	Paralysis.
Pierce	Concord, N. H.	Mar. 4, 1853	Mar. 4, 1857	Traveled in Europe; retired to Concord, N. H.	1869	Dropsy and inflammation of stomach.
Buchanan	Wheatland, Pa.	Mar. 4, 1857	Mar. 4, 1861	Retired to Lancaster, Pa.; devoted himself to writing defense of his administration.	1868	Rheumatic gout.
Lincoln	Springfield, Ill.	Mar. 4, 1861	Apr. 15, 1865	Died in office.	1865	Assassinated by Booth.
Johnson	Greenville, Tenn.	Apr. 15, 1865	Mar. 4, 1869	Retired to home in Greenville, Tenn.; chosen United States senator in 1875.	1875	Paralysis.
Grant	Washington, D. C.	Mar. 4, 1869	Mar. 4, 1877	Made tour of the world and retired to private life in New York.	1885	Cancer of the tongue.
Hayes	Fremont, Ohio	Mar. 4, 1877	Mar. 4, 1881	Was president of the Board of Freedmen, and president of the National Prison association.	1893	Neuralgia of heart.
Garfield	Mentor, Ohio	Mar. 4, 1881	Sep. 19, 1881	Died in office.	1881	Assassinated by Guiteau.
Arthur	New York City	Sep. 20, 1881	Mar. 4, 1885	Died the year following his retirement.	1886	Bright's disease.
Cleveland	Buffalo, N. Y.	Mar. 4, 1885 Mar. 4, 1893	Mar. 4, 1889 Mar. 4, 1897	Retired to New York to practice law; at the end of second term, retired to Princeton, N. J.	1908	Heart failure.
B. Harrison	Indianapolis, Ind.	Mar. 4, 1889	Mar. 4, 1893	Professor of International law at Leland Stanford University, California; afterward practiced law.	1901	Pneumonia.
McKinley	Canton, Ohio	Mar. 4, 1897	Sep. 14, 1901	Died in office.	1901	Assassinated by Czolgosz.
Roosevelt	Oyster Bay, N. Y.	Sep. 14, 1901	Mar. 4, 1909	In March, 1909, headed a scientific expedition to Africa, organized in the interest of the Smithsonian institution; resumed literary work and politics.		
Taft	Cincinnati, Ohio	Mar. 4, 1909	Mar. 4, 1913	Kent Professor of law at Yale University.		
Wilson	Princeton, N. J.	Mar. 4, 1913	.....	.....		

THE PRESIDENTS OF THE UNITED STATES

Educational Advantage	Early Vocation	Profession	Religious Connections	Married	Wife's Name	Children: Boys	Children: Girls	Name
Common School	Surveyor	Planter	Episcopalian	1759	Martha (Dandridge) Custis (1732-1802), widow with two children.	0	0	**Washington**
Harvard College, 1755	Teacher	Lawyer	Unitarian	1764	Abigail Smith (1744-1818).	3	2	**Adams**
College of William and Mary, 1762	Lawyer	Lawyer	Liberal	1772	Martha (Wayles) Skelton (1748-1782), widow of Bathurst Skelton.	0	6	**Jefferson**
Princeton College, 1771	Lawyer	Lawyer	Episcopalian	1794	Dolly (Payne) Todd (1772-1849), widow.	0	0	**Madison**
Entered College, William and Mary	Lawyer	Politician	Episcopalian	1786	Eliza Kortwright (1768-1830).	0	2	**Monroe**
Harvard College 1787	Lawyer	Lawyer	Unitarian	1797	Louisa Catherine Johnson (1775-1852).	3	1	**Adams, J. Q.**
Self Taught	Lawyer	Lawyer	Presbyterian	1791	Rachel Donelson Robards (1767-1828), divorced wife of Captain Robards.	3	0	**Jackson**
Academy	Lawyer	Lawyer	Reformed Dutch	1807	Hannah Hoes (1783-1819).	4	0	**Van Buren**
Entered Hampden-Sidney College	Medicine	Army	Episcopalian	1795	Anna Symmes (1775-1864).	6	4	**Harrison**
College, William and Mary, 1806	Lawyer	Lawyer	Episcopalian	1813 1844	First, to Letitia Christian (1790-1842); second, to Julia Gardiner (1820-1889).	3 4	4 2	**Tyler**
University of North Carolina	Lawyer	Lawyer	Presbyterian	1824	Sarah Childress (1803-1891).	0	0	**Polk**
Common School	Soldier	Army	Episcopalian	1810	Margaret Smith (1788-1852).	1	3	**Taylor**
Public School	Tailor	Lawyer	Unitarian	1826 1858	First, Abigail Powers (1798-1853); second, Caroline Carmichael McIntosh (1813-1881), a widow.	1 0	1 0	**Fillmore**
Bowdoin College, 1824	Lawyer	Lawyer	Episcopalian	1834	Jane Means Appleton (1806-1863).	3	0	**Pierce**
Dickinson College, 1809	Lawyer	Lawyer	Presbyterian	....	Unmarried.	..	...	**Buchanan**
Self Taught	Farmer	Lawyer	Liberal	1842	Mary Todd (1818-1882).	4	0	**Lincoln**
Self Taught	Tailor	Politician	Liberal	1827	Eliza McCardle (1810-1876).	3	2	**Johnson**
West Point Military Academy, 1843	Tanner	Army	Methodist	1848	Julia Dent (1826-1902).	3	1	**Grant**
Kenyon College, Ohio, 1842	Lawyer	Lawyer	Methodist	1852	Lucy Ware Webb (1831-1889).	7	1	**Hayes**
Williams College, 1856	Teacher	Lawyer	Disciples	1858	Lucretia Rudolph (1832——).	4	1	**Garfield**
Union College, 1848	Teacher	Lawyer	Episcopalian	1859	Ellen Lewis Herndon (1837-1880).	1	1	**Arthur**
Common School	Teacher	Lawyer	Presbyterian	1886	Frances Folsom (1864——).	2	3	**Cleveland**
Miami University, Ohio, 1851	Lawyer	Lawyer	Presbyterian	1853 1896	First Caroline Scott (1832-1892); second, Mary (Lord) Dimmick (1858—).	1 0	1 1	**Harrison**
Common School	Teacher	Lawyer	Presbyterian	.....	Frances Folsom (1864——)	..	...	**Cleveland**
Entered Allegheny College	Lawyer	Lawyer	Methodist	1871	Ida Saxton (1844-1907).	0	2	**McKinley**
Harvard 1880	Publicist	Publicist	Reformed Dutch	1883 1886	First, Alice Lee (1861-1884); second, Edith Kermit Carow (1861——).	0 4	1 1	**Roosevelt**
Yale, 1878	Lawyer	Lawyer	Unitarian	1886	Helen Herron (1861——).	2	1	**Taft**
Princeton, 1879	Lawyer	Educator	Presbyterian	1885	Helen Louise Axson	0	3	**Wilson**

THE PRESIDENTS OF THE UNITED STATES

Age at Death	Place of Death	Place of Burial	Writings of the Presidents	Presidential Sobriquets	Name
67	Mt. Vernon, Va.	Mt. Vernon, Va.	*Maxims; Transcripts of Revolutionary Correspondence.*	*Father of his Country; American Fabius.*	**Washington**
90	Quincy, Mass.	Unitarian church, Quincy, Mass.	*Essay on Canon and Feudal Law; Defense of the American Constitution.*	*Colossus of Independence; Son of Liberty.*	**Adams**
83	Monticello, Va.	Monticello, Albemarle Co., Va.	*A Summary View of the Rights of America; The Declaration of Independence; Act for Freedom of Religion.*	*Sage of Monticello; Long Tom.*	**Jefferson**
85	Montpelier, Va.	Montpelier, Hanover Co., Va.	*Reports of Debates During the Congress of the Confederation and Federal Congress; Essays.*	*Father of the Constitution.*	**Madison**
73	New York City.	Hollywood cemetery, Richmond, Va.	*A View of the Conduct of the Executive; The People; The Sovereign.*	*Last Cocked Hat.*	**Monroe.**
80	Hall of Congress, Washington, D. C.	Unitarian church, Quincy, Mass.	*Poems of Religion and Society; Lectures on Rhetoric and Oratory; Criticisms of Paine's "Rights of Man;" Defense of Washington's Policy of Neutrality.*	*Old Man Eloquent.*	**Adams, J. Q.**
78	Hermitage, near Nashville, Tenn.	Hermitage, near Nashville, Tenn.		*Old Hickory; Cæsar of the White House.*	**Jackson**
79	Kinderhook, N. Y.	Villiage cemetery, Kinderhook, N. Y.	*Inquiry Into the Origin and Causes of Political Parties in the United States.*	*Little Magician; Wizard of Kinderhook.*	**Van Buren**
68	White House, Washington, D. C.	North Bend, Ohio.	*A Discourse on the Aborigines of the Valley of the Ohio.*	*Tippecanoe.*	**Harrison**
72	Ballard House, Richmond, Va.	Hollywood, Richmond, Va.		*Young Hickory.*	**Tyler**
53	Nashville, Tenn.	Nashville, Tenn.		Also *Young Hickory.*	**Polk**
65	White House, Washington, D. C.	Near Louisville, Ky. (Springfield).		*Rough and Ready; Old Buena Vista.*	**Taylor**
74	Buffalo, N. Y.	Forest Lawn, Buffalo, N. Y.		*The American Louis Philippe.*	**Fillmore**
64	Concord, N. H.	Minot cemetery, Concord, N. H.		*Purse.*	**Pierce**
77	Lancaster, Pa.	Woodward Hill cemetery, Lancaster, Pa.	*Résumé of My Administration.*	*Old Public Functionary; Bachelor President.*	**Buchanan**
56	Washington, D. C.	Oak Ridge cemetery, Springfield, Ill.	*Orations.*	*Honest Old Abe; Rail-splitter; Great Emancipator.*	**Lincoln.**
66	Greenville, Tenn.	Greenville, Tenn.	*Speeches.*	*Sir Veto.*	**Johnson**
63	Mount McGregor, N. Y.	Riverside, New York City.	*Shiloh; Vicksburg; Chattanooga; The Wilderness; The Personal Memoirs of U. S. Grant.*	*Unconditional Surrender; Old Three Stars.*	**Grant**
71	Fremont, Ohio.	Fremont, Ohio.		*President de Facto.*	**Hayes**
49	Elberon, Long Branch, N. J.	Lake View cemetery, Cleveland, Ohio.	*Discovery and Ownership of the Northwestern Territory; Garfield's Words.*	*The Martyr President; The Dark Horse.*	**Garfield**
56	New York, N. Y.	Rural cemetery, Albany, N. Y.		*Our Chet; America's First Gentleman.*	**Arthur**
71	Princeton, N. J.	Princeton, N. J.	*Writings and Speeches.*	*Man of Destiny; The Claimant.*	**Cleveland**
67	Indianapolis, Ind.	Crown Hill cemetery, Indianapolis, Ind.	*Speeches; This Country of Ours; Views of an Ex-President.*	*Son of His Grandfather; Hoosier President.*	**Harrison**
58	Buffalo, N. Y.	Cemetery, Canton, Ohio.	*Speeches.*	*Prosperity's Advance Agent Bonaparte of Politics.*	**McKinley**
			The Naval War of 1812; Essays on Practical Politics; The Winning of the West; Hero Tales From American History; American Ideals; Life of Oliver Cromwell; African Game Trails.	*Teddy; The Rough Rider; T. R.; Our Strenuous President.*	**Roosevelt**
				The Globe Trotter; The Judicial President.	**Taft**
			Congressional Government; The State; An Old Master, and Other Political Essays; Mere Literature and Other Essays; George Washington; A History of the American People.	*The Scholar in Politics.*	**Wilson**

GOVERNMENT OF CANADA. — The government of the Dominion of Canada (which comprises all of British North America except Newfoundland) is carried on by means of a *federal government* and a *federal parliament*, which deal with all affairs of the Dominion as distinguished from merely provincial affairs, the latter being dealt with by provincial district governments of each province, district or territory.

Source of Governmental Powers.—All constitutional power and authority of both the federal and provincial and district governments and legislatures, are derived from the imperial Parliament of Great Britain; and the principal act by which the government of the dominion and the various provinces, districts and territories is regulated, is known as the British North America Act of 1867. Canada, like the United States, has in effect a written constitution, but it is supplemented by certain unwritten conventions which are derived from the constitutional law of the United Kingdom. Although the imperial Parliament of Great Britain is the supreme legislative body for the whole empire, yet it has delegated the powers of self government to the Dominion and ceases to legislate for it except so far as it may be requested so to do.

Limitations of Power.—Although the imperial Parliament has supreme power and jurisdiction over the whole empire and its acts cannot be brought in question or their validity contested in any court of law, the statutes passed by the Canadian Parliament, whether federal or provincial, must not exceed the legislative limits which the imperial Parliament has laid down, or they may be judicially declared to be *ultra vires* of the legislature which has assumed to pass them.

EXECUTIVE DEPARTMENT

The Sovereign.—The executive power of the whole British empire is by law vested in a single person—the Sovereign. The crown is by common law and constitutional custom, hereditary, and yet in the formal act of Recognition still preserved in the coronation ceremony, the assent of the people is theoretically necessary. The right of inheritance may, and has been, changed by the imperial Parliament, and subject to such change continues hereditary. The heir of the preceding Sovereign is the rightful successor, and as in common law descents, the preference of males to females, and the right of progeniture are strictly adhered to. Besides being heir to the preceding Sovereign, the successor must also be a Protestant.

How the Sovereign Acts.—In the exercise of executive power the Sovereign acts upon the advice of the ministers of the crown who are strictly accountable to Parliament for all public acts of the Sovereign. Through Canada and all parts of the British empire all writs run in the sovereign's name and all crimes are charged to be "against the King's peace, his crown and dignity."

Term of Office.—The Sovereign's term of office is during life, but in case of personal incapacity for the official duties of the office, by reason of infancy or other cause, a Regent may be appointed by Parliament.

Powers and Duties of the Sovereign.—It is difficult within a short compass to specify all the duties of the Sovereign, but among the more important are the following:

Commander-in-chief of Army and Navy.

Communicates with Parliament verbally or by message.

Chooses ministers of imperial government.

Approves or disapproves of acts of Parliament.

Makes treaties with advice of his imperial ministers.

Power to declare war and make peace.

Appoints public officers with advice and consent of his imperial ministers.

Commissions public officers.

Grants reprieves and pardons for crimes.

Confers honors, peerages, baronetcies, knighthoods, etc.

Has supreme judicial authority in all causes and matters in his dominions, such judicial authority being exercised on the judicial committee of his council.

The Governor-General of Canada

How Chosen.—The Governor-general is the Sovereign representative in Canada, and is appointed by the Sovereign with the advice of the imperial ministers.

Term of Office.—The term for which the Governor-general is appointed is usually five years, but the time may be extended or shortened by the Sovereign.

Eligibility.—The person to be chosen must be a British subject, and is usually selected from the ranks of the statesmen of Great Britain.

Salary.—The salary of the Governor-general is fixed by a statute of the Dominion Parliament at £10,000, and is paid out of the Dominion exchequer.

Powers and Duties.—Is the representative of the Sovereign in Canada and acts for him.

Communicates with Canadian Parliament, verbally or by message.

Chooses ministers of Canadian government, who are able to command a majority vote of the Canadian House of Commons.

In Sovereign's name approves or disapproves of acts of Canadian Parliament.

May reserve acts of Dominion Parliament for consideration of the Sovereign.

May, with advice of Canadian ministers, disallow Acts of provincial legislatures.

Appoints public officers of Dominion of Canada with advice of Canadian ministers.

Commissions public officers of Dominion.

Exercises Sovereign's prerogative of granting reprieves or pardons for crimes committed in Canada.

The Cabinet constitutes a kind of executive committee both of Parliament and the Privy Council. Its powers and duties are not defined by any statute or written law, but rest on conventions which have become part of the constitutional law of England and of the various parts of the empire to which the powers of self government have been delegated. It differs from the cabinet of the president of the United States in that it is considered essential that all of its members shall be also members of one or other of the Houses of Parliament, where they shall be able to explain and defend all their acts and proceedings. The cabinet of the dominion originates all legislation which it thinks to be necessary or expedient, and the defeat of any government measure of importance in the House of Commons, generally necessitates a resignation of the ministry, as no longer able to command the confidence of Parliament.

Salaries.—The salary of the Prime Minister is fixed by statue at $12,000 per annum. The salary of each of the other ministers is $7,000 per annum.

The Privy Council of Canada.—This is a body distinct from the cabinet. The statute law provides for the establishment of a Privy Council of the Sovereign in Canada to aid and advise in the government of Canada, the members of which are to be chosen and summoned by the Governor-general. No salary is attached to the office of Privy Councillor.

The Executive Departments.—The various Executive Departments of the Canadian government are under the control of ministers who are appointed to office by the Governor-general by commission under the great seal of Canada, and hold office during the pleasure of the Crown. The following are the Cabinet portfolios and their respective Executive Departments:

The Prime Minister, President of the Privy Council of Canada

The Ministers of Trade and Commerce, Department of Trade and Commerce

The Secretary of State, Department of Public Printing and Stationery, Department of Secretary of State

The Minister of Justice, Department of Justice

The Minister of Marine and Fisheries, Department of Marine and Fisheries

The Minister of Militia and Defense, Department of Militia and Defense

The Post Master General, Post Office Department

The Minister of Agriculture, Department of Agriculture

The Minister of Public Works, Department of Public Works

The Minister of Finance and Receiver General, Department of Finance

The Minister of Railways and Canals, Department of Railways and Canals

The Minister of the Interior and Superintendent of Indian Affairs, Department of Indian Affairs, Department of Interior

The Minister of Customs, Department of Customs

The Minister of Inland Revenue, Department of Inland Revenue

The Minister of Labor, Department of Labor

LEGISLATIVE DEPARTMENT

Parliament of Canada.—The Parliament of Canada is composed of the Sovereign, the Senate and the House of Commons. It is the prerogative of the Sovereign to summon meetings of Parliament and to prorogue or dissolve it. It is also the prerogative of the Sovereign to approve or disapprove of all bills which have been agreed to by both Houses. The Sovereign takes no part in debate. An annual session of Parliament must be held.

The Senate.

Number of Members.—87.

How Appointed.—By the Governor-general on the advice of Canadian Ministers.

Term of Office.—Life, but office may be forfeited.

Eligibility.—Thirty years of age or upward; national born or naturalized subject of the Sovereign; owner of $4,000 realty; resident of Province he represents; and in Province of Quebec his property qualification must be situated in the electoral district he represents.

Salary.—Fixed by statute at $2,500 and traveling expenses; speaker, $4,000.

Powers of Senate.

(a) Appoints its officers other than Speaker.

(b) Has power to approve, reject, or amend bills passed by the House of Commons.

(c) Cannot originate or alter bills passed by the House of Commons for raising revenue.

The House of Commons.

Number of Members.—221, elected by popular vote for electoral districts. Readjusted decennially.

Speaker.—Elected by House subject to approval of Governor-general.

Salary.—$2,500 and traveling expenses Speaker, $4,000.

Term of Office.—Duration of Parliament, but may resign or be expelled for crime.

Duration.—Until dissolved by Governor general, but not to exceed five years.

Powers. (a) Originates all bills for raising revenue.

(b) May approve, reject or amend bills passed by the Senate.

Legislation.—All laws must receive the assent of the Governor-general, the Senate and the House of Commons.

Legislative powers of Dominion Parliament are limited to federal matters.

JUDICIAL DEPARTMENT.

Judges of Dominion Courts.

Supreme Court.—Consists of a Chief Justice and five other Judges.

How Appointed.—By the Governor-general with the advice of the Canadian ministers.

Term of Office.—Life and good behavior, but may resign after 20 years service on full pay.

Jurisdiction.—Appellate court to hear appeals from courts of last resort in various Provinces of the Dominion. Has original jurisdiction in certain constitutional matters.

Salary.—Chief Justice, $10,000; other Judges, $9,000.

Exchequer Court.—Consists of one judge.

How Appointed.—By the Governor-general with the advice of the Canadian ministers.

Term of Office.—Life and good behavior, but may resign.

Salary.—$8,000.

Jurisdiction.—Claims against the crown; federal railways; patents; trade marks, copyrights; admiralty.

GOVERNORS-GENERAL OF CANADA

Governor-General	Lineage	Term of Office	Birth	Death
The Right Hon. Viscount Monck, G. C. M. G.	Charles Monck, British statesman, made a peer of the United Kingdom in 1866	1867–1869	1819	1894
The Right Hon. Lord Lisgar, G. C. M. G.	Baron Lisgar, a British politician (Sir John Young)	1869–1872	1807	1876
The Right Hon. the Earl of Dufferin, K. P. K. C. B., G. C. M. G.	Was created Marquis of Dufferin in 1888 (Frederick Temple Hamilton Blackwood)	1872–1878	1826	1902
The Right Hon. the Marquis of Lorne, K. T., G. C. M. G., P. C., etc.	Eldest son of the eighth Duke of Argyll (John George Henry Douglas Sutherland Campbell)	1878–1883	1845	....
The Most Hon. the Marquis of Lansdowne, G. C. M. G.	Fifth Marquis of Lansdowne (Petty-FitzMaurice Henry Charles Keith)	1883–1888	1845	....
The Right Hon. Lord Stanley of Preston, G. C. B.	Sixteenth Earl of Derby (Frederick Arthur Stanley)	1888–1893	1841	1908
The Right Hon. the Earl of Aberdeen, K. T., G. C. M. G.	Seventh Earl of Aberdeen (John Campbell Hamilton Gordon)	1893–1898	1847	....
The Right Hon. the Earl of Minto, G.C.M.G.	Fourth Earl of Minto (Gilbert John Elliot-Murray Kynynmound)	1898–1904	1845	....
The Right Hon. the Earl Grey, G. C. M. G.	Fourth Earl Grey (Albert Henry George)	1904–1911	1851	....
H. R. H. the Duke of Connaught	Third son of Queen Victoria	1911–	1850	....

PREMIERS OF CANADA

Name	Service: Term	Service: Years	Born	Died
Rt. Hon. Sir John A. Macdonald	1867–1873	6	1815	1891
Hon. Alexander Mackenzie	1873–1878	5	1822	1892
Rt. Hon. Sir John A. Macdonald	1878–1891	3	(see above)	(see above)
Hon. Sir J. J. C. Abbott	1891–1892	1	1821	1893
Rt. Hon. Sir J. S. D. Thompson	1892–1894	2	1844	1894
Hon. Sir Mackenzie Bowell	1894–1896	2	1823	....
Hon. Sir Charles Tupper, Bart.	1896–(Jan. 15 to July 8)	..	1821	....
Rt. Hon. Sir Wilfrid Laurier	1896–1911	13	1841	....
Rt. Hon. Robert Laird Borden	1911–....	..	1854	....

LAW may be defined as the system of rules established by organized society, performance of which it enforces or breach of which it punishes. It is the coercive character of its rules that distinguishes law from custom.

Its History.—Law has a natural course of development among uncivilized people; and what are at first merely customary usages or arbitrary decrees of a despotic ruler, intended only for a single case, become fixed as rules of law. In early law certain universal tendencies may be observed. Thus, such law is always formal. That is, the tests by which the validity of acts is judged are based on an arbitrary formality rather than upon the essential justice or reasonableness of the act. Procedure and proof are similarly formal. Such tests as ordeal or combat are held to determine the righteousness of a litigant's cause.

Five Systems.—In the history of the modern world five great systems of law have grown up: The Chinese, the Hindoo, the Mohammedan, the Roman, and the English. Of these the two last named are peculiar in having spread far beyond the countries in which they had their origin, and these two systems at the present day mainly dominate the civilized world.

Roman Law was partially diffused over the countries which the Romans conquered, and later was either tacitly or expressly adopted by most of the European countries. It now prevails over all southeastern Europe as well as in Germany, Belgium and Holland, and to a large degree its principles have been adopted in the Scandinavian and the Slavonic countries. The settlers of Central and Southern America carried their law with them and the Roman Law prevails throughout the countries there, as it also does in most of the East and West Indies.

A few portions of the British Empire and of the United States also have inherited the Roman law which, however, tends in such places with lapse of time to take on some admixture of the English common law. Scotland, parts of Africa, Ceylon, Quebec, Louisiana and the Philippine Islands come under this description.

The English Common Law has been spread by English colonists almost everywhere that the English language is spoken. Great Britain (with the exception of Scotland), Australia, New Zealand, British America (excepting the Province of Quebec), India, parts of Africa, numerous smaller British colonies, the United States, the Hawaiian Islands, all are dominated by the English system of jurisprudence, though in India native law as well as English law is enforced.

Our whole system of law is based on the English *common law.* This originated in local customary rules enforced in different communities in England from which was gradually evolved a common law for the whole kingdom. The earliest important influence in this direction was given by the establishment, in the reign of Henry II., of the Kings Courts, which had jurisdiction over the whole kingdom and travelled on a circuit through the several shires. These courts gradually superseded petty local tribunals. In the reigns of Edward I. and Edward III. parliamentary enactments strengthened the tendency to uniformity already begun and the foundations of the modern laws of real property were laid. Soon afterwards the equity jurisdiction of the chancellor became recognized, by means of which extensive modifications have been evolved in modern English law. In the reign of Henry VIII. and shortly thereafter the destruction of the Papal power in England prevented the further development of civil law principles through the medium of the canon law and the church. In other countries of Europe the canon law had been one of the means by which Roman or civil law had been extended. The great body of commercial law, which is so important to-day, has grown up almost wholly since the beginning of the eighteenth century.

When the English colonists settled in the United States they carried with them the system of law to which they had been accustomed and the revolution, though it severed the political union between the United States and England, did not change the system of law, so that except as subsequent statutes or decisions of American courts may have led to a different result English precedents still have weight in American courts.

Foundations of American Law.—The sources of American law are two: *statutes* and *decisions* of the courts. It is an important rule of the English common law that a previous decision of a court on similar facts creates a *precedent* binding the same court, or other courts of equal or lower rank, to render the same decision. It is due to this binding effect of precedent

that definite rules of law gradually were evolved by the courts without the aid of legislative enactment. The rules thus established must be sought in the published decisions of the courts.

Legislative Enactment is another very important source of law. But even when legislatures pass statutes, courts have the power of deciding what they mean, and thus even in regard to statutory law the governing rules often cannot be clearly known until courts have decided cases involving the construction of the statutes.

Classification.—Law may be divided into *public* and *private* law. Public law involves rights and duties between the state, or one acting by its authority, and a private individual, while private law involves the relative rights and duties of private persons.

Public Law comprises (a) International law, (b) Constitutional law, (c) Administrative law, (d) Criminal law.

International Law consists of rules governing the conduct of states toward one another, and the conduct of citizens of one state toward another state. In disputes between nations no court exists to which the parties may come and obtain a decree which will be forcibly carried out under the direction of the court; but the rules of international law are recognized by the courts of individual nations as binding when, as not infrequently happens, such rules affect the rights of the individuals.

Constitutional Law defines the manner in which the government is carried on, and the limits of the powers of the state as against the individual. In the United States not only the general government has a written constitution, but each state likewise has such a constitution. Each of these constitutions establishes the method of government and also contains grants and limitations of power to the several departments of the state. The Federal Constitution gives certain powers to the national government and denies certain powers to the individual states. Except in so far as powers are granted expressly or by necessary implication to the national government they are retained by the states. Both in Federal and State Constitutions the individual is protected in certain fundamental rights. Laws passed in violation of a constitution and within its jurisdiction are void, and whenever they are involved will be so treated by the courts.

Administrative Law relates to the rules by which government is administered by officers other than judges. Numerous rules affecting rights and duties are applied in this way: the collection of revenue; the promotion of health by boards established for the purpose; the supervision of banks, insurance companies, and other corporations; the management of public lands, are but a few of the activities which are carried on by administrative officers and in the exercise of these functions their rulings have a quasi-judicial character.

Criminal Law is the most familiar branch of public law. It consists of prohibitive rules to which penalties are attached. Criminal law, like civil law, grew up in England mainly by the decisions of courts creating a *common* law as distinguished from *statute* law. At the present time, however, criminal law has been more completely reduced to statutory form by legislative enactment than the civil law. Within the limits of the constitution the Congress of the United States has power to declare acts criminal and punish them as such, but there is no unwritten federal criminal law and the punishment of crimes is for the most part retained by the several states.

Legal Rights.—The rights enforced by private law may be divided into (a) Rights *in rem*; (b) Rights *in personam*. The former class of rights impose correlative duties on all the world, while the latter class impose correlative rights only on specified persons. The ownership of property affords an instance of a right *in rem*. The owner has a right to the property and everyone else in the world is under a duty to refrain from interfering with it.

Property is classed in the law as either *real* or *personal*. Real property consists of land, houses and other structures attached to the land and interests in such property. All other property, whether of tangible form or consisting of intangible rights, is personal.

Certain fundamental personal rights also may be classed as rights *in rem* since all the rest of the world is under a duty to each individual to refrain from interfering with these rights. Such interference constitutes what is called a *tort*, and, as such, gives a right of action for damages to the injured person and will frequently also constitute a crime and render the offender liable to prosecution by the state. Personal rights, such as are here alluded to, are the right to life, the right to freedom from bodily indignity either by assault or imprisonment; the right within certain limits to freedom from defamation either by written or spoken statements; the right of an innocent person to freedom from malicious prosecution for a crime, the right not to be injuriously misled by wilfully deceptive statements.

Recently Developed Rights.—The development of the boycott has given rise to questions not yet fully settled as to the right of individuals to freedom from such concerted attempts to cause damage—purely negative though a boycott may be. Similarly, the invasion of the privacy of individuals has given rise to questions of how far it is legal to publish by way of advertisement, or otherwise, pictures of individuals without their consent; and in other ways invade a reasonable privacy. The keen competition of modern business has also caused another new right to be recognized clearly, that of freedom from unfair competition. The simulation of the product of a manufacturer whether by the adoption of a deceptively similar name or by the use of deceptively similar packages, or otherwise, is illegal even though no trade-mark is infringed and no actual misstatement made.

Rights in Personam may be divided into (a) family rights; (b) contractual rights; (c) obligations imposed by law.

Family Rights and duties of husband and wife, and of parent and child are created by the existence of those family relations and are confined to persons bearing that relation to each other.

Contractual Rights and duties are created by the voluntary entering into an agreement of a sort which the law regards as binding. Agreements under the common law might be made binding either by attaching a seal to a writing containing the agreement or by an agreed consideration being paid by the promisee to the promisor.

Most of the ordinary transactions of business life involve applications of the law of contracts. The greater part of the law of agency, partnership, insurance, sales, negotiable paper and banking consists of specialized contractual law.

Certain other rights are given to specific individuals and duties imposed on other specific individuals irrespective of agreement or status by virtue of special statutes or for reasons of justice. The remedy or right of action allowed by law for breach of any legal duty may be classed under this head. When a right *in rem* is violated by a particular individual the owner of the right *in rem* then acquires, besides his original right against all the world, a special right *in personam* against the wrongdoer.

Thus, an owner of land acquires a right *in personam* against a trespasser for the recovery of damages suffered by the trespass. So a right *in personam* may change its character when the right has been violated. The right of a servant to employment under a contract becomes a right of action for damages if the employer wrongfully discharges the servant. Both rights against the master are rights *in personam*, but the right of action arising on breach of the contract is different from the right to employment which existed under the contract when unbroken.

Legal Remedies.—Closely connected with the subject of legal rights and duties is the subject of *legal remedies* for their enforcement. The rules defining the rights and duties of persons has been called the *substantive* law, that defining the remedies and the procedure and proof, the *adjective* law. *Adjective Law* may be divided into the law of *procedure* and of *proof* or *evidence*. *Procedure* in turn may be divided into *civil* procedure and *criminal* procedure; and civil procedure into procedure *at law* and *in equity*.

Civil Procedure.—The fundamental steps of civil procedure at law are the beginning of the action by a writ or notice to the defendant, *pleading*, trial and judgment.

Pleading consists first of a statement of the plaintiff's case variously styled a declaration or complaint. This is followed by a plea or answer of the defendant denying some or all of the facts alleged in the plaintiff's statement, or alleging further facts, or both. The answer is sometimes followed by other pleadings. The ultimate result of the pleading is that each party has set forth the facts on which he relies and these facts have either been admitted or denied by the other party. If essential facts are denied it is necessary to try the disputed question by means of *proof*.

But not only questions of *fact* but also questions of *law* might be involved in a dispute. The parties might agree as to the facts and dispute only as to whether on those facts the plaintiff had a right of action. Or the defendant might dispute both the truth of the facts alleged by the plaintiff and also assert that even though the facts were as the plaintiff alleged, still the plaintiff would have no cause of action. Questions of law are decided by a judge and, in accordance with his decision on questions of law and a jury's verdict on questions of facts, final judgment is given by the court for the plaintiff or defendant whichever is entitled to it. In the United States at the present day many questions of fact are decided by judges without the aid of juries, but owing to the provision of state constitutions, this is generally impossible except by the parties' waiving their right to trial by jury.

Procedure in Equity differs from procedure at law in various respects. The plaintiff's pleading is called a *bill* or *petition* and is fuller than is usual in a declaration at law. The defendant's answer is also fuller as to facts charged in the bill. There is no jury; questions of fact as well as law being determined by the judge.

The most fundamental difference between *equity* and *law*, however, is in regard to the character of the final order of the court. When judgment is rendered at law in favor of the plaintiff an execution for an amount of the judgment is put in the hands of a sheriff, who endeavors to satisfy the execution by seizure of the defendant's goods. The decree of the court of equity, however, is directly against the person of the defendant, ordering him on pain of imprisonment, to do what the court directs. A court of law can only give a money judgment, a court of equity can effectively order a defendant to do many things besides the payment of money; and not only are affirmative orders possible, but negative orders or injunctions are possible, and constitute one of the most important branches of equity jurisdiction.

In many states of America the procedure at law and in equity is now made identical, and even in states where this is not so, the same court generally has jurisdiction of both actions at law and suits in equity. In any event, however, the distinction between equitable relief and legal relief is still necessarily observed.

Criminal Procedure is in the main like civil procedure at law; the chief difference relating to the beginning of the proceedings. A person may be charged with crime by *complaint* made by any citizen to a magistrate who, if satisfied that there is reasonable cause for the complaint, and if he has jurisdiction to try cases of the sort, may proceed with the trial of the accused or otherwise may hold the accused for trial in the proper court.

Another method of beginning a criminal prosecution is by *information* filed by a prosecuting officer, but the commonest method is by *indictment* found *by grand jury* on a case presented to it by the prosecuting officer. The accused may then be arrested and held for trial either by confining him or by admitting him to bail. Those who give bail are regarded as private keepers of a prisoner and are bound to produce him when called upon to do so.

Greater particularity is required in the criminal pleading of the indictment than is necessary in civil actions. The defendant makes no other answer or plea than either guilty or not guilty. The latter plea compels the government to prove everything essential to make out the guilt of the accused of the crime charged.

In civil cases it is sufficient for one alleging facts in his pleading to prove them by a mere preponderance of evidence; but in criminal trials the government must prove the prisoner's guilt beyond a reasonable doubt in order to convict him.

Trials both civil and criminal are ordinarily conducted by a single judge, but appellate courts are established to revise the rulings of law made by trial judges if these rulings are questioned. When the trial judge makes a ruling of law the party aggrieved by his decision may reserve the right to question the correctness of the ruling in an appellate court, which generally consists in from three to seven judges sitting together. If the ruling at the trial is held to be incorrect by the appellate court, a new trial is ordered.

Evidence.—A very important branch of the adjective law is that relating to evidence. It is an obvious rule of logic as well as of law that no testimony is admissible which is not *relevant* to the facts in dispute; but not all evidence which is relevant is admissible. Indeed the law of evidence has been defined as consisting of rules excluding various kinds of logically relevant testimony; the most important of these rules is that which excludes *hearsay* evidence.

Of vital importance also is that which excludes *oral* evidence of the contents of a *written document* when the written document is obtainable and which makes a written contract between parties a conclusive statement of their agreement. The rules of evidence grew up as an accompaniment of the jury system and to a large extent are designed to avoid the misleading of a tribunal composed of twelve men unlearned in the law and perhaps of no great education. The commonest kind of legal errors carried from trial courts to appellate courts consists of erroneous rulings admitting or excluding proffered testimony.

Contracts.—A contract is an agreement between two or more persons, enforceable at law, whereby rights are acquired by one party to acts or forbearances on the part of the other party. The two fundamental ideas of contract are agreement and legal obligation.

Classification.—Contracts are classified in various ways. There are *express* and *implied* contracts; *formal* and *informal* contracts; *executed* and *executory* contracts; *valid* and *voidable* contracts.

Express and Implied Contracts.—An express contract is one created by oral or written words. An implied contract is one inferred from the acts of the parties.

Formal and Informal Contracts.—Formal contracts are those whose validity depends upon their form. They are of two kinds—contracts of *record* and contracts under *seal*. At common law the seal consisted of an impression on wax or a wafer attached to the instrument. By statute, however, a mere scroll has the same effect as a common-law seal. All contracts which are not of record or under seal are *informal*.

Executed and Executory Contracts.—An executed contract is one which has been fully performed by both parties, while an executory contract is one in which something remains to be done. A contract may be executed on one side and executory on the other.

Valid and *Voidable Contracts.*—A valid contract is one which is enforceable at law against both parties. A voidable contract is one which may be avoided at the option of one of the parties.

Essentials of a True Contract.—All true contracts contain the following essentials: (1) competent parties; (2) a valuable consideration; (3) a real agreement; (4) a lawful object. Some contracts also must comply with certain forms prescribed by law.

Incompetent Parties.—Certain persons are more or less incompetent to make a valid contract. They consist of the following six classes: (1) infants; (2) insane persons; (3) drunkards; (4) married women; (5) aliens; (6) corporations.

Infants. At common law, all persons under twenty-one years of age are infants. In a few states, however, by statute, females are of age at eighteen.

Married Women.—At *common law* a married woman's contracts were void. Courts of equity, however, from an early day, have protected her *separate estate* and recognized her *contracts* relative thereto. This estate included all property, both real and personal, which was settled upon her to her sole and separate use. The legal title to it had to be in some other person, who might be her husband, who held it in trust for her.

The Married Woman's Acts, which are in force in every state of the Union, have greatly enlarged the rights and powers of married women. Generally speaking, they provide that property owned by a woman at the time of her marriage, and all subsequently acquired by her by gift, grant, bequest or devise, shall be her separate estate free from the debts of her husband, and that she shall have power to make contracts with reference to such estate. In a few of the states these modern statutes go farther and give her the right to make contracts in general and to engage in trade the same as a *feme sole*.

Corporations are artificial beings. They are invisible and intangible and exist only in contemplation of law. They must act therefore, through the instrumentality of agents. They may make contracts, provided they act within the scope of their charters. Contracts which are foreign to their charters are *ultra vires*.

Consideration.—A promise is not legally binding unless supported by a valuable consideration. A good consideration, such as blood relationship, will support a conveyance, but not a contract. A promise, therefore, to make a gift is not enforceable. If, however, the object of the donation has been delivered to the donee the gift is irrevocable.

Promise Under Seal.—A promise under seal, at the old common law, was conclusively presumed to be supported by a valuable consideration. In this country, however, the presumption is disputable.

What Constitutes a Valuable Consideration.—A consideration is a valuable one in the eye of the law if it consists of some benefit, interest, or right accruing to the promisor, or some detriment, forbearance or responsibility suffered or undertaken by the promisee. It is not essential, however, that there be a real benefit to the promisor, or a real detriment to the promisee. The mere waiver of a legal right is sufficient. Thus, it has been held that a promise by an uncle that he would pay his nephew $5,000 if during his minority he would refrain from using intoxicating liquor and tobacco, and would not swear or play cards for money, is legally enforceable. In such case, the restriction upon the nephew's lawful freedom is a sufficient consideration for the uncle's promise.

A promise to perform an *impossible* thing is not a valuable consideration. Nor is a promise to do what the promisor is already bound to do. Marriage is a valuable consideration and so is a promise to marry.

Inadequacy of Consideration.—Mere inadequacy of the consideration is no defense to an action on a contract. It may be used with other testimony, however, as evidence of fraud, undue influence or duress.

A Real Agreement.—To create a contract there must be an offer and an acceptance. The minds of the parties must meet. In other words, the acceptance must be unconditional and conform to the terms of the offer. The offerer may prescribe the time and place of the acceptance and the mode of making it.

Revocation of Offer.—An offer may be revoked at any time before acceptance. It may become revoked by mere lapse of time. The death or insanity of either party before acceptance revokes it.

An Offer by Mail or Telegraph.—An offer by mail does not take effect until received, but an acceptance by mail, provided it is properly addressed and stamped, takes effect when posted. The fact that it is lost in the mails is immaterial. The offeror, however, may make the actual receipt of the acceptance a condition precedent to a contract. Similar rules govern relative to offer and acceptance by telegraph.

A Lawful Object.—The object of the agreement must be a lawful one. An agreement to do an act which is prohibited by positive law, or which is against public policy, is illegal and void.

Wagering Contracts.—In this country wagering contracts are quite generally prohibited by statute. At common law, however, they were enforceable. They include transactions on the board of trade, called futures, whereby the parties do not contemplate a delivery of the goods sold, but merely payment of the difference between the contract price and the market price at the time of delivery.

Sunday Contracts.—Sunday contracts, as a rule, are also prohibited by statute. At common law, however, they, like wagering contracts, were enforceable. The statutes of the various states vary considerably, but all exempt from their operation contracts founded upon works of charity or necessity. Under these statutes, promissory notes, bonds, deeds and mortgages delivered on Sunday are void, although signed on a secular day. But those delivered on a secular day are enforceable although signed on Sunday. This is owing to the fact that the instrument takes effect upon delivery.

Usury Statutes.—Usury statutes obtain in nearly all of the states. Usury is interest contracted for or paid in excess of the legal rate. The purpose of the usury statutes is to protect debtors from overreaching creditors. They vary in the different states. Some make the entire contract void. Others make the interest void. While still others merely make the excess above the legal rate void. They apply to loans, but not to sales. Hence they are not applicable where bills or notes are discounted by a third party. Nor, by the law merchant, do they apply where a banker in loaning money deducts in advance the highest rate of interest allowable. To constitute usury there must be a corrupt intent, but devices to cover this intent are carefully scrutinized by the courts.

Contracts in Restraint of Trade are against public policy and void. The chief reason is they tend to create monopolies. A person may, however, restrain himself from carrying on a business or profession within reasonable limitations as to territorial limits. And when he does this no limitation is essential as to time.

Contracts in Restraint of Marriage.—Contracts which unduly restrain a person from marrying are against policy and void. Thus, a contract never to marry, or not to marry any one but a certain person to whom the promisor is not already engaged, is void. But a contract not to marry until of age is valid. And, ordinarily, a contract not to marry without the consent of the promisor's parents is valid.

Cornering the Market.—Combinations whose purpose is to corner the market are against the public policy and void. This is because they tend to create monopolies and thereby unduly enhance prices. Similarly, where a buyer at a public sale is fraudulently influenced by fictitious bids to pay an abnormally high price he may rescind the contract.

Contracts Against Public Justice or the Public Service.—Agreements which tend injuriously to affect public justice or the public service are against public policy and void. Thus, a contract whereby a party agrees unduly to interfere officially in a law suit that does not concern him; or to pay a public officer a fee for an official act; or unduly to influence an election to a public office, are void.

Contracts Which Must be in Writing.—In some jurisdictions in this country a writing is now essential in one or more of the following cases: (1) contract of insurance; (2) acknowledgment of a debt which is barred by the statute of limitations; (3) acceptance of an order for the payment of money; (4) ratification by a minor after reaching his majority.

The Statute of Frauds.—In every state in this country there exists what is known as the Statute of Frauds. This statute contains two sections—the 4th and the 17th—of great importance in the law of contracts, especially the former.

The 4th Section of the Statute of Frauds.—The 4th section of the English statute provides that no action shall be brought (1) whereby to charge any executor or administrator upon any special promise to answer in damages out of his own estate; or (2) to charge the defendant upon any special promise to answer for the debt, default or miscarriage of another; or (3) to charge any person upon any agreement made upon consideration of marriage; or (4) upon any contract or sale of lands, tenements or hereditaments, or any interest in or concerning them; or (5) upon any agreement that is not to be performed within the space of one year from the making thereof, unless the agreement upon which such action shall be brought, or some memorandum or note thereof, shall be in writing, and signed by the party to be charged therewith, or some other person thereunto by him lawfully authorized. Failure to comply with the requirement of this section of the statute does not render the contract void, but renders it unenforceable by excluding oral testimony of it.

The 17th Section of the Statute of Frauds.—The 17th section provides that no contract for the sale of any goods, wares or merchandise, for the price of 10 £ sterling, or upward, shall be allowed to be good, except (1) the buyer shall accept part of the goods so sold and actually receive the same; or (2) give something in earnest to bind the bargain, or in part payment; or, that some note or memorandum in writing of the said bargain be made and signed by the parties to be charged by such contract, or their agents, thereunto lawfully authorized.

Contracts for Work, Labor and Materials Excluded.—This section does not apply to contracts for work, labor and materials. As to just what constitutes such a contract, however, the courts do not agree. In most of the states it is held that a contract for a chattel to be made is not one for work, labor and materials, provided the chattel is one which the vendor ordinarily makes and sells in the regular course of his business.

Minimum Value.—In most of the states the minimum value of the goods to which this section of the statute applies is fixed at $50. In a few, however, it is more, and in a few others less. And in at least two the amount is not limited.

In a few states, including Illinois, this section of the statute has been repealed.

Reality of Consent.—The mutual consent of the parties must be real. The causes which sometimes render it unreal are the following: (1) mistake; (2) misrepresentation; (3) fraud; (4) undue influence; (5) duress.

Mistake.—The kind of mistake which is meant in this connection is mistake of intention and not mistake of expression. The former avoids the contract, but the latter does not. Where the parties are mistaken as to the existence of the subject-matter the mistake, of course, avoids the contract.

Misrepresentation, as distinguished from fraud, is an innocent misstatement or nondisclosure of a fact. As a rule, it has no effect upon a contract. There are, however, some exceptions to this rule. These consist of contracts *uberrimae fidei*. From their nature one party relies upon the other party for knowledge of certain facts and that other party in consequence is bound to exercise the utmost good faith.

They include insurance contracts, and those made between parties occupying a fiduciary relation, such as guardian and ward, trustee and *cestu ique trust*, attorney and client, principal and agent, etc. In this class of cases a material misrepresentation, although innocently made, renders the contract voidable and entitles the injured party to equitable relief.

Fraud is a misrepresentation of a material fact, present or past, made with knowledge of its falsity or in reckless disregard whether it is true or false, with intent to deceive, and which does deceive the other party, to his injury.

Ordinarily, to constitute fraud there must be a *misrepresentation* as distinguished from a mere *concealment*. There are, however, some exceptions to this rule. Where the deceiving party is in duty bound to make a disclosure, or where he takes steps to prevent a disclosure, or where the concealment renders that which is stated false, the nondisclosure amounts to fraud. The effect of fraud upon a contract is to make it voidable at the option of the injured party.

Undue Influence.—Undue influence is akin to fraud. It consists in the taking by one of the parties to the contract of an unfair advantage over the other party, who either reposes confidence in him, or possesses a weak intellect, or is in distress. Like fraud, its effect upon a contract is to render it voidable.

Duress is actual or threatened violence or imprisonment which reasonably causes another to enter into a contract. It may be by one of the parties to the contract or by his agent. And it may be against, or of, either the other party to the contract, or his or her spouse or other near relative. It may consist of the threatened destruction of property, or, under oppressive circumstances, of the illegal detention of property. As in the case of fraud or undue influence, its effect is to render the contract voidable.

Rules of Interpretation.—The ultimate purpose of rules of interpretation of contracts is to ascertain the intention of the parties. To accomplish this the following rules are applied by the courts:

When the contract is in writing the writing itself is the best evidence of it. This rule does not apply, however, where the writing is a mere memorandum of the contract, or where the purpose in introducing oral testimony is to show fraud, illegality, mistake of expression, usage or custom, or a condition precedent. Nor does it apply to subsequent oral agreements. Nor to oral testimony whose purpose is to explain the meaning of terms. Again, where a proper foundation has been laid for the introduction of secondary evidence, oral testimony of the written contract is admissible.

When the instrument is partly written and partly printed and the written and the printed parts conflict, the former must control.

Ordinarily, words are to be given their plain, common meaning. If, however, the context or surrounding circumstances show that the parties intended to use them in a peculiar or technical sense they must be given that special meaning.

When doubt exists as to the meaning of a word or clause it is to be construed most strongly against the party using it.

When words or clauses are repugnant, those which are opposed to the manifest intention of the parties are to be rejected.

Subsequent acts of the parties may have a controlling influence in determining their intention. In no case, however, will they be allowed to defeat the plain import of the words.

The various parts of the instrument must be construed together. When there are several contemporaneous agreements relating to the same transaction they must be construed in the light of one another. And when one or more other papers are directly referred to in the instrument as constituting an inducement to the contract, they are entitled to consideration.

Modes of Discharging a Contract.—Contracts are discharged in the following ways: (1) by agreement; (2) by performance; (3) by impossibility of performance; (4) by breach; (5) by operation of law.

Discharge by Agreement.—The parties may agree that their contract shall no longer bind them. Such an agreement is called a waiver, cancellation or rescission. Express words of rescission are not essential. Thus, where the parties make a new contract, which is inconsistent with the old one the latter is discharged. In such case if a third party is substituted for one of the original parties with the consent of all three, the new agreement is called a novation.

Discharge by Performance.—Strict and full performance of a contract discharges it. Ordinarily, a reasonable time is allowed within which to perform a contract. When, however, time is of the essence of the contract, failure to perform within the time agreed constitutes a breach. Mercantile contracts, especially, belong to this class.

Performance may consist in payment of money or negotiable paper. In the latter case the performance may be absolute or conditional. Ordinarily, a presumption arises that the payee is entitled to sue on the original contract if the paper be not paid when due.

Tender, or an offer to perform, may constitute a release. Thus, when a party offers to render services, or deliver goods, or do some other act which he is bound to perform, and the tender is refused, he is usually released. It is to be observed, however, that when the obligation is the payment of money, a tender of the sum due does not discharge the debt. Usually, however, it stops the accrual of interest, and also puts the burden of costs on the creditor in case he sues to recover the debt. Moreover, if any security for the debt exists, it discharges it.

Discharge by Impossibility of Performance.—When the agreement shows on its face physical or legal impossibility of performance there is no contract. And the same is true when the subject-matter of the agreement has ceased to exist at the time the agreement is entered into.

Ordinarily, however, when the impossibility of performance arises subsequently to the formation of the contract it does not discharge it. The chief exceptions to this rule are as follows: (1) when the contract is one for personal services and death or incapacitating illness intervenes; (2) when the continued existence of some specific thing is essential to the performance and it ceases to exist through no fault of either party; (3) when the impossibility is created by law.

Discharge by Breach.—Breach of the contract by one of the parties always gives the other party a right of action for damages, and sometimes discharges the contract. When one party renounces the contract the other party may treat it as discharged and sue at once for the breach. When the promises are independent of each other, failure of performance by one party does not operate to discharge the other; but when the promises are conditional upon each other, it does. Independent promises are absolute, divisible or subsidiary. Conditional promises are precedent, concurrent or subsequent.

Discharge by Operation of Law.—Contracts are discharged by operation of law in the following ways: (1) merger; (2) alteration; (3) bankruptcy proceedings.

Merger is where a higher security swallows up or extinguishes a lower one. This cannot occur unless the securities are of unequal grade, and the subject-matter and the parties the same. A contract under seal will merge a simple contract, and a judgment will merge a contract under seal. But a written contract not under seal will not merge an oral one because they are of equal grade. Each is merely a simple contract.

Alteration of a contract discharges it, provided the alteration is material and made intentionally by one of the parties to it, or his agent, without the consent of the other party.

Bankruptcy releases a party from all his liabilities provable under the bankruptcy proceedings. The decree of the court constitutes the order of discharge.

Negotiable Instruments.—Negotiable paper should possess the following characteristics: (1) it must be in writing and signed; (2) it must contain an unconditional order or promise to pay a certain sum of money; (3) it must be payable to order or bearer; (4) it must be payable at a determinable time; (5) if a bill of exchange it must indicate the drawer.

Bills of Exchange.—A bill of exchange is an unconditional written order by one person upon another, directing him to pay a third party, or to his order or to bearer, a sum of money therein stated.

Bills of exchange are of two kinds: (1) foreign; (2) domestic. A foreign bill of exchange is a bill drawn in one state or country and payable in another state or country. A domestic or inland bill of exchange is a bill which is payable in the state or country in which it is drawn.

Parties to a Bill of Exchange.—The necessary parties to a bill of exchange are the drawer, the drawee and the payee. There may be, in addition, indorsers and indorsees. After the drawer accepts the bill he is called the acceptor. In accepting the bill he thereby becomes the principal debtor and the drawer becomes a guarantor of payment instead of a guarantor of acceptance.

Presentment for Acceptance Not Always Essential.—Unless the drawer has directed that presentment be made for acceptance it is not essential in the case of bills payable on demand, or on a certain date, to present them for acceptance. It is customary to do so, however, as to those payable at a specified time. Those payable a certain number of days after sight or demand must be presented for acceptance within a reasonable time.

Privilege of the Drawee.—The drawee is entitled not only to inspect the bill, but also to retain it twenty-four hours. This is to enable him to investigate the drawer's account before deciding whether he will accept the bill or not.

An acceptance which differs from the tenor of the bill may be refused by the holder; but if he accepts it he is bound by it.

Promissory Notes.—A negotiable promissory note is an unconditional written promise by one person to pay another person, or to his order or to bearer, at a determinable time, a sum in money. The *liability* of the maker, unlike that of the drawer of a bill of exchange, is primary and direct.

Transfer of Bills and Notes—A bill or note payable to bearer, or payable to order and indorsed in blank, is transferable thereafter by mere delivery. The transferor in such case impliedly warrants the genuineness of the signatures and the body of the instrument. He also impliedly warrants the capacity of the parties to make a contract and his title to the instrument.

When the instrument is indorsed in full, as, for example, "Pay to the order of John Brown," any further transfer will require the indorsement of the indorsee. Without such indorsement the equitable title would pass, but not the legal title.

Indorser's Liability.—An indorser of a bill or note not only impliedly warrants all that a transferor by mere delivery impliedly warrants, but also, in the case of an unaccepted bill payable at a certain future time, that it will be accepted unconditionally by the drawee when duly presented for acceptance; and in the case of a promissory note or an accepted bill payable at a certain future time, that it will be paid at maturity if duly presented for payment, or, if payable on demand, that it will be paid within a reasonable time after demand of payment is made. And furthermore, that in case of dishonor, either by non-acceptance or non-payment, after due demand, he will pay the obligation upon receiving due notice of the dishonor.

Where there are two or more indorsers they are liable *prima facie* in the order in which their names appear on the instrument.

Place for Indorsement.—The proper place for an indorsement is across the back of the instrument. It may, however, be elsewhere, even upon a separate paper. In such case the separate paper is called an allonge. It may contain several indorsements.

A Restrictive Indorsement is one which restrains further indorsement of the bill or note. Title is vested in the indorsee as a trustee or agent. Thus, "Pay to John Brown for my use"; "Pay to John Doe for my account"; are restrictive indorsements.

An Indorsement with Waiver is an indorsement which waives demand, notice or protest, or more than one of them. When in the body of the instrument it binds all the parties, but when it is above the signature of but one indorser he is the only person bound by it.

Protesting a bill or note consists in taking the necessary formal steps by a notary public to establish and certify to its dishonor. It is essential that the same notary take all the steps required and that the certificate of protest be based upon his acts.

Notice of Dishonor of a bill or note may be oral. Ordinarily, however, it is in writing. It should contain statements showing: (1) a sufficient description of the instrument dishonored; (2) that it was presented for acceptance or payment; (3) that acceptance or payment was refused; (4) that it has been protested, if this has been done; (5) that the holder looks to the party notified for payment.

Checks.—A check is an order on a bank or banker, payable on demand without grace, drawn by a depositor.

Relation between Bank, Depositor and Checkholder.—The fund on deposit belongs to the bank rather than to the depositors. The bank is the depositors' debtor. For this reason a checkholder, as a rule, may not sue the bank. If, however, the check has been previously certified by an authorized officer of the bank, he may do so. In such case the bank is the checkholder's debtor. Moreover, where the holder of the check procures the certification the drawer and the indorsers are released.

Presentment of Check.—A check should be presented within a reasonable time. What constitutes a reasonable time depends upon the circumstances of the particular case. Five days' delay has been held sufficient to render the check stale. On the other hand, a month's delay has been held insufficient to do so. A stale or overdue check admits equitable defenses against the holder.

Payment of Checks.—When a check, properly drawn, is presented for payment and there are sufficient funds on deposit to meet it, the bank is bound to pay it. A refusal to do so would render it liable to the depositor for damages.

When Fund is Attached.—When the fund of a depositor is attached the bank, as a rule, may not pay his checks. In those states, however, in which a check operates as an equitable assignment *pro tanto* of the fund upon which it is drawn, the bank may pay checks drawn before the attachment.

Forged Checks.—When a bank pays a check whose signature is forged it must bear the loss. And when it pays a raised check it also must bear the loss, unless the drawer's negligence in filling up the blanks facilitated the forgery.

Certificates of Deposit are negotiable the same as promissory notes, and the rules which apply to indorsers generally apply to this class of paper.

Bona Fide Holders of negotiable paper are persons who take it in good faith, without notice of equities in general, in the usual course of business, for a valuable consideration, before maturity.

As a rule, a *bona fide* purchaser of negotiable paper takes it free from all equities. There are some equitable defenses, however, available even against him. Thus, incapacity of the maker or drawer to make a valid contract, such as insanity, infancy and coverture, is a defense against everybody. Likewise, where the signature is forged, or the body of the instrument materially altered. Also where the original consideration is illegal and the statute for this reason makes the instrument void.

Agency.—An *agent* is one who represents and acts for another. A *principal* is one who is represented by and acts through another. *Agency* is the relation which exists between such persons.

Creation of the Agency Relation.—The relation of agency may be created by *agreement* or by *operation of law.*

By Agreement it may be by appointment or by ratification. Ratification is the adoption of the act of an unauthorized agent. To create the agency relation by ratification the following conditions must exist: (1) the doer of the act must profess to do it on behalf of an existing principal; (2) the approval of the act must be given with full knowledge of all the facts; (3) the act must be approved as a whole. It may not be approved in part and repudiated in part.

Creation by Operation of Law.—As a rule, the agency relation is created by agreement of the parties. There are, however, two important exceptions to this rule: (1) agency by *estoppel*; (2) agency by *necessity*. In these cases there is no assent of the parties. The relation is created by operation of law.

In the case of *agency by estoppel* the principal by his act estops himself from disputing the agency. As said by an eminent judge, "Where one has so acted, as from his conduct to lead another to believe he has appointed some one to act on that belief, then, unless he interposes, he will, in general, be estopped from disputing the agency, though in fact no agency really existed."

A good example of *agency by necessity* is that which arises where a husband improperly fails to furnish his wife necessaries. In this case, as said by Chief Justice Holmes, "it (the law) creates a compulsory agency."

Classification of Agents.—Agents are classified as to the *scope of their authority* and also as to the *nature of their duties.*

As to scope of authority, agents are either general or special. A general agent is one who is appointed to do acts of a class, and a special agent is one appointed to do an individual act.

As to the nature of their duties, agents are either professional or non-professional. The former include brokers, factors, or commission merchants, auctioneers and attorneys-at-law.

Capacity of the Parties.—Any person who has legal capacity to act in his own right may act through an agent. And any person who has sufficient natural capacity to perform the act delegated to him may be an agent.

Appointment of Agents.—Ordinarily, an agent may be appointed orally. In some cases, however, by statute, a writing is essential. At common law, to empower an agent to bind his principal by an instrument under seal the agent's authority must be under seal. At present, however, this rule is subject to the following exceptions: (1) where the instrument is sealed in the presence of the principal, by his authority; (2) where the instrument does not require a seal.

Duties and Liabilities of Agents—An agen must be loyal to his trust and obey in structions. He must not engage in en terprises antagonistic to the interest of hi principal nor reap secret benefits at th expense of his principal. He must exercis due care and skill and keep regular ac counts of his transactions connected wit the agency. If he exceeds his authority a agent he is liable to the third party. An in all cases he is liable to third parties in jured by his torts, where they are no guilty of contributory negligence.

Rights of Agents—An agent is entitled to th compensation agreed upon, or to reason able compensation where no sum is fixed b agreement. If the term is fixed, and he i wrongfully discharged he may recover th *actual* value of the services rendered, o has the option of treating the contract a recinded and recovering the actual valu of the services rendered, or of treating th contract as subsisting and recoverin damages for the breach. If he should de cide to do the latter, he should wait unti the end of the term.

Duties and Liabilities of Principal.—It is th duty of the principal to give instruction to his agent as to the duties he is to per form, to furnish him with proper appli ances, etc., and to remunerate him accord ing to the terms of the contract. Th acts of the agent, within the scope of th agency, are the acts of the principal, and h is liable for them.

Termination of the Agency Relation.—Th agency relation may be terminated a follows: (1) by act of the parties; (2) b expiration of the term; (3) by operatio of law.

By Act of the Parties.—The parties ma terminate the relation at any time, b mutual agreement. Moreover, as a rule either party can renounce the agency a any time. In doing so, however, he exer cises a power rather than a right and i liable in damages for breach of his con tract. The only exception to this rule i where the agent's authority is coupled wit a proprietary interest in the subject-matte of the agency. In such case the principa cannot renounce the agency.

By Expiration of the Term.—When th agency is created for a definite period i expires at the end of the term.

By Operation of Law.—The chief cause by which the agency relation may b terminated by operation of law are th following: death, insanity, bankruptcy war, and marriage.

Corporations.—A business corporation, from a strictly legal point of view, is an artificial person created by law, invisible intangible, and existing separate and distinct from its members. Practically however, it is an association of natura persons endowed with power by the legislature to carry on business enterprises in many respects as an individual.

How Created.—In this country they are created by the legislature, and as a rule under general statutes. Under these statutes the charter of the corporation consists of the certificate of incorporation, the articles of association, and the statutory provisions.

Its Attributes and Powers.—As a legal entity, a business corporation has capacity: (1) to enjoy a potential immortality; (2) to enter into contracts; (3) to take, hold and transfer property; (4) to sue and be sued like a natural person; (5) to make contracts with its own members, and sue and be sued by them; (6) to have and use a common seal; (7) to enjoy grants of

privileges and immunities; (8) to make by-laws; (9) to commit torts, and even certain crimes for which it may be indicted and fined; (10) in the absence of statutes or special circumstances, to be solely liable for its obligations.

Management of Corporations.—The power behind the throne in the case of a corporation is the stockholders. They choose a board of directors, and this board is entrusted by the stockholders with the direct management of the business. The details of management are entrusted by the board of directors to a president, secretary and treasurer, chosen by the board.

Powers of the Majority.—The chief powers of the majority, with respect to the stockholders, are as follows: (1) to choose directors; (2) to make by-laws; (3) to make important changes in the business within the scope of the charter.

Voting Power.—Under modern statutes each stockholder is entitled to one vote for each share of stock owned, and he is permitted to cumulate them as he chooses. He may also vote by proxy.

Powers of Directors.—The board of directors has a wide discretion in the management of the business. It has sole power to declare dividends and to fix the time and place of payment. As a rule, the majority of the directors constitute a quorum. The board has authority to select agents of the corporation, but not to decide upon important changes in the company's business, nor to determine whether the business shall be wound up or not.

Liability of Shareholders.—As a rule, the shareholders whose subscriptions are fully paid are not liable to the creditors of the corporation. But where they participate in the wrongful diversion of the capital of the corporation to the injury of its creditors they are liable to them.

Modes of Dissolving a Corporation.—A corporation may be dissolved in any one of the following ways: (1) by expiration of its charter; (2) by surrender of its charter with the consent of the state; (3) by legislative enactment, provided it is constitutional; (4) by judicial proceedings for the purpose of forfeiture owing to misuser or nonuser of its franchises.

Partnerships.—A partnership is an unincorporated association of two or more competent persons who have agreed to unite their property, labor and skill, or some of them, in carrying on a lawful business as principals for their joint profit.

Requisites of a Partnership.—The requisites of a partnership are as follows: (1) two or more competent persons; (2) a voluntary, unincorporated association; (3) based upon contract; (4) a lawful business; (5) carried on by the partners as principals; (6) for pecuniary gain.

Classification of Partnership.—Partnerships are sometimes classified as *ordinary* partnerships, *limited* partnerships and *joint-stock companies.*

Ordinary Partnerships.—Ordinary partnerships are divided into *general* and *special* partnerships.

A general partnership is one for carrying on a general kind of business or several kinds of business. A special partnership is one created to accomplish a single adventure.

Limited Partnerships.—A limited partnership is one having one or more general partners whose liability for the firm debts is not limited, and one or more special partners whose liability is limited. In organizing this kind of partnership the provisions of the statute must be carefully followed.

Joint-stock Companies are partnerships with a capital stock divided into transferable shares. In the absence of statutory provisions they are governed by the articles of association, the by-laws, and the general principles of partnership.

Classification of Partners.—Partners are designated according to the relation that exists between them and the firm, or between them and third persons. Thus, depending upon such relation, they are called ostensible, active, secret, dormant, nominal, general, special, incoming, retiring, or liquidative.

Powers of Partners.—As a general rule, each partner, for the purposes of the partnership business, is an agent of the firm and of his co-partners. The extent of the agency depends upon the nature of the business. In a trading firm a partner has implied power to buy and sell goods, execute commercial paper, borrow money, pledge or mortgage firm personalty, collect debts due the firm, lease premises, hire property, appoint agents, etc. He has no implied power, however, to submit controverted partnership matters to arbitration, or make a general assignment for the benefit of creditors.

In the case of a non-trading firm the implied powers of a partner are more limited. Thus, he has no implied power to bind the firm by making, accepting or indorsing commercial paper. Such paper, therefore, is not enforceable even in the hands of a *bona fide* purchaser.

Rights of Partners.—Each partner, in the absence of an agreement to the contrary, has an equal right to share in the management of the business of the firm. And each has the right to have firm property applied to the payment of firm debts.

Duties of Parties.—The partnership relation is one of great confidence and trust. For this reason the law requires that partners exercise toward one another the highest integrity and good faith. In the absence of agreement, a partner must not engage in transactions antagonistic to the firm's business, or take secret profits at the expense of the firm. He must conform to the partnership agreement, keep accounts, exercise care and skill, and consult with his co-partners upon all proper occasions.

Liability of Partners.—Partnership obligations arising from *contract* are joint, while those arising from *tort* are joint and several. Each member of the firm is personally liable, however, for all the firm debts. But a partner who is compelled to pay firm debts out of his separate estate is entitled to contribution from his co-partners.

Partnership Property.—The property of the firm may be both real and personal. The legal title of the firm personalty may be held in the firm name. It is otherwise, however, as to the firm realty. This is owing to the fact that the firm is not a separate legal entity. The deed should run to all of the partners in trust for the firm. It may be held by any one, however, for the use of the firm.

Nature of a Partner's Interest in the Firm Property.—The interest of a partner in the the firm property is a peculiar one. It is simply his share in the surplus after the debts are paid. And this is all the buyer gets where his interest is sold by a separate creditor under a writ of execution.

Actions in Law and Equity.—Since the firm is not a separate legal entity, a partner cannot sue his firm at law. Nor can the firm sue him. Moreover, a partner cannot sue, as a rule, his co-partner at law. He may do so, however, as to transactions wholly distinct from the partnership business; and also as to matters arising prior or subsequent to the partnership, and which, though connected with it, are not partnership transactions. Thus, a partner may sue his co-partner at law for breach of his agreement to enter into the partnership relation, to furnish capital, pay debts, indemnify him for expenses paid, or reimburse him for capital advanced.

Dissolution of the Firm.—The partnership relation may be terminated either (1) by act of the parties, or (2) by operation of law.

By act of the parties it may be by original agreement or by subsequent act; and by original agreement it may be by lapse of time or by the accomplishment of the object.

By operation of law it may be by death, insanity, marriage, bankruptcy, or war between the countries of the partners. The circumstances under which each of these causes will effect a dissolution of the partnership relation are similar to those under which each of them will terminate the agency relation.

A court of equity may decree the dissolution of a partnership for any of the following causes: (1) fraud in creating the partnership; (2) insanity of a partner; (3) gross misconduct of a partner; (4) hopelessness of success.

Notice of Dissolution Required.—When the partnership is dissolved by act of parties notice of the dissolution must be given, not only to those who have had dealings with the firm, but also to the public generally. The former must have *actual* notice, but as regards the latter a general notice in a newspaper of general circulation in the neighborhood, for a reasonable period, is sufficient.

Effect of Dissolution.—When the partnership is dissolved by the death of a partner the legal title to all the firm personalty vests at once in the surviving partners, who hold it in trust for the firm. Moreover, the right of disposing of all the partnership assets, real as well as personal, vests in them. Firm creditors may proceed at law against the surviving partners, or in equity against the estate of the deceased partner. They may pursue the latter course irrespective of the extent of the firm assets.

After dissolution, the partners may perform acts with the view of closing up the business, but not with the view of creating new obligations.

Sale of Personal Property is the transfer of its general ownership for a price in money.

In the case of a barter or exchange one chattel is transferred for another; and in the case of a bailment there is a transfer of the possession of a chattel but not of the title.

What is frequently called an executory sale is merely an agreement to sell.

Formalities of a Sale.—A contract of sale requires no formalities unless it is within the provisions of the Statute of Frauds (which see). It may be oral or in writing; the price may be paid at once or on a future day; possession of the goods may be given the buyer immediately or retained for a time by the seller.

When Title Passes.—When the title passes is governed by the intention of the parties. Where they do not express their intention

it is to be inferred from their acts and the surrounding circumstances. If the goods are ready for immediate delivery the law presumes that title passes at once. If they are not, the law presumes that title is not to pass until they are put in a deliverable condition. If the sale is on approval the law presumes that title does not pass until the buyer has tried and approved them. In the case of a "sale or return" it passes to the buyer at once with the right to pass it back to the seller within the time agreed, or within a reasonable time when no time is fixed, if he chooses to do so. Where the goods are shipped C.O.D. the title passes to the buyer upon delivery to the carrier, but the buyer is not entitled to possession of them until he pays the price.

Duties of the Seller.—The duties of the seller are three-fold. He must furnish the thing agreed upon, transfer title to the buyer, and give him possession of it.

Warranties.—A warranty is an assurance of some fact coupled with an engagement, express or implied, to make the assurance good or pay for the deficiency. Ordinarily the seller impliedly warrants that he is the owner of the subject-matter of the sale and that it is free from incumbrance. When the goods are sold by sample, he impliedly warrants that they shall conform to the sample; and when sold by description, that they shall conform to the description. When sold by a manufacturer, he impliedly warrants that they are free from latent defects which might have been guarded against by the exercise of reasonable care. And when sold for a particular purpose, he impliedly warrants their fitness for that purpose.

Breach of Warranty gives the buyer a right of action for damages, whereas a breach of a condition usually entitles him to rescind the contract. He is entitled to recover the difference between the value of the goods as they are and what it would have been had the goods been as warranted.

Stoppage in Transitu.—The seller may stop the goods while in transit, provided they are not paid for and the buyer is insolvent. He may do this, as a rule, even where the buyer has resold them to a third party. The exception to this rule is where the bill of lading is given to the buyer and turned over by him to the subvendee who pays the price without notice or knowledge that his vendor has not paid for them.

Remedies of the Buyer.—When the buyer has paid for the goods and the seller refuses to deliver them the buyer is entitled to recover the market value of the goods at the time and place of delivery, together with interest. If he has not paid for the goods he is entitled to recover the difference between the contract price and the market price at the time and place of delivery, provided the latter price is greater than the former, together with interest.

Real Property is land and whatever is permanently fixed to land, together with certain incorporeal rights annexed thereto or issuing therefrom.

Classification of Estates.—Estates in real property are classified with respect to: (1) quantity of interest; (2) time of enjoyment; (3) number and connection of tenants; (4) manner of enjoyment.

Quantity of Interest—With respect to quantity of interest estates in real property are of two kinds: (1) freehold; (2) less than freehold.

Freehold Estates are of three kinds: (1) fee-simple; (2) fee-tail; (3) for life.

Life estates are either for the life of the tenant or for the life of another person. Those for the life of the tenant include (1) dower estate: (2) estate by the curtesy; (3) homestead estate.

Estates Less Than Freehold are also of three kinds: (1) for years; (2) at will; (3) by sufferance.

Time of Enjoyment.—With respect to time of enjoyment estates in real property are of two kinds: (1) in possession; (2) in expectancy.

Estates in expectancy are of two kinds: (1) remainders; (2) reversions.

Remainders are subdivided into (1) vested; (2) contingent.

Number and Connection of Tenants.—With respect to the number and connection of the tenants estates in real property are of four kinds: (1) in severalty; (2) in joint tenancy; (3) in common; (4) by entirety.

Manner of Enjoyment.—With respect to manner of enjoyment estates are of two kinds: (1) absolute; (2) conditional.

Definition of Estates.

In Fee-Simple.—This is the highest estate known to the law. It is an estate of inheritance, free from any condition and of indefinite duration.

In Fee-Tail.—This is an estate of inheritance which is descendable only to particular heirs of the grantee and not to his heirs in general. It had its origin in the desire of owners of great estates to keep them intact to particular families by restricting the power of alienation. In this country it is looked upon with such disfavor that where it is recognized at all the restraint upon free alienation is limited by statute so that the immediate grantee gets a life estate and the second taker the remainder in fee.

For Life.—An estate for life may be created by the parties themselves or by operation of law. An estate for life usually endures during the life or lives for which it is created.

For Years.—An estate for years is a mere chattel interest although created for a thousand years. It may be limited to commence presently or at some future time. It does not descend to the heir, but vests in the executor or administrator of the deceased in the same manner as other chattels.

At Will.—This is an estate which the tenant holds at the pleasure of the lessor. Statutes almost invariably require a notice to quit, and the practical effect of these statutes is to convert estates at will into tenancies from year to year or from month to month.

By Sufferance.—A tenant by sufferance is one who holds over after his term expires and is allowed by the owner to continue in possession. At common law he was not liable for rent beyond the term agreed, but modern statutes frequently make him liable for double rent.

In Remainder.—This is an estate which is limited to commence at a future time on the termination of a precedent estate created at the same time. It is either *vested* or *contingent*. A vested remainder is one in which there is an immediate fixed right of future enjoyment. A contingent remainder is one in which the right of enjoyment does not accrue until the happening of some uncertain event which may never happen.

In Reversion.—This is the residue of an estate left in the grantor, or his heirs commencing in possession upon the determination of a particular estate granted. It is subject to the same incidents as an estate in remainder. Practically the on difference between these two estates is th a *remainder* is always created by act the parties and a *revision* always b operation of law.

In Severalty.—This is an estate he by one person in his own right. Mo legal estates in real property belong to th class.

In Joint Tenancy.—A joint tenancy is a estate in which the grantees have t same interest, created at the same tim by the same conveyance, and held by the by the same undivided possession. Th most important incident of this estate the right of survivorship.

In Common.—At common law th estate is created when two or more perso acquire their interests by separate a distinct titles. The only unity betwe them is that of possession. In a joi tenancy there are the additional unities title, time and interest. That is, t several tenants must obtain their tit from the same source, at the same tim and acquire the same interest. Where tenants in common may acquire the title from different sources, at differe times, and acquire different interests.

By Entirety.—This estate is created wh a conveyance is made to husband a wife and the conveyance is silent as to t manner in which they shall hold. They a not joint tenants, nor are they tenan in common. Neither party can dispo of his or her interest without the asse of the other, and upon the death of eith the estate survives to the other.

Absolute Estate.—An absolute estate one which is free from restriction.

Upon Condition.—An estate upon cont tion is one which is commenced, enlarg or defeated upon the happening or pe formance of some condition.

Upon a Conditional Limitation.—This an estate which is restricted by some cond tion, and which terminates by operatio of law upon the happening of the event b which its limitation is measured.

Equitable Estate.—An equitable esta is a right or interest in real property n recognized at common law, but recognize and made available by courts of chancer The three kinds of equitable estates a users, powers and trusts.

Title.—This is the means whereby the own of realty has the just possession of h property. In other words, it represen the right or authority for the enjoyme of his land. Title to property is classifie both as to *origin* and *nature*. As to orig it is original or derivative. As to nature is legal or equitable.

Modes of Acquiring Title.—Original tit to property is acquired in the followi four ways: (1) occupancy; (2) discover (3) conquest; (4) cession.

Derivative Title is acquired in the follow ing two ways: (1) descent; (2) purchas

Title by *descent* accrues through co sanguinity, affinity or adoption. Title b *purchase* is acquired by act of the parti or by operation of law. It is acquired b act of the parties either by public or priva grant or by devise. Public grant is b patent or legislative grant. Private gra is by deed or by dedication.

Deed.—A deed is an instrument, written printed, or partly written and part printed, on paper or parchment, by whic an estate is conveyed, or not less than freehold, in lands, tenements and her ditaments.

Parties to a Deed.—The two parties to deed are the grantor and the grante

If the grantor is married his wife also should sign the deed. This is essential to convey her dower interest. And where the land conveyed is a homestead it is also essential in order to transfer her homestead right.

If the grantor is a corporation the deed should contain the corporate name at the beginning and be signed by its president or other officer authorized so to do.

The Description of the Premises.—The premises should be accurately and minutely described. Reference should be made to prior deeds by which title was acquired by the grantor. If the land is described by metes and bounds, and also by specifying the number of acres, and the two descriptions differ, the former will govern.

Covenants in a Deed.—A quit-claim deed merely transfers all the right, title and interest in the land that the grantor has. A warranty deed, in addition to this, contains certain personal undertakings called covenants. These covenants warrant that the grantor is lawfully seised of the premises in fee-simple; that the premises are free from all incumbrances; that the grantor has good right to sell the same to the grantee, and that he will and that his heirs, executors and administrators shall, warrant and defend the same to the grantee, his heirs, and assigns forever, against the lawful claims of all persons whatsoever.

Execution of a Deed.—A deed is executed by the grantor and grantee signing it and annexing thereto their seals. At common law the sealing of the deed was the most important act in its execution. In some states, by statute, sealing is not essential. In some states two witnesses are essential, in some one, and in others none. In order that the deed may be recorded it must also be acknowledged.

Delivery of a Deed.—To pass the title to the property the deed must be delivered. And the delivery must be voluntary.

A delivery of the deed by the grantor to a third party to hold until the grantee has performed certain conditions, or until a certain time has transpired, does not pass the title. Such a delivery is called a delivery in escrow.

Recording a Deed.—Recording a deed is not essential to pass title to the grantee. To protect himself, however, the grantee should have the deed recorded at once. To do so gives constructive notice to the world that the title to the land is in him.

Wills.—Title to real estate may be acquired by devise or will in all the States of the Union. To render a person competent to transfer title by this means he must be of full age and of sound mind. Moreover, he must act voluntarily.

In most of the states a will must be in writing, signed by the testator, or by some person in his presence, and by his direction, and attested by witnesses, who must subscribe their names thereto in the *presence* of the testator. The form of wording a will is immaterial as long as its intent is clear.

Witnesses.—Most of the states require two witnesses, except in Connecticut (3), Maine (3), Massachusetts (3), New Hampshire (3), South Carolina (3), Vermont (3).

Males and females are competent to make wills at 18 years in the following states: California, Connecticut, Hawaiian Islands, Idaho, Montana, Nevada, North Dakota, Oklahoma, South Dakota, Utah; and in the following states only females at 18 years: Colorado, District of Columbia, Illinois, Maryland, Missouri, Washington, Wisconsin.

In the following states persons of 18 years may dispose of personal property only: Alabama, Arkansas, Missouri, Oregon, Rhode Island, Virginia, West Virginia; in Georgia any one over 14 years and in Louisiana any one over 16 years is competent to make a will. In Colorado persons of 17 years, and in New York males of 18 and females of 16 years may dispose of personalty.

COMMERCIAL LAW IN THE VARIOUS STATES

States and Territories	Interest Laws			Days of Grace	Statutes of Limitation			Arrest for Debt	Exemption Laws		Jurisdiction of Justices of the Peace
	Legal Rate Per Cent	Allowed by Contract Per Cent	Penalty for Usury		Judgments Years	Notes Years	Open Accounts Years		Personal Property Exempt	Homestead Exempt	
Alabama	8	8	Forfeit interest	3	20	6	3	No	$1,000	$2,000	$100
Arizona	6	Any	No provision	0	5	4	3	No	500	2,500	300
Arkansas	6	10	Forfeit principal and interest	3	10	5	3	No	500	2,500	300
California	7	Any	No provision	0	5	4	2	No	....	5,000	300
Colorado	8	Any	No provision	0	10	6	6	No	....	2,000	300
Connecticut	6	15	Fine or imprisonment or both	0	7	6	6	No	....	1,000	100
Delaware	6	6	Principal and interest forfeited	0	10	6	3	No	200	....	200
District of Col.	6	6	Forfeit interest	0	12	3	3	No	300	....	300
Florida	8	10	Forfeit interest	0	20	5	3	No	1,000	160 Acres	100
Georgia	7	8	Forfeit excess of interest	0	7	6	4	No	300	1,000	100
Idaho	7	12	Forfeit interest and 10% of principal	0	6	5	4	No	....	5,000	300
Illinois	5	7	Forfeit interest	0	20	10	5	No	400	1,000	200
Indiana	6	8	Excess interest forfeited	0	20	10	6	No	600	or 600	200
Iowa	6	8	Forfeit interest and 8% of principal	0	20	10	5	No	200	or 40 Acres	100
Kansas	6	10	Forfeit of double amount of usurious interest	0	5	5	3	No	....	160 Acres	300
Kentucky	6	6	Forfeit of interest	3	15	15	5	No	250	1,000	100
Louisiana	5	8	Forfeit interest	0	10	5	3	No	....	Total, 2,000	100
Maine	6	Any	No provision	0	20	20	6	No	....	500	20
Maryland	6	6	Forfeit interest	0	12	3	3	No	100	....	100
Massachusetts	6	Any	No provision	0	20	6	6	Yes	....	800	1,000
Michigan	5	7	Forfeit interest	0	6 and 10	6	6	No	500	1,500	300
Minnesota	6	10	Forfeit principal and interest	0	6	6	6	No	200	80 Acres	100
Mississippi	6	10	Forfeit interest	3	7	6	3	No	....	2,000	200
Missouri	6	8	Forfeiture or misdemeanor	0	10	10	5	No	300	1,500 (min.)	250
Montana	8	Any	No provision	0	10	8	5	No	....	2,500	300
Nebraska	7	10	Forfeit interest	0	5	5	4	No	500	or 2,000	200
Nevada	7	Any	No provision	0	6	6	4	No	....	5,000	300
N. Hampshire	6	6	Forfeit three times excess	0	20	6	6	No	....	500	13½
New Jersey	6	6	Forfeit interest and costs	0	20	6	6	No	200	1,000	200
New Mexico	6	12	Forfeit of twice the amount of interest	3	7	6	4	No	500	1,000	100
New York	6	6	Forfeit of principal and interest; misdemeanor	0	20	6	6	No	250	1,000	200
North Carolina	6	6	Forfeit interest	0	10	3	3	No	500	1,000	200
North Dakota	7	12	Forfeit excess interest	0	10	6	6	No	1,500	5,000	200
Ohio	6	8	Forfeit interest over 8%	0	5	15	6	No	100	1,000	300
Oklahoma	6	10	Forfeit interest	0	1	5	3	No	....	5,000	200
Oregon	6	10	Forfeit principal and interest	3	10	6	6	No	....	1,500	250
Pennsylvania	6	6	Forfeit excess of interest	0	5	6	6	No	300	....	500
Rhode Island	6	Any	No provision	0	20	6	6	Yes	300	....	....
South Carolina	7	8	Forfeit interest	3	20	6	6	No	500	1,000	100
South Dakota	7	12	Misdemeanor	3	20	6	6	No	750	5,000	100
Tennessee	6	6	Forfeit of excess interest	0	10	6	6	No	....	1,000	500
Texas	6	10	Forfeit interest	3	10	4	2	No	500	5,000	200
Utah	8	12	No provision	0	8	6	4	No	....	2,000	300
Vermont	6	6	Forfeit of excess interest	0	8	14	6	No	200	500	200
Virginia	6	6	Forfeit interest	0	20	5	2	No	....	2,000	100
Washington	6	12	Forfeit of double accrued interest and costs	0	6	6	3	No	1,500	2,000	100
West Virginia	6	6	Forfeit excess interest	0	10	10	5	No	200	1,000	300
Wisconsin	6	10	Forfeit treble amount of usurious interest paid	0	20	6	6	No	200	5,000	200
Wyoming	8	12	Forfeit interest	3	5	5	8	Yes	500	1,500	200

NOTE.—In many of the states it is impossible to place a fixed amount on personal property exempt. In the table above these states have no amount given in the personal property column.

LABOR LAW AND LEGISLATION—The Labor Contract. — The relation of employer and employee arises from contracts concerning labor, the right to make such contracts being a property right in which both parties are interested, and in which they are protected by constitutional guaranties. Special rules of common law govern such contracts, embodying the results of numerous decisions of the courts. An employer is presumed to employ his workmen lawfully, to compensate them fairly, and to have due regard for their health and safety. The workman is presumed to be reasonably competent, to be ready to obey reasonable orders, and to use ordinary care in the performance of his work. As a result largely of modern industrial conditions, the inequality between employers and employees as regards the making of contracts has become so conspicuous that statutes have been enacted regulating in various ways the conditions of employment, and in so far taking the matter out of the hands of the immediate parties to the contract. These regulations, as well as the rules of common law, form a part of every labor contract to which they are applicable. Subject thereto, adults of competent mental capacity may contract freely, and be held mutually to the standards indicated.

Enforcement. — There is not, generally speaking, any specific performance of a labor contract enforceable at law, and either party may terminate such a contract at any time, for any reason or without reason, being liable only in damages for the breach of a contract for a fixed term. A statute of Colorado attempts an exception to this rule by forbidding the discharge of a workman between the ages of eighteen and sixty solely on account of age, but such a law is doubtless without value.

Breach. — A few states have enacted laws for the punishment of the breach of labor contracts as for a crime, where on the strength of such contracts advances of money or supplies have been procured and the contract is then fraudulently broken. The states having laws of this class are Alabama, Arkansas, Florida, Georgia, Louisiana, Michigan, Minnesota, New Mexico, North Dakota and South Carolina. The laws of most of these states look mainly to agricultural employment, though in Michigan, Minnesota and North Dakota they seem to have reference mainly to the fraudulent procurement of money advances for transportation to the place of employment. A special class of employees is embraced in laws which provide a penalty for the abandonment of locomotives or trains at other than terminal or division points, while more general laws of New York and Washington prohibit any abandonment of employment that would knowingly jeopardize life or limb, or expose valuable property to destruction.

Notice of Termination. — If the employer contracts with his employees for a notice of their purpose to leave service, he may be required by statute to give corresponding notice, under like forfeiture, of his intention to discharge. Laws to this effect are found in Maine, Massachusetts, New Jersey, Pennsylvania, Rhode Island and Wisconsin.

Clearance Cards. — The giving of a recommendation or clearance card at the termination of employment is not obligatory on the employer, even though a new employer may demand such certificate before employing an applicant for service. A few states have enacted laws directing such cards to be furnished, but such laws are of at least doubtful validity. The states having them are Florida, Indiana, Missouri, Montana, Ohio and Texas. The courts of Georgia and Kansas have declared such laws unconstitutional, while a Texas court of appeals upheld the law of that state.

Interference with Contracts.—Third parties interfering with a contract of employment, unjustifiably inducing the breach thereof by either employer or employee, are liable to the injured person in damages, even though the contract was terminable at will by either of the parties to it. There must be knowledge of the contract, and a mere attempt without damage will support no action. Knowingly interfering with a contract for service by hiring or enticing away an employee is made a penal offense in Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee. The attempt entails the same penalty as the performance in Alabama and Georgia. There is a federal statute making it an offense to procure workmen in government arsenals or armories to leave their employment during the term of their contract, or to retain such a workman after notice of such contract. Other forms of interference will be noted under the heading of strikes.

The giving of discounts or bonuses to employees who make purchases for the employers, or giving gratuities to employees, to influence them in regard to their employers' business, is against the law in Connecticut, Iowa, Massachusetts, Michigan, Nebraska, New Jersey, New York, Rhode Island, South Carolina, Virginia, Washington and Wisconsin. A like law in Indiana is restricted to employees of railroad companies. The Washington statute prohibits the tipping of employees of public houses or public service corporations. Asking or accepting gratuities is also forbidden by the above statutes.

Civil and Political Rights of Employees. —Voting.—Most states of the Union provide a penalty for employers interfering with or seeking to coerce employees in the exercise of their rights as voters, either by posting notices or printing them on pay envelopes, or threatening dismissal, reduction of wages, or the closing of the plant in case of the success of any designated candidate or party. The law of Minnesota protects employees in the exercise of any natural right or any right or privilege of citizenship. The Wyoming statute mentions the candidacy of employees, while in Colorado no employer, foreman or manager of a railroad, mining or manufacturing work carried on in the precinct, may act as judge, clerk or watcher at the polls in any election. Many of these laws direct the allowance of time to vote without loss of wages.

Freedom as Traders, etc.—Freedom of workmen in the selection of their places of trade is the object of laws of Colorado, Florida, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Nevada, New Jersey, New Mexico, Ohio, Oregon, Tennessee, Texas, Utah, Washington and West Virginia. Free choice of boarding or lodging houses is provided for in the laws of Massachusetts, Montana, Nevad Oregon and Utah, while in Michigan th same protection is extended to employee in the choice of life or accident insuranc and in Tennessee to the choice of th family physician, and the withholdin of any part of an employees wages to pa a company doctor without the full con sent of such employee is forbidden.

Principles of Wages. — The matter o wages is primarily one for determinatio by contract, as regards the rate, and th time, place, and medium of paymen At common law the court will, in th absence of a specified rate, order the pay ment of such a sum as the services renc ered are shown to be reasonably worth if the contract is entire, payment can b demanded only on the completion o the work; if separable, at such times a are shown to be reasonable, or at time fixed by the custom of the communit or the trade. No wages can be recovere for service rendered in violation of lav as for work on Sunday, when Sunda labor is prohibited; or for services as a engineer when the workman is withou the license required by law; or for wor in excess of eight hours when the statu restricts the time to eight hours.

Payee. — The payee will usually be th workman or his personal representativ though statutes of Alabama, Arizon Georgia, Mississippi, New Jersey ar Pennsylvania authorize the payment wage debts not in excess of a specific sum directly to the heirs of a decease employee. Payments to one demandin from the employer the wages of a workma on the claim that the latter is indebt to the claimant can be made only aft all legal formalities are complied wit or the employer will be liable to th employee regardless of the payment ma to the claimant. In every state there a statutes reserving to workmen (in mar only to those having dependents) a ce tain amount or percentage of their wag which is not subject to garnishment wh in the hands of the employer. In a nu ber of states assigning claims or taki or sending them outside the state in ord to avoid the exemption laws in favor wage earners is forbidden.

Recovery. — Another law that is fou in practically every jurisdiction, and the federal statutes, is one that mak a debt for wages for labor a preferr claim in the settlement of the estate o deceased or insolvent employer. Mecha ics' liens are likewise universally grant by statute. Where the enforcement such liens is not convenient, as in t case of public works or railroad constru tion work, contractors are in a numb of states required to give bond for t payment of wages due their workme or failure to pay wages out of curre receipts may be penalized.

Wage suitors are favored by the la of some states, as by allowing a success claimant of wages an attorney's fee law as to the constitutionality of whi the courts differ); by prohibiting a stay execution on a judgment for a wage del by declaring no property exempt fr execution under such a judgment; or placing wage suits at the head of the tr docket.

Assignments.—Assignments of future ea ings are restricted in the interests the workman, and especially of his fami Such laws have been upheld, though th undoubtedly restrict the freedom of c

tract. The law may require that the assignment shall be recorded, or that the employer shall be notified of the assignment or shall accept or consent to the same, or that the wife or husband of a married person making an assignment shall join therein; discounts or interest rates may also be limited. Except for the laws that merely require recording, these statutes are of recent enactment. States having laws embodying these provisions in whole or in part are Colorado, Delaware ,Indiana, Iowa, Louisiana, Maryland, Massachusetts, Minnesota, New Jersey, New York, Pennsylvania, Rhode Island, Tennessee, Washington, Wisconsin and Wyoming. Assignments to secure loans or future advances are declared void in Georgia and Massachusetts; and a law of Indiana declaring all assignments of future earnings void has been held valid.

Rates—Rates of wages on public works are fixed by statute in a few states, either at the current rate in use for work of the sort that is to be done, or at an amount named in the law. The states having such laws are California, Delaware, Indiana, Maryland, Nebraska, Nevada, New York and Oklahoma. A Virginia statute orders a reasonable amount to be paid as salvage in the case of wrecked goods, and provides for arbitrators where the laborer and the owner of the goods do not agree, but there is no nearer approach than this to the direct determination of wages in private undertakings. Indirectly the matter is regulated by forbidding deductions by way of fines for imperfect work (Massachusetts), or "for any reason" (Indiana). The same object is in view where, when coal mining is paid for by weight, the law forbids the screening of coal before weighing, or directs that all coal mined shall be weighed. Alabama, Arkansas, Colorado, Iowa, Kansas, Missouri, Ohio, Oklahoma, Pennsylvania, Washington, West Virginia and Wyoming have laws of this sort.

Time of Payment. — Statutes regulating the time of the payment of wages have been held constitutional, though not uniformly. These laws may be of general application, or restricted to classes of employment, or to corporations, or they may apply only where the number of employees exceeds a given minimum. The following states have laws directing employers to pay wages monthly: Arizona, Colorado (railroads), Missouri (railroads), Tennessee (mining, manufacturing, railroad construction), Virginia (mining, manufacturing). In the following, semi-monthly or bi-weekly payments are prescribed: Arkansas (corporations), Colorado (corporations except railroads), Indiana (mining and manufacturing), Iowa (coal mines), Kentucky (mining), Maine (corporations), Maryland (mining, manufacturing, transportation), Missouri (mining, manufacturing), New Jersey, New York (railroads), Oklahoma (mining, manufacturing), Pennsylvania, West Virginia (mining, manufacturing), Wyoming (coal mining). The following have a weekly pay day: Connecticut (corporations), Kansas (except railroad and farm corporations), Massachusetts, New Hampshire, New York (except railroads), Rhode Island, Vermont. In Wisconsin a weekly or bi-weekly pay day is prescribed unless there is a written contract.

A few states direct that wages due discharged employees shall be paid them without waiting for the regular pay day. These are Arizona, Arkansas, Colorado, Massachusetts, Oregon, and South Carolina.

The place of payment is restricted by the law of a single state, California, which forbids the payment of wages in any place where liquor is sold.

Payment in Scrip, etc. — The medium of payment is the subject of a number of laws which either prohibit the use of scrip, tokens or store orders, as in Colorado, Maryland, Montana, New Jersey and New York; or require that if issued they shall be redeemable in money, as in Arizona, Arkansas, Georgia, Illinois, Indiana, Iowa, Kansas, Louisiana, Michigan, Nevada, New Mexico, Oklahoma, Oregon, South Carolina, Tennessee, Vermont, Virginia, West Virginia and Wisconsin. The North Carolina statute on this subject directs that scrip or tokens shall be redeemable at face value and transferable, but this is held not to require orders for merchandise to be redeemed in money. So a statute of Kentucky directing wages to be paid in lawful money does not preclude the issue of orders for merchandise between pay days, nor require such orders to be redeemed in cash. A Pennsylvania statute levies a twenty per cent tax on all scrip not redeemed within thirty days after its issue. Courts rule diversely as to the validity of statutes forbidding the use of scrip, but the Supreme Court has upheld a law requiring its redemption in money at face value.

Company stores, or the "truck system" of wage payment, may also be prohibited, as in Colorado, Maryland and Pennsylvania; or their operations may be regulated by forbidding the charging of a higher cost to employees than to others, or of a higher rate than is charged by other stores, as by the laws of Connecticut, Indiana, New Jersey, Ohio and Virginia.

Hours of Labor — in General. — The length of a day's work for adult males is in general a matter of contract with which the law can interfere only on the ground that the public welfare requires its statutory regulation. A number of states have laws declaring the number of hours that constitute a day's work generally, but as these laws do not interfere with contracts for longer service, they are of no practical effect.

Public Works. — On public works it is competent for the state to declare the length of time workmen may labor, even though they are employed by contractors, since the state has the right to fix the terms on which work may be done for it, or on which persons may deal with it. A number of states and the federal government have laws or provisions in their constitutions fixing the hours of labor, mainly prescribing eight as the limit. The states are California, Colorado, Delaware (city of Wilmington), District of Columbia, Idaho, Indiana, Kansas, Kentucky, Maryland (city of Baltimore), Massachusetts, Minnesota, Montana, Nebraska (cities of the second class), Nevada, New York, Oklahoma, Oregon, Pennsylvania, Utah, Washington, West Virginia, Wisconsin, and Wyoming. All these laws provide for the eight-hour day except Massachusetts, where nine hours is the limit unless municipalities by special vote adopt the eight-hour day. Other states have laws relating to highways only, but these apply less to the employment of labor than to the working out of taxes.

Railroads.—Considerations of public safety validate laws limiting the hours of labor of employees on railroads. The federal statute makes sixteen hours out of any twenty-four the maximum work time of employees engaged in the movement of interstate trains or trains in the District of Columbia, and nine hours the maximum for train dispatchers and telegraph or telephone operators whose employment affects the movement of such trains. The periods fixed by state laws vary, but obviously where interstate traffic is affected no labor in excess of that allowed by the federal statute will be permitted. The courts differ as to whether the prescription by state law of a shorter work day is valid. The maximum hours of service in any twenty-four hour period permitted in the movement of trains are twenty-four in Michigan, eighteen in Nebraska, sixteen in Arizona, Arkansas, Colorado, Indiana, Iowa, Kansas, Minnesota, Missouri, Montana, New York, North Carolina, North Dakota, South Dakota, Texas, Washington and Wisconsin; fifteen in Ohio, fourteen in Oregon, and thirteen in Flordia and Georgia. Train dispatchers and telegraph operators and operators of block signals have the same hours in several of the above states, but are limited to eight hours service per day in Arkansas, Connecticut, Maryland, Nevada, New York, North Carolina, Texas, West Virginia and Wisconsin. In a number of states a period of rest after service is prescribed, the hours to be consecutive. These are fixed at ten in Colorado, Georgia, Iowa and Oregon, and in Texas if there have been sixteen hours of continuous service; at nine in Arizona, and at eight in Arkansas, Florida, Indiana, Kansas, Michigan, Minnesota, Missouri, Montana, Nebraska, New York, North Dakota, Ohio, South Dakota, Texas (if there has been an aggregate of sixteen hours of service in any twenty-four hour period), Washington, and by the federal statute.

Street Railways.—The hours of labor on street railways are regulated by statute in several states, as follows: twelve in California, Maryland, New Jersey, Pennsylvania and South Carolina; and ten in Louisiana, Massachusetts, New York, Rhode Island and Washington. In New Jersey and New York the service must be rendered during consecutive hours, and in Massachusetts and Rhode Island within twelve consecutive hours. This law has also been said to provide for public safety and is supported on that ground.

Mines, Smelters, etc. — The hours of labor in underground mines, smelters and reduction works are restricted to eight per day in Arizona, California, Colorado, Idaho, Missouri, Montana, Nevada, Oklahoma, Oregon, Utah, Washington and Wyoming. The Nevada statute applies also to work in open cut mines and in plaster and cement mills. A New York law regulates the hours of labor of workmen in compressed air, the limit ranging from eight hours in twenty-four where the pressure does not exceed 28 lbs. to the square inch, to two hours out of twenty-four, divided by an interval of four hours where the pressure exceeds 46 lbs. but does not exceed 50 lbs. No employment is permitted under a pressure in excess of 50 lbs.

Sundry Employments.—The hours of labor of drug clerks are limited to ten per day and 60 per week in California,

and to 70 hours in one week and 136 hours in two weeks in New York. A New Jersey statute also limits the hours of labor of employees in bakeries to 60 per week. In Arizona work in laundries is restricted to eight hours per day; while nine hours is a day's work for telephone operators in Montana.

Eight-Hour Day.—The following summary presents the present result of the movement for the eight-hour day. It is adopted for employment on public works in nineteen states, the District of Columbia and for the federal government; by Delaware and Maryland for their chief cities; and by Massachusetts for municipalities adopting it in accordance with state law; for work in mines in twelve states, in smelters and reduction works in nine states, and for train dispatchers and telegraph operators in nine states.

Women and Children.—**Age and Working Time of Children.**—A majority of the states have laws regulating the employment of children, fixing the minimum age of employment, the maximum hours of labor per day, restricting or forbidding employment in certain occupations, and providing particularly for the safety and sanitation of their working places. Some states include adult females in their laws governing some of these details, while in others the laws as to the two classes are separate. The power of the state to regulate the employment of children is unquestioned.

The table on page 493 shows for children the age below which employment in industry is unlawful, the age to which the indicated protection in the matter of the length of the working day applies, the daily hours of labor permitted, and the restrictions as to night work, if any. The restrictions set forth in the table mentioned are relaxed in a number of states where the child has a widowed mother, invalid parents, or is dependent on its own efforts for support. Relaxation of the law on one or more of these grounds is found in the states of Arkansas, California, Colorado, Delaware, District of Columbia, Georgia, Kentucky, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Rhode Island, South Carolina, Texas, Virginia and Washington.

Hazardous or Injurious Employments.—Danger to life, limb or health, and exposure to immoral or otherwise injurious influences are reasons for forbidding the employment of children in certain occupations. Thus employment in mines is the subject of special laws in some states, though it is more commonly included with other industrial employment. The cleaning of moving machinery or work with or about designated forms or classes of dangerous machinery or in certain hazardous employments is forbidden by several states, as follows: below the age of 21, Louisiana (cleaning moving machinery only); 18, Michigan, Pennsylvania; 16, Illinois, Indiana (18 for females), Iowa, Kentucky, Minnesota, Missouri, Nebraska, New Jersey, New York, North Dakota, Ohio, Oklahoma, Rhode Island, Wisconsin; 14, Massachusetts. Employments injurious to morals, including acrobatic and mendicant occupations are forbidden up to 18 in Michigan (21 for females), Minnesota, New Jersey and Washington; to 16 in California, Idaho, Iowa, Kentucky, Maine, Montana, Nebraska, New York and Rhode Island; to 15 in Delaware, Indiana (18 for mendicant employment), Louisiana, Massachusetts, Pennsylvania (18 for mendicancy); to 14 in Colorado, District of Columbia, Florida, Illinois, Kansas, Maryland, Missouri, New Hampshire, Ohio, Oklahoma, Virginia, Wisconsin and Wyoming; and to 12 in Connecticut and Georgia. A few states regulate street trades, as the sale of newspapers, shoe blacking and messenger service, by special laws; employment in bar rooms is similarly restricted in some states, though in many this is classed with occupations dangerous to morals.

Hours of Labor of Women.—While women have equal rights with men as to the making of contracts, their physical structure and a regard to the welfare of the race warrant limitations as to their employment which would not be valid as to adult males. Thus their hours of labor are limited by several states, and laws of this sort are constitutional. The limit of employment is 12 hours per day in Pennsylvania; 11 hours in South Carolina; 10 in Connecticut, Illinois, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, New Jersey, New York, Oregon, Rhode Island, Virginia and Washington; and 9 hours and 40 minutes in New Hampshire. In some of these states the total number of hours per week allowed is less than six times the maximum per day, while in a few only the weekly maximum is named. This results in the following limitations: 60 hours per week in Pennsylvania, South Carolina and Tennessee; 58 hours in Connecticut, Maine and Minnesota; 56 hours in Massachusetts and Rhode Island; 55 in New Jersey; and 54 hours in Michigan and Missouri. Night work by women is prohibited in New Jersey between 6 p. m. and 7 a. m., Connecticut after 10 p. m., Missouri, between 10 p. m. and 5 a. m., and Indiana, Massachusetts and Nebraska between 10 p. m. and 6 a. m.

Seats.—Female employees are to be supplied with seats and allowed such use of them as their employment will reasonably permit, according to laws of Alabama, California, Colorado, Connecticut, Delaware, District of Columbia, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

Employers' Liability.—At common law the employer is charged with the exercise of a reasonable degree of care for the safety of his workmen, which failing he becomes responsible for the injuries resulting from his neglect. What such degree of care is depends upon the nature of the undertaking, more hazardous ones involving a greater degree and *vice versa*. The measure is generally said to be that degree of care that a reasonably prudent man would take to protect himself in like circumstances. Tools and appliances must be reasonably safe and suitably adapted to their intended use. The same test applies to the working place, though the employer is held to a stricter accountability for this than for the condition of appliances. At common law, an employer may in general carry on his business in his own way if only the employee is capable of contracting and knows and appreciates the dangers of the situation. He must not use unreasonably dangerous methods or appliances, however, and it has been said that dangerous work should be undertaken only after the adoption of all known reasonable precautions.

Statutes Fixing Standard of Care.—Factory inspection laws, railroad safety appliance laws, mine regulations, and the like, address themselves to the standard of safety to be secured by the employer, and in so far restrict the freedom allowed him by the common law in this respect. When the law fixes such a standard, it is negligence to come short of it, and an employer doing so will generally be liable in damages for the resultant injury, if any. In some states the courts allow the plea of assumed risks in such cases, though the better rule is to the contrary. Maintenance and repair stand on the same footing as the original provision and the Supreme Court has held that the duty of conforming to the provisions of the federal law as to drawheads and automatic couplers on railroad trains is an absolute one, and the exercise of ordinary care is not sufficient to excuse a failure in this regard.

Defenses.—An employer sued for damages for injuries to an employee may offer in defense that the workman assumed the risks of the undertaking, that the injury was the result of the negligence of a fellow-servant, or that, even if the employer was himself negligent, the employee by his own contributory negligence was in such measure responsible for the injury as to relieve the employer from liability therefor. The risks assumed are those arising from the ordinary incidents of employment, of which the workman was aware or which he could have known if he had exercised ordinary care and existing after the employer has performed his duty as to the exercise of care in behalf of his employees; this includes the risk of injury from the negligent act of fellow-servants who have been selected with ordinary care. An employee who represents the employer is not a fellow-servant to his subordinates. Where the employee's own negligence contributes to the injury, no attempt will ordinarily be made to apportion fault and make a partial award of damages, but any degree of contributory negligence will vitiate entirely the claim of the injured person.

Statutes Affecting Defenses.—These defenses have been modified or abrogated by numerous statutes, to such an extent that, as was recently said by a justice of the Supreme Court, there is hardly a jurisdiction in which they exist unmodified. Thus a statute of Colorado abrogates entirely the defense of fellow-service; while a number of states have done away with it in its application to railroad employment, to mine labor or more generally. The British employers' liability law of 1880 is a pattern for laws enacted in several states, specifically charging liability for defects in the condition of ways, works, or machinery, for the negligence of employees exercising superintendence or giving orders; and for the acts of certain employees on railroads. The principal effect of these laws is in changing the rule as to fellow-service. They exist in Alabama, California, Colorado, Idaho, Indiana, Maine, Massachusetts, Michigan, New Jersey, New York, Pennsylvania, and Texas.

The modification or abrogation of the other defenses is sometimes general, but is more frequently connected with statutes prescribing safety appliances, the employer not being allowed to plead these defenses where he fails to conform to the provisions of the statute. Instead of allowing the contributory negligence of the injured employee to bar him entirely from recovery of damages, the federal liability law and a number of state laws embody a doctrine of comparative negligence, by virtue of which there is to be an admeasurement of the negligence of the employer and the contributory negligence of the employee, and where the former is gross in comparison with the latter, damages shall not be entirely withheld, but only reduced proportionally. Such laws are found in Iowa, Mississippi, Nebraska, Nevada, North Dakota, Ohio, South Dakota, Texas, and Wisconsin, and in a modified form in Georgia. All these laws are of very recent enactment, but the principle has been held to be constitutional.

mployees' Waivers.—Employers frequently secure contracts from their employees waiving their rights to damages for injuries due to the former's negligence. Courts construe such contracts diversely, and a number of state statutes and the federal statute above mentioned prohibit them, either generally, or in connection with statutes charging a particular duty. The states having such laws are Alabama, Arkansas, California, Colorado, District of Columbia, Florida, Georgia, Indiana, Iowa, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, South Carolina, South Dakota, Texas, Virginia, Wisconsin, and Wyoming. Such laws have been declared constitutional.

elief and Compensation for Injured Employees.—Employers, either singly or in association, may organize systems of relief available for employees injured in the course of employment. These funds may be supplied entirely by the employer, the benefits being available to all employees or they may be supplied by the employer and employee jointly, only those employees being entitled to benefits who become members of the association and contribute to its funds. The acceptance of benefits is usually made a bar to suits for damages, and the bringing of a suit likewise cuts off the benefits. Agreements that acceptance shall so operate, if made in advance of the receipt of the injury, are commonly construed as only putting the employee to his election, and are valid only to that extent, though a few statutes do not permit the receipt of benefits to go further than to effect a reduction of the amount of the judgment against the employer in proportion to the amount of his contribution to the benefit fund. Such provisions exist in laws of Georgia, Iowa, Michigan, Nebraska, Nevada, New Jersey, New York, North Dakota, South Dakota, and Texas, and in the federal employers' liability law.

A Montana statute requires coal mine operators and employees to maintain a mutual fund from which injured employees are to be paid, the system being designated one of insurance, and requiring the payment of fixed amounts, according to the degree of injury. A similar law of Maryland relates to coal and clay miners in its chief mining counties.

Compensation Systems.—As distinguished from the system of liability, in which the employee must prove the employer to have been at fault, is the method of compensation covering not only accidents caused by the fault of the employer, but also those that are the result merely of the trade risk, frequently called inevitable, the burden of which is, under the liability system, assumed by the party least able to bear it, *i. e.*, the workman. Most industrial countries other than the United States have adopted compensation as the method of dealing with industrial accidents, while the liability system is chiefly in use in this country. Since August 1, 1908, laborers and artisans in the employment of the Government of the United States in manufacturing establishments, forts, arsenals, navy yards, on river and harbor and reclamation work, and on the Isthmian canal are compensated for injuries without reference to the fault of the employer or to the doctrine of fellow-service or of assumption of risks. The negligence or misconduct of the injured person will debar him from benefits, which are the continuation of wages during disability for a period not exceeding one year. The compensation for death is one year's earnings of the deceased employee, payable to his dependents.

A statute of Massachusetts authorizes employers to draft schemes which, when approved by the state board of conciliation and arbitration, may be offered to the employee as a substitute for the liability provisions of the state law, and which, when accepted, shall be binding upon both parties; such schemes must propose a more liberal relief than merely to meet the employer's legal liability. The New York legislature of 1910 enacted laws providing for compensation according to schemes embodied in the laws themselves, one law proposing an elective scheme, applicable to industries generally, and one embodying a compulsory system, applicable to designated dangerous employments. The amount of compensation payable to dependents of a workman dying as the result of injury is determined by the amount of his earnings, but may not exceed three thousand dollars. Incapacity, partial or total, temporary or permanent, is provided for according to its nature and degree and to the earnings of the employee, but may not exceed ten dollars weekly for a term of eight years.

Physical Conditions of Employment.—**Factories.** — The rule of common law that the employer is to use ordinary care for the safety of his workmen is supplemented or superseded in many states by laws fixing a standard of safety, or prescribing the use of certain protective appliances. Thus fire escapes on factories and other places of employment are required in most jurisdictions of the United States, and in a number the use of doors that open outwardly or of sliding doors is directed. Laws requiring dangerous machinery to be guarded are found in Colorado, Connecticut, Illinois, Indiana, Iowa, Kansas, Kentucky, Massachusetts, Michigan, Minnesota, Missouri, Nevada, New Jersey, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, Tennessee, Washington, West Virginia, and Wisconsin. Belt shifters, and a provision of cut-offs and switches for the prompt and safe starting and stopping of machinery are required by the laws of some of the above states. Guards or barriers about elevator shafts, well-holes, and vats of hot liquid or kettles of molten metal may also be prescribed, and the construction of stairways is regulated. The storage and use in workrooms, etc., of inflammable or explosive oils and the like are regulated by statute in Iowa, Maryland, Massachusetts, Missouri, New Jersey, and Pennsylvania.

Sanitation, including heating and lighting, whitewashing or painting, and the sweeping and scrubbing of floors and the washing of walls at fixed periods; and ventilation, calling for a prescribed amount of air space per employee, the installation of fans, hoods, etc., for conducting dust from buffing and polishing wheels, and fumes from vats, etc., giving off injurious or offensive odors and gases, are provided for in several states. Laws covering part or all these points are found in Alabama, Arizona, California, Colorado, Connecticut, Delaware, Illinois, Indiana, Iowa, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Jersey, New York, Ohio, Oregon, Pennsylvania, South Dakota, Tennessee, Virginia, Washington, West Virginia, and Wisconsin.

A statute of Illinois prohibits the taking of food into workrooms where poisonous dusts or gases may affect it. Water closets and wash rooms, with separate provisions for the sexes, are frequently provided for, as in Alabama, California, Colorado, Connecticut, Delaware, District of Columbia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Rhode Island, Tennessee, Virginia, Washington, West Virginia, and Wisconsin.

Sweat Shops or Tenement Factories are regulated by special laws in Connecticut, Illinois, Indiana, Maryland, Massachusetts, Michigan, Missouri, New Jersey, New York, Ohio, Pennsylvania, and Wisconsin. These laws may prescribe the amount of air space, light, ventilation, sanitation, and safety, and in some states require licenses and registration of all workrooms used for such purposes, or lists of all persons to whom work is given out, with their place of residence.

Food Products.—Bakeries, confectionaries, etc., where food products are made or handled, are subjects of specific regulation in some states, partly for the benefit of the workmen employed therein, and partly for the sake of the public health. The states having such laws are California, Connecticut, Illinois, Indiana, Massachusetts, Minnesota, Missouri, Nebraska, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Tennessee, Washington, and Wisconsin.

A number of these laws forbid the use of cellars or basements below a certain level, prohibit sleeping in shop or storage rooms, and forbid the employment of persons affected with tuberculous or other infectious or contagious diseases.

The enforcement of these laws is intrusted in most states having them to officers appointed or elected for the purpose; in a few, however, it is in the hands of the ordinary law-enforcement officers, in which case not much can usually be said as to the efficiency of enforcement. In a few states the inspection of bakeries, confectionaries, etc., is placed in the hands of health officers.

Mines.—The operation of mines is regulated in thirty-one, or practically all the states having mines, and by federal statute for the territories. These laws contain requirements that maps of all workings shall be prepared and filed with an officer of the state, that escape shafts shall be provided, travel ways be timbered and lighted and safety holes or places of refuge from passing cars supplied; and that timbers for the use of men in their working places be provided in suitable lengths and amounts. Blasting, including drilling, tamping, and the firing of shots, may be regulated, as well as the opening and storage of boxes of explosives, the storage of oil, hay, and other inflammables, and the insulation of electric wires. Methods of working, the construction and protection of hoisting shafts and cages, the use of safety lamps, the employment of qualified foremen, fire-bosses, and shot-firers, the daily inspection of dangerous places, and other details are embraced in these laws with greater or less completeness. Except in California, Oregon, and the Territories (which are under the control of federal inspectors) the commonwealths having mining laws have state officials specially charged with their enforcement.

Railroads.—The provision of train brakes subject to the control of the engineer, of safety couplers, grab-irons, and switch signals, the blocking of frogs, the placing of tell-tales or warning strings at the approach to bridges or tunnels, and the height of wires, bridges and tunnel roofs above the track are matters of regulation affecting the railways of many states. A few states also require the block system of operating trains to be used, and some prescribe the candle power of the locomotive headlight.

These points are considered in the laws of Arkansas, Colorado, Connecticut, Delaware, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New York, North Carolina, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, South Dakota, Texas, Vermont, Virginia, Washington, Wisconsin, and Wyoming, and in federal statutes applicable to interstate commerce. Inspectors to enforce railroad regulations are provided for by the laws of Illinois, Massachusetts, Michigan, Nebraska, Ohio, and Washington.

The construction of caboose cars has been specially legislated on in Illinois, Michigan, Minnesota, Montana, New York, North Dakota, Ohio, Virginia, Washington, and Wisconsin. The laws usually prescribe the length of the car, its equipment with double trucks, platforms with guard rails and steps, and other provisions for the safety and comfort of the train crew. A number of states designate the minimum train crew that may be employed, Arizona, Arkansas, Connecticut, Indiana, Maine, Maryland, Nebraska, Nevada, North Dakota, Ohio, South Carolina, Texas, and Wisconsin having laws of this sort. Shelters over repair tracks are prescribed in Arkansas, Kansas, Oklahoma, and Texas.

Street railway employees are protected by laws requiring the platforms on which motormen stand to be inclosed, either all the year, or during the winter months. Such laws exist in Colorado, Connecticut, District of Columbia, Illinois, Indiana, Iowa, Kansas, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oregon, South Carolina, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, and Wisconsin. Power brakes or other adequate brakes are prescribed either for all street cars, or for those of designated types or weight, in California, Connecticut, Iowa, New Hampshire, Ohio, and Wisconsin. In Connecticut, New Jersey, and Oregon, seats are to be furnished drivers or motormen on street railways.

Building Operations.—The erection, destruction, and repair of buildings expose workmen to hazards against which employers are required by law to furnish protection in a number of states. These laws relate to the construction, strength, barricading, and in a few states, to the shielding, of scaffolds; to the laying of permanent or temporary flooring or the placing of secondary scaffolds as the building progresses; to the guarding of hoist-ways or shafts, the construction and operation of hoists and cranes, and the protection of workmen from falling objects. These provisions are more or less fully embodied in laws of California, Connecticut, Illinois, Indiana, Kansas, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, New York, Ohio, Oklahoma, Pennsylvania, and Wisconsin.

Accidents.—Of the thirty-two laws regulating employment in mines, nineteen require accidents to be reported. In twenty-three states and by the federal statute accidents on railroads are directed to be reported; while ten states impose a similar duty on proprietors or managers of factories, stores, etc. Six states, Illinois, Indiana, Kansas, Minnesota, Missouri, and Wisconsin, require accidents to employees generally to be reported to state or local officials. By a number of these laws, official investigations and reports are authorized. Surgical and medical supplies as means of aid to injured employees must, according to statute, be kept available in mines in Alabama, Arkansas, Illinois, Indiana, Maryland, Ohio, Oklahoma, Pennsylvania, Utah, Washington, and Wyoming; in iron foundries in Michigan; and in factories generally in Massachusetts.

Restrictions on Employment.—Either the public welfare or the safety of the workman and his co-employees may warrant a preliminary determination of his fitness to engage in certain kinds of labor. To this end examinations and registration of persons wishing to engage in such occupations may be required. Color blindness of men employed in certain capacities on railroads, and infectious or contagious diseases as well as lack of skill in laborers, are illustrations of disqualifications for service. Laws requiring evidence of qualification, and usually registration as well, are found in a number of states, as follows:

For employees on railroads, in Alabama, Georgia, Indiana, Massachusetts, Ohio, and Texas; for motormen on street railways, in New York and Washington; for steam engineers, either generally or in designated capacities, in Alabama, District of Columbia, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nevada, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Washington, and by federal statute; for stationary firemen, in Massachusetts, Montana, and New York; elevator operators in Minnesota; mi managers or foremen, fire bosses, et in mines, in Alabama, Illinois, Indian Iowa, Kentucky, Missouri, Montana, Oh Oklahoma, Pennsylvania, Tennessee, Uta and Wyoming; for all miners in Illinoi and for anthracite miners in Pennsylvani for plumbers, in California, Colorad District of Columbia, Illinois, Kansa Louisiana, Maine, Maryland, Massach setts, Michigan, Missouri, Nebraska, Ne Hampshire, New York, Oregon, Pennsy vania, Texas, Virginia, and Wiscons (such a law was declared unconstitution in Washington); for electricians in Minn sota (such a law was recently declar unconstitutional in Louisiana); for hors shoers in Colorado, Maryland, Michiga Minnesota, and Ohio (declared uncons tutional in Illinois, New York, and Was ington); for barbers in Colorado, Co necticut, Delaware, Illinois, Marylan Michigan, Minnesota, Missouri, Nor Dakota, Oregon, Rhode Island, Uta Washington, and Wisconsin; moving pi ture machine operators, Maryland and Ne York; and chauffeurs, New York.

Alien Labor.—An argument in suppo of legislation of the kind above noted that it limits competition, and partic larly that of unskilled or unqualifi labor. The federal Chinese exclusi acts and the acts forbidding the impo tation of immigrant laborers under co tract are designed directly to limit co petition of a sort especially likely to low rates of wages and the standard of livin The employment of aliens on publ works is prohibited, or a preference f citizens expressed, by statutes of Ca fornia, Idaho, Indiana, Louisiana, Main Massachusetts, New Jersey, New Mexic New York, Pennsylvania, Utah a Wyoming.

Convict Labor.—The same reasons ope ate to restrict convict labor and prevent or limit its output and the sa of convict labor products in the ope market. Such laws are not direct labor laws, and the effort to regulate t sale of the goods after they once becon the subject of commerce, and particular of interstate commerce, has general been found to be beyond the power state legislatures.

Employment Offices conducted by the stat rendering free services to persons seekir employment and to employers wishir to hire employees, are provided for t statutes of Colorado, Connecticut, Ill nois, Indiana, Kansas, Maryland, Mass chusetts, Michigan, Minnesota, Missour Nebraska, Ohio, Oklahoma, Rhode Islan West Virginia, and Wisconsin. Centr and branch offices are provided for some of these states, with weekly otherwise periodical exchanges of lis of applications.

Private Employment Offices are now reg lated by statute in a number of state these statutes may fix the rate charges, require receipts to be give and open registers to be kept, prohibit th conduct of the business in connectio with boarding houses or saloons, requi evidence of bona fide vacancies, provid penalties for fraud or for sending femal to places of immoral resort, require license, for which a fee is charged, an otherwise regulate the conduct of th business. Laws of this nature exist i California, Colorado, Connecticut, Di trict of Columbia, Idaho, Illinois, Indian Iowa, Kentucky, Louisiana, Maine, Mass chusetts, Minnesota, Missouri, Montan

Nevada, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Rhode Island, Tennessee, Utah, Virginia, Washington, West Virginia, and Wisconsin. The provision limiting fees was declared unconstitutional in California, as unwarrantably interfering with the freedom of contract.

Bureaus of Labor.—Bureaus or departments of the state government charged with the duty of administering the laws relative to labor, including the inspection of factories and other working places, the collection of labor statistics, the investigation and mediation of labor disputes, and of seeking to further the interests of industrial workers and industry generally, are provided for by statutes of California, Colorado, Connecticut, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Texas, Virginia, Washington, West Virginia and Wisconsin. There is also a federal office charged with such of these duties as are appropriate. Besides the above, these bureaus are in some states charged with the duty of conducting free public employment offices and of enforcing the laws relative to private offices.

Statutes Relating to Labor Organizations. — Labor organizations may incorporate under the general corporation laws of a state applicable to associations of like nature; in a number of states, however, and by federal statute, provision is made by special laws for their incorporation. The states are Iowa, Louisiana, Maryland, Massachusetts, Michigan, Nebraska, New Jersey, New York, Ohio, Pennsylvania, Texas and Wyoming. That labor agreements are not conspiracies is declared by statute in California, Colorado, Maryland, Minnesota, New Jersey, New York, North Dakota, Oklahoma, Pennsylvania, Texas, and West Virginia. Statutes applicable to labor organizations but not restricted to them are found in most states giving to unincorporated associations a right to sue or be sued with reference to their funds, or which determine in general how actions affecting such associations may be brought.

The badges, cards or insignia of labor organizations are protected from unwarranted or fraudulent use by laws of California, Connecticut, Georgia, Massachusetts, Minnesota, New York, Pennsylvania, Rhode Island, Texas, Virginia, and Wisconsin. The union label is protected from imitation or fraudulent or unauthorized use in forty-two states. Maryland, Montana and Nevada have laws directing that public printing shall bear the union label; such laws have generally been held unconstitutional.

Laws prohibiting discrimination against workmen on account of their membership in labor organizations, either by discharging them or by requiring them to agree not to join, have been enacted by the legislatures of several states and by Congress, but wherever a test has been made of this law in the higher courts, it has been declared unconstitutional, and it has been so held by the Supreme Court. Laws of this sort still stand on the statute books of California, Colorado, Connecticut, Idaho, Indiana, Kansas, Massachusetts, Minnesota, Mississippi (for telegraph operators only); Nevada, New Jersey, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, and Wisconsin. Laws addressed to labor organizations and forbidding them to discriminate against members or applicants for membership on account of their belonging to or joining the National Guard are found in New York and Wisconsin.

Labor organizations are specifically exempted from the operation of anti-trust laws in California, Louisiana, Michigan, Montana, Nebraska, and Wisconsin; of insurance laws in Massachusetts; and of laws governing beneficial associations in Kansas. Laws of Maine and New Jersey authorize them to take out collective insurance in behalf of their members, for which insurance companies may also make special rates. The bribery of representatives of labor organizations is specially penalized by a New York statute.

Strikes.—Though strikes are legal everywhere under the common law as construed in this country, two states, Pennsylvania and Texas, have laws specifically legalizing them; while in Minnesota it is declared that the fact of engaging in a strike more than one year prior to hiring shall not be made the subject of inquiry in employing workmen. Where employers advertise for workmen while there is a strike in their establishment, the fact must be stated in the advertisement, according to laws of Illinois, Massachusetts, Montana, Oregon, and Tennessee.

Several states have laws to direct the conduct of strikers where the operation of railroads is affected. These laws prohibit the obstruction of the operation of trains, the intimidation of employees on trains, and the abandonment of engines or trains at other than division points or the point of regular schedule destination. These provisions are found partly or in their entirety in laws of Connecticut, Delaware, Illinois, Kansas, Kentucky, Maine, Mississippi, New Jersey, New York, Pennsylvania, and Texas. The Maine statute covers other public service corporations as well as railroads.

Picketing, Boycotts and Black Lists.—Two states, Alabama and Colorado, prohibit picketing. Boycotts are declared unlawful by laws of Alabama, Colorado, Illinois, Indiana, and Texas; while blacklisting is prohibited by statutes of Alabama, Arkansas, Colorado, Connecticut, Florida, Illinois, Indiana, Iowa, Kansas, Minnesota, Mississippi (telegraph operators only); Missouri, Montana, Nevada, North Carolina, North Dakota, Oklahoma, Oregon, Texas, Utah, Virginia, Washington, Wisconsin, and by a federal statute applicable to interstate railway service. Intimidation or other interference with employment is prohibited under penalty in Alabama, Connecticut, Delaware, Georgia, Idaho, Illinois, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Dakota, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Texas, Utah, Vermont, Washington, West Virginia, and Wisconsin. Conspiracy against employees is specifically forbidden in Alabama, Florida, Georgia, Kansas, Minnesota, Mississippi, New York, North Dakota, and Washington.

Arbitration of Labor Disputes.—Provision for conciliation or arbitration in cases of disputes between employers and employees through the instrumentality of boards, either existing as permanent state boards or appointed locally for the occasion, exists in a number of states. When special boards are to be appointed it is frequently provided that one member shall be named by the employer, one by the labor union representing the employees, and the third by these two. State or local officials may offer their services as mediators, or may convey information to standing boards as to the existence or threatened occurrence of a strike, whereupon mediation may be attempted or arbitration proposed. Investigations and awards may be made, and the results published; awards may be made a matter of record as of a finding of a court. State boards are provided for by laws of Connecticut, Illinois, Louisiana, Maine, Michigan, Missouri, Oklahoma, and Utah; local boards in Colorado, Kansas, Maryland, Nevada, Pennsylvania, Texas, Washington, and by federal statute; a combination of state and local officials are to form the boards in Idaho and Indiana; while provision is made for state boards, with the alternative that special boards may be appointed to act locally in lieu thereof, in California, Massachusetts, Minnesota, Montana, New York, Ohio, and Wisconsin.

COMPULSORY EDUCATION AND CHILD LABOR LAWS

Statutory provisions relating to compulsory attendance and child labor, prepared by the United States Bureau of Education.

	Compulsory Education			Child Labor	
State	Age	Annual Period	Penalty on Parents for Neglect	Age Under Which Specified Employments Are Forbidden	Educational Restrictions on Child Labor
Alabama				12 years, in any mill, factory, or manufacturing establishment.	No child, 12 to 16, may work in any mill, etc., unless attends school 8 weeks each year employed.
Arizona	*a*8–14	6 months; 20 weeks consecutive.	$5 to $25		No child under 14 may be employed during school hours.
Arkansas	*dd*8–16	Not less than half the full term. Applies to certain counties.	$10 to $25	12 years, in all cases in manufacturing establishments, except canning industries in vacation; 14, unless to support a parent or self, as specified by law; 14, in mines; females not at all in mines. Applies to certain counties only.	No child, 14 to 18, unable to write, may be employed in a manufacturing establishment unless he has attended school 12 weeks the preceding year.
	*gg*8–14	Not less than one-half full term. Applies to certain other counties.	$5 to $25		

COMPULSORY EDUCATION AND CHILD LABOR LAWS—Continued

Compulsory Education				Child Labor	
State	Age	Annual Period	Penalty on Parents for Neglect	Age Under Which Specified Employments Are Forbidden	Educational Restrictions on Child Labor
California	8-15	Full term	First, not over $10 or 5 days' imprisonment; subsequent, $10 to $50 or 5 to 25 days, or both.	14 years, in any mercantile or manufacturing establishment, workshop, hotel, or as messenger, etc. Children 12 to 15, upon permit, may work if parents incapacitated, or during vacation.	No miner under 16 may work for gain in school hours, unless he can read and write English or attends night school.
Colorado	*b*8-16	Full term	$5 to $25	14 years in any underground works, mine, shelter, mill, or factory. No female may be employed in a coal mine.	Unlawful to employ children under 14 during school hours unless they have complied with the school-attendance law; under 16, unable to read and write, unless attending day or night school.
Connecticut	*c*7-16	Full term	Not exceeding $5 each week of absence.	14 years, in any mechanical, mercantile, or manufacturing establishment.	Children under 14 may not be employed while school is in session. Children 14 to 16 can not leave school to be employed, unless their education is satisfactory to the local or state board.
Delaware	7-14	5 months (may be reduced by districts to 3).	First, not over $2; after, not over $5. On default imprisonment 2 to 5 days.	14 years, in any factory, workshop, or manufacturing establishment, except in canning industry, etc., or to support widowed mother.	No child 14 to 16 may be so employed, unless he has attended day or night school 12 weeks the preceding year.
District of Columbia	8-14	Full term	Not exceeding $20	14 years in any factory, workshop, store, office, hotel, theater, as messenger, etc. Children 12 to 14 may get permit to work in certain cases.	Children under 14 may not do any work for wages during school hours, nor under 16 in preceding employments, unless can read, write, and attended school 130 days preceding year.
Florida				Children under 15 may not be employed more than 60 days without consent of legal guardian.	
Georgia				10 years, in or about any manufacturing establishment; 12 years after Jan. 1, 1907, except for support of self or parents in specified cases.	After Jan. 1, 1908, no child under 14 may be employed as in preceding column (with the exception there noted) unless able to write and has attended school 12 weeks the preceding year; under 18, unless so attending school.
Idaho	*d*8-18	Full term	Not over $300 or imprisonment not over 6 months, or both.	14 years, in any mine, factory, workshop, mercantile establishment, laundry, hotel, etc., except over 12 during vacations.	No child under 14 may be employed in any way during school hours.
Illinois	*e*7-16	Full term, to be not less than 6 months.	$5 to $20 and costs, and stand committed until paid.	14 years, in any mercantile institution, factory, office, theater, elevator, etc., or as messenger or driver; 16, in or about any mine. No female may work in or about a mine.	No child 14 to 16 unable to read and write may be employed unless attending an evening school, if there is one. No child under 14 may be employed at any work for wages during the school term.
Indiana	*f*7-14	Full term	$5 to $25, and, in discretion of court, imprisonment 2 to 90 days.	14 years, in any manufacturing or mercantile establishment, mine, quarry, laundry, renovating works, bakery, or printing office. No female may work in a mine.	Children under 16 unable to read and write English may not be employed in foregoing employments except in vacation of public schools.
Iowa	*f*7-14	24 consecutive weeks; first and second class city boards may require full term.	$3 to $20	14 years, in any mine, factory, mill, shop, laundry, packing house, elevator, or store where more than 8 persons are employed.	
Kansas	8-15	Full term *g*	$5 to $25	14 years, in any factory, workshop, theater, packing house, or in or about any mine; 16, in any dangerous, etc., employment.	Under 14 may not be employed in any way during school hours. No minor under 16 may work in a coal mine unless he can read and write and has attended school 3 months in the year.
Kentucky	*h*7-14	8 consecutive weeks; full term in cities of first, second, third, and fourth class.	First, $5 to $20; subsequent, $10 to $50.	14 years, in any mine, workshop, factory, store, office, hotel, as messenger, etc.	Under 14 may not be employed in any way during school term; not from 14 to 16 in stated occupations unless can read and write and attended school 100 days preceding year.
Louisiana				14 years, in any manufacturing or mercantile establishment, mine, laundry, carrying messages, etc.	Children under 14 may not be employed in foregoing employments nor in clothing, dressmaking, or millinery establishments unless they have attended school 3 months in preceding year.
Maine	*ee*7-15	Full term	Not exceeding $25, or imprisonment not exceeding 30 days.	14 years, in any manufacturing or mechanical establishment.	Children under 15 shall not be employed in any manufacturing or mechanical establishment, except during vacation, unless they have attended school 16 weeks during preceding year.
Maryland *i*	*j*8-12	Full term	Not exceeding $5	14 years, in mills and factories (except canning establishments), unless self, widowed mother, or invalid father solely dependent upon such employment. 19 counties exempt from law. 14 years, day messenger service; 16 years, night messenger service; 21 years, messenger duty to house of ill repute.	No minor 12 to 16, unable to read and write English, may be employed where there is an evening school unless attending that or another school.

COMPULSORY EDUCATION AND CHILD LABOR LAWS—Continued

Compulsory Education				Child Labor	
State	Age	Annual Period	Penalty on Parents for Neglect	Age Under Which Specified Employments Are Forbidden	Educational Restrictions on Child Labor
Massachusetts	(k)	Full term	Not exceeding $20	14 years, in factories, workshops, or mercantile establishments; 21 years, dangerous occupations.	Children under 14 may not be employed at any work for wages during school hours; from 14 to 16 may not be so employed in any factory, workshop, or mercantile establishment if unable to read and write. l
Michigan	7-16	Full term	Fine of $5 to $50, or imprisonment 2 to 90 days, or both.	14 years, in any manufacturing or mercantile establishment, workshop, laundry, store, office, hotel, messenger service, etc.	Children 14 to 16 may not be employed unless they have attended school 100 days preceding year, and can read and write and know the elements of arithmetic.
Minnesota	f8-16	Full term	Not over $50, or imprisonment not over 30 days.	14 years, in factories, mills, workshops, or mines.	Children under 14 years may not be employed in any service during school term; under school age (16 years), in any occupation during school term unless they have attended school the prescribed period; under 16, unable to read and write English, in any indoor occupation (except in vacation) unless attending day or evening school.
Mississippi				12 years, in any mill, factory, or manufacturing establishment.	
Missouri	m8-14	Not less than ¾ of term. Full term in cities of over 500,000.	$10 to $25, or imprisonment 2 to 10 days, or both.	14 years, in any gainful occupation except agriculture and domestic service; 16 years, in dangerous and unwholesome occupation; no females in mines or dramshops.	No child between 14 and 16 may be employed unless he has regularly attended school and is able to read and write English.
Montana	n8-14	Full term; in no case less than 16 weeks.	$5 to $20	16 years, in mines or underground works.	Children under 14 not to be employed during school sessions unless they have completed the studies required by law; from 14 to 16, if unable to read and write English.
Nebraska	o7-15	Two-thirds of school term; in no case less than 12 weeks. Full term in cities.	$5 to $25 (on truant officer).	14 years, in any manufacturing or mercantile establishment, office, hotel, etc.	No child under 14 may be employed in any service during school hours.
Nevada	8-16	Full term	First, not over $10 or imprisonment not over 5 days; subsequent, $10 to $50, or imprisonment 5 to 25 days, or both.		
New Hampshire	p8-14	Full term	First, $10; subsequent, $20.	12 years, in any manufacturing establishment.	No child under 14 may be employed during school sessions, nor under 16 if unable to read and write English. No minor unable to read and write English may be employed unless attending day or evening school, if any is held.
New Jersey	q7-17	Full term	Punishable as a disorderly person.	14 years, in factories, workshops, mills, or manufacturing establishments, also mines; 15 years until July 4, 1911, 16 years thereafter, in factories, etc., between 6 p. m. and 6 a. m.	Children under 15 must have attended school 12 weeks the preceding year as a condition of employment.
New Mexico	7-14	Full term	$5 to $25, or imprisonment not exceeding 10 days.		
New York	7-16	Full term (not less than 160 days) in districts of over 5,000 population having a superintendent, for children 7-16 r; elsewhere, for children 8-16, Oct. 1 to June 1. r	First, not over $5 or imprisonment 5 days; subsequent, not over $50 or imprisonment 30 days, or both.	14 years, in factories; if 14 to 16, the child must have attended school 130 days the preceding year, and be able to read and write English, and cipher. Similar provisions apply, in places of over 3,000 population, to work in mercantile establishments, business offices, restaurants, hotels, express or messenger service, except for children over 12 in small places during vacation. For work in or about mines 16 years is the minimum. No female may work in a mine. s	Unlawful to employ in any business or service child under 14 during school term; or one 14 to 16 in city of first or second class, unless he has an employment certificate (having certificate and not having completed elementary course, must attend evening or trade school) or one 14 to 16 elsewhere, in any factory, etc., unless has employment certificate, or in any service unless has certificate of school attendance, etc.
North Carolina	t8-14	16 weeks	$5 to $25	12 years, in any factory or manufacturing establishment (does not apply to oyster canning and packing); 12 years, in mines employing over 10 men (boys); children 12 to 13 may be employed in factories only as apprentices.	Apprentices 12 to 13 years must have attended school 4 months in preceding 12.
North Dakota	8-15	Full term	$5 to $20 (on school official).	14 years, in mines, factories, workshops, mercantile establishments, etc.	Children under 14 may not be employed in any manner during school term, or those 14 to 16 unless they have attended school 120 days preceding year and know the elementary branches.
Ohio	u8-14	Full term; in no case less than 28 weeks.	$5 to $20; on default, imprisonment from 10 to 30 days.	14 years, in any factory, workshop, business office, mercantile establishment, hotel, as messenger, etc.; 18 years, messenger service between 9 p. m. and 6 a. m.	No child between 14 and 16 may be employed in foregoing occupations without a schooling certificate.
Oklahoma	8-16	3 to 6 months. v	$10 to $50	16 years, in mines (no girls in mines).	
Oregon	w9-14	Full term	$5 to $25 fine, or imprisonment 2 to 10 days, or both.	14 years, in any factory, store, workshop, in or about any mine, or in the telegraph, telephone, or public messenger service.	Foregoing employments forbidden to any child 14 to 16 unless attended school 160 days preceding year and can read English. No child under 14 may be employed in any work for compensation during school hours.

COMPULSORY EDUCATION AND CHILD LABOR LAWS—Continued

	Compulsory Education			Child Labor	
State	Age	Annual Period	Penalty on Parents for Neglect	Age Under Which Specified Employments Are Forbidden	Educational Restrictions on Child Labor
Pennsylvania	*x*8-16	Full term; but the school board of each district has power to reduce this to not less than 70 per cent of the term.	First, not exceeding $2; subsequent, not exceeding $5; on default, imprisonment; first, not over 2 days; subsequent, not over 5.	14 years, in any employment, except domestic or farm labor. Girls may not work in or about coal mines.	No child 14 to 16 may be employed unless he can read and write English and has complied with the school laws.
Rhode Island	*y*7-15	Full term	Not exceeding $20	14 years, in any factory, manufacturing or business establishment.	Children under 13 may not be employed except during school vacations.
South Carolina				12 years, in any factory, mine or textile establishment, except that certain self-dependent children may work in the latter.	Children may work in textile establishments in June, July, and August if they have attended school 4 months during the year and can read and write.
South Dakota	*f*8-14	Full term; but districts may reduce it to 16 weeks, 12 consecutive.	$10 to $20 and costs; stand committed till paid.	14 years, in mines	No child 8 to 14 to be employed during school hours unless he has attended school 12 weeks during the year.
Tennessee *z*	8-14	4 months or 80 days consecutively.	First offense, $1 for each day of absence.	14 years, in workshops, factories, or mines.	
Texas				12 years, in mills, factories, manufacturing or other establishments using machinery; 16 years in mines, distilleries, or breweries.	Unlawful to employ children 12 to 14 who can not read and write English, in mills, factories, etc., certain self-dependent children excepted.
Utah	8-16	20 weeks, 10 consecutive; in cities of the 1st and 2d class 30 weeks, 10 consecutive.	First, not exceeding $10; subsequent, not exceeding $30, with costs.	14 years in mines (constitution of state).	
Vermont	*a*8-15	Full term	$5 to $25	12 years, for any railroad company or in any mill, factory, quarry, or workshop, or carrying messages.	No child under 16 who has not completed the 9-year school course may be employed in any railroad, factory, mine, or quarry work, or in delivering messages, except out of school hours.
Virginia *bb*	8-12	12 weeks	First, $2 to $10; subsequent, $5 to $20.	13 years, after March 1, 1909; 14 after March 1, 1910, in any factory, workshop, mercantile establishment, or mine, except in certain cases of need over 12. *cc*	
Washington	8-16	Full term	Not over $25	14 years (boys), 16 years (girls), at any labor not connected with house or farm work; 16 years in mines (girls not at all).	Children under 15 may not be employed during school hours unless excused by the school superintendent.
West Virginia	8-14	20 weeks	First, $2; subsequent, $5	12 years, in factories, workshops, mercantile or manufacturing establishments; 14 in mines (no girls may work in mines).	No child under 14 shall be so employed during school term if it hinders regular attendance.
Wisconsin *cc*	7-14	Full term in 1st class cities; in 2d class cities not less than 8, elsewhere not less than 6 school months.	$5 to $50 and costs, or imprisonment not over 3 months, or both.	12 years, in any occupation; 14, in factories, workshops, mines; 14 to 16, in any occupation without specified written permit.	Children 12 to 14 may not be employed in any occupation, except during school vacations by specified written permit, in stores, offices, hotels, mercantile establishments, laundries, or public messenger service, where they reside (does not apply to farming or other outdoor work).
Wyoming	*f*7-14	Full term	Not exceeding $25	14 years, in mines; females may not work in mines. (Constitution.)	
United States laws (for territories).				12 years, in the underground workings of any mine.	

a To 16, if unable to read and write English.
b Children 14 to 16 whose labor is necessary to their own or parents' support are excused.
c Not applicable to children over 14 lawfully employed to labor at home or elsewhere.
d Except children over 14 who have completed eighth grade, or have to support themselves or parents, or have other good cause to be exempt.
e Children 14 to 16 necessarily and lawfully employed are exempt.
f Inclusive.
g 8 weeks for children over 14 who can read and write English and are at work to support themselves or others.
h To 16 in cities of first, second, third, and fourth classes; holders of employment certificates excepted.
i The provisions tabulated for Maryland (except in fifth column) are of the act of 1902, whose operation is limited to Baltimore city and Allegany county.
j To 16 unless regularly employed to labor at home or elsewhere.
k To 16 if wandering about public places without lawful occupation, or if unable to read and write.
l Must be able to so read and write as is required to enter the second grade in 1906, third in 1907, and fourth in 1908 and after.
m To 16 years for children not lawfully, regularly, and usefully employed.
n To 16 if unemployed.
o To 16 years in cities.
p To 16 if unable to read and write English.
q Inclusive. Does not apply to children over 15 who have finished grammar-school course and are regularly employed; otherwise must attend grammar, or high, or manual-training school. Children over 14 may be employed in cases of necessity.
r Does not apply to children 14 to 16 lawfully employed.
s Other forbidden employment: under 16, on certain machines in box factories; under 21, night messenger service in certain cities; under 16, in bowling alleys and in places of amusement at night.
t Law does not take effect in any county until voted by the county; does not apply to children over 12 lawfully employed at home or elsewhere.
u To 16 if not legally employed or if unable to pass fifth grade test in required subjects. Children in cities who have not completed eighth grade may be required to attend until they are 16.
v In the discretion of school boards.
w To 16 if unemployed.
x Not applicable to children over 13 who can read and write English and are regularly employed in useful service.
y Not applicable to children over 13 who are lawfully employed.
z The compulsory attendance act applies to 18 counties, in addition to which 13 counties are under special laws.
aa Children over 15 or under 8, when once enrolled, must attend the full term they are enrolled for.
bb Compulsory attendance law optional with the voters of any county, city, or town.
cc Children under 17 may not be sent to immoral resorts.

CUSTOMS DUTIES UNDER THE TARIFF LAW OF 1909 AND OF 1913 COMPARED

The following table covers only the principal articles imported into the United States, except Philippine Islands, Guam and Tutuila. ad val.—ad valorem; n. s. p. f.—o' specially provided for; n. e.—not enumerated.

Articles	Rates of Duty Under Payne Law of 1909	Rates of Duty Under Underwood Law of 1913
SCHEDULE A—CHEMICALS, OILS AND PAINTS		
Acids, n.s.p.f.	25 p.c. ad val.	15 p.c. ad val.
Alcoholic compounds, n.s.p.f.	60c. lb. and 25 p.c. ad val.	10c. lb. and 20 p.c ad val. to 40c lb and 20 p. c. ad val.
Alkalies, alkaloids, and all chemical and medicinal compounds, preparations, mixtures and salts, and combinations thereof.	25 p.c. ad val.	15 p.c. ad val.
Ammonia, carbonate of, and muriate of.	1½c. lb.	¾c. lb.
Coal-tar products, not medicinal and not colors or dyes.	Free list	10 p.c. ad val.
Drugs.	1¼c lb. and 10 p.c. ad val.	10 p.c. ad val.
Glue, value not above 10c. per pound.	2½c. lb.	1c. lb.
Oil, castor, gals.	35c. gal.	12c gal.
Oil, olive, in bottles, etc., gals.	50c. gal.	30c. gal.
Oil, whale, gals.	8c. gal.	5c. gal.
Opium, crude and not adulterated, containing 9 per cent. and over of morphia, lbs.	$1.50 lb.	$3 lb.
Paints, colors, pigments, etc.	30 p.c. ad val.	15 to 20 p.c. ad val.
Perfumery, cosmetics, containing alcohol.	60c. lb. and 50 p.c. ad val.	40c. lb. and 60 p.c. ad val.
Perfumery, cosmetics, not containing alcohol.	60 p.c. ad val.	60 p.c. ad val.
Soap, castile and unperfumed toilet soap.	1¼c. lb.	10 p.c. ad val.
Soap, perfumed toilet.	50 p.c. ad val.	30 p.c. ad val.
Soda, bicarbonate of.	5-8c. lb.	¼c. lb.
Sponges, not advanced in value by chemical processes.	20 p.c. ad val.	10 p.c. ad val.
Talcum.		15 p.c. ad val.
SCHEDULE B—EARTHS, EARTHENWARE AND GLASSWARE		
Cement.	8c. 100 lbs.	10 p.c. ad val.
Earthenware, porcelain, decorated.	60 p.c. ad val.	40 p.c. ad val.
Earthenware, common, not ornamented.	25 p.c. ad val.	15 p.c. ad val.
Glassware, plain, decorated or cut.	60 p.c. ad val.	45 p.c. ad val.
Marble, manufactures of, except for jewelry.	50 p.c. ad val.	45 p.c. ad val.
Spectacles, eyeglasses, opera and field glasses, and frames for same.	50 p.c. ad val.	35 p.c. ad val.
SCHEDULE C—METALS AND MANUFACTURES OF		
Iron, bar, n.s.p.f.	6-10c. lb.	5 p.c. ad val.
Steel, n.s.p.f.	Graduated rate	15 p.c. ad val.
Automobiles, valued at $2,000 or more and automobile bodies.		45 p.c. ad val.
Automobiles valued at less than $2,000, and automobile chassis and finished parts of automobiles, not including tires.	45 p.c. ad val.	30 p.c. ad val.
Copper plates, n.s.p.f.	2½c. lb.	5 p.c. ad val.
Pens, metallic, except gold pens.	12c. gross	8c. gross
Table and kitchen utensils, metal.	40 p.c. ad val.	25 p.c. ad val.
Tin plates.	1 2-10c. lb.	15 p.c. ad val.
Pins, not jewelry.	35 p.c. ad val.	20 p.c. ad val.
Iron beams, girders, joists.	Graduated rate	10 p.c. ad val.
Cast iron pipe, andirons, plates, stove plates hollow ware.	8-10c. lb.	10 p.c. ad val.
Aluminum, and alloys of any kind in which it is the chief component, in crude form.	7c. lb.	2c. lb.
Watch movements and watch cases, clocks and parts thereof.	Graduated rate	30 p.c. ad val.
Zinc in blocks, pigs or sheets.	Graduated rate	15 p.c. ad val.
SCHEDULE D—WOOD AND MANUFACTURES OF		
Briar wood and similar wood unmanufactured.	15 p.c. ad val.	10 p.c. ad val.
Paving posts, railroad ties, telephone, trolley and telegraph poles.	10 p.c. ad val.	10 p.c. ad val.
House or cabinet furniture, and manufactures of wood or bark, n.s.p.f.	35 p.c. ad val.	15 p.c. ad val.
SCHEDULE E—SUGAR, MOLASSES AND MANUFACTURES OF		
Sugars and syrups of cane juice.	Above 75 degrees polariscope 95-100 of 1c. per lb. and for each additional degree 35-1000 of 1c. per lb.	Not above 75 degrees polariscope 71-100 of 1c. per lb.: for every additional degree 26-1000 of 1c. per lb.*
Saccharin.	65c. lb.	65c. lb.
Sugar cane in its natural state, or unmanufactured.	20 p.c. ad val.	15 p.c. ad val.
Molasses, not above 40 degrees.	20 p.c. ad val.	15 p.c. ad val.
Maple sugar and maple syrup.	4c. lb.	3c. lb.
Glucose or grape sugar.	1½c. lb.	1 1-8c. lb.
Sugar candy, valued more than 15c. per pound.	50 p.c. ad val.	25 p.c. ad val.
Sugar candy and all confectionery, n.s.p.f., valued at 15c. per pound or less.	4c. lb. and 15 p.c. ad val.	2c. lb.
SCHEDULE F—TOBACCO AND MANUFACTURES OF		
Tobacco, wrapper, filler, leaf.	$1.85 lb. to $2.50 lb.	$1.85 lb. to $2.50 lb.
Snuff.	55c. lb.	55c. lb.
Cigars and cigarettes.	$4.50 lb. and 25 p.c. ad val.	$4.50 lb. and 25 p.c. ad val.
SCHEDULE G—AGRICULTURAL PRODUCTS AND PROVISIONS		
Horses and mules and all live animals, n.s.p.f.	25 p.c. ad val.	10 p.c. ad val.
Barley, bushel of 48 pounds.	30c. bushel	15c. bushel
Barley malt, bushel of 34 pounds.	45c. bushel	25c. bushel
Oatmeal and rolled oats.	1c. lb.	30c. 100 lbs.
Oats, bushel.	15c. bushel	6c. bushel
Rice, cleaned.	2c. lb.	1c. lb.
Macaroni, vermicelli, and all similar preparations	1½c. lb.	1c. lb.
Butter and substitutes.	6c. lb.	2½c. lb.
Cheese and substitutes therefor.	6c. lb.	20c. p.c. ad val.
Hay.	$4 ton	$2 ton
Honey.	20c. gallon	10c. gallon
Hops.	16c. lb.	16c. lb.
Seeds, flax seed, linseed and other oil seeds, n.s.p.f.	25c. bushel	20c. bushel
Seeds, castor.	25c. bushel	15c. bushel
Seeds, castor.	25c. bushel	15c. bushel
Fish, except shell fish, packed in oil or in oil and other substances.	1c. lb.	25 p.c. ad val.
SCHEDULE G—Continued		
Fruits, apples, peaches, quinces, cherries, plums and pears.	25c. bushel	10c. bushel
Fruits, preserved, n.s.p.f.	2c. lb.	1c. lb.
Fruits, oranges, grapefruit, lemons and limes in bulk.	1c. lb.	½c. lb.
Pineapples in bulk.	$8 per 1,000	$5 per 1,000
Nuts of all kinds, shelled or unshelled, n.s.p.f.	1c. lb.	1c. lb.
Spices, unground, n.s.p.f.	Free list	1c. lb.
Chocolate and cocoa unsweetened, prepared or manufactured, n.s.p.f.	Graduated rate	8 p.c. ad val.
Chocolate and cocoa, sweetened, prepared or manufactured, valued at 20c. per pound or less	Graduated rate	2c. lb.
SCHEDULE H—WINES AND OTHER BEVERAGES		
Brandy and other spirits manufactured or distilled from grain or other materials, n.s.p.f.	$2.60 gallon	$2.60 gallon
Champagne and all other sparkling wines, quarts	$9.60 per doz.	$9.60 per doz.
Wines, still, in casks, vermuth and similar beverages.	45c. gallon	45c. to 60c. gallon
Wines, still, in bottles, quarts.	$1.85 per doz.	$1.85 per doz.
Malt liquors, in bottles, jugs, gallons.	45c. gallon	45c. gallon
Mineral waters, in bottles, quarts.	30c. doz.	20c. doz.
SCHEDULE I—COTTON MANUFACTURES		
Cotton thread, uncolored, according to numbers	2½c. lb. to 28c. lb.	5 to 25 p.c. ad val.
Cotton thread, colored, bleached, according to numbers.	6c. lb. to 67c. lb.	7½ to 27½ p.c. ad val.
Cotton cloth, uncolored, according to numbers.	1c. sq. yard to 8c. sq. yard	7½ to 27½ p.c. ad val.
Cotton cloth, colored, bleached, according to numbers.	Graduated rate	10 to 30 p.c. ad val.
Cotton handkerchiefs or mufflers, hemmed or hemstitched, n.s.p.f.	4¼c. sq. yard and 10 p.c. ad val.	30 p.c. ad val.
Cotton clothing, ready made.	50 p.c ad val.	30 p.c. ad val.
Cotton hosiery, pairs.	70c. doz. to $2 doz. and 15 p.c. ad val.	$1.20 doz. pairs and 30 to 50 p.c. ad val.
Cotton shirts, drawers, and all underwear, n.s.p.f	60c. doz. and 15 p.c. ad val. to $2.25 doz. and 35 p.c. ad val.	30 p.c. ad val.
Cotton, plushes, velvets, corduroys.	9c. sq. yard and 25 p.c. ad val. to 12c. sq. yard and 25 p.c. ad val.	40 p.c. ad val.
Lace manufactures.	60 p.c. ad val.	35 to 45 p.c. ad val.
SCHEDULE J—FLAX, HEMP AND JUTE AND MANUFACTURES OF		
Flax hemp or ramie single yarns, finer than 80 lea or number.	35 p.c. ad val.	10 p.c. ad val.
Mattings for floors.	3½c. sq. yard	2½c. sq. yard
SCHEDULE K—WOOL AND MANUFACTURES OF		
Combed wool or tops, n.s.p.f.	Graduated rate	8 p.c. ad val.
Yarns.	Graduated rate	18 p.c. ad val.
Cloths, knit fabrics, felts not woven and all manufactures of every description, wholly or chiefly of wool, n.s.p.f.	Graduated rate	35 p.c. ad val.
Blankets, n.s.p.f., and flannels.	Graduated rate	25 to 30 p.c. ad val.
Dress goods, women's and children's.	Graduated rate	35 p.c. ad val.
Clothing, ready made and wearing apparel of every description, n.s.p.f.	44c. lb. and 60 p.c. ad val.	35 p.c. ad val.
Carpets, woven whole for rooms, and rugs.	10c. sq. foot and 40 p.c. ad val.	50 p.c. ad val.
Plushes, velvets and all other pile fabrics, cut or uncut.	Graduated rate	45 p.c. ad val.
SCHEDULE L—SILK AND SILK GOODS		
Silk partially manufactured, or spun silk.	35 p.c. ad val.	20c. lb. to 35 p.c ad val.
Silk, wearing apparel.	60 p.c. ad val.	50 p.c. ad val.
Silk, yarns, threads.	45c. lb. to 60c. lb.	35 to 60 p.c. ad val.
Silk, all manufactures of, n.s.p.f.	Graduated rate	45 p.c. ad val.
SCHEDULE M—PAPER AND BOOKS		
Printing paper, other than paper commercially known as hand-made or machine hand-made, valued above 2½c. per lb., n.s.p.f.	3-10c. lb. to 8-10c. lb.	12 p.c. ad val.
Books, of all kinds, bound or unbound pamphlets, engravings, photographs, n.s.p.f.	25 p.c. ad val.	15 p.c. ad val.
Paper, manufactures of, n.s.p.f.	35 p.c. ad val.	25 p.c. ad val.
Playing cards.	10c. pack and 20 p.c. ad val.	60 p.c. ad val.
SCHEDULE N—SUNDRIES		
Beads.	35 p.c. ad val.	35 p.c. ad val.
Brushes.	40 p.c. ad val.	35 p.c. ad val.
Bristles.	7½c. lb.	7c. lb.
Diamonds and other precious stones, cut but not set.	10 p.c. ad val.	20 p.c. ad val.
Feathers and downs.	20 to 60 p.c. ad val.	20 to 60 p.c. ad val.
Furs, dressed.	20 p.c. ad val.	10 to 40 p.c. ad val.
Furs, wearing apparel.	50 p.c. ad val.	50 p.c. ad val.
Gloves.	$1.25 doz. to $5.80 doz.	$1 to $2.50 doz. pair
Gutta-percha and India rubber, manufactures of, n.s.p.f.	35 p.c. ad val.	10 p.c. ad val.
Hair, human, cleaned but not manufactured.	20 p.c. ad val.	20 p.c. ad val.
Leather, manufactures of.	15 p.c. ad val.	30 p.c. ad val.
Musical instruments.	45 p.c. ad val.	35 p.c. ad val.
Phonographs, gramophones, graphophones, or parts.	45 p.c. ad val.	25 p.c. ad val.
Pipes and smokers' articles.	Graduated rate	20 to 50 p.c. ad val.
Paintings and statuary, n.s.p.f.	15 p.c. ad val.	15 p.c. ad val.
Toys.	35 p.c. ad val.	35 p.c. ad val.
Umbrellas, parasols, sunshades, n.s.p.f.	50 p.c. ad val.	35 p.c. ad val.

CUSTOMS DUTIES UNDER THE TARIFF LAW OF 1913—Continued

DATES OF TAKING EFFECT.—Following are the dates on which various portions of the Underwood-Simmons Law go into effect:

Dec. 1, 1913.—Raw wool free.

Jan. 1, 1914.—New rates on wool manufactures.

March 1, 1914.—New rates on sugar and molasses.

May 1, 1916.—Sugar and molasses free.

June 30, 1914.—First payment of the income tax for ten months of 1913, namely, from March 1 last to Dec. 31.

Jan. 1, 1914.—The denatured alcohol section.

The remainder of the law went into effect at midnight, Oct. 4, 1913.

The free raw wool provision in effect Dec. 1, exempts from duty all wool of sheep, hair of the camel and of like animals, all paper twine for binding such products, all wool wastes, including noils, top, card, slabbing, roving, ring, yarn, bur, thread, and garnetted wastes, all shoddies, mungo, flocks, wool extract, carbonized wool, and other wastes not specially provided for. Until the date named, the rates of the Payne law will be assessed on all such wool and wastes.

The rates of the Payne law also remain effective until Jan. 1, 1914, on wool manufactures, when the Underwood reduced rates come into force. This means that until that date the Payne law rates will be assessed on combed wool, woolen yarns, cloths, knit fabrics, ready-made clothing, carpets, drugget, angora goat tops, woolen cloths, plushes, velvets and pile fabrics.

Sugar rates as provided in the Payne law are operative until March 1, 1914, including those on tank bottoms, strips of cane, melada, molasses, and sugar drainings. On that date the Underwood rates will become applicable to these items. But the Underwood rates on maple sugar, maple syrup, and sugar cane in its natural state, became effective at once, and remain in force until May 1, 1916. Maple sugar will then be admitted free, as well as refined sugar and molasses.

PARLIAMENTARY LAW and practice consist of those rules, precedents, and usages which are generally accepted as the most convenient and practicable for the government of proceedings in deliberative assemblies or organizations. Most of the essential rules now accepted had their origin in the English parliament, although some of them have been changed to adapt them to the needs of our legislative bodies. The rules and usages of Congress have great weight as correct parliamentary law in the United States generally, but the legislature of each state has a code of its own containing the general rules, and special ones not commonly accepted.

Besides the common parliamentary law, which is recognized by deliberative bodies in general, each body may make rules for its own government. When there are no special rules to the contrary the body is controlled by the principles of common parliamentary practice, and these principles govern if there are no rules enacted by the body itself.

Uses.—Parliamentary law is needed in deliberative bodies in order that there may be a mutual understanding as to what may be done, that the rights of the body and of its individual members may be protected, and that business may be transacted with expedition and also deliberation.

A gathering does not become a deliberative body until it is duly organized. This implies officers and members. The number of the former may vary according to circumstances. There must be one to preside over the deliberations. Then there should be a clerk or secretary to keep a record of the transactions.

Parliamentary practice presumes that, ordinarily, matters for discussion and decision emanate from some member or members of the meeting, and that the discussing and deciding is done by the membership.

Organization.—Temporary.—At the time appointed, or a few moments later, some one steps forward and requests the meeting to come to order, and, having secured attention, he either makes a motion that a certain person, giving his name, act as chairman, or asks the assembly to nominate a chairman. And he puts motions or nominations to vote, until some one is elected to preside. The chairman then takes his place, and the organization is completed by the nomination and election of a secretary, and any other necessary officers.

Convention of Delegates.—In the case of a convention of delegates, a temporary organization is first made by electing a chairman and secretary *pro tem.* Then a committee on credentials is chosen, to ascertain who are duly authorized to take part in the deliberations and the voting. This committee next reports the names of those who are found to have proper credentials, also doubtful or contested cases, with recommendations. No one without proper credentials is allowed to vote on the report of the committee, or on any question until he is duly accepted as a delegate. The organization of the convention is finished by the nomination and election of permanent officers.

After a meeting is duly organized, it is customary for some member to state briefly the object of the meeting, and business may be introduced at once, or the time may be occupied by addresses. A committee is sometimes appointed to prepare resolutions, while addresses are being given to fill up the time, and they report as soon as possible or they may be given more time, and bring in their resolutions after a recess, or at a subsequent meeting.

Permanent.—In organizing a permanent society a temporary organization is first effected, after which the chairman calls upon some person who is taking a leading part in getting up the society to state the object of the proposed organization. A motion or resolution favoring the organization is next in order, and, if carried, a committee is appointed to draft a constitution or by-laws or both. The constitution should contain five articles at least, *viz.*: 1. Name and object of the society. 2. Qualifications of members. 3. Officers, their election and duties. 4. Meetings of the society. 5. How to amend the constitution.

At the second meeting the constitution is adopted, and after all have signed the constitution who wish to become members, by-laws are adopted if desired, and a committee is appointed to nominate permanent officers, to be elected at this or an adjourned meeting. Each officer as elected takes the place of the temporary one, and when all are elected the organization is completed.

Nominations and Elections.—Generally the most prudent and expeditious way of making nominations is to place the matter in the hands of a committee created for the purpose, who, after due consideration, make the nominations and tender their report to the assembly, after which a motion is made and seconded to adopt the report of the committee. Then the names of the nominees are again read with a pause after each, to give opportunity for amendments. Any member who is not satisfied with a nomination may move to substitute another name, and if this motion receives a second and is carried the substituted name takes the place of the regular nominee.

The vote, if by acclamation, may be taken upon each name before passing to the next, but the more common way is to vote upon the names as a whole, after the entire list has been considered.

Sometimes the chairman is authorized by the assembly to make the nominations, and in this case the names are treated the same as if brought in by a committee.

Another way of nominating is as follows: Some member obtains the floor and says, "*I nominate Mr. A.*" In the same way another member nominates Mr. B. and another Mr. C, and so on. When a number of candidates have thus been nominated, some member moves that the nominations close, and if this motion is seconded and carried the chairman then takes the vote upon the names, in the order in which the nominations were made, and continues until one is elected. If there is more than one office to be filled, the same process must be gone through with in each individual case.

If the election is to be by ballot, and the names are on the ballots, each voter may cast his ballot as it is, or he may cross off names and write others in their places. If blank slips are used, each voter writes on his slip the names of the nominees, or substitutes other names according to his choice. A majority of all the votes cast is necessary to a choice. In case the office or offices are not filled at the first ballot, the voting must be continued until the necessary officers are elected.

Officers and Their Duties.—Chairman, President, or Moderator.—The presiding officer is generally known by one of these titles. He should always be addressed by his title, and in referring to himself he should always use his official title, thus: "*It is the opinion of the chair,*" etc.

It is his duty to take the chair and call the meeting to order at the proper time, to announce in its order each item of business, to state all proper questions, to put them to vote, and to declare the result of the vote, to see that the rules of debate are not violated, to preserve order, to state points of order or course of proceeding, by request, or when he finds it necessary to do so, to receive all messages and other communications and announce them to the assembly, to act for the assembly in signing all papers, etc.

He may sit while stating a question, but he should rise to put a question to vote, or to speak to a question of order.

Vice-President.—The vice-president acts in place of the president in his absence.

Clerk or Secretary.—The recording officer, whether called clerk or secretary, keeps a correct record of the proceedings, or the *minutes*, and reads them at the next meeting. In the absence of the chairman (if there is no vice-president present), it is his duty to call the meeting to order, and to occupy the chair while the assembly proceeds to elect a chairman *pro tem.*, to read papers to be acted upon when requested to do so, to call the roll of the assembly when necessary, to hand to the chairman of every committee appointed a list of the persons on the committee, and a statement of the matter committed to them, to make out in order and hand to the chairman before each meeting, the items of business for the meeting, to have at each meeting a list of all committees, to have the custody of all papers and documents, to sign his name to the minutes, and to authenticate by his signature alone, or in connection with that of the chairman, all the acts, orders, and proceedings of the assembly. In some assemblies the secretary also acts as treasurer.

Treasurer.—The treasurer has charge of the funds of the society, and pays them out by order of the assembly, signed by the secretary. His annual report should give the amount in the treasury at the beginning of the year, the amount received, the amount paid out, and the balance on hand. This report should be examined by an auditor or by an auditing committee, and compared with the itemized accounts kept by the treasurer, and the receipts he has received for payments made, and if found correct it should be approved by a vote of the society.

Committees.—A committee for deliberation or investigation should be large, and should represent all classes and localities. A committee for action should be small, and should consist of those only who are in favor of the proposed action.

A committee may be nominated and elected, or the chairman may be authorized by the constitution or by-laws, or by a vote of the assembly, to appoint a committee or committees. The constitution or by-laws may also prescribe the number of members of which each committee shall be composed, or the number may be included in the motion if the appointment is ordered by the assembly.

Sometimes the assembly proposes different numbers, and in this case the number is decided by vote; the vote being taken first on the highest number proposed, and then upon the next, and so on until a vote is carried deciding the number.

A *select* committee is a committee appointed for a particular occasion. A *standing* committee is one appointed beforehand, for all matters that may arise of the same nature.

The person first named on a committee calls the members together, and presides all through, or until the committee elects another chairman which is seldom done. In the absence of the first member, the next in order who is present acts as chairman. The committee chooses one of its own number to act as secretary. It conducts its proceedings in the same manner as business is conducted in the assembly.

A committee must be assembled to do business and a quorum must be present.

A paper referred to a committee must not be altered, or rejected by them. The committee may present amendments written on another sheet or they may recommend a substitution, or make any recommendation they see fit. The report of the committee is signed by all the members, or by the chairman alone, and he makes the report to the assembly unless another has been chosen to tender it. Only that which has been agreed to by the majority can be incorporated in the report, but the minority may also tender a report if they choose. The minority report may be

substituted for the report of the committee, by a vote of the assembly. When the committee has tendered its report in full and the report has been accepted, the committee is thereby discharged, but it may be revived by having the report or some part of it referred back to it.

Committees may *adjourn* from time to time until their work is completed, then the motion is to *rise*, which motion means the same as to adjourn, and is subject to the same rules.

Committee of the Whole.—The object of resolving the assembly into the "committee of the whole," is to permit of less formality in the consideration of a subject than is allowed under ordinary circumstances, and the motion is, "*That the assembly do now resolve itself into a committee of the whole, to consider,*" etc., specifying the subject. If carried, the presiding officer at once calls another member to the chair, and takes his place as a member of the committee. The only motions in order are "to amend," "to adopt," and "to rise and report." Before going into the "committee of the whole," the assembly may pass an order limiting debate, which order cannot be changed in the committee.

The chairman having resumed his seat, the member who presided in the committee rises and informs the chairman that he is ready to report. The report may then be received, or the time fixed when it shall be received.

The clerk keeps the minutes of the proceedings of the committee, if there is not an assistant clerk to keep them, but the only record he makes in the minutes of the assembly is the report as received from the committee. If at any time the committee becomes disorderly, the presiding officer may resume the chair and declare the committee dissolved.

The quorum of the committee of the whole is the same as that of the assembly.

Informal Action.—Instead of going into a committee of the whole, the assembly may consider a question informally, with the same freedom and the same restrictions as in the committee of the whole. In this case the chairman retains his seat and there is no motion to rise and report. The chairman brings the subject that has thus been considered before the assembly, and it is treated as if reported by a committee.

Any motion except "to amend" or "to adopt," puts an end to the informal action. A temporary memorandum is kept the same as in the committee of the whole, and the clerk enters the chairman's report only in the minutes.

Quorum.—A quorum of an assembly, or of a committee or a board, is such a number as is competent to transact business; and unless the number is prescribed by the constitution or by-laws, or by an order of the assembly, it consists of a majority of the members. The number may be fixed at much less than a majority. When a quorum is not present the only action that can be taken is to adjourn.

Order of Business.—In the absence of special rules upon the subject, the regular order of business is as follows:

1. Reading the minutes of the previous meeting. 2. Reports of standing committees (boards of managers, trustees, etc., come under this head). 3. Reports of select committees. 4. Unfinished business. 5. New business.

To take business up out of its order requires a suspension of the rules, but a better way, sometimes, is to lay on the table business as it comes up, and thus reach a question that it is desirable to consider first.

Introduction of Business.—New business must be introduced when there is no question before the assembly. It may be brought in in the form of a resolution or recommendation, or in the form of a simple motion. The member rises, addresses the chairman by his title, and after being recognized by a bow or having his name announced, he reads his resolution or recommendation and moves its adoption; or he makes a simple motion as suggested above. In either case another member seconds the motion.

Amendments and all other questions are introduced in the same way as new business. The table of motions shows when each motion is in order, and how the question may be treated.

The mover of a motion may modify it, or withdraw it altogether before it is stated by the chair, but after it is stated he can do neither without the consent of the assembly. If a mover modifies his motion, the one who seconded it may withdraw his support.

Mere routine business may be transacted without the formality of a motion, if no one objects.

Resolutions, Recommendations, and Motions.—**Common Forms.**—*Resolved*, That fifty dollars of the funds of this society be appropriated to defray the expenses of its delegates at the general convention.

We recommend, That a committee of three be appointed by the chair to draft resolutions, or to make recommendations, respecting the establishment of a branch office in San Francisco.

(First member) "Mr. Chairman:

"I move that the resolutions be adopted."

(Second member) "Mr. Chairman, I second the motion."

A resolution or recommendation may have a preamble or preambles worded about as follows: *Whereas*, It is desirable to procure only the best of material for our new building; and,

Whereas, We deem it necessary to send a man to personally superintend its selection; therefore,

Resolved, That etc., or *We recommend*, That etc.

The Motion.—The basis of business—the point for discussion and decision—is called the *motion*.

A motion is a formally-worded proposition presented in a deliberative body for its consideration, and for its decision by vote.

A member having something to which he desires the meeting to agree makes a motion to that effect.

Before making his motion he must obtain the floor. To do this in an organized meeting, he rises and, addressing the chairman, says "*Mr. President*" (or whatever the title may be), and then waits for recognition. The chairman hearing the voice and seeing the member who has risen, *recognizes* him by pronouncing his name, "*Mr.* ——," or "*The gentleman* (or *member*) *from*——," mentioning the locality he represents.

No member has a right to make a motion, discuss a question, or address a meeting until he has thus addressed and has thus been recognized by the chairman. Then he *has the floor*.

Having obtained the floor, the member says, "*Mr. President*" (or whatever the title may be), "*I move*——*thus and so*."

Now it is necessary for another member to indicate his desire to have the proposition considered. This is called seconding the motion. To do this the second member must arise and secure recognition as in the former case, and then say, "*Mr. President, I second the motion.*"

Stating the Question.—The presiding officer then says, "*It has been moved and seconded that*——," and reads the resolution, or hands it to the secretary to be read by him. After stating or reading the motion, the president says, "*The question is on the adoption of the resolution or motion just read,*" or he may say, "*You have heard the motion. Have you any remarks to make?*" or, "*Remarks are in order,*" or use some equivalent expression. This is called "stating the question."

After the chairman has thus stated the question the subject is open to discussion, but not before.

In routine work the chairman may often put a question without waiting even for a formal motion. This can be done only with common or universal consent, and should be used only in regard to minor matters. Then this method saves time, and does no injustice.

After a motion has been made and seconded and the question has been stated by the chair, the members may enter upon its discussion.

Debate.—In order to debate a question the member must secure the floor in the same manner he would secure it for the purpose of offering a motion. The ordinary rule is for the presiding officer to give the floor to the member whose voice he first hears. When two or more address the chair at the same time, the chair must decide who is entitled to the floor. In such a case the member upon whose motion the subject was brought before the body, or who presents the report, if he has not already spoken to the question, has the prior claim and should be recognized; even if another addressed the chair before him. A member who has not spoken has priority over those who have.

Points of Order.—It is the privilege of any member to call attention to a breach of order in debate, by obtaining the floor and saying, "*I rise to a point of order.*" The chairman then says "*Please state your point of order.*" When the point is stated, the chairman decides whether it is well taken or not, this decision being subject to appeal. When a question of order is raised, the speaker should at once take his seat and await the decision. Then if the decision is in his favor he may proceed, but if against him, and any one objects to his speaking further, he cannot continue without permission from the assembly.

Limiting Debate.—It is the custom of bodies to limit the time of a speech and the number of times a member may speak to the same question.

The common parliamentary law is not to allow a member to speak more than once to the same question until all who desire have spoken.

If a member offers to speak a second time, and no one signifies a desire to occupy the floor, and there is no objection, the chair may permit the member to proceed. Otherwise, to obtain the privilege of speaking a second time, the question must be put to vote for the decision of the meeting.

An order limiting or closing debate can be adopted, so that, at the time specified, all discussion upon it shall cease. As a body can limit the time of a speaker, it can also *extend his time*. The meeting can also *extend the time of the debate*.

In the discussion the speakers must confine themselves to the question before the body, and avoid personalities or other improprieties.

The maker of a motion may vote against, but cannot speak against, his motion.

Putting the Question.—If no one rises to speak, or the chairman thinks the debate has ended, he asks, "*Are you ready for the question?*" If then no one rises to debate it, he proceeds to put the question to vote.

In putting the question, as it is termed, the ordinary form will be something like the following: The chair will say, "*The question is on the adoption of the motion, or resolution, which you have just heard read; as many as are in favor of its adoption will say aye.*" The ayes having voted, he will then say, "*As many as are of a contrary opinion will say no,*" or "*All opposed will say no.*" The chair, judging the comparative vote, will announce the result, stating that the motion is carried or lost, as the case may be. If he thinks the ayes are in the majority he says, "*The ayes appear to have it.*" Then pausing, to see if any one expresses doubt, and none being raised, he says, "*The ayes have it, and the motion is agreed to* (*is carried, or prevails*)," or *vice versa*, if he thinks the noes have it.

Form of Voting.—This varies. Sometimes it is by voice, sometimes by show of hands, sometimes by counting hands, or a rising vote by counting members as they stand, by tellers who count the members as they pass between them, by yeas and nays, and by ballot.

Where a hand-vote is customary the chair may say, "*Those in favor of the motion or resolution will hold up the right hand,*" and "*Those opposed will manifest it by the same sign.*" Excepting in a few cases a majority vote determines a question.

Discussion can be renewed even after the voting has begun, and up to the final taking of both sides.

Division.—Sometimes a motion may consist of more than one distinct idea, and therefore would be divisible into two or more distinct propositions, and it might be that some would favor one part and not another, and, consequently, would desire to vote on the parts separately. In such a case a member can move that the question be *divided*, and specify in his motion how it is to be divided. If the motion for a *division of the question* prevails then each part will be put to vote as though it were a separate motion, and one part may be carried and another lost.

When the chairman announces the result of a vote any member may express a doubt as to the accuracy of the decision by rising and saying, "*Mr. President, I call for a division of the house.*" If a member thus calls for "*division*" the presiding officer shall say, "*A division is called for; those in favor of the motion will rise and stand until counted.*" After they are counted and the number announced, he shall say, "*Those opposed will rise;*" and they will be counted and the number announced.

The chair or the clerk, or both, may count. After the announcement of the result a member may press the doubt further by calling for a count by tellers, and even after that has been taken there may be a demand for the yeas and nays.

Yeas and Nays.—The object of calling the *yeas* and *nays* is usually to place the names of the members on record so that it will be known how each man voted. At other times it is used as a dilatory motion, and is made for the purpose of consuming time. In Congress one-fifth of the members present can order the vote to be taken by *yeas* and *nays*. In some bodies it is ordered on the call of a single member. Societies should have a rule stating what small minority may order the *yeas* and *nays*. In any meeting a majority vote can order the *yeas* and *nays*. When the yeas and nays have been ordered, the presiding officer will put the question in a form similar to the following: "*As many as are in favor of the adoption of the resolution will, when their names are called, answer yea,* (*or yes*); *those opposed will answer nay,* (*or no*). *The secretary* (*or clerk*) *will call the roll.*"

The roll is then called, and each member, as his name is called, rises and answers *yes* or *no*, (or *yea* or *nay*), which answer is noted by the clerk. When the roll-call is ended the clerk reads the names of those who voted in the affirmative, and afterward those who voted in the negative. Errors may then be corrected. The clerk then gives the number voting on each side to the chair, who announces the result.

The Ballot.—Sometimes a vote is by ballot. It is common and most equitable in the election of officers.

The chairman appoints at least two tellers, who distribute slips of paper upon which the members write their votes. The tellers collect and count the votes and report the result to the chairman, who announces it to the meeting. In counting ballots all blanks are ignored. In case of an election the chair will say: "*The whole number of votes cast is*——; *the number necessary for a choice is*——; *Mr. A. received*——; *Mr. B.*——; *Mr. C.* ——. *Mr. A., having received the requisite number, is therefore elected.*"

Tie Vote.—When there is a tie vote the motion fails. The chairman, if a member of the meeting or, authorized by constitutional law, however, has the casting or deciding vote in such a case, and, if he gives it for the affirmative, the motion prevails. He may even vote with the minority when his vote will make a tie, and thus defeat a measure, and he may vote in any case where his vote would change the result. Thus where a two-thirds vote is necessary, and his vote given to the minority would prevent the adoption of the question, the presiding officer can so cast his vote.

Classes of Motions.—Motions are differently classified according to their nature and purpose.

First.—The principal motion or main question by which the subject is brought before the body.

Second.—Those which bear upon the main question. These are called subsidiary motions, and are as follows: 1. To postpone indefinitely. 2. To amend. 3. To refer (commit or recommit). 4. To postpone to a certain day or time. 5. The previous question. 6. To lay on the table.

Third.—Incidental questions, so called because they are occasioned in a casual way during the consideration of other questions. From their very nature they must be decided before the questions which give rise to them. They cover: 1. Suspension of the rules. 2. Withdrawal of a motion. 3. Reading of papers. 4. Objection to the consideration of a question. 5. Questions of order (including appeals from the decision of the chair).

Fourth.—Privileged questions. They are so called because of their pressing importance and their need of immediate attention; therefore they may interrupt other proceedings. They are: 1. Calls for the orders of the day. 2. Questions of privilege. 3. The motion to adjourn. 4. The motion to fix the time to which to adjourn.

Order of Precedence.—The motions below numbered 1 to 9 take precedence over all others in the order given, and any one of them, except to amend or substitute, is in order while a motion of a lower rank is pending.

Letters refer to rules following.

Closing a meeting.	
1. To fix time to which to adjourn	B
2. To adjourn (in committees, to rise), or to take a recess, without limitation	A E F
Concerning Orders, Rules, etc.	
3. For the orders of the day	A E H N
To make subject a special order	M
To amend the rules	M
To suspend the rules	A E F M
To take up a question out of its proper order	A E
To take from the table	A E G
Questions touching priority of business	A
4. To lay upon the table	A E G
To bring up a question the second time.	
To reconsider debatable question	D E F I
To reconsider undebatable question	A E F I
Questions of privilege.	
Asking leave to continue speaking after indecorum	A
Appeal from chair's decision touching indecorum	A E H L
Appeal from chair's decision generally	E H L
Question upon reading of papers	A E
Withdrawal of a motion	A E
Suppressing or extending debate.	
5. For the previous question.	A E M
To limit, or close, debate	A M
To extend limits of debate	A
Deferring action.	
6. To postpone to a fixed time	C
To refer to committee.	
7. To commit (or recommit)	D
Modifying or amending.	
8. To amend or to substitute, or to divide the question	K
Suppressing the question.	
Objection to consideration of question	A H M N
9. To postpone indefinitely	D E

Rule A.—Undebatable, but remarks may be tacitly allowed.

Rule B.—Undebatable if another question is before the assembly.

Rule C.—Limited debate allowed on propriety of postponement only.

Rule D.—Opens the main question to debate. Motions not so marked do not allow of reference to main question.

Rule E.—Cannot be amended. Motion to adjourn can be amended when there is no other business before the house.

Rule F.—Cannot be reconsidered.

Rule G.—An affirmative vote cannot be reconsidered.

Rule H.—In order when another has the floor.

Rule I.—A motion to reconsider may be moved and entered when another has the floor, but the business then before the house may not be set aside. This motion can only be entertained when made by one who voted originally with the prevailing side. When called up it takes precedence of all others which may come up, excepting only motions relating to adjournment.

Rule K.—A motion to amend an amendment cannot be amended.

Rule L.—When an appeal from the chair's decision results in a tie vote, the chair is sustained.

Rule M.—Requires a two-thirds vote unless special rules have been enacted.

Rule N.—Does not require to be seconded.

General Rules.—No motion is open for discussion until it has been stated by the chair.

The maker of a motion cannot modify it or withdraw it after it has been stated by the chair, except by general consent.

Only one reconsideration of a question is permitted.

A motion to adjourn, to lay on the table, or to take from the table, cannot be renewed unless some other motion has been made in the interval.

On motion to strike out the words, "*Shall the words stand as part of the motion?*" unless a majority sustains the words, they are struck out.

On motion for previous question, the form to be observed is, "*Shall the main question be now put?*" This, if carried, ends debate.

On an appeal from the chair's decision, "*Shall the decision be sustained as the ruling of the house?*" the chair is generally sustained.

On motion for orders of the day, "*Will the house now proceed to the order of the day?*" This, if carried, supersedes intervening motions.

When an objection is raised to considering questions, "*Shall the question be considered?*" objections may be made by any member before debate has commenced, but not subsequently.

Legal Holidays.—In the United States.

January 1. *New Year's Day*: In all the states (including the District of Columbia, Arizona, and New Mexico) except Massachusetts, Mississippi, and New Hampshire.

January 8. *Anniversary of the Battle of New Orleans*: In Louisiana.

January 19. *Lee's Birthday*: In Florida, Georgia, North Carolina, South Carolina, Virginia, Alabama, and Arkansas.

February. *Mardi-Gras*: In Alabama and the parish of Orleans, Louisiana.

February 12. *Lincoln's Birthday*: In Colorado, Connecticut, Delaware, Illinois, Kansas, Massachusetts, Minnesota, Nevada, New Jersey, New York, North Dakota, Pennsylvania, Washington, and Wyoming.

February 22. *Washington's Birthday*: In all the states (including the District of Columbia and Arizona) except Mississippi. It is observed, however, in the public schools of the latter state.

March 2. *Anniversary of Texan Independence*: In Texas.

April. In Oregon, the forty-fifth day preceding general state election, primary nominating election held. Every day on which an election is held throughout Oregon is a legal holiday.

Good Friday: In Alabama, Connecticut, Delaware, Florida, Louisiana, Maryland, Minnesota, New Jersey, Pennsylvania, Tennessee.

April 19. *Patriots' Day*: In Maine and Massachusetts.

April 21. *Anniversary of the Battle of San Jacinto*: In Texas.

April 26. *Confederate Memorial Day*: In Alabama, Florida, Georgia, and Mississippi.

May 10. *Confederate Memorial Day*. In North Carolina and South Carolina.

May (second Friday) *Confederate Day*. In Tennessee.

May 20. *Anniversary of the signing of the Mecklenburg Declaration of Independence*. In North Carolina.

May (last Friday). *Pioneers' Day*. In Montana, observed in public schools.

May 30. *Decoration Day*. In all the states and territories (and District of Columbia) except Alabama, Florida, Georgia, Idaho, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Louisiana. In Virginia, known as "Confederate Memorial Day," as also in certain other Southern states.

June 3. *Jefferson Davis Birthday*. In Florida, Georgia, Alabama, Mississippi, Tennessee, Texas, and South Carolina. In Louisiana, known as "Confederate Memorial Day." In Virginia, in public schools.

June (first Monday), even years. General state election in Oregon.

July 4. *Independence Day*. In all the states, District of Columbia, and territories.

July 24. *Pioneers' Day*. In Utah.

August 16. *Bennington Battle Day*. In Vermont.

September (first Monday). *Labor Day*. In all the states and territories (and District of Columbia), except North Dakota. In Louisiana, observed in Orleans parish. In Wyoming, by proclamation of the governor.

September (first Tuesday). *Primary Election Day*. In Wisconsin.

September 9. *Admission Day*. In California.

September 12. *"Old Defenders' Day."* In Baltimore, Md.

October 31. *Admission Day*. In Nevada.

November 1. *All Saints' Day*. In Louisiana.

November. General Election Day. In Arizona, California, Colorado, Delaware, Florida, Idaho, Illinois (in Chicago, Springfield and East St. Louis only), Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio (from 5.30 a.m. to 9 a.m. only), Oklahoma, Oregon (vote for presidential electors only), Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, West Virginia, Washington, Wisconsin, and Wyoming, in the years when elections are held therein.

November. *Thanksgiving Day* (last Thursday in November): Is observed in all the states, and in the District of Columbia, Arizona, and New Mexico, though in some states it is not a statutory holiday.

December 25. *Christmas Day*. In all the states, District of Columbia, and territories.

Sundays and fast days are legal holidays in all the states which designate them as such.

There are no statutory holidays in Mississippi, but by common consent the Fourth of July, Thanksgiving, and Christmas are observed. In New Mexico, Washington's Birthday, Decoration Day, Labor Day, Flag-Day (June 14), and Arbor Day are holidays when so designated by the governor. In South Carolina, Thursday of Fair week is a legal holiday.

Arbor Day is a legal holiday in Arizona, Maine, Maryland, New Mexico, Wisconsin, and Wyoming, the day being set by the governor; in Texas, February 22; Nebraska, April 22; Utah, April 15th; Rhode Island, second Friday in May; Montana, second Tuesday in May; Georgia, first Friday in December; Colorado (school holiday only), third Friday in April; in Oklahoma, the Friday following the second Monday in March; in Arkansas, first Saturday in March.

Old English Holidays.—These holidays, with their names, had their origin in mediaeval England when the state religion was that of the Church of Rome, and they are still observed generally or in some parts of England, Scotland, and Ireland.

January 6. *Twelfth Day*, or *Twelfth-tide*, sometimes called Old Christmas Day, the same as Epiphany. The previous evening is *Twelfth Night*, with which many social rites have long been connected.

February 2. *Candlemas*. Festival of the Purification of the Virgin. Consecration of the lighted candles to be used in the church during the year.

February 14. *Old Candlemas*. St. Valentine's Day.

March 25. *Lady Day*. Annunciation of the Virgin. April 6 is old Lady Day.

June 24. *Midsummer Day*. Feast of the Nativity of John the Baptist. July 7 is old Midsummer Day.

July 15. *St. Swithin's Day*. There was an old superstition that if rain fell on this day it would continue forty days.

August 1. *Lammas Day*. Originally in England the festival of the wheat harvest. In the Church the festival of St. Peter's miraculous deliverance from prison. Old Lammas Day is August 13.

September 29. *Michaelmas*. Feast of St. Michael, the Archangel. Old Michaelmas is October 11.

November 1. *All hallowmas*. Allhallow or All Saints' Day. The previous evening is All hallowe'en, observed by home gathering and old-time festive rites.

November 2. *All Souls' Day*. Day of prayer for the souls of the dead.

November 11. *Martinmas*. Feast of St. Martin. Old Martinmas is November 23.

December 28. *Childermas*. Holy Innocents' Day.

Lady Day, Midsummer Day, Michaelmas, and Christmas are quarter (rent) days in England, and Whitsunday, Martinmas, Candlemas, and Lammas Day, in Scotland.

Shrove Tuesday, the day before Ash Wednesday, and Maundy Thursday, the day before Good Friday, are observed by the Church. Mothering Sunday is Mid-Lent, in which the old rural custom obtains of visiting one's parents and making them presents.

TRADE AND INDUSTRY

AGRICULTURE is the oldest and most important industry. It is the art of tilling the ground, the planting, cultivation and harvesting of crops, and includes fruit-growing or horticulture, animal husbandry, or the rearing, breeding, feeding and management of the domesticated breeds of live stock, as well as the manufacture or evolving from products of the soil articles for home consumption or purposes of commerce. By it humanity is fed and clothed, and it contributes in many other ways to the welfare and wealth of the world. Without agriculture man would be a barbarian and the earth a wilderness.

The knowledge that centuries of research and practice give, the light contributed by agricultural chemistry supplemented by new and improved machinery and modern transportation facilities, have greatly enlarged the productions and possibilities of agriculture; and its problems, the mysteries of the soils, and of animal and plant life are engaging the best intellect.

Acreage Yields.—While in the aggregate of field productions the United States ranks first, America does not compare favorably with older countries in acre-yields. To compass this a more scientific farming, more educated farmers, more thorough tillage and cultivation, careful seed selection, proper fertilization, and rational crop rotation must be the agencies; in fact a more intimate knowledge and use of the underlying principles governing soil fertility, and crop and live stock production. What this would mean finds illustration in the examples afforded by England and Germany in wheat-growing, with averages of 32.2 and 26.1 bushels per acre, respectively, compared with the 14 bushels per acre in the United States, from a soil naturally as fertile and as well adapted as any.

Home and Foreign Markets.—In the settlement and development of America the millions of acres of fresh land brought into production yielded more than domestic consumption required, which caused the seeking of markets elsewhere for the surplus, and the resulting export trade has been a wellspring of prosperity. There are signs, however, that American farmers will not so largely depend for profits in the future upon foreign demands, as home requirements are annually increasing. A case in point is the constantly lessening difference between the production and home consumption of wheat.

In the five-year period of 1894-8 exports from the United States averaged 32 per cent of annual production, and in 1904-8 had fallen to 17 per cent, while the average annual production was 535,387,000 bushels for the first period, and 665,959,000 bushels in the latter. Deducting the average yearly exports for each period it is shown that the consumption of wheat at home increased 50 per cent. Also, for 1909, the value of agricultural exports was $903,000,000, or $151,000,000 below the highest record, made in 1907, and $114,000,000 below the next highest, in 1908, while on the other hand the imports of agricultural products were never so high in value, the amount being $637,000,000, in 1909.

Soils and Their Fertilization.—Naturally the soil is and must be of primal importance. Plants obtain their food from the soil, and atmosphere, and the mineral elements in the soil are utilized only through the plant roots. If requisite elements are lacking yields are less; however much of a factor tillage may be. Without proper proportions of plant food available in the soil, tillage and good seed do not suffice to maintain it in a high state of productivity, and a supply of suitable plant food must be maintained if maximum yields are to be realized.

Chemistry of Soil.—Vegetation requires carbon and oxygen, taken into the plant leaves from the air as carbon dioxide; hydrogen, a constituent of water absorbed through the plant roots; nitrogen, taken from the soil by all plants and also from the air, especially by legumes; and potassium, phosphorus, magnesium, calcium, iron and sulphur, drawn only from the soil.

Of these, nitrogen, the most expensive element of plant food, although comprising four-fifths of the atmosphere, is perhaps the one becoming the most seriously deficient in the ordinary soils of the wheat and corn growing sections, due largely to continuous grain-growing, resulting in a loss of vitality and dwarfed growths.

A rational rotation of crops, use of manures, with the legumes as pasture and hay crops, or used as green manure by plowing them into the soil, will upbuild the land, and the shortage of nitrogen be overcome by the liberal use of legumes, such as alfalfa, clover and peas, in the form of either green or animal manures, which also add humus of great importance.

Phosphate.—One eminent soil expert says: "To increase the value of farm manure we should add phosphate to it. Thus we can balance manure, and when used on soils rich in potassium, in rotation with nitrogen-fixing legume crops, we can provide plant food in a balanced ration to meet the needs of maximum yield. By these means we can check the progress of soil exhaustion, and even gradually increase the fertility and productive capacity of the land. Indeed, we can thus profitably enrich such land even beyond its virgin fertility," and, again ". . . land may be built up and be made richer than it ever was by a good system of strictly grain farming." The experiment stations are successfully solving these problems.

Humus, decaying vegetable or animal matter, is the great storehouse of nitrogen, and is also an indispensable element in soils, not so much because of its direct nourishment to plants but because it helps to render other materials available for the growing crops. It is humus that gives life and heart to the soil, improves its physical condition, its tilth and texture, augments its water-holding capacity, gives its dark color, modifies extremes in its temperature, facilitates the entrance of air, and is what most worn-out lands suffer for want of.

Commercial Fertilizers, by which are provided artificial plant food, are in common and extensive use where lands have been depleted and crop production decreased, as on the tobacco and cotton lands of the Southern states, acting as a sort of medicine or stimulant to the soil, but many of them have little or no further influence than is evidenced in the increase of a single season's crops or crop.

Composition of the Principal Commercial Fertilizing Materials

Fertilizing Material	Nitrogen	Phosphoric Acid			Potash	Chlorine
		Available	Insoluble	Total		
	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent
Supplying nitrogen:						
Nitrate of soda	15.5–16.0	...	...	...	...	...
Sulphate of ammonia	19.0–20.5	...	...	...	...	...
Dried blood (high grade)	12.0–14.0	...	...	...	...	...
Dried blood (low grade)	10.0–11.0	...	...	3.0– 5.0	...	...
Concentrated tankage	11.0–12.5	...	...	1.0– 2.0	...	...
Tankage (bone)	5.0– 6.0	...	...	11.0–14.0	...	...
Dried fish scrap	7.0– 9.0	...	...	6.0– 8.0	...	...
Cotton-seed meal	6.5– 7.5	...	...	1.5– 2.0	2–3.0	...
Castor pomace	5.0– 6.0	...	...	1.0– 1.5	1–1.5	...
Supplying phosphoric acid:						
South Carolina rock phosphate	...	...	26–28	26.0–28.0	...	...
South Carolina rock superphosphate (dissolved South Carolina rock phosphate)	...	12–15	1– 3	13.0–16.0	...	...
Florida land rock phosphate	...	...	33–35	33.0–35.0	...	...
Florida pebble phosphate	...	...	26–32	26.0–32.0	...	...
Florida superphosphate (dissolved Florida phosphate)	...	14–16	1– 4	16.0–20.0	...	...
Boneblack	...	...	32–36	32.0–36.0	...	...
Boneblack superphosphate (dissolved boneblack)	...	15–17	1– 2	17.0–18.0	...	...
Ground bone	2.5– 4.5	5– 8	15–17	20.0–25.0	...	...
Steamed bone	1.5– 2.5	6– 9	16–20	22.0–29.0	...	...
Dissolved bone	2.0– 3.0	13–15	2– 3	15.0–17.0	...	...
Thomas slag	...	...	...	11.4–23.0	...	...
Supplying potash:						
Muriate of potash	...	...	...	...	48–52.0	45.0–48.0
Sulphate of potash (high grade)	...	...	...	...	48–52.0	0.5– 1.5
Sulphate of potash and magnesia	...	...	...	...	26–30.0	1.5– 2.5
Kainit	...	...	...	...	12–12.5	30.0–32.0
Sylvinit	...	...	...	...	16–20.0	42.0–46.0
Cotton-hull ashes	...	...	...	7.0– 9.0	20–30.0	...
Wood ashes (unleached)	...	...	...	1.0– 2.0	2– 8.0	...
Wood ashes (leached)	...	...	...	1.0– 1.5	1– 2.0	...
Tobacco stems	2.0– 3.0	...	...	3.0– 5.0	5– 8.0	...

The following table is given, showing the amount of fertilizing constituents in one ton of various agricultural products, if returned to the land in the form of manure:

Farm Products	Nitrogen	Phosphoric Acid	Potash
Timothy hay	19.2	7.2	25.2
Clover hay	39.4	8.0	35.0
Alfalfa hay	53.2	10.8	49.2
Cowpea hay	79.6	13.2	47.2
Field corn fodder	17.2	7.2	21.4
Corn silage	8.4	2.4	6.6
Wheat straw	8.6	2.6	14.8
Rye straw	10.0	5.8	15.8
Oat straw	13.0	4.4	24.4
Wheat	34.6	19.2	7.0
Rye	32.4	16.2	10.4
Oats	36.2	15.4	11.4
Corn	29.6	12.2	7.2
Barley	39.6	15.4	9.0
Wheat bran	51.2	58.4	31.4
Linseed meal	108.6	37.6	26.2
Cotton seed meal	142.8	61.8	36.4
Potatoes	7.0	3.2	11.4
Milk	10.2	3.4	3.0

Kinds of Soils.—Generally a soil well drained, with a sandy or gravelly subsoil, is adapted to tree and fruit growing. The deep alluvial prairie lands are premier for corn, and the rather drier and more compact soils, containing liberal proportions of lime and clay, are especially prized for wheat. Soil alone, however, does not determine the kinds of crops that should be raised.

Rainfall.—Over a large portion of America the precipitation is ample for the requirements of agriculture, but owing to wide variation in the yearly rainfall some sections have too much and others too little. In some of the plains regions west of the Missouri river, and elsewhere as well, precipitation is comparatively scant, but over considerable of these the greatest proportion of the yearly rainfall comes in the crop-growing season.

All localities are subject to vagaries of the weather, but their harmful effects are minimized by the knowledge that experience and study have brought. Diversity of crops, scientific methods of preparation and tillage best adapted to the particular locality, drainage and irrigation are being utilized through a better understanding, and have large influence on the general welfare.

Irrigation and Drainage.—Irrigation is the artificial watering of land to increase production, or make available for agriculture lands that otherwise would be too dry. Artificial watering of the land has been practiced from earliest times in the older countries, and even by the prehistoric people of some portions of what are now the United States.

Mormons, beginning late in 1840, in Utah, were the first modern people to demonstrate the practicability of extensive irrigation in America, and from their modest beginnings farming and fruit-growing by irrigation have slowly but continuously been extended until the nation, states, municipalities, companies and individuals are all interested in irrigation enterprises in the regions of insufficient rainfall. Authorities state that in 1860 about 100,000 acres of land were under irrigation in the United States, while in 1910 there were being irrigated over 10,000,000 acres, and more than 15,000,000 acres capable of irrigation were under completed canals and reservoirs.

The National Reclamation Law of 1902 gave great impetus to such undertakings in the United States. By its provisions the proceeds from sales of public lands in fourteen states and two territories have been used in the construction of irrigation systems. In each of these the reservoirs are essential parts, storehouses for the collected flood-waters thereby made usable when needed for lands otherwise barren. Most of the irrigated lands are supplied by gravity with water from reservoirs and surface streams, although the lands watered by artesian wells are not unimportant, and those irrigated by pumping from wells by wind-power and gasoline engines are increasing, especially where immeasurable quantities of water, popularly called the underflow, lie near the surface. The applying of water in the United States is quite generally by checks, flooding and furrows, and in all skill and judgment are required, the character and situation of the soil and the crops planted being governing factors.

Drainage, by either natural or artificial means, has for its principal object the removal of excess water from the land, to make it more productive. Many tracts already producing would be greatly enhanced in value if some practical system of soil drainage were installed. The most efficient method is by the use of porous tiles, buried at proper depths and distances apart in the ground. In times of too much water they quickly carry off the surplus, early leaving the surface in condition for cultivation, and in times of drought permit such action of the earth's vapors as to accumulate moisture in the soil.

Underdrainage.—The practice of underdrainage is old, but the use of specially made burnt clay tiles for the purpose is comparatively recent. Such lands, for instance, as are full of water for the first two or three feet below the surface, or those where water stands on the surface after heavy rains, are greatly improved by tile drainage, and ditches also are often profitably employed to carry off surface water. Properly drained fields obviously present many advantages. Even in lands under irrigation the circulation of water in the soils is quite necessary, to prevent injurious accumulation of soluble substances having unfavorable effects. Fortunately, most lands have natural underdrainage, but without this the removal of the excess water by tiles is to be commended.

Ground too wet is generally cold, often sour, and unfriendly to plant growth, whereas well drained land, containing the moisture held by capillarity, has appreciably more warmth and needed aëration. These conditions not only increase its powers for developing and yielding plant food, but the soil being warmer, promotes the germination of seeds and gives thriftier, healthier plants. In ordinary seasons it enables preparation, planting, cultivating and harvesting to be done at such times as experience has shown best.

Tillage and Dry Farming.—It is quite probable that low yields and failures of crops are more generally due to inadequate and improper tillage than to any other part of the farmer's work. Proper seed, a soil of average fertility, its timely and proper preparation and subsequent tillage, where crops are cultivated during their growth, very materially determine yields.

Good soils often fail of compensating returns because of poor tillage. It is through the processes aided by cultivation that plant food is available and utilized. Sowing or planting the staple crops on unbroken sod would be unprofitable. By tillage the soil is not only aërated and pulverized but moisture is conserved. The action of air and moisture in the soil brings about such changes that the otherwise largely unavailable food elements are liberated for assimilation by plants through their roots. Hence, the importance of thorough and scientific tillage for all crops, for yields are materially influenced by the frequency and kind of cultivation given.

Dry Farming.—This is all the more imperative in those regions of scant rainfall, and in these in recent years have been adopted a system of culture that makes production more certain and more abundant. This is popularly called "dry farming," the principles of which have been practiced from the most ancient times. Dry farming means simply proper tillage, an outstanding feature being suitable preparation of the soil for the reception and retention of the natural precipitation. By providing a loose, finely pulverized surface, or dust blanket, capillary attraction with the moisture beneath is broken, lessening evaporation and promoting proper percolation.

Where irrigation is impracticable for lack of water, as in the major portions of the semiarid regions, such methods prove advantageous, and by conservation the natural rainfall is made sufficient for yields that otherwise would have been impossible. Its general principles might be profitably adopted everywhere, and are absolutely essential to remunerative results in regions of scant rainfall.

Agricultural Education.—Recognizing agriculture as the country's chief industry, Americans early evinced interest in agricultural education, which took practical form in the organization of societies for its promotion. Washington, the first president of the United States, strongly urged upon Congress the wisdom of providing ways and means for agricultural research and dissemination of the useful knowledge acquired, and he was a member of the first society formed, in 1785, for the advancement of agriculture in America.

This was the nucleus from which has developed the comprehensive agricultural educational system of our day, reaching its highest efficiency in the present excellent colleges and schools maintained in the interest of husbandry, with their elaborate curricula, extensive equipment, and army of capable instructors. Now, also, nearly every farming community has an agricultural or similar association. State, county and district fairs have been educators; nearly, if not all, the states have their boards of agriculture or their equivalent, supported by public funds, and from these institutions are issued, free, a great variety of literature to those interested in rural pursuits.

Agricultural Literature.—In the same time there has been developed through private enterprise an extensive agricultural literature, of general and special works and periodicals, many of which are devoted wholly to some one branch of farming, as dairying, a single breed of live stock, orcharding, market gardening, and the like. Farmers' institutes, the agricultural college short courses and extension work, instruction by correspondence and home reading courses and other kindred methods, all aid in teaching the whys and wherefores of the business of farming.

Extension Education.—A number of colleges, with the coöperation of interested railroads, carry the gospel of better farming direct to those who cannot attend the schools, by sending out train specials,

known as seed, wheat, dairy, corn, alfalfa, or poultry trains, depending on the topic selected for presentation. These trains are properly equipped and manned with college specialists, who lecture at the different railroad stations visited, and answer such questions as may be propounded, illustrating their lectures and answers by examples, specimens, diagrams, charts and tables—a method of teaching found extremely popular.

United States Department of Agriculture.—The head of the agricultural educational forces in the United States is the National Department of Agriculture, which was established in 1862 as a bureau, under direction of a commissioner, and in 1889 by an act of Congress made an executive department of the government under a secretary, appointed by the President, and who is a member of his cabinet. The work of its extensive corps of scientists and experts is principally for the nation as a whole, while that of the colleges and experiment stations chiefly concern the advancement of agriculture in the states in which they are respectively located. The national department issues bulletins, reports and other literature from its specialized bureaus, some free and others for which only nominal charges are made. The most popular are the "Farmers' Bulletins" and the "Yearbooks," both free, the latter obtained generally by application to members of Congress.

Agricultural Colleges.—While there were a number of agricultural colleges and schools supported mostly by private funds and popular subscriptions previously, the Land Grant act of 1862, by which Congress donated public lands to states and territories providing agricultural colleges, laid the broad foundation upon which have been built institutions for teaching agriculture and the mechanic arts in every state and territory. Supplemental to this endowment the states make liberal appropriations for furthering the work.

To Michigan belongs the distinction of having the oldest agricultural college in the United States, it having been created by legislative enactment in 1855, and formally opened in 1857. Nearly one-half of such colleges are connected with their state universities, and the others are separate, or are parts of technical or industrial institutes.

Curricula.—Their curricula embody many distinct courses, pertain to nearly every conceivable phase of farm affairs, and provide for teaching the sciences related to the various industries of farm, shop and home. Chemistry, physics, bacteriology, botany, entomology, zoölogy, mechanics, and kindred studies, are prominent. Courses comprehend among others the study of soils, soil physics, crops and their production, farm mechanics and farm management; animal husbandry, or the origin and history of the various breeds of domesticated animals and their characteristics, care, feeding, breeding and management; dairying, horticulture, veterinary science, mechanical engineering, electrical engineering, and domestic science and art.

Agricultural Experiment Stations, as the term would imply, are for conducting agricultural experimental investigations. They are generally connected with the agricultural colleges, and the members of the faculties of the colleges usually comprise the staff of the station. The first of the regularly organized experiment stations was in Connecticut in 1875, followed by others elsewhere.

In 1887 Congress passed the Hatch act, which gave $15,000 a year for the maintenance of each agricultural experiment station, for experimentation, investigation, and the compilation and reporting of results.

Purpose and Work.—The law specifically states that these stations shall "conduct original researches or verify experiments on the physiology of plants and animals, the diseases to which they are severally subject, with remedies for the same; the chemical composition of useful plants at their different stages of growth, the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and waters; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses for forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese, and such other researches or experiments bearing directly on the agricultural industry of the United States, as may in each case be deemed advisable."

In 1906 Congress passed the Adams act, having for its object extension and strengthening of the experimental work of stations by additional funds. By its provisions an initial appropriation of $5,000 was to be increased each year until 1911, when it would amount to $15,000, thereafter making annually available an aggregate of $30,000 of government funds for each station, under the Hatch and Adams acts. Several states have two stations, one being supported wholly with state funds, and several maintain branches of the government stations.

Publication of Results.—Results of the work of these stations are published in bulletins and circulars sent free to those who desire them. While the agricultural colleges and stations are in a sense separate institutions, their property and work are more or less closely interwoven, to their mutual advantage, the colleges profiting from the work of the stations, and the stations from the gratuitous use of the college farms, buildings, apparatus and equipments.

Plant Breeding, and Seeds.—A work of great importance carried on by experiment stations is that of improving crops in both yield and quality. Knowing that through the process of selection based on chemical analysis the sugar content of the sugar-beet had been increased from about 5 per cent to 16 per cent, the idea was advanced that the chemical composition of corn might be similarly changed. Experiments showed that it could be done at will, either to a high or low protein, oil content, or other constituent; that a corn rich in protein had an added value for feeding to growing animals; the corn with the larger oil content was of special worth in fattening animals, and the increase of carbohydrates rendered it more valuable for manufactures, as for starch, glucose, and other articles. Similarly, wheat had been improved for flour-making by increasing the gluten content, and such possibilities in plant-breeding seem well-nigh limitless.

Value of Selected Seed.—The wisdom of using seed selected according to approved standards has already been convincingly demonstrated, through improved quality and increased yields. Several states, notably Minnesota, Illinois and Kansas, have by these methods materially enlarged their yields of wheat and corn. Experience has shown, too, the advisability of planting only such seeds as have been graded, and tested for germination, so that a given quantity may be planted uniformly on a given area, with reasonable assurance of definite results.

Imperfect Vitality of seeds cannot be detected by mechanical examination alone, but the testing box tells in advance of the field planting. The importance of this is emphasized by the illustration that if seed corn, for instance, was only 90 per cent germinable, it would mean the vacant places in the field would aggregate 10 per cent of the area, or ten acres out of a hundred which would produce nothing, due to an uneven and imperfect stand because of the 10 per cent of worthless seed. Lacking good seed there can be no successful agriculture. (See also *Elementary Agriculture* under Education.)

Status of the United States in Agriculture.—In its aggregates of field production the United States is without a peer among the nations. Although the capabilities of some parts are as yet but poorly comprehended, the possibilities of others scarcely suspected, and developments superficial, owing to the large holdings by corporations as well as by individuals, and the variant conditions that had to be understood before they could be dealt with, the achievements of the past promise to be far surpassed by the enlightened husbandmen of the future.

Rank Among Our Industries.—The country's progress and development agriculturally is suggested by the fact that the aggregate of Indian corn raised in 1911 in the United States was considerably more than twice that in 1890. With a yield of 308,103,000 bushels, it assumed first rank in wheat in 1890; in 1909 the yield was 737,189,000 bushels, or 139 per cent greater. The 1901 crop, however, of 748,460,000 bushels was the largest ever produced, the 1909 crop being next.

In quantity and value the agricultural products of the United States exceed those from any other source. In three-score years they have advanced from the point of not equaling home demands to that of making the United States the world's largest exporter of farm products. In the aggregate of products American agriculture rivals that of all Europe. The farms not only contribute abundantly for home needs, and provide export commodities overshadowing in value all others combined, but supply the manufacturers of the country with raw materials, although, as already stated, the ratio between production and consumption at home has been gradually narrowing.

Exports.—For the year ending June, 1911, the value of farm products exported from the United States was $1,000,000,000, of which live stock and their products were an important part. Large numbers of domestic animals, especially cattle and sheep, and immense shipments of dressed meats go to foreign ports constantly. Cotton is the leading export crop, the amount thus disposed of in 1911 reached a total value of $526,000,000. For the fiscal year ending June 30, 1911, the live animals exported aggregated in value $19,050,000, while that of packing house and dairy products reached nearly $150,000,000.

TABULATIONS ON AGRICULTURE, HORTI-

TABLE I.

Crop	Soil	Planting Date	Seed to Acre	Normal Yield per Acre	Origin and Brief History	Use
Alfalfa. *Medicago sativa.* Linn. *Leguminosæ.*	Deep, well-drained, nonacid, fertile, with deep, permeable subsoil.	May-August, north March-May, Aug.-Oct. south.	20-25 pounds broadcast. 15-20 pounds drilled.	3 tons.	Is native to southwestern Asia and was in use centuries before Christian era. Spread from Media to Greece about 480 B. C., Italy first century A. D., Spain eighth century, Mexico and South America sixteenth century. Was introduced from Chili into California in 1854. Came from Mexico to Texas early part of nineteenth century.	Stock feeding. Pasture. Soiling. Soil improvement.
Barley. *Hordeum sativum.* Jessen. *Gramineæ.*	Old, well-subdued land, not soggy. Rich clay loam best.	April-May north. March-April, September-March, south.	1.5 to 2.5 bushels.	25.5 bushels.	Supposed to be native of western Asia, and widely grown before Christian era. Use as bread-plant universal throughout Europe, Asia and Africa to close of fifteenth century.	Malting purposes. Hay and grain. Food for domestic animals. Human diet. Malt-sprouts and brewers' grains are by-products.
Buckwheat. *Fagopyrum esculentum.* Mœnch. *Polygonaceæ.*	Rather light, well-drained, and not over-rich. Will grow on wide range, including poor land.	May-July 15.	3-5 pecks.	18.1 bushels.	Native of Europe and northern Asia. Has been cultivated for centuries in all grain-growing countries. Is found wild in China and Siberia, and has been grown in China for food from time immemorial.	Flour for human food. Honey plant. Grain for poultry. Middlings a by-product for stock feeding.
Clover, Alsike. *Trifolium hybridum.* Linn. *Leguminosæ.*	Deep clay loam. Will do well on moist and cool land.	March-August.	8-15 pounds alone. 4-6 pounds on wheat or rye in spring.	1.5 tons hay. 4 bushels of seed.	Takes its name from parish in South Sweden. From there probably introduced into England. Is found in Europe, northern Africa, western Asia. Reached America from Great Britain or Scandinavia.	Hay. Pasture. Silage. Honey plant. Soil improvement.
Clover, Red. *Trifolium pratense.* Linn. *Leguminosæ.*	Slightly alkaline medium clay loam, underlaid with moderately porous clay subsoil.	March-August.	15 pounds alone. 8-14 pounds on small grain in spring.	1.5 tons hay. 3-6 bushels of seed.	Probably native to Europe. Introduced into England early in seventeenth century. Doubtless introduced into America by early colonists.	Hay. Pasture. Soiling. Silage. Soil improvement.
Clover, White. *Trifolium repens.* Linn *Leguminosæ.*	Light clay loam, slightly alkaline.	March-August.	10-12 pounds alone. 2-4 pounds in mixtures.	1.5 tons hay. 2.5 to 6 bushels of seed.	Indigenous to Europe, northern America and probably western Asia. Grown in every country in Europe and throughout America. Best in moderately cool, moist climate.	Lawn grass. Pasture. Honey plant. Short hay. Soil improvement.
Corn. *Zea mays.* Linn. *Gramineæ.*	Fertile, medium loam. New lands preferable.	May-June north. Late March, south.	4-8 quarts. 9-11 quarts for silage.	25.4 bushels. 8-12 tons silage.	Originated in Mexico. Found in cultivation and principal food of Indians by first explorers of North America. Is related botanically to a native Mexican grass, teosinte (*Euchlæna mexicana*).	Human food. Stock feeding. Grain for poultry. For manufacture of glucose, dextrine, alcohol, starches, grits, hominies, oil, etc.
Cotton. *Gossypium hirsutum* and *G. barbadense.* *Malvaceæ.*	Fertile clay or sandy loam, with a clay subsoil at a depth of about two feet.	April-May 15.	½ to 1 bushel.	0.5 bale.	Origin antedates recorded history. Supposed to have originated in India, or possibly China. Found in various countries of southern Asia and Africa, and Columbus and other explorers found it native in West Indies, South America and Mexico. First cultivated in United States in colony of Virginia, 1621.	Manufacture of cloth, thread and yarn. Cottonseed oil. Cottonseed meal, oil cake and hulls for stock feed.
Cowpea. *Vigna unguiculata.* Walp. *Leguminosæ.*	Wide range, sandy and loamy soils preferred.	May-June north. May-July south	1 to 1.5 bushels. 3 pecks for seed.	1.5 tons. 10 bushels of seed.	Native of India and region northwestward to southern part of trans-Caspian district. Has been cultivated more than 2,000 years. Reached West Indies latter part of seventeenth century, and mainland of America later.	Soil improvement. Forage. Seed food for man and domestic animals. To fit land for sod.
Mangels. *Beta vulgaris.* Linn. *Chenopodiaceæ.*	Wide range, deep alkaline loam preferable. Good preparation of seed-bed essential.	April-May	5-8 pounds.	24 tons.	Considered direct descendant of chard, used as vegetable by Greeks 300 B. C. Use of root for cattle feeding recorded in sixteenth century. Beets introduced in America by early colonists.	Stock feed.
Millet. Many groups and varieties. *Gramineæ.*	Fertile, mellow clay loam.	April-July.	1-3 pecks drilled.	1.5 tons.	Cultivated in China since 2800 B. C. Still largely grown in oriental countries as food grain and forage. In America, usually grown as supplementary or catch-crop.	Hay. Forage. Soiling. Silage. Pasture. Seed for stock feed.
Oats. *Avena sativa.* Linn. *Gramineæ.*	Not specially fertile. Clay loam preferable.	April-May north. February-March, September-December south.	2-3 bushels.	30.1 bushels.	Probable nativity Tartary in western Asia, or possibly eastern Europe. Largely north temperate zone crop, but grown in Australia, Africa and South America. Has been cultivated in America since advent of first settlers.	Food for animals. Human food. Forage crop. Pasture.
Rice. *Oryza sativa.* Linn. *Gramineæ.*	Rich, moist, well-drained clay loam.	March 15-June 15.	1.3 bushels	25-30 bushels.	Existed in India in early historic times, and doubtless indigenous there. Introduced into America soon after settlement of Virginia. Introduced accidentally into lower Carolina in 1694.	Human food. Stock feed. Starch. Wine.

*The bulletins herewith mentioned may be had upon application to the director of the respective agricultural experiment station or college publishing

CULTURE AND ANIMAL HUSBANDRY
FIELD CROPS

Fertilizers	Plant Diseases and Enemies	Remedies	Bulletins*
Lime to correct acidity, well-rotted manure. Commercial fertilizer containing phosphoric acid and potash.	Dodder. Leaf spot. Anthracnose. Root rot. Web-worm, army worm.	Close cutting, removal of stalks, burning, close pasturing. Mowing. Mowing, and application of nitrate fertilizer. Plowing under. Mowing, fall disking.	Farmers' Bulletins Nos. 194, 215, 339, 373. Canada Central Experimental Farm Bulletin No. 46. Most experiment stations have issued bulletins.
Barnyard manure. 200 to 500 pounds of complete commercial fertilizer.	Rust and mildew. Closed smut.	No effective remedy. Formaldehyde treatment: 1 pint formaldehyde into 20 gallons water in barrel. Submerge sacks of barley 10 minutes in solution, then empty on platform to dry. Preferably, cover drying seeds with blanket for two hours.	Wisconsin Experimental Station Reports Nos. 20, 21, 22, 23.
	Loose smut.	Hot water treatment, which is effective also against closed smut: Grain in gunny sacks submerged 12 hours in cold water, to soften hull; then removed and drained 1 hour; then submerged in hot water at *constant* temperature of 130° F. for not over 6 minutes. Seed should be sown same or following day.	Yearbooks of the U. S. Dept. Agr.
Fertilizer seldom needed. Light applications barnyard manure or moderate dressing of complete fertilizer on poor soil. 100 pounds of low-grade fertilizers, especially if sown late.	Relatively free from diseases and insects. Birds may cause loss.		Yearbooks of the U. S. Dept. Agr. Cornell Bulletin No. 238.
Lime.	Clover failure.	Lime and manure. The addition of potash may aid.	U. S. Dept. Agr. Plant Industry Bulletins Nos. 31, 59, 66, 123.
Carbonate of lime. Stable manures.	Flower midge.	Feed off or mow first crop just before timothy heads out. Pasturing or clipping back to delay blooming ten days useful.	Farmers' Bulletins Nos. 128, 237, 260, 323.
	Seed fly.	No practicable remedy known.	
	Root borer.	Crop rotation.	
See alsike clover.	See alsike clover.	See alsike clover.	See alsike clover.
See alsike clover.	See alsike clover.	See alsike clover.	See alsike clover.
10-20 tons farm manure each year or two. Phosphoric acid, nitrogen and potash. Plow under large quantities of vegetable matter, preferably legumes and grasses.	Root worm.	Crop rotation and fall plowing.	U. S. Dept. Agr. Office of Experiment Stations, Bulletin No. 57.
	Webworm.	Crop rotation and fall plowing.	
	Cutworm.	Early fall plowing. Sprinkling bran mixed with paris green and molasses in proportions of 30 pounds bran, 1 pound paris green, 2 quarts molasses, enough water to moisten the bran.	Farmers' Bulletins Nos. 32, 41, 81, 174, 199, 229, 253, 292, 298, 303, 313, 317.
	Chinch bug.	Trap in dusty furrows. Destroy in furrows by kerosene. Strip of coal tar will prevent passage.	
	Grasshoppers.		
	Crows. Smut.	Burn affected plants and rotate crops.	
Acid phosphate kainit. Muriate of potash. Nitrate of soda. Cottonseed meal. Barnyard manure.	Webworm and cotton-square borers.	Dust with paris green.	U. S. Dept. Agr. Office of Experiment Stations, Bulletin No. 33.
	Plant lice.	Plow under host plants in fall or winter, or spray with whaleoil soap, kerosene emulsion or tobacco solution.	Bureau Plant Industry Bulletin No. 62.
	Cutworms. Cotton worm.	Place about fields bunches of grass immersed in paris green; or destroy by winter cultivation.	Division of Statistics Bulletin No. 16. Yearbooks 1902, 1904.
	Cottonboll worm.	Apply paris green to plants.	Farmers' Bulletins No. 36, 48, 217, 302, 314, 326.
	Mexican cottonboll weevil. Wilt.	Mature crop early and destroy immediately all rubbish. Fumigate seed with carbon bisuphide before planting.	
	Sore-shin or damping off.	Plant disease-resistant seed; burn infested plants; rotate crops.	
	Root knot.	Lime and cultivate to keep surface mulch dry.	
Acid phosphate 200 to 400 pounds and muriate of potash or kainit, 160 pounds per acre.	Wilt.	Bordeaux mixture. Iron variety practically immune.	U. S. Dept. Agr. Bureau of Plant Industry, Bulletin No. 25. U. S. Dept. Agr. Agrostology Bulletin No. 64, Circular No. 24. Yearbook for 1896. Most experiment stations have issued bulletins.
	Mildew and leaf spot.	Seldom extensive damage.	
	Nematode worms.	Iron variety practically immune.	
10 to 12 tons manure in fall. 300 to 500 lbs fertilizer rich in nitrogen.	See sugar beet.	See sugar beet.	New York (Cornell) Bulletins Nos. 243, 244.
Manures to be determined by local needs. Requires plant food near surface.	Smut.	Formaldehyde or hot water treatments. See under barley.	Farmers' Bulletin No. 168. Division of Botany Bulletin No. 23. Kentucky Experiment Station Bulletin No. 98. Kansas Bulletin No. 102.
	Chinch bug.	Crop rotation. See under oats.	
Fertilizers must be used sparingly. Barnyard manure, 10 to 25 loads per acre on poor soils. Fertilizer containing 10 to 20 pounds each of ammonia and potash, and 30 to 60 pounds of phosphoric acid per acre.	Closed and loose smut.	Formaldehyde or hot water treatments of seed. See under barley.	Farmers' Bulletins Nos. 250, 395, 420, 424. Ohio Experiment Station Bulletins Nos. 101, 138. Kansas State Bd. Agr. 14th Report.
	Orange leaf rust.	Plant resistant and early maturing varieties.	
	Black stem rust.		
	Chinch bugs.	Plow furrow to prevent spread. Scatter tar in furrow. In extreme cases burn one field to save another.	
	Army worms.		
Rich soils generally used.	Rice weevil.	Carbon bisulphide.	Farmers' Bulletin No. 110.
	Rice worm.	Draw off water and allow field to dry for few days.	Division of Botany Bulletin No. 22.
	Rice grub.	Water.	U. S. Dept. Agr. Office of Experiment Station Bulletin No. 113.
	Chinch bug.	Thorough flooding.	
	White blast.	Application of lime to soil.	Louisiana Experiment Station Bulletins Nos. 24, 50, 61, 77.
	Smut.	See under barley.	

the same, or to the United States Department of Agriculture. A list of such stations follows the tables.

TABLE I. FIELD

Crop	Soil	Planting Date	Seed to Acre	Normal Yield per Acre	Origin and Brief History	Use
Rye. *Secale cereale.* Linn. *Gramineæ.*	Light, with little clay. Well drained, will grow on poor soil.	April-May or September-November.	3-4 pecks, early. 6-8 pecks, late.	15.7 bushels. 1 ton of straw.	Original home was between Austrian Alps and Caspian Sea. Culture more than 2,000 years old. Seems to be of decreasing importance.	Grain for animal and human food. Fall pasture. Soiling. Cover-crop and green manure. Flour. Alcoholic liquors. Pasture for hogs. Hay. Fodder. Silage. Sirup.
Sorghum. *Andropogon sorghum.* Brot. or *Sorghum vulgare.* Pers. *Gramineæ.*	Rich, well drained, sandy or clay loam.	March-June.	1.5to2bushels broadcast. 6 pounds to 0.5 bushel for silage drilled.	3-6 tons fodder. 8-20 tons green forage.	Originated in tropical or subtropical regions of old world, and in cultivation as human food for many centuries, long before Christian era. Tropical Africa generally considered birthplace.	
Soybean. *Glycine Hispida.* Maxim. *Leguminosæ.*	Well-drained sandy, loam or clay soil.	May-June.	2-3 pecks in drills. 1 to 1.5 bushels broadcast.	12-20 bushels.	Native of southeastern Asia. Thought to be derived from wild *Glycine soja* of Japan. Grown extensively in China and Japan.	Animal grain feed. Silage. Soiling. Hay. Cover-crop and soil improvement. Human food.
Sugar Beet. *Beta vulgaris,* Moq. *Chenopodiaceæ.*	Clay loam, or medium light sandy loam.	May, north January-May south.	8-12 pounds.	11.5 tons.	Known at least three centuries before Christian era. Sugar first extracted about middle of eighteenth century by Marggraff. First attempt to grow beets for sugar in U. S. in 1830, near Philadelphia.	Stock feeding. Sugar manufacture.
Sugar Cane. *Saccharum officinarum.* Linn. *Gramineæ.*	Well-drained soil of good average character.	March 21-May 20.	4 tons of cane.	8-25 tons.	Origin lost in antiquity. Cultivation probably among first undertaken by tropical peoples. Early use almost exclusively for eating raw. As source of sugar it stood practically alone until beginning of last century.	Manufacture of sugar and molasses.
Sweet Potato. *Ipomœa batatas.* Poir *Convolvulaceæ.*	Warm, sandy, well-drained and aerated.	March 21-May.	1.5 to 4 bushels.	100 bushels.	Nativity unknown, probably tropical America. Was cultivated in tropics of both hemispheres when authentic records began. De Candolle inclines to an American origin.	Human food.
Timothy. *Phleum pratense.* Linn. *Gramineæ.*	Deep clay loam, moist and fertile.	March-October.	8-16 pounds; with clover 10 pounds.	1.5 tons.	Native of Europe and extensively cultivated in cooler parts of North America as a forage plant. Introduced to America from England in 1720.	Hay. Pasture.
Tobacco. *Nicotiana tabacum.* Linn. *Solanaceæ.*	Rich, friable sandy loam in seed-bed, well fertilized each spring with fertilizer containing 10 per cent ammonia, 8 per cent available phosphoric acid, 12 per cent soluble potash.	February 1 to March 1 in seed-bed. April-June in field.	1 tablespoonful to 100 square yards of seed-bed, to set out six acres.	800-1000 pounds.	Of American origin. Pipes and other means for smoking tobacco were found in prehistoric mounds of the United States, Mexico and Peru. Columbus found natives using tobacco for smoking, chewing and snuff. In 1558, Jean Nicot, French ambassador to Portugal, sent a supply of tobacco seed to Queen Catherine de' Medici, and to commemorate the service the generic name Nicotiana was given.	Disinfectant. Smoking and chewing purposes. Stalks for making of paper.
Vetch. *Vicea* spp. *Leguminosæ.*	Wide range. Used on poor sandy or gravelly soils to improve them. Prefers moist clay loam.	April-June. September-December.	1 bushel.	1.5 to 3 tons.	Common spring vetch is native in Europe and western Asia. Was cultivated by Romans. Reached America 100 years ago.	Cover-crop. Stock feed. Soil improvement. Pasture.
Wheat. *Triticum sativum.* Lam. *Gramineæ.*	Light clay and glacial drift soils.	September-October. April-May.	6-8 pecks.	13.8 bushels.	Wheat cultivation antedates recorded history. Monuments more ancient than Hebrew scriptures depict its cultivation established. Chinese grew wheat 2700 B. C. Cultivation in America prior to discovery by Columbus not known.	Flour for human food. Grain for stock feeding. Straw. Bran, shorts and middlings are by-products for stock-feeding.

TABLE II. ORCHARD

Crop	Climate	Soil	Planting Time, Plants or Seed per Acre	Diseases	Remedies
Apple *Pyrus malus.* Linn. *Rosaceæ*	Temperate	Clay loam to sandy loams, with variety preferences.	Fall or spring, fall preferable.—27-33.	Scab.	Spray thoroughly with lime-sulphur, 1-40, or bordeaux, 3-3-50, 3 times: (1) Just before blossoms open, (2) just as blossoms fall, (3) 10 to 14 days after blossoms fall.
				Fire blight.	Cut out and destroy diseased parts. Wash wound with corrosive sublimate 1 part to 1,000 of water. Paint wound with gas tar or lead paint.
				N. Y. apple tree canker.	Spray before buds start with lime-sulphur, 1-12, or bordeaux 10-10-50; soak body and limbs when making first application for scab. Cut out cankers and treat wound as for fire-blight.
Asparagus. *Asparagus officinalis,* Linn. *Liliaceæ*	Temperate.	Warm, well-drained loam, deep rich, fertile and moist.	Early spring, April preferable for seed.—5,445-14,520. 1 oz. of seed to 400 plants. Rows 8 ft. apart, plants 1 ft. in row; or rows 4 ft. apart, plants 2 ft. in rows, 5,445. Rows 2 ft. apart, plants 18 inches in row, 14,520.	Rust.	During cutting season, permit no plants to mature. Fertilize liberally and cultivate thoroughly. Late in the fall burn all infected plants. Spray with bordeaux, 5-5-50, containing a sticker of resin, sal soda, soap. Spray when shoots are 8 to 10 inches high after cutting, and repeat once or twice a week.

CROPS—Continued

Fertilizers	Plant Diseases and Enemies	Remedies	Bulletins
250 pounds per acre of dissolved phosphate rock.	Black rust of stems. Orange rust of leaves. Smut. Ergot. Chinch bug. Hessian fly.	Burn infested stubble—rotate crops. Formaldehyde or hot water treatment. See under barley. Clean seed on clean land. Burn rubbish nearby. Rotate crops. Plow deep trenches and use tar strips. Resistant varieties, late seeding, burning stubble, sowing early wheat trap crop.	Pennsylvania Agr. Experiment Station Bulletin No. 52. U. S. Dept. Agr. Yearbooks.
Barnyard manure and leguminous green manures.	Grain smut. Whole-head smut. Chinch bugs and green aphis.	Rotation and seed selection. Hot water and formaldehyde treatments. See under barley. Seldom serious. Avoid continuous cropping on same area.	Farmers' Bulletins Nos. 37, 50 90, 135, 174, 246, 288. Bureau of Chemistry Bul etins Nos. 14, 20, 26, 34.
200 to 300 pounds high-grade acid phosphate. 50 pounds muriate or sulphate of potash per acre.	Sclerotium. Nematode root worms. Rabbits. Grasshoppers. Reddish brown hairy caterpillar.	Fatal. No treatment. Not specially serious.	Farmers' Bulletins Nos. 58, 121, 372. Connecticut Experiment Station Bulletin No. 22. Delaware Bulletins Nos. 60, 61. Georgia Bulletin No. 17. Indiana Bulletin No. 108. Kansas Bulletins Nos. 18, 92, 100, 123. Many other station bulletins.
Green fertilizers, generally alfalfa.	Leaf spot.	Bordeaux mixture and crop rotation.	Division of Entomology Bulletins Nos. 19, 23, 29, 33, 40, 43.
Stable manures.	Curly top.	Seldom occurs in two successive seasons in same locality.	Specia Report No. 28.
Complete commercial fertilizers.	About 150 insect enemies.	See entomology bulletins in next column.	Bureau of Chemistry Bulletins Nos. 27, 96.
Stable manure. Nitrogenous fertilizers, dried blood, fish refuse in small quantities.	Root diseases, rind disease, sereh, pineapple disease, red top, top rot, smut, rust.	Burn over, use quicklime as soil fungicide.	Farmers' Bulletins Nos. 52, 92. Bulletins of Hawaiian Sugar Planters Experiment Station, Louisiana, Cuba, and Porto Rico Experiment Stations.
Lime extensively.	Rats. Borers. Innumerable insects. Parasitic nematodes on roots.	Burn over or poison. Mongoose will destroy. Hand pick, rotate crops, use trap crops, or rest land. Fought by introduction of parasites. Expose soil to air and sunlight.	
Abundant humus. Light straw manure. Crimson clover sod plowed under at half-growth.	Black rot. Soil rot. Soft rot.	Use slip-seed. Thoroughly clean and disinfect storage house. Plant in new soil. Crop rotation. Apply kainit and sulphur, 300 pounds per acre. Dry potatoes before storing. Destroy all infected potatoes.	Farmers' Bulletins Nos. 26, 129, 324. Arkansas Experiment Station Bulletin No. 72.
Stable manure put in furrow under the crop.	Tortoise beetles. Sawflies. Flea beetles.	Dip plants before setting in solution of arsenate of lead, 1 pound to 25 gallons water. Paris green or the above arsenical spray. Arsenical sprays.	South Carolina Bulletin No. 63.
Top dressing with barnyard manure and complete fertilizer.	Rust Grasshoppers		Farmers' Bulletin No. 111. Division of Agrostology, U. S. Dept. Agr., Bulletins Nos. 7, 14, 17, 20. N. Y. State College of Agr. Farmers' Reading-Course Bulletin No. 10.
In field, 1,000 pounds cottonseed, 1,000 pounds cottonseed meal, 300 pounds carbonate of potash, 700 pounds fine ground bone, and 800 pounds of lime to acre.	Root rot. Sore skin. Wilt. Angular leaf spot. Pole burn. Flea beetle and hornworm.	Sterilize soil with heat or formalin before seed sown. Lime. Plant disease-resistant seed; burn infected plants; crop rotation. Grow vigorous plants. Apply heat carefully and ventilate sheds to reduce humidity. Light spray of paris green, 1 pound paris green, 1 pound quicklime, 100 gallons water, stirred constantly while in use.	Farmers' Bulletins Nos. 60, 82, 83, 120, 343. Plant Industry Bulletin Nos. 18, 51, 91, 96. Report on the Culture of Tobacco, U. S. Census, 1883.
Cow manure at rate of 20 to 25 loads per acre.	Tobacco worm. Cutworms. Bud worm.	Dust or spray with paris green, 1 pound to 160 gallons water. Sow along rows bran and paris green, 1 pound paris green, 50 pounds bran. Hand pick or dust or spray with paris green.	Bulletins from experiment stations, particularly Connecticut, Maryland, North Carolina, Kentucky.
Seldom needed. On poor land, complete fertilizer, and especially phosphoric acid and potash, may be required.			Farmers' Bulletins Nos. 18, 102, 147. Division of Agrostology, Circular No. 6. Alabama Experiment Station Bulletins Nos. 87, 96, 105.
Barnyard manure. Complete commercial fertilizer. 200 to 400 pounds of a 4-12-4 fertilizer commonly used.	Hessian fly. Chinch bug Rust. Loose smut. Stinking smut or bunt.	Late seeding, burning stubble. Clean tillage, crop rotation. Plant resistant varieties. No satisfactory treatment. Formalin, 1 pound to 50 gallons water. Sprinkle the wheat and cover with cloths soaked in the solution, or immerse the sacks 30 minutes; or blue stone, 1 pound to 5 gallons water. Immerse sacks 10 minutes, then drain and dry. Apply the solution to all utensils and machinery used.	Farmers' Bulletins Nos. 132, 250. U. S. Dept. Agr. Division of Physiology and Pathology Nos. 16, 24, 29. Plant Industry Bulletins Nos. 3, 47, 78, 79. Office of Experiment Station Bulletin No. 11.

AND GARDEN CROPS

Insect and Other Enemies	Insecticides and Remedies	Time to Bear	Yield per Acre	Bulletins on Culture
Bud moth.	Applications of either 1 lb. paris green or 4 lbs. arsenate of lead in 100 gals. water (1) when leaf tips appear and (2) just before blossoms open.	3 to 6 years from planting. Good crop in 10 to 15 years.	Tree 30 years old 20-30 bus.	Cornell Bul. 272. Geneva Buls. 163 and 185.
Canker worms.	Spray once or twice before blossoms open with 1 lb. paris green, or 4 lbs. arsenate of lead in 100 gals. water. Repeat after blossoms fall. Use sticky bands or wire-screen traps to prevent ascent of wingless females.			Cornell Buls. 93, 124, 142. Geneva Buls. 262, 296, 306, 320. Geneva Circular 9.
Codling moth.	Use burlap bags on trunk, and kill caterpillars under them every 10 days from July 1 to Aug. 1, and once later.			
Oyster shell scale.	Spray with kerosene emulsion diluted with 6 parts of water or whale oil soap, 1 lb. to 4 or 5 gals. water, in May or June when young white lice appear.			
Asparagus beetle.	Chickens and ducks will destroy. Close cutting of young shoots early in season. Use fresh air-slacked lime or arsenites dusted on dew-wet plants after cutting period.	Seed 3-4 years. Plants 1-3 years.	2000 bunches of 1½ in. diameter.	Geneva Buls. 75, 188. California Buls. 165 and 172. New Jersey Reports 1896, 1898. Farmers' Bul. 61. Massachusetts Bul. 61. Iowa Bul. 53.

TABLE II. ORCHARD AND

Crop	Climate	Soil	Planting Time, Plants or Seed per Acre	Diseases	Remedies
Beans (bush). *Phaseolus vulgaris. Leguminosæ.*	Warm temperate.	Good warm loam.	May-June—1 qt. of seed to 100 feet of drill. In drills 2 ft. apart plants 12 inches in row. In hills, 18x20 inches, 3 plants per hill.	Anthracnose or red spot.	Plant clean seed. Hand spray with Bordeaux mixture, 5-5-50, (1) when plants break through ground, (2) when first pair of leaves are expanded, (3) when pods have set.
Beans (pole). *Phaseolus vulgaris. Leguminosæ.*	Warm temperate.	Warm fertile soil.	Late spring, after danger of frost. After ground becomes warm.—1 qt. seed to 200 hills. Hills 4x4 ft., one plant per hill. Should be at least 5 plants per pole.	Blight.	Spray with bordeaux as for anthracnose.
Beets. *Beta vulgaris.* Linn. *Chenopodiaceæ.*	Temperate.	Loose, light, fresh, clean rich soil.	April-June—Seed 5-6 lbs. per acre. In drills 12x6 inches.	Scab, rust, rot, spot diseases.	Avoid following potatoes with beets. Practice clean culture and proper rotations. Spray with bordeaux mixture for leaf diseases.
Blackberry. *Rubus nigrobaccus.* Bailey. *Rosaceæ*	North temperate. Cool, northern exposure.	Strong loam, retentive of moisture and tending toward clay.	Spring preferably, or fall—900 to 1550.	Anthracnose and leaf rust.	Cut out bearing canes as soon as they are through fruiting.
				Orange rust.	Dig up and burn infected bushes as soon as detected.
Cabbage. *Brassica oleracea.* Linn. *Cruciferæ*	Cool, moist climate.	Well-drained, rich, friable loam.	April-May to June-July—7,000-11,000. 1 oz. seed to 3,500 plants.	Club root or club foct.	Practice crop rotation. Set only healthy plants. Do not use manure containing cabbage refuse. Lime the seed-bed at least as early as fall before.
				Black rot.	Practice crop rotation. Soak seed 15 minutes in solution made by dissolving one corrosive sublimate tablet in pint of water.
Cauliflower. *Brassica oleracea.* Linn. var. *botrytis.* D. C. *Cruciferæ.*	Temperate, cool and moist.	Richest land, strong, moist loam best.	April-July in seed-bed. July in field.—7,000 to 10,000. 1 oz. seed to 3,000 plants.	Same as cabbage.	See cabbage.
Celery. *Apium graveolens.* Linn. *Umbelliferæ.*	Temperate.	Moist peaty soil or highly fertilized land.	January-April in seed-bed. May-August in field—20,000 to 30,000. 1 oz. seed to 7,000 plants.	Cerospora leaf blight or early blight.	Spray with ammoniacal copper carbonate, 6-3-45, making 5 to 8 applications. Begin while still in seed-bed. Bordeaux 5-5-50, may be used for earlier application.
				Septoria leaf blight or late blight.	Same treatment as for early blight, but continue till harvest.
Cherry. *Prunus avium* and *Prunus cerasus.* Linn. *Rosaceæ.*	*Sweet.* 39-44° latitude 68-86° longitude. *Sour.* 35-45° latitude, 68-100° longitude.	Elevated, light, dry, loamy, retentive soil.	Spring or fall—Sweet 48, sour 134.	Brown rot.	Plant resistant varieties. Prune trees to let in sunlight and air. Spray with self-boiled lime-sulphur, 8-8-50, to which add 2 lbs. arsenate of lead to 50 gals. Spray (1) about time young fruit sets, (2) 2 to 3 weeks later, (3) 1 month before fruit ripens, omitting the arsenate.
				Black knot.	Cut out and burn all knots before leaves appear.
				Leaf spot; powdery mildew.	Spray with lime-sulphur or bordeaux. Dust with sulphur or spray with potassium sulphide, 1 oz. to 3 gals. water, or lime-sulphur as for leaf spot.
Currant. *Ribes rubrum.* Linn. *Saxifragaceæ.*	Cool temperate climate.	Cool, moist and rich soil.	Fall or spring—2,178.	Cane blight or wilt.	Begin when plants are small, go over 3 or 4 times every summer and cut out and burn all diseased canes.
				Leaf spot and anthracnose	Upon first appearance of currant worms spray with bordeaux and paris green, 1 lb. to 100 gals., or arsenate of lead, 4 lbs. to 100 gals. Repeat if second brood of worms appears.
Gooseberry. *Ribes* spp. *Saxifragaceæ.*	Cool and shady north temperate.	Moist, but not soggy, clay loams. Rich, cool, bottom lands.	Fall or early spring—2,178.	Powdery mildew.	Cut away drooping branches. Keep ground free from weeds. Spray with potassium sulphide, 1 oz. to 2 gals. Commence when buds are breaking and repeat every 7 to 10 days until fruit is gathered.
Grape. *Vitis.* spp. *Vitaceæ.*	Warm. Along shores of bodies of water best. The location must provide frost drainage.	Gravel or clay.	In spring. Completed by last of May—605.	Black rot.	Remove all mummies and diseased leaves. Rake all refuse into furrows and cover. Use surface cultivation and keep down weeds and grass. Keep vines well sprouted. Spray with bordeaux, 4-4-50, till middle of July, after that with ammoniacal copper carbonate. Spray first when third leaf shows. Foliage should be protected by coating of spray *before* every rain. Make 4 applications of bordeaux, 50 to 60 gals. of spray to acre.
				Downy mildew.	Apply bordeaux as for black rot.
Lettuce. *Lactuca sativa.* Linn. *Compositæ.*	Cool temperate.	Open, loose, rich loam.	April-June Aug-Sept.—1 oz. seed to 3,000 plants. Rows 2 ft. apart, plants 1 ft. in row equals 21,780 plants.	Rot or drop.	Steam sterilization of soil to depth of 2 inches or more; or use fresh soil for every crop. Common in greenhouses.
Muskmelon. *Cucumis melo.* Linn. *Cucurbitaceæ.*	Hot, bright temperate climate.	Light and quick warm soil. Sandy loam.	May-June—1 oz. seed to 50 hills. Plants 6x6 ft. (preferable). Plants 5x5 ft.	Downy mildew.	No effective method of control.
				Wilt.	Spray with bordeaux, 5-5-50. Gather and destroy all wilted leaves and plants.
Onion. *Allium cepa.* Linn. *Liliaceæ.*	Temperate.	A rich, moist, butnot wet, loam with subsoil of clay.	April-May—1 oz. to 100 feet of drill. 4-5 lbs. per acre. In drills, 14 to 20 in. apart, seed 5 to 6 lbs.; sets 6 to 12 bus.	Mildew.	Spray with bordeaux, 5-5-50, when plants show 3 leaves. Repeat every 10 days till harvest.
				Smut.	Crop rotation. Drill into rows when planting seed, 100 lbs. sulphur and 50 lbs. air-slacked lime to acre.
Pea (garden). *Pisum sativum.* Linn. *Leguminosæ.*	Temperate.	Rich, friable soil, not overrich in nitrogen.	April-May or July-Aug.—1 quart of seed to 100 ft. of drill, or 2 bus. per acre. Dwarf 12x1 in.; tall, double rows 3 ft. apart.	Powdery mildew.	Fungicidal spray.

RDEN CROPS—Continued

Insect and Other Enemies	Insecticides and Remedies	Time to Bear	Yield per Acre	Bulletins on Culture
vil.	Use bisulphide of carbon as for pea bug.	45-65 days from seed.	75-120 bus.	Cornell Bul. 239. New Jersey Bul. 151. Geneva Bul. 48.
vil.	Use bisulphide of carbon as for pea bug.	65-70 days from seed.	75-100 bus. dry beans.	Cornell Buls. 87, 115. New Hampshire Bul. 62.
often damaged by nsects.		65-150 days.	400 to 700 bus.	Cornell Bul. 163.
-fly e borer.	Spray with paris green or arsenate of lead, or apply hellebore. In midsummer cut off and destroy the drooping tips.	1 year. Good crops in 2 and 3 years.	50 to 100 bus.	Cornell Bul. 99. Central Experimental Farm. Ottawa, Can., Bul. 56.
bage worm. bage Apnis.	If plants not heading, spray with kerosene emulsion or paris green to which sticker has been added. If heading, apply hellebore. Before plants begin to head spray with kerosene emulsion diluted with 6 parts water; whale-oil soap, 1 lb. in 6 gals. water; or one of tobacco extracts.	90-150 days.	7500 heads.	New Jersey Bul. 98. Geneva Buls. 232, 251, 302. Cornell Bul. 78.
e as Cabbage.	See cabbage.	110 days from seed.	125-200 barrels, 18-30 heads per barrel.	See cabbage.
widespread or serous insect pests.		120-150 days.	120-160 crates.	Cornell Bul. 132. Michigan Bul. 102. Geneva Bul. 51.
is. m curculic	Spray with kerosene emulsion diluted with 6 parts of water or with one of tobacco extracts. Spray just after blossoms fall with arsenate of lead, 6-8 lbs. in 100 gals. water, and repeat in about a week. After fruit has set, jar trees daily over sheet or curculio catcher.	3 years. Commercial crops 4-6 years according to variety.	2½ tons.	Cornell Buls. 81, 98, 235. Geneva Bul. 98. U. S. Dept. Agr. Bureau of Entomology Circular 120.
rant worm.	When worms first appear, spray with 1 lb. paris green or 4 lbs. arsenate of lead in 100 gals. of water. Ordinarily the poison should be combined with bordeaux. After fruit is half grown use hellebore.	1 year. Good crops in 2 and 3 years.	100 bus.	Geneva Buls. 167, 199. Iowa Bul. 30.
rant worm.	See currant.	1 year. Good crops in 2 and 3 years.	100 bus.	Geneva Buls. 114, 133, 161.
ly beetle or flea eetle. t worm. f Hopper. e Chafer. le troubled by insects.	When buds begin to swell, cover with arsenate of lead, 8 lbs. in 100 gals. of water. To kill larvæ add 1 lb. paris green or 4 lbs. arsenate of lead to every 100 gals. of bordeaux mixture. Spray latter part of June with 6 lbs. arsenate of lead in 100 gals. water. Repeat in 7 to 10 days. Cultivate thoroughly in June, close to vines, to kill pupæ. Spray underside of leaves with whale-oil soap, 1 lb. in 10 gals. water, about July 1. Repeat in a week or 10 days. Spray with 10 lbs. arsenate of lead in 100 gals. water.	Fair crop in 4 years.	3 to 5 tons.	Cornell Buls. 157, 208, 224, 235, 254, 266.
		65 days from seed.	400-800 half-bushel baskets, 600 baskets good average.	Massachusetts Bul. 69.
ped cucumber eetle. is.	Plant early squashes as trap crop. Spray with bordeaux. Dust with tobacco dust or snuff, or land plaster with a little kerosene or turpentine. Spray with kerosene emulsion diluted with 6 parts water or use one of tobacco extracts. Burn vines after harvest, and keep down weeds.	120-140 days from seed.	3,000-7,000 melons.	Cornell Bul. 95.
on fly or maggot. ips.	See cabbage-root maggot. Kerosene emulsion, diluted with 6 parts water; tobacco decoction; whale-oil soap, 1 lb. to 4 gals. water.	135-150 days from seed.	500 bus.	Geneva Bul. 182. Michigan Bul. 31.
weevil or pea bug. moth or worm. aphis or louse.	Fumigate seed stock with carbon bisulphide. Place seed in tight vessel or room and expose to fumes for 2 or 3 days. One pound of bisulphide for 100 bushels of peas. Early planting of early varieties. Plant seed in drills and use cultivator to bury aphides after they have been brushed from vines.	50 to 80 days.	100 to 150 bus. green in pod.	Cornell Bul. 67. Farmers' Bul. 45. Florida Bul. 36. New Jersey Report 14. Delaware Bul. 49.

TABLE II. ORCHARD AND

Crop	Climate	Soil	Planting Time, Plants or Seed per Acre	Diseases	Remedies
Peach. *Prunus persica.* Sieb. & Zucc. *Rosaceæ.*	Warm and sunny. In north near body of water.	Light and sandy loam.	Spring preferable—134.	The yellows. Leaf curl. Brown rot.	Dig out and burn diseased trees as soon as discovered. Spray trees once *before buds swell* with bordeaux, 5-5-50, or lime-sulphur mixtures used for San Jose scale. Plant resistant varieties. Prune trees to let in air and sunlight. Thin fruit well. Spray with self-boiled lime-sulphur, 8-8-50, and arsenate of lead 2 lbs. to 50 gals. water. Spray (1) when shucks are shedding from young fruit, (2) 2 to 3 weeks later, (3) 1 month before fruit ripens, omitting the arsenate.
Pear. *Pyrus communis.* Linn. *Rosaceæ.*	Temperate. Best near large bodies of water.	Strong loam of moderate depth overlying a porous subsoil.	Spring or fall—48 to 108 standard plants. 193 dwarf plants.	Fire blight. Scab.	Prune out blighted branches, cutting 6 to 8 inches below diseased part. Disinfect with corrosive sublimate solution, 1 to 1,000. Clean out limb and body cankers. Disinfect all large wounds and cover with coat of paint or gas tar. Plant resistant varieties. Spray three times with lime-sulphur, 1-50, or bordeaux, 3-3-50, as for apple scab.
Plum. *Prunus domestica.* Linn. *Rosaceæ.*	Temperate.	Clay loam. Some varieties on light moist soils.	Spring or fall—108-134.	Black knot. Brown rot. Leaf spot.	Cut out and burn all knots before leaves appear in spring. See peach. Two or three applications of self-boiled lime-sulphur or bordeaux, 3-3-50. First application about 10 days after blossoms fall. Japan plums should not be sprayed with bordeaux.
Potato. *Solanum tuberosum.* Linn. *Solanaceæ.*	Moist, cloudy climate. Sensitive to frost.	Warm, rich, sandy or loamy soil.	March to May—8 to 10 bu. seed. Early, rows 18 in. apart; late, 3 ft. x 18 in. or 3 ft. x 3 ft.	Blight and rot. Scab.	Spray with bordeaux, 5-5-50. Commence when plants are 6 to 8 in. high and repeat every 10 to 14 days during season. Use 40 to 100 gals. per acre each application. Treat tubers before cutting by soaking in formalin solution, 1 pint to 30 gals. water, for 2 hours, or in corrosive sublimate, 1 oz. to 7 gals., for 1½ hours. Plant in clean soil.
Quince. *Cydonia vulgaris.* Pers. *Rosaceæ.*	Temperate	Heavy, moist, retentive clay loam, well drained.	Spring or fall—200.	Leaf and fruit spot.	Spray three times with bordeaux as for apple and pear scab.
Radish. *Raphanus sativus.* Linn. *Cruciferæ.*	North temperate.	Rich, light, loose; one that drains rapidly.	March-Sept.—1 oz. seed to 100 ft. of drill. Rows, in garden, 12 to 18 in apart.	Relatively free from diseases.	
Raspberry. *Rubus strigosus.* Michx. (red). *R. occidentalis.* Linn. (black). *Rosaceæ*	Cool temperate.	Deep, moist soil. Lighter loams for red, heavier loams for black.	Fall or spring, the latter preferable for black-caps—Black 2,420; red 2,904.	Anthracnose. Cane blight or wilt. Red rust.	Remove all old canes and diseased new ones as soon as fruit is gathered. Spray with bordeaux, 5-5-50, when new canes are 6 to 8 inches high and follow with two more at intervals of 10 to 14 days. No successful treatment known. For new settings use only plants from healthy plantations. Dig up and destroy infected plants.
Spinach. *Spinacia oleracea.* Linn. *Chenopodiaceæ.*	Cool season plant. Grown in fall and spring.	Abundance of available plant-food, particularly nitrogen. Any good garden or field soil.	March and Aug-Sept.—1 oz. seed to 100 ft. drill or 10 to 12 lbs. per acre; rows 12 to 15 in. apart.	Mildew, anthracnose, leaf blight.	Burn all affected parts. Practice crop rotation. Treat soil with mixture of flowers of sulphur and air-slacked lime.
Squash. *Cucurbita pepo*, var. *Conensa.* Linn. *Cucurbetaceæ*	Temperate.	Warm and quick soil. Sandy lands or sandy loams best.	Summer, April-May; winter, May-June—1 oz. seed for 25 hills, or 4 lbs. per acre. Summer, hills 4x4 ft.; winter, hills 8x10 ft.	Mildews.	Bordeaux mixture or ammoniacal carbonate of copper.
Strawberry. *Fragaria chiloensis*, var. *ananassa.* *Rosaceæ*	Cool season plant.	Rich, rather moist, sandy soil.	Aug. or spring—10,000 to 14,000.	Leaf-spot, rust, or leaf-blight.	In setting new plantations, remove all diseased leaves before plants are taken to field. Spray newly set plants with bordeaux 5-5-50, as soon as growth begins. Repeat three or four times during season. The following spring, spray just before blossoming and again 10 to 14 days later. Plant resistant varieties.
Tomato. *Lycopersicum esculentum*, var. *vulgare.* *Solanaceæ*	Warm climate, long season, sunny, open position.	Warm soil, light, porous and well drained.	Start plants in hot bed Feb. or March; transplant May to June—1 oz. to 3,000 plants.	Septoria, leaf-spot. Mildew. Black rot. Bacterial blight.	Spray with bordeaux, 5-5-50, as soon as plants are set out. Spray underside of leaves. Repeat every week or ten days. Spray with bordeaux. Crop rotation. Crop rotation, destruction of affected vines and contiguous vegetable matter.
Turnip. *Brassica rapa.* Linn. *Cruciferæ.*	Cold weather plants. North temperate.	Loose, moist soil.	April, or July-Aug.—1 oz. seed to 100 ft. of drill. Rows 18 in. apart, or broadcast. Rutabaga, rows 2 ft., plants 10 inches in row.	Club root. Soft rot.	See cabbage. Plant on soils free from disease. Plant resistant varieties.
Watermelon. *Citrullus vulgaris.* Schrad. *Cucurbitaceæ.*	Warm and sunny climates. Southern temperate.	Light, quick, warm, gray, sandy soil, with strong clay subsoil.	May-June—1 oz. seed for 30 hills, or 4 to 5 lbs. per acre. Hills 8x10 ft.	Free from any vital disease.	

TABLE III. HORSES, CATTLE

Best Breeds	Characteristics	Uses	Brief Breeding Rules
HORSES **American Saddle Horse**	Head rather small and clean cut. Eyes wide apart, full, clear and prominent. Ears pointed. Long upright neck, sloping shoulders. Deep chest, short, strong back. Barrel ribbed well back. Strong coupling, quarters level, strongly muscled. Pasterns long and sloping. Bones of leg broad and flat, strong tendons. Height about 15 hands 2 inches. Weight about 1,000 pounds.	Saddle horse for pleasure, as a gaited horse, hunter, cavalry or commercial purposes. A light harness horse also.	1. Age of puberty 12 to 24 months. 2. Best age for breeding, 2 to 3 years. 3. Period of heat, 9 days after delivery and each 2 or 3 weeks thereafter; duration of heat, 2 to 3 days.

GARDEN CROPS—Continued

Insect and Other Enemies	Insecticides and Remedies	Time to Bear	Yield per Acre	Bulletins on Culture
each borer.	Dig out borers in June and mound up trees. Apply gas tar or coal tar to trunk from roots up to a foot or more above surface of ground.	2 years. Good crop in 4 to 5 years.	5-10 bus. per tree in full bearing.	Cornell Buls. 176, 192, 276.
urculio.	Spray just after blossoms fall with arsenate of lead, 6 to 8 lbs. in 100 gals. water, and repeat in a week. After fruit has set, jar tree daily over a sheet and destroy beetles.			
an Jose scale.	See apple.			
ear psylla.	After blossoms fall, spray with kerosene emulsion diluted with 6 parts water or whale-oil soap, 1 lb. in 4 or 5 gals. water, or one of tobacco extracts. Repeat every 3 to 7 days.	3 or 4 years. Fair crop in 6 to 12 years. Dwarfs in 5 to 7 years.	A tree 20-25 years old from 6-15 bus.	Cornell Buls. 108, 145, 142, 272. Geneva Buls. 67, 84.
eaf blistermite.	Spray with lime-sulphur wash in fall or spring, or with concentrated lime-sulphur solutions, 1 gal. in 10 gals. water.			
ear slug.	Spray with 1 lb. paris green or 4 lbs. arsenate of lead in 100 gals. of water.			
lum curculio.	Spray just after blossoms fall with arsenate of lead, 6 to 8 lbs. in 100 gals. water, and repeat in about a week. After fruit has set, jar trees daily over sheet and destroy the beetles.	3 years. Good crop in 5 or 6 years.	3 to 8 bus. per tree.	Cornell Buls. 38, 81, 131, 235. Geneva Buls. 98, 117.
olorado potato beetle.	Spray with paris green, 2 lbs., or arsenate of lead, 4 lbs., in 100 gals. water, or arsenite of soda combined with bordeaux mixture.	80 to 140 days.	100-300 bus.	Geneva Buls. 101, 123, 221, 241, 264, 267, 279, 290, 311. Vermont 85. Maine 141.
lea beetles.	Bordeaux mixture as applied for potato blight.			
uince curculio.	When adults appear, jar them from tree onto sheets or curculio catchers and destroy them.	2 years. Good crop in 4 years.	100 to 300 bus.	Cornell Buls. 80, 145, 148.
an Jose scale.	See apple.			
round-headed apple tree borer.	See apple.			
laggots.	Cover soil just after planting with a heavy dressing of unleached wood ashes. Inject bisulphide of carbon into earth about plants.	30-45 days from seed.	2,800-3,500bunches.	
awfly.	See blackberry.	1 year. Good crop in 2 and 3 years.	50-100 bus.	Geneva Buls. 124, 226.
ane borer.	See blackberry.			
eaf miner.		30 to 60 days.	200 barrels.	Rhode Island Bul. 41. Geneva Buls. 70, 99.
striped cucumber beetle.	See muskmelon.	Summer, 60-80 days; winter 125-160 days.	10 to 15 tons, winter.	N. Y. State Exp. Station Report 6th. New Jersey Bul. 94. Geneva Buls. 75, 113, 156, 158. Ohio Bul. 105. Cornell Bul. 31.
quash-vine borer.	Plant a few early squashes between rows of late varieties as trap crop. As soon as early crop is harvested, remove and burn vines.			
phis.	Spray with kerosene emulsion diluted with 6 parts water or use one part of tobacco extract. Burn vines after fruit harvest and keep down weeds.			
quash stinkbug.	Trap adults under boards in spring. Kill nymphs with kerosene emulsion.			
White grubs.	Dig out grubs from beneath infested plants. Destroy pupæ by early fall cultivation of land.	1 year. Heavier crop usually in 2 years.	75-250 bus.	Cornell Bul. 79.
oll worm.	Hand picking. Use of corn as a trap crop. Destruction of wormy fruit.	150 days from seed.	8 to 16 tons.	Cornell Buls. 32, 61. Michigan Buls. 19, 31. Florida Bul. 48. Kentucky Bul. 66. Connecticut Bul. 115.
obacco worm.	Hand picking.			
Nematode galls.	Crop rotation and preventing contiguity of host plants, notably cowpeas.			
Root maggots.	Inject bisulphide of carbon into soil about roots before grubs have burrowed deeply into tissues. Crop rotation.	60-70 days from seed.	600 to 1,000 bus.	Geneva Report 6th.
Flea beetle.	Spray with bordeaux or sprinkle with paris green diluted with land plaster (1 part by bulk of paris green to 50 of plaster).			
Melon worm.	Spray with paris green, 4 ounces to 50 gals. water. Two or three sprayings a week apart.	120-180 days.	400-500 melons.	Georgia Bul. 38.
Melon louse.	Spray with a 1 to 20 mixture of kerosene and water, or kerosene emulsion, or whale-oil soap, 1 lb. to 1 gal.			
striped cucumber beetle.	See muskmelon.			
Flea beetle.	Hand picking and thorough spraying with bordeaux mixture and paris green.			

SHEEP AND SWINE

Best Foods	Diseases and Symptoms	Treatment	Bulletins
For the trotter. When not in training, feed should be reduced at least one-half. Good oats and clean sweet timothy should constitute bulk of ration. Also a few carrots and a bran mash occasionally. In spring, when shedding, bran mash may be given more often to keep bowels open.	*Big-head.*—Symptoms: Loss of vitality, irregular appetite or other digestive disturbance. Tendency to stumble. Then intermittent or migratory lameness. Swelling of bones of face and jaw. Animal becomes thin, coat rough, and skin tight.	Place animal under new conditions. Give lime, one peck slacked in a cask of water, more water being added from time to time. Give a tablespoonful of powdered bone meal in each feed, with free access to a large piece of rock salt. Feeds containing mineral salts, such as beans, cowpeas, oats and cottonseed meal are good. Animal should not work during active stage or be used for breeding.	Best references to breeds in stud-books issued by breed societies.

TABLE III. HORSES, CATTL

Best Breeds	Characteristics	Uses	Brief Breeding Rules
HORSES—Cont'd. **Belgian Draft**	Short body set on short legs. Tendons of legs large. Head good size. Eyes small, neck short, thick and well crested. Shoulders heavily muscled. Chest deep and wide, good barrel. Back short, broad and inclined to sag. Loins wide, short and very thick. Flank low and full. Hindquarters short, very wide, muscular. Lower thighs very wide, well muscled. Hocks round and meaty. Colors, chestnut, roan, brown and bay.	Draft and crossing, especially on grade draft mares.	4. Period of gestation 11 to 12 months. 5. Proper rations and sufficient exerci important during pregnancy. 6. Fecundity favored by (a) Warm climate. (b) Abundance of exercise. (c) Generous supply of nutritious fo regularly given. (d) Crossing (e) Heredity. (f) Full maturity of animal.
Clydesdale	Weight 1700 to 2000 pounds for stallions, 1500 to 1800 pounds for mares. Height, 16 to 16½ hands. Colors, bay, brown, black or chestnut, with white markings on face and legs. Head intelligent. Shoulder good, which gives a free, easy, long stride. High withers. Arm well muscled. Feathering on leg is fine, silky and long. Quarters and croup muscular. Springy, strong pastern. Front action free and snappy.	Draft and crossing on native draft mares.	7. Variation in type caused by (a) Changed conditions of life. (b) Heredity—union of two animals wi diverse qualities. (c) Habit or use or disuse of parts. (d) Food.
French Coach	Height 16 hands. Weight 1000 to 1400 pounds. Rather upstanding. Smooth and symmetrical, fine quality, clean cut, intelligent head, long graceful neck, closely ribbed body, muscular quarters. Legs well set and fine. High free knee action, regular uplifting hock action. Colors, bay, brown or black.	Coach and carriage horse, cavalry and fast saddle purposes. Crossing on common brood mares for production of grade coach horses for general city purposes.	8 Selection is of two kinds— (a) Natural. Survival of those possessi greatest ability to live and get fo under particular conditions. (b) Methodical. Favoring and fixing characters especially useful to ma kind.
German Coach	Colors, bay, brown or black. Height 16 to 16½ hands. Weight 1350 to 1450 pounds. Deep round body, well proportioned, close ribs, neck long and high set on shoulders, neat head, intelligent face. Back short and strong, smooth at coupling, plump rounded quarters, strongly muscled limbs, strong hock, good feet.	Saddle, carriage and draft. The horse-of-all-work.	9. Heredity—like produces like. Offspri resemble parents in stature, form a feature. Normal and abnormal ch acters are inherited. Predisposition diseases is subject to laws of heredity. Characters that have appeared regular through many generations transmitt with greatest force. Variations a transmitted.
Hackney	Considerable substance, very smooth, gracefully curved outlines, rather short legs, head well proportioned, full bright eyes, well-developed neck, shoulders long, sloping, well muscled. Body deep and round-ribbed. Muscular loins and quarters, strong hocks, excellent action. Colors, brown, bay or chestnut, with white markings. Height 15.2 to 16 hands.	Heavy-harness horse. A desirable cross on common mares of much quality.	10. Correlation of parts. Whole organis so closely interwoven that change in o organ or set of organs almost certain result in disturbance of the balance other qualities and produce a change other organs. Certain characters a normally correlated.
Percheron	Height 15.25 to 16.5 hands. Weight 1500 to 2000 pounds. Colors, gray and black. Active temperament, intelligent head, deep body, wide muscular croup, clean-cut legs, joints clean and hard; legs show abundance of quality. Good action.	Draft and crossing to produce grade draft mares.	11. Atavism, or reversion to characteristics remote ancestors, may occur. Leadi causes are change of environment a crossing.
Shetland Pony	Height 10 hands 2 inches. Weight 325 to 375 pounds. Compact build, deep body, heavy muscular quarters, short legs, short broad back, deep full chest, muscular neck, small head and ears, prominent eyes, docile disposition. Colors, brown, black and bay. Long shaggy coats, heavy, long mane.	Child's pony and light driving.	12. Inheritance of acquired characte Acquired character is gained as result action, nonaction, or reaction from e vironment. Such characters may inherited.
Shire	Conformation low, broad and stout. Heavy in build, slow in movement. Large girth, deep and strongly coupled with broad back, quarters heavily muscled, legs strong, feet large. Feathering on legs below knees and hocks. Weight 2200 pounds. Height 17 hands. Colors, brown, bay or black with white markings on face and legs.	Draft and crossing to produce grade draft horses.	13. Determination of sex. Many theori have been advanced, but in the prese state of our knowledge it is not prac cable to attempt to control the s among the mammalian animals. 14. Prenatal influences of doubtful con quence. Pregnant animals should kept quiet and free from causes whi might produce extreme nervous sho They should have normal exercise.
Standard-Bred Trotter	Head well proportioned, clean cut, neck long and muscular, crested in stallions. Shoulders well muscled, chest low, foreleg long from elbow to knee, short from knee to fetlock. Pasterns sloping, feet moderate in size, oily in appearance. Back and loin well muscled, hindquarters and croup well muscled and smooth. No fixed colors. Height 16 hands. Weight for mares 900 pounds, stallions 1150 pounds.	Racing, driving as a roadster, and breeding. Also heavy - harness horse. Much used in breeding "cow ponies."	15. Four methods of breeding (a) Cross-breeding. A union of differe breeds or races or breeding togetl of different strains of families wit the same breed. Increases fertili size and restores constitution, vi and thrift. Breaks up establis types, and destroys prepotency of breed. Not certain to prod improvement.
Suffolk Punch	Low-set, short legs, deep body, muscular, durable feet. Head clean cut, with full forehead and Roman nose, neck full, with strong crest, chest deep and wide. Barrel deep, round-ribbed, and well let down on hind flank. Legs and hindquarters muscular. Height 16½ hands. Weight 2000 pounds. Color chestnut.	Heavy draft and crossing on range mares.	(b) Grading. Breeding of unimpro females to males of well-establis breeds will invariably impr stock.
Thoroughbred	Very deep, narrow chest, long legs. Refinement and clear definition of feature. Large nostrils, full, clear eyes, broad forehead, neck long and straight, sloping shoulder, muscular hindquarters, sharp withers, well marked superficial blood vessels, silky skin and hair. Colors, bay, brown, or chestnut, more or less white in face and limbs. Height 15 to 16 hands. Weight 900 to 1050 pounds.	Racing, sporting, breeding. Influence felt in all but draft breeds.	(c) Inbreeding. Breeding together close relations. Will fix desir qualities. Likely to diminish weaken constitution, impair fec dity. (d) Line-breeding. Union of anin more or less closely related. Fa fixation of characters, but may re in too great refinement and weak of constitution.
Welsh Pony	Good shoulders, strong back, neat head, best of legs and feet. Height 12 to 13 hands. Colors, bay or brown, gray or black. Great strength and endurance.	Child's pony and for hack and tradesmen's purposes.	16. Pedigree and individual excellence sh both enter into choice of breeding anim Neither alone sufficient.

HEEP AND SWINE—Continued

Best Foods	Diseases and Symptoms	Treatment	Bulletins
When horse goes into training, strength of food should be gradually increased. At first may have all hay he will consume. Later it may be necessary to limit it. No carrots. Bran mash once or twice a week if constipated. Oats gradually increased.	*Hives.*—Symptoms: Eruption of swellings from one-half to two inches in diameter on skin. The edges of swellings cut off sharply from surrounding tissue.	Withhold feed for 24 hours. Then give bran mashes and small quantities of hay. Cleanse digestive tract by quart of linseed oil or 1½ pounds epsom salts. To relieve itching, apply alkaline solutions, 1 tablespoonful sodium bicarbonate to 1 quart of water, or a weak solution of ammonia.	Report of Kansas State Board of Agriculture, 1899.
	Heat stroke.—Symptoms: Horse stops sweating, appears droopy in harness, drags along, soon falls and becomes unconscious. Breathing rapid and shallow, pulse rapid and weak, body temperature excessively high.	Treatment energetic. Apply ice bags to head and pour cold water over body to reduce temperature immediately. Give ½ pint whisky, followed by tincture of digitalis in 1 dram doses by mouth or ½ dram doses subcutaneously to stimulate heart. Continue cold water until temperature is reduced to 102 or 103 degrees Fahr. Rub limbs briskly with straw or the hands. Recovery is gradual, over week or two.	
	Moon blindness.—Symptoms: Great irritation in eyeball, excessive flow of tears; eye kept closed and drawn back into socket; mucous membrane on inside of eyelid red, swollen and may protrude between closed lids; eyeball enlarged and cloudy, very sensitive to light.	Keep animal in the dark and wash off eye several times daily with a 4 per cent solution of boric acid. A few drops may be dropped in eye. Ice poultices may be used 3 or 4 days, after which warmth should be applied by covering eye with cotton soaked in warm water. One or two drams of potassium iodide daily have been recommended.	Farmers' Bulletin No. 170.
For the driving horse.—Oats lead among the grains. Bran mash for constipation. When horse is not taken from stable during day, the concentrates should be reduced by one-third. Laxative foods, such as clover or alfalfa hay or bran, in too large quantities should be guarded against.	*Lampers.*—Symptoms: Mucous membrane of mouth becomes congested with blood and protrudes below incisor teeth.	May be relieved by making a few shallow punctures in mucous membrane with a sharp knife that has been thoroughly sterilized. Such treatment demands expert care.	
	Rheumatism.—Symptoms: Animal becomes stiff and lame, followed by rise of temperature (104 degrees Fahr.) A swelling appears around joints of legs which is very painful to the touch. Location may change from day to day, and attacks be intermittent.	Administer a cathartic, aloes balls containing 7 drams of aloes. Thoroughly rub affected joints with a stimulating liniment, as camphor or chloroform liniment. Follow cathartic with salicylates given in form of sodium salicylate. 6 to 8 drams may be given 2 or 3 times daily in food. Keep horse in dry place and give plenty of fresh air.	North Carolina Bulletin No. 189.
For the work horse.—In general, horse should have over 2 pounds of provender daily for each 100 pounds of weight. Of this about two-thirds should be grain, depending on heaviness of work. Morning meal should be rather light, mostly of grain. Midday ration should not be large. Heavy feeding at night. In cold weather a more carbonaceous ration may be used. Equal parts of corn and oats better than larger proportion of oats.	*Colic.*—Symptoms: Animal lags or stops in harness or walks around stall restlessly. Looks around at side, kicks at belly, may grit teeth. Tail gets a peculiar crook and is held extended. May lie down, roll, kick, or make violent movements, as slamming head against floor or biting at self or manger. Attacks may be intermittent.	Give animal plenty of room. To allay pain, cannabis indica, 1 to 2 ounces, may be given, or morphine sulphate, 5 to 7 grains, given subcutaneously. Larger doses of either dangerous. An excellent prescription is fluid extract cannabis indica, 4 drams; tincture opium, 6 drams; sulphuric ether, 1 ounce; sweet spirits of niter, 1 ounce. Give in 1 dose and repeat if necessary in an hour. To stimulate intestines, 8 drams of aloes or 1 pint of linseed oil. Injections of lukewarm water into rectum good. In fermentation colic tapping is quickest and surest method. This requires expert surgery.	Florida Bulletin No. 72.
	Heaves.—Symptoms: Distressing dry cough which often occurs in paroxysms. A double respiration present. Expired air comes from nose in 2 jets, with pause between them.	Condition incurable. Greatest benefit from regulation of diet. All dusty hay should be withheld and small quantities of best timothy given sprinkled with lime or molasses water. Nutritious concentrated foods best: corn, oats and bran with carrots and turnips or apples mixed in.	
For the brood mare.—Much the same as for work horse with the addition of more protein foods, as bran and oil-meal. If constipated, give bran mash. After foaling, a hot bran mash fed once a day has a cooling and laxative effect. To stimulate milk flow, good pasture grass best, but oats or wheat bran with equal weight of corn-and-cob meal is good.	*Bots.*—Symptoms: Cause irritation of walls of stomach and intestines and obstruction of passage between stomach and intestines.	Best treatment preventive. Eggs should be removed from hair before tenth day. If occasional bots noticed in manure, animal should be starved for 12 hours, allowing only water, after which give 2 teaspoonfuls of tartar emetic in water as a drench. Repeat in 4 hours; 8 or 12 hours later give a drench of 1 pint to 1 quart of linseed oil.	Iowa Bulletin No. 18.
	Worms.—Symptoms: Presence of worms in fæces the only sure sign.	Give animals no food for 12 to 18 hours. Then give tartar emetic in two-dram doses every 4 hours until 3 doses are given. Follow in 3 or 4 hours with 1¼ pints of linseed oil.	
	Curb.—Symptoms: A rupture of the ligament on posterior surface of hock with swelling and heat, often lameness. Leg shows bulging backward below point of hock.	In acute inflammation cold water should be applied for 10 to 12 hours daily in constant stream. If lameness persists after a week, a blister of biniodide of mercury 1 part to vaseline 8 parts should be applied and animal should rest for 2 to 4 weeks.	
	Founder.—Symptoms: Onset sudden with fever from 102.5 to 106 degrees Fahr., rapid respiration, increased pulse, intense pain in feet. Animal stands with hind feet well under body.	Give tincture of aconite in 10-drop doses every 2 hours during first day. Allow animal to stand with affected feet in a soaking-tub of cold water, or in puddle of soft clay, water to be kept cold by addition of ice. Give 2 ounce doses of saltpeter in a pint of water 3 times daily for 1 week. Case may need expert attention.	
For the foal.—Should begin to nibble grain from mother's box at 2 months, and at 5 to 6 months be eating well. Should have more protein than work horse. Oats, shorts, peas and perhaps corn, may constitute the grain. Alfalfa, clover and mixed hays may constitute the roughness. Abundant exercise important.	*Bone spavin.*—Symptoms: Onset gradual. Lameness most marked when horse is first brought out of stable and disappears on warming up. Bony enlargement on hock joint.	Proper shoeing will assist in removing lameness. 4 to 6 weeks rest with repeated blisters may give temporary relief. Most successful treatment requires assistance of a veterinarian.	New Jersey Bulletin No. 92.
	Ringbone.—Symptoms: Onset gradual with lameness. Local heat, swelling and pain in joint. Presence of bony enlargement about joint.	Foot should be properly dressed and shod. If lameness is marked, prolonged rest and repeated mercurial blisters (1 part biniodide of mercury to 8 of vaseline) should be applied. If this is not successful, call veterinarian.	
For the stallion.—During breeding season, grain ration should consist mainly of good sound oats, varied by ration of corn, corn-and-cob meal, or barley. Wheat bran is valuable. The roughness should be clean, sweet hay, timothy or timothy and clover mixed.	*Splint.*—Symptoms: Lameness. Pressure over splint will cause animal to flinch. Skin will show increase of temperature and there may be some edema. New bony growth may be seen or felt on front of internal splint bone.	For acute inflammation, let cold water run over part for several hours each day for a week. Hair should be clipped, then apply blister of one dram benzoid of mercury to one ounce of petrolatum. Animal should rest 3 to 4 weeks. In severe cases, call veterinarian.	Special Report on Diseases of the Horse, Bureau of Animal Industry, U. S. Dept. Agr., 1903.

TABLE IV. HORSES, CATTLE,

Best Breeds	Characteristics	Uses	Best Foods
CATTLE			
Aberdeen-Angus	Black color, polled heads, rotund compact type, smoothness of conformation, short legs, evenness of flesh when fat, deep, full hindquarters. Beef breed.	Beef. Very valuable in crossing and grading. Little value for milk.	*For dairy cattle* 1. The dairy calf.—Avoid fattening feeds. Choose such as tend to develop a vigorous muscular system. Gradually substitute skimmed milk for full milk after first few days. A small quantity of some concentrated feed, as shorts, linseed meal, or flaxseed meal boiled into a jelly with water (1 part meal to 6 of water) is fed daily with the skimmed milk. Milk should be at blood heat unless calf is accustomed to cold milk. At 6 or 8 weeks other feeds are given, preferably oats wheat middlings, or a mixture of both. For older calves, mill feeds, oil-meal, barley, malt sprouts, etc., are desirable. Keep fine quality of early-cut hay before calves. 2. Dairy heifer.—As time of parturition approaches, feeding should be plain, good clean hay from clover or mixed grasses, corn fodder, corn silage (not to exceed 25 to 30 pounds a day) or roots. Both dry and succulent roughage is fed, and small amounts of bran, ground oats, shorts, gluten feed and perhaps corn. Shortly before calving, feeding of all grains except about 2 pounds of bran, is discontinued and dry roughage and roots are fed till cow freshens. Directly after calving a warm thin slop of oatmeal, bran or shorts is given or warm water only. Until danger of fever is over, feed should be very light and gradually increased for 2 or 3 weeks until cow is on full feed. Corn meal good for a heavy milking heifer. 3. Dairy cow:— (a) Summer.—Ample pasturage. Later in the season add soiling crops, such as corn, alfalfa, peas and oats, rye, rape, etc. Summer silage: corn, red or other clover and alfalfa. 30 pounds of soiling crop or silage average allowance for dairy cows on poor pastures, to be increased as conditions demand. In case of heavy milkers or very short pasture, add few pounds of wheat bran or wheat bran and oats, throughout season. (b) Winter.—Succulent feeds should be provided during entire lactation period. Silage and roots are main available feeds. Best results from not over 40 pounds silage fed daily, and fed with some dry roughage, hay or corn fodder. Protein feeds, as clover hay, wheat bran or oil-meal should be fed with corn silage or fodder. Clover hay or hay of other legumes stands first for dairy cows. Pure timothy, especially if late cut, is a poor cow feed. Other kinds of hay are millet, oat, sorghum, alfalfa and pea. Common concentrates are the cereals and mill refuse, starch or glucose factory refuse, brewery and distillery feeds and oil-meals. Good rule is to feed as many pounds of grain feeds a day as cow produces pounds of butterfat during week and to feed as much roughage as cow will eat up clean. Should give variety of feeds containing liberal amount of easily digestible substances. Feeding must be regular. 4. Dairy bull.—Ground oats, wheat bran, gluten meal, oil-meal, silage, clover hay; grain ration not to exceed 5 or 6 pounds per day for 1000-pound animal. Keep animal vigorous, not fat and lazy. *For beef cattle* Baby beeves (10 to 16 months).—Require heavy grain feeding. Corn depended on largely, fed with a food rich in protein, as oil-meal or gluten feed. Oats and bran may be added if not too expensive. Good ration is 5 pounds corn, 2 pounds oats, ½ pound oil-meal, plenty of good clover or alfalfa hay. Corn silage is valuable. Daily ration must be increased as fast as calves can handle it. Long yearlings (18 to 23 months).—When calves are born in spring they are given little or no grain before or after weaning. Through summer and fall depend on grass. In winter a liberal feed of hay with small allowance of grain. Pasture without grain following summer and full feed of grain next fall and winter. If roughage is largely alfalfa, clover or cowpea hay the grain ration may consist of corn alone. If other roughage used, supplement corn with equal weight of bran, or one-third to one-half of that weight of oil-meal. In the second fall feed close grown corn fodder, shelled corn, alfalfa, clover or cowpea hay. If non-legume roughage used make night grain ration one-fifth to one-fourth oil-meal, gluten or cottonseed meal. Short two-year-olds.—Finish by feeding grain in connection with spring and summer pasture. With this system a light grain ration is fed the first winter and less than half feed of grain second winter. Soaked shell corn is effective for spring and summer feeding. Fall feeding two-year-olds.—Corn fodder on pasture. May begin about September 15 and continue in field for 3 months. Begin with 3 pounds of corn a day and increase till cow's capacity is reached. 3 pounds bran and 1 pound oil-meal or cottonseed meal per steer per day will greatly increase gains. Winter feeding range two-year-olds.— Cattle which have had no grain during summer and fall. Snapped corn most used early in feeding with alfalfa, clover or cowpea hay. Field-cured stalks with alfalfa equally good. After 6 to 8 weeks begin shelled corn gradually to replace snapped corn. If non-leguminous hays used supplement corn with about 2 pounds per day of bran, oil-meal, gluten or cottonseed meal. On full feed will take 20 to 25 pounds grain per day, plus as roughage desired. Range three-year-olds.—Require smaller proportion of protein foods than above, but consume a larger proportion of grain to hay.
Ayrshire	Medium size, standard weight for cows 1000 pounds, bulls 1500 pounds or more. A little smoother than Jersey or Holstein but from behind wedge shape is evident. Tips of ears notched, horns white with black tips and curve outward and upward. Body large and deep, ribs well sprung, hindquarters often heavy. Udder shows high development of form and setting. Color variable through red, white, and brown in patches. Mild but active disposition. Dairy breed.	Milk, butter, and cheese. Crossing to improve grade herd.	
Brown-Swiss	Weight for cows 1200 pounds and bulls 1800 pounds. Colors shade from light to dark chestnut brown. Light tuft of hair between horns, on inside of ears, and a narrow line along back. Nose black, mouth surrounded with meal-colored band. Horns with black tips, medium size. Face dishing, large, full eye; ribs well sprung. Hoofs and tongue black, udder large, extending well up in front and rear. Teats large, well placed. Short legs. Dairy breed.	Milk for condensing and butter and cheese making.	
Galloway	Low, blocky animal, with long, soft, shaggy coat of black hair, hornless, well sprung in the ribs, resembling barrel in shape, which is evenly covered with juicy lean flesh. Head short and wide, forehead broad, face clean, nostrils large. Eye large and prominent. Neck short, clean. Shoulders broad, joining body smoothly. Hindquarters long, wide, well filled. Rump straight, wide, carrying width of body out uniformly, well filled with flesh. Thighs broad and thick. Legs short and clean. Beef breed.	Beef, hides and crossing. Very prepotent.	
Guernsey	Clean-cut, lean face, long, thin neck, backbone rising well between shoulder blades, pelvis arching and wide, rump long, abdomen large and deep, udder full in front, of large size and capacity. Teats well apart, and of good even size. Hair a shade of fawn with white markings, cream colored nose, horns amber, small, curved and not coarse. Mature cows about 1050 pounds. Bulls 1200 to 1500 pounds. Dairy breed.	Milk, cream and butter. Cross-breeding.	
Hereford	Color, red and white. Head, including jaws and throat, white, white under neck, down the breast, under belly, and on legs. Bush of tail white, white strip on top of neck to top of shoulders, remainder of body red. Head short, forehead broad, eyes full, horns rather strong and of whitish yellow color, free from black tips, more or less drooping, neck short and thick. Hide heavy and loose and covered with dense soft coat of hair. Breast broad and full, free from loose dewlap. Shoulders broad on top. Ribs well sprung and extending well backward. Rump bones wide apart. Legs short, straight and set well apart. Line of back straight and level. Quarters full and well rounded. Beef breed.	Beef, especially early or "baby" beef.	
Holstein-Friesian	Color, black and white piebald. Head, broad between eyes, eyes large and bright, horns small, tapering toward tips, neck long, chest moderately deep and low, barrel long and wedge shaped, large abdomen, legs rather short and nearly straight and wide apart. Hair fine, soft and furry. Udder very capacious, extending well forward in front; teats well formed and wide apart. Dairy breed.	Milk, butter and cheese. Fair beef qualities.	
Jersey	Small head, muzzle black or dark in color surrounded by light or mealy strip of light skin and hair. Eyes prominent, bright and wide apart. Horns crumpled, small, often black tipped. Neck fine, clean and small. Legs short, fine boned and small. Body well rounded, large and deep. Skin mellow, loose, yellow, with short fine silky hair. Udder large, not pendulous. Teats medium size, placed far apart. Back straight from shoulder to tail. Movement light and graceful. Cows 800 to 1000 pounds, bulls 1200 to 1500 pounds. Dairy breed.	Milk and butter.	
Red Polled	Weight for bulls 1800 to 2000 pounds, cows 1300 to 1500 pounds. Color red. Nose flesh color. Switch of tail and udder white. Head medium length, wide between eyes. Poll well defined and prominent, neck of medium length, clean cut, straight from head to top of shoulder. Chest broad and deep, back long, straight and level, hips wide and well covered, legs short and straight. Udder full and flexible. Teats well placed and wide apart. Hide, loose, mellow, with full coat of soft hair. Dual purpose breed.	Beef, milk and butter.	
Shorthorn	Head wide between eyes, short from eyes to nostril. Horns short, curved forward, waxy white with dark tips. Neck short and fine. Back straight, level and broad and deeply covered with flesh. Thighs wide, deep and long, well filled down in the twist. Body deep, squarely built. Flanks well let down, underline nearly straight. Legs medium length. Colors, pure red, pure white, a mixture of these colors, or roan. Beef breed.	Beef, crossing, grading. Fair results for milk, butter and cheese.	

HEEP AND SWINE—Continued

Brief Breeding Rules	Diseases and Symptoms	Treatment	Bulletins
Age of puberty 4 to 18 months.	*Caked udder.*—Part or all of udder becomes enlarged and firm. Cow is depressed and there may be a slight rise of temperature. Gland is sensitive to pressure and flow of milk is lessened. Milk is watery and may be tinged with blood.	Give sparingly of milk producing food. Massage udder with hand and rub in camphorated oil or tincture of iodine 1 part, alcohol 8 parts. Then severe warmth should be applied by sponges wrung out of hot water and held against udder. In case of development of abscess or gangrene expert assistance will be needed.	Herdbooks of all breeding and registration societies. Special Report on Diseases of Cattle and Cattle Feeding, U. S. Department of Agriculture, Bureau of Animal Industry, 1892. Revised 1904.
	Chapped teats.—Symptoms: Apparent on teats. May cause great difficulty in milking.	In fresh cows wean calf as soon as possible. See that teats are dry before cow goes out into the cold or wet weather. Bland antiseptic ointment, as a 10 per cent ointment of calomel in petrolatum should be applied after milking. Yellow oxide of mercury in a 5 per cent ointment is also good. Care must be taken to prevent milk becoming contaminated. In very bad cases milk should be withdrawn for few milkings with tube and udder massages. End of teat and milking tube must be sterlized before inserting. Astringent applications, as lead water with laudanum or tannic acid ointment, are good when there is considerable discharge from the sores.	Bureau Animal Industry Circular No. 51.
Best age for breeding beef cattle, 20 to 27 months, dairy cattle 18 to 24 months.			Same Bulletin No. 108.
			Same, 15th Annual Report.
			Farmers' Bulletins Nos. 55, 205, 346.
	Milk fever.—Symptoms: Attack usually comes on within two days after calving. Cow is restless, staggering gait, especially in hind legs, weakening of knees and fetlocks in front. This increases until paralysis becomes general, and animal goes down. Cow takes very characteristic position—head turned round to side, usually left, rests against chest, causing peculiar arching of neck. If head drawn out straight, immediately flops back to above position. Animal quiet and insensible.	Because of paralysis of the throat, great care should be taken in administration of medicines by the mouth. Patient should be kept in an upright position on the breastbone, and not on her side. Only successful treatment is the injection into the udder of atmospheric air, which requires the assistance of a surgeon.	Connecticut Reports, 1893-1901.
Period of heat, 40 to 60 days after delivery, if suckling the calf, and 20 to 30 days if calf is taken away at birth. Period recurs each 3 weeks thereafter. Duration 12 to 24 hours.			Cornell Bulletins Nos. 268, 269.
			Florida Bulletin No. 96.
	Sore tongue.—Inability to eat, frequent movement of lips with formation of froth on their margin, driveling of saliva. Ulcers occur on gums around teeth, inside lips and on tip of tongue. Muzzle dry and parched, and crusts and scabs form over the parts. The thin skin in clefts between jaws may become fissured and eroded, causing a slight swelling with pain. Animal takes position with back arched and feet propped under body.	Remove herd from pasture to barn or corral and feed on soft nutritious food, such as bran mashes, ground feed and gruels. Keep clear cool water in manger. Dissolve 2 heaping tablespoonfuls of borax or one tablespoonful potassium chlorate in each of first 2 buckets of water taken during day. Astringents, such as ½ tablespoonful alum, borax or chlorate of potash, should be placed on tongue. Feet may be treated with a 2 per cent solution of carbolic acid or of creolin. Fissures or lesions of skin benefited by carbolized vaseline or zinc ointment.	Georgia Bulletin No. 49.
			Illinois Bulletin No. 142.
			Indiana Bulletins Nos. 129, 130, 136, 137; Circulars Nos. 12, 14.
			Kansas Bulletin No. 81.
Period of gestation 9 to 9½ months (285 days).	*Indigestion.*—Symptoms: When stomach and small intestines affected, loss of appetite and rumination, coated tongue and emaciation. Constipation is usual, although diarrhœa may be present. Fæcal matter contains imperfectly digested food and more or less mucus. When large intestine involved, appetite may not be affected. Diarrhœa marked, droppings coated with mucus. No undigested food present. Animal will lose flesh and become hidebound.	In constipation, 1 quart of castor oil should be given. Easily digested and nutritious food should be given in small quantities. Green food best or hot bran mashes, with small amount of good sweet hay. In diarrhœa and fermentation a mixture of bismuth subnitrate 1 dram and creosote ½ dram shaken up with milk or given as a drench twice daily for 2 or 3 days is beneficial. For a tonic powder, nux vomica 1 dram, reduced iron ½ dram, powdered gentian root 1 ounce, should be given in the feed 2 or 3 times daily for a few weeks	Louisiana Bulletins Nos. 104, 115.
			Maryland Bulletin No. 84.
			Massachusetts Report, 1908.
reeder should work toward a certain standard or ideal and should choose parents that approach that ideal. The parents, especially the male, should have known ancestry of approved type, as there is less danger of undesirable variations in the offspring.			Michigan Bulletins Nos. 149, 257; Circular No. 4.
	Choking.—Symptoms: Champing of jaws, driveling of saliva, ceasing to chew and choking movements, head extended, eyes bulging, inability to swallow.	When obstruction is in pharynx, a block of wood should be placed in mouth between back teeth, and object removed with hand. If in gullet, small amount of olive oil should be given at frequent intervals to lubricate the esophagus and allow object to pass into stomach. If this fails, the probang, a long, hollow, flexible tube, may be used. It is oiled. By means of probang, foreign body gradually forced into stomach.	Mississippi Bulletins Nos. 70, 121.
			Missouri Bulletins Nos. 53, 58.
	Cough.—Symptoms: Chilly sensations or a chill followed by rise of temperature to 103 to 105 degrees Fahr., loss of appetite and rumination, dry muzzle, constipation, rapidity of pulse and respiration. Cough at first dry, harsh and painful. Later cough becomes moist and there is nasal discharge.	Animal should be placed in light, comfortable stall and given plenty of clear water. Keep bowels open with 1 pound of Glauber's salts. Feed green succulent materials if possible or bran mashes and moistened hay. An electuary consisting of extract of belladonna leaves 5 grains, morphine sulphate 3 grains, powdered licorice-root 4 drams and sufficient sirup to make an electuary, should be given on tongue 4 times daily. If cough persists after the secretion ceases a mixture of ammonium chloride 1 dram in ½ ounce of brown mixture should be given 4 or 5 times daily.	New York (Geneva) Bulletin No. 317.
			Ohio Bulletin No. 193.
he feeding and environment are important if best results are desired.			Oregon Bulletin No. 102. Pennsylvania State Board of Agriculture Bulletin No. 16.
	Warts.—Symptoms: Appear as grayish or grayish red projections of skin or mucous membrane. Favorite location is udder and teats, sides of head and neck, on lips and belly.	May be removed with scissors or fingers, or ligatured by rubber band or horsehair. Roots should be cauterized with tincture of iron, glacial acetic acid or lunar caustic. Acids should not be used around eyes or mouth. When warts are found in large numbers, arsenic in form of Fowler's solution should be given in 1 teaspoonful doses twice a day for a 6-months calf.	Pennsylvania Bulletin No. 88; Report, 1908.
he various breed associations have established standards of excellence which serve as guides to breeders in choice of parents.	*Mange.*—Symptoms: Contagious disease. Points of redness, pimples, vesicles and formation of scabs. Intense itching which becomes unbearable at night in hot stables or when exposed to sun. Animals scratch, rub, and bite themselves. Hair falls out and skin is bloody. In worst stages skin moist and bloody, ulcerated, scabby, thickened and wrinkled.	A good combination of drugs for killing parasites is flowers of sulphur 1 ounce, vaseline (or lard) 10 ounces. Best method is to dip animal in a vat containing flowers of sulphur 24 pounds, unslaked lime 12 pounds, water 100 gallons. This should be repeated in 10 days to 2 weeks.	Rhode Island Bulletin No. 77.
			South Carolina Bulletin No. 67.
			Tennessee Press Bulletin No. 1900.
	Ringworm.—Symptoms: Formation of circular patches on skin which soon becomes denuded of hair. Outer layer of skin is inflamed and vesicles form which exude a gummy liquid. Scaly crusts are formed, usually on head and neck.	Remove crusts by washing with soap and water, then apply acetic acid, 10 per cent sulphur ointment, tincture of iodine, or nitrate of mercury ointment once daily. Cleanse and whitewash stable to destroy spores scattered by crusts.	Texas Bulletin No. 110.
or additional breeding rules, see horses.			Wisconsin Bulletins Nos. 33, 38, 116, 117, 151.

TABLE III. HORSES, CATTLE,

Best Breeds	Characteristics	Uses	Best Foods
SHEEP			
Cheviot	Medium size, hornless, face and legs white, body closely covered with wool of soft fiber and pure white. Head bold and broad. Fleece forms almost a ruff about face. Deep and large in breast, back wide and straight. Short legs set well apart, hoofs black. Mature rams 200 pounds, ewes 150 pounds.	Mutton. Not superior as a wool producer. Wool of good quality, but light.	A clean and dry feeding place is necessary. Regularity in feeding imperative. Ordinarily best to feed sheep twice a day. Sheep need to have access to salt and water at all times.
Cotswold	Large, high-standing breed with heavy fleece of long white, lustrous wool. Ample topknot often covering eyes. Bold upright carriage. Head moderately small, face white or mixed with gray, eyes prominent, neck short, thick and strong, shoulders broad and full, back broad, breast broad and well forward, quarters long and full, mutton quite down to hock. Weight of ram 250 pounds, ewe 200 pounds.	Mutton and wool, the latter especially. Crossing on native and merino sheep.	*Feeding lambs.*—When ewe has a single lamb, not necessary to feed any grain until near weaning time. When a ewe has two lambs, they should get some grain. If lambs are to be sold before weaning, grain feeding must begin as early as possible. A mixture of three-fourths corn meal and one-fourth bran is satisfactory. Right after weaning it is well to have fresh pasture, or rape or other succulent feed. In addition, lambs should be fed liberally on grain.
Dorset-Horn	Face and legs pure white, flesh-colored nose. Both sexes have horns. Eyes prominent, neck short and symmetrical, shoulders broad and full. Chest full and deep, quarters wide and full with mutton extending down to hock. Fleece medium grade, of even quality, extending over belly and well down on legs. Short stout legs. Weight for rams 200 pounds, ewes 160 pounds.	Mutton breed. Early breeder, valuable for production of hothouse or winter lambs. Fleece light.	For fattening, corn is best, combined with peas and bran. Grain feeding must come gradually. For fattening mature lambs during fall, good grass pasturage and rape or rutabagas, with a mixture of corn and oats, is most satisfactory.
Hampshire Down	Black face, head large, well covered with wool on forehead and cheeks, nostrils wide. Ears large and drooping, eyes prominent and lustrous, legs well under outside of body, straight, almost black. Chest deep and full with breast prominent and full, back straight, quarters long and deep in thigh. Ewes prolific and heavy milkers. Weight for rams 250 pounds, ewes 185 to 195 pounds.	Mutton and production of early market lambs. Fleece inferior.	For final fattening, lambs should be confined in yard. During winter dry succulent fodder with grass will give good results; for dry fodders, alfalfa or clovers; for succulence, corn silage or roots; for grain, corn, oats, bran and oil-meal or cottonseed meal.
Leicester	Hornless, large size, rectangular form of body on clean legs, bare faces or carrying a very scant topknot. Head long, tapering toward muzzle, face wedge-shaped, covered with fine white hairs, eyes large and prominent, neck strong and moderately short. Breast deep, broad and full. Back broad and well fleshed. Legs of moderate length. Fleece fine, uniform, curly, with bright luster.	Crossing purposes to get early lambs for market. For wool especially, and mutton.	To fatten lambs in a short period give preparatory feeding on rape or roots for about six weeks. Should have pasture before going on rape, which must be restricted in quantity. For grain, begin with bran or oats. Give one-fourth pound per head daily at start. Increase quantity slowly. At end of a month about 1 pound per head, which should consist of ½ corn and ½ bran or oats given in 2 feeds. For fodder clover hay, corn stalks or pea straw. Increase amount gradually.
Lincoln	Large size with heavy fleece of long wavy or curly wool and moderate tuft of wool on face. Color white, head large, without horns, body deep, back wide and straight. Legs broad and set well apart. Weight for rams 250 pounds, ewes 200 pounds.	Wool. Crossing, especially on merino stock.	*Breeding ewes.*—Fond of clover hay, alfalfa, alsike, pea-straw, shredded corn fodder and oat hay. A ewe weighing 100 to 150 pounds will eat 2 to 3 pounds of such fodders daily during winter. May need to supplement pasture with small grain, as oats. Just before lambing time, ewes should be fed liberally on variety of roughage. Some succulent food as corn silage and roots, will help to produce good flow of milk. After lambing the ewe should receive some wheat bran or oats, unless they can go on good pasture.
Merino	Distinguished by its very fine wool, usually delicately crimped. Wool generally short and dense. Grows to tips of ears and hoofs of feet. Form, when shorn, angular, shoulders narrow, back not usually so straight or strong as English breeds, legs less straight and neck more slender. Ram usually has horns. Very enduring and resistant. *The American merino* has 3 to 5 heavy folds on neck, and folds on arm and sides and across hips. Fleece covers entire sheep except tip of nose and hoofs. Eyes hidden by wool. Outside of fleece a dirty brown, but inside white. Ewes 80 to 100 pounds, rams 100 to 175 pounds. *Delaine merinos* have smoother bodies than the American, and fewer folds and wrinkles. Mature ewes 100 to 150 pounds, rams 140 to 200 pounds. *Rambouillet merinos* have large bodies, usually smooth and free from wrinkles, except perhaps on neck. Fleece fine and white. Rams usually have large spirally curved horns, ewes hornless. Legs long. Rams 175 to 185 pounds, ewes 140 to 160 pounds.	Wool. Fleece especially fine, strong and heavy. Used for crossing to increase wool production. Delaine merino mutton of fair quality.	*Feeding rams.*—For ram lambs clean, heavy oats and pasture are best. In winter, clover hay and corn fodder, roots or silage, should constitute the ration. During breeding season, bran, oats, roots and clover hay should be fed liberally.
Oxford Down	Largest of down breeds. Nearly straight on underline. Long and coarse fleece. Very stately appearance. Color of face and legs brown, which is often flecked with gray. Ewes very prolific and heavy milkers. Not hardy under American climatic conditions. Rams 250 to 350 pounds, ewes 180 to 275 pounds.	Representative mutton breed. Fleece long and coarse.	
Shropshire Down	Dark brown face and legs. Broad head, short face, thick muscular neck, body somewhat barrel shaped, except that it is straight on back. Body, head and legs to knees covered with fleece of even length and quality. Weight for rams 225 pounds, ewes 175 pounds.	Mutton and wool.	
South Down	Smallest of down breeds, but the model in form. Short straight legs, wide apart; broad level back thickly fleshed; long broad hips; neck short, thick at shoulder; head small, forehead full, face short, eyes prominent, ears small. Face and legs uniform reddish brown. Hindquarters carry down very heavy; breast broad and prominent. Fleece compact, long and close wool, white and carrying some yolk. Best weight for rams 200 pounds, ewes 150 pounds.	Mutton breed; used for crossing to produce early lambs. Wool of good quality.	
Suffolk Down	Large, rangy sheep, black-faced, hornless, with long clean, black legs. Wool is of good quality and mutton is excellent. A good feeder and very prolific.	Mutton breed; used also for crossing. Wool is short.	

Best Breeds	Characteristics	Uses	Best Foods
SWINE			
Berkshire	Rather more than medium size. Snout of medium length, face dished. Ears nearly erect, well carried. Jowl heavy. Neck short with considerable crest. Shoulder, back and rump of good width. Body deep, Ham thickly meated, strong constitution. Color black with a white mark on face. White on each foot and on tip of tail.	Lard and pork. Meat lean and of high quality.	*Breeding boar.*—Should not be overfed, but given just what he will eat up clean. Ration need to be varied and have bulk, and always contain a succulent food. Young boar should be fed more concentrated foods than older animals. Boar should be fed more liberally during breeding season, than remainder of year. Food should consist of grain (finely ground oats with one-third to one-half ration of wheat middlings or wheat bran, skimmed milk, succulent food (roots, fine cut second-crop clover or alfalfa leaves).
Cheshire	Medium size. Body has good length. Shoulders and hams well developed. Face slightly dished. Ear small and erect. Bone fine and of fair quality. Color white. Black spots often occur on skin.	Lard, pork and bacon.	
Chester-White	Medium size, face straight or very slightly dished. Ear droops and is somewhat loosely attached to head. Color white, hair in many specimens wavy or curly. Neck wide, deep and short. Jowl smooth, neat and firm. Shoulders broad, deep and full. Chest large, deep, full in girth. Sides full, smooth, deep; ham broad, full, long, wide and deep. Back broad on top, straight or slightly arched, legs short and straight. Coat fine. Weight of boars 2 years old 500 pounds, sows 450 pounds.	Lard and pork. Crossing, especially with Poland-China.	*Breeding sows and young.*—Good pasture (blue grass, clover, field-pea, alfalfa, cowpea, soybean) is essential and cheap. Mature sows need little except good pasture in August and September. In October about 2 pounds per head of corn should be given. After sows are bred they should have pasture and some grain, preferably equal parts of corn and oats at the rate of 3 or 4 pounds to 3

SHEEP AND SWINE—Continued

Brief Breeding Rules	Diseases and Symptoms	Treatment	Bulletins
Age of puberty 6 to 10 months.	*Stomach worm.*—Symptoms: Sheep become unthrifty, dull and lose flesh and strength. A soft non-inflammatory swelling appears under the jaws. Diarrhœa appears.	Change flock to high, well-drained land which has not been occupied by sheep for some time. Feed generously and provide plenty of salt. Mix 10 drams of coal-tar creosote in a gallon of water and give to lambs 4 to 6 tablespoonfuls, and to yearlings and older sheep 8 to 10 tablespoonfuls every other day until 3 doses have been given. Feed should be withheld for 12 hours before and 3 hours after medicine.	Best breed information found in flockbooks published by the various breed societies. Experiment station records will reveal innumerable experiment station bulletins.
Best age for breeding 18 to 20 months.			
Period of heat, regularly during spring and autumn months. At other seasons period is irregular and often absent. Duration 2 to 3 days.	*Tapeworms.*—Symptoms: Slow development. Weakness and loss of flesh. Flanks are drawn up or distended with gas. Unsteady on feet. Excessive diarrhœa may develop.	Fringed tapeworm difficult to control by medicine. For broad tapeworm, give every sheep in flock ½ to 1 dram of extract of male fern in 2 to 4 ounces of castor oil, or 1 to 1½ drams of kamala. Withhold feed night before and in the morning of the day in which the medicine is given and give no water for 5 or 6 hours after medicine.	
Period of gestation 5 months (21 weeks).	*Bloating.*—Symptoms: Abdomen becomes bloated and distended, filling with gas. Feeding falls off, animal shows stupidity, and respiration is difficult.	Surgical treatment is necessary.	Arizona Bulletin No. 60, Report, 1908.
One ram to 30 to 50 ewes. In north, breed in October to December to get lambs in March-May; in South breed in August or September. Ewes have passed greatest usefulness at 7 to 8 years.	*Liver rot or fluke disease.*—Symptoms do not appear until disease is far advanced. Rapid loss of condition and weakness, wool becomes dry and may drop off. Eyes and lips become bloodless. Appetite falls off. Bowels irregular.	Remove sheep to high, dry pastures and separate the sick from the well. Give nourishing food and plenty of salt. Infested pastures and pools should be drained and should be used for other purposes until clean. Snails should be destroyed. Drugs have little effect.	Illinois Bulletin No. 129, Circular No. 125.
	Gid, staggers or sturdy.—Symptoms: Animal moving in a circle, swaying, reeling, running forward with head elevated, turning about sharply, showing lack of control. Animal may be stupid. Eyes become staring, sight lost.	Animals in advanced stage should be slaughtered. Carcasses of infested sheep should be completely disposed of so that dogs cannot get at them. As precaution, give dogs that have run of place 1 or 2 teaspoonfuls of castor-oil, followed 12 to 24 hours later by 25 minims of extract of male fern, followed with another dose castor-oil in 2 hours. Keep dog tied and burn all discharges.	Michigan Bulletin No. 178.
Lambs may be allowed to run with mother 3 to 4 months. Should be weaned by 4 months. To get hot-house lambs, have rams and ewes in good physical condition, not overfat. Use a young ram and keep him well fed while in service. Give ewes abundance of succulent food and some corn. If ewe was not shorn in fall, shear as early as safe. Have ram with ewes not earlier than March 15 nor later than May 15.	*Scab.*—Symptoms: Sheep scratch, rub and bite infested places. Little blisters form which rupture and exude a yellowish liquid which dries on skin and forms scab. Mites may be found in margin of scab. Wool mats and falls out. Shoulders, sides, back and rump most affected.	Shear all sheep and confine for 2 to 4 weeks. Then dip in a mixture that will kill the mange mites. Lime and sulphur dip is very good. Repeat 7 to 10 days later. Each sheep must be kept in dip 2 minutes and head dipped at least once.	Missouri Board of Agriculture, Missouri Bulletin 7 (1909), No. 2.
For additional breeding rules see horse.	*Sheep ticks.*—Symptoms: Animals show itching and pain caused by ticks, and bite and scratch themselves.	Dip flock in lime and sulphur mixture or in a kerosene emulsion. Dip twice with an interval of two weeks. Pens and resting places must be thoroughly cleaned before animals are returned.	
	Foot rot.—Symptoms: Lameness is apparent. Foot reveals red, moist spot in cleft just above the horny part. A sticky offensive discharge from hole in horn of hoof follows. Just above hoof there is swelling, accompanied by heat and sensitiveness.	Treat feet of healthy sheep with a solution of 1 pound chloride of lime to 12 quarts water or 1 pound carbolic acid crystals to 4 gallons water. Remove sheep to clean fields. To treat diseased sheep, cut away all loose or undermined horn and all proud flesh, and stand sheep for 10 minutes in solution containing 4 pounds copper sulphate in 5 gallons water. When disease has reached deeper, area should be washed with a solution containing 1 ounce carbolic acid crystals in 20 ounces water, then dusted with a powder of equal parts boric acid and oxide of zinc and covered with soft bandage.	Missouri Station, Circular Information No. 25.
	Paper skin or lung worm disease.—Symptoms: A fitful or spasmodic cough leaving animal almost suffocated. Discharge accompanies cough. In final stages skin becomes dry and papery. Appetite falls off, resulting in weakness and decline.	Market infested animals or separate from flock. Remove flock to clean inclosures and give nourishing feed, plenty of salt and pure water. Fumigation is best, using a mixture of flowers of sulphur and alcohol in a deep vessel floating in pan of water. Place in tight room and ignite. Attendant should remain to see that none suffocate. A mixture of 1 part salt to 25 parts of copperas should be kept constantly before sheep.	Nevada Bulletin No. 63.
	Sore feet and sore mouth.—Symptoms: Lameness and difficulty in eating. Ulcers appear on skin of leg above hoof and in membrane lining the lips.	Remove scabs and wash twice daily with solution of 1 tablespoonful creolin in 1 quart of water. Then paint infected parts only with Lugal's solution of iodine.	New York (Cornell) Bulletin No. 285.
	Garget.—Symptoms: Udder is swollen and hot. Milk contains streaks of blood or clumps of pus.	Give 5 ounces of epsom salts dissolved in a pint of water, as purgative. Bathe udder often with warm water and rub with camphorated oil, and keep udder milked out clean.	Oklahoma Report, 1908.
	Grass staggers.—Symptoms: Failing appetite, constipation, abdominal pain, fever, restlessness, unsteadiness, delirium, running against objects aimlessly.	Affected animals should receive a strong laxative. Then give 2 tablespoonfuls, twice a day, of following mixture in a half pint of linseed tea: Aromatic spirits of ammonia 1½ ounces, alcohol 2½ ounces, fluid extract of nux vomica ½ dram.	Tennessee Bulletin No. 84. Wisconsin 23d Report. Virginia Bulletin No. 178. Wisconsin Report, 1907.
	Scours.—Symptoms: Offensive diarrhœa, loss of appetite, distended abdomen, abdominal pain. Depression and weakness.	2 teaspoonfuls castor-oil containing 2 or 3 drops of creolin should be given at once and followed by a tablespoonful of following mixture 3 times daily: Paregoric 1 dram, subnitrate of bismuth 2 drams, sherry wine 3 drams, salol ½ dram, mucilage of acacia 5 ounces.	Wyoming Bulletins Nos. 79, 81, Report 1908.

Brief Breeding Rules	Diseases and Symptoms	Treatment	Bulletins
1. Age of puberty 3 to 7 months.	*Mange.*—Symptoms: The crusts about eyes and ears are often the first evidence of disease. Disease spreads until it may cover entire body. Marked itching. Sometimes loss of flesh and decline.	Crusts may be removed by scrubbing with soap and water followed by application of a 3 per cent solution of creolin or an ointment made of sulphur 2 drams, resorcin 1 dram and vaseline to make an ounce. Continue daily until all parasites are killed. When large numbers are affected, dipping in lime and sulphur dip (described under mange in cattle) is necessary. Dipping should be repeated after 6 days.	Best breed information found in herdbooks published by various breed associations.
2. Best age to breed 8 to 12 months.	*Verminous bronchitis.*—Symptoms: Bronchial tubes inflamed, very severe coughing. Growth stunted. Caused by a small round worm in bronchial tubes.	Kill adult pigs for food in first stages. Give young pigs a teaspoonful of turpentine in swill food 3 times daily.	Bureau of Animal Industry Bulletin No. 48. Farmers' Bulletin No. 331. Colorado Bulletin No. 146. Report 1907.
3. Period of heat, 3 days after weaning the pigs and every 9 to 12 days thereafter. Duration 1 to 3 days.	*Paralysis.*—Symptoms: Hind legs affected first, gradually extending over entire body.	Surgical treatment requiring extreme care is necessary.	Illinois Circulars Nos. 126, 133.
4. Period of gestation 112 to 116 days.	*Rickets or rachitis.*—Symptoms: Animals stunted and poorly nourished. Lameness appears and bones about joints swell. Bones may become very weak and body fall over.	Feed concentrated and nutritious food rich in proteids. Milk, middlings, bran and ground bone meal are good. Lime water should be given. Sunlight, fresh air, clean quarters and exercise must be provided. Precipitated phosphate of calcium in 1 dram doses 2 or 3 times daily in the feed, with oil of phosphorus in 1 drop doses is helpful.	Indiana Bulletins Nos. 100, 126. Iowa Bulletin No. 106. Mississippi Bulletin No. 107.

TABLE III. HORSES, CATTLE,

Best Breed	Characteristics	Uses	Best Foods
SWINE—Cont'd			
Duroc-Jersey	Medium size, fine bone. Snout medium length, face slightly dished, ear drooped, jowl heavy, body wide and deep set on short legs. Ham heavily fleshed. Cherry red the popular color, but yellowish red and chestnut are often seen. Weight of boars 2 years old 600 pounds, sows 500 pounds.	Lard and pork. Crossing, especially with Berkshire and Poland-China.	or 400 pound sows, until late December. Then substitute daily 5 or 6 pounds of ration, ground oats 2 parts, ground corn 2 parts and bran 1 part. Skimmed milk is especially recommended for mixing grain ration. In winter give liberally of clover, alfalfa, or pea-hay.
Hampshire or **Thin-Rind Swine**	Medium size, face straight, ear inclined forward, but does not droop. Jowl light, as is also shoulder and ham. Back of medium width. Legs of medium length and bone of good quality. Color, black extremities with a white belt 4 to 12 inches wide encircling body and including fore-legs, which should also be white. Weight, boars 2 years old 450 pounds, sows 400 pounds.	Bacon and pork. Almost general purpose.	For first 24 hours after pigs are born, give sow no food. Then give light ration of ¼ ground corn, ½ shorts, ¼ ground oats mixed with 3 to 5 pounds skimmed milk to one of grain. Pigs should be given a little feed at 3 weeks, using same ration as for sow. Feed liberally to 3 months of age.
Large Yorkshire or **Large White Swine**	One of the largest breeds. Snout of medium length, with little or no dish. Moderate dish in face. Jowl of good width and muscular. Ears rather large, firmly attached, fringed with fine hair. Shoulders and back of medium width. Side long. Ham lighter than that of lard type with flesh carried well round inside of thigh. Legs medium length. Bone fairly heavy, clean and flinty. Color, white.	Bacon. Valuable for crossing on Poland-China, Berkshire and Chester-White.	*The bacon hog.*—Best feeds are mixed peas, barley, oats, shorts and skimmed milk. Barley, ground or soaked over night is feed most used. Oil-meal or tankage may be added advantageously. Summer feeding on pasture of clover, alfalfa or rape.
Poland-China	Medium size. Face slightly dished. Jowl full and heavy. Ears fine, firmly attached; about one-third of ear droops. Neck short, thick and heavily arched on top. Shoulder heavy. Side short. Back wide. Ham very wide and deep. Legs short, bone fine. Black, with 6 white points on face, feet and tip of tail. Weight of boars 2 years old 600 pounds, sows 500 pounds.	Lard and pork. Valuable in crossing.	*The lard hog.*—Principal source of feed the undigested food in droppings of steers. Follow steers with equal number of pigs of about 6 months of age, and give them one-fourth to one-third pound of tankage daily. For the last 4 or 5 weeks of fattening they should be removed from steer lots and fed as much corn as they will consume. Method will vary according to method of feeding the steers. Pigs that do not follow steers are fattened on pasture, clover or alfalfa or June-grass being best. Corn alone or abundant clover pasture is excellent ration.
Tamworth	Should have golden-red hair on a flesh-colored skin, free from black. Snout long and straight. Ear large. Jowl narrow and light. Neck and shoulder are light; back and loin of medium width, side of good length, moderately deep. Rather deficient in ham. Legs long and strong.	Bacon. Crossing, especially with Berkshire.	

TABLE IV. CHICKENS, TURKEYS,

Best Breeds	Characteristics	Uses	Best Foods
CHICKENS			
Plymouth Rock	Three varieties, the barred, white and buff. Back and body rather long, breast broad and deep. Single combs, yellow shanks. Cocks weigh 9½ pounds and hens 7½ pounds.	General purpose, for both meat and eggs. Brown egg.	A good ration must contain sufficient digestible nutrients to meet needs of animal. Animal's appetite is safest guide as to amount of food needed.
Wyandotte	Eight standard varieties, white, buff, black, silver, golden, silver penciled, partridge and Columbian. A bird of curves, back short and broad, body deep and round, breast broad and deep, with a low-set keel. Shanks short, strong and carried well apart. Colors silver, white, black, buff and mixtures. Close-fitting rose combs. Abundant fluffy, close-fitting plumage. Weight 8½ pounds for cocks, 6½ pounds for hens.	General purpose, for both meat and eggs. Brown egg.	
Rhode Island Red	Two varieties, single comb and rose-comb. Tail color black. Rhode Island red has a red surface of body plumage, with a red under color, free from slate. Buckeye breed surface color is dark, rich garnet, and under color allows a bar of slate-color next to surface. Body of bot-long, Rhode Island reds level. Buckeye body shows slight elevation in front. Weight of Rhode Island red cocks 8½ pounds, hens 6½ pounds, Buckeye cocks 9 pounds, hens 6 pounds.	General purpose. Brown egg.	*Balanced ration.*—For egg production, 1 part protein to 4.6 parts carbohydrates. For fattening, 1 part protein to 7 or 8 parts carbohydrates. For raising young chickens, 1 part protein to 4 parts carbohydrates.
Brahma	Two varieties, light and dark. Show heavy leg and toe feathering, thick, close plumage. General color of light Brahma, white, with black tail and black center stripes in both hackle and saddle feathers. In dark Brahma, wings of cock crossed by heavy black bar, and entire breast, body, leg and toes black. Back, wings, body and breast of female have a basis of gray on which are distinct dark pencilings. Weight for dark cocks 11 pounds, hens 8½ pounds; for light cocks 12 pounds, hens 9½ pounds.	Meat breed. Brown egg.	The ration should consist of foods which the fowl likes. The following grains are preferred by fowls in order named: wheat, corn, oats, peas, barley, buckwheat, rye. The ration should provide a good variety and sufficient bulk to aid digestion. Wheat, bran, clover and alfalfa meal provide bulk in ration. The ration should contain easily digested foods, as whole grain and part ground feed. Feed at least one-third ground grain, as wheat or bran middlings, ground oats, corn meal and very small quantities of gluten meal. Wheat is most desirable of grains. Corn should be used largely because it is cheaper. Heavy oats rank next. Meat in some form, as beef scrap or green cut bone or skimmed milk should be included in every ration. It should form at least 10 to 15 per cent of total food consumed each day. Green food in form of cabbage roots or cut clover should be given each day. Grit in form of cracked oyster shells or mortar is indispensable. Because of cost, wheat bran and middlings and buckwheat middlings may be much used. Chickens should be fed according to age and season of year, giving the more heat producing foods in winter. The lighter and more active breeds can be fed a wider ration than the heavy and more sluggish breeds. The ration should be balanced in such a way that the appetite is kept good, the needs of egg production met, and the fowls prevented from becoming too fat.
Cochin	Four varieties, buff, partridge, white, black. Peculiarity is an appearance of massiveness and fluffiness. Heavy, short feathering is piled high on back and extends wide at sides. Excessive thigh and shank feathering. Combs single, low, close on head and evenly serrated with five distinct points. Cocks weigh 11 pounds, hens 8½ pounds.	Meat breed. Brown egg.	
Leghorn	Eight varieties, single-comb and rose-comb brown single-comb and rose-comb white, single-comb and rose-comb buff, single-comb black and single-comb silver duckwing. Characterized by early maturity and great activity. Large combs on top of head.	Egg production. White egg.	
Minorca	Three varieties, single-comb black, rose-comb black, single-comb white. Long body, carried rather upright, deep at breast with back tapering sharply toward tail, which is long and carried rather low. Comb large. Ear lobes large and pure white. Cocks of rose-comb weigh 8 pounds, hens 6½ pounds. Single-combs weigh 1 pound heavier.	Egg breed. White egg.	
Dorking	Three varieties, colored, white and silver-gray. Body long and deep. Carries abundance of flesh. Skin white. Colored largest cocks weigh 9 pounds and hens 7 pounds. White cocks weigh 7½ pounds, hens 6 pounds. Silver-gray variety is between these two. All have a fifth toe.	General purpose, meat especially. Egg of very light color.	
Orpington	Three varieties, buff, black and white. Long body, abundant plumage, white skin. Short heavy shanks. Tendency to feathering on shanks. Cock weighs 10 pounds, hen 8 pounds.	General purpose. Egg tinted.	
Houdan	Color black and white evenly broken in alternate splotches throughout entire plumage. Head ornaments of crest and beard. White skin. Carry fifth toe on each foot. Cocks weigh 7 pounds, hens 6 pounds.	General breeding purposes. White egg.	
Hamburg	Six varieties, golden spangled, silver spangled, golden penciled, silver penciled, white and black. About size of the Leghorn.	Egg and fancy breed. White egg.	
Indian	Two varieties, Cornish and white. Beaks and shanks yellow. Bird of strong proportions. Back and wings of cock mixture of red and black, tail and breast black. Hen's back, wings, breast and body a rich bay penciled with black. Cocks weigh 9 pounds, hens 6½ pounds.	Meat breed. Tinted egg.	

SHEEP AND SWINE—Continued

Brief Breeding Rules	Diseases and Symptoms	Treatment	Bulletins
Boars do not show best form before 4 or 5 months old, and should not begin service under 10 months. Give best service 2 to 5 years old. Sows should be prolific and good milkers. For pork, breed sows any time after 8 months of age, but for pure-bred breeding stock 12 months of age better. Should breed twice a year, to get 1 litter in early spring (April to May), the second in September or October. Pigs may run with sows 8 to 10 weeks.	*Sore mouth.*—Symptoms: Aversion to food and saliva dripping from mouth. Gums become congested and later necrotic patches develop, especially about front teeth and tusks. Offensive odor to mouth. Jaws are swollen, lips and mouth often cracked and covered with scabs. Rapid decline and prostration.	Affected animals should be separated from well animals and pens thoroughly disinfected. Wash mouth with 2 per cent warm creolin solution to remove patches. Then a 10 per cent ointment of salicylic acid may be applied in severe cases. Treat daily until ailment is cured.	
	Cottonseed poisoning.—Symptoms: Loss of appetite accompanied by thumps. Animal drops over, kicks and squeals for a few minutes and dies.	Complete elimination of cottonseed meal from ration is the only positive prevention. Given in proper quantities it is normally safe, but its use demands special precautions.	Ohio Bulletins Nos. 209, 213. Oklahoma Bulletin No. 80. Pennsylvania Bulletin No. 95. South Dakota Bulletin No. 105. Wisconsin Bulletin No. 184; Report 1907.
	Catarrhal rhinitis or snuffles.—Symptoms: Animal more quiet than usual and may experience slight chills. Eyes are red, appetite lessened and constipation is present. Watery discharge from nostrils, which later thickens and makes breathing difficult.	Keep animal warm and provide clean, well-lighted pen. Liquid foods should be warmed, 1½ ounces of castor oil should be given. Fumigation by burning tar in close room may help. To lessen nasal discharge, tineture of belladona leaves in ½-teaspoonful doses twice daily may be added to feed.	
	Thumps.—Symptoms: Sets in suddenly with a jerking or twitching movement of flanks, which may become excessive, producing a thumping. Animal keeps quiet and has a poor appetite. May fall off in weight.	If caused by worms, give dried sulphate of iron in swill once a day for 7 or 8 doses, ¼ pound sulphate for 40 pigs. If caused by indigestion, give less food and allow access to charcoal and wood ashes. Exercise should be allowed also on free pasture. In first stages give every 4 hours a physic of 2 ounces raw linseed oil followed with 3 to 10 drops of tincture of opium in a little oil.	
	Hog cholera.—Symptoms: Continuous fever and discoloration of skin. Animals lack spirit and lie huddled together. Refuse to move when disturbed.	Demands expert and immediate care.	
For additional breeding rules see horses.	*Swine plague.*—Symptoms: Aversion to food. Much coughing, back arched, groin sunken, eyes reddened and skin in front takes reddish tinge.	Demands expert and immediate attention.	

DUCKS AND GEESE

Brief Breeding Rules	Diseases and Symptoms	Treatment	Bulletins
Very close inbreeding tends to produce chicks that are weak and fall an easy prey to disease or are infertile. Line breeding is better. Mate offspring of a pair with father and mother rather than brother with sister.	*Simple canker.*—Symptoms: Appears as yellowish or whitish patches in mouth or throat. Surrounded by inflamed mucous membrane.	Dust powdered boric acid on sores or apply pure creolin with soft cotton cloth. Fifteen grains boric acid in 1 ounce water may be used freely as a wash.	Ontario Department of Agriculture Bulletin No. 151.
	Lice.—Symptoms: May be found under wings and on skin about feather roots, on abdomen, back, neck and head.	Dust thoroughly with pure fresh Persian insect powder. Work well down to skin. Repeat in 10 days.	Farmers' Bulletins Nos. 41, 51, 64, 177, 182, 200, 234, 287, 355, 357. Bureau of Animal Industry Bulletin No. 110; Same Circular No. 140. Arizona Bulletin No. 60. Connecticut Bulletins Nos. 52, 55.
	Mites.—Symptoms: Red, black and gray. Breed in cracks and crevices of building or under droppings.	Keep roost clean. Use abundance of mixture of 1 quart kerosene and 1 fluid ounce creolin or good liquid lice killer for painting roosts and droppings-board.	
Grandchildren of original father may be mated to those of original mother.			
	Diphtheria.—Symptoms: Fowl becomes suddenly ill and loses appetite; legs are hot, comb hot and deep red. Difficult breathing and sharp cough. Inflammation of throat. Legs and wings may become paralyzed.	Segregate sick fowl and preferably kill and burn. May give fowl four times daily a 0.01 grain tablet of biniodide of mercury. Cleanse mouth and throat often with strong peroxide of hydrogen, or 1 tablespoonful creolin in 4 fluid ounces of water.	Kansas Bulletins Nos. 162, 164. Maine Bulletins Nos. 157, 159, 165, 166, 168 (contains bibliography). Maryland Bulletin No. 138. Missouri Board of Agriculture Missouri Bulletin No. 6 (1908), No. 12. New York (Cornell) Bulletins Nos. 212, 258, 274, 277, 282, 284. Oregon Bulletin No. 100; Circular No. 4. Pennsylvania Bulletin No. 87. Rhode Island Bulletin No. 126, Report 1908.
Selection involves the careful inspection of the individuals of any generation and preservation for breeding of only the best.	*Scaly leg.*—Symptoms: Rough grayish or whitish scales and crusts on shanks and feet.	Apply ointment made by mixing 1 teaspoonful creolin in 1 cupful melted lard. Stir until cool and apply daily until scales and crusts drop off.	
Hybridization involves the crossing of two strains, varieties, or races in order to combine the favorable qualities of the two. Sex control seems at present beyond human power.	*Colds.*—Symptoms: Sneezing, watery eyes, discharge from nostrils and swollen face. Bubbles or drops form in corners of eyes.	Sleeping quarters should be well ventilated. Give condition powders or tonic in food or drinking water, or season mashes with ginger and red pepper. Following mixture will usually cure if taken at start: 20 to 30 drops spirits of camphor with a tablespoonful granulated sugar. Dissolve in pint of drinking water and allow birds access to no other drink.	
Period of incubation is 19 to 24 days, average 21.	*Catarrh* (contagious) *or roup.*—Symptoms: Peculiar, strong offensive odor. A glairy water-white or yellowish discharge from nostrils and under eyelids. Legs hot. Comb and wattles hot and deep red. Characteristic roup smell always present.	Kill and burn all very sick birds. Segregate in an open shed all that show symptoms. Use creolin dip—1 teaspoonful pure creolin in 1 pint water and dip heads in solution, using fresh solution for each 6 birds—and make fowl inhale creolin vapor by spraying over with the same solution. Thoroughly cleanse head, mouth, eyes, nostrils and throat with this disinfectant, and keep fowls in wide open, fresh pens.	
To get early market poultry mate late in fall. Brahma and Cochin pullets begin to lay at 7 to 9 months. Leghorns and other small breeds 4 to 6 months. Plymouth Rock and Wyandottes, 5 to 7 months. Mate breeding hens 2 to 6 weeks before earliest date for hatching. Hens should have few weeks rest before breeding season, for high-class stock. Breeding stock should have free range or, if confined, be not crowded and fed green feed and meat scrap in addition to that given laying stock. Hold eggs for hatching in cool, dry place, at temperature of 40 to 55 degrees Fahr. Hen for setting should be in fair condition, should feel hot to hand when handled, and should allow herself to be handled freely.	*Worms.*—Symptoms: Will appear in the excrement.	Allow no food for 12 hours. Then give in 1 dose a mixture of 2 teaspoonfuls oil of turpentine and 1 tablespoonful sweet oil. Administer directly into crop through rubber tube passed down throat. May be necessary to repeat in 12 to 24 hours.	
	Gapes.—Symptoms: Difficult breathing and characteristic gaping attitude. Caused by a parasitic worm which attaches itself to mucous lining of windpipe.	Remove worms by a loop of horsehair or a wire gape-worm extractor dipped in a weak solution of creolin. Stretch fowl's neck forward and introduce extractor into windpipe. Carefully twist it as withdrawn. Immediately disinfect extractor bearing worms.	
	Diarrhœa.—Symptoms: Looseness of bowels. Discharges yellowish, greenish, dark or watery.	Give bird dry grain with abundance of charcoal, and do not allow any meat food. Scalded milk, thickened with well-boiled flour and seasoned with ginger, makes a desirable food and remedy.	
	Contagious diarrhœa.—Symptoms: Thirst, little appetite, stupidity, bowel discharge loose and watery, often dark or bluish green, sometimes blood streaked. Comb and wattles dark red or purplish, and legs hot.	Segregate affected birds. Disinfect and remove excrement. Give calomel in 0.01 of a grain dose 3 times daily. For difficult cases dissolve 12 tablets of mercury bichloride, 0.001 of a grain drug strength each, in 1 quart of drinking water and allow no other drink. This medicine should be given less frequently as soon as improvement appears.	

TABLE IV. CHICKENS, TURKEYS,

Best Breeds	Characteristics	Uses	Best Foods
CHICKENS—Cont'd **Bantam**	Ornamental birds of many varieties: Sebright, rose-comb, booted white, Brahma, Cochin, Japanese, Polish, game, black-breasted red Malay.	Fancy and ornamental varieties of many foregoing breeds.	See page 408.

Best Breeds	Characteristics	Uses	Best Foods
TURKEYS **Bronze**	Largest and hardiest of all varieties for the market. Adult cock 36 pounds, hen 20 pounds.	Meat.	The young must be fed with care at first, allowing only bread and milk mixed with ¼ pot cheese and a little chopped onion, given 2 or 3 times a day. Once or twice a day feed finely cracked corn, wheat and oatmeal mixed in equal parts. After second week, bread and milk should be decreased and grains and pot cheese increased. Fine grit and charcoal should be available. Water should be provided in such a way that young turkeys cannot become wet. When turkeys graze in fields during day they should be fed grain at night, corn, wheat, oats or peas.
Narragansett	Plumage bronze and black with a mixture of white. Second in size to bronze. Cock 30 pounds, hen 18 pounds. General color gray.	Meat.	
Buff	Feathers a reddish buff, the wing flights being white.	Meat.	
Slate	Plumage of a bluish slate shade. Cock 27 pounds, hen 18 pounds.	Meat.	
Black	Plumage pure black. Otherwise same as above.	Meat.	
White Holland	Plumage pure white throughout; has pinkish white shanks. Cocks 28 pounds, hens 18 pounds.	Meat.	During breeding season, one feeding a day of mixture of equal parts by weight of wheat middlings, wheat bran, corn meal, ground oats and meat scraps, stirred up with skimmed milk, should be given. In fattening turkeys for market they should be fed all the whole corn they will eat at night. In morning a mixture of 6 parts corn meal, 3 parts wheat middlings, 1 part beef scraps, mixed as thick paste with sour skimmed milk may be given. Turkeys do best on free range.
Bourbon Red	A kindred variety to the buff, having deep reddish-buff plumage.	Meat.	

Best Breeds	Characteristics	Uses
DUCKS **Rouen**	Largest and most popular of all colored market varieties. Weight 9 pounds for drakes, 8 pounds for ducks.	Meat.
Black Cayuga	Largest solid black duck known. Mature pair weighs 15 pounds. Body of good length.	Meat. A fair layer.
Pekin	Largest white duck in existence. Specimens weigh as high as 10 or 12 pounds. Head and beak long and of good size, beak orange-yellow, back, breast and body long, broad and deep, with deep keel. Creamy white.	Meat. A good layer.
Crested White	Medium-sized white duck with large white crest or topknot, about two-thirds the size of Pekin, which it resembles in color and shape of body, except crest.	Meat. A fair layer.
Indian Runner	Head long and flat, light fawn in color, cap and cheek markings light fawn, bill straight, green with black bean at tip, eyes hazel, neck white from head to beginning of breast markings, back, light fawn or gray, breast light fawn, body light fawn, rear half white. Shanks and feet orange-yellow. Carriage very erect. Small size.	Meat. The best layer
Colored Muscovy	Good size, black and white in color, black predominating. Side of head and region around eye are without feathers and are carunculated or corrugated and scarlet. Builds her nest and never scatters her eggs. Never quacks. Active on wing.	Meat.
White Muscovy	Same as colored muscovy except that it is pure white.	Meat.

Best Breeds	Characteristics	Uses
GEESE **African**	Large head with pronounced black knot and heavy gray dewlap under throat. Neck long, back broad and flat, breast full and round, body large and upright, thighs short and plump. Shanks medium length and dark orange color. Wings of good size, close fitting. General color, gray. Mature gander 20 pounds, goose 18 pounds.	Meat and feathers.
Embden	Color white. Square, compact body. Neck long and massive appearing, large head. Medium-size orange-colored bill. Back slightly arched, breast round, deep and full. Shanks short, stout, deep, orange color, thighs strong, wings large, tail short. Eyes bright blue. Mature gander 20 pounds, goose 18 pounds.	Meat and feathers.
Toulouse	Blue-gray in color, marked with brown. Head large but short, bill short and stout, neck medium long, body compact, medium length, deep, belly almost touching ground, back broad, slightly arched, breast broad and deep, wings large, strong, close fitting, tail short. Adult gander 20 pounds, goose 18 pounds.	Meat and feathers.
White and Brown Chinese	Bodies plump and round, covered with coat of soft feathers and fine down. Medium size, mature specimens weighing 10 to 14 pounds. Long arch necks, with large round knob at base of beak. Short erect body and carriage.	Meat and feathers. Much in demand f ornamental purposes.

DUCKS AND GEESE—Continued

Brief Breeding Rules	Diseases and Symptoms	Treatment	Bulletins
Select fresh eggs from vigorous stock having the qualities particularly desired. Eggs should not be more than 1 week old, and must be clean. For Asiatic breeds, mate 1 male to 6 to 10 females; for Americans, 1 male to 15 to 20 females; for Mediterraneans, 1 male to 20 to 25 females. In selecting breeding stock, pedigree, appearance, condition and performance are of first importance in the parents. Strong, constitutional vigor and early maturity essential.	*Fowl cholera.*—Symptoms: A yellowish discoloration of part of droppings usually white. Fowl becomes unsteady on legs, feathers rumpled, wings droop, head drawn down, comb and wattles pale, legs hot. Food repulsive. *Pip.*—Symptoms: Mucous membrane of mouth dries and a hard horny scale is formed on end of tongue. The hard scale or pip will in time fall off of its own accord. *Bronchitis.*—Rattling in throat and difficult loud breathing.	Use mercury bichloride as on page 409 (contagious diarrhœa). 1 per cent solution carbolic acid in drinking water and cayenne pepper in food are recommended. Treatment seldom satisfactory. Apply equal parts of glycerine and water freely or wash mouth frequently with a solution of 15 grains boracic acid in 1 ounce of water. Remove fowl to comfortable fresh-air pen, protected from drafts. Give nourishing, bracing food. Use 12 tablets arsenite of antimony, 0.001 of a grain each, to each pint of drinking water and allow bird no other drink.	See page 409.

Brief Breeding Rules	Diseases and Symptoms	Treatment	Bulletins
Select big, strong, vigorous, healthy, well-matured stock, not closely related. Constitutional vigor of first importance. Introduce new blood into flock. Males should be unrelated to females, as inbreeding weakens flock. Medium-sized male with good, fair-sized females of strong constitutional vigor and mature age will give best results. Have 4 or 8 females to 1 male. Hen lays 20 to 40 eggs in a season, beginning March or April. 1 mating sufficient to fertilize entire batch of eggs. Hen will lay 15 to 20 eggs before becoming broody, and if broken up then will lay another batch. Period of incubation 26 to 30 days. Old birds in good condition, not overfat, best breeders. Birds of either sex may be used for breeding until 8 or 10 years old. Laying generally begins in March or April.	*Blackhead.*—Symptoms: Turkeys look pinched, shrunken and purple about head. Feathers rough. Diarrhœa present with bright yellow excrement. Birds have little life and drag about. *Colds.*—See under chickens. *Roup.*—See under chickens. *Gapes.*—See under chickens. *Tapeworms.*—Symptoms: Presence of worms in fæces. *Diarrhœa.*	Kill and burn affected birds, and thoroughly disinfect coops, buildings, feeding and drinking troughs, etc. Pepper, ginger and something sour in food aid in prevention. Freshly powdered kuosso, tansy and pumpkin seeds are recommended. Turpentine in small doses has given success. Mix 2 ounces sulphuric acid and ½ pound copperas in 2 gallons water, and give 1 teaspoonful of mixture in each quart of drinking water.	See chicken references. Farmers' Bulletin No. 200.

Brief Breeding Rules	Best Foods	Diseases and Symptoms	Bulletins
Mate only standard specimens. Select meaty birds, deep keeled and strong in bone. Attention must be given to pedigree, appearance, condition and performance. Quick growth is important. Better ducklings result from eggs from old ducks, but young ducks lay a month earlier than old ones, and their eggs may be used for early hatching. Laying period December to June. Usually 1 male to 5 females till June, then to 10 females. Birds are kept in flocks of 25 to 40 of both sexes. Laying season extends from January to August. Period of incubation 25 to 32 days. Ducks are poor sitters and eggs generally hatched by hen or incubator. For general breeding notes see chickens.	When breeding birds have free range and water-run, they may be fed either whole corn, wheat, oats or barley, or a mixture. If eggs are desired, supply good beef scrap. The birds may be allowed to help themselves. When confined and heavy egg production desired, soft food should be fed morning and night and a light feed of hard grains in middle of day. Corn meal, low-grade flour, wheat bran, meat scrap and some green food, as turnips, cabbage, cut clover or alfalfa, make a valuable mixture. Drinking water should always be within reach. Begin to feed ducklings when 40 to 48 hours old. Start with mixture of two-thirds wheat bran and one-third corn meal, moistened with water or milk; a raw egg stirred in with each quart of grain is good addition, as is also a little sand or prepared grit. Keep before ducklings for 2 days if it remains sweet. Otherwise renew. When ducklings 1 week old, they may take 0.05 beef scrap, 3 parts wheat bran, 2 parts corn meal, 4 feedings a day. Gradually increase proportion of corn meal so that at 6 weeks the meal and bran are equal, and the beef scrap is 0.15 of the whole. At 6 weeks feed 3 times daily. If this feed too laxative, reduce the beef scrap. Excess green food likely to make skin yellow. Abundance of grit and fresh water must be constantly available.	Ducks are remarkably free from disease and there are no diseases peculiar to them. Ducks running with other fowls may contract diseases, which should be treated as for other fowls. Lameness may result from damp quarters. Ducks having colds, as shown by frothy scum over eyes, should have eyes washed with warm water containing a little carbolic acid. Treat as for cold.	See chicken references. Farmers' Bulletin No. 64.

Brief Breeding Rules	Best Foods	Diseases and Symptoms	Bulletins
Choose bright, active goose and gander of good parentage, 2 to 5 years old. Mate in fall or early winter. Gander and geese 1 to 4 in number, should be put together and isolated till they become acquainted. Young ganders often take but 1 goose. Hens may be placed on the eggs. Goose will usually lay 2 litters. Wild ganders do not mate until 2 to 3 years old, and frequently will not mate first year in captivity. Period of incubation 27 to 33 days. Laying season is very short, beginning about February 1. Will lay 20 to 50 eggs per year. Geese not fully mature until 1 year old, and first year eggs frequently infertile. Best laying is from second year on. Ganders are most valuable at 3 to 7 years. Goose becomes broody after laying about 18 to 20 eggs. If these taken away and goose shut up for few days she will then lay another batch, and with similar treatment a third batch. Eggs for hatching should be held at 50 to 60 degrees and turned each day. For general breeding notes, see chickens.	Geese graze freely and in this way pick up much of their food. In winter, supply a little grain and liberal allowance of succulent food, as roots and cabbage. At laying time the feed should be increased. A liberal ration, as prepared for ducks, containing considerable animal food, should be given twice a day. Water and grit should always be accessible. In finishing grass-fed geese for market, feed corn meal with 10 per cent of beef scrap, scalded or wet with cold water. Once a day give whole corn. Keep goslings in warm place, and first 2 or 3 days feed a little soaked bread and water. Gradually let them out, and in a week they may go free. Will need nothing but a little stale bread first 5 weeks, if on good free range. After 5 weeks a mash of one-third corn meal, two-thirds bran should be given. After 6 weeks give equal parts of corn and bran, to fatten.	Geese are almost wholly free from disease, and the grower is seldom troubled in this respect.	See chicken references. Farmers Bulletin No. 64.

TABLE OF SHRUBS AND HEDGES

Name of Shrub	Height in Feet	Time of Flowering	Color of Flowers	Distance Apart in Feet	Uses	Remarks
Althea, or Rose of Sharon (*Hibiscus*).	8 to 10	August September	Red, pk., wht.	3	Screen.	Single kinds better; makes good screen; stands pruning well.
Common Barberry (*Berberis vulgaris*).	6	June	Yellow	2	Defensive screen.	Foliage dense, very dark green.
Japanese Barberry (*Berberis Thunbergii*)	4	June	Yellow	1 ½	Boundary, drive, terrace.	Bears red berries; fall color striking.
Single Bridal Wreath (*Spiraea Van Houtter*).	5 to 6	June	White	2 to 3	Boundary.	Widely planted, showy and economical.
Sea Buckhorn (*Hippophae rhamnoids*).	6 to 10	.....	.....	3	Screen.	Gray foliage makes it distinctive.
Dogwood (*Cornus alba*)	8	June	White	2 ½	Screen or background for lower growths.	Bark blood-red and showy in winter.
Slender Deutzia (*Deutzia gracilis*).	2 ½	June	White	2	Edging.	Showiest of dwarf-flowering hedges.
English Privet, or Prim (*Ligustrum vulgare*).	2 to 6	.....	.....	1	Best clipped hedge; edging, terrace, etc.	Better than California, because hardier.
English Wayfaring Tree (*Viburnum lantana*).	10 to 15	June	White, large	5	Screen.	Grows rapidly, has attractive, dark foliage and purple fruit.
Golden Bell (*Forsythia intermedia*).	5 to 8	Early May	Yellow	3	Boundary.	Best of yellow shrubs; blooms before Cydonia; too striking for wide use.
Tartarian Honeysuckle (*Lonicera Tatarica*).	10	June	Pink	3	Screen.	Dense foliage, showy flowers and berries.
Large-flowered Hydrangea (*Hydrangea paniculata, var. grandiflora*).	3 to 15	July, August	White pink	2 to 3	Screen, boundary.	Blooms when flowers are scarce; showy.
Japanese Briar (*Rosa rugosa*).	5 to 8	All summer	Wt., pk., red	2	Boundary.	The only rose suitable for a hedge.
Japanese Snowball (*Viburnum plicatum.*)	6 to 8	June	White	4	Screen, boundary.	Showy and better than Common Snowball.
Japan Quince (*Cydonia Japonica*).	4	May	Red	1 ½	Defensive boundary.	Blooms among first of all the shrubs; thorny, subject to scale.
Lilac (*Syringa vulgaris*).	8 to 15	June	Purple, white	2	Screen.	Spreads all over creation if given a chance, but is an excellent screen.
Honey Locust (*Gleditschia triacanthos*).	3 to 15	May	Greenish	1 ½	Defensive.	Requires close attention to pruning; apt to become bare near bottom. Being supplanted by better kinds.
Garland's Mock Orange (*Philadelphus coronarius*).	8 to 15	Early June	White	3	Screen.	Flowers highly scented; grows rapidly.
Osage Orange (*Maclura pomifera*).	3 to 15	May	White	2 to 3	Defensive screen.	Bears yellow fruit 3 to 4 inches in diameter, when not clipped.
Spirea (*Spiraea arguta*).	2 to 3	Early May	White	2	Edging, terrace.	Two weeks earlier than *Spiraea*; showy, but not a sure bloomer.
Spirea (*Spiraea, Anthony Waterer*).	2 to 3	All summer	Magenta	2	Boundary, edging, terrace.	Good for those who like such things.
Native Thorn (*Crataegus coccinea*).	3 to 12	May	White	2 ½	Screen; defensive boundary.	One of the best native shrubs, or small trees. Bears showy scarlet fruit; improves with shearing, making very dense hedge. Can be kept at any height.
Cockspur Thorn (*Crataegus Crus-galli*).	3 to 15	Late May	White	2 ½	Defensive screen; boundary.	Native plant, with very long thorns. Fruit showy. Good windbreak.
Wistaria or Wisteria (*W. Frutescens*).	8 to 15	All summer	Lilac	2	Screen; trellis.	Handsome, hardy, slow-growing, climbing shrub. Flowers in elegant racemes, slightly scented.

FLOWER PLANTING TABLE

May is the almost sole flower-planting month; the Adonis, Cornflower, Pink, Primrose and Sweet Pea may also be planted in April.

Name of Flower	Life of Plant	Blooms	Plants In. Apart	Seeds Inches Deep	Colors
Achillea	Annual-Perennial	May-June	6	.....	Yellow
Adonis	Annual	June-October	6	¼	Blue-White
Ageratum	Perennial	August-October	10	.....	White-Rose
Anemone	Annual	July-September	14	¼	Various
Aster	Annual	July	8	⅛	Blue-White-Pink
Bachelor's Button	Annual	June-September	14	¼	Various
Balsam (Lady's Slipper)	Perennial-Annual	June-July	10	¼	Blue-White-Pink
Bellflower (*Campanula*)	Perennial	May-August	26	.....	Crimson
Bleeding Heart (*Dicentra*)	Annual	June-October	12	⅛	Orange
Calendula	Annual	August	10	⅛	Orange
California Poppy	Annual	June-September	8	⅛	White
Candytuft	Annual	August	36	¾	Green
Castor Bean	Perennial-Annual	August-October	18	⅛	Various
Chrysanthemum	Annual	June-September	10	¼	White-Purple-Rose
Clarkia	Annual	June-October	10	¼	Red-Purple-Yellow-White
Cockscomb	Perennial	June-July	12	.....	Various
Columbine (Aguiligia)	Perennial	July-August	12	.....	Coral
Coral Bell	Annual	June-August	12	⅛	Yellow-Brown
Coreopsis	Annual	June	10	⅛	Blue-White-Rose
Cornflower	Annual	August-September	24	¼	Red-White-Pink
Cosmos	Perennial	July-September	36	.....	Various
Dahlia	Perennial	May	10	.....	White-Pink-Rose
Daisy	Perennial	July-August	10	.....	Yellow
Evening Primrose	Perennial-Biennial	April-July	6	¼	Blue

FLOWER PLANTING TABLE—Continued

Name of Flower	Life of Plant	Blooms	Plants In. Apart	Seeds Inches Deep	Colors
Forget-Me-Not	Perennial	July	10	.....	Various
Four-o'Clock	Perennial-Annual	July-August	12	¼	Red-White-Yellow
Foxglove	Perennial-Biennial	June	12	⅛	White-Pink
Gaillardia	Perennial	July-October	12	⅛	Yellow-Red
Globe Amaranth	Annual	July	12	¼	Pink
Godetia	Annual	July-October	12	⅛	White-Red
Gourds	Annual	July-October	14	⅛	Various
Heliopsis	Perennial	July	12	¼	Yellow
Helianthus	Perennial	August-September	18	.....	Yellow
Hollyhock	Biennial	August	16	½ drills	Red-Pink-Purple-White-Yellow
Iceland Poppy	Perennial-Annual	June-September	6	⅛	White to Orange
Iris	Annual	May-July	12	.....	White-Blue-Yellow
Larkspur	Perennial-Annual	June-July	8	⅛	Blue-White-Pink
Lavatera	Annual	July	8	¼	Rose
Lobelia	Annual	June-September	4	⅛	Blue-Red
Love-Lies-Bleeding	Annual	June-July	10	¼	Scarlet
Love-in-a-Mist	Annual	June-September	8	¼	Blue-White
Lupine	Perennial-Annual	June	5	.....	Blue-White-Pink
Mallow	Perennial	July-September	10	.....	White-Rose
Marigold	Annual	August-October	6	¼	Lemon to Orange
Mignonette	Annual	July-October	12	⅛	Whitish Green
Monkshood	Perennial	July-August	8	.....	White-Blue
Moonflower	Annual	August-September	5	¼	White
Morning Glory	Annual	July-August	12	¼	Various
Nasturtium	Annual	July-October	10	½	Various
Nicotiana	Annual	July-August	8	¼	Red-White
Pansy	Perennial-Annual	May-October	12	⅛	Various
Peony	Perennial	May-June	48	.....	Red-White-Pink
Petunia	Annual	July-September	8	Scatter	White-Pink-Blue-Wine
Phlox	Perennial-Annual	July-October	8	⅛	Various
Pink	Perennial-Annual	August	6	⅛	White to Rose
Poppy	Annual	July-August	5	⅛	Various
Portulaca	Annual	July-October	5	⅛	White-Red-Yellow
Primrose	Perennial	April-May	6	.....	Yellow-Pink
Pyrethrum	Perennial	August-October	12	.....	Various
Rudbeckia	Perennial	August-September	12	.....	Yellow
Salpiglossis	Annual	June-August	8	⅛	Various
Salvia	Perennial-Annual	August-October	6	⅛	Scarlet
Scabiosa	Perennial	June-August	8	.....	Blue-Yellow-White
Schizanthus	Annual	July-August	10	¼	Yellow-Lilac
Silene	Perennial	June-August	6	.....	White to Rose
Snapdragon	Perennial-Annual	July-August	8	¼	Various
Stock	Annual	June-July	6	¼	White to Red
Sunflower	Perennial-Annual	August	36	¼	Yellow
Sweet Alyssum	Annual	May-September	5	⅛	White
Sweet Pea	Annual	June-October	8	3 trench	Various
Sweet William	Perennial-Biennial	July-August	10	¼	Red-White-Pink
Verbena	Perennial	June-August	8	.....	Various
Veronica	Perennial	August	6	.....	Purple
Violet	Perennial	March	6	.....	Violet
Wallflower	Perennial-Biennial	July-August	8	½	Yellow-Brown
Zinnia	Annual	July-October	10	½	Various

THE ROSE GARDEN

There are numerous varieties of roses, and their care occupies an important province in flora culture. The best results are obtained from setting out the plants or roots in the spring—from the middle of April to the middle of May. For practical purposes they may be divided into the following classes, with the leading examples of each:

Classes	Characteristics
The Hybrid Perpetuals	Hardiest of the garden roses
Frau Karl Druschki	An ideal white rose
Jacqueminot ("Jack Rose")	Brilliant scarlet
Paul Neyron	Dark rose—largest of all
Magna Charta	Bright pink—a favorite
George Arends	Splendid soft pink
The Hybrid Teas	The most satisfactory for the general garden
Robert Huey	One of the largest bright reds
The Lyon	Deep coral pink verging on yellow
White Killarney	One of the best pure whites
La France	Clear satiny pink
Burbank	Rich pink
Richmond	Brilliant crimson
The Teas	Much tenderer than the Hybrid Teas; sweet scented
The Bride	Pure white
Perle des Jardins	Beautiful rich yellow
Papa Goutier	Dark Crimson
Hardy Climbers	Popular and showy
American Pillor	Large, single, pink flowers
Excelsa	Finest of crimson ramblers
Hiawatha	Single, brilliant crimson
Dorothy Perkins	Soft shell-pink, fragrant
Lady Gay	Delicate cerise-pink which change to creamy white
Wichmoss	A "Moss" rose, light bluish-pink, fragrant
Hybrid Briers	Hardy semi-climbing roses
Lord Penzance	Beautiful contrasting shades
Refulgence	Dazzling scarlet, in clusters
Juliet	Rosy red with reverse petals of old gold
The "Baby Ramblers"	Dwarf, "perpetual bloomers"
Phyllis	Beautiful pink
Jessie	Bright cherry-red, white center
Orleans	Brilliant red, white center
Snowball	White, free flowering
Noisette	Excellent climber for walls
William Allen Richardson	Deep orange-yellow flowers
Garland	Semi-double, blush and white
Longworth Rambler	Splendid autumn climber; flowers, semi-double and crimson
Japanese and Chinese	
Blairii (China)	Vigorous climber for sunny walls; flowers, blush and rose
Rugosa (Japanese)	No pruning is needed; flowers, white, rose and violet

THE AGRICULTURAL EXPERIMENT STATIONS

The most prolific source of agricultural literature is the United States Department of Agriculture, Washington, D. C. This department maintains various bureaus and laboratories, in charge of eminent specialists, who investigate and report upon almost every phase of agriculture, horticulture and animal husbandry. For location of Agricultural Colleges and State Universities, see page 76.

Alabama—
College Station, Auburn.
Canebrake Station, Uniontown.
Tuskegee Station, Tuskegee.
Alaska—Sitka.
Arizona—Tuscon.
Arkansas—Fayetteville.
California—Berkeley.
Colorado—Fort Collins.
Connecticut—
State Station, New Haven.
Storrs Station, Storrs.
Delaware—Newark.
Florida—Gainesville.
Georgia—Experiment Station.
Guam—Island of Guam.
Hawaii—
Federal Station, Honolulu.
Sugar Planters' Station, Honolulu.
Idaho—Moscow.
Illinois—Urbana.
Indiana—Lafayette.
Iowa—Ames.
Kansas—Manhattan.
Kentucky—Lexington.
Louisiana—
State Station, Baton Rouge.
Sugar Station, Audubon Park, New Orleans.
North Louisiana Station, Calhoun.
Rice Station, Crowley.
Maine—Orono.
Maryland—College Park.
Massachusetts—Amherst.
Michigan—East Lansing.
Minnesota—University Farm, St. Paul.
Mississippi—Agricultural College, Starksville.
Missouri—
College Station, Columbia.
Fruit Station, Mountain Grove.
Montana—Bozeman.
Nebraska—Lincoln.
Nevada—Reno.
New Hampshire—Durham.
New Jersey—New Brunswick.
New Mexico—Agricultural College.
New York—
State Station, Geneva.
Cornell Station, Ithaca.
North Carolina—
College Station, West Raleigh.
State Station, Raleigh.
North Dakota—Agricultural College.
Ohio—Wooster.
Oklahoma—Stillwater.
Oregon—Corvallis.
Pennsylvania—
State College, Pa.
State College, Institute of Animal Nutrition.
Porto Rico—Mayaguez.
Rhode Island—Kingston.
South Carolina—Clemson College.
South Dakota—Brookings.
Tennessee—Knoxville.
Texas—College Station.
Utah—Logan.
Vermont—Burlington.
Virginia—
Blacksburg.
Norfolk, Truck Station.
Washington—Pullman.
West Virginia—Morgantown.
Wisconsin—Madison.
Wyoming—Laramie.

HORTICULTURE is the growing and cultivating of fruits, vegetables, flowers and ornamental plants, as shrubs and others. It is divided under four general heads by authorities, *viz.:*

Pomology, or fruit growing.
Oleri-culture, or vegetable growing.
Floriculture, or the growing of flowers and plants for various purposes.
Landscape gardening.

The first two have the wider economic importance. Improved transportation facilities, fast freight lines with refrigerator cars, organized systems of gathering, shipping and marketing, and a better general and specific knowledge of climates and soils best adapted to each particular product have stimulated horticulture in all its branches.

According to the census of 1900 fruits in the United States aggregated in value nearly $131,500,000, of which those of the orchards proper contributed $83,752,000, grapes over $14,000,000, small fruits $25,000,000, and subtropical fruits $8,550,000. Of this total California was credited with 21.5 per cent, New York 12.1 per cent, Pennsylvania 7.5 per cent, Ohio 6.8 per cent, and Michigan 4.5 per cent, the aggregate for these five states amounting to over 52 per cent of the total for the United States.

Many other states include favored localities where fruits of the finest quality are grown.

Spraying as a means of protecting fruits and fruit trees, shrubs and vines from injury by insects and fungi, is generally regarded as essential, not only in preventing loss of fruit but in aiding its more perfect development. Also, it has been demonstrated in some districts noted for the excellence of their fruits that damage by unseasonable frosts may be successfully guarded against by use of smudge pots, or heaters, in which oil or some other material is burned, and by which atmospheric conditions are made such as to prevent destruction of the fruit buds by cold.

Bee-keeping goes hand in hand with fruit-raising, and the bees are helpful in promoting perfect pollination in the blossoms which they visit.

ANIMAL HUSBANDRY, or the rearing of live stock, is important, if not indispensable to a prosperous and permanent agriculture. Farm animals not only provide meat and milk, which constitute leading industries in themselves, but, through the wise use of their manures, vitally aid in maintaining the fertility of the land. As agriculture grows in intensity the values of manures increase; in Germany, for instance, it is a common custom to measure the peasant's prosperity by the size of his manure heap. Under right management, it should be infinitely more profitable, too, to market the bulk of the farm crops in the form of beef, mutton, pork, products of the cow and poultry, than to sell the crops direct. In the latter case all the fertility they contain goes with them, resulting in a net loss to the land of just that much plant food. Persevered in, such a system leads to impoverished soils and poverty. Besides, stock-keeping affords continuous employment for labor.

Select Breeding.—All domesticated animals have been greatly improved by judicious selection, mating and feeding, and the better sorts are always found where civilization is most advanced. In America, the pure-bred and high-grade are gradually taking the place of the "scrub" or mongrel. The former are not only kept more economically, but mature earlier, and can be reliably depended upon to return largest profits. The selection of a breed should depend upon the individual, his needs, environments and location, and by all means, for any purpose, be of improved stock and superior individuals.

Dairying.—No other form of husbandry is more highly profitable, or contributes more to maintaining or building up soils than dairying. In recent years its progress and growth throughout the United States and Canada have been most marked, resulting incidentally in many immense butter factories, called creameries, some of which gather their milk and cream from a wide territory, and for which special milk trains are run. Butter and cheese making away from the farms have become special industries representing large capital, under the management of trained specialists.

Important Aids.—Inventive genius has been of incalculable aid to dairying. In comparatively recent years have come the Babcock test, and the cream separators. The test is used in ascertaining the per cent of fat in milk, and, with the scales, enables the detection of profitable and unprofitable cows. The separators extract the fat from milk by centrifugal force, as soon as drawn from the cow, obtaining a larger percentage of the butter-fat or cream than is possible by gravity, and leaving the milk at once available and sweet as a much esteemed food for young farm animals.

The many well-to-do communities where dairying is a leading industry prove that, wisely conducted, it yields a higher prosperity than general farming.

Veterinary Science has kept pace with and contributed to the general advance in animal husbandry. The tuberculin test, for detecting tuberculosis in cattle, is one of the valuable late discoveries, and another is the successful treatment of milk fever in cows. By inoculation and dips immunity is had from "Spanish" or "Texas" fever in cattle, and the latest discovery, and one promising incalculable value to the swine industry, is that by which hogs may be made immune from "cholera" through inoculation, which annually destroys vast numbers.

MANUFACTURES.—At the time the American colonies were founded the industries of the world were largely conducted under the domestic system of labor. The colonists were without capital and there was very little opportunity for specialization in manufacture. Each family was largely dependent upon its own exertions for the production of food and clothing, as well as for the ordinary domestic utensils and implements of agriculture. Building materials were unknown, except as they were obtained from the forest or the quarry.

Early Basic Industries.—The basic industries of the country, nevertheless, had an early start and naturally continued to develop with the increase in population.

Textile Industries.—Until after the Revolution, and even as late as 1840, hand spinning and weaving and the domestic manufacture of coarse cloths was largely practiced throughout the country. The tendency was constantly toward the factory method of manufacture, and a little fulling-mill was built at Rowley, Mass., in 1643, which was probably the first textile mill erected in this country. The first cotton factory for the employment of English methods was built in 1790 at Pawtucket, R. I. A cotton mill operated by horsepower was built on James Island near Charleston, S. C., in 1787. About the same time other textile mills were put into operation in Philadelphia and in the Southern states.

Shipbuilding.—The unlimited forests were an inducement to shipbuilding, and this was the first industry in which coöperative labor was employed. The *Restless*, built in 1614, was probably the first vessel with a deck built in this country. The industry developed with the increase in population, and by 1700 extended from the northern to the southern colonies. In 1769 the annual product amounted to not less than 389 vessels, with an aggregate of 20,000 tons burden.

Lumber.—The first sawmill in the New England states was built in 1633 or 1634. Saw and grist mills were located on streams wherever there was sufficient population to support them. They were the first industries to utilize the water power of the country.

Building Materials.—The first brick were made in Virginia in 1629. Rough logs and hewn timber were the universal building materials outside of the larger settlements, but the product of the sawmills was used for building at an early date. As early as 1770 considerable quantities of lumber were exported.

Metal Industries.—Iron was the only base metal produced in the early history of the colonies. The precious metals were found in small quantities, but never enough to be of commercial importance. The first forge was set up in Massachusetts, probably at Lynn or Braintree, in 1643 or 1644. Iron works, bloomaries and forges, and mills for the manufacture of articles from the metal were erected at various points where the ore was discovered. In 1619 there was an attempt made in Virginia to manufacture iron. Later the iron deposits were discovered in Pennsylvania, where forges and furnaces were built as early as 1700. In 1731, when the returns of the manufacturers were made by the governors in pursuance of an order of the House of Commons, New England was reported to have six furnaces, eighteen forges, one slitting mill, and a nail factory. The industry was insignificant as compared with the 668 blast furnaces and rolling mills and steel works in operation 200 years later (1904), when more than 250,000 persons were employed, and the annual products were valued at $906,000,000.

Leather.—Tanning, as one of the simplest of the arts and a support of the stock husbandry, was commenced almost with the first settlement. The tanning of leather and the manufacture of boots and shoes was of commercial importance at Lynn, Mass., as early as 1650. In 1640 laws were enacted providing for the preservation of the hides of animals to be tanned for leather, and evidently the shoe industry was of considerable importance then. Eastern Massachusetts has continued to be the principal boot and shoe producing district of the country. The products of the factories in the two cities of Brockton and Lynn during 1904 were valued at more than $55,000,000 and formed about 17 per cent of the total for the United States, which was reported as $320,000,000.

Causes of Development.—The various Indian wars of the colonial period, the war of the Revolution, as well as all subsequent wars, have stimulated the industrial development. Those in the early history of the country forced the planting of the mechanical arts, and an unprecedented development commenced immediately after the Civil war.

The ingenuity of the people, unlimited natural resources, the system of laws, free intercourse between the states, and improved methods of transportation have, combined with the various other conditions, caused a rapid and unprecedented increase in the manufactures of the United States. No other nation has such a record of development.

Materials.—The raw materials used in manufactures are obtained either from the farm, the forest, the mine, or the sea. During 1904 those obtained from the farm were reported as costing $2,492,836,646; those from the forest, $163,464,677; those from the mine $471,118,181; and those from the sea, lakes and rivers, $13,715,086.

Principal Industries.—The manufacture of food products, structural and building materials, and clothing and kindred products are by far the most important industries of the country.

Animal and Fish Products.—The manufacture of canned goods was comparatively unimportant prior to 1890. Since then it has had a wonderful development, and a great variety of foods preserved in metal or glass receptacles is now manufactured from animal and fish products. In 1904 there were 10,647 establishments with an annual product of $1,139,557,178. This includes the slaughtering industry and the manufacture of the various animal products, cheese, butter, condensed milk, and the canning and preserving of sea foods. It also includes the by-products, such as fertilizers, containers, etc., which are of great importance in some establishments. Measured by the gross annual value of products ($913,914,624), slaughtering and meat packing is the most important single industry of the United States. This is the product of the wholesale establishments only. The retail butchers and farmers slaughter an enormous number of which no record is preserved.

Butter and Cheese.—These products are manufactured on farms even more extensively than in independent establishments. In 1900 the production of butter on farms amounted to 1,071,745,127 pounds and in factories to 531,478,141 pounds. But this enormous total of 1,603,223,268 pounds does not represent the total production, as it is estimated that 40,000,000 pounds of butter was made by persons having one or two cows, but who were not classed as farmers.

Vegetable Products.—The different varieties of food products are now practically unlimited, new forms of tasty preparations constantly appearing in the market. Including the flour mills and the bakeries there were 38,055 establishments reported as engaged in the manufacture of these commodities from vegetable products during 1904, and their annual product was valued at $2,176,693,177. This value includes by-products, such as cattle feed, fertilizers, etc., which are not used for food. Flour mills, breweries, sugar refineries, bread and other bakery products are, in the order named, the four most important industries using vegetables or cereals.

Flour Mills.—Flour is the most important product for human consumption as a raw material. The annual production of wheat flour exceeds 110,000,000 barrels.

Bakeries.—Such a large quantity of flour is consumed annually in domestic use that the operations of the 18,227 establishments reported as engaged in the manufacture of bread and bakery products during 1904 is no indication of the actual consumption. The products of these establishments amounted to $269,609,061.

Sugar.—Sugar cane was first brought to Louisiana in 1751 and the first sugar was manufactured in 1791. The industry has had a wonderful development, but the domestic production has never been sufficient to supply the consumption in the United States. The products of the refineries for 1904 amounted to $277,285,449, which includes a considerable amount of by-products. The production has increased from 274,724,000 pounds in 1860-1 to 828,800,000 in 1908-9.

Beet Sugar.—The manufacture of sugar from beets assumed considerable proportions prior to 1870. The production for that year was about 896,000 pounds. There has been a steady increase from year to year, the product for 1909 amounting to 851,768,000 pounds.

Liquors.—A considerable proportion of the revenue of the federal government is derived from a tax on the production and sale of distilled and fermented liquors. The production is carefully gauged. The production of distilled liquors, exclusive of fruit brandies, increased from 109,275,928 tax gallons in 1890 to 133,450,755 gallons in 1909. The production of fruit brandies increased from 1,825,810 gallons in 1890 to 6,440,858 gallons in 1909, and of fermented liquors from 27,561,944 barrels in 1890 to 56,364,360 barrels in 1909.

Confectionery.—Candy making as an art did not obtain a firm footing in this country until about the middle of the last century, but as early as 1816 there were twenty confectioners manufacturing candy in Philadelphia. The products are made so largely in small shops, bakeries, and restaurants that no correct figures can be compiled. During 1904, however, there were 1,348 establishments with an annual product of $87,087,253 which made a specialty of these products.

Glucose.—This product is used largely in the manufacture of confectionery as a substitute or adulterant for sugar. Prior to 1870 there was very little, if any, manufactured in this country, but during 1904 the product was valued at $12,207,197.

Manufactured Ice.—In 1880 there were about thirty-five establishments in the country

manufacturing ice for sale. Since 1890 the industry has increased very rapidly, especially in the Southern states, where it is difficult, or impossible, to obtain the natural product. There were 1,320 establishments in operation during 1904 and their annual product was valued at $23,790,045. In addition, enormous quantities are manufactured by breweries, markets, and cold storage companies and consumed in the establishment where produced.

Textiles.—These industries include the manufacture of fabric from either vegetable or animal fibers. The processes of manufacture are complicated and require large investments in machinery. A larger quantity of cotton is consumed than of all the other fibers combined. The consumption for the entire world in 1908 shows that about 54 per cent of the quantity was cotton, 14.5 per cent wool, 14 per cent jute, 10 per cent flax, 7 per cent hemp, and 0.5 per cent silk.

Cotton Mills.—In 1850 there were 1,094 establishments with an annual product of $4,734,424. In 1904 there were 1,154 establishments manufacturing cotton goods, and cotton small wares and their products for the year were valued at $450,467,704.

Wool Manufactures.—The product of the 675 establishments reported for this industry in 1850 amounted to $48,608,770. There were 1,213 establishments in 1904 engaged in the manufacture of woolen and worsted goods, carpets and rugs, felt goods, wool hats and, similar products in which wool in some form was the chief component material. The annual product of these mills was valued at $380,934,003.

Hosiery and Knit Goods.—The variety of products has increased with the application of new inventions, and since 1880 the industry has advanced more than five fold. There were 1,079 establishments in operation during 1904 and their products were valued at $136,558,139.

Spindles and Looms.—The spindle is used in the majority of the textile mills irrespective of the character of the fiber consumed. In 1870 there were 9,344,418 spindles and 204,954 looms in operation. By 1904 the number of spindles had increased to 30,351,703 and the number of power and hand looms to 697,789.

Clothing and Kindred Products.—The manufacture of men's and boy's wearing apparel for sale, ready made, is a branch of industry established during the decade ending 1860. Since then it has been greatly expanded and specialized. It now covers practically every article of clothing worn by the old and young of both sexes. Considering the industry in this broad sense, there were 15,952 establishments engaged in it during 1904 and their products were valued at $1,496,133,850. Of the various classes of manufacture included in this aggregate the most important are men's and women's exterior clothing, hosiery and knit goods, and boots and shoes.

Iron and Steel Products.—The manufacture of pig iron is the foundation of all industries in this group. The production has increased from 563,755 long tons in 1850 to 25,795,471 tons in 1909.

Rolling Mills and Steel Works.—The larger portion of the products of the blast furnaces was consumed as material in these works and their products were in turn consumed in part by the foundries and machine shops of the country. There were 415 steel works and rolling mills in operation during 1904 and their products were valued at $673,965,026. In the early days of the industry these works made only the heavier partially manufactured products, such as nail and boiler plate, rods, ingots, etc. Finished products, such as wire, wire nails, bolts, nuts, rivets; pipe, tubes, horseshoes, springs, stamped ware, structural iron, rails, etc., are now frequently manufactured in the establishment where the metal is produced. The annual production of steel ingots and castings increased from 4,412,032 gross tons in 1894 to 14,023,247 in 1908.

Wood Industries.—The sawmill is the basic industry for these products. There were 31,231 mills in operation during 1908 producing rough lumber, lath or shingles and kindred products. The production of lumber amounted to 33,224,369,000 feet board measure and there were 2,986,684,000 lath and 12,106,483,000 shingles manufactured. Wood is used as material, either alone or associated with other products, in such a great number of industries that it is impossible to measure its relative importance. Those industries in which it was the principal material reported a gross product for 1904 amounting to $1,223,730,336. The New England states were originally the principal lumber producing section. With the depletion of the forests the center of the industry shifted to the north Central states, then to the Pacific coast and the Southern states. Washington and Louisiana are now the two principal lumber producing states, the production for 1908 amounting to 2,915,928,000 and 2,722,421,000 feet board measure respectively.

Power and Machinery.—The almost universal adaptation of machinery to all lines of manufacture has been one of the most important factors in the industrial development of the United States. The use of machinery was greatly stimulated by the invention of cotton spinning machinery in 1870, the power loom in 1785, the cotton gin in 1794, Bessemer process of steel making in 1856, the sewing machine in 1845, the gas engine, which was first used about 1800. Machines for the manufacture of brick were also invented in 1800.

Steam Power.—The invention of the steam engine in 1773 diverted attention from water power, which at that time was in universal use. Mills could be built in cities where operatives could be supplied. By 1870 steam power employed in the manufacturing establishments had increased to 1,215,711 horsepower. In 1904 there was 11,117,625 horsepower reported for the steam engines, including gas and internal combustion engines, employed in manufactures. The largest increase occurred during the decade ending with 1900.

Water Power.—In 1870 the water wheels in manufacturing establishments were capable of developing 1,130,431 horsepower or almost half of the power used in such establishments. The quantity has not increased as rapidly as steam power. By 1904 it amounted to 1,647,969 horsepower and formed only 11 per cent of the total power employed. Water power is now used largely to develop electric power, and the water wheels used for that purpose during 1907 were reported as having 1,441,000 horsepower.

Electric Power.—This kind of power was first employed in manufacturing establishments during the decade ending with 1890. By 1900 the electric motors used for this purpose had 310,661 horsepower and by 1904 it had increased to 1,150,891 horsepower, forming about 11 per cent of the total power. The establishment of large hydro-electric plants which furnish electricity for every conceivable purpose, is stimulating its use in manufactures, where it is now of greater importance than the direct application of water power.

Manufacturing Zones.—In 1850 the center of manufactures was in eastern Pennsylvania. From decade to decade it has moved steadily westward on about the same degree of latitude and is now about the center of Ohio. The manufactures of the large cities of the middle west have increased rapidly and their importance has tended to pull the center away from the Eastern states, where industries were first developed.

Most Important Area.—The heaviest area of manufactures is in the southern New England states, southern New York, New Jersey, and eastern Pennsylvania. Manufactures are extensive and fairly heavy over a much larger area, namely, that north of the Potomac and the Ohio and east of the Mississippi rivers; in this section they have increased very rapidly during the past twenty years.

Principal Centers.—New York, Philadelphia, and Boston were for many years the principal manufacturing cities. Chicago now outranks Philadelphia, and St. Louis outranks Boston. During recent years manufactures have developed so rapidly in the suburbs of the cities that the establishments located within the corporate limits of the cities are no longer a true indication of the importance of the industrial community. The establishments in the immediate neighborhood of the city should be considered as forming a part of its industries. The following table gives the statistics for ten of the principal industrial districts of the United States.

THE TEN PRINCIPAL INDUSTRIAL DISTRICTS

District	Number of Establishments	Number of Employes	Salaries and Wages for Year	Gross Value of Products	Area (sq. mi.)
New York	25,257	735,460	$436,238,272	$2,144,488,093	702
Chicago	8,382	288,869	186,165,672	970,974,280	500
Philadelphia	7,780	286,944	151,923,857	677,781,117	501
Boston	4,870	177,157	102,501,692	457,254,360	502
Pittsburg	1,859	119,839	77,339,055	383,490,468	198
St. Louis	2,603	104,097	61,913,138	319,709,859	206
Baltimore	2,243	78,729	36,651,368	202,659,272	246
Cincinnati	2,600	82,560	44,862,069	203,095,605	151
Cleveland	1,720	75,142	44,216,685	179,184,277	200
Buffalo	1,631	54,648	31,072,320	168,111,658	201

Large Establishments.—Large industrial enterprises have developed very rapidly during the past twenty years. One of the most effective methods of forming these enterprises is to consolidate existing independent establishments. During 1904 there

were 1900 establishments that reported an annual product in excess of $1,000,000 and many of these were operated under the same ownership. Their combined product formed 38 per cent of the total product reported for all establishments. There were 34,181 establishments that had an annual product in excess of $100,000, and their combined product formed 79 per cent of the total for all.

The large establishments are of greatest importance in petroleum refining, slaughtering and meat packing, iron and steel works, tobacco manufacture, and also in the manufacture of electrical machinery and of cotton goods.

United States Compared With Other Nations.—In 1860 the United States was given fourth place in respect to the value of manufactures produced, and was conceded the first place in 1894. By some authorities it was given the first place as early as 1885. The United Kingdom is given the second place, Germany the third, and France the fourth. Germany has made greater relative progress during the past twenty-five years than has either England or France.

The supremacy of the United States as a manufacturing nation may be attributed to several causes, but none has a more stimulating effect than the possession of a home market, untrammeled by local conditions and protected from foreign competitors. American manufacturers practically supply the needs of a population double that of the United Kingdom, more than double that of France, and nearly a third again as numerous as the population of the German empire, and in addition export domestic manufactures valued at more than a billion and a half of dollars.

Iron and Steel in Other Nations.—The manufacture of iron and steel is the most significant indication of a nation's progress.

The United States is by far the greatest iron and steel producing nation.

Textiles in Other Nations.—The United Kingdom is the greatest producer of textiles, but it does not have the undisputed control that it enjoyed during the first half of the nineteenth century. Both the United States and Germany are active and often successful competitors. In 1909 there were 53,312,000 cotton spindles in the United Kingdom as compared with 28,018,000 in the United States and 10,163 000 in Germany.

MINES AND MINING.—The two basal industries upon which all others depend are agriculture and mining. Manufactures of every kind, trade, transportation—all industry—must cease when the farms and the mines fail to bring forth their increase. When these two basal industries are measured by the value of their annual products that of mining appears of comparative insignificance. In 1908, for instance, the gross value of the agricultural products is estimated at $7,871,000,000, while in 1907, the year of maximum activity in the mining industry, the value of the mineral products exceeded $2,000,000,000 for the first and only time in our history.

Principal Mining Countries.—The United States leads the world in the production of most of the important mineral substances.

TABLE I. PRODUCTION OF THE PRINCIPAL MINERALS AND METALS BY THE LEADING COUNTRIES OF THE WORLD

Countries	Coal Short Tons	Iron Ores Long Tons	Gold Value	Silver Value	Copper Pounds	Lead Short Tons	Zinc Short Tons	Petroleum Barrels	Cement Barrels	Salt Barrels
United States	415,842,698	35,983,336	$94,560,000	$28,050,600	942,570,721	310,762	190,749	179,572,479	52,910,925	28,822,062
Great Britain	292,829,725	5,516,266	16,000	72,300	1,295,952	33,120	6,530	.....	25,057,580	14,747,514
Germany	237,245,556	7,462,210	64,800	2,659,300	50,229,160	181,167	225,948	1,009,278	See Note	15,652,885
Austria-Hungary	53,960,776	2,144,405	2,469,300	947,000	3,508,768	16,118	9,335	12,612,295	See Note	4,814,821
France	41,197,591	3,984,064	835,400	425,200	52,896	27,600	1,252	.....	56,936,934	8,658,150
Belgium	25,960,805	76,331	.....	.....	.....	33,231	627	.....	.....	.....
Russia	27,615,128	3,130,564	28,052,200	70,700	37,137,400	110	9,740	62,186,447	.....	14,741,750
Japan	16,337,551	50,843	2,887,900	2,033,300	91,243,396	3,312	.....	2,070,929	.....	4,902,550
India	14,301,991	.....	10,598,500	.....	.....	.....	.....	5,047,038	.....	.....
Australia and New Zealand	11,413,654	36,046	(Br. India) 73,327,300	9,187,000	84,236,880	131,376	128,683	.....	.....	599,828
Spain	4,538,340	10,384,183	.....	2,233,600	117,790,400	202,253	172,169	.....	.....	6,590,807
Mexico	1,129,086	.....	22,371,200	39,402,900	96,843,760	121,440	6,466	3,481,410	.....	86,585

Note.—Germany, Austria-Hungary, Russia, and other European countries are manufacturers of Portland cement but statistics are not available.

The accompanying table I. shows the principal mineral products of the leading producing countries for the latest years that statistics are available. The United States produces nearly 40 per cent of the world's supply of coal, 63 per cent of the petroleum, 40 per cent of the iron ore, nearly 60 per cent of the copper, 30 per cent of the lead and zinc, 21 per cent of the gold and 25 per cent of the silver.

Fuel.—Coal is not only the principal mineral product, but it furnishes 60 per cent of the tonnage hauled by the transportation companies and nearly all the power. There are six grand divisions or provinces into which the coal-producing areas are divided, as follows:

The Eastern Province, which includes all of the bituminous areas of the Appalachian region; the Atlantic coast region, which includes the Triassic fields near Richmond and the Deep and Dan river fields of North Carolina, and also the anthracite region of Pennsylvania.

The Gulf Province, which includes the lignite fields of Alabama, Mississippi, Louisiana, Arkansas and Texas.

The Interior Province, which includes all the bituminous areas of the Mississippi valley region and the coal fields of Michigan. This province is subdivided into the eastern region, which embraces the coal fields of Illinois, Indiana and western Kentucky; the western region, which includes the fields of Iowa, Missouri, Nebraska, Kansas, Arkansas and Oklahoma; and the southwestern region, which includes the coal fields of Texas. The Michigan fields are designated as the northern region of the interior province.

The Northern (or Great Plains) Province, which includes the lignite areas of North and South Dakota and the bituminous and subbituminous areas of northeastern Wyoming and of northern and eastern Montana.

The Rocky Mountain Province, which includes the coal fields of the portions of Montana and Wyoming which are in the mountainous districts of those states, and all the coal fields of Utah, Colorado and New Mexico.

The Pacific Coast Province, which includes all of the coal fields of California, Oregon and Washington.

Production and Quality.—In point of production and in the quality of the coals the *Appalachian region* of the eastern province is by far the most important.

It extends from Pennsylvania on the north to Alabama on the south and includes, besides the anthracite region of Pennsylvania, the high-grade coking coals of the Connellsville district of Pennsylvania, the Pocahontas and New river districts of West Virginia, and the Warrior district of Alabama; the famous steam and gas coals of the Pittsburg district in Pennsylvania and of Fairmont and other districts in northern West Virginia; the unrivaled smithing coal of the George's creek region in Maryland and Elk Garden in West Virginia, the Kanawha (W. Va.) gas coals and the Jellico steam and domestic coal of eastern Kentucky and Tennessee.

The coals of the interior province are for the most part noncoking, but possess good steaming qualities and are good domestic fuels.

Those of the great plains and Rocky mountains range from lignite to bituminous, with small areas of anthracite. Some of the bituminous coals in the Rocky mountain areas possess good coking quality.

The principal coal deposits of the Pacific coast are in Washington and Alaska, though the latter have not been developed.

Pennsylvania is by far the most important contributor to the coal supply, its combined production of anthracite and bituminous coal being equal to that of all the other states taken together. In the possession of its supply of anthracite Pennsylvania stands alone. Small areas of anthracite are found in the Rocky mountains, but the production is and always will be insignificant as compared with the Pennsylvania product.

Illinois ranks second, closely followed by West Virginia.

Ohio is the fourth in rank, followed in order by Alabama, Indiana, Colorado and Kentucky. No other state produced as much as 10,000,000 tons, and it will be noted that all of these with one exception, Colorado, are east of the Mississippi river.

Petroleum and Natural Gas.—The Appalachian region was formerly the center of the petroleum industry, and Pennsylvania, Ohio and West Virginia were the leading producers. These fields are now on the decline and the development has followed the star of empire to the west.

The contestants for first place in the production of petroleum are Oklahoma and California. Illinois ranks third. All of these developments in California and in Oklahoma have been in the last six years, neither state prior to 1904 having a production of any importance. Illinois had no importance as a petroleum producer prior to 1906. The gulf states of Louisiana and Texas have also become important producers in the last decade and the possibilities of future development are exceptionally good.

The principal gas-producing states are Pennsylvania, West Virginia, Ohio, Kansas, Indiana and New York in the order named.

Metals.—**Gold.**—From the time of Solomon, "the accursed thirst for gold" has led the adventurous portion of the human race into the wilderness and the desert, has made them brave the frozen north and the heat of the tropics. The search for gold more than anything else led to the "winning of the west" and the development of the Rocky mountain and Pacific coast states. It is now conquering the territory of Alaska.

The states east of the Mississippi river lead in the production of coal and of iron and in the manufacturing industries. The states west of that dividing stream are the leading producers of the precious and semiprecious metals. The eastern states that produce gold are Alabama, Georgia, New Hampshire, North Carolina, South Carolina, Tennessee and Virginia, but none of them yields as much as $100,000 a year.

The distinction of leader in the production of gold belongs to Colorado. Alaska comes second, with California a close rival. Nevada, whose prominence fell with the exhaustion of the Comstock lode, has again come to the front with the developments at Bullfrog, Goldfield, Ely and Tonopah and now ranks fourth. The other important producing states are South Dakota, Utah, Montana, Arizona, Idaho and Oregon.

Silver.—The same states are for the most part, also, the principal producers of silver, though not occupying the same relative positions. A notable exception to the rule is Alaska, whose silver outturn is inconsiderable. The leading states in the production of the white metal are Montana, Colorado, Nevada, Utah, Idaho, Arizona and California.

Copper.—Only two of the eastern states have any prominence as producers of copper. Michigan, which ranks third among the copper-producing states, owes its importance to the deposits of ore containing copper as a native metal and commonly known as "lake" copper. It is considered superior in quality to all other grades and usually commands a premium of ¼c per pound. Tennessee ranks sixth among the copper producers, but yields less than 10 per cent of the output of Michigan. The production of Tennessee is principally from Ducktown, in the southeastern part of the

Three states produce 80 per cent of the entire yield of copper—Arizona, from four principal districts, Bisbee, Globe, Jerome, Clifton-Morenci; Montana from the Butte district; and Michigan from the "lake" or Houghton district. The other important producers are Utah, California, Tennessee, Colorado and Nevada.

Lead.—The production of lead comes from two principal sources:

1. The Mississippi valley region, where it is largely associated with zinc, but the character of the ore is such that it can be separated mechanically before smelting.

2. The Rocky mountain region, where the lead is in combination with silver and has to be separated by refining after smelting into base bullion.

Missouri is the principal producer of lead, the product coming partly from the Joplin lead-zinc district in the southwestern part of the state and partly from what is known as the "disseminated" lead district in the southeastern part of the state. Missouri produced in 1908 about 40 per cent of the total output. Wisconsin, Kansas and Illinois are also producers of lead-zinc ores.

The lead produced in the Mississippi valley states is known as "soft lead"; that which is obtained from the smelting and refining and silver-lead ores is known as "desilverized lead." The principal producer of the latter is the Cœur d'Alene district of Idaho. Utah, the third in importance, obtains its lead chiefly from the Park City, Tintic and Bingham districts. Colorado ranks fourth. No other state produced as much as 10,000 tons.

Zinc.—Missouri, in zinc production, as in that of lead, ranks first, the output being from the Joplin-Webb City district. The production for the state in 1908 was practically two-thirds of the total output. Colorado is second in rank with a production of 20 per cent of that of Missouri, most of which was from Lake county. Then come Wisconsin, Kansas and New Jersey, in the order named. The New Jersey product is from a complicated ore found at Franklin, in Sussex county, and known as Franklinite. Virginia was at one time an important producer of a particularly pure zinc from carbonate and silicate ores at Bertha, but the deposits have been exhausted.

Quicksilver.—The principal sources of quicksilver in the United States are California and Texas. The industry is on the decline, the introduction of the chlorination and cyaniding process for the treatment of gold ores having largely reduced the demand for quicksilver for amalgamation, its principal use.

Aluminium.—Quite the reverse from quicksilver, the uses for and production of aluminium, "the new metal," are growing rapidly, one of the most recent applications being in the construction of automobiles, for which its lightness and strength give it special desirability. The production is controlled in the United States by one company, which owns the Hall reduction patents, and exact statistics are not available.

All clays are ores of aluminium, being silicates of the metal, but its extraction from them is an expensive chemical process and not practical for industrial purposes. The ore from which the metal is obtained by electrolytic reduction is bauxite, an oxide of the metal. The known workable deposits are in Alabama, Georgia and Arkansas.

Iron Ores.—Iron ores are abundantly distributed, but vary widely in the size of the ore bodies and the quality of the ores. The deposits may be divided into three great districts—the eastern, central, and western.

The Eastern District comprises all the Appalachian states from New York to Alabama.

The Central District includes the great deposits of the Lake Superior region, Michigan, Minnesota and Wisconsin, and less important areas in Illinois, Iowa, Missouri and Texas.

The Western District includes the Rocky mountain and Pacific coast states.

The principal source of supply at the present time is the Lake Superior region, the three states of Minnesota, Michigan and Wisconsin contributing 80 per cent of the ores that feed the blast furnaces of the United States. Minnesota alone produces over 50 per cent of the total.

Platinum, Nickel and Cobalt.—The deposits of these metals are not of economic importance in the United States. Some platinum is recovered in the refining of placer gold and a small quantity is obtained from the black sands of the Pacific coast. The principal source of supply is the Ural mountains in Russia. Small quantities of nickel and cobalt (the two metals being usually associated) were formerly produced at Lancaster Gap, Pa., Mine La Motte, Mo., and Riddles, Ore., but the United States depends for its present supply on the deposits of Sudbury, Ont.

Structural Materials.—The most generally distributed of the mineral substances are those used chiefly for the construction of buildings, the clays and the building stones. Some kind of clay is produced in every state and territory, and there is no state or territory in which stone suitable for building purposes is not available.

The development of these industries, and particularly the manufacture of common brick, while not contributing so largely to the value of the mineral product, indicate the healthful growth of the social fabric in the building up of desirable and permanent communities.

Clay.—New York, Illinois, Pennsylvania and Ohio are the leading states in the manufacture of common brick, though because of the development of potteries and other clay-working arts Ohio ranks first in total value of clay products, with Pennsylvania second, Illinois third and New York fourth.

Stone.—The principal varieties of stone used for building purposes are granite, sandstone, limestone and marble. The first three are of general distribution, though the quarrying industry has not been by any means equally developed in the different sections.

Granite.—The principal development of the granite quarrying industry has been in New England, Vermont, Maine and Massachusetts being the three leading states. From New England a jump is made to California for the fourth in rank, and then for the fifth another jump is made to Wisconsin. Other important producing states are, in order, Georgia, Washington, New Hampshire, North Carolina, Maryland, Minnesota, Connecticut and Rhode Island, three of these being in New England.

Sandstone.—The principal producers of sandstone are New York, Pennsylvania and Ohio, the two former including a peculiar variety, known as bluestone, used for curbing and flagging.

Marble.—New England is the principal home of the marble industry, Vermont producing more than half of the total output of the United States. The only other important producing states are New York, Georgia and Tennessee.

Limestone suitable for building purposes is found in nearly every state. The principal production is in a belt of states extending from New York and Pennsylvania on the east to Missouri on the west

and includes, besides these states, Ohio, Indiana and Illinois. These six states contribute more than two-thirds of the total production.

Cement.—No one branch of the mining industry has shown such a notable growth in recent years as that of the production of cement materials and the manufacture of Portland cement. In 1888 the production of Portland cement in the United States was barely a quarter of a million barrels; in 1908 it was 51,072,612 barrels.

Ten years ago the seat of the industry was in the Lehigh district of eastern Pennsylvania, that region turning out three-fourths of the total production. The Lehigh district is still the chief producer, contributing from 40 to 50 per cent of the total output, but the industry has become more generally distributed over the country, as the fireproof construction of large hotels, office buildings and apartment houses has been required to meet the demands of urban population, and railroad freights have acted as a protective tariff to local establishments.

Gypsum.—Gypsum, like cement, owes its rapid growth in recent years to the construction of large office, hotel, and apartment buildings. Its principal use is in the manufacture of wall plasters, and because of the hardness, durability and attractiveness of gypsum plasters, they have to a large extent superseded ordinary lime plasters. The utilization of gypsum for this purpose had its real beginning in the manufacture of "staff" for exposition buildings.

Since the World's Columbian exposition at Chicago the increase in the use of gypsum plasters has been rapid. The higher grades of calcined gypsum, or plaster of paris, are used for making statuary and by dentists for making casts. Some crude gypsum of lower quality is ground and used for fertilizer.

Chemical Minerals.—Salt.—If we exclude water from consideration as a mineral product, salt is the one mineral substance whose chief use is as an article of food. Water, it is true, is a mineral, but with the exception of a comparatively small quantity taken from springs and sold as pure potable water or for medicinal purposes, water is not considered as a commercial mineral product.

Distribution.—Common salt is widely distributed. It is held in solution in sea water, and in the waters of land-locked lakes, as Great Salt lake, the Dead Sea, etc. It occurs as brine springs and as rock salt and it is recovered from all of these sources. Probably the largest production at the present time is obtained from wells through which surface water is conducted to the salt beds, allowed to become saturated, pumped again to the surface and evaporated to dryness. Rock salt is mined in New York, Louisiana, Kansas and California.

Production.—Michigan is the largest producer of salt, all of the product being obtained by evaporation of brine from deep wells around Bay City and Saginaw. New York is second, most of its product also being brine salt from the western part of the state in Genesee, Livingston and Wyoming counties and from the old state reservation around Syracuse. Salt is also produced from brine wells in Pennsylvania, Ohio, West Virginia, Illinois, Kansas, Louisiana, Texas, Oklahoma, Utah and California. In Utah the source is the water of Great Salt lake; in California it is principally the sea water from Alameda bay.

Phosphate Rock.—The United States has to depend for its potash fertilizer upon the potash salt deposits of Stassfurt in Germany, and for its nitrates upon Chili. Other countries, however, send to the United States for their supplies of phosphate, and since the discovery of the land and river deposits of phosphate rock in South Carolina, just after the close of the Civil war, the mining and marketing of this valuable soil food has been a steadily growing industry.

During late years the industry in South Carolina has been declining, but this has been more than made up by greatly increased production in Florida, where it began something over twenty years ago, and in Tennessee, where it began fifteen years ago. Recently phosphate rock has been discovered in Arkansas and large areas have been located on government lands in Idaho, Utah and Wyoming.

Sulphur and Pyrite—Sulphur is obtained from two classes of ore. In one the sulphur occurs native, intermixed with limestone, recovery being accomplished by the application of sufficient heat to melt the sulphur. The other source is metallic sulphide ores, principally iron pyrite, in which the ores are roasted and the sulphur fumes recovered as sulphuric acid. This is used chiefly in the manufacture of superphosphates.

Iron pyrite is mined for this purpose in Massachusetts, New York, Virginia, Alabama, Georgia, and California. In Illinois, Indiana and Ohio it is obtained as a by-product in the mining of coal. Only recently efforts have been made to recover the sulphur by the smelters of copper and lead sulphide ores. Sulphur is produced in only four states—Louisiana, Nevada, Utah and Wyoming. With the exception of Louisiana the production is small.

The method of recovery in Louisiana is of particular interest. The deposits lie at considerable depth and can be reached only by passing through an immense bed of quicksand. The sulphur is obtained by forcing superheated water through iron pipes, melting the sulphur and forcing it to the surface by compressed air.

Borax.—The entire production of borax is from three counties in California—San Bernardino, Inyo and Ventura. The desert marshes of Nevada were at one time important producers and the "twenty mule team" that hauled the product 200 miles across the desert was a spectacular advertisement. These deposits are no longer productive.

Miscellaneous.—Asphalt and Related Bitumens.—A variety of hydrocarbons is included under the general head of asphalt. They are used for the manufacture of street paving, road dressing, waterproofing metals, papers and fabrics, roofing, electrical insulation, varnishes, reservoir and foundation linings, coal briquetting, etc. Bituminous lime and sandstone are used chiefly for paving. The production is from five states—California, Utah, Texas, Oklahoma and Kentucky.

Mineral Paints.—These include metallic paints, mortar colors, ochers, umbers, siennas, ground slate and shale, though many other minerals or mineral products are also used in the paint trade for mixing with these basic pigments.

Among these substances are asbestos, asphalt, clay, graphite, gypsum, magnesite, pyrite, talc and chalk. Zinc oxide and a mixture of zinc oxide and lead oxide made direct from the ores are also basic pigments. The lead pigments, such as white lead, litharge, orange mineral, etc., are made by the chemical decomposition of pig lead, and Venetian red is made from the roasting of iron sulphate.

Of the natural mineral pigments (the ones first mentioned), metallic paint and mortar colors are produced principally in New York, Pennsylvania, Maryland, Ohio and Tennessee; small quantities in New Jersey, Virginia, Wisconsin and California.

The principal producers of ochers, umbers, and siennas are Pennsylvania and Georgia; with smaller amounts from Vermont, Virginia, Kentucky, Iowa and California. The slate and shale ground for pigments is for the purpose of producing a deep black color, and this material is usually retained as a by-product in coal-mining. These materials are ground for pigments in Pennsylvania, New Jersey, New York, Iowa and Tennessee.

Asbestos.—The United States leads all other countries in the manufacture of asbestos products, but obtains its chief supply of raw material from Canada.

The chief characteristics of asbestos are its incombustibility by fire and its low heat conductivity, which render it valuable for fireproofing and for insulation. It is of fibrous structure and one variety, known as chrysotile, possesses strength and toughness sufficient to weave into fabrics, and is used for making fireproof theater curtains, etc.

Canada is the principal producer of this variety. Asbestos is used for boiler and safe packing, in the manufacture of paint, and as an electric insulator. Asbestos boards, shingles and other forms for fireproof construction are now quite common. Vermont and Georgia are the only two states in which it is produced in this country, and the output compared with the imports from Canada is small.

Other Minerals.—There are some forty other minerals among those mined for economic use. There are, for instance, corundum and emery quartz and feldspar granite, grindstones, infusorial earth, tripoli, millstones, oilstones and pumice, which are included among the products used for abrasive purposes.

Bromine, a by-product of salt evaporation, is useful in the chemical industry.

Fluor spar, mined principally in Illinois and Kentucky, is used as a blast furnace flux, for the manufacture of hydrochloric acid and for the manufacture of opalescent glass.

Feldspar and *quartz* are used in pottery works.

Talc is used as a lubricant for making slate pencils and in the manufacture of complexion powder, and a fibrous variety is used as a make-weight in paper manufacture.

Mica is used for windows in fireplaces and "base-burner" stoves, for the manufacture of insulators, and lamp chimneys for decorative purposes, and as a lubricant. It is mined principally in North Carolina.

Graphite, which is mined principally at Ticonderoga, N. Y., is used in the manufacture of lead pencils, crucibles, and as a lubricant.

Monazite, mined in North Carolina, is used for the manufacture of the mantles used in the Welsbach lights.

Tungsten and *vanadium* are used in the manufacture of special steels.

Sand is used for the manufacture of mortar, for molding and other purposes.

Manganese and *manganiferous iron ores* are used in the manufacture of steel.

PRODUCTION OF THE PRINCIPAL MINERALS AND METALS, AND THE TOTAL VALUE OF ALL MINERAL PRODUCTS IN THE UNITED STATES, BY STATES

Figures in **bold-face** indicate the ranking states.

States	Rank	Coal Short Tons	Rank	Iron Ores Long Tons	Rank	Gold Value	Rank	Silver Value	Rank	Copper Pounds	Rank	Lead Short Tons	Rank	Zinc Short Tons
Alabama	5	11,604,593	3	4,687,468	16	$ 41,200	21	$ 200		See Note g.				
Alaska		See Note a.			2	19,858,800	11	109,400	11	4,438,836	20	3		
Arizona					8	2,500,000	6	1,551,200	1	**289,525,267**	9	1,464	16	152
Arkansas	19	2,078,357	13	b 55,966									7	2,002
California	27	a 21,862			3	19,329,700	7	911,300	5	39,643,835	12	515	18	27
Colorado	8	9,634,973	18	10,176	1	**22,871,000**	2	5,429,400	7	13,943,878	4	28,728	2	24,885
Connecticut			16	c 28,112										
Delaware														
Florida														
Georgia	25	264,822	11	321,060	14	56,200	22	100						
Idaho	28	5,429			9	1,443,500	5	4,042,900	9	7,256,086	2	98,464	10	581
Illinois	2	47,659,690					19	1,100			14	363	14	298
Indiana	6	12,314,890												
Iowa	9	7,161,310									15	110	11	516
Kansas	10	6,245,508									8	2,293	4	8,628
Kentucky	7	10,246,553	14	d 53,235									13	341
Louisiana														
Maine														
Maryland	13	4,377,093		See Note d.						See Note g.				
Massachusetts	29	50		See Note c.					19	7,863				
Michigan	23	1,835,019	2	11,992,693			10	157,300	3	222,289,584				
Minnesota			1	**29,127,918**										
Mississippi														
Missouri	15	3,317,315	12	98,414			16	26,400	13	f 1,580,831	1	**122,451**	1	**123,655**
Montana	20	1,920,190	8	e 518,449	7	3,160,000	1	**5,539,500**	2	252,503,651	7	2,320	9	900
Nebraska														
Nevada				See Note e.	4	11,689,400	3	5,086,100	8	12,241,372	6	3,796	12	398
New Hampshire					18	3,700	17	3,400	16	135,139				
New Jersey			10	394,767									5	6,926
New Mexico	18	2,467,937		See Note e.	11	306,300	9	214,500	10	4,991,351	11	586	17	134
New York			5	697,473										
North Carolina			15	48,522	13	97,500	20	700	18	29,391				
North Dakota	24	320,742												
Ohio	4	26,270,639	17	26,585										
Oklahoma	17	2,948,116									10	1,409	6	2,235
Oregon	26	86,259			10	905,900	15	30,000	14	271,191	19	7		
Pennsylvania	1	**200,448,281**	9	443,161										
Rhode Island														
South Carolina					15	53,700	22	100		See Note g.				
South Dakota					5	7,742,200	12	105,500		See Note g.	18	18		
Tennessee	11	6,199,171	7	635,343	18	3,700	14	32,600	6	19,710,103			13	341
Texas	21	1,895,377		See Note b.	20	500	8	239,100	17	g 30,488	16	42		
Utah	22	1,846,792			6	3,946,700	4	4,520,600	4	71,370,370	3	42,455	15	282
Vermont				See Note e.										
Virginia	14	4,259,042	6	692,223	19	3,600	21	200			18	13	8	910
Washington	16	3,024,943			12	253,700	13	46,400	15	162,201	13	391		
West Virginia	3	41,897,843		See Note d.										
Wisconsin			4	733,993							5	4,013	3	17,538
Wyoming	12	5,489,902		See Note e.	17	7,600	18	1,900	12	2,416,197	17	36		

States	Rank	Petroleum Barrels	Rank	Portland Cement Barrels	Rank	Salt Barrels	Rank	Natural Gas Value	Rank	Clay Products Value	Rank	Building Stones Including Slate Value	Rank	Total Value of All Mineral Products for Each State
Alabama			16	k 310,244				See Note r.	19	$1,559,606	27	$ 627,011	13	$ 36,939,149
Alaska											44	40,343	18	20,791,738
Arizona				See Note p.					43	104,992	31	451,832	10	43,502,834
Arkansas							12	$ 164,930	35	508,788	37	259,500	35	5,348,907
California	2	44,854,737	8	l 2,480,100	6	899,028	10	307,652	8	4,523,745	6	3,351,585	5	65,137,636
Colorado	13	379,653	13	m 809,306					15	1,970,081	24	740,253	6	58,629,487
Connecticut									27	901,561	17	1,125,799	41	2,721,663
Delaware									41	146,527	39	195,761	49	382,502
Florida									39	233,162	43	41,910	32	9,167,762
Georgia				See Note k.					16	1,928,611	12	1,895,608	36	5,200,881
Idaho					12	1,114			38	339,356	42	69,394	23	15,256,382
Illinois	3	33,685,106	4	3,211,168		See Note r.	8	446,077	4	11,559,114	7	3,134,770	3	122,900,688
Indiana	9	3,283,629	2	6,478,165			5	1,312,507	6	6,740,167	5	3,646,603	12	37,295,494
Iowa			11	n 1,205,251			18	93	9	4,069,497	29	533,282	21	18,088,537
Kansas	10	1,801,781	3	3,854,603	4	2,588,814	4	7,691,587	11	2,248,805	30	471,126	16	26,162,213
Kentucky	12	727,707		See Note n.			9	424,271	12	2,229,108	19	893,447	22	16,141,956
Louisiana	8	6,835,130			5	947,129	11	s 236,837	30	629,924			26	12,113,009
Maine									34	542,730	11	2,027,508	39	4,044,678
Maryland				See Note q.					22	1,441,099	18	1,070,623	28	11,489,062
Massachusetts				See Note q.					18	1,647,362	8	2,955,195	34	5,925,949
Michigan	15	h 15,246	7	2,892,576	1	**10,194,279**			17	1,728,790	25	708,120	8	55,168,133
Minnesota									20	1,508,710	14	1,493,706	39	60,076,135
Mississippi									28	828,739			46	974,518
Missouri		See Note h.	6	2,929,504			14	22,592	7	5,631,456	10	2,306,058	11	41,499,835
Montana									36	387,525	38	225,709	7	46,803,841
Nebraska									25	946,516	32	338,070	45	1,425,388
Nevada					11	9,714						Inc. in Alaska	20	19,043,820
New Hampshire									37	371,640	20	867,028	44	1,614,277
New Jersey			5	3,208,446					3	12,313,696	13	1,531,740	17	21,315,631
New Mexico									42	140,671	45	15,955	37	4,937,890
New York	11	1,160,128	9	1,988,874	2	9,076,743	6	959,280	5	8,929,224	3	6,157,279	9	45,669,861
North Carolina									26	943,968	21	800,177	42	2,145,947
North Dakota							15	2,480	40	206,222		Inc. in Ore.	47	738,818
Ohio	5	10,858,797	10	1,521,764	3	3,427,478	3	8,244,835	1	**26,622,490**	4	4,764,309	2	134,499,335
Oklahoma	1	**45,798,765**		See Note o.	7	r 847,357	7	860,159	32	562,929	33	337,429	14	26,586,751
Oregon							17	250	33	555,768	36	286,414	40	2,743,434
Pennsylvania	7	9,424,325	1	**18,254,806**		See Note r.	1	**19,104,944**	2	14,842,982	1	**10,274,110**	1	**473,083,212**
Rhode Island											28	556,474	48	708,694
South Carolina									31	615,248	34	297,874	43	2,081,001
South Dakota				See Note m.			13	24,400	45	63,847	40	131,994	33	8,528,234
Tennessee				See Note n.			16	350	23	1,230,434	16	1,310,651	19	19,277,031
Texas	4	11,206,464	12	o 917,977	8	442,571		See Note s.	14	2,066,735	26	659,574	24	15,212,929
Utah	14	i 17,775	14	p 507,603	9	242,678			29	658,517	35	286,414	15	26,422,121
Vermont									44	89,064	2	7,152,624	31	9,313,129
Virginia			15	q 502,225		See Note r.			21	1,499,130	22	796,428	25	13,127,395
Washington				See Note l.					13	2,104,289	15	1,367,191	27	11,610,224
West Virginia	6	9,523,176			10	145,157	2	14,837,130	10	3,261,736	23	772,534	4	77,465,737
Wisconsin									24	958,395	9	2,850,920	29	11,052,151
Wyoming		See Note l.								52,282	41	72,947	30	9,453,341

PRODUCTION OF THE PRINCIPAL MINERALS AND METALS, AND THE TOTAL VALUE OF ALL MINERAL PRODUCTS IN THE UNITED STATES, BY STATES—Continued

a. Includes Alaska.
b. Includes Texas.
c. Includes Massachusetts.
d. Includes Maryland and West Virginia.
e. Includes Nevada, New Mexico, Utah and Wyoming.
f. Includes unapportioned copper.
g. Includes Alabama, Maryland, South Carolina and South Dakota.
h. Includes Missouri.
i. Includes Wyoming.
k. Includes Georgia.
l. Includes Washington.
m. Includes South Dakota.
n. Includes Kentucky and Tennessee.
o. Includes Oklahoma.
p. Includes Arizona.
q. Includes Maryland and Massachusetts.
r. Includes Illinois, Pennsylvania and Virginia.
s. Includes Alabama and Texas.

THE FISHERIES OF THE WORLD.—The fisheries of the world constitute one of its most important industries, and at the same time furnish a very important part of the material used for human food. The aggregate value of the catch for a single year cannot be closely estimated, but it must exceed the sum of $100,000,000, a sum, let us say, equal to the cost of half a dozen battleships.

Capture of Fishes.—Fishes are taken on every shore of every country, some species in nets in sandy bays, some with hook and line or other devices from among rocks, some in great schools in the open sea while migrating to and from their spawning grounds, some as they enter rivers for the purpose of spawning in fresh waters.

To the first class, those taken in sandy bays, the great majority of the different species belong, notably the tribes of the croakers and drums, the sea bass, the sardines, the barracudas, the mullets, the flounders and soles and the great array of scaly fish of the sea.

About rocks are found the hosts of rock cod, of wrasse fishes, of groupers, and, in tropical regions, of parrot fish and the multitude of forms which swarm about the coral reefs

The codfish and halibut, with their relatives, are mostly taken with hand lines in water relatively deep.

In schools in the open sea are the mackerel and nearly all of its many relatives, from the mighty swordfish and the giant tuna, to the little chub mackerels that swarm on the coasts of all northern regions.

The Salmon Fisheries.—As important as any of these groups is that composed of anadromous fishes—that is, of fishes which ascend the rivers to spawn.

Red Salmon.—Easily first among these is the red salmon of the northwestern waters, which runs in the rivers at the age of four years, every individual of either sex dying after spawning. This species runs only in streams having lakes in their course. It spawns in gravelly streams at the head of the lake. The young spends the first year in the lake, then passes down to the sea, where it feeds on young crabs, small herring and the like, returning when four years old to cast its spawn, for the most part, in the same river in which it was hatched. This species reaches a weight of about six pounds. It is chiefly used for canning. Its flesh is very red, but inferior in flavor to that of the king salmon.

The King Salmon, or quinnat, of the Pacific ranks next in value among anadromous fishes. It is much larger than the red salmon, averaging twenty-two pounds and sometimes reaching 100. Its flesh is more delicate, but the aggregate value of the species is less, as it is far less abundant in Alaska, although it is the dominant species in the Columbia, the Sacramento and the Amur. It, too, ascends streams to their fountain heads, but it is not restricted to those with lakes. Both species ascend the Yukon river as far as Lake Labarge, upward of 2,000 miles, and both follow the Fraser and the Columbia to the uttermost waters.

Other Species.—Four other salmon of the Pacific are of value—the Atlantic salmon, the steel-head of the Pacific, the sturgeon of many species, fishes of great value for their steak-like flesh and for their eggs used as caviare; the shad, the alewife, the striped bass, the smelt, the eulachon and numerous less known fishes of the tropical and south temperate zones.

The Lake Fishes.—There are also fishes in enormous variety in the rivers of the world, and especially in the lakes. First among bodies of fresh water come the Great Lakes of North America, and among these Lake Erie ranks highest as having for its size the most valuable fresh water fisheries of the world. Of the fresh water fishes the whitefish of the lakes ranks first in value, though some other species less esteemed, as the lake herring and the pike perch, sometimes yield a larger output.

Cod Fisheries.—The cod and halibut, with the haddock, pollack and other lesser fish, swarm off the rocky coast of Iceland, British Columbia, Newfoundland, Alaska and eastern Siberia. The cod especially furnishes a fishery of the greatest importance.

Tropical Fisheries.—In the tropical seas the number of species is vastly greater, but none of them is so abundant in individuals. A single haul of a small net at Key West, Fla, yielded seventy-five species of fishes, almost as many as all that frequent the shores of the British isles. There are 500 species of fishes found at Samoa, the majority edible. This is as many as are found in the whole of Europe. North America has upward of 2,500 species, in fresh and salt waters, and about 12,000 are known over the whole world. There are many species in deep waters. Some of these are valuable for food when the proper gear for taking them can be used.

Deep Sea Fishes.—Fishes are found to the depth of nearly five miles. Those in great depths are black in color, flabby in substance, and either blind or else provided with very large eyes and luminous spots, like lanterns. In some cases these luminous spots are on the end of the nose, like the headlight of an engine. In moderate depths, as one-eighth of a mile, most species are bright red. These red fishes are often of great value as food. They are now sought for in many regions by means of long hand lines or the beam trawl.

In temperate regions, as in the United States, in England and in Australia, only a few of the many sorts of fishes are utilized as food. The others meet no sale, even though in many cases they may furnish good food. But in tropical markets, as in Italy, Cuba, Hawaii and Japan, nothing is thrown away. All kinds of sea-flesh not actually harmful is preserved, and in these markets a most interesting variety of sea animals may be seen.

Artificial Hatching.—The process of the artificial hatching of fishes has now risen to great prominence. In nature the eggs of fishes are usually scattered about in the water to be fertilized by the similarly scattered milt, or germ cells of the male. In some cases, as the black bass, the male builds a rough nest and guards the eggs and the young. But this is not the usual rule. In general, the eggs are at the mercy of other fishes, crabs, and even of multitudes of bacteria. Not one in a thousand usually matures, often not one in a hundred thousand. By taking the eggs, and washing them with the milt artificially a vastly larger number can be made to hatch. By caring for the young and by depositing them in suitable places, as many as one in a hundred or even one in twenty can be brought to maturity. This work has been especially successful with whitefish, lake herring, the various kinds of trout and salmon, and the pike perch.

In case of a few species, as the black bass, and sturgeon, artificial fertilization of the eggs has been found impossible. In the great majority of cases, however, the process is very successful.

Output of Artificial Fish Hatcheries.—Numbers of young fish planted by the United States fish hatcheries and private hatcheries:

Salmon	164,648,170
Trout	75,839,430
Whitefish	419,665,000
Shad	57,378,000
Striped bass	1,599,195
Pike perch	644,900,000
Yellow perch	223,661,285
White perch	343,262,650
Cod	184,426,000
Flounders	786,626,000
Other fish	40,617,180
Lobsters	164,509,000
Total	3,107,131,910

Fishing Nations.—Among the fishing nations, the United States, Great Britain, Norway, France, Canada, Italy and Japan rank first. In northern regions there are relatively few species, but these few run in enormous numbers. The herring schools on every northern shore, above the latitude of Boston and as far as the Arctic circle. Björnsön says that wherever the herring schools touch the shores of Norway a town springs up, like driftwood cast up by the sea; so it is in Ireland, Scotland, Canada and Japan, and so it will be some time in Alaska. Huxley estimates that there are more herring in existence than individuals of any other kind of fish.

In the Atlantic the mackerel has also its vast predatory schools, but the true mackerel is not in the Pacific.

FORESTS.—Reliable data regarding the forested area of many countries are difficult to obtain, owing to imperfect surveys, lack of statistical facilities, etc. For Europe and the United States the reports are more complete.

The percentage of land under forest in Bosnia and Herzegovina is reported as being about 53 per cent, 45 per cent in Bulgaria, 44 per cent in Sweden, 40 per cent in Russia, 30 per cent in Austria-Hungary and Luxemburg, 26 per cent

in Germany, and 21 per cent in Norway; the remaining countries of Europe have less than 20 per cent forest land.

The forests of India embrace about 13 per cent of the area of that country, of Japan 59 per cent, of Canada 40 per cent, and of the United States about 36 per cent.

In Europe a large portion of the forests belong to the state, and from them important revenues are obtained. The percentage of domain forests amounts to 84 per cent in Spain, 80 per cent in Greece, 70 per cent in Bosnia and Herzegovina, 61 per cent in Russia, 47 per cent in Roumania, 33 per cent in Germany, and 27 per cent in Sweden.

Lumbering.—Comprises the felling, and preparing of wood for building purposes, shipbuilding, furniture manufacture, paper making, and a variety of other uses. It forms one of the most important industries of the United States, Canada, and of some European countries. The industry, especially in America, is well organized, and is subdivided into:

1. Logging, which includes the felling, cutting in lengths, and transporting to the mill.

2. Sawmilling of the logs into rough timber, beams, joists, boards, and laths.

3. The planing of these.

In the Northern states and in Canada lumbering is chiefly carried on in winter, and the logs are transported on sleighs over the icy roads to rivers and lakes, where they are floated either singly or in rafts to the mills.

The chief wood-exporting countries are the United States, Canada, Austria, Norway, Sweden, and Russia; Great Britain and Germany being the largest importers.

BUSINESS AND COMMERCE

BUSINESS ORGANIZATION, ADMINISTRATION AND ECONOMICS

BUSINESS ECONOMICS.—All industries are conducted for purposes of profit. Their size, their organization and management are subordinate to this main consideration of yielding returns on the investment.

The investor in a modern enterprise, unless he has the majority of stock and thus the controlling interest, does not shape the business policy of the undertaking.

Classes of Industrial Enterprises.—All enterprises may be divided into two categories:

Non-Speculative Industries, or those attended with ordinary business risks; and

Speculative, or those in which the risks are unusually large.

In order to induce investments in the latter class of industries the allurement of exceptionally high profits is necessary. It may be noted here that some profits of this kind are at their best doubtful, and that many illegitimate schemes have been launched by unscrupulous promoters under the guise of an industry.

Methods of Financing.—The owner may have sufficient means to carry on and develop his business, but this is not the usual method of financing. When more or less large amounts of capital are required, three alternatives are open to the owner: (1) Borrowing money; (2) taking in moneyed partners; (3) incorporating and offering stock for sale.

The first two methods are not always feasible and have many disadvantages, such as the necessity to meet loan and interest obligations frequently at most inconvenient times, the partner's interference with the management, etc. The third plan may be considered the best, and it is the one most often used.

Selling "Stock."—There are two ways of offering shares to capitalists; one, by personally presenting the case to friends or strangers by means of interviews or correspondence; the other, by appealing to the public through circular letters, newspaper and magazine advertisements, etc. In either case, *a prospectus*, describing the nature of the enterprise, its scope and its special advantages, is usually prepared.

The Prospectus should be a document containing neither exaggerations nor misrepresentations, but at the same time putting the proposition in a most favorable light. It should be carefully arranged, and, while giving details (would-be investors are naturally inquisitive), it should not be overloaded with immaterial facts which might obscure the main issue. The writer of a prospectus must know what to omit as well as what to include in his paper.

Evidential Facts.—To substantiate facts contained in the prospectus, reports, certificates, analyses, abstracts of title, etc., must be on hand, so that any one desiring to investigate the proposition may be immediately shown all the data proving the accuracy of the promoter's assertions. An investigation before investment, unless the offer is of gilt-edged stock or bonds of national reputation, is imperative. When the prospectus is distributed, a personal or a facsimile letter generally accompanies it. In this letter are set forth the strongest features of the project.

A Financial Statement, indicating definitely how much money is needed, for what purposes, and how much stock is offered to secure the amount, is sent only to those parties who are sufficiently interested to justify the beginning of negotiations.

Importance of Efficient Management.—The nature of the enterprise is of comparatively little importance to the average investor as long as his capital is protected and his income assured; but he cannot be sure of either unless the undertaking is sound, well organized and efficiently managed. Some enterprises have failed because of lack of adequate capital, but immeasurably larger is the number of those which have come to grief either because of poor foundation or because of mismanagement.

Classification of Industries.—Legitimate industries may be divided into the following classes:

Extractive, under which heading are considered mining, agriculture, forestry, fishing, and hunting;

Manufacturing, whether by the handicraft or the factory system;

Distributive, or those concerned solely with the marketing of products.

Auxiliary to these are the pursuits of *transportation, banking, insurance*, and *warehousing*, which because of the division and the specialization of occupations have become distinct enterprises.

The Business Unit in extractive industries is comparatively small, seldom reaching the size of modern manufacturing, merchandising, or transportation concerns; having smaller capitalization per unit and employing fewer laborers, it is simpler in structure.

With the breaking up of plantations and large estates, with the ever-increasing demand for intensive cultivation of small areas, farming particularly is lacking in the complex and extensive organizations so characteristic of the factory system.

Natural Conditions.—One of the essentials of the extractive industries is their great dependence upon natural conditions for their success or failure. Unless natural supplies are present and accessible, no amount of capital, administrative skill, or labor, and no combination of these factors will produce a profitable mine, quarry, or lumbering camp, and no farm will pay unless climatic conditions are favorable and the soil is good or can be made so. Efficiency of labor and of equipment, proximity to the market and good transportation facilities are important, but it is nature, with its deposits of mineral wealth, its sunshine and rainfall, its fertile soil, its rivers filled with fish, its world of animal and vegetable life—it is nature which gives the chief value to each extractive industry.

Correct judgment as to the extent to which each extractive enterprise may be capitalized is therefore necessarily based upon exact knowledge of natural conditions. The public so eager to join "get-rich-quick schemes" must in most instances blame no one but itself for its losses.

All the assertions of a fraudulent or of an overenthusiastic promoter cannot create a rich gold mine or a petroleum gusher. If these exist, their presence as well as their commercial worth can be ascertained beyond reasonable doubt by modern methods of careful scientific investigation.

Organization.—It was in the *manufacturing industry* that the new type of business organization arose. The highest expression of this industry—the factory system, with its modern steam and electrically driven machinery—has increased a thousand fold the efficiency of men; it has given an opportunity to exercise the highest strategic ability in the massing and grouping of laboring forces, and in the direction of these forces toward the common goal—the production of finished commodities. Out of materials most of which in their raw state are useless the mill and the factory produce a bewildering variety of goods, capable of sustaining us, of supplying our needs and wants, of giving us joy and comfort.

Factory System.—The work in the factory necessitated the coöperation of individuals on a scale unknown in any other type of industrial activity. The process of production was divided into many component parts, each part dependent upon the other and the whole calling for a systematic

coördination of effort. Unless there was one ruling spirit dominating the part-activities of the mammoth factory, all its capable workmen, all its powerful engines, all its delicate and intricate mechanism, all its rapidity of motion would have been of comparatively little value.

Specialization.—From the operating rooms of the factory, the principles of specialization were transferred to the offices and to the counting-houses, to the banks and to the department stores. Every branch of human endeavor where the scope and the importance of duties required a differentiation of functions, a strict fixing and enforcing of responsibilities, and an assumption of central supervision and control learned the value of subdividing into departments and of combining the related parts into a harmonious working unit.

The Essentials in the organization of each business are more or less alike. The departments must correspond to those natural divisions into which a concern resolves itself and thus fit the peculiar conditions of a specific enterprise, but the guiding principles of organization are the same, whether we deal with a factory, a transportation company, or a jobbing house.

The Problems which business organization must solve are problems of uniting a body of individuals in such a way that, grouped for the performance of certain transactions, they may work without waste and friction, adding to the precision of a machine the intellectuality of men.

Departments.—A large business concern is divided into departments because of the fact that the different kinds of work which must be performed in such a concern demand special training, both on the part of the authorities who govern the work and on the part of the subordinates.

Different methods of procedure characterize the *purchasing*, the *advertising*, the *manufacturing*, the *accounting* and other activities of a business unit. In order to secure successful results, each activity is placed under the immediate supervision of *specialists*, who act as heads of departments and direct the labor placed under their control. The sphere of action and the responsibility of departmental heads is clearly defined. This insures the greatest accuracy, economy, and dispatch.

The primary divisions of a business enterprise, regardless of its size or nature, are as follows:

1. *The Executive* (managerial) division.
2. *The Commercial* (and office) division.
3. *The Productive* (factory, mine) *or the Handling* (transportation service, store) division.

The subdivisions and the departments vary, groupings being effected and systems evolved which lead to the most effective operation of business.

In a factory the number and the character of the departments is determined by the demands of a standardized machine production which moves materials with an automatic regularity from one stage of manufacture to another until they reach as finished commodities the selling end of the organization.

The more general departments of a factory are the *receiving room*, the *storing room*, *designing*, *drawing and experimenting rooms*, *tool-rooms*, *power*, *fuel and lighting plants* and the *shipping room;* to these are added different workshops, such as foundry, assembling and erecting rooms, etc.

The commercial division consists of *accounting*, *correspondence*, *advertising*, *selling*, and *credit and collections* departments. A *legal department* is usually connected with credit and collections.

Management.—Most of our modern large undertakings are organized as corporations and the same initial executive authorities may be found in each concern.

Directors.—The proprietors or stockholders elect a *board of directors*, the latter selecting the executive officers—president, vice president, secretary and treasurer. If the board of directors is too numerous for an expeditious handling of affairs it either elects or appoints an *executive committee*. Some of the very large firms have also an advisory committee and a number of subcommittees to supervise special branches of their activity, such as finance, improvements, sales, etc.

General Manager.—Under the board of directors and responsible to it is the general manager, who has direct control over all the departments. He must possess constructive ability, his qualifications including wisdom and skill in selecting the right kind of men for various positions and of cultivating a spirit of fellowship and good-will in the staff.

The general manager formulates (in conjunction with the president and the board of directors or the executive committee) the business policy of the enterprise; he must therefore be familiar both with the technical and the commercial side of the business; he must understand the workings of every department, not only the details which should be left to the clerical force, the factory workmen, the foreman, the salespeople, but the main principles governing the relation between the man and the tool, the effort and the result.

A successful manager combines with a determination to carry out plans once formulated an adaptability to changing conditions and a willingness to accept suggestions. Such a manager inspires confidence in his superiors and commands the obedience and respect of his subordinates.

In a manufacturing concern his immediate assistants are a *superintendent*, at the head of the manufacturing division, and a *comptroller* or auditor, under whose direction is the commercial branch.

Under the superintendent are the chief engineer, the chief draftsman and foremen who supervise the work in the shops; under the comptroller are the chief accountant, the head of the correspondence division, the sales manager, the advertising manager and the credit man.

Accounting.—The accounting department, although not engaged in the active forwarding of business, is of supreme importance. In this department the *bookkeeper* and his assistants keep records of every transaction, from the largest to the smallest, thus furnishing data for an insight into the workings of every branch of the business. There are two main systems of bookkeeping—the *single entry* and the *double entry*. The difference in the methods is indicated in their names; the first method consists in a single, the second in a double recording of commercial facts in the account books of the concern (the journal, the ledger, the cash book, the stock book, etc).

A single entry only registers the personal relations of the firm with its creditors and debtors and the variations in stock and cash on hand; the double entry, by having for each credit a countervailing debit and *vice versa*, indicates also the gains and losses; it shows the interdependence existing between the various factors which make up a business enterprise and it permits a rapid detection of mistakes in posting. The double entry system is the one most generally adopted, single entry being confined to small enterprises or to those very few of the somewhat larger concerns which are blind to the evident superiority of the double entry.

The Auditor is the officer of the accounting department who evolves systems of accounting, passes on the correct posting of data and sees to it that every item is charged to its proper account. The auditor also prepares comparative statements and other reports, such as inventories, pay rolls, etc.; these are submitted to the general manager, thus enabling the latter to know always the firm's standing.

The highest officer in the department is the chief accountant. He dissects and analyzes the facts of the business as they are revealed by the accounts; he estimates the cost of production and traces to their sources all profits and losses. He must be able to look far beyond the books of the company; the general principles of similar businesses and their relation to the commercial and financial world at large must be known to him. Without this, he cannot have an intelligent appreciation of the statistical business facts in a particular enterprise and cannot make suggestions as to improvements.

The keenness of present day competition does not allow haphazard methods; the whole drift of modern industry is toward a systematic decrease of production-costs and an increase of business efficiency. This explains the great value of the chief accountant's work.

Distributive Industries.—Raw materials, particularly agricultural products, are marketed through the medium of *boards of trade* or *exchanges*. Such goods are bought by either domestic manufacturers or exporters; in both cases the transaction involves a comparatively large quantity of a commodity and the buyers demand a certain definite grade or quality. The supply comes from widely separated sources, from small farms and large estates, from every rural community which produces in excess of its home consumption. The problem of concentrating the supply is solved by the existence of a special class of traders who have established themselves at those strategic points which, because of their geographic position, have become primary markets for the sale of such goods as wheat, raw cotton, provisions, tobacco, live stock, etc.

Exchange.—To facilitate the handling of business, the traders have formed associations known as produce exchanges or boards of trade. An exchange is a corporation controlled by the law of the state in which it is located. Its charter sets forth the object of the association, which usually is to provide rooms where the members may meet, to establish and maintain uniformity in commercial usages of the place, to acquire and disseminate business information, and to adjust controversies between the members.

How Constituted.—Each exchange frames its own constitution and by-laws. The latter indicate who may be admitted to membership as well as the conditions on which the members are allowed to transact business. Violations of the rules meet with prompt punishment ranging from a few dollars'

fine to expulsion from the exchange. The number of members is invariably limited.

Like all other corporations, exchanges are governed by a board of directors or managers elected by and from the members of the exchange. The board appoints various standing committees (a law committee, a floor committee, a finance committee, a trade committee, etc.), as well as all the employes and agents, such as secretary, attorneys, inspectors, weighers, gaugers, etc.; it enforces the rules of the exchange and it supervises the financial and other affairs, as well as the property of the organization. In order to defray the expenses of the exchange an annual assessment is made upon each certificate of membership.

The contracts concluded on the exchanges may be divided into *spot, or cash, dealings* and *futures*.

Spot, or Cash, Transactions represent the purchase and sale of goods available for immediate delivery. These goods are either in cars on railroad tracks or in warehouses, and they are offered for sale by means of samples. Each sample is provided with a certificate of *grade*. In most states the inspection of great staples and their grading as to freedom from impurities, soundness, color, etc., is conducted by public officials, the state thus guaranteeing the grade; this is particularly true of grain.

Warehousing.—Exchanges have evolved a carefully devised system for regulating the trade in each commodity. If the goods are not unloaded, the samples are accompanied by a ticket indicating the name of the railway company over which line the products have come and the number of the car which holds them; if they are unloaded and stored in a *regular warehouse* (by "regular" is meant a warehouse recognized and supervised by the exchange), then a *warehouse receipt* is offered to the prospective buyer. The receipt shows that a certain quantity of goods of a certain quality has been accepted by the warehouseman and is ready for delivery. When a sale takes place the receipt is indorsed by the seller and given to the buyer.

Warehouse receipts are unquestioningly accepted by dealers because they are confident that each receipt represents goods actually in the possession of the warehouseman, and that these goods will be delivered to them on the presentation of the document.

Futures.—The concentration of distribution in a few central markets, the character of the commodities dealt in (staples), the readiness with which the price of these commodities responds to world-wide influences of supply and demand, have created a tendency for speculation on the floors of the exchanges. Speculative transactions are generally known as *futures*.

Futures have developed from ordinary time dealings and they are not necessarily speculative in their character; among buyers of futures may be found millers, spinners, distillers, and other manufacturers who buy in order to cover their future needs for raw materials; among sellers are many farmers who dispose of their products before harvesting at a current price which they consider advantageous.

Nature of Contract.—A necessary condition for the existence of futures is a well-regulated market for classified standard commodities. The contractual stipulations of futures conform to the requirements of the exchanges as to grades, units of amount and terms of delivery. Each exchange has an accepted form of contract which leaves open to the contracting parties the determination of the price, the month of delivery, and the total of the amount (always in the accepted unit or its multiples).

In the majority of instances both buyers and sellers of futures are speculators. The buyers purchase because they anticipate a rise in price, and the sellers assume obligations because they believe the price will drop.

Bulls and Bears.—Those speculators who have bought with the intention of reselling before the date of delivery are known as *bulls*. They naturally take advantage of every opportunity to influence the market in the direction of higher prices.

Those who have made sales without possessing the goods are known as *bears*. Their efforts are directed toward depressing the market, as they must buy before they are called upon to meet their obligations.

Margins.—Many outsiders speculate on the exchanges; to do so they resort to the services of *exchange brokers;* the trading is usually done on *margins*, the margin being a deposit of so many cents per bushel, bale, or other unit of product. The amount is given the broker to protect him in case the market goes against his customer. It must be understood that the broker, as a member of the exchange, is held responsible for the fulfillment of all the contracts concluded by him. Should unfavorable price fluctuations exceed the deposited amount, an additional margin is demanded by the broker, and if the demand is not met, then the transaction is wound up and the sum originally deposited is forfeited. For his services the broker is entitled to a commission, the rate of which is established by the exchange.

Delivery.—The majority of futures do not involve an actual delivery of goods; the purchase and sale contracts are compared, and a payment of the difference between the two prices liquidates the transaction.

Privileges are a form of speculative contracts officially recognized by the exchanges; they are concluded either before or after the regular trading hours. Privileges are *puts, calls*, and *straddles*.

The *put* is a contract by which a person acquires the right either to deliver or not to deliver a certain amount of goods at a stipulated price; the taker of a put receives a fixed consideration for which he agrees to accept the goods if they are offered for delivery.

In a *call* contract the right is acquired to request or not to request the delivery of goods at a specific price.

A *straddle* is a combination of a put and a call. It permits the purchaser of such a contract either to call for goods or to deliver them.

The takers of privileges accept the risks because they expect the market conditions to be such as not to warrant their being asked to fulfill their part of the contract. Privileges are often used by bears and by bulls as means for speculative insurance. A bear, for instance, buys calls; this enables him, if the price rises, to meet his obligations by requesting the taker of the call to deliver the goods in his stead.

The Sale of Manufactured Goods.—In the marketing of agricultural products the problem confronting distributers is that of concentrating the supply; in the sale of manufactured goods their task is that of dividing the supply into small units in order to reach the numerous final consumers. The methods used are necessarily different from those employed in the first case. Dealers in finished commodities do not belong to closed market organizations demanding certificates of membership and regulating the trade.

Direct Selling.—Any one may at any time operate in any market as a wholesaler or a retailer, and the selling organization of any factory may eliminate both, and enter into direct relations with the consumer. The latter system, that of *direct selling*, has been gaining ground recently; factories establishing their own retail stores, sending out canvassers, or conducting a mail-order business. In each case the producer seeks to gain control over the market, to create and to maintain a demand for his particular goods.

Illustrations of the *factory retail store method* may be seen in the Regal, Douglas and Walk-Over shoe stores, in the Huyler's or Gunther's candy stores, in the United Cigar stores, and in a number of stores established by typewriter and camera manufacturers. Each store is responsible to the main office, with which it must keep in close touch.

The *canvassing method* is used especially by the publishers of books and magazines.

The *mail-order system* is used by the makers of furniture, of ready-made clothing, of novelties, etc.

Many manufacturers, for the purpose of regulating the sale of their output, have established *exclusive agencies*, which are modifications of the retail store plan; this method relieves the manufacturers of the necessity for entering into the retail sale business, at the same time permitting them to assign territories, determine prices, observe the market conditions, and push sales. The agent is usually selected from among reputable retail dealers best fitted to handle the goods.

The Mail-Order Business has grown to large proportions within the past two decades. It has been adopted not only by manufacturers but also by a number of retail firms, which from some central distributing point reach every town, every village, and every farm in the United States. They send out elaborate catalogues and other advertising literature, describing their goods and offering them at prices which usually cannot be met by the local general store.

Montgomery Ward & Company, and Sears, Roebuck & Company, both of Chicago, are the two most important concerns of this character, their yearly business running into many millions of dollars. Most department stores maintain mail-order branches.

Wholesalers and Jobbers are intermediaries between producers and retailers; in some instances their activity has been superseded by direct dealings between the factory and the consumer, or the factory and the large retailer, but as yet they are a very important factor in the campaign of distribution. They control the trade of such storekeepers as do not buy in sufficiently large quantities to enable them to deal directly with manufacturers, thereby securing wholesalers' discounts.

Many retailers prefer the services of the *jobber*, because buying from the factories necessitates the placing of orders many months in advance, and because dealing with the jobbers permits them to carry a more diversified stock; the jobbers gather the outputs of many mills, from which their customers may make selections and take the desired quantity.

Most wholesale houses specialize in one line of goods, such as clothing, groceries, drugs, dry goods, hardware, etc.; however, there are a number of general jobbing houses. The retailers are reached by means of traveling salesmen or catalogues; frequently a combination of the two methods is adopted.

Department Stores.—A most interesting phenomenon in the retail business has been the rise of the *department stores*. These stores have acquired a large share of city trade. Their business policy may be summed up as follows: Small profits on each sale, provided this leads to a quick turnover of capital; one price plainly marked; exchange of goods or refunding of money in case of dissatisfaction; cash payments, the granting of credit being an exception.

Organization and Advantages.—The buying division of a department store, alert as to where, when, and how to buy most advantageously, is connected with many sources of supply; department stores can secure better purchasing terms than small dealers because they buy in large quantities; their expense of handling goods is also proportionately smaller than the expense of those stores where there are only a few articles of each kind. This enables such stores to ask lower prices. Department stores offer to patrons many shopping comforts not to be found elsewhere; the stores are characterized by spaciousness; they are well lighted and ventilated, have reading and retiring rooms, etc. The possibility of doing practically all the shopping under one roof is another great advantage.

The main strength of *special single line* stores (they hold their own in cities) is in the higher grade of articles they carry and in the placing of personal service above all other considerations. Their patronage comes largely from the well-to-do who seek quality and style, for which they are willing to pay. In certain lines of retail business special stores predominate; this is true of drugs, groceries, musical instruments, etc.

The Foreign Market.—The foreign markets of the United States are usually considered from the point of view of export business, the fact being overlooked that in these markets our country is buying annually over a billion and a quarter dollars' worth of goods, and that there are many problems to solve in connection with importations from abroad.

Importing.—Goods coming from foreign countries are admitted into the United States only at some *port of entry*, which is usually also a *port of delivery*, or a place where the importer may, upon the payment of customs duties and other charges, receive the merchandise. For the convenience of importers a number of inland points have been designated by the government as ports of delivery.

Bonded Warehouses.—All imported merchandise may be *entered* either for *consumption* or in *bond*. In the first case, the duty must be paid immediately and the goods may be withdrawn to any place to suit the convenience of the consignee; in the second instance, the *collector* of the port, who is the chief executive officer of the customs district, requires a bond double the amount of the estimated duties; the goods must be either placed in a *bonded warehouse* at the port of arrival or entered for transshipment via a *bonded route* to some interior port of delivery. The importer is thus relieved of the necessity of paying more or less large sums of money to the government before he actually needs the goods.

All *bonded warehouses* are placed under the control of specially designated customhouse officials, and they must comply with certain regulations regarding the receipt and the custody of goods; the storage charges are usually somewhat higher than in ordinary warehouses.

Customs Regulations.—Goods are admitted into the United States by filing a *declaration*, the form of which is prescribed by law. When the value of imports exceeds $100 a *certified consular invoice* must be presented by the consignee to the customhouse through which the articles are to pass. This invoice contains a detailed statement of the consignment, indicating the quantity, the nature and the prices of the things imported, as well as all the costs incidental to their shipment to the United States.

The name consular is given to the invoice because its accuracy is guaranteed under oath before an American consul in the district from which the merchandise is exported; the consul certifies to this fact by affixing his seal and signature to the document. In case a certified invoice cannot be produced at the time of making the entry, a *pro-forma invoice* must be presented and a bond be given to the government for the subsequent production of a certified invoice.

It is of great importance that the goods when entered should be designated according to their classification in the tariff, and that they should be assigned to their proper class, as the class regulates the rate of duty. For the purpose of avoiding sometimes costly mistakes importers resort to the services of *customhouse brokers*, who make entries for them and see to it that all the customs administrative formalities are complied with.

The Appraiser.—When goods arrive, one package out of each ten is sent to the appraiser's store; the *appraiser* examines it, and decides whether its contents correspond to the invoice and whether the declared price is correct. Should the appraiser's findings warrant an advance in the price of over 10 per cent, a penalty fine is levied, and in case the advance is over 40 per cent, the goods may be confiscated. A *protest* against the decisions of a local appraiser may be submitted by the importer to the *board of general appraisers*.

Exporting.—Large manufacturing concerns doing export business have their *agents abroad*, who work in territories assigned to them. This is the most satisfactory way of meeting foreign competition, of gaining new and keeping old customers. However, this method is too expensive for smaller firms. These latter deal with possible purchasers either directly by means of *correspondence*, or indirectly by intrusting their interests to the care of *export commission houses*.

Export commission houses may be regarded as resident buyers for foreign merchants; they receive orders from abroad, finance the payment of bills, and direct the shipment of goods; they are paid for their services a commission of about 2½ per cent.

Methods.—The sending out of *traveling salesmen* and *advertising* in foreign countries are both increasing in importance as methods of developing export business.

Export Syndicates.—In some countries merchants carrying on an export and import business form *export syndicates* whose objects are to keep its members posted concerning the conditions in foreign markets, the financial standing of buyers, trade opportunities, tariff changes, etc.

Commercial Museums.—A very important institution for the promotion of foreign trade is a commercial museum. It is usually of a quasi-public character and is established and maintained either entirely by state and municipal authorities or with their assistance.

Commercial museums *exhibit sample products* from various parts of the world thus showing what these places offer in the way of return trade; they also show samples of articles which are in demand in these localities and which are sold there by foreign competitors. These displays, arranged both geographically, by countries, and monographically, by products, offer an effective and rapid method for gauging foreign markets. The exhibits are supplemented by information as to origin, industrial value, use and price of each article displayed.

Commercial museums promote private enterprises only by acting as disseminators of mercantile knowledge.

Special Knowledge Required.—An essential *condition for success* in foreign markets is a knowledge of the customs, tastes and peculiarities of the people whom the exporter wishes to reach. If catalogues, circulars or price lists are sent out, they should be written in the language of the country for which they are intended, and the indications of weights and measures, as well as the quotations of prices, should conform to those used abroad.

Packing.—In packing goods the exporter should closely follow the instructions sent him, remembering that goods are liable to damage on long sea voyages, as well as because of rough handling in many localities where proper facilities for loading, unloading and transshipment do not exist.

Marking.—If there are many packages in a consignment, it is advisable to adopt a *distinctive mark*, placing this mark and a consecutive running number on each package; this permits a quick reassembling of goods should they become separated.

Invoicing should be very carefully done, because invoices must be presented to the customhouse officials abroad. A carelessly or improperly prepared invoice may prevent the entry of goods, thus creating delay.

All goods shipped abroad must be *cleared* at a customhouse, the owners, shippers, or consignors delivering to the collector of the port from which the goods are shipped *manifests* specifying the kinds, quantities, values and destination of the merchandise.

When the steamer is loaded the captain files with the collector a full and complete manifest, which contains a detailed list of each consignment composing the ship's cargo. This manifest, after it has been certified by the customs officer, is returned to the captain together with *clearance papers*.

Tariff Legislation.—The act of July 4, 1789, was the first tariff law enacted by Congress. Since then thirty-five principal tariff laws have been in force for various periods. The last law was approved August 4, 1909. The raising of revenue and the encouragement and protection of domestic manufactures has been the object of all these laws.

FOREIGN TRADE OF THE UNITED STATES

EXPORT TRADE

Articles—Domestic Merchandise	Values
Agricultural Implements	$ 35,973,398
Aluminium and Manufactures of	1,330,018
Animals	19,048,653
Books, Maps, Engravings, and Other Printed Matter	7,088,994
Brass, and Manufactures of	6,230,092
Breadstuffs, Corn	35,961,479
Breadstuffs, Oats	832,718
Breadstuffs, Wheat	22,040,278
Breadstuffs, Wheat Flour	49,386,946
Cars, Carriages, and Other Vehicles and Parts of	30,534,936
Chemicals, Drugs, Dyes, and Medicines	23,007,414
Clocks and Watches, and Parts of	3,126,771
Coal, Anthracite	15,690,331
Coal, Bituminous	29,323,105
Copper Ore	1,095,296
Copper, Manufactures of	103,813,110
Cotton, Unmanufactured	585,318,869
Cotton, Manufactures of	40,851,918
Earthen, Stone and China Ware	3,138,188
Fertilizers	10,721,132
Fibers, Vegetable, and Textile Grasses, Manufactures of	8,565,990
Fish	7,698,321
Fruits and Nuts	24,498,465
Furs and Fur Skins	10,473,517
Glass and Glassware	3,246,391
Glucose or Grape Sugar	3,395,383
Hay	1,032,591
Hides and Skins	4,802,637
Hops	2,130,972
India Rubber, Manufactures of	12,452,562
Instruments for Scientific Purposes	12,421,512
Iron and Steel, Manufactures of	230,725,351
Leather, and Manufactures of	55,673,057
Malt Liquors	1,075,559
Marble, Stone, and Manufactures of	1,690,180
Musical Instruments	3,471,401
Naval Stores	25,022,720
Nickel, Nickel Oxide and Matte	6,004,414
Oil Cake, Oil Cake Meal	19,631,127
Oils, Animal	788,860
Oils, Mineral, Crude	5,417,513
Oils, Mineral, Refined or Manufactured	92,698,003
Oils, Vegetable	19,805,232
Paints, Pigments, and Colors	6,294,746
Paper, and Manufactures of	19,215,499
Paraffin, Paraffin Wax	7,378,736
Provisions, Beef Products	25,235,461
Provisions, Hog Products	104,152,059
Provisions, Dairy Products	3,283,816
Seeds, Clover	577,929
Seeds, All Other	1,897,137
Soap	4,046,981
Spirits, Distilled	1,885,491
Starch	3,137,552
Molasses, and Sirup	2,106,226
Sugar	2,244,379
Tobacco, Unmanufactured	39,255,320
Tobacco, Manufactures of	4,383,584
Vegetables	5,545,091
Wood, and Manufactures of	92,255,951
Wool, and Manufactures of	2,293,473
Total Exports, Domestic	$2,013,549,025
Exports, Foreign Merchandise	35,771,174
Total Exports, Domestic and Foreign Merchandise	$2,049,320,199
Specie, Gold	$22,509,653
Specie, Silver	64,749,958
Total Exports, Domestic and Foreign	$2,136,579,810

IMPORT TRADE

Articles—Merchandise	Values
Animals	$ 6,850,964
Art Works	22,495,842
Books, Maps, Engravings, etc	6,033,075
Br stles	2,970,481
Cement, Portland, Hydraulic	324,949
Chemicals, Drugs, Dyes, and Medicines	95,101,006
Clocks and Watches, and Parts of	3,162,961
Coal Bituminous	4,975,914
Cocoa, Crude, and Shells of	14,552,879
Coffee	90,567,788
Copper, and Manufactures of (not ore)	32,013,562
Cork Wood, and Manufactures of	6,609,813
Cotton, Unmanufactured	24,776,320
Cotton, Manufactures of	66,996,551
Earthen, Stone, and China Ware	11,411,665
Feathers, Flowers, etc	9,845,344
Fertilizers	10,150,142
Fibers, Vegetable, Unmanufactured	30,752,250
Fibers, Vegetable, Manufactures of	54,765,999
Fruits and Nuts	41,515,067
Furs, and Manufactures of	23,618,948
Glass and Glassware	6,881,891
Hair, Unmanufactured	4,755,131
Hats, Bonnets, and Materials for	7,518,281
Hides and Skins, Other Than Furs	70,504,980
India Rubber and Gutta-Percha, Crude	92,910,513
Iron and Steel, and Manufactures of	34,205,968
Jewelry and Precious Stones	42,507,446
Lead, Ore, and Base Bullion	4,196,760
Leather, and Manufactures of	14,636,720

IMPORT TRADE—Continued

Articles—Merchandise	Values
Malt Liquors	$ 3,396,366
Meats and Dairy Products	13,890,535
Oils	33,023,687
Paper, and Manufactures of	18,626,880
Paper Stock, Crude	5,481,680
Rice	2,126,822
Silk, Unmanufactured	74,924,004
Silk, Manufactures of	31,900,054
Spices	4,946,200
Spirits, Distilled	6,076,929
Sugar	96,691,096
Tea	17,613,569
Tin, in Bars, Blocks or Pigs	37,935,978
Tobacco, Unmanufactured	27,855,996
Tobacco, Manufactures of	5,416,466
Toys	7,964,835
Vegetables	9,293,855
Wines	8,531,613
Wood, and Manufactures of	52,931,803
Wool, Unmanufactured	23,228,005
Wool, Manufactures of	18,569,791
Total Merchandise	$1,527,226,105
Specie, Gold	$ 73,607,013
Specie, Silver	45,937,249
Total Imports	$1,646,770,367

UNITED STATES IMPORTS AND EXPORTS BY COUNTRIES

Countries	Imports	Exports
Austria-Hungary	$16,958,099	$19,514,787
Azores and Madeira Islands	138,994	174,943
Belgium	37,084,743	45,016,622
Bulgaria	284,254	89,768
Denmark	1,712,600	13,196,950
Finland	190,055	2,216,482
France	115,414,784	135,271,648
Germany	163,242,560	287,495,814
Gibraltar	6,824	328,909
Greece	3,138,049	627,320
Italy	47,334,809	60,580,766
Malta, Gozo, etc	14,427	231,097
Netherlands	32,926,492	96,103,376
Norway	8,009,490	7,356,405
Portugal	7,015,358	2,669,910
Roumania	273,597	964,398
Russia in Europe	11,004,164	23,524,267
Servia	574,141	13,058
Spain	19,784,998	25,064,916
Sweden	8,532,422	7,973,820
Switzerland	25,652,299	704,808
Turkey in Europe	7,540,440	2,536,141
Great Britain and Ireland	261,289,106	576,613,974
Bermuda	599,516	1,357,631
British Honduras	1,184,373	1,562,583
Canada	100,863,418	269,806,013
Newfoundland and Labrador	1,380,935	4,604,382
Central American States:		
Costa Rica	4,838,416	3,473,376
Guatemala	2,562,488	2,431,769
Honduras	2,657,009	2,126,014
Nicaragua	1,442,299	2,475,792
Panama	3,506,735	20,867,919
Salvador	1,463,792	2,100,713
Mexico	57,450,111	61,281,715
West Indies:		
Barbadoes	310,913	1,451,628
Jamaica	6,242,700	4,379,585
Trinidad and Tobago	4,665,110	3,375,138
Other British	1,039,857	2,667,049
Cuba	110,309,468	60,709,062
Danish	135,117	810,537
Dutch	353,256	768,802
French	25,257	1,578,181
Haiti	813,713	5,358,761
Santo Domingo	3,632,453	3,805,329
Argentine Republic	29,090,732	43,918,511
Bolivia	327	891,624
Brazil	100,867,184	27,240,146
Chili	19,941,000	12,044,578
Colombia	8,994,460	4,905,934
Ecuador	3,628,805	2,238,539
Guianas:		
British	473,050	1,850,867
Dutch	999,221	722,853
French	31,433	287,034
Paraguay	34,516	86,986
Peru	9,314,030	5,597,123
Uruguay	1,613,736	5,317,711
Venezuela	7,635,256	3,791,620
Aden	1,629,631	1,193,942
Chinese Empire	34,227,503	19,287,836
French China		188,711
German China	914,830	357,988
Japanese China	137,751	388,542
East Indies:		
British India	43,952,047	9,414,203
Straits Settlements	19,958,513	2,143,242
Other British	8,723,264	380,351
Dutch	9,934,163	3,213,598
French	87	255,944
Hong Hong	2,718,315	7,756,138
Japan	78,527,496	36,721,409

FOREIGN TRADE OF THE UNITED STATES

UNITED STATES IMPORTS AND EXPORTS BY COUNTRIES—Continued

Countries	Imports	Exports	Countries	Imports	Exports
Korea	$ 245,551	$ 1,144,583	British South Africa	$ 2,160,342	$12,842,442
Persia	1,055,603	21,899	British East Africa	1,184,191	639,517
Russia, Asiatic	1,199,298	1,179,782	Canary Islands	95,121	683,526
Siam	75,306	370,348	French Africa	672,851	1,454,455
Turkey in Asia	10,150,372	1,403,912	German Africa	536,274	239,455
Australia and Tasmania	9,102,868	37,524,586	Liberia	745	103,161
New Zealand	2,676,870	7,555,962	Madagascar	61,575	14,294
British Oceanica	14,766	506,342	Morocco	296,229	42,207
French Oceanica	1,017,478	643,764	Portuguese Africa	250,036	3,395,737
German Oceanica	62,072	113,546	Turkey in Africa—Egypt	21,674,653	2,114,596
Philippine Islands	17,400,398	19,723,113	Tripoli	69,448	.....
British West Africa	212,155	2,041,893	Total	$1,527,226,105	$2,049,320,199

Business Correspondence.—Modern industrial and commercial activities are impossible without extensive correspondence. Millions of letters are daily exchanged; some of these do not leave the confines of a single factory or store, being used in interdepartmental relations; others cross continents and seas in order to bring together prospective buyers and sellers.

Diversity of Letters.—Letters of application for positions and letters of introduction, letters of inquiry and letters of information, letters ordering goods and those rescinding orders, letters of complaint and letters adjusting differences, letters demanding payments and those accompanying remittances; these and an infinite variety of other kinds of communications are used in the daily routine of business.

The increasing complexity of business life, the ever growing dependence upon the goods and the services of others, have made correspondence one of the cornerstones of our civilization, and upon this art depends in many instances the success or the failure of a commercial enterprise.

Distribution of Mail.—In large business organizations the incoming mail is generally opened by the *receiving clerk*, who distributes it to the various departments. Many firms request that all communications should be sent to the company and not to any member or official thereof; in this case, all letters must go to some central point, the nature of the letter alone revealing for whom it is intended.

Letters must be answered promptly, then filed away for future reference. (See Business Letters under *Practical English*.

Mail Contracts.—With regard to *contracts by mail*, it is necessary to remember that an offer may be withdrawn at any time before it has been accepted, but legally the offer is not withdrawn until a notice of the withdrawal reaches the other party. On the other hand, the mailing of a letter of acceptance completes the transaction; in this case the law considers that the post office is the common agent of both the seller and the buyer, and that as soon as the letter is mailed the contract of sale is complete.

Telegrams.—A telegram, being a quicker medium of communication, may be used advantageously to withdraw an offer made by mail. If a telegram is sent accepting a mail offer, there is no binding contract until the telegram reaches its destination.

Advertising.—The *object of advertising* is to attract the attention of the public to salable commodities or to services, and to create a demand for these.

The forms which advertising assumes and the media which it uses vary with the character of the goods advertised and with the amount of money available for publicity purposes.

The Advertised Article.—Certain commodities are excluded from general advertising either because they cannot be so advertised or do not need this kind of publicity. Most *raw materials* are included in this group. These materials are subdivided into comparatively few grades, and they are usually sold according to certain fixed standards to buyers whose chief consideration is the adaptability of the article to productive purposes. The number of these buyers is limited and they know definitely what they want. The owner of a sugar refinery or of a textile mill is governed in his purchases by the necessities of his establishment, and no amount of competitive advertising will sway him in his decision, which is based upon experience and business judgment.

Implements and Machinery are usually advertised in trade and technical journals or by means of circulars and catalogues. In most instances, the announcements merely state the character and the quality of the product and give the name of the selling firm.

Finished Commodities are the most widely, most persistently and most ingeniously advertised. The average final consumer seeks the greatest amount of physical or spiritual satisfaction with the least expenditure of money; he is undecided, open to suggestions, and it is in order to get his patronage that the bulk of advertising is carried on. This advertising uses every device known to the psychologist and to the printer, and its subtleness and aggressiveness grow from year to year.

Advertising Media.—The periodical press is the most important medium of modern advertising.

The Daily Papers are used extensively by local merchants, bankers, real estate agents, professional men, theater owners, etc.; however, they print also an ever increasing number of announcements of transportation companies and of manufacturers of certain goods, such as breakfast foods, tobacco, automobiles, ready-to-wear clothing, etc.

Magazines.—The latter advertise more frequently in magazines of general circulation because their object is the creation of a national reputation and of a national demand, and this object can be more economically obtained by using weekly and monthly journals instead of advertising simultaneously in various local papers throughout the country.

Another advantage of magazine advertisements over those in newspapers lies in the fact that the first may be made more striking, more attractive, because they have at their disposal a better grade of paper and superior printing facilities.

Occasional Literature.—The distribution of occasional literature includes the sending out of typewritten or printed letters, of circulars, catalogues, calendars, handbills, booklets, and almanacs. In this connection, special firms furnish lists of addresses which they compile from local trade directories, clipping bureau reports, mercantile agency books, etc.

Outdoor Advertising.—The most important forms of outdoor advertising are signboards, posters, billboards and street-car cards. The greater part of this form of publicity is controlled by *bill posting and street-car agencies* which are organized into a national union and which prescribe certain definite rules for such advertising.

By Sample.—An effective though somewhat expensive publicity method is a house-to-house distribution of samples; this is of particular advantage when a new article of superior quality is placed on the market.

Demonstrators.—Somewhat similar in character is the work of demonstrators, who travel from town to town in order to show the patrons of the shops handling their articles the advantages of their goods.

Advertising Managers.—Some business men write their own announcements, but most of the present-day advertising is done by men trained for the work. All large firms have advertising managers who control this side of the business, subject to limitations imposed by the financial head of the concern.

Advertising Agencies.—The great number of advertising media, the difficulty of ascertaining which are the best for specific purposes, has called into existence advertising agencies. These agencies collect and systematize information concerning publicity channels and place this information at the disposal of those concerns which intrust them with the management of their publicity campaign. They relieve their patrons of all the details of the work, writing advertising copy, making illustrations, selecting type and borders, drawing contracts with papers and magazines, etc.

Advertising Rates.—The price paid for advertisements in the periodical press is determined by the circulation of the periodical, as well as by the size and the position of the announcement. The rate charged for one page of magazine advertisement approximates $1 per thousand circulation, higher class publications demanding a somewhat larger sum.

Keying.—Various methods are used in order to determine the results of advertising in different periodicals. This is called *keying*. Announcements are keyed by lightly modifying the given address, by employing department letters, or by requesting the reader to fill out a coupon and mail it to the advertiser.

Salesmanship.—The success of a business enterprise largely depends upon the efficiency of its *selling force*.

The main classes of salesmen are:

1. Clerks in retail stores.
2. Commercial travelers.
3. Correspondents intrusted with the writing of sales letters.
4. Itinerant specialty salesmen.
5. Peddlers and hucksters.

Personal Elements.—A successful salesman should be a keen observer of human nature; in addition to a pleasing personality he should possess tact and perseverance. As he must often contend with exasperating circumstances, it is very important that he should be self-controlled. A salesman should be straightforward and not overloquacious, remembering that it is not the quantity but the quality of talk which counts. He should dress neatly; the matter of personal appearance is of greater importance to a business promoter than to a huckster, but even for the latter a shabby or a ragged attire is not good stock in trade.

The present-day salesman is a product of *schooling* and of *self-training*. Many factories and department stores give their salespeople instructions in the principles of salesmanship and in the methods of applying their general knowledge to specific conditions.

Special Requirements.—A salesman should *know the articles* he handles, not alone their selling price, but their purpose, their superiority over other similar articles, durability, workmanship, finish, as well as all other facts which might interest the probable buyer. The well-informed clerk inspires his customers with confidence, and this is an important element in making sales.

People buy for various reasons; sometimes in response to dictates of judgment, sometimes of feelings and of emotions. The wide-awake salesman reads his customer and makes his appeal accordingly.

Commercial Travelers represent either manufacturers or wholesalers; they usually operate from a central office, the sales manager being their directing force.

A *sales manager* should be one who has had extensive selling experience and who has "made good" while doing actual saleswork. He should know his salespeople and the territories which they cover; he should be able to advise them and to coöperate with them in all possible ways.

Territory.—In dividing the territory the most important considerations are the condition of transportation facilities, the number of commercial centers and the line of goods handled.

Necessity of Judgment.—Roadmen should exercise judgment in taking orders; they must understand the needs of their customers as well as the interests of the house they represent. A buyer who has been overstocked is not likely to forget the fact, nor to forgive the salesman responsible for it. The *financial standing of the buyer* must also be carefully considered, as extensive sales to undesirable customers lead to the canceling of orders by the credit department of the firm, thus causing many annoyances and frequently creating ill-feeling.

Communication.—The firm should always be advised where it may find its representatives, and it is the duty of the commercial traveler to keep his house informed of his whereabouts. It frequently happens that fluctuations in price take place, or the stock may be considerably reduced; these and other important data must be immediately communicated to the roadmen.

Compensation.—The compensation of the commercial traveler consists of a fixed salary or of a commission on sales; often a combination of salary and commission is used.

Credit and Collections.—Credit is the means which makes possible transactions involving the transfer of commodities, services, or money for a future equivalent. It is estimated that over 90 per cent of modern business is conducted on a credit basis, the credit granted being in the form of either *deferred payments* or of *loans*.

Deferred Payments.—In merchandising deferred payments are exemplified by the shipment of goods on time terms by the manufacturer to the wholesaler, and by the wholesaler to the retailer, as well as by the "charge accounts" of the customer in the retail store.

Book Credit.—Such credit is usually book credit, neither notes nor collaterals being demanded by the credit giver from the credit seeker.

The *basis* of such credit is the confidence which those who grant it have in the ability and the willingness of the debtors to meet their obligations at a stipulated future date. This confidence is derived from a more or less exact knowledge of the *tangible and intangible assets* of the credit seekers.

Capital, in its various forms, calculated at marketable value, represents the *tangible assets*, while the *intangible assets* include honesty and business efficiency of the debtor, as well as any patents, trademarks, franchises, etc., which may protect his enterprise from competition, thus giving it greater earning power and greater stability. However important the tangible assets may be, it is the intangible ones which are most carefully scrutinized by the credit man when he passes upon credit risks.

Most deferred payments represent *short-time* credit, which seldom exceeds three months. Inasmuch as a considerable discount is generally offered for cash, it is of great advantage to the merchant to be able to utilize as far as possible his own capital or his *bank credit*.

Bank Loans may be obtained at a smaller rate of interest than that which is charged for deferred payments. The bank loans either on the *personal note* of the borrower or on the *pledge of collateral securities*, such as stocks, bonds, etc. The note is signed either by the borrower alone, if his financial standing in the community warrants the bank to accept his "single-name paper," or it is indorsed by a second party, a business associate or a friend of the borrower (two-name paper). The bank loans also by *discounting* bills of exchange and other negotiable documents arising from ordinary business transactions.

Credit Department.—Every large concern has a credit department whose work is placed under the supervision of a *credit man*. In this department are gathered and classified all data pertaining to the financial standing of the firm's present and prospective customers.

The data are obtained from the following sources. Written and signed statements of those who apply for deferred payments; references given by them; reports sent by the commercial travelers of the house; bank references; personal interviews of the credit man with the credit seekers; rating books and special reports of the mercantile agencies; information supplied by the credit coöperative organizations.

Credit Man.—A good credit man should not only be able to analyze credit statements and balance sheets, but he should also possess the power of discrimination and of selection, the ability to read character as it is revealed by the customer's manner of answering questions, by his past history, by his associates, by his methods of conducting business, etc.

It is easy to deny credit, but it should be remembered that denial of credit in most instances means loss of business, and the best credit man is not the one who is overconservative, but the one who knows how to bring to his house the greatest number of credit patrons with the least probability of incurring bad debts.

Collections.—In connection with sales on credit, accounts should be watched carefully and *collections* made regularly. Many accounts never reach a past maturity stage, for they are promptly paid by the debtors when due; others become delinquent, thus necessitating the services of the *collection department*.

In dealing with bad accounts one should carefully distinguish between those customers who are unmethodical or slow and those who are willfully negligent or insolvent. If letters reminding the debtor of his obligations fail, drafts are sent for collection to a bank or to an agency. Should this method of enforcing payment also fail, there remains but legal procedure. When this has been decided upon it should be pushed without delay. It presupposes the breaking off of all friendly relations with the debtor, and nothing is to be gained from dilatory measures.

Transportation by Land and by Sea.—Commerce measures distances not so much by miles as by what it costs to transport freight from one locality to another. The cost of transportation depends upon the condition of the roadbed, the effectiveness of the motive power and the serviceability of the vehicle.

Primitive methods for overcoming distances by means of beasts of burden or draft animals over unimproved highways are not only slow, insecure and irregular, but are also expensive, thus limiting the commercial intercourse between communities to the exchange of more or less valuable objects of an imperishable character.

At present *wagon roads* do not play an important rôle in long distance traffic, but as feeders of railways and as local lines of communication their economic significance is very great. The cost of wagon transportation is prohibitive on sand surfaces at some seasons, but even on the best macadamized road it is seldom less than 10 cents per ton mile, the average being about double this amount. The average railway rate in the United States is between seven and eight mills, and the rate on the Erie canal about three mills.

Railway Rates are based upon the expenses incurred in transporting goods as well as upon the value of the service to the shipper and the nature of the article transported.

Rate-Fixing.—For the purposes of rate-fixing, commodities are grouped into a small number of classes, the rate being based upon class and not upon individual articles. Our interstate railway rates are governed by three *classifications*—the *official*, applying in the territory north of the Ohio river and east of the Mississippi river; the *southern*, being in force south of the Ohio and east of the Mississippi; and the *western*, governing the freight traffic west of the Mississippi river.

The Classifications are issued by committees composed of representatives from all the railroads operating in the territory covered by the classification; supplementing these are *freight tariffs* which specify the rates for the various classes of commodities and

which are published by each railroad independent of all others for its own use.

Many products which are invariably handled in carload lots, such as coal, grain, cement, etc., are not included in the classifications, but are given a special or a so-called *commodity rate*.

Shipping.—Common carriers require that goods delivered to them for shipment should be accompanied by a *shipping bill*, containing a list of the articles to be transported as well as directions concerning where and to whom the goods are consigned. Shipping clerks should be familiar with railroad routes, classifications and tariffs; inefficiency in the organization of the *shipping department* has cost many a firm large sums of money through errors in routing and through overcharges.

Receipt and Bill of Lading.—When goods are delivered to the railroad company a *receipt* is given the shipper. This receipt is usually exchanged for a *bill of lading*, issued by the railway freight agent. The bill of lading is forwarded by the shipper to the consignee. It is not only a railway receipt for the goods and a contract for their carriage, but it is also an evidence of ownership and a means for transferring the title to the goods. On the bills of lading are printed certain stipulations limiting the liability of the carrier; to illustrate, in case of freight being lost, the carrier is not liable but for losses due to its own negligence, and even in the latter case not unless the claim is made within a certain time limit.

Way Bill.—One of the most important shipping papers is the *way bill*. It is not given the shipper, but it accompanies his shipment usually in the possession of the conductor who has charge of the freight train. The way bill is used by the agent at destination as a guide in collecting charges and by the central office in checking agents' reports.

Notice on Freight Bill.—As soon as the freight arrives at its terminal a *notice* is sent to the consignee. Upon the payment of the freight charges the railroad surrenders the goods and delivers a receipted *freight bill*, the transaction thus being brought to an end.

Water Transportation.—The *ocean* affords unrivaled opportunities for the use of large vehicles and powerful motors; it therefore permits the utmost utilization of both carrying space and propelling force; this results in a comparative cheapness of *ocean freight rates*. These rates are considerably less than railway charges, not only because it costs less to give the service but also because of the fact that rate agreements and combinations are more easily effected by railway organizations than by steamship companies.

An important fact to be considered is that in water transportation the vehicle is the carrier's chief item of expense, the roadway being provided by nature and the terminal facilities by municipalities, states or independent corporations.

Ocean Commerce is carried on by means of *steamers* and of *sailing vessels*. The respective position of each may be judged from the following figures: In 1904-5 the gross tonnage of sea-going steamers was 27,900,000 tons, that of sea-going sailers 7,812,000 tons. These data do not show the exact proportion of the work done by the two carriers, the steamer traveling and delivering cargoes with greater rapidity than the sailing vessel, whose movements are dependent upon winds and other natural conditions.

The comparative efficiency of the two is usually placed as four for steam and one for sail. Only about 5 per cent of the world's shipping is carried by sailing vessels.

Steamship transportation is divided into regular (line) traffic and irregular (charter) traffic.

Line Traffic implies a prearranged schedule of fixed sailings to definite ports and is made possible only by a large and continuous volume of trade. Line traffic is maintained by three kinds of vessels—by fast express steamers which carry only passengers, mail and parcels; by steamers of more moderate speed transporting both passengers and freight, and by boats which handle only freight. The equipment and the maintenance of line traffic is expensive and only the large commercial ports of the world can command such a service.

Charter Traffic.—Much of the heavy and bulky freight of commerce is carried by cargo boats operated as individual units, these boats being chartered as the occasion warrants; the traffic carried on by such vessels is known as *charter traffic*. Ports whose shipments are irregular depend almost entirely upon this kind of transportation.

Negotiations for the hire of single vessels, often called *tramps*, are usually made through *ship-brokers*, whose function is to provide cargoes for ships and ships for cargoes. These brokers may be found in most parts of the world.

Boats are chartered either for a single trip or for a certain length of time, *voyage charters* being much more numerous than *time charters*.

The contract whereby the merchant hires the vessel is known as the *charter party*, and in case of a trip charter it contains various agreed-upon conditions as to voyage, cargo, freight rate, time allowed for loading and unloading, etc. If the vessel is kept in the port longer than the *lay days* permit, the owner is entitled to an indemnity, usually provided for in the charter party and called *demurrage*. A charter party is supplemented by *bills of lading* acknowledging that the goods for the carriage of which the vessel was hired were received on board ship; bills of lading give effect to the various provisions of the charter.

Corporation Economics.—Of the three forms of business organization, individual ownership, partnership and corporation, the last is best suited for conducting large industrial and commercial enterprises.

Individual Ownership limits the amount of capital and credit a business unit may command; it also makes the single owner liable to the full extent of his possessions for the failure of the venture; because of this, individual ownership at present is confined almost exclusively to retail trade, to repairing industries and to farming.

A Partnership, through combination of capital and labor, makes larger enterprises possible but it greatly increases the individual liability of those who are associated in this way; each partner becomes personally liable not only for his own acts, but also for the acts of all other members of the firm. A partnership possesses another disadvantage which prevents it from meeting many important requirements of modern business; it is dissolved by the death or by the withdrawal of one of its members as well as by the addition of a new partner. Each dissolution necessitates a readjustment of all titles, rights, assets and liabilities.

A Corporation has none of the aforementioned disadvantages; its existence is continuous and distinct from the persons forming it; its capital is divided into shares and the liability of the stockholders is limited to the amounts they have actually invested in the business. The control of the corporation is vested in the directors and other officers, who alone can act for the concern; this leads to greater efficiency through concentration of power and does away with complications and uncertainties which might arise should individual stockholders be permitted to involve the organization. The division of corporation capital into shares affords opportunities to both small and large investors, and the transferability of the securities makes it possible for the stockholders to join or to leave the undertaking at any time.

In the public mind, corporations are frequently associated with the idea of monopoly, but it should be remembered that not every incorporated business of large magnitude is a monopoly. Huge department stores working as corporations must continually face competition, and this is true of most of the steamship companies and of many manufacturing establishments.

Monopoly means a control over the supply of goods or services, not necessarily an absolute control, but one sufficiently powerful to permit the fixing of prices.

Excessive competition among industrial and railway companies caused many of them to enter into temporary agreements regulating prices, dividing territory, etc. These agreements were known as *pools*.

Pools.—In railway transportation, pooling consisted in apportioning either the competitive traffic or the receipts from this traffic; divisions were made according to stipulated ratios. In manufacturing, agreements usually entered into were those limiting the annual output to a certain percentage of the producing capacity of the various establishments; if a factory produced and sold in excess of the stipulated amount, its owner was obligated to contribute a part of his earnings to the pool, the money to be distributed among those who made less than their share of production.

The successful management of a pool is very difficult, as its agreements can not be enforced. In the United States pools were declared illegal, being "in restraint of trade." They were succeeded by trusts.

Trusts are combinations by means of which the stockholders of competing corporations assigned their shares in trust to a committee (a board of trustees), receiving trust certificates instead. The earnings of the various companies are combined and each company receives its proportionate share of profits in accordance with the number of certificates it owns. At present the term "trust" is often erroneously applied to any combination which is capable of dominating a given branch of industry.

Holding Company.—The hostile attitude of our courts toward pools, as well as toward consolidations in the form of trusts, has led various competing concerns into forming single large corporations; thus corporations have been established not only for the purpose of securing the economies of large scale production, but also in order to obtain a monopolistic control over the market. In many instances this result has been accomplished by forming a *hold-*

ing company. A holding company acquires a controlling interest in several corporations by purchasing the majority of their stock. Identical in structure with ordinary corporations, it differs from them in that it is organized for the express purpose of holding stock, and by this means shaping the business policy of subsidiary concerns.

Stock.—The stock of a corporation is usually divided into *preferred* stock and *common* stock. The holders of preferred stock are entitled to a certain percentage of the profits (ordinarily from 6 to 7 per cent) prior to the distribution of dividends among the holders of common stock.

There are two kinds of preferred stock, *cumulative* and *noncumulative*. The advantage of the cumulative stock is suggested by its name. Should the annual profits of a corporation be insufficient to pay the stipulated interest to the holders of the cumulative stock, the deficiency must be made good by the corporation out of future earnings, if any.

Bonds.—A distinctly different class of corporation securities are *bonds*, which are issued as certificates of indebtedness and may be regarded as promissory notes of a corporation, usually payable in from twenty to thirty years.

ECONOMICS OF PLANTS, ANIMALS AND MINERALS

I. Foodstuffs. II. Narcotics and Medicines. III. Fibers. IV. Commercial Woods. V. Gums, Resins and Extracts. VI. Oils, Fats and Waxes. VII. Dyestuffs and Tanning Materials. VIII. Animal Products. IX. Mineral Products.

The most important commercial products are summarized in the following pages. The materials are grouped according to their sources: thus all the many products of the cotton plant are treated under one head; and since cotton fiber is the most important product of this plant, it is placed under the general heading of vegetable fibres, even though it supplies oil, cattle food and other articles. Countries of production are mentioned in the order of their relative importance.

FOODSTUFFS

Name of Raw Material	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Wheat is the seed of a grass (*Triticum sativum*). Fr., *Froment, Blé;* Ger., *Weizen;* Sp., *Trigo.*	Its commercial varieties, hard, soft, red, white, etc., differ in percentage of starch and gluten. The whole grain is ground into *graham flour*, made into *breakfast foods* and used in brewing. From parts of the grain are prepared *whole wheat flour, white flour, middlings, bran, wheat grits, wheat starch, macaroni, spaghetti*, etc. Wheat straw is plaited into braids (Leghorn, etc.) for hat making, and is used like the straw from other grains for packing material and as bedding for animals.	Grows in temperate climates, the largest crops being raised in United States (especially in Minnesota, North Dakota, Ohio, South Dakota and Kansas); Central Europe (Russia, France, Austria-Hungary and Italy); India, Argentina, Canada and Australia. The area of wheat production is steadily increasing and wheat raising has become an important industry in newly developed countries, such as parts of British America, West Australia and Manchuria. The United States is the chief exporter of flour.	Wheat flour may be said to be the standard foodstuff of modern civilized man. In the modern flour mill, heavy rollers of steel or porcelain have replaced the old-style millstones. The bran, middlings and flour are separated by sieves, the finest being of silk bolting cloth. Macaroni is made from special varieties of hard, glutinous wheat. The principal countries exporting wheat are United States, Russia, Argentina, Canada, Roumania, India and Australia. Straw braids come largely from Italy, China and Japan.
Barley is the seed of a grass (*Hordeum sativum*, variety *vulgare*, etc.). Fr., *Orge;* Ger., *Gerste;* Sp., *Cebada.*	It is used chiefly in brewing and for horse feed; also in soups. *Pearl barley, barley flour, malt, beer* and *alcohol* are its chief products.	Cultivated chiefly in north and central Europe, the colder parts of Asia and North America.	Malt is made by moistening barley and allowing it to sprout in a dark room. During germination the starch is converted into dextrine and maltose. On fermentation, maltose produces alcohol. Pearl barley is prepared by removing the hard outer coats of the grain.
Rye is the seed of a grass (*Secale cereale*). Fr., *Seigle;* Ger., *Roggen;* Sp., *Centeno.*	It is used in the form of *rye flour* and for distilling whisky and vodka. Rye straw is plaited into *hat braids.*	Cultivated in the cold climates of northern Europe, especially in Russia. Only small amounts are grown in the United States.	Rye flour is the chief breadstuff in parts of Russia, Scandinavia and Germany. Whisky is distilled from fermented rye and corn.
Oats is the seed of a grass (*Avena sativa*). Fr., *Avoines;* Ger., *Hafer;* Sp., *Avenas.*	Used chiefly for horse feed, and in lesser amounts for making *oatmeal* and breakfast foods.	Grown in largest amounts in Russia and the United States (especially Illinois and Iowa). Cultivated throughout the temperate parts of the civilized world.	The manufacture of oatmeal is of relatively small importance since the more nourishing products of wheat are increasingly used.
Corn, Maize or **Indian Corn** (*Zea mays*) belongs to the grass family. Flint, dent, sugar, soft and pop corn differ in percentage of starch and gluten, and the grain may be white, yellow, red or black in color. Fr., *Blé, Grain;* Ger., *Getreide, Korn;* Sp., *Grano.*	Among the dozens of useful products made from corn are *corn meal, corn grits, hominy, breakfast foods, beer, whisky, alcohol, cologne spirits, cornstarch, dextrine, glucose, grape sugar, corn sirup, corn oil, soap, rubber substitute* and *cattle foods.* A special variety of corn is raised to make *cob pipes.* Compressed *corn pith* is packed between the double hulls of warships. Corn husks are used in *mattresses* and *paper* is made in very limited amount from the leaves and stalks. Large amounts of *popcorn*, plain and candied, are eaten in the United States.	Corn is the most valuable farm crop of the United States. The chief corn growing states are Illinois, Iowa, Kansas, Nebraska and Missouri. The bulk of the world's production of maize is grown in this country, although it is an important crop in Hungary, Italy, Egypt, South Africa, and other parts of the world.	Corn is of primary importance as a food for live stock, enormous quantities being used to fatten cattle and swine. The manufacture of starch and other products from corn is an industry of increasing magnitude. The chief starch derivatives are *dextrine* and *glucose* or *grape sugar* (used in brewing beer and as a substitute for true sugar). Corn oil may be called a by-product in starch manufacture, yet the annual value of corn oil is greater than that of cornstarch produced in the United States. It is used in soap and paints. Vulcanized by heating with sulphur, it forms a widely used adulterant and substitute for rubber.
Rice is the seed of a grass (*Oryza sativa*). Fr., *Riz;* Ger., *Reis;* Sp., *Arroz.*	*Rough rice* and *clean rice* are the common commercial articles. *Rice polish, saké* or rice wine, rice straw and rice paper are of lesser importance. Rice, steamed and swelled, is now extensively used as a breakfast food.	It is usually grown in swampy land or else on irrigated fields. In most countries rice is grown in the most primitive fashion. Immense irrigating plants and modern agricultural machinery make possible the large production in parts of the United States. It is the chief crop in southeastern Asia, from India through Indo-China, a great part of China, southern Japan and many islands of the Pacific. Rice of excellent quality is raised in Texas, Louisiana and South Carolina, and an amount about equal to the production of this country is imported from eastern Asia.	It is estimated that one-third of the people of the world live principally on rice. Rough rice or paddy (rice in the hull) is first hulled by machinery and then the grains are polished or whitened. The *rice polish*, which consists of the powdered outer coats, is a very nourishing cattle food. *Saké*, the national drink of Japan, is a weak alcoholic liquor brewed from rice. Rice straw is of enormous use in Asia, being employed for hundreds of purposes, some of them as unexpected as the making of bags, ropes and sandals.
Millet and **Sorghum** are cultivated grasses of many varieties (*Panicum, Setaria, Andropogon*, etc.). Fr., *Millet;* Ger., *Hirse;* Sp., *Mijo.*	Guinea corn, kaffir corn, broom corn and other names are employed to distinguish the different kinds.	These grains are grown in practically all parts of the world. In Europe and America they are important chiefly as fodder plants, although in many other parts of the world the seeds are used as human food.	In some places the juice of sorghum is boiled down to make sirup or sugar. Common brooms are made of the top of one variety of sorghum (broom corn). These grains are mainly of local importance.

FOODSTUFFS—Continued

Name of Raw Material	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Buckwheat (*Fagopyrum esculentum*) is regarded as a cereal because its seeds are used like those of wheat, rye and other grains. Fr., *Sarrasin;* Ger., *Buchweizen;* Sp., *Trigo sarraceno.*	The seeds are ground into buckwheat flour. Buckwheat fields are especially attractive to bees and a fairly important source of honey.	Buckwheat cultivation has decreased in recent years. New York and Pennsylvania produce the greater part of the crop in the United States. Abroad it is raised chiefly in Russia, France and Japan.	Buckwheat flour is less used than formerly. Very little of this grain enters into foreign trade.
Hay is made from many grains and leguminous plants. Fr., *Foin;* Ger., *Heu;* Sp., *Heno.*	Timothy, clover and alfalfa are the chief sources of hay in the United States.	It is produced almost exclusively in temperate climates. Its yearly value in the United States is almost equal to that of the wheat crop.	Hay is most important in the cattle raising sections of the world. Some baled hay is exported to Europe and a little is sent to the tropics.
Starch is prepared from many seeds and roots. The common starches are from corn, wheat, rice, potatoes (*Solanum tuberosum*), cassava, tapioca (*Manihot utilissima*), arrowroot (*Maranta arundinaceæ*) and the pith of the sago palm tree (*Metroxylon* sp.) Fr., *Amidon;* Ger., *Stärke;* Sp., *Almidón.*	Starches appear on the market in powder, lump, flake and pearl forms. Starch grains differ in size and shape according to their source so that it is not difficult under a microscope to identify the various kinds. Glucose, dextrine and alcohol are made from starch.	For industrial purposes starch is prepared chiefly from potatoes in Europe and from corn and potatoes in the United States. Cassava is a very important foodstuff in almost all parts of the tropics. Many starches are of great local importance, such, for example, as taro in Hawaii. Comparatively few enter into general commerce.	In general, starches are separated from roots or seeds by grating them and washing with water. The starch grains are carried off in suspension and later separated from the water. Starch and starchy foods are of the greatest importance to men and animals. Aside from the manufacture of glucose, dextrine and alcohol, starch is used for sizing yarn, cloth and paper, for making paste and laundry purposes. Tapioca comes on the market chiefly from Brazil and Straits Settlements. Arrowroot starch is produced in Bermuda, St. Vincent and Jamaica. Sago is exported from Straits Settlements.
Vegetables of an almost infinite variety are used in all parts of the world. Many of these are roots, some seeds, some leaves or other parts of plants.	The bulk of the crop is consumed fresh, although beans, peas, etc., are dried and increasing amounts of vegetables are canned or otherwise preserved.	The largest cultivation of fresh vegetables is as a rule near great cities.	Vegetables are so heavy in proportion to value that they are not normally shipped long distances. Potatoes and onions, being least perishable, are most important in general commerce. Better transportation facilities naturally increases the trade in both fresh and canned vegetables.
Fruits, like vegetables, are used in great variety. Those deserving special mention are: **Apple** (*Pyrus malus*).—Fr., *Pomme;* Ger., *Apfel;* Sp., *Manzana.* **Plum** (*Prunus domestica*).—Fr., *Prune;* Ger., *Pflaume;* Sp., *Ciruela.* **Grape** (*Vitis* sp.).—Fr., *Raisin;* Ger., *Weinbeere;* Sp., *Uva.* **Orange** (*Citrus aurantium*).—Fr., *Orange;* Ger., *Orange;* Sp., *Naranja.* **Banana** (*Musa sapientum*).—Fr., *Banane;* Ger., *Banana;* Sp., *Banana, Guineo.* **Date** (*Phœnix dactylifera*).—Fr., *Datte;* Ger., *Dattel;* Sp., *Datil.* Many others are of almost as great value.	Large quantities of dried and evaporated fruits are produced, among which are apples, apricots, plums (prunes) and grapes (raisins). Canned fruits, jellies, sirups, wines, liquors and vinegar are manufactured.	Different fruits thrive in different climates. Apples are widely raised in temperate regions, the largest production being in the northern United States and parts of Canada. France, Italy and Spain, the greatest grape-growing countries, are the largest producers of wine.	Refrigerator cars and special steamers make possible the shipment of fresh fruits to parts of the world distant from the region of production. There is a large export of green, ripe and dried apples from the United States and Canada to England and the Continent. Australia and South Africa are increasing their export of apples and other fresh fruit. Prunes, raisins and other dried fruits are shipped to all parts of the world from California and Mediterranean countries. Bananas, oranges and pineapples are the chief tropical fruits in general commerce. Florida and southern California, with the West Indies, Central America and northern South America, supply the markets of the United States. Those used in England and northern Europe come from the Canary islands and the West Indies. Dates come chiefly from northern Africa and western Asia.
Sugar is obtained from the juice of the sugar cane (*Saccharum officinale*) and from the juice of the sugar beet (*Beta vulgaris*). Fr., *Sucre;* Ger., *Zucker;* Sp., *Azucar.* Maple sugar is from the juice of the sugar maple tree (*Acer saccharinum*). Sugar and sirup are made also from the juice of several palm trees.	Pure cane and beet sugar are in every way identical. Raw cane sugar, brown to yellowish in color, produced by evaporation of the juice in open pans (muscovados), and crystals from vacuum pans are both important commercially. The price of raw sugar is determined by its purity as shown on chemical analysis. A fairly good indication of purity is found in color, and raw sugars are graded according to an accepted standard which is set by the Dutch government. *White sugar*, granulated, loaf and pulverized, as commonly sold, is more nearly chemically pure than most other articles of commerce. *Molasses*, from cane juice boiled in open pans, is palatable for human food, and, like all cane molasses, is fermented and distilled to make *rum.* *Molasses* from vacuum pans (whether from cane or beet juice) is not pleasant in taste, but is an important food for cattle and is distilled to make alcohol.	Sugar cane is grown in India, Cuba, Hawaii, Java, Brazil, Mauritius, Louisiana and other parts of tropics and subtropics. India's large production is consumed locally and enters little into export trade. Sugar beets are grown most extensively in Germany, Austria, Russia, France and United States. More than half of the world's supply of sugar (exclusive of India) now comes from the sugar beet. Sugar cane is harvested by hand, no satisfactory machinery having been devised for cutting the canes in the field. Economic modern processes necessitate the building of enormous mills and the manufacture of sugar on a very large scale. A factor of great importance in this has also been the production of sugar from beets, grown on the farms of the temperate zone, close to the point of consumption. Here the refuse or pulp from the beets, along with the molasses, is promptly used for stock food.	After harvesting, sugar cane is carried (usually by rail) promptly to the mill, where the juice is pressed out. Modern mills have nine rollers, arranged in three sets. The trash, or bagasse, is almost dry when it leaves the last rollers and is used as fuel to run the mill. The juice is boiled down, generally in vacuum pans heated by steam, and the sugar crystals which form are separated from the molasses in centrifugals. Sugar beets are sometimes stored for several months before being used. The juice is commonly extracted by diffusion; that is, the beets are sliced and soaked in warm water. The sweet liquid is then treated in practically the same way as cane juice. Raw sugar is refined or purified by dissolving it in water, treating it with lime and the serum of blood, filtering through animal charcoal and recrystallizing. The large sugar refineries are located in the United States and Europe. Sugars from the maple and the palm are produced only in small amounts and are only of local value. Sugar of milk is of some importance medicinally and industrially.

FOODSTUFFS—Continued

Name of Raw Material	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Alcohol is formed as a result of the fermentation of sugar and is therefore obtainable from practically any fruit or from any starchy matter through conversion of the starch into sugar. Alcohol is also a product of wood distillation. Fr., *Alcool;* Ger., *Weingeist;* Sp., *Alcohol.*	Alcohols differ in chemical composition according to the source. Grain alcohol, denatured alcohol and wood alcohol are the chief commercial types.	All parts of the world make and use alcoholic liquors. Distilled liquors contain more alcohol than fermented drinks. Wood alcohol and denatured alcohol are finding an increasing use for many industrial purposes in Europe and America, largely because of the lessened tax on their production.	Grain alcohol is distilled from fermented grain, chiefly Indian corn, in the United States. Potatoes are the most important source of alcohol in Germany. For industrial purposes it is denatured, or rendered unfit for use in beverages, by the addition of substances which give it an objectionable taste, odor or color. Alcohol finds a large use for heating, lighting and the development of power in alcohol motors. In these uses Europe leads. It is employed also in the manufacture of artificial silk, ether, paints, varnishes and hundreds of other products.
Tea, as it appears in commerce, is the prepared leaves of a bush or small tree (*Thea chinensis*). Fr., *Thé;* Ger., *Thee;* Sp., *Te.*	Teas are classed commercially according to the district of production as China, Ceylon, India, Assam, Japan, Formosa, Java; according to the method of preparation giving sun-dried, pan-fired, basket-fired; (*a*) green—Gunpowder, Imperial, Hyson, Caper, etc.; (*b*) black—Pekoe, Oolong, Souchong, Congou, etc., and according to the quality, dependent chiefly on the age of the leaf. *Brick tea* is commonly of low grade and not salable in the United States. It is made from tea dust and sweepings or from large leaves and trash. It has a large sale in Tibet and Russia. *Soluble tea,* or tea extract, and *tablet tea* are not of great commercial importance.	Tea is grown chiefly in hilly country throughout eastern and southern Asia. China, Ceylon, India, Japan and Java are the chief producing countries. The cultivation of the tea plant requires great care to produce leaves of perfect quality, young, tender and fragrant. The very youngest leaves and leaf buds, when properly prepared, sell for the highest price. In some places tea is picked only once or twice a year, while in other countries, where the climate is favorable to rapid growth of new shoots, the pickings are very frequent.	Green and black teas are made from leaves of the same species of plant. For black tea the leaves are allowed to wither and ferment slightly before being dried, usually over a charcoal fire. Green teas are prepared by drying the leaves more quickly and not allowing them to ferment. Tea is popular because of its pleasant taste and stimulating quality (due to the theine, or caffeine, which it contains). Outside of tea producing countries, the chief consumers are English-speaking people. The United Kingdom buys about half of all export teas, chiefly from Ceylon, Assam and Bengal. The United States uses more green tea than any other country, much of our supply coming from Japan, Formosa and China. Much Chinese tea is exported overland to Russia.
Coffee is the seed of a small tree. The world's supply of coffee is produced chiefly by the species of tree which was originally native in Abyssinia and cultivated in Arabia (*Coffea arabica*). The Liberian coffee tree (*C. liberica*) is cultivated to a limited extent. Fr., *Café;* Ger., *Kaffee;* Sp., *Café.*	The commercial varieties of coffee are named according to the districts of production, and to a very considerable extent these names when so applied indicate flavor (Mocha, Java, La Guayra, Santos, Rio, etc.). Such names as Mocha and Java, indicating high-grade coffees, have in the past been applied to beans from other localities, but this practice has been stopped in the United States by recent pure food laws. *Coffee extract* is prepared for sale to only a small amount. The popularity of coffee is due to the fact that, like tea and chocolate, it contains caffeine, a mild stimulant.	Coffee is cultivated in many parts of the tropics. Brazil is by far the greatest producer, the coffee district being mainly in the states of Sao Paulo, Rio de Janeiro, Minas Geraes and Espirito Santo. Much coffee is grown in the mountains of northwestern South America, Central America and the West Indies. Coffee is grown in Java and other parts of the East Indies, as well as in smaller quantities in Arabia, Africa and Australia.	Two beans are usually contained in each red coffee berry. The berries are sometimes dried in the sun and then cleaned by machinery to separate the beans from the several coats which cover them. In the wet method the berries are first crushed and washed to free them from the pulp, after which the beans are dried in the sun and cleaned by machinery. Coffee is roasted before use and people in some parts of the world prefer a much darker roast than others. Coffee is but little adulterated at the present time, but there are various substitutes on the market, such as chicory, roasted barley, etc. The United States uses more coffee than any other part of the world both in total amount and per capita.
Cacao Beans are the seeds of a rather small tree (*Theobroma cacao*). Fr., *Cacao;* Ger., *Cacao;* Sp. *Cacao.* (This species is absolutely distinct from the cocoanut palm and from coca, the leaves of which yield cocaine.)	Cacao beans are classified commercially according to the place of origin as San Thomé, Bahia, Esmeralda, Guayaquil, Mexican, etc., and according to the method of drying as fermented (rotted) or unfermented. *Cocoa* and *chocolate* in its many forms, bitter, sweet, milk, candy, etc., are increasingly used for food and drink. They are in some respects superior to both tea and coffee in supplying nutriment (oil, starch and albuminoids) in addition to the same stimulant principle. *Cocoa butter* is added to some of the finest candies and enters into the manufacture of cosmetics, pomades and salves. Cocoa shells are of scarcely any importance.	Cacao trees are grown in warm moist climates, usually in the shade of larger trees. Brazil, Ecuador and the island of Sao Thomé in the gulf of Guinea, Venezuela, Trinidad, Mexico, Central America, Ceylon and the East Indies produce cacao. The beans grow in pods six to ten inches long, each of which contains, perhaps, fifty seeds. These, after removal from the rind, are dried, generally in the sun, on especially prepared floors. It is customary to allow them to ferment slightly before drying, to develop the flavor.	Chocolate is made by grinding cacao beans which have first been cleaned, roasted, crushed and separated from the thin skin or shell which covers each. Sugar, vanilla or other ingredients are added to make sweet chocolate, etc. Cocoa or cocoa powder is made by pressing the ground-up beans in a powerful machine to remove some of the oil, and then pulverizing the remaining mass. Because it contains less fat than chocolate some people find it easier of digestion. Cocoa butter is the solid oil or fat removed in making cocoa. Great factories in the United States, Holland, France, Switzerland, England and Germany use the bulk of the crop of cacao beans. The United States imports beans from the producing countries and prepared chocolate and cocoa from Europe.
Yerba Mate or (Paraguay tea), the dried leaves of a tree (*Ilex paraguayensis*). Fr., *Maté;* Ger., *Maté;* Sp., *Maté.*	These leaves contain caffeine and are used like tea.	The tree grows wild in Paraguay and adjoining regions of Argentina and Brazil. The leaves are not selected but entire branches are taken.	After drying, the leaves and twigs are broken up and packed for sale. Mate is a common beverage in many parts of South America. Attempts, not very successful, have been made to popularize it in Europe and America.
Mustard is the seed of plants of the genera *Brassica* and *Sinapis.* Fr., *Moutarde;* Ger., *Senf;* Sp., *Mostazo.*	*Yellow* and *black mustard* are the important kinds, although some seeds are brown, red or white in color. Mustard is used in condiments and medicinally. *Oil* pressed from mustard seeds is used in some countries for burning and soap-making.	Widely cultivated in Europe, as well as in the United States, Asia and the East Indies.	Used in larger amount than any other spice. Black mustard, or a mixture of black and yellow mustard, produces on mixing with water a very pungent essential oil. To this is due the sharp smell and taste of mustard and its action on the skin (in mustard plasters, etc.). The flour made by grinding the seeds of black and yellow mustard enters into a great many condiments.
Pepper is the fruit of a vine (*Piper nigrum*). Fr., *Poivre;* Ger., *Pfeffer;* Sp., *Pimienta.*	*Black pepper* consists of the dry, unripe berries, while *white pepper* is the ripe fruits with the outer skin removed.	Grown chiefly in the neighborhood of Singapore and on the Malabar coast of India.	Whole peppers, *i. e.,* the entire berries, are pulverized to make ground pepper. Half the value of spices imported into the United States consists of whole black and white pepper.

FOODSTUFFS—Continued

Name of Raw Material	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Red Pepper (Cayenne pepper or chillies) is the fruit of a small plant (*Capsicum species*). Fr., *Poivre de Cayenne;* Ger., *Spanische pfeffer;* Sp., *Pimiento.*	Enters into the composition of many condiments, and unripe appears as green peppers. There are large and small varieties.	Grown in almost all parts of the world and used in large amounts by people in warm climates, as Mediterranean countries, India, Africa, Mexico and West Indies.	In addition to the local production, the United States imports red peppers from Africa and Japan.
Allspice (or Pimento) is the dried unripe fruit of a tree (*Pimenta officinalis*). Fr., *Piment;* Ger., *Jamaikapfeffer;* Sp., *Pimento.*	A common spice, sometimes called *Jamaica pepper.*	Grown and produced almost exclusively in Jamaica.	The berries are simply dried in the sun and are commonly used whole. Popular because of its cheapness.
Cloves are the dried flower buds of a tree (*Jambosa caryophillus*). Fr., *Girofle;* Ger., *Gewurznelke;* Sp., *Clavos de Girofle.*	A spice used in food, confectionery and liquors. *Clove oil* is employed also in medicine and dentistry and is the basis for the manufacture of artificial vanilla.	Cultivated in the Molucca islands, East and West Indies, Zanzibar and Pemba.	The manufacture of vanillon, or artificial vanilla, from oil of cloves is important. The United States is the largest consumer of cloves.
Nutmegs are the kernels of the fruits of a small tree (*Myristica fragrans*). Fr., *Muscade;* Ger., *Muskatnuss;* Sp., *Moscada.*	The fruit looks like a small pear and the kernel is covered by a thin shell, outside of which is a red seed coat, which when dry is *mace,* another spice.	Nutmegs and mace are produced chiefly in Banda islands, East Indies.	The selling price has fallen within recent years so that West Indian plantations are no longer profitable.
Vanilla is the prepared, unripe seed pod of an orchid (*Vanilla planifolia*). Fr., *Vanille;* Ger., *Vanille;* Sp., *Vainilla.*	The pods, or beans, are used in flavoring. *Vanilla extract* is made from the beans and is imitated with tonka beans (from a South American tree) and artificial vanilla (from coal tar or oil of cloves).	Vanilla beans are produced in greatest amount and best quality in the state of Vera Cruz, Mexico. Reunion, Tahiti and Mauritius supply inferior grades. The vine requires a very moist climate.	Aside from the use in food, candy, chocolate, ice cream, etc., the cheaper grades of vanilla are employed extensively in flavoring chewing tobacco.
Ginger is the dried rootstalk of a plant (*Zingiber officinale*). Fr., *Gingembre;* Ger., *Ingwer;* Sp., *Gengibre.*	*Coated ginger* is dried with the skin on, while *peeled ginger* is scraped and bleached. Candied and preserved ginger, powdered ginger and ginger ale are commonly sold.	Grown in tropical countries, particularly in Bengal, Cochin China, China, Africa and Jamaica. African is usually coated ginger and Jamaica is the best quality of peeled ginger.	Ginger is next to pepper among spices in the amount imported yearly into the United States. Candied ginger is exported in large amount from Canton, China.
Turmeric consists of the dried stems of a plant of the ginger family (*Curcuma longa*). Fr., *Curcuma;* Ger., *Gelbwurzel;* Sp., *Curcuma.*	*Curry,* a much used condiment, is compounded with turmeric powder.	Grown in southeastern Asia and neighboring islands.	Used industrially in making yellow dye for cotton goods, in preparing fancy leather and in chemical work.
Cinnamon is the dried bark from young twigs of a small tree (*Cinnamomum zeylanicum*). Fr., *Cannelle;* Ger., *Zimmt;* Sp., *Canela.*	The best is in quills, or long rods, composed of pieces of bark rolled together. *Chinese cinnamon* or *cassia* is inferior. Used as a spice, usually in powdered form. *Cinnamon oil* is distilled from the bark as well as from leaves and twigs.	The best quality is from Ceylon. Cassia is from China, India and Indo-China.	Cassia is cheaper and much more common than true cinnamon.
Caraway, *anise, sesame, cardamoms, coriander,* and *pistachio* are less important spices.	*Sarsaparilla, fruit juices, aloes, asafetida* and many *essential oils* are used in flavoring.	Most spices are natives of Asia and the East Indies and are cultivated in the tropics and subtropics.	Many flavoring materials and extracts are made artifically in the chemical laboratory.
Olives are the fruit of a tree (*Olea europea*). Fr., *Olive;* Ger., *Olive;* Sp., *Oliva;*	*Pickled olives* are usually the unripe fruits prepared and bottled in salt water. *Olive oil* (sweet oil) is the most popular oil for table purposes. Oils from cotton seeds, peanuts, sesame seeds and other sources are used like olive oil.	The tree, which lives to a great age, grows in Mediterranean countries, California and Australia. Only limited districts produce olives fit for bottling. Most olives are grown for the production of oil.	Olives for pickling are soaked in lye to remove bitterness and often spices are added to the pickle to give an aromatic flavor. Olive oil is pressed from the ripe fruit. The poorer grades of oil are used in lubricating and for soap-making.

NARCOTICS AND MEDICINES

Name of Raw Material	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Tobacco is the prepared leaf of a plant (*Nicotiana tabacum, N. rustica,* etc.). Fr., *Tabac;* Ger., *Tabak;* Sp., *Tabaco.*	Commercial grades are named from the locality of production as Havana, Sumatra, Mexican, Turkish, Virginia, etc. Certain grades are appropriate for use as cigar wrappers and others for fillers and are so named in the trade. *Cigars, cigarettes, chewing tobacco, smoking tobacco* and *snuff* are extensively used. The stems and ribs of the leaves are employed in *sheep-dip* and for fumigating greenhouses.	More tobacco is raised in the United States than in any other country and Kentucky raises more than any other state. India is the second largest producer. In Europe it is cultivated in Austria-Hungary, Russia, Germany, Netherlands, France, Belgium and Turkey. Cuba, Porto Rico, Mexico, Central and South America, China, Java, Sumatra, Philippines, Ceylon, Syria and Cape Colony are important producers. Seeds of Havana tobacco plants raised in Connecticut or elsewhere produce a grade of Havana tobacco. The many grades of tobacco are due to the varieties of the plant, as well as to soil, climate and cultivation. The curing of the leaf is of the utmost importance. It includes a period of slight fermentation and drying in well ventilated barns.	Cigars are nearly all made by hand, but many cigarettes are manufactured by machinery. Nearly all plug tobacco is flavored with molasses, vanilla, licorice or other substances. The United States exports over half of the tobacco raised, chiefly to England in the form of leaf tobacco. Few cigars are exported, but cigarettes and plug tobacco go to the East Indies, China and Australia. Leaf tobacco is imported in large amount from Cuba, Sumatra, and Turkey and manufactured cigars are brought from Cuba. Large revenues are raised in many countries from the taxation of tobacco, and in Austria, France, Spain, Italy and Japan the tobacco business is a government monopoly.
Hops are the dried fruits of the hop vine (*Humulus lupulus*). Fr., *Houblon;* Ger., *Hopfen;* Sp., *Lupulo, hoblon.*	Hops are employed chiefly in brewing beer and malt liquors.	They are cultivated in almost all parts of Europe, especially in England, Germany and Austria. In the United States, California, Oregon, Washington, New York and Wisconsin produce the largest crops.	Hops are added to the malt, liquor, or wort, before fermentation and give a bitter flavor to malt liquors. Hops are not exported on a large enough scale to be an important item in commerce.

NARCOTICS AND MEDICINES—Continued

Name of Raw Material	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Opium is the dried juice of the white poppy (*Papaver somniferum*). Fr., *Opium;* Ger., *Opium;* Sp., *Opio.*	Opium is valuable as a narcotic because of the morphine and other alkaloids it contains. *Laudanum* is a tincture of opium and alcohol. Paregoric is a common preparation in which opium is an ingredient.	Opium culture is an important industry in northern India, China, Persia, Asiatic Turkey and Egypt. In China the government strongly discourages opium smoking and has greatly restricted the cultivation of the poppy. The juice is obtained by scratching the seed capsule and collecting the little drops which exude on it. The juice is then further dried in the sun.	Opium for smoking is exported to China from India. It is used in the form of pills in Mohammedan countries like Persia and Turkey. The United States imports opium for medicinal purposes chiefly from Turkey in Asia.
Quinine is the bark of a tree (*Cinchona sp.*). Fr., *Quinquina;* Ger., *Chinarinden;* Sp., *Quina.*	A drug of great importance, much used in the form of sulphate of quinine or other salts.	Originally native in the Andes and hence called Peruvian bark. The world's supply now comes from plantations in Java. Produced also in South America, Ceylon and India.	The principal market is Batavia, Java, from whence it is largely shipped to Holland.
Coca is the leaf of a small tree or bush (*Erythroxylon coca*). Fr., *Coca;* Ger., *Cocablatter;* Sp., *Coca.*	*Cocaine*, an alkaloid which produces local anæsthesia, is the important constituent.	Cultivated chiefly in steep valleys in the Andes of Peru and Bolivia, in smaller quantities in India, Ceylon and Java.	The Indians of the Andes chew the leaves on account of the stimulating effect and the bulk of the crop is so used. The residue is exported to manufacturers of medicinal preparations in Europe and America.
Medicinal Plants and drugs are numbered by the hundred. Among the most important are:	These are used in the form of extracts, tinctures and other pharmaceutical preparations.	Many grow wild, but the tendency of modern medicine is to use material from carefully selected plants cultivated for the purpose.	The preparation of medicines is carried on by a large number of firms in practically all parts of the world. The trade in drugs, however, is of less relative importance now than it was in the middle ages, when rhubarb, for example, occupied a prominent place in the list of commodities.
Rhubarb, a genus of plants belonging to the natural order *Polygonaceae.* Fr., *Rhubarbe;* Ger., *Rhabarber;* Sp., *Ruibarbo.*	Its root has long been recognized as of medicinal value owing to its astringent properties. The principal Finds of medicinal rhubarb have received such names as Russian or Turkey, East Indian, Himalayan, Chinese, and English, according to their source.	The best comes from China, though it is called Turkey rhubarb. In Europe and America generally there are several kinds of rhubarb cultivated for the sake of their stalks.	Rhubarb possesses more or less purgative and astringent properties; this is essentially the case with the roots, and hence these are largely used in medicine. The leaf-stalks of certain species are now largely used for tarts, puddings, jam, etc., and the juice is made into a kind of wine.
Sarsaparilla, the dried roots of several plants of the genus *Smilax.* Fr., *Salsepareille;* Ger., *Sarsaparilla;* Sp., *Zarzaparrilla.*	*Smilax medica* supplies the sarza of Vera Cruz. *S. siphilitica*, or *S. papyracea*, yields the Lisbon or Brazilian sort. *S. officinalis* belongs to Central America, although it yields the kind known as Jamaica sarsaparilla. *Hemidesmus indicus* yields the East Indian sort.	There are two special varieties obtained from Jamaica and Lima respectively. The roots are very long, of the thickness of a quill, dark brown in color and bitter in taste.	Sarsaparilla is valued in medicine on account of its mucilaginous and demulcent qualities. Various decoctions made from the roots are medicinally used as tonics and diuretics, and derive their properties from the presence of starch, resin, a volatile oil, and the crystalline principle smilacine.
Aconite is a hardy herbaceous plant, natural order *Ranunculaceae*, represented by the well-known wolfsbane or monkshood. Fr., *Aconit;* Ger., *Eisenhütchen, Wolfswurz;* Sp., *Acônito.*	An alkaloid contained in the leaves of monkshood. It is one of the most powerful poisons known.	The plants are natives of Europe, Asia, and North America, but the woolly aconite, or monkshood, is probably a native of Great Britain.	They are remarkable for their poisonous properties and medicinal qualities, being used internally as well as externally in rheumatism, gout, neuralgia, etc. In certain forms, a tincture of the root is used medicinally in cases of heart disease.
Ipecacuanha, the dried root of several plants of the natural order *Rubiaceae.* Fr., *Ipécacuana,* Ger., *Ipecacuanha, Brechwurzel;* Sp., *Ipecacuana.*	The best is the annulated, yielded by the *Cephaelis ipecacuanha.*	It is a native of Brazil, and the dried root is exported from the Rio Janeiro, Buenos Ayres, and other South American ports. Recently the cultivation of the plant has been introduced into India and Ceylon. The name of *American ipecacuanha* is given to the *Euphorbia ipecacuanha,* a plant which grows in sandy places in North America.	It is simply the root that is valuable, and in its bark exists the active principle emetine, which renders ipecacuanha of service in medicine. The color of the root is generally brown or red. The cases in which ipecacuanha is used are mainly dysentery, asthma, and coughs.
Belladonna, a plant, *Atropa belladonna*, or deadly nightshade, natural order *Solanaceae.* Fr., *Belladone;* Ger., *Belladonna;* Sp., *Belladama.* All parts of the plant are poisonous, and the incautious eating of the berries has often produced death.	The inspissated juice is commonly known by the name of extract of belladonna.	A plant which has narcotic and poisonous berries, a native of Europe.	The extract of the plant is used medicinally for soothing irritation and pain, and by oculists for the purpose of dilating the pupil during an examination of the eye, and diminishing the sensibility of the retina to light. The activity of belladonna is owing to the presence of the alkaloid atropine.
Nux Vomica, the fruit of a species of *Strychnos*, order *Loganiaceae.* Fr., *Noix vomique;* Ger., *Brechnuss;* Sp., *Nuez vómica.*	The taste of the berries is exceedingly bitter, and from them the two alkaloids strychnine and brucine are obtained.	The plant is chiefly found in Cochin China and the East Indies. The fruit of the tree is a large berry, much like a small orange, and in it the seeds are laid flat.	The seeds are mainly exported from India and their only value is for the extraction of the alkaloids, which are used in medicine. The alkaloids are known as a very virulent poison.
Castor, the name of the plant *Ricinus communis*, and also of the oil extracted from the seeds of the plant. Fr., *Huile de ricin;* Ger., *Rizinusöl;* Sp., *Aceite de ricino.*	The beans and the oil made therefrom.	It is a native of India, but its cultivation is now very widespread. The seeds are oval in shape, and mottled brown in color.	The oil is obtained from the seeds by bruising and pressing. It is afterward heated to the boiling point, which coagulates and separates the albumen and impurities. Castor-oil is used medicinally as a mild but efficient purgative. It is chiefly imported from India.
Areca, a genus of lofty palms with pinnated leaves, and a drupe-like fruit inclosed in a fibrous rind. Fr., *Arec;* Ger., *Areca;* Sp., *Areca.*	It produces nuts and fibers.	The tree grows in various parts of the East Indies, and is cultivated on account of its nuts. There are two species of areca and each of them is remarkable for the for the purposes to which its fruit is applied. One is the *Areca catechu*, also known as the betel-nut palm, which is one of the most beautiful trees of the East Indies.	With lime and the leaves of the betel pepper, the areca-nuts when green form the celebrated masticatory of the East. They are an important article in eastern trade. The nuts are also imported into Europe and America for the manufacture of tooth powder.

NARCOTICS AND MEDICINES—Continued

Name of Raw Material	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
loe, a plant of which there are nearly two hundred species. Fr., *Aloès;* Ger., *Aloe;* Sp., *Aloe.*	From the juice of the leaves of many species a drug is obtained, known as aloes, which is of much value in medicine. *Aloe fiber* is obtained from species of *aloe, agave, yucca, etc.*, and is made into coarse fabrics, ropes, etc.	The principal drug-producing species are the Socotrine aloe, the Barbadoes aloe, the Cape aloe, etc. A beautiful violet color is afforded by the leaves of the Socotrine aloe. The American aloe is a different plant altogether; as are also the aloes or lign-aloes of scripture, which are supposed to be the *Aquilaria Agallochum* or aloe wood.	Some of the larger kinds are of great use, the fibrous parts of the leaves being made into cordage, fishing nets and lines, cloth, etc. The inspissated juice of several species is used in medicine, under the name of *aloes*, forming a bitter purgative. Formerly the chief source of the drug was Socotra, but it is now imported from various parts of the world.
Kola, the seeds or fruit of the *Sterculia acuminata.* The nuts are also known as guru nuts, Fr., *Noix de kola;* Ger., *Kotanüsse;* Sp., *Nueces de kola.*	Nuts and alkaloids.	The tree grows extensively in tropical Africa.	Medicinally the nuts are employed in case of diarrhœa and affections of the liver. Large supplies are shipped from the Gambia to France and Germany, where they are used to adulterate cocoa and chocolate.
ngostura Bark, the aromatic bitter medicinal bark obtained chiefly from *Galipea officinalis.* Also called cusparia bark. Fr., *Ecorce d'Angostura de Columbie;* Ger., *Angosturarinde;* Sp., *Corteza de Angostura.*	Chiefly valuable for its bark.	The tree is 10 to 20 feet high, and grows in the tropical regions of South America.	The bark is valuable as a tonic and febrifuge and is also used for a kind of bitters. From this bark being adulterated by the poisonous bark of *Strychnos Nux Vomica, its use* as a medicine has been almost given up. It is an article of considerable commerce in Venezuela.

FIBERS

Name of Raw Material	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Manila Hemp is a fiber obtained from the leaf stalk of a tree (*Musa textilis*) of the banana family. Fr., *Chanvre de Manille, Abacá;* Ger., *Manila hanf;* Sp., *Abacá.*	The strongest rope fiber in common use, especially desirable for marine cordage. The finest fibers are used by natives in the Philippines for weaving sinamay cloth.	Produced commercially only in the Philippine islands. Practically all of this fiber is cleaned by hand.	The most important export from the Philippines. The bulk of the production is sent to the United States and England.
Sisal (henequen or sisal hemp) is a hard, strong fiber from the leaves of a century plant (*Agave rigida*). Fr., *Sisal, Chanvre d'Amerique;* Ger., *Sisal hanf;* Sp., *Henequen, Maguey.* Many similar fibers are obtained from the leaves of other species of *agave* plants.	Sisal is very important for making rope and twine. All of these fibers are used locally for making mats, bags, ropes, harness, hammocks, etc., and several of them are employed in the United States and Europe for making sacking and brushes. *Mezcal* and *pulque* are alcoholic drinks made in Mexico from the sap of agave plants.	Sisal is cultivated in Yucatan and the Bahamas. Plantations of henequen, or maguey, have been established in Cuba, Hawaii, India, German and British East Africa and the Philippines. The home of the agave plants is Mexico and Central America and this part of the world produces most of these fibers.	On modern plantations machines have superseded the primitive hand methods of cleaning the fiber. Sisal is the chief product of Yucatan and its greatest export. The bulk of the production is used in the United States in making rope, twine and sacking. All of the other agave fibers are of less commercial importance than sisal or henequen.
New Zealand Flax (or New Zealand hemp) is a fiber from the leaves of a plant (*Phormium tenax*) of the lily family. Fr., *Chanvre de la Nouvelle Zelande;* Ger., *Neuseeland-Hanf;* Sp., *Cañamo de la Neuva Zelanda.*	Used in rope making.	A wild plant in New Zealand. Prepared by scraping away the pulpy part of the leaf.	An important cordage fiber. The fiber exported is all graded by New Zealand government inspectors, who certify to its quality.
Fibers more or less similar to the foregoing are obtained from the leaves of other plants.	These are all cordage fibers and some of them are much used by native people.	The plants grow wild in the warmer parts of both the old and the new worlds. Some are cultivated, but on a smaller scale than with sisal.	While these fibers are used to some extent in the mills of Europe and America, they are of relatively small importance.
Flax is the bast fiber of an annual herb (*Linum usitatissimum*). Fr., *Lin;* Ger., *Flachs, Lein;* Sp., *Lino.*	Flax or linen fiber and linseed oil are the chief products of the plant. *Tow* is a by-product in making linen and flax yarns and fabrics. *Linseed oil* is used in paints, varnishes, printer's ink, oilcloth and linoleum. *Linseed oil-cake* is a valuable cattle food. *Flax seeds* find limited use in medicine.	Flax is grown for fiber in Russia, Belgium, Italy, France, Holland, Ireland and Egypt. Little flax fiber is produced in the United States. Plants for fiber production are straight stemmed, while the varieties grown for seed have many branches. Flax seeds are produced in Russia, India, Argentina and the United States. Plants harvested for fiber are pulled up by the root in order to obtain the greatest possible length. The fiber is separated from the stalk of the plant by retting, a process of partial decay, breaking and scutching to remove the woody parts and hackling or combing. In the best grades of flax most of this work is done by hand.	Flax yarns are used in making rope, twine, bagging and coarse unbleached fabrics. Linen yarns are made into products of the better grade, including fine linens, cambrics, laces, etc. Linen is bleached by exposure to the sun and by treatment with a dilute solution of chloride of lime. Linen rags are the stock for the best qualities of paper. The United States imports flax fiber mainly from Europe, as well as large quantities of linens, laces, etc. Some flax seeds are imported and large amounts of linseed oil-cake are sent to Europe.

FIBERS—Continued

Name of Raw Material	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Hemp is the bast fiber from a tall plant (*Cannabis sativa*) of the nettle family. Fr., *Chanvre;* Ger., *Hanf;* Sp., *Canamo.* Other hemps of different botanical origin and having quite different qualities are called by such names as manila hemp, sisal hemp, tampico hemp, Mauritius hemp, sunn hemp, bowstring hemp, etc. Strictly speaking, none of these is true hemp.	As with other cordage fibers of this character, the long, combed fibers are called line and the short strands, tow. The commercial fiber is longer, coarser and less strong than flax. It cannot be bleached perfectly white, although used in so-called coarse linens. Russian, Italian and Kentucky, as applied to hemp, denote the country of origin. Italian hemp is the finest, Kentucky the strongest. *Hemp oil* is pressed from the seeds. The dried leaves (*bhang*) are smoked or made into a drink in India and used, as is an extract (*hasheesh*), as an intoxicant.	Cultivated in Russia, the warm countries of Asia, the shores of the Mediterranean, Kentucky, Missouri, Illinois and California. The fiber is extracted by rotting, cleaning and combing, but more of the work is done by machinery than in the case of flax.	Russia produces more hemp fiber than all the rest of the world. Russia and Italy are the largest exporters. The United Kingdom uses a very large amount of the fiber in making binder twine and bagging. Hemp is considerably used in carpet manufacture. The use of jute for making bagging and burlap has had the effect of lessening the demand for hemp. Hemp oil is used in paints, varnishes and soap. The oil-cake is a cattle food.
Jute is the bast from a tall plant (*Corchorus sp*). Fr., *Jute, Chanvre de l'Inde;* Ger., *Jute, Jutehanf;* Sp., *Cañamo de las Indias.*	The commercial fibers are long, but softer and weaker than hemp. It does not bleach well and is less durable than hemp, especially when exposed to dampness. Extensively employed in cordage, burlap, bagging, carpets, etc. *Jute butts*, or rejections, are an important paper stock.	Grown in large quantities in the Ganges valley, India, and in lesser amount through other parts of southeastern Asia. The stalks are rotted and treated like flax and hemp.	Jute does not easily spin into fine threads. Its chief use is in making burlap and gunny sacks, although it is used in twine, rope, carpets, curtains, upholstery fabrics such as plushes, etc. Calcutta is the great shipping port for jute fiber and Dundee, Scotland, the most important place for its manufacture. There are large jute mills making burlap, etc., in India, the United States and other countries. Paper factories in this country use a large amount of jute butts for making wrapping papers.
Ramie is the bast fiber from a plant (*Boehmeria nivea*) of the nettle family. Fr., Ger. and Sp., *Ramie.*	Commonly called China grass, or rhea, although fibers from other plants sometimes receive these names. Usually strong and silky in appearance but difficult to clean and bleach.	Cultivated chiefly in China. Produced in Indo-China, India and on a small scale in Mediterranean countries. Will probably be cultivated widely when cheap processes can be employed for the preparation of clean fiber.	Used largely in China for weaving grass cloth, or Canton linen. The fiber is very difficult to "de-gum." Many experiments are being made to find a satisfactory process. Now used in making fabrics which resemble linen, laces, underwear, plushes, etc. Will be used more largely as its manufacture is improved.
Bast Fibers from other plants are of some importance; among these are *sunn hemp, linden bast, Cuba bast* and *lace bark.*	Sunn hemp is similar to jute in its qualities and uses. Linden bast or Russian bast is made into mats, ropes, etc.		These fibers are not used on a large scale. Cuba bast is woven into ladies' hats and used for tying bundles of cigars.
Cocoanut Palm.—This tree (*Cocos nucifera*) yields a great variety of useful products. Fr., *Cocotier;* Ger., *Cocospalme;* Sp., *Coco.*	*Cocoanut fiber* (*coir*, or cocoa fiber) is obtained from the outer husk of the nut. The shells are made into cups. The milk is a nourishing drink. The kernel or meat of the nut is used for food as *shredded* or *desiccated cocoanut.* Dried cocoanut meat (*copra*) is pressed to make *cocoanut oil* for soap and candle making and cooking. The *oil-cake* is a valuable cattle food. Cocoanut wood (porcupine wood) from the trunk of the tree is not of great importance. *Palm sugar* is made from the juice collected from the flower spathe or this juice is fermented to make alcoholic drinks (*toddy, tuba, arrack*).	The cocoanut (or coco-nut) palm grows in coast regions throughout the tropics. It is commonly cultivated, but frequently its products are of only local use. Plantations in nearly all parts of the world supply some articles for export.	Cocoanut fiber is made into matting, ropes and brushes, and the poorer grades are used in upholstery. Coir fiber comes chiefly from Ceylon and India. Much is imported into the United States in the form of yarn. Cocoanut oil and copra are among the chief exports of Ceylon. Copra is obtained also from islands in the Pacific and Indian oceans and in smaller quantities from other parts of the tropics. Cocoanut oil is manufactured and used on a larger scale in Europe than in the United States. Fresh cocoanuts come to this country largely from the West Indies and northern South America.
Cotton consists of the seed hairs of a plant (*Gossypium sp*). Fr., *Coton;* Ger., *Baumwolle;* Sp., *Algodon.*	The chief commercial types of cotton are American upland, sea island, Egyptian, Indian, Brazilian and Peruvian. These differ in the length of the individual fibers (staple). The quality is indicated by the grading under such names as fine, good, good fair, fully fair, middling fair, good middling, middling, etc. Cotton fiber is spun into *yarn* and made into *thread, muslin, calico* and hundreds of other cotton or part cotton fabrics. *Mercerized yarn* is prepared by treatment with strong caustic alkali. *Cotton linters* are used in cheap yarns, cotton batting, mattresses, and the manufacture of celluloid and artificial silk. *Cottonseed oil* is used for table purposes, for packing sardines, for cooking, making soap, candles, etc.	Cotton is next to corn the most valuable farm crop of the United States. Nearly three-fourths of all the cotton produced annually in the world is grown in the south Atlantic and gulf states. The remainder comes mostly from India, Egypt, China, Brazil, and Asiatic Russia. A comparatively small percentage of the crop is sea island cotton from the coast of Georgia and from islands in the West Indies. The area of cotton production is spreading in the United States as well as in foreign countries. The cotton fiber, attached to the seeds, is picked by hand from the plants in the field. The seeds and fiber (or lint) are separated by machines (cotton gins) and the cotton is pressed into bales. Cotton seeds are subjected to heavy pressure in machines in order to extract the oil. The oil-cake is a valuable cattle food and the hulls are used for fuel or for paper making.	The greatest centers of cotton manufacture are in England, New England, the Carolinas and Georgia. Germany, Russia, India and Japan are among the important manufacturing nations. Modern cotton mills are of immense size. The bales are opened, the cotton cleaned, carded, and twisted into slivers, rovings, and finally into yarn. Raw cotton, cotton yarn and cotton fabrics are all important in trade. About half the crop of the United States is exported in bales to be manufactured in the mills of other countries. Sea island cotton has the longest staple and is used for the finest qualities of yarn and fabrics. Egyptian cotton also has a long staple. Large amounts are imported into the United States. England has an enormous foreign trade in cotton fabrics. The United States exports chiefly unbleached muslin, more of which goes to China than to any other country.
Silk Cotton consists of the seed hairs of various trees and plants. Kapok is from a large tree (*Ceiba pentandra*). Fr., *Kapok, Soie vegetale;* Ger., *Kapok, Wolle der Wollbaume;* Sp., *Kapok, Algodon de seda.*	*Kapok* or *ceiba* is the commonest vegetable silk in commercial use. Similar fibers from other sources are called *balso, pochote* and other names.	Kapok comes chiefly from Java, although the tree is common in many parts of the tropics. The crop is principally from wild trees.	These fibers can not be spun satisfactorily and are therefore used only for upholstery. The chief European market is in Holland.

FIBERS—Continued

Name of Raw Material	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Raphia is peeled from the large leaflets of a palm tree (*Raphia pedunculata*). Fr., *Raffia;* Ger., *Raphiafaser;* Sp., *Raphia.*	Madagascar raphia is the only important grade. A similar soft fiber used locally is produced in West Africa.	From a very common wild tree.	Exported in considerable amounts from Madagascar and used by gardeners for tying plants. Used for making mats and basketry and in kindergartens.
Piassava comes from the sheathing bracts of certain palm trees, in West Africa *Raphia vinifera;* in Bahia, Brazil, *Attalea funifera;* in Para, Brazil, *Leopoldinia piassaba.* Fr., Ger. and Sp., *Piassava.*	Stiff coarse fibers known as West African bass, Bahia or Para bass or piassava.	From wild trees.	Used in making brooms and brushes. Piassava is an important export from the producing regions.
Kittool (*Caryota urens*) and **Palmyra** fiber or **bassine** (*Borassus flabellifer*) are from the leaf sheaths of other palms.	These and several other palm fibers of lesser importance are finer and less stiff than piassava.	Produced in Ceylon and India.	Fairly important for brush making, having some resemblance to bristles.
Palmetto fiber is from the leaf stalks and creeping stems of a palm (*Serenoa serrulata*).	The fiber and an extract used in tanning are both obtained from this palm.	Grows in Georgia, Florida, Alabama and Mississippi.	Manufactured in limited amount. Used for upholstery and in paper making.
Crin Vegetal is the shredded leaves of a palm (*Chamaerops humilis*). **Panama Straw** (*Carludovica palmata*) and many other fibers are of commercial value.	*Crin vegetal* and *Spanish moss* are used in upholstery, *zacaton* in brush making, *esparto* for paper stock, and *Panama straw* for weaving hats.	Crin vegetal grows wild in Algeria. Spanish moss is prepared for use in the Southern states. Esparto comes from North Africa. Zacaton roots from Mexico. The best Panama straw is prepared in Ecuador and Peru.	These fibers are fairly important in trade. Panama straw enters into commerce only as Panama hats and is not an article of export in its crude state.
Rattan is the stem of a climbing palm (*Calamus* species). Fr., *Rotin;* Ger., *Indianische Rohre, Rotang;* Sp., *Roten, Bejuco.*	Rattan cane is used whole or peeled. Split rattan is the bark which is removed from the peeled rattan.	Rattan vines grow wild in tropical forests of southeastern Asia. The thorny leaves and branches are cleaned away from the stems and the outer skin is removed. Then the rattan is cut into lengths, sorted according to thickness and tied in bundles.	Used for a multitude of purposes in the east. In Europe and America for making furniture, baskets, whips, etc. Split rattan is used for chair seats and peeled rattan for brushes and basketry. Exported largely from Singapore and Java.
Bamboo is the stem of the largest plant of the grass family (*Bambusa* species). Fr., *Bambou;* Ger., *Bambusrohr;* Sp., *Bamboa, Bambu, Caña.*	One of the most useful plants in the world. Whole stems and split bamboo are both important commercially.	Grows in tropical countries. Most common in southern Asia and the East Indies.	In the east, large bamboo serves for house construction, furniture, utensils, agricultural implements, fishing rods, canes and hundreds of other purposes. The young shoots are eaten as a fresh vegetable. Split bamboo is woven in basketry, mats, etc., and used in stiff brushes. Imported from the East Indies.

COMMERCIAL WOODS

SOFT WOODS OR NEEDLE-LEAVED WOODS

Name of Raw Material	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Pine Wood is from various species of coniferous trees (*Pinus strobus, P. palustris*, etc.) Fr., *Pin;* Ger., *Fichte, Tanne;* Sp., *Pino.*	Soft pines are of several kinds, chiefly *white pine, western white pine, sugar pine* and *red pine.* Hard or *yellow pines* are more numerous and include *longleaf,* (*Georgia, hard* or *southern*) *pine, shortleaf* (*bull, spruce, Cuban, slash, pitch* or *loblolly*) *pine, western yellow pine* and *European* (*northern*) *pine,* called also *yellow deal* and *Scotch fir. Turpentine* (*spirits of turpentine*) and *rosin* (*colophony*) are prepared from the sap of certain species of yellow pine trees. *Tar, pitch, charcoal* and other products are obtained by distilling yellow pine wood.	Soft pine forests yield lumber in the northern United States and Canada and in the Rocky mountains. White pine was formerly the common timber in the Appalachians, but the supply is almost exhausted. Yellow pine is cut in large amount in the forests from North Carolina to Texas, and other hard pines come from the middle and far west, as well as from Mexico and the West Indies. Scotch fir is one of the most important woods of northern Europe. Turpentine is distilled from the sap of pines in Georgia and adjacent states, Russia, Austria, France and India.	The industries relying mainly on the forest and its products in the United States employ almost a million workers and add perhaps two billion dollars annually to the wealth of the nation. Pine is the most important construction wood in use. Very little of the great area formerly covered with white pine now remains in this country. The yellow pine is being cut rapidly and the price of lumber has practically doubled in the past twenty years.
Spruce (*Picea* species). Fr., *Sapin, Epinette;* Ger., *Fichte;* Sp., *Abeto, Picea.* **Hemlock** (*Tsuga* species). Fr., *Cigue;* Ger., *Schierling;* Sp., *Pinabete.* **Fir** (*Abies* or *Pseudotsuga* species). Fr., *Sapin;* Ger., *Tanne;* Sp., *Abeto,* are coniferous soft woods of great importance.	These are known by many names and there are several botanical species of each. *Black, white, red, tideland* and *Norway spruces, Douglas fir* and *European silver fir* (*Swiss pine*) are most important.	The spruces are common in Canada, northern Europe and on the northern Pacific coast of America and Asia. Hemlock is cut in northern United States, Canada, Japan and Siberia. Fir is found in the same general region as spruce.	The United States exports soft woods, chiefly pine, spruce and hemlock, to Europe, the West Indies, South America, Austria, Hawaii and Africa. Canada exports large quantities of spruce and pine to the United States and England. Russia and Sweden supply great quantities of soft woods to Europe, although the forests of Sweden are being rapidly cut away. Northern Japan and eastern Siberia contain forest areas rich in soft woods, which are beginning to be developed.
California Redwood comes from a coniferous tree (*Sequoia sempervirens*).	A soft, straight-grained, durable wood. Much used in shingles.	One of the largest trees of the world. Found only on the Pacific coast.	
Cedar. Fr., *Cedre;* Ger., *Zeder;* Sp., *Cedro,* and **Cypress.** Fr. *Cypres;* Ger., *Cupresse;* Sp., *Cipres,* are of many species (*Thuya, Chamaecyparis, Juniperus, Taxodium,* etc.).	*Bald cypress, yellow cypress, Indian cypress, white cedar, juniper, red cedar* and dozens of other woods have more or less similarity.	These woods are widely distributed and extensively used, but are not marketed in such large amounts as the pines, spruces and firs.	

COMMERCIAL WOODS—Continued

HARD WOODS OR BROAD LEAVED WOODS

Name of Raw Material	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Poplar, Tulip Poplar (*Liriodendron tulipifera*) and **Carolina Poplar** (*Populus deltoides*) are both large trees. Fr., *Peuplier;* Ger., *Pappelholz;* Sp., *Alamo.*	Tulip poplar (*whitewood*) and Carolina poplar (*cottonwood*), although classed in the trade as hard woods, are almost as soft as pine.	Both are from large trees in the eastern and central United States.	Poplars and lindens are soft, light, co paratively cheap woods, extensively us for general construction. They are n especially strong. All of them a important in paper making.
Linden comes from the basswood or lime tree (*Tilia* species). Fr., *Tilleul;* Ger., *Linde;* Sp., *Tila, Tilo.*	*Linden, basswood* and *whitewood* are the names used in America. *Linden, lime* or *lin* are European names. The bark supplies a useful bast fiber for ropes, mats, etc.	Common in southern Canada, central United States and Europe, growing to be trees of fairly large size.	
Maple (*Acer* species).—Fr., *Erable;* Ger., *Ahorn;* Sp., *Arce, Meple.* **Birch** (*Betula* species).—Fr. *Bouleau:* Ger., *Birke;* Sp., *Abedul.* **Beech** (*Fagus* species).—Fr., *Hêtre;* Ger., *Buche;* Sp., *Haya.* **Sycamore** (*Platans* species).—Fr., *Sycomore;* Ger., *Platane;* Sp., *Platano.* These four are among the important hard woods in common use.	*Sugar maple, silver maple, rock maple, black birch, cherry birch,* and many other names are employed. Peculiarities of the grain are known as bird's-eye, curly, etc., in the trade.	All of these are obtained from the hardwood forests of central United States and Europe. In some European forests the trees have been carefully planted and scientifically tended.	These are close-grained hard woo suitable for furniture and cabinet wo Birch is the wood commonly used imitation of mahogany. The silver maple and the Japan ma are highly valued as shade and orn mental trees.
Oak is from many species (*Quercus alba, Q. rubra, Q. robur,* etc.). Fr., *Chene;* Ger., *Eiche;* Sp., *Roble, Encino.*	*White oak, chestnut oak, live oak, red oak, black oak, swamp oak, willow oak,* and many other varieties are found in the lumber trade. *Oak bark* is used in tanning leather. *Cork* is the bark of one species (*Q. suber*) found in Portugal, Algeria and Spain.	Chiefly from eastern and central United States and Europe. Oaks are found also in many other parts of the world.	An open-grained hard wood of gre strength and durability. When parallel to the medullary rays (qu tered oak) it exhibits a beautiful gr valued highly for cabinet work.
Chestnut (*Castanea* species) is a large tree. Fr., *Châtaigne;* Ger., *Kastanien;* Sp., *Castaña.*	American and European chestnut woods are very similar. The nuts are popular for food. An extract from wood and bark is used in tanning.	Formerly a very common tree in the northern United States and still abundant. Common also in Europe.	The wood is used extensively for cabi work. It is open-grained, softer a much less strong than oak.
Ash (*Fraxinus* species).—Fr., *Frène;* Ger., *Esche;* Sp., *Fresno.* **Elm** (*Ulmus* species).—Fr., *Orme;* Ger., *Ulme;* Sp., *Olmo.* **Hickory** (*Hicoria* species).—Fr., *Noyer;* Ger., *Hickory;* Sp., *Nogal americano.*	These woods are of much commercial value. Hickory nuts are marketed.	The trees are found in the central United States, some on the west coast. Ash and elm grow also in Europe and Asia.	Valuable for their toughness and elas city. Used for tool handles, carri and wagon building, furniture, etc.
Walnut (*Juglans* species).—Fr. *Bois de noyer:* Ger., *Nusskolz;* Sp., *Nogal.*	*American* black walnut, *English Italian, French* and *Circassian* walnut are commercial varieties. The nuts are exported from southern Europe.	Formerly a very abundant tree in the central United States. Has now become scarce, and high priced. Grown in many parts of Europe.	Used for gun stocks, cabinet work, vene ing, etc. A highly decorative wo which has gone out of style in t United States because it is difficult obtain.
Cherry is from the wild black cherry tree (*Prunus serotina*).		Native in the eastern United States.	Valued on account of its red color. Li walnut, cherry has become scarce a high priced.
Sweet Gum is from a common tree (*Liquidambar styraciflua*).	The wood is called *gum, red gum, hazel* or *bilsted.*	Native in the United States and Mexico. Cut chiefly in the Southern states.	A cheap cabinet wood, used to so extent in building.

IMPORTED CABINET WOODS

Name of Raw Material	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Mahogany is the wood of a tropical tree (*Swietenia mahogani* or *Khaya* species). Fr., *Acajou;* Ger., *Mahoganyholz;* Sp., *Caoba.*	*Santo Domingo, Cuban* and other kinds are named from the locality of production. Honduras *bay wood* is of inferior quality. Nearly all of the wood with a beautiful grain, or figure, is cut into thin veneers.	A wild tree in tropical forests of the West Indies, Mexico, Central and South America. African mahogany (*khaya*) comes from the west coast.	One of the most sought for of all cabi woods. Largely imported into Euro and America. Particularly useful cause of its beautiful color, grain a durability.
Cigar-Box Cedar is from a tree of the mahogany family (*Cedrela ovorata*).	*Cedro* is the name under which this wood is largely handled.	Produced largely in West Indies, Mexico, Central America and northern South America. Tuna mahogany of Australia is very similar.	One of the important woods of commer Too soft for work of the best grade considerably used for furniture.
Teak is from a large tree (*Tectona grandis*). Fr., *Teck;* Ger., *Teakholz;* Sp., *Teca.*	Especially valuable for shipbuilding because it is practically indestructible.	Chiefly from Burma. Grows in southeastern Asia and adjacent islands.	A very important export from fard India.
Ebony (*Diospyros* species).—Fr., *Ebène;* Ger., *Ebenholz;* Sp., *Ebano;* and **Rosewood** (*Dalbergia* or *Machœium* sp.)—Fr., *Bois de rose;* Ger., *Rosenholz;* Sp., *Palo de rosa,* are important fancy woods.	*Cocobolo, tulip, amaranth, padauk, satinwood,* and many others are used for cabinet work and fancy articles.	Nearly all of these hard woods of beautiful colors are from tropical forests.	*Lignum vitæ* is especially useful for m ing pulleys and caster wheels. These woods are obtained in only limi quantity and many of them are sold weight rather than measure.

GUMS, RESINS AND EXTRACTS

Name of Raw Material	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Gum Arabic is from small thorny trees (*Acacia* species). Fr., *Gomme arabique;* Ger., *Arabisches gummi;* Sp., *Goma arabiga.* **Gum Tragacanth** and **Mesquite Gum** are similar.	*Kordofan gum, Senegal gum, Barbary gum, Cape gum* and *wattle gum* are all of similar nature.	The trees grow wild in sandy regions in Africa and Australia.	These gums are soluble in water. Used for making mucilage, confectionery, etc., and in stiffening and printing silk and cotton fabrics.
Copal is resin produced by trees of many species. Fr., and Ger. *Copal;* Sp., *Goma copal.* (*Trachylobium, Dammara, Hymenæa, Agathis,* etc.).	Copals are named usually from their locality as *Zanzibar* (the hardest), *Sandarusi, Mozambique, Sierra Leone, Benguela, Angola, Loango, South American, Manila,* etc. *Kauri* is from the kauri pine tree of New Zealand.	These resins are mostly gathered from the trunks and branches of living trees. The best and hardest varieties, like Zanzibar and kauri, are found underground, having been formed perhaps ages ago and become partly fossilized.	Used for making varnishes by dissolving them in spirits of turpentine and oil. These substances are commercially important.
Dammar, Sandarach, Benzoin, Asafetida, Myrrh, Olibanum, Aloes, Guiac, Dragon's blood, Kino, Peru Balsam, Tolu, Copaiba, Storax and **Gamboge** are resins, gum resins or extracts from the juices of plants.	Gum resins and resins of many kinds are used in varnishes, medicines, incense, etc.	Such forest products are gathered in nearly all countries.	Not of so much relative commercial importance as such materials were in the middle ages.
Rubber is the milky juice (latex) of many trees and vines of the tropics and subtropics. (*Hevea, Manihot, Castilloa, Ficus, Landolphia,* etc.). Fr., *Caoutchouc, Gomme elastique;* Ger., *Kautschuk, Federharz;* Sp., *Caucho, Hule, Goma elastica.*	Crude india rubber, or *caoutchouc,* has dozens of commercial varieties differing greatly in quality according to the nature of the plant and the process of preparation (*Para, Ceara, Central American, African, Ceylon, plantation,* etc.) Crude rubber is treated with sulphur (vulcanized) to make elastic and waterproof articles, as well as hard rubber goods (*vulcanite* and *ebonite*). Substitutes for rubber are made from rape oil, corn oil, etc.	The largest supplies of rubber come to market from the Amazon valley. Para rubber is prepared by smoking (drying) the latex over a fire. The latex is coagulated often by simple drying in the air and frequently by chemical or mechanical processes. Mexico and Central America, Africa and the East Indies furnish large amounts. Most of the world's supply comes from wild trees. Every year there is a larger production from plantations, and much of this, like the Ceylon rubber, is of very fine grade and brings the highest market price.	Rubber has, within a very few years, become an important article in the world's commerce. Its uses are multiplying and its price has risen in proportion. Factories in Europe and America make automobile tires, rubber bands, elastic cloth, toys, shoes, tubing, hose, waterproof cloth, stoppers, erasers, etc., as well as articles of hard rubber, such as combs, buttons, surgical and chemical appliances. Rubber is used in floor cloths, cements and varnishes. Old rubber articles are worked over and the reclaimed rubber utilized.
Gutta-Percha is from the milky juice of a tree (*Dichopsis* species). Fr., and Ger., *Gutta-Percha;* Sp., *Guta-Percha.* **Balata** is similar.	Similar in some ways to rubber.	From the East Indies.	Used to insulate submarine cables and for making golf balls. Singapore is the chief port of shipment.
Chicle is from the milky juice of a tree (*Achras sapota*). Fr., Ger. and Sp., *Chicle.*	Chicle is called also *gum chicle,* or *crude chewing gum.*	Chiefly from Yucatan.	Used in chewing gum.

OILS, FATS AND WAXES

Name of Raw Material	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
See Cotton, Corn, Olive, Flax, Hemp, Cocoanut, Cacao for other oils. See also various animal oils and petroleum.	Vegetable oils are of two important types, *fixed* or *fatty oils* and *volatile* or *essential oils.* Fixed oils are either *drying oils* like linseed or *nondrying* like olive.	Fixed oils are obtained from seeds by pressure in powerful machinery or by chemical processes. The oil-cake remaining is used for cattle food and fertilizer.	Drying oils are used in paints and varnishes, preparing leather, etc. Nondrying oils are used for table purposes, cooking, illuminating, lubricating, soap and candle making, etc. *Glycerine* is a by-product in soap making.
Castor Oil is from the seeds of the castor plant (*Ricinus communis*). Fr., *Huile de ricin;* Ger., *Rizinusöl;* Sp., *Aceite de ricino.*	The cold drawn or cold pressed oil is used in medicine. Much castor oil is treated with sulphuric acid to produce *Turkey red oil* for use in dyeing and calico printing.	The largest production is in India. Grown in the tropics and warm temperate climates.	Used in soap making, lubricating, preparing artificial leather and celluloid.
Palm Oil is from the pulp and seeds of a palm (*Elæis guineensis*). Fr., *Huile de palme;* Ger., *Palmfett;* Sp., *Aceite de palme.*	Palm oil is from the pulp, palm kernel oil from the seeds.	From the coast of the gulf of Guinea, West Africa.	For making soap and candles, and used in the preparation of tinplate.
Peanut Oil, *sunflower, almond, sesame, poppy, rape seed, kapok, soy bean* and various other oils are used.		Seeds for oil production are little cultivated in the United States with the exception of flaxseed, cotton and corn.	Marseilles, Rotterdam, and several other European cities have great mills for the production of vegetable oils of this character.
Essential Oils are made chiefly from flowers and leaves of plants.	*Attar of roses, patchouli, lavender, violet, geranium, cedar, wintergreen, cloves, lemon, orange, sassafras, peppermint, citronella, lemon grass, cinnamon, bay, almond, eucalyptus* and many others are prepared.	Fragrant oils are prepared in large amount for the perfumery trade in France, Italy, Germany and Austria, from roses, violets and other cultivated plants. Peppermint oil is produced in the United States, and it, as well as menthol, comes from Japan.	These oils are obtained by distillation of the plant with water or else by absorbing the fragrance in lard or oil (enfluerage). They are used in perfumery, for flavoring and in medicine.
Camphor is from the wood of the champhor tree (*Cinnamomum camphora*). Fr., *Camphre;* Ger., *Kampher;* Sp., *Alcanfor.*	Although called *gum camphor,* this is strictly a volatile or essential oil.	From Formosa, Japan, China and Borneo. Prepared by distilling the wood with water.	Nine-tenths of the world's supply is exported from Formosa. Its production is a monopoly of the Japanese government. Used in making celluloid and smokeless powder, in medicine and as a protection against insects.

OILS, FATS AND WAXES—Continued

Name of Raw Material	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Vegetables Waxes are from myrtleberries (*Myrica* species), Japanese waxberries (*Rhus* species) or the leaves of the carnauba palm (*Copernicia cerifera*). Fr., *Cire végetal;* Ger., *Vegetabilishes Wachs;* Sp., *Cera vegetal.*	*Myrtleberry* or *Bayberry wax*, *Japan wax* and *carnauba wax* are much like beeswax in their nature and uses.	Japan wax is produced only in Japan. Carnauba wax is from Brazil.	These waxes are found in commerce b are not of great importance.

DYESTUFFS AND TANNING MATERIALS

Name of Raw Material	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Logwood (*Hæmatoxylon campechianum*).—Fr., *Campeche;* Ger., *Kampeschenholz, Farbholz;* Sp., *Palode Campeche.* **Brazil wood** (*Cæsalpinia* species).—Fr., *Bois de Bresil;* Ger., *Brasilholz;* Sp., *Madera de Brasil.* **Fustic, Young Fustic, Sappan, Cam, Bar, Peach** and other woods.	Handled commercially in logs, chips, or very commonly in the form of extract.	From the forests of tropical America and the West Indies.	Aniline and other coal-tar dyes have le sened the demand for these, as well almost all other vegetable dyes. The is still a fairly large trade in logwood.
Indigo is obtained from the juice of the indigo plants (mostly *Indigofera* species). Fr., *Indigo;* Ger., *Indigo;* Sp., *Añil, Indigo.*		India, Ceylon, Java and Central America are the chief producers. Formerly cultivated much more extensively.	Prepared by soaking the plants in wate The green solution turns blue on e posure to the air, the indigo separat and falls to the bottom of the tank.
Madder, Annatto, Safflower, Quercitron, Turmeric, Turnsole, Persian Berries, Saffron, Archil, Cudbear, Litmus, Woad and many other vegetable substances are used as dyes.			
Tanbarks are from many species of trees.	*Hemlock, white oak, wattle, mangrove, larch* and *willow* are used.	Obtained mostly as by-products of lumber industry. In the United States, hemlock is most important.	Extracts from the bark are usually pr pared and the material is found commerce in this form. The value largely dependent on the percentage tannin.
Tanning extracts are prepared from many woods, fruits, leaves, roots and galls.	*Oak, chestnut, quebracho* and *cutch* are extracts from wood. *Myrobalans, valonia, divi-divi* and *algarobilla* are fruits yielding tannin. *Sumac* and *gambir* leaves, *canaigre* and *palmetto* roots and oak and sumac galls are all employed.	Obtained in nearly all parts of the world.	Different substances or extracts are e ployed in preparing different qualities leather.

MISCELLANEOUS SUBSTANCES

Name of Raw Material	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Vegetable Ivory is the seed of a palm tree (*Phytelephas* species). Fr., *Ivoire végetal;* Ger., *Holzelfenbein;* Sp., *Corozo, Tagua.*	Other species of palms produce vegetable ivory in the South Sea islands.	From Ecuador, Colombia and Panama.	Used for making buttons, etc. Exported to United States and Europe.
Argols, a deposit in wine casks. Fr., *Tartre;* Ger., *Weinstein;* Sp., *Tártaro.*	*Argal* or *lees* are the only source of tartaric acid and tartrates.	Principally from Portugal.	Used in dyeing, making baking powd cream of tartar, seidlitz powders a tartar emetic.
Lycopodium powder consists of the spores of certain mosses. Fr., *Lycopode;* Ger., *Lycopodium, Barlapp;* Sp., *Licopodio.*		Exported from Russia.	Used in fireworks and by pharmacists.
Pyrethrum is the powdered flowers of a plant allied to the chrysanthemum. (*Pyrethrum* species).	Used in insect powders.	From Persia and southeastern Europe.	

ANIMAL PRODUCTS

Animal	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Cattle are of several important types. The most abundant is the domestic ox (*Bos taurus*). Fr., *Bétail;* Ger., *Rindvieh;* Sp., *Ganado.* The Indian Humped Ox and the Water Buffalo are raised in the East.	*Beef*, fresh, dried, salted, canned or otherwise preserved is the most valuable of all cattle products. *Hides* (including kips and calfskins) are second only to beef in importance. *Milk* is sold fresh, condensed, evaporated, or is made into butter, cheese, *casein* and *sugar of milk.* Horns, hoofs and bones are used for buttons, handles for knives, brushes, umbrellas and fancy articles, or made into *gelatine* and *glue.* *Tallow* from beef fat is used in food, soap, candles and lubricants. *Oleo oil* and *stearine* are from tallow and are used in making oleomargarine or butterine. *Neat's-foot oil* is a lubricant. *Dried blood* is used in purifying sugar, clarifying wines, and in dyeing. *Cow hair* is mixed in plaster. *Pepsin* and rennet are made from the stomach. All waste parts go into *fertilizers.*	The United States, Russia, India, Argentina, Germany, Austria-Hungary, France and Australia are the greatest cattle raising countries. In this country, the cattle raising area has moved rapidly westward. More than half of the beef cattle are now found in Texas, Iowa, Missouri, Kansas, Nebraska, Colorado and Wyoming. They are fattened in the corn belt (Illinois, Iowa, Nebraska, Kansas) and killed in the slaughter houses of Chicago, Kansas City, St. Louis and Omaha. The by-products of slaughtering are very numerous and the industry is conducted so economically that, in the great slaughter houses, no part of the animal is wasted. In some parts of the world hides and tallow are the chief products of the cattle industry on account of the difficulty of transporting the meat.	The United States, Argentina and Au tralia are the greatest exporters of li cattle and beef. Great Britain bu the greater part of the cattle produ exported by the United States. F frigerator cars and cold storage steamships make possible the shipme of fresh meat to long distances. Fresh meat is a growing export fro Argentina, Australia, New Zealand an South Africa to Europe. The dairy industry is of growing imp tance and New Zealand exports butt and cheese to England. Denma Sweden, Holland, Switzerland, Cana and Australia export dairy produc Notwithstanding the large producti of hides in the United States, o tanning industry is so large that m lions of dollars worth are annua imported, chiefly from South Ameri Sole leather is made from cattle hid Leather is split and finished in a gre number of styles.

ANIMAL PRODUCTS—Continued

Animal	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Sheep (*Ovis aries*) are of a great number of breeds (Merino, Lincoln, Leicester, Southdown, Highland, etc.). Fr., *Moutons;* Ger., *Schafe;* Sp., *Carneros.*	*Wool* is the most valuable product of the sheep. The grades of wool are named according to the breed of sheep, the locality and the use to which they may be put. Clothing wools are fine and comparatively short, combing wools are of medium length, carpet wools are long and coarse. *Meat* (mutton and lamb) is of less importance than beef and pork. *Sheep* and *lamb skins* are used with the wool on, for rugs and furs (Persian lamb, broadtail, Astrakhan, Tibet). *Skins* (roans) are tanned for morocco and fancy leather. *Chamois* is usually oil-tanned sheepskin. *Catgut* is made of sheep intestines, *tallow* from the fat, *cheese* from the milk and *fertilizer* of all waste.	Raised chiefly in temperate countries, in largest numbers in Australia, Argentina, Uruguay, Russia and the United States. The finest wools are raised in Germany, Argentina, Australia, South Africa, and the United States. Combing wools come from England, Scotland, France, Australia and the United States. Carpet or native wools are produced in Russia, Asia Minor and China from sheep of unimproved breed. Sheep raising is an industry appropriate to a fairly open, temperate country which is sparsely settled. For this reason it has prospered in the western United States, Argentina, Australia, New Zealand and South Africa, where good breeds of sheep have been introduced.	Within the past hundred years, cotton has displaced wool as the most important commercial textile fiber. Wool is carded and spun into woolen yarns or combed and spun into worsted yarns. Woolens and worsteds are the two types of wool fabrics. Cotton is very largely mixed with wool to cheapen the product. The United Kingdom, Germany and France supply the world with woolen and worsted fabrics. The United States mills supply mainly the home market. Nearly all the factories are in New England and the Middle states. Live sheep are exported from Argentina, Australia, the United States and Canada, but a larger value is represented in frozen mutton, which goes in refrigerator ships from New Zealand, Australia and Argentina to Europe.
Swine are of many breeds (*Sus scrofa*). Fr., *Cochon;* Ger., *Schwein;* Sp., *Puerco, Cochino.*	The *meat* is by far the most valuable product. It is sold fresh, salted, pickled and smoked and in the form of ham, bacon and sausage. *Lard, lard oil, stearine,* and other fats and oils are obtained from the fat. The *skins* are made into leather and all waste parts are utilized in *fertilizers* or converted into *prussiate* (cyanide) *of potash.* *Bristles* come chiefly from China and Russia, where pigs have not been improved by breeding.	Pigs are raised in almost all parts of the world, but the hog raising industry is greatest in the United States. Corn is the food which is most important in fattening the animals for market.	Chicago, Kansas City and Omaha are the chief pork packing centers. Probably in no other industry is every by-product more completely utilized. Hog products constitute one of the most valuable of this country's exports, greatly exceeding the value of even cattle products.
Goats are less varied in their breed than many other domestic animals (*Capra* species). Fr., *Chèvre;* Ger., *Zeige;* Sp., *Cabra.*	*Angora* and *Cashmere* are breeds which produce exceptional qualities of hair. The hair from the common goat is coarse and is used in making carpets and blankets. *Goat* and *kid skins* are the most valuable products of these animals.	The greatest number of goats are raised in western Asia. There are many in southern Europe and northern Africa. Angora goats are raised in Asia Minor, South Africa, Texas and Australia. In Switzerland they are raised for their milk, and cheese made from it.	Large numbers of goat and kid skins are imported into the United States, chiefly from the East Indies, Mexico and South America. These are largely tanned with chrome to make glazed kid and soft leathers. By other processes morocco and glove leather are prepared.
Camels (*Camelus* species) are of two types, the one-humped or dromedary, and the two-humped or Bactrian. Fr., *Chameau;* Ger., *Kameel;* Sp., *Camello.*	*Camel hair* is the only product which enters into general commerce. Locally the flesh, milk and hide are utilized.	Camels are found throughout central Asia and northern Africa. Camel hair comes chiefly from interior Asia.	The hair or wool is soft and suitable for making hosiery, underwear and shawls.
Alpaca is an animal similar to the camel (*Auchenia pacos*). Fr., *Alpaga;* Ger., and Sp., *Alpaca.*	The wool of this animal is used to make dress goods.	Raised in Peru.	Imported into Europe and United States.
Horses are chiefly beasts of burden (*Equus caballus*). Fr., *Chevaux;* Ger., *Pferde;* Sp., *Caballos.*	*Horsehair* is from manes and tails. *Hides* are tanned to make leather. Horse flesh is eaten in Europe. *Pony skins* are used as furs.	Horsehair is exported chiefly from Russia, Argentina, Germany, and other countries.	The hair is used for making haircloth and brushes, and for stuffing mattresses and furniture.
Wild Animals of many kinds are killed for the sake of their skins.	Important *furs* are obtained from the sable, fox, weasel, marten, ermine, mink, skunk, raccoon, bear, otter, beaver, muskrat, seal, nutria, squirrel, chinchilla, mole, monkey, rabbit, etc.	Good furs come mostly from Siberia, Russia and British America, with the exception of skins of the monkey and cat families.	London and Leipzig are the world's great fur markets. Skins of the domestic cat are dyed and dressed so as often to resemble more costly fur. Rabbit fur is similarly altered. Great numbers of rabbit skins are imported from Australia and New Zealand to the United States and the fur from them is used in making felt hats. Nutria fur is used for the same purpose.
Other Animals furnish products of value.	*Ivory* is chiefly from the tusks of African and Indian elephants.	*Deer horns* for knife handles, etc., come from many parts of the world. *Deer skins* are tanned for leather.	*Musk,* a perfume, comes from the musk ox of Asia. *Castoreum* from the beaver and *civet,* from the civet cats of Africa and Asia, are the bases for perfumes.
Whales are of several species (*Balæna, Physeter*). Fr., *Baleine;* Ger., *Wallfisch;* Sp., *Ballena.*	*Whale oil* (sperm oil) is drained from the blubber. *Whalebone* is from the mouth, *spermaceti* from the blubber and cavities in the head and *ambergris* from the intestines. *Porpoise leather* is from the skin of the white whale.	The Greenland fishery is most important, but whale fishing is not as prosperous an industry now, as it was one hundred years ago. This is largely because of the scarcity of whales and partly because kerosene is so generally used for illuminating.	Whale oil is used in leather dressing, burning, soap making and lubricating. Spermaceti is used in candle making and for waxing cartridge covers; whalebone for stiffening dresses, making brushes and whips; and ambergris in perfumes.
Sponges are the skeletons of peculiar animals (*Spongidæ*). Fr., *Eponge;* Ger., *Schwamm;* Sp., *Esponji.*	The qualities differ with the species and locality.	Obtained in the Mediterranean and West Indies.	Imported largely from the eastern Mediterranean.
Fish are of hundreds of species but there are comparatively few that are of great commercial importance. Fr., *Poisson;* Ger., *Fisch;* Sp., *Pescado.*	Of the food fish, cod, haddock, herring, sardines, mackerel and salmon are handled in large quantities fresh, canned, salted or otherwise cured. *Caviare* is the prepared roe of sturgeon. *Isinglass* is a pure gelatine made from the swimming bladders of sturgeon and other fish.	The great fisheries of the world are the "Grand Banks" off Newfoundland, the North Sea and the coast of Norway. Salmon are canned on the northwest coast of America and on a smaller scale in Japan, Siberia and Norway. Portugal, Spain and France lead in canning sardines. *Oils,* made from menhaden and other fish are used in preparing leather, in paints, oiling ropes, etc. *Cod liver oil* is used in preparing chamois and other leather and in pharmacy.	Canned salmon leads in value our exports of fish products, and goes mainly to England. We import herring, etc., in oil from Europe and considerable quantities of fresh or canned lobsters from Nova Scotia and Newfoundland. *Fertilizers* are prepared from the refuse from fish canneries and from fish which are not otherwise useful.

ANIMAL PRODUCTS—Continued

Animal	Chief Commercial Articles Produced	Habitat and Cultivation	Manufacture, Uses and Trade
Oysters are the most valuable shellfish. (*Ostrea* species, *Meleagrina*, etc.) Fr., *Huitres;* Ger., *Austern;* Sp., *Ostras.*	Oysters are gathered on the coasts of Europe and America. Some are canned but the greater amount are consumed fresh. Pearl oysters (*Meleagrina*) supply *mother of pearl* and occasionally true pearls. Abelone (*Haliotis*) and various mussel shells are also used.	Pearl oysters are found off the coasts of Ceylon, Society islands, northern Australia, Panama, in the Gulf of California, the Red Sea and the Persian gulf. Abalone shells come from the shores of the Pacific.	Pearl shell is used for buttons, knife handles, etc. Mother of pearl is imported largely from the South Pacific.

PRODUCTS OF BIRDS

Raw Material	Chief Commercial Articles Produced	Habitat and Production	Manufacture, Uses and Trade
Eggs are chiefly from the domestic fowl. Fr., *Oeufs;* Ger., *Eier;* Sp., *Huevos.*	Aside from their use as food, eggs supply *egg albumen.* Large numbers are bought in the spring and summer and preserved by cold storage.	There is a large and increasing foreign trade in fresh eggs.	Eggs are used in preparing tanned leather for gloves, etc.; and egg albumen in photographic paper, clarifying sugar, etc.
Feathers and bird skins are from many kinds of wild and tame birds. Fr., *Plumes;* Ger., *Federn;* Sp., *Plumas.*	Ostrich, cock, goose, duck, turkey, pheasant, heron, grebe, and many wild birds furnish *plumes* for decorative purposes.	Ostrich feathers are obtained by killing wild birds in central Africa and from ostrich farms in South Africa. Smaller quantities come from North Africa, Argentina and California. Down, for pillows and feather beds, is from the domestic goose.	The United States imports feathers and down chiefly from Europe. The greater part of the supply of ostrich feathers comes from South Africa, and from California ostrich farms.
Guano is the accumulated excrement of birds and bats. Fr., Ger. and Sp., *Guano.*	A valuable fertilizer. Refuse from fish canneries and oil factories goes under the name of fish guano.	From dry islands and caves.	Exported mainly from islands in the Pacific.

INSECT PRODUCTS

Silk is from the cocoons of the cultivated silkworms (*Bombyx mori*). Fr., *Soie;* Ger., *Seide;* Sp., *Seda.* Pongee and other wild silks are produced by insects of different species (*Antheræa*).	*Silk cocoons* are reeled to obtain *raw silk.* The unreelable parts of the cocoons are *silk waste,* which is converted into *spun silk.* Raw silk is "thrown" or twisted giving *tram* and *organzine* for weaving.	Silkworms are reared and cocoons produced commercially only in China, Japan, India and Mediterranean countries, particularly Italy, southern France, Greece, Turkey and western Asia. Here, cheap and competent labor can be obtained as it cannot in any other part of the world where the climate is favorable. The reeling of the raw silk from the cocoon is largely conducted in modern factories.	China exports almost half the raw silk of commerce. Japan and Italy each export less than half as much as China. The United States leads the world in the quantity of silk manufactured. France uses almost as much raw silk and makes fabrics of high grade. More than half the raw silk imported into the United States comes from Japan. We import silk fabrics in large amount from France, Germany and Switzerland.
Honey (Fr., *Miel;* Ger., *Honig;* Sp., *Miel*) and **Beeswax** (Fr., *Cire de abeilles;* Ger., *Bienenwachs;* Sp., *Cera de las abejas*) are produced by the honey bee (*Apis mellifica*).	*Honey* is sold either in the comb or extracted. *Beeswax* is obtained by melting the comb. Beeswax is adulterated and imitated by the use of paraffin, stearine, and vegetable waxes. Wax is used for candles, waxing floors and thread, artificial plants, salves, etc.	Honey and wax are produced in northern Europe and the United States.	Much honey is shipped from California to other parts of the United States and to Europe. Beeswax is imported from Europe and South America.
Lac is a resinous substance formed on twigs by the lac insect (*Coccus lacca*). Fr., *Laque;* Ger., *Lack;* Sp., *Laca.*	*Stick lac* is the crude material as gathered from the trees. *Seed lac* and *button lac* are partly purified. Red lac dye is a by-product now of little importance or value. *Orange shellac* is bleached to make white shellac.	From forests of northern India and Indo-China.	Dissolved in alcohol to make varnishes. Used in sealing wax, putty, for sizing paper, stiffening felt hats, etc.
Cochineal consists of the dried bodies of insects (*Coccus cacti*). Fr., *Cochenille;* Ger., *Cochenille;* Sp., *Cochinilla.*	Used as a red dye for wool.	Raised on cactus plants in Mexico, Central America, Teneriffe, and the East Indies.	Of little present importance due to the extensive use of dyes from coal tar.
Cantharides are the dried bodies of beetles (*Cantharis, Mylabris,* etc.) Fr., *Cantharides;* Ger., *Kantharidien;* Sp., *Cantáridas.*	*Cantharides,* Spanish flies and Chinese blistering beetles are similar.	From southern Europe, India and China.	Used medicinally for blistering purposes and internally as a stimulant to the urinary organs.

MINERAL PRODUCTS

Metals	Ores and Chief Products	Locality and Preparation	Manufacture, Uses and Trade
Iron is the most useful metal. Fr., *Fer;* Ger., *Eisen;* Sp., *Hierro.*	*Hematite* (sesquioxide of iron) is the ore which supplies three fourths of the iron of commerce. *Limonite* brown (homatite) is a hydrous oxide and furnishes nearly one-fourth of the world's supply of the metal. Magnetite and siderite are less common ores. *Pig iron* is the crude form of the refined metal and is transformed into *cast iron, wrought iron* and *steel* in their multitudinous forms. These three forms of iron differ in hardness, strength, elasticity, malleability, etc., according to the amounts of carbon, sulphur, phosphorus, manganese and other elements. *Ochers* and metallic paints are iron oxides. *Prussian blue* and *copperas* are iron compounds. *Pyrite* (iron pyrites or fool's gold) is a sulphide of iron, useless as an iron ore.	The United States, Germany, Great Britain, Spain and France are the greatest producers of iron. Its ores occur in almost all parts of the world. Hematite is mined in Minnesota, Michigan, Alabama and other parts of the United States and in Germany, England, France, Spain, Russia, etc. Limonite is also widely distributed. Pig iron is made by smelting iron ore in a blast furnace. The ore, mixed with limestone, is melted by burning coke, coal or charcoal. Pyrite is found in Spain and many other parts of the world and is valuable in the preparation of sulphuric acid (oil of vitriol).	The United States manufactures more iron and steel than any other country. Almost half of the production is in Pennsylvania. Cast iron appears in many articles but is weaker than other forms of iron. Wrought iron contains less impurity and is used for bars, plates, wire, structural material and parts of machinery. Steel (Bessemer, Siemens-Martin, open hearth, etc.) contains more carbon than wrought iron, possesses both strength and hardness, and is used for rails, structural material, machinery, tools, wire rope, sheet steel, etc. Its hardness may be increased by tempering. The United States imports iron ore from Cuba and Spain, pig iron from the United Kingdom and a little manufactured iron and steel from Europe. We export large quantities of manufactured iron and steel.

MINERAL PRODUCTS—Continued

Metals	Ores and Chief Products	Locality and Preparation	Manufacture, Uses and Trade
ead is the softest, heaviest, most malleable and most easily melted of the common metals. Fr., *Plomb;* Ger., *Blei;* Sp., *Plomo.*	*Galena* (lead sulphide) is the only important ore; it often carries a considerable percentage of silver. Carbonates and sulphates of lead are less common. *Solder* and *type metal* are alloys of lead with tin and antimony. *White lead* is a carbonate, *red lead* and *litharge* are oxides. *Chrome yellow* and *orange mineral* are lead compounds used as pigments.	Ores are found in many countries but the main supply is from the United States, Spain, Germany and Mexico. The chief lead mines of the United States are in Missouri, Idaho, Utah Colorado and Kansas. Much lead bullion is from smelters where silver ores are reduced.	The chief use of metallic lead is in piping, sheet lead, shot and alloys. Large amounts of ore are transformed not into metallic lead but into white lead for use in paints. Lead ores and lead bullion are imported from Mexico. England is the greatest importer of lead and lead ores.
nc is one of the most useful metals. Fr., *Zinc;* Ger., *Zink;* Sp., *Zinc.*	*Sphalerite* or blend (zinc sulphide) is the chief ore. Carbonates, silicates and oxides of zinc are found. Crude zinc (*spelter*) is distilled from roasted ore. *Brass, German silver* and other alloys contain zinc. *Galvanized iron* consists of a coating of zinc on sheet iron. *Zinc oxide* (zinc white) resembles white lead and is used in paints.	Germany, United States and Belgium supply most of the zinc. In this country, Missouri and Kansas lead in zinc production.	Used in electric batteries, making hydrogen, zinc etchings, etc. The greatest amount of zinc is used in alloys and zinc compounds. Zinc and zinc ores are both imported and exported by the United States, the imports exceeding the exports. Zinc oxide is exported in larger amount than any other form.
opper is, next to iron, the most important metal in use. Fr., *Cuivre;* Ger., *Kupfer;* Sp., *Cobre.*	There are many ores. *Chalcopyrite,* and *bornite,* (sulphides of copper and iron) are widely distributed. *Chalcocite* (copper sulphide) is mined in Montana, *malachite* and *azurite* (carbonates of copper) in Arizona and metallic copper in Michigan. *Copper matte* is the crude metal as it comes from the smelter. *Brass* and *bronze* are alloys of copper with zinc, tin, aluminium, etc. *Copper sulphate* (blue vitriol) is the most important chemical compound of copper.	The greatest production is in the United States, in Arizona, Montana, Michigan, and Utah. Spain, Japan, Chili, Australia and Germany produce smaller amounts. The metal is purified by smelting, and refined, often by electrolytic methods.	The value of copper has increased within recent years, due to its enormous use in electrical work. Aside from this, copper is employed in large amount in the various alloys into which it enters, and in coins, utensils, printing plates, etc. Copper sulphate is extensively used in electrical apparatus, dyes, chemical work and as an antiseptic. Large amounts of manufactured copper are exported to Europe. Smaller quantities of ores, matte and regulus are imported from Mexico, South America and other countries. Copper wire is extensively used by telephone and telegraph companies.
old is the standard precious metal. Fr., *Or;* Ger., *Gold;* Sp., *Oro.*	Gold ores are usually gravels or beds of quartz rock in which the metal occurs in small particles. *Chloride of gold,* used in photographic work, is its only important compound. Pure gold is called 24 carats fine. A smaller figure indicates that the metal is alloyed to harden it.	Found in nearly all parts of the world. South Africa and the United States are the leading producers. Australia, South America and parts of Europe possess important gold fields. Gold is separated from gravel (placer mines) by washing with water. The particles of metal, being heavy, sink and can be collected. Rock containing gold is crushed to fine powder and the gold combined with mercury (amalgamation). Low-grade ores are treated with a solution of cyanide of potassium which dissolves the gold and the metal is later separated.	Gold is used for money, jewelry, gold leaf (gilding) and in dentistry. It is almost always alloyed with copper and silver. Gold is the world's accepted standard of value. Shipments of gold go from one country to another chiefly to balance international business dealings. Government treasuries and bank vaults are the chief storehouses for gold, either as bullion or coin.
atinum is a rare metal. Fr., *Platine;* Ger., *Platin;* Sp., *Platina.*	Found with gold, iridium and other rare metals in placer mines.	Chiefly from Russia. Smaller amounts from Colombia, California, Canada and Australia.	Used in the terminals of incandescent electric lamps. Also employed by chemists, jewelers and dentists.
lver is the common precious metal. Fr., *Argent;* Ger., *Silber;* Sp., *Plata.*	*Argentiferous galena* (lead ore) is the commonest ore of silver. The amount of silver per ton varies greatly. Zinc and copper ores often carry silver. Many sulphides of silver (argentite, pyrargyrite, etc.) are found, as well as chlorides and bromides (cerargyrite and bromyrite). *Chloride* and *nitrate of silver* are used in photography.	Silver is produced in greatest amount in the Rocky mountains and the Andes. The United States, Mexico, Australia, Bolivia, Chili, Peru and Germany furnish nearly the entire supply. Montana, Colorado, Nevada and Utah lead in silver production in the United States. The ores are usually smelted and refined to purify the metal.	Manufactured into innumerable articles for household use and personal adornment. The cheapest are not solid (sterling) but are electrically plated with a very thin coating of silver. Silver coins form the bulk of the currency of the world, although in most countries gold is the standard.
ercury (or quick silver) is a heavy metal which is liquid at ordinary temperatures. Fr., *Mercure;* Ger., *Merkur, Quecksilber;* Sp., *Mercurio.*	*Cinnabar* (sulphide of mercury) is the source of the metal, although a little is found in nature in the pure state. *Vermilion* (artificially prepared cinnabar) is used in paints. *Calomel* and *corrosive sublimate* are used in medicine and *fulminates* of mercury in explosives.	Produced in Spain, the United States, Austria, Italy and Russia. California supplies most of this country's quota. Obtained by distillation of the ore.	Used principally in the extraction of gold and silver from their ores by amalgamation. Employed in thermometers and barometers, silvering mirrors, and in making amalgams for dental work. Half of the mercury produced in this country is exported to Mexico, Central America and China.
luminium (or aluminum) is the lightest metal in common use. Fr. and Ger., *Aluminium;* Sp., *Aluminio.*	*Bauxite* (aluminium hydrate) is the only ore. *Cryolite* (fluoride of aluminium and sodium), a mineral mined only in Greenland, was formerly used as an ore but is now utilized in the manufacture of alum and soda. *Alum* (a sulphate) is made from cryolite or clays.	Bauxite is mined in France, Ireland, Austria, Arkansas, Alabama and Georgia. Aluminium is refined by electric processes, the works in America being located near Niagara Falls.	Used largely as an addition to iron and steel, preventing bubbles and waste in castings. Used in electrical work, and for purposes where a light, strong metal is necessary, as in certain machinery, hulls for small boats, etc. Refineries are located in Switzerland, France and Great Britain.
	Corundum (aluminium oxide) is, next to diamond, the hardest natural mineral. *Sapphire* and *ruby* are transparent forms suitable for gems. *Emery* is an impure form of corundum.	Canada, North Carolina, Alabama and India have mines of corundum. Emery is produced chiefly in Greece and Asia Minor. Rubies and sapphires are found in Ceylon, India and Montana.	Corundum and emery are powdered for use as abrasives in wheels, sharpening stones, polishing powder and cloth.
	Feldspar is a silicate of aluminium with other metals.	Mined in Canada, Pennsylvania, Connecticut, New York, Maine and Norway.	Ground up for use in pottery making. The location of manufacturing centers of pottery of all kinds and of bricks, is dependent on clay deposits. In pottery making, Ohio, New Jersey and Pennsylvania lead the United States. Abroad, fine china is made in France, Germany, Austria, England, Japan, and China. All of these countries export chinaware.
	Clay is chiefly silicate of aluminium and other metals. *Kaolin* is its purest form. The properties of clay vary with its composition, as china clay, fire clay, pipe clay, brick clay etc.	Clays are found in all parts of the world as a result of the decomposition of other rocks. For many purposes they are freed from sand and grit by washing with water, the clay being carried away in suspension. Later it is allowed to settle and gathered up in the form of mud.	

MINERAL PRODUCTS—Continued.

Metals	Ores and Chief Products	Locality and Preparation	Manufacture, Uses and Trade
Tin is less abundant than most of the common metals. Fr., *Etain;* Ger., *Zinn;* Sp., *Estaño.*	*Cassiterite* (tin oxide) is the only important ore. This mineral is commonly found as pebbles (stream tin) in gravel. *Tinplate* and alloys containing tin are of enormous importance in the arts. Of these, *bronze* is chief. *Gun metal, pewter, solder, type metal* and *britannia metal* are other alloys. Salts of tin are used in dyeing, glass making, etc.	The Malay peninsula and nearby islands (Banca and Billiton) produce over half the tin ore of the world. The remainder is mined in Bolivia, Australia, Tasmania and Cornwall, England. Small deposits occur in the United States. Tin melts at a low temperature and is easily refined.	England manufactures more tin than a other country. Tinplate, used for tin cans, roofing a kitchen utensils, is made by dippi sheet iron or steel in a bath of melt tin, thus covering it with a thin layer tin. Tinplate is manufactured in t United States and imported from En land. Tin metal is imported from En land and Straits Settlements.
Antimony. — Fr., *Antimoine;* Ger., *Antimon;* Sp., *Antimonio.* **Bismuth.**— Fr., Ger. and Sp., *Bismuth.*	*Stibnite* (antimony sulphide) is the chief ore of antimony. Bismuth occurs in small amounts in a pure state and also combined with sulphur. These metals form many alloys such as *type metal, anti-friction metals, white metal, babbitt metal, fusible metals,* etc. *Tartar emetic* and other antimony compounds are used in medicine and dyeing.	Antimony is produced in Germany, France, Italy, Hungary, United States, Japan, and other countries. Bismuth comes mainly from Bolivia and Australia. Some is produced in Saxony and England.	While the total amounts of these met in use are relatively small, they are high importance due to their peculi properties. Our imports of antimo are mainly in the form of regulus metal.
Nickel.—Fr. and Ger., *Nickel;* Sp., *Niquel.* **Cobalt** is found with nickel and forms pigments. Fr., *Cobalt;* Ger., *Kobalt;* Sp., *Cobalto.*	*Garnierite* (a silicate of nickel and magnesium) is the common ore. Magnetic iron pyrite (*pyrrhotite*) often carries several per cent of nickel. Sulphides and other compounds occur. *German silver* contains nickel, copper and zinc. It enters into other alloys.	In Ontario, Canada, nickel is found in pyrrhotite. Garnierite is mined in largest amount in New Caledonia. Norway produces other ores.	France and Germany refine nickel fr imported ore, chiefly from New Ca donia. Nickel steel, being especia hard and tough, is used for armor pla special machinery and wire rope. Nickel is extensively used for cheap el tro-plating. Nickel and nickel oxide are exported Holland and England from the Unit States and ores and matte are import from Canada.

THE FOLLOWING METALS ARE LITTLE USED IN THE PURE STATE, BUT ENTER INTO THE COMPOSITION OF MANY USEFUL MINERALS

Metals	Ores and Chief Products	Locality and Preparation	Manufacture, Uses and Trade
Magnesium.—Fr., *Magnésium;* Ger., *Magnesium;* Sp., *Magnesio.*	The metal is used in flash powders for photographic use. *Magnesite* (magnesium carbonate) is used in making carbon dioxide gas and *epsom salts* and for preparing *magnesia* (calcined magnesia).	Chiefly mined in Austria, Germany and Greece.	Used in chemical manufacture, in fi proofing and lining furnaces. Import into the United States.
	Dolomite (magnesium calcium carbonate) is common limestone, used for building.	Found in many parts of the world.	Calcined dolomite is used for lining ir furnaces.
	Talc (hydrous magnesium silicate), soapstone or steatite, is a soft mineral.	Mined in Maryland, Virginia, North Carolina, etc., and in Europe.	Made into laundry tubs, firebrick, heart stones, griddles, slate and tailor's pe cils, gas tips, etc. Imported in sm amount from France and Italy.
	Meerschaum or sepiolite (magnesium silicate).	From Asia Minor and New Mexico.	Easily carved. Made into pipes a cigar holders in Austria and Fran Largely imitated.
	Asbestos is a fibrous variety of serpentine (a magnesium silicate). *Mineral wool* is an artificial fibrous mineral.	Mined in Quebec, Canada. Another variety of asbestos comes from Italy. Mines recently discovered in Wyoming.	A fireproofing material. This miner fiber is spun and woven into firepro fabrics for theater curtains or made in felt building paper, pipe covering, e
Calcium (Fr., *Calcium,* Ger., *Calcium;* Sp., *Calcio*) has no commercial use in the metallic state. Its compounds, both natural and artificial, are of great economic importance.	*Limestone* (calcium carbonate) is a very common rock used for building. It may be of almost any color and coarse or fine in texture. *Marble* is a name applied to limestones suitable for polishing or ornamental work. *Mexican onyx* is translucent. *Chalk* is of peculiar soft texture; *whiting* is prepared chalk used to make putty and paints; *precipitated chalk* is similar. *Lime* is made by burning (calcining) common limestone. *Portland* and *hydraulic cements* are prepared by calcining siliceous limestones or a mixture of limestone and clay. *Chloride of lime* (or bleaching powder), *acetate of lime, calcium carbide* and many other compounds are of industrial value.	Limestones are found and utilized in all parts of the world. In the United States, Pennsylvania, Illinois, Ohio, Indiana, New York and Missouri are the chief producers. Fine marbles are quarried in Italy, Egypt, France, Spain and Greece. Vermont, Georgia, Tennessee and New York supply the greater part of the marble used in the United States. Hydraulic and Portland cements are of enormous commercial importance, being used in concrete construction work. Europe and the United States produce large quantities. Pennsylvania is the leading state in this industry.	As building material, limestone is us everywhere. Lime is used in chemic industries and mortar. Handsome marbles are imported fro Carrara, Italy, and other parts of Euro Mexican onyx is also imported. Cha comes mainly from the south of En land. We export some Portland ceme and import a little from Europe. Buildings (both shops and residences) a now being extensively constructed cement—in the former case being enforced by iron rods.
	Gypsum (hydrous calcium sulphate) is used in fertilizers (*land plaster*). *Plaster* is prepared by calcining (burning) gypsum. *Plaster of paris* is its purest form. *Alabaster* is compact white gypsum.	A common mineral mined in many parts of the world. Michigan, Kansas, New York, Ohio and other states produce it.	Fertilizers and plaster use up large qua tities of this mineral. Plaster of paris used for casts, decorative plaster wo cement, etc.
	Fluorite (calcium fluoride) is a less common mineral.	Mined in England, Kentucky and Illinois.	Used in chemical manufacture and as flux for ores.
	Phosphate rock (chiefly calcium phosphate, is important in the preparation of fertilizers, and chemicals containing phosphorus.	Found in deposits of organic origin in South Carolina, Florida, Tennessee, the West Indies, Canada, Spain, France, Germany and England.	The natural phosphates are treated w sulphuric acid as a first step in t manufacture of phosphatic fertilize Exported in large amount to Germa England and other countries.
Arsenic.—Fr., *Arsenic;* Ger., *Arsenik;* Sp., *Arsénico.*	*Arsenopyrite* (arsenic and iron sulphide), *orpiment* and *realgar* (sulphides of arsenic) are the sources of arsenic. *Arsenic* (white arsenic, arsenious acid or oxide of arsenic), *paris green* and other compounds and salts are prepared.	Germany, England, Canada the United States and Spain produce the ores. Chemical laboratories transform them into the useful compounds.	Sheep dip, rat poison, insecticides, e balming fluid, pigments and dyes prepared with arsenic compounds. senic salts are used in preparing c tain coal-tar colors.

METALS—Continued

Metals	Ores and Chief Products	Locality and Preparation	Manufacture, Uses and Trade
hrome.—Fr. and Ger., *Chrome;* Sp., *Cromo.*	*Chromite* (oxide of chromium and iron) is the only ore. *Bichromate of potash* is the most important compound.	Mined in Asia Minor, Greece, Canada, New Caledonia, California, etc. Salts are prepared in the chemical laboratory.	Bichromate of potash and chromic acid are used in tanning soft leather. A small percentage added to steel makes it very hard and suitable for burglar-proof safes, tools, etc. Salts of chrome are used for dyes and pigments (chrome yellow, chrome green).
arium.—Fr., *Baryte;* Ger., *Barium, Baryt;* Sp., *Bario.*	*Barytes* or barite is a heavy white mineral (barium sulphate).	Mined in the United States and Germany.	A substitute or adulterant for white lead in paints and used in making oxygen.
trontium.—Fr. and Ger., *Strontium;* Sp., *Estroncio.*	*Strontianite* (strontium carbonate) and *celestite* (strontium sulphate) contain this element.	Found in Germany, Scotland, Texas and New York.	Strontium salts are used in sugar refining and making red fire.
otash (or potassium), an alkaline metal. Fr. *Potasse;* Ger., *Kalium;* Sp., *Potasio.*	Chlorides, sulphates, etc., are found in Germany. Wood ashes and sugar beet refuse furnish much of the world's potash.	Stassfurt, Germany, possesses the only known large deposit of natural potash salts.	These salts are the source of potash in many chemical industries and in fertilizers. Exported in large amount from Germany to England, France and America.
odium (Fr., *Sodium;* Ger., *Natrium;* Sp., *Sodio*) is the most important alkaline metal.	*Salt* (rock salt, sea salt, lake salt, halite or sodium chloride) is the commonest natural compound of sodium. Important for food and in chemical manufacture.	Rock salt is mined in Germany, Austria, Spain, England, Louisiana, Kansas, India and other parts of the world. Obtained by evaporating salt water from wells in England, Michigan, New York, Ohio and China, or by evaporating salt water in the West Indies, Great Salt lake, etc.	Used for meat packing, curing fish, in silver refining, and the preparation of hydrochloric acid, soda ash, carbonate of soda, etc. The foreign trade in salt does not represent very large values.
	Soda niter (nitrate of sodium) is a very easily soluble mineral.	Found in quantity only in the deserts of northern Chili.	Exported in large amounts to Europe and America for fertilizer and the manufacture of nitric acid and other chemicals.
	Borax (hydrous sodium borate) occurs in nature in an impure form and is prepared also from calcium borates.	Borates are found in Tuscany, Central Asia, California and Nevada, and in South America.	Borax and boracic acid are used in pottery manufacture, for the preservation of meat, in dyeing and in medicine.
are Metals.—Tungsten, molybdenum; vanadium, uranium.	The ores of these metals are unusual minerals.	Found in Colorado, Arizona, Germany, England and Sweden.	Used in making special high grades of steel. Their salts are used in dyeing.
Thorium, cerium, lanthanum and yttrium.	Monazite, samarskite, thorite and other rare minerals contain these elements.	Found in North Carolina, Norway, Brazil and Ceylon.	Used in preparing the mantles for incandescent gas lights.
Lithium.	Lithium silicates are the source of this element.	Principally from South Dakota, California and Sweden.	In chemical laboratories converted into lithium carbonate for medicinal tablets and mineral waters.
Radium.	Occurs with ores of uranium.	A newly discovered very rare element.	The chloride has peculiar properties and is used chiefly by physicians.

NONMETALLIC MINERALS

Mineral	Ores and Chief Products	Locality and Preparation	Manufacture, Uses and Trade
ulphur.—Fr. *Soufre;* Ger., *Schwefel;* Sp., *Azufre.*	*Sulphur* or *brimstone* is found in a pure state in volcanic regions or associated with gypsum and limestone. *Pyrite* (sulphide of iron) is also a source of sulphur compounds.	Sicily, Italy, Japan, Louisiana and Utah have mines of native sulphur.	Used in manufacturing sulphuric acid, gunpowder, matches, as a disinfectant, for bleaching and vulcanizing rubber. Blue vitriol, green vitriol and alum are sulphates. Sulphur is imported from Sicily and Italy.
uartz (silica) is of many varieties, crystalline to amorphous. Fr., *Quartz;* Ger., *Quarz;* Sp., *Cuarzo.*	*Rock crystal* is employed for lenses. Many semiprecious stones are varieties of quartz, as *agate, moss agate, onyx, sard, chalcedony, chrysoprase, jasper,* etc. *Rock flint, flint* and *quartz sand* are used in making glass and pottery. *Sandstones* of various colors are chiefly quartz.	Rock flint is mined in Connecticut and Pennsylvania. Flint comes from the chalk cliffs of England and France. Sandstones are quarried and used for building in almost all parts of the world. Pennsylvania, Ohio, and New York supply the greatest quantities in the United States. Honestones and whetstones are mostly sandstone, and in this country are largely quarried in Arkansas, Michigan and New Hampshire.	Outside of building stones, quartz is used in greatest amount in making glass and pottery. For glass it is melted with alkali (soda ash) and either lime or lead oxide. Glass is either blown or molded. Belgium, Austria, Germany, France, Great Britain and the United States manufacture glassware. Pennsylvania, Indiana and New Jersey are the leading states. Large amounts are imported by England and the United States.
ems of many kinds are found in nature. Fr., *Pierres precieuses;* Ger., *Edelsteine;* Sp., *Piedras preciosas.*	These are nearly all transparent stones having brilliancy or beauty of color. Aside from diamond, corundum and varieties of quartz, the following are important—*topaz, emerald, aquamarine, tourmaline, olivine, spinel, moonstone, opal, turquoise* and *garnet.*	Produced in many parts of the world. Siberia, Russia, Ceylon, India, Brazil, North Carolina and Montana are all important.	Cut and polished for use in jewelry. Much of this work is done abroad.
lica is a common mineral found in rocks in many parts of the world. Fr., *Mica;* Ger., *Marienglas, Glimmer;* Sp., *Espejuelo.*	Several varieties occur (*muscovite, biotite,* etc.) Valuable only when found in large sheets which can be split smoothly.	Mined in India, Canada, North Carolina and South Dakota.	Transparent sheets are used for lamp chimneys and stove doors. Employed in electrical work, and lubricating. Imported from India.
uilding Stones.—Fr., *Pierres de construction;* Ger., *Bausteine;* Sp., *Piedrasde construcción.*	*Granite, syenite, gneiss, basalt* and other hard or durable rocks.	Quarried for local use in all parts of the world.	Only stone of exceptional beauty is shipped to a great distance. Scotland, Norway, Massachusetts, Maine and other localities produce fine stones.

CARBON AND CARBON COMPOUNDS

Mineral	Forms and Chief Products	Locality and Preparation	Manufacture, Uses and Trade
Coal is the most important fuel. Fr., *Charbon de terre, houille;* Ger., *Kohle, Steinkohle;* Sp., *Carbon mineral.*	*Peat, lignite* and *brown coal* are poor in quality, retaining much appearance of vegetable origin. *Bituminous coal,* coking coal, non-coking coal, cannel coal, cherry coal, splint coal, gas coal, steam coal, etc., are all varieties of soft coal and contain a considerable percentage of volatile matter. *Anthracite coal* is almost pure carbon. By distillation, bituminous coal yields *gas, ammonia, coal tar* and *coke.* Coal tar products are numbered by the thousand. Among them are *naphtha, benzene, oil of mirbane, perfumes, flavors, drugs, saccharine, aniline* and other dyes, *phenol, carbolic acid, salicylic acid, napthaline, photographic developers, creosote, oils, tar* and *pitch.*	Coal is a result of the alteration of vegetable matter. Deposits occur in almost all parts of the world, but many are almost entirely undeveloped; as, for example, the coal fields of China. The largest production is in the United States, Wales, England, Germany, Austria, Russia and Australia. Mines are worked in India, Japan, Mexico, South America, South Africa, China and the Philippines. Pennsylvania, Ohio, West Virginia, Alabama, Indiana, Iowa and many other states mine coal in great amount. Pennsylvania produces nearly all of the anthracite and a large quantity of bituminous coal.	Bituminous coal is the fuel which runs the factories, railways and steamships of the world. The distillation of coal tar and the utilization of its numerous by-products, is one of the best examples of modern economy which turns waste material into useful products and large profits. Much coke is made without saving the by-products. The United States exports coal, both bituminous and anthracite to Canada and ships bituminous coal to Mexico, Cuba and other countries. Some coal is imported from British America. Great Britain has a large export trade in coal. Much of that shipped from Cardiff, Wales, is in the form of briquettes or blocks made by mixing small coal with pitch or tar and pressing it into shape.
Petroleum (or coal oil).—Fr., *Pétrole;* Ger., *Petroleum, Bergol;* Sp., *Petróleo.*	Petroleum or *coal oil,* in its crude state, is a dark colored liquid. It yields by distillation, first; light oils, *gasoline, naphtha, benzine;* second, *illuminating oils, kerosene, headlight oil,* etc.; third, *lubricating oils, engine oil, cylinder oil, machine oil;* fourth, *petroleum residuum* (for asphalt paving) and *coke. Petrolatum, vaseline* and *paraffin wax* are by-products in petroleum refining.	Obtained from wells in the United States, Russia, Dutch East Indies, Galicia, Roumania and other countries. More than half of the world's output is from the United States, the leading districts being (1) Kansas and Oklahoma, (2) California, (3) Illinois, (4) Pennsylvania and (5) Texas. Crude oil is transported from the wells for hundreds of miles through pipe lines to the refineries.	Probably no modern industry is more effectively organized and carried on than the petroleum business. There is no waste in the distillation of the crude oil and no part of it for which uses have not been found. In addition, the business of selling the oil is managed with the highest skill. American kerosene oil is exported to all parts of the globe. Crude oil is also exported as well as other petroleum products.
Asphaltum (or mineral pitch).—Fr., *Asphalte, Goudron minéral;* Ger., *Asphalt;* Sp., *Asfalto.*	A bituminous mineral substance found more or less pure, in some localities. *Rock asphalt* consists of sandstone or limestone impregnated with asphalt. Much asphalt is produced in refining certain grades of petroleum—such as those obtained in California and Texas.	The pitch lake of Trinidad and the Bermudez lake at the mouth of the Orinoco in Venezuela, are the largest known deposits of moderately pure asphalt. Smaller deposits of high grade occur in Utah, Cuba and the Barbadoes. Rock asphalts are mined in France, Switzerland, Sicily, California, Kentucky and Oklahoma.	For paving, rock asphalts are much used in Europe. Trinidad and Venezuelan asphalts are exported in large quantities to the United States and Europe. For paving, these lake asphalts are mixed with broken stone, sand and petroleum residuum. Pure varieties (gilsonite, marjak, glance pitch) are made into black varnish, used for insulating, etc.
Graphite is almost pure carbon. Fr., *Graphite;* Ger., *Graphit;* Sp., *Grafito.*	*Plumbago* or *black lead* is used in making crucibles, lead pencils, lubricants for heavy machinery, stove polish, foundry facings, paint, etc. *Artificial graphite* is made from coal or coke by an electric process.	Produced in Bohemia, Ceylon, Italy, Germany, Mexico and the United States. The deposits in Ceylon are the largest in the world. Much of that mined in New York and Alabama is of very high grade.	Powdered graphite is mixed with fine clay in greater or less proportion and then molded and baked to form such articles as crucibles and lead for pencils. Graphite is imported from Ceylon to the United States, and lead pencils from Europe.
Diamond is pure crystallized carbon. The hardest known substance. Fr., *Diamant;* Ger., *Diamant;* Sp., *Diamante.*	Many diamonds are transparent, colorless stones. Some are blue or yellow. Some stones (*bort* and *carbonado*) are unfit for gems but valuable for polishing or in diamond drills.	South Africa produces the bulk of the world's supply. These deposits are in rock. In Brazil and India a few diamonds are found in gravel. Most of those from Brazil are opaque and dark colored (carbonado).	The beauty of a diamond is largely due to cutting. The diamond cutting industry is centered in Amsterdam and Antwerp. Diamonds are imported to the United States mainly from Holland and Belgium after cutting. Carbonado is used in diamond drills. Diamonds are used in cutting glass and for grinding and polishing.
Amber is a fossil resin. Fr., *Ambre;* Ger., *Bernstein;* Sp., *Ambar.*		Found chiefly along the shores of the Baltic.	Used in making mouthpieces for pipes, cigar holders, beads, etc.
Carborundum.	Carbide of silicon. Harder than any known substance but the diamond.	Manufactured at Niagara Falls, by electrically heating a mixture of coke, sand and salt.	Used for making polishing powder, in grinding wheels, sharpening stones, abrasive cloth, etc.

MONEY, BANKING AND FINANCE.—Money comprises all things which every one accepts in exchange for his property and services and in exchange for which one can always procure the property and services of others which are on the market for sale. It includes coins made of gold, silver and copper, notes issued by banks, and, in the United States and some other countries, certain government notes.

Functions of Money may be described by the phrases *standard of value* and *medium of exchange.* By the former is meant that commodity in terms of which the value, or ratios of exchange, of commodities are measured and expressed. Gold is that commodity in the chief commercial countries of the world at the present time, and a certain definite portion of it, in the United States 23.22 grains, is declared by statute to be the unit of value and is given a special name, as the dollar, pound sterling, mark, franc, etc. By the medium of exchange is meant those things which *mediate,* or act as go-betweens, in exchanges. It includes coins made of the standard commodity, all other things included under the head money, and many things not ordinarily so included, such as bank deposits, some other book accounts, various devices for making payments used by express companies and post offices, private tokens, etc.

The Elements of the Medium of Exchange common to the leading countries at the present time may be classified as *standard coins, subsidiary coins* and *bank currency.* In some countries are also found certain special coins not classifiable either as standard or subsidiary, and certain *government notes.*

Standard Coins are those made from the commodity which serves as the standard of value, are minted freely or at a small charge for whoever brings metal of the proper standard to the mints, and are legal tender for all payments public and private.

Subsidiary Coins are usually made of silver with an intrinsic value below their face value, are redeemable in standard coins, are legal tender only for small amounts, and are minted in limited quantities on government account. Among special coins may be mentioned the United States silver dollar, the five-franc piece of France, Belgium, Switzerland and Italy, and the thaler of Germany. These are coins which possess full legal tender power in their respective countries, and are not directly redeemable in standard coins, but are either no longer coined at all or only coined from time to time in limited quantities under the authority of special laws.

The Government Notes referred to are usually noninterest-bearing promissory notes issued by governments in various denominations suitable for monetary purposes, and payable to bearer on demand. In the early stages of their history they are frequently not redeemable on demand in standard coins, and consequently depreciate in various degrees according to the likelihood of their redemption in a long or a short period, the fiscal condition of the government issuing them, and other circumstances.

United States Money.—The medium of exchange of the United States at the present

time, exclusive of its bank currency, consists of gold coins, silver dollars, silver half and quarter dollars and dimes, a nickel five-cent piece, a copper cent, gold certificates, silver certificates, greenbacks and Sherman notes.

Gold and Silver Certificates are issued, the former chiefly in large, and the latter in small denominations, by the treasury department in exchange for gold coins and silver dollars respectively, which are held for their redemption.

Greenbacks, also called United States notes, were first issued in 1862 and 1863 to assist in financing the Civil war. Until January 1, 1879, they were not redeemable in coin and were consequently depreciated. Since that time the Secretary of the Treasury has been obliged to redeem them in gold on demand, and for that purpose has kept on hand a gold reserve, which was fixed at $150,000,000 by the act of 1900. When redeemed, they can only be reissued in exchange for gold coin, and the total amount which may be issued under existing laws is $346,681,016.

The Sherman Notes were issued under authority of an act passed in 1890 providing for the purchase each month of 4,500,000 ounces of silver bullion at its market price, to be paid for in treasury notes, which were to be redeemable on demand in gold coin or silver dollars at the option of the Secretary of the Treasury.

In 1893 the silver purchase clause of this act was repealed, about $150,000,000 of the certificates having been issued to that time. The bullion accumulated in the vaults of the treasury under authority of this act was subsequently coined by authority of law, silver certificates issued, and, by authority given in the act of 1900, gradually substituted for the Sherman notes, less than $4,000,000 of which still remain in circulation.

MONETARY SYSTEM OF THE UNITED STATES AS AT PRESENT CONSTITUTED

I. Gold, Silver and Minor Coins

	Gold Coin	Standard Silver Dollars	Subsidiary Silver Coin	Minor Coin
Weight	25.8 grains to the dollar.	412.5 grains.	385.8 grains to the dollar	5 cent piece: 77.16 grains, 75 per cent copper, 25 per cent nickel.
Fineness	900-1000.	900-1000.	900-1000.	1 cent piece: 48 grains, 95 per cent, copper, 5 per cent tin and zinc.
Ratio to gold		15.988 to 1.	14.953 to 1.	
Limit of issue	Unlimited.	Coinage ceased in 1905.	Needs of the people.	Needs of the people.
Denominations	$20, $10, $5, $2½.	$1.	50 cents, 25 cents, 10 cents.	5 cents, 1 cent.
Legal tender	Unlimited.	Unlimited, unless otherwise contracted.	Not to exceed $10.	Not to exceed 25 cents.
Receivable	For all public dues.	For all public dues.	For all dues up to $10.	For all dues up to 25 cents.
Exchangeable	For gold certificates, as below, and subsidiary and minor coin.	For silver certificates and minor coin.	For minor coin.	
Redeemable			In lawful money at the treasury in sums or multiples of $20.	In lawful money at the treasury in sums or multiples of $20.

II. Paper Currency

	Gold Certificates	Silver Certificates	United States Notes	Treasury Notes of 1890	National Bank Notes
Limit of issue	Unlimited for gold coin unless gold reserve falls below $100,000,000.	Amount of silver dollars coined, $562,173,530.	$346,681,016.	No further issues; volume steadily diminishing by redemption in silver dollars.	Not to exceed capital of banks.
Denominations	$10,000, $5,000, $1,000, $500, $100, $50, $20, $10.	$100, $50, $20, $10, $5, $2, $1.	$1,000, $500, $100, $50, $20, $10, $5, $2, $1.	$1,000, $100, $50, $20, $10, $5, $2, $1.	$1,000, $500, $100, $50, $20, $10, $5.
Legal tender	Not a tender.	Not a tender.	For all debts, public and private, except customs and interest on public debt.	Unlimited, unless otherwise contracted.	Not a tender.
Receivable	For all public dues.	For all public dues.	For all public dues.	For all public dues.	For all public dues except customs.
Exchangeable	For subsidiary and minor coin.	For silver and minor coin.	For subsidiary and minor coin.	For silver and minor coin.	For subsidiary silver and minor coin.
Redeemable	In gold coin at the treasury.	In silver dollars at the treasury.	In gold at the treasury.	In gold at the treasury.	In lawful money at the treasury, or at bank of issue.

COINAGE OF THE UNITED STATES, 1792-1910

Denomination	Pieces	Values
Gold		
Double eagles	112,807,169	$2,256,143,380.00
Eagles	48,177,301	481,773,010.00
Half eagles	70,986,684	354,933,420.00
Three-dollar pieces (coinage discontinued under act of September 26, 1890)	539,792	1,619,376.00
Quarter eagles	13,971,659	34,929,147.50
Dollars (coinage discontinued under act of September 26, 1890)	19,499,337	19,499,337.00
Dollars, Louisiana Purchase Exposition (act of June 28, 1902)	250,000	250,000.00
Dollars, Lewis & Clark exposition	60,000	60,000.00
Total gold	266,291,942	$3,149,207,670.50
Silver		
Dollars (coinage discontinued, act of Feb. 12, 1873, resumed act of Feb. 28, 1878)	578,303,848	$578,303,848.00
Trade dollars (discontinued, act of Feb. 19,1887)	35,965,924	35,965,924.00
Dollars (Lafayette souvenir, act of March 3, 1899)	50,000	50,000.00
Half dollars	366,731,221	183,365,610.00
Half dollar (Columbian souvenir)	5,000,000	2,500,000.00
Quarter dollars	385,922,401	96,480,600.25
Quarter dollars (Columbian souvenir)	40,000	10,000.00
Twenty-cent pieces (coinage discontinued act of May 2, 1878)	1,355,000	271,000.00
Dimes	602,967,986	60,296,798.60
Half dimes (coinage discontinued, act of February 12, 1873)	97,604,388	$4,880,219.40
Three-cent pieces (coinage discontinued, act of Feb. 12, 1873)	42,736,240	1,282,087.20
Total silver	2,116,677,008	$963,406,087.95
Minor		
Five-cent pieces, nickel	642,501,287	$32,125,064.35
Three-cent pieces, nickel (coinage discontinued, act of September 26, 1890)	31,378,316	941,349.48
Two-cent pieces, bronze (coinage discontinued, act of September 26, 1890)	45,601,000	912,020.00
One-cent pieces, copper (coinage discontinued, act of February 21, 1857)	156,288,744	1,562,887.44
One-cent pieces, nickel (coinage discontinued, act of April 22, 1864)	200,772,000	2,007,720.00
One-cent pieces, bronze	1,859,536,529	18,595,365.29
Half-cent pieces, copper (coinage discontinued, act of February 21, 1857)	7,985,222	39,926.11
Total minor	2,944,063,098	$56,184,332.67
Total coinage	5,327,032,048	$4,168,798,091.12

Silver-dollar coinage under acts of April 2, 1792, $8,031,238; February 28, 1878, $378,166,793; July 14, 1890, $187,027,345; March 3, 1891, $5,078,472—total, $578,303,848.

The Medium of Exchange of Other Countries, exclusive of their bank currency, resembles that of the United States in most essentials, but differs from it in some particulars.

Canada.—That of Canada approximates it most closely, the unit of value being the same, and government notes playing an important rôle. The gold coins of both

England and the United States, however, are there current, and the governor-general may declare other gold coins legal tender at their bullion value.

England has a large unit of value, consisting of 123.274 grains of standard and 113.001 grains of pure gold, which is represented in a coin called *the sovereign*. Its silver coins are all subsidiary, the shilling weighing $87\frac{3}{11}$ grains 0.925 fine, being the unit among them and having a tale value of one-twentieth of a sovereign. The penny and the farthing are minor coins of copper having tale values respectively of one-twelfth and one-forty-eighth of a shilling.

Unlike the United States, England does not use government notes as an element of currency.

France, Belgium, Switzerland, and Italy have the so-called franc system, the franc, consisting of 4.978 grains of standard and 4.4802 grains of pure gold, being the unit. In these countries all the silver coins are subsidiary, except the five-franc piece, which in its status closely resembles the silver dollar of the United States. It contains 385.8 grains of standard and 347.22 grains of pure silver, and from 1865 to 1874 was coined in unlimited amounts for private persons at a seniorage charge of one and two-thirds francs per kilogram. Between 1874 and 1878 they were coined in limited quantities for government account only, but since the latter date their coinage has been suspended. However, they still remain legal tender at their tale value for all amounts.

Germany makes the mark its unit, consisting of 6.1457 grains of standard gold. All silver coins are subsidiary except the thaler. The silver mark weighs 85.733 grains, and all subsidiary coins are legal tender only in payments of twenty marks or less. The thalers are remnants of the old currency systems in use before the foundation of the empire and are legal tender for any amount. Imperial treasury notes constitute a small element of the currency of the empire.

Banks.—The largest element of the medium of exchange of commercial nations is supplied by banks, which also frequently perform other important financial functions, such as the encouragement of saving, the purchase and sale of securities, the promotion of industrial enterprises and the execution of trusts of various kinds. Their most fundamental operations are *the conduct of deposit accounts* and *the making of loans and discounts*.

Deposits are credits on the books of a bank obtained by business men and others by the sale to the bank of their surplus cash, their own personal notes, and of credit instruments representing payments due them from other people. These credits give the customer the right to call upon the bank for legal tender money or for a transfer to the credit of some other person of all or some part of the amount due him.

Some, known as *demand deposits*, give the right to demand payment at any time without notice, and others, known as *time deposits*, only after the lapse of a certain time from the date of demand.

Check.—In making use of his rights the customer employs the *check*, which is a written order to the bank to pay to bearer or to the order of a specified person a specified sum.

Loans and Discounts.—The personal notes and bills of exchange payable at some future date received by the bank in return for credits allowed or cash advanced are usually described in bank accounts as *loans* and *discounts*.

Bank Notes.—Instead of opening credit accounts or advancing legal tender money to its customers a bank having the authority may *issue notes*—that is, transfer to them its promises to pay to bearer on demand—in denominations convenient for use as money. To the bank these notes represent obligations of the same kind as deposits, but to the customer they serve as hand-to-hand money and may be substituted for government notes, and, for many purposes, for coin.

Banking Processes.—Through the processes involved in *loaning, discounting, conducting deposit accounts*, and *issuing notes*, banks perform a large part of the world's exchanges, in the United States the major part. Nearly all business men and a large percentage of other people are their customers.

Purchases of goods are generally made on time, the credit instruments, such as personal notes and bills of exchange, which represent the obligations thus created, are discounted by the banks, and deposit accounts opened against them. By transfers of these from one person to another the mutual indebtedness created by purchases and sales on credit are canceled and the transactions thus completed and closed.

Profits.—The interest on the discounted notes and bills, which it has purchased by credit accounts bearing no interest or a lower interest than is charged on loans or by notes, is the chief source of a bank's profits.

Exchange.—In the conduct of their business banks find themselves each day in the possession of checks, drafts and other bills of exchange drawn on other banks in the same or other cities.

Clearing Houses.—In order to collect those drawn on banks located in the same town clearing houses have been organized in all large and in many small cities. These are places at which clerks of the various banks meet for the purpose of exchanging checks, drafts, etc., and settling mutual obligations.

Correspondents.—For the collection of paper drawn on out-of-town banks and the supply of their customers with the means of meeting out-of-town payments, banks usually employ what are known as correspondents. These are banks in commercial and financial centers with which they open deposit accounts on which they arrange to have credited the amounts of checks, drafts, etc., sent for collection, and debited the drafts drawn in favor of their customers.

Through this correspondence system the banks of the entire commerical world have been organized into a great machine for the conduct of commerce, business men anywhere being able through their banker to make payments in any part of the world or to receive amounts due them.

Through it, also, the mutual indebtedness of the people of different cities, states and nations, created by mutual trade, investments, and other financial operations, are canceled in substantially the same manner as those between citizens of the same place are canceled by local banks and clearing houses.

Bank Balances.—The aggregates of the debits and credits which the banks of a place have with their correspondents represent with a considerable degree of accuracy what the people of the place owe to outsiders and what outsiders owe to them. The balance between these aggregates may be great or small, in favor of the banks or against them, and their payment, if demanded, must be accomplished by the shipment of money. If payment is not demanded the banks will ordinarily pay interest on adverse balances and receive interest on favorable ones. The banks are thus put to expense whenever the balance is against them and are making a profit whenever it is in their favor. In the first case, in order to indemnify themselves, they must charge a premium on drafts on out-of-town places, and in the second case they can afford to sell drafts at a discount, provided they can make more out of their funds at home than the interest allowed on their balances with correspondents.

Rate of Exchange.—This premium charged or discount allowed on drafts is known as the *rate of exchange*. If a premium is charged, *exchange is said to be at a premium;* if a discount is allowed, *it is said to be at a discount.*

The rate of exchange at a given time is fixed by a process of bargaining between either the banks of a place which have favorable balances with correspondents and therefore desire or are willing to sell exchange, and those which have unfavorable balances and consequently desire or are willing to buy exchange, or, in case all the banks are in the same situation as regards the condition of their balances, between the banks and those of their customers who want exchange.

Foreign Exchange.—In the foreign exchange, between countries having the same standard, the so-called *par of exchange* must be calculated; that is, the exact equivalent of the unit of one nation in terms of the other. Between the United States and other nations this calculation consists of dividing the number of grains of pure gold contained in the foreign unit by 23.22, the number of grains of pure gold in our dollar.

Between countries having different standards—for example, between gold and silver standard countries—the place of the par of exchange is taken by the relative market values of the two metals. If one or both of the nations have a secondary standard its depreciation must be calculated as well as the par of exchange or the relative values of the metals constituting their primary standards.

The rates of exchange between foreign countries fluctuate above or below the par of exchange or the substitute for it as the domestic rate fluctuates above and below the par value of domestic drafts. Between gold standard countries the upper and lower limits of these fluctuations are determined by adding to and subtracting from the par of exchange the cost of obtaining and shipping gold, and are called the *gold points*.

Foreign Drafts are drawn by parties of various degrees of financial reputation and are made payable at different dates. Accordingly the element of interest enters into the calculation of their market values and consequently into the prices at which they are quoted.

When a New York banker sells a *cable* there is no appreciable interval between the time at which he receives the pay for it and the time at which his balance with his foreign correspondent is diminished by the amount drawn, but when he sells a *sixty-day* draft he receives the pay for it at the date of sale and still draws interest on the total amount of his balance for sixty days, the draft not being payable until after the lapse of that period of time.

Leaving out of consideration, therefore the cost of the cablegram, he could afford to

sell a sixty-day draft at the price of a cable minus interest on the amount for sixty days at the rate received on balances with his correspondent.

Classes of Banks.—From the standpoint of the *source* of their authority to do business, banks in the United States may be classified as *national, state* and *private* according as they are chartered by Congress or by state legislatures or operate without charters under the authority of the common law.

State banks may be subclassified into *commercial banks, savings banks* and *trust companies.*

The basis of this classification is the nature of the business performed.

Commercial Banks perform the functions described and cater to the needs of the commercial classes.

Savings Banks specialize in the business of promoting saving by keeping time deposits, upon which they allow relatively liberal rates of interest, and by investing them in high-class securities, like bonds and real estate mortgages, instead of commercial loans of the kind chiefly sought by commercial banks.

Trust Companies were originally organized for the purpose of administering financial trusts of all kinds, such as the estates of deceased persons, or of living persons who are unable or unwilling to administer them for themselves, and those of charitable, educational and other institutions. They have added to these, however, numerous other functions, such as acting as financial agents for corporations, states, municipalities, and at times even the federal government; promoting and financing new enterprises, especially combinations, mergers and trusts; stock jobbing; the promotion of saving; and, when not forbidden by law, commercial banking.

In fact the tendency of their development is in the direction of making them financial department stores in which every branch of finance is carried on.

Banking Laws.—The laws governing the different classes of institutions are not uniform throughout the United States, although there is a tendency toward uniformity observable in recent legislation.

The National Banks are regulated by the new Federal Reserve Act, attempts to remedy immobility of money and credit by: (1) providing for use of short time commercial paper as a basis of expanding currency and credit in times of stress, through twelve reserve centers. (See U.S. map pp. 47 and 48 for boundaries.) 2. By lowering reserve requirements to 18% in central reserve cities, 15% in reserve cities and 12% outside of reserve and central reserve cities. 3. By allowing National Banks not in central reserve cities to loan on farm lands.

It is expected to overcome tendency of money and credit to centralize in New York.

Touching Other Banks.—The legislation of the various states regarding commercial banks is far from uniform, but the national banking code has served as a model in many cases. The chief differences between the rights and privileges of the two classes of institutions are the following:

(1) State banks do not issue notes chiefly because the national government levies a tax of 10 per cent on such notes and sometimes also because such issues are prohibited by law.

(2) In most states commercial banks with a capital stock as small as $10,000 are permitted and in a few no minimum is prescribed.

(3) The laws of most states are more liberal than the national banking code in the matter of real estate loans and in that of the amount permitted to be loaned to a single firm or individual.

The laws regarding savings banks differ somewhat according as the institution belongs to the *mutual* or the *stock* class, but usually limit their investments to certain specified classes of securities, limit the amount of deposits in the name of a single individual, and permit the bank to require a certain number of days' notice of the depositor's intention to withdraw deposits.

Legislation regarding trust companies is changing rapidly. The tendency in some states now is to require them to segregate the different branches of their business and to conform to the laws regulating institutions which specialize in each branch; for example, to the laws regarding commercial banks in the management of their strictly commercial business, to those regarding savings banks in their savings business, etc.

European Banking Systems differ from ours chiefly in the presence in each country of a central bank in such relations to the government and the other banking institutions as to make it the center and balance wheel of the entire system.

In England this central institution is the Bank of England, in France the Bank of France, and in Germany the Imperial Bank. The most important other commercial banking institutions of these countries fall into groups somewhat different from those in the United States.

In England they are the *joint-stock* and *private banks, foreign* and *colonial banks* and *discount firms* and *companies.*

In France, five great incorporated institutions which do the bulk of the business; *private banks, provincial banks,* and *foreign* and *colonial banks.*

In Germany, eight large incorporated banks, *private banks, provincial banks, mortgage* and *coöperative banks.* In all of these countries these banks operate extensively through branches.

Postal Savings Banks.—In most European countries are also found postal savings banks conducted by the post-office departments of their respective governments, and in many of them so-called mortgage banks for loaning on real estate security and coöperative banks for loaning to peasants, artisans and others on the joint security of their combined properties.

The Financial Center of each country, which is usually also its chief commercial center, is the seat of its chief *money market.* By this is meant the place where the machinery for the keeping and distribution of the money funds of the country, for the determination and registration of loan rates, for the investment of a large portion of its capital, and for the sale and registration of its principal securities, is located. The central money market of this country is in New York City, that of England is in London, and those of France and Germany in Paris and Berlin respectively.

Machinery of the Money Market.—The most important parts of the machinery of the New York money market are the *banks,* state and national, organized into the *clearing house association, groups of trust companies, private banks* and *foreign banks,* the *United States subtreasury and assay office,* and the *stock exchange.*

The Associated Banks act as reserve agents and correspondents for banks and trust companies in every part of the country, and in this capacity hold balances to the credit of these institutions which aggregate very large sums.

The New York Subtreasury receives and disburses a very large percentage of the revenues of the federal government, and thus at times draws heavily on the funds on deposit in the associated banks and at others pours large amounts into their coffers.

The Assay Office is the principal avenue through which new supplies of the precious metals reach the market.

The Trust Companies serve as financial agents for the great railroads, trusts and other corporations of national scope and influence and also do a large commercial banking business.

The Foreign Banks mediate between foreign financial centers and New York.

The New York Stock Exchange lists the bonds and stocks of great railroads, public service corporations, trusts and other industrial corporations of national scope, the bonds of the United States government, and occasionally those of foreign countries, of states and municipalities, and the stock of banks and trust companies. It furnishes a carefully regulated market for the daily purchase and sale of these securities and also a place for the loaning of such funds as bankers and other parties wish to place at the disposal of stock brokers, speculators and investors.

The private banks and brokerage firms mediate between the investors of the country, the stock exchange and the banks.

The Cash Reserves of the associated banks thus constitute the central money reservoir of the country. From it are drawn a considerable portion of the funds needed by banks in every part of the country for the accommodation of their customers and to it ultimately flows their surplus cash. From it also the United States government draws most of its supplies and to it contributes from time to time its surpluses.

The Financial Barometer.—The amount of these reserves in excess of 25 per cent of their deposits, the minimum amount required by law to be kept constantly on hand in their vaults, called the *surplus reserves,* is an excellent barometer of the power of the New York banks to lend, and is, therefore, constantly watched by persons and institutions whose operations are based on loans obtained in the New York market.

The rates charged for loans are also affected by the fluctuations of these reserves, usually rising when they fall and *vice versa.* When the surplus reserves fall to a low point or entirely vanish, as a result of drafts on the New York banks from various parts of this country, from foreign countries, from the subtreasury, or from all three combined, the money rates accordingly rise to very high points, and operators on the stock exchange, being deprived of funds for further operations and being called upon to pay their loans, are forced to sell the securities lodged as collateral at such prices as they will bring.

Panics.—At such times the values of securities fall, and sometimes, when this movement goes to extremes, a panic ensues. If the efforts thus to raise funds to meet obligations to the banks wholly or to a considerable degree fail, bank failures at commercial centers result, followed by a rapidly widening circle of banking and commercial failures throughout the country. In other words a commercial crisis follows. The originating cause or causes of the crisis may be outside of and possibly widely

distant from New York, but it is quite certain to follow the course indicated on account of the vital connection of the New York market with the rest of the country.

The European Central Banks.—In Europe the central banks play a leading rôle in the money markets. They hold the reserves of the other banks, rediscount bills for them in case of need, act as bankers for their respective governments, issue most or all of the notes, and exercise a controlling influence over rates.

Importance of Gold.—Their ability to perform these functions depends primarily upon their power to influence the international flow of the precious metals, especially gold, and to issue notes against commercial bills. When, for example, the reserve of the Bank of England falls below a certain point, on account of drafts made upon it by other institutions, it raises the rate of discount. This normally causes the market rate to rise, since the interest rate on deposits paid by other banks and financial institutions varies with the bank's discount rate and they must charge higher rates in order to reimburse themselves.

The rise in the market rate attracts funds from the continent or checks an outward flow and this increases the bank's reserve or prevents a further decline. The increased bank rate also acts as a check on borrowers and in this way also contributes toward the protection of the reserves.

The Issue of Notes against commercial securities by the Bank of France and other central institutions, having this right, contributes to the same end. When, for example, the demand for currency increases in France, larger drafts are made upon the Bank of France and these may be met in whole or in part by issues of notes instead of by payments of cash which would diminish the reserves. When the demand ceases the surplus notes are deposited in the banks, returned by them to the central institution and canceled or preserved for issue at another time.

The same procedure is possible in Germany, though there, if the issues of the Imperial Bank exceed a certain maximum, a tax of 5 per cent must be paid to the government on the excess.

The issues of the Bank of France are also limited by law to a certain maximum, but this is changed from time to time and is ordinarily maintained at so high a point as to leave the bank a large margin for increases in time of need.

Advantages of Elastic Notes.—In countries like these, in which the central banks have the right freely to issue notes against their general assets as well as to manipulate the exports and imports of gold through changes in their discount rates, the rates charged on loans both by the central and the other banks are more stable and fluctuate within narrower limits than in England, where the central bank lacks this special resource. The fluctuations are very much smaller both in number and in magnitude than in the United States, where, in the absence of a central bank, the facilities for manipulating exports and imports of gold are inadequate and the system of note issue quite as inelastic as that of England

BANKS IN THE UNITED STATES

From Special Reports of the United States Comptroller of Currency

State or Territory	National Banks		State Banks		Savings Banks		Private Banks		Loan and Trust Companies		Total		
	Banks	Savings Deposits	Banks	Savings Deposits	Banks	Savings Deposits	Banks	Savings Deposits	Companies	Savings Deposits	Banks	Depositors	Savings Deposits
Alabama	72	$3,398,159.67	99	$2,314,790.14	7	$1,860,682.96	9	$236,915.59			187	50,725	$7,810,548.3
Alaska	2	43,078.38	6	601,953.64							8	520	645,032.0
Arizona	13	7,709.53	25	1,258,333.27			2				40	4,678	1,266,042.8
Arkansas	42	1,162,164.33	112	1,151,261.47	4	534,079.79	5	85,257.04			163	14,187	2,932,762.6
California	147	11,495,866.20	239	31,316,020.87	122	226,122,970.65	7	242,761.38	14	$12,050,818.16	529	525,488	281,228,437.2
Colorado	113	10,735,215.25	69	634,276.91	8	3,192,904.69	32	552,503.67	11	4,971,694.12	233	62,804	20,086,594.6
Connecticut	80	855,048.79	5		85	255,811,170.99			19	3,051,660.95	189	553,901	259,717,880.7
Delaware	27	1,563,800.60	2	64,113.86	2	9,135,409.30			10	865,030.26	41	35,668	11,628,354.0
District of Columbia	11	321,106.55			12	11,295,975.38			5	7,275,506.93	28	87,711	18,892,588.8
Florida	37	5,551,119.47	65	1,978,622.67	4	955,006.78	4	88,043.12			110	38,380	8,572,792.0
Georgia	91	5,214,143.71	262	7,379,207.13	16	7,117,302.51	12	105,531.17			381	99,236	19,816,184.5
Hawaii	4	159,183.35	7	3,506,180.58							11	11,325	3,665,363.9
Idaho	41	823,839.58	81	788,193.68	4	159,794.52	6	17,858.14	9	182,181.28	141	11,263	1,971,867.2
Illinois	401	42,558,544.62	303	42,428,121.16			255	10,847,910.44	36	162,480,384.28	995	821,203	258,314,960.5
Indiana	247	19,344,584.96	205	9,022,116.07	5	10,974,680.99	153	2,296,060.50	83	27,247,313.69	693	271,221	68,884,756.2
Iowa	301	16,668,815.84	207	16,789,920.90	474	115,619,099.05	111	4,256,772.49	4	645,355.25	1,097	419,546	153,979,963.5
Kansas	204	6,454,238.60	581	5,586,609.85	13	2,836,344.24	5	58,849.35			803	61,220	14,936,042.0
Kentucky	138	7,910,563.44	282	9,362,496.94	9	1,080,306.46			25	3,020,175.81	454	59,594	21,373,542.6
Louisiana	35	2,481,754.82	116	6,334,169.73	8	12,540,359.35					159	80,733	21,356,283.9
Maine	79	15,992,938.44			51	87,409,607.71			35	15,376,527.36	165	332,687	118,779,073.5
Maryland	97	30,980,660.58	28	5,037,902.12	44	88,425,116.37	1	26,644.37	13	1,206,305.16	183	346,317	125,676,628.6
Massachusetts	197	11,526,824.86			187	728,497,465.04			43	7,125,738.25	427	2,049,137	747,150,028.1
Michigan	97	39,105,306.48	265	100,936,036.07	14	30,490,348.22	102	3,905,944.26			478	606,989	174,437,635.0
Minnesota	258	22,298,309.83	510	20,075,232.58	11	21,769,828.27			2	793,244.89	781	257,267	64,936,615.5
Mississippi	30	1,269,597.50	146	4,149,233.11	12	2,002,908.71	4	10,500.00			192	31,551	7,432,239.3
Missouri	118	9,819,993.97	730	17,506,610.35			39	548,268.31	34	21,305,946.14	921	218,555	49,810,818.7
Montana	40	3,476,795.38	40	1,522,131.05	3	3,368,053.01	8	177,223.59	5	1,228,289.65	96	21,076	9,772,492.6
Nebraska	194	10,658,208.57	520	10,900,758.50	11	2,618,239.87	6				731	67,673	24,177,206.9
Nevada	13	1,165,114.68	14	1,234,813.27			3				30	4,657	2,399,927.9
New Hampshire	56	1,710,780.41	9	4,655,577.86	51	77,693,356.95					116	197,757	84,059,715.2
New Jersey	178	34,202,470.27	18	2,899,285.32	27	98,130,571.77	7	398,213.34	70	72,917,470.11	300	641,868	208,548,010.8
New Mexico	37	1,103,695.98	22	228,047.37	4	415,471.54					63	3,930	1,747,214.8
New York	425	87,216,074.53	168	34,812,378.89	137	1,405,239,941.56	21	807,320.49	80	66,964,224.91	831	3,238,890	1,595,039,940.3
North Carolina	61	5,282,127.51	187	5,294,433.56	21	6,231,263.80	2	2,309.30	4	1,390,734.38	275	103,744	18,200,868.5
North Dakota	133	7,005,799.35	364	5,467,201.14					2	533,315.27	499	23,774	13,006,295.7
Ohio	350	43,947,472.25	294	55,121,416.44	41	97,853,958.85	104	5,335,502.03	12	72,023,581.19	801	861,516	274,281,930.7
Oklahoma	201	1,060,438.70	387	1,387,734.84					1	27,106.31	589	10,507	2,475,279.8
Oregon	70	1,722,168.62	79	9,417,941.81	6	1,010,762.03	9	14,236.89	5	2,876,554.52	169	37,284	15,041,663.8
Pennsylvania	768	170,057,725.74	111	86,687,332.65	11	166,095,376.28	21	1,515,474.26	233	96,132,802.92	1,144	1,270,023	520,488,711.8
Porto Rico	1		6	563,879.37							7	9,490	563,879.3
Rhode Island	22	3,654,829.72	2		18	69,298,014.42			10	43,617,464.16	52	192,415	116,570,308.3
So. Carolina	31	5,746,861.26	117	4,167,858.73	22	8,502,166.13	3	283,627,13			173	66,553	18,700,513.2
So. Dakota	89	3,703,238.44	332	7,547,085.07	10	684,113.68	14	280,673.81	5	858,198.55	450	43,012	13,073,309.5
Tennessee	84	6,387,845.95	168	2,720,969.63	21	11,111,214.81			2	1,107,288.14	275	85,643	21,327,318.5
Texas	465	6,479,382.08	241	414,253.40			30	22,194.11	27	2,242,102.16	763	34,484	9,157,931.7
Utah	20	2,792,021.09	54	5,099,356.10	3	8,540,412.18	2	71,501.99			79	63,901	16,503,291.3
Vermont	47	7,544,364.18			21	39,471,118.55			23	18,878,526.35	91	178,585	65,894,009.0
Virginia	111	20,852,644.88	151	11,625,921.35	20	9,257,197.10	1	139,762.00	5	1,243,161.21	288	126,867	43,118,686.5
Washington	72	10,828,747.00	152	15,719,012.23	8	3,792,593.06	11	92,892.76	14	4,612,171.73	257	135,729	35,045,416.7
West Virginia	88	9,828,084.21	82	6,777,101.78	10	5,652,371.82			10	1,196,884.06	190	91,628	23,454,441.8
Wisconsin	125	40,774,994.32	358	34,870,310.75	3	1,144,513.06			8	2,237,470.89	494	324,965	79,027,289.0
Wyoming	29	2,085,717.88	37	264,940.67			4	23,841.33	3	12,188.07	73	6,819	2,386,687.9
Total	6592	757,030,152.35	8258	597,621,144.88	1540	3,633,942,072.45	993	32,444,592.86	862	657,697,417.11	18,245	14,894,696	5,678,735,379.6
By Divisions													
New England	481	41,284,786.40	16	4,655,577.86	413	1,258,180,733.66			130	88,049,917.07	1,040	3,504,482	1,392,171,014.9
Eastern	1506	324,341,838.27	327	129,501,012.84	233	1,778,322,390.66	50	2,747,652.46	411	245,361,340.29	2,527	5,620,477	2,480,274,234.5
Southern	1285	81,564,448.83	2028	63,670,319.64	154	66,844,860.22	70	974,139.46	73	10,200,345.76	3,610	883,325	223,254,113.9
Middle Western	1897	234,518,022.27	2872	296,749,764.32	548	277,852,428.44	764	27,190,458.03	179	286,733,296.33	6,260	3,781,262	1,123,043,969.3
Western	1040	46,283,328.15	2352	33,538,785.40	49	13,115,127.03	69	1,093,091.75	27	7,630,791.97	3,537	300,815	101,661,124.3
Pacific	378	28,878,545.08	650	65,435,624.87	143	239,626,532.44	40	439,251.16	42	19,721,725.69	1,253	783,520	354,101,679.2
Island possessions	5	159,183.35	13	4,070,059.95							18	20,815	4,229,243.3

UNIVERSAL GAZETTEER

THE EARTH.—Shape and Size of the Earth.—The Earth is very nearly an oblate spheroid, whose shorter axis coincides with its axis of rotation passing through the two poles. It rotates at a velocity of 15 degrees an hour (about 17.366 miles a minute at the equator); 1 degree is therefore equal to 4 minutes.

The circumference of the globe is about 24,855 miles, and the diameter about 7,900 miles. More exactly—

Earth's equatorial semidiameter equals 3963.296 miles.

Earth's polar semidiameter equals 3949.790 miles.

Earth's mean semidiameter equals 3958.794 miles.

Earth's oblateness equals one-three-hundredth.

One degree of latitude at pole equals 69.407 miles.

One degree of latitude at equator equals 68.704 miles.

The temperature increases on an average about 1 degree F. for every 64 feet descent. But this amount is variable according to the locality, geological formation, and dip of strata. In the Calumet and Hecla mine, observations show an increase of 1 degree in about every 125 feet. At Bendigo it is shown to be 1 degree per 80 feet of descent. At Ronchamp collieries, on the other hand, the temperature increases 1 degree F. in only 49 feet.

Chemical Composition.—By combining a large number of analyses of rocks of all sorts, F. W. Clarke has estimated the relative amounts of elements in the crust of the earth:

	Per Cent		Per Cent
Oxygen	47.02	Manganese	0.07
Silicon	28.06	Sulphur	0.07
Aluminium	8.16	Barium	0.05
Iron	4.64	Strontium	0.02
Calcium	3.50	Chromium	0.01
Magnesium	2.62	Nickel	0.01
Sodium	2.63	Lithium	0.01
Potassium	2.32	Chlorine	0.01
Titanium	0.41	Fluorine	0.01
Hydrogen	0.17		
Carbon	0.12		100
Phosphorus	0.09		

The Magnetic Poles.—The geographical poles of the earth are the extremities of the imaginary line passing through its center of gravity and about which it revolves, and are therefore symmetrically located with regard to the equator.

The magnetic poles, however, are not coincident with the geographical poles, nor are they diametrically opposite to each other. The latest results show that the north magnetic pole, or locality where the dip is 90 degrees, is situated in King William's Land, Canada, in about 97 degrees west, 70 degrees north (extending over a considerable area).

The position of the south magnetic pole has been located in latitude 72 degrees 23 minutes south and longitude 154 degrees east, by Prof. Edward David and Mr. Douglas Marson, members of Lieut. Shackleton's expedition to the south pole which left New Zealand on January 1, 1908.

By reason of the annual variation of the magnetic needle, it is believed that the magnetic poles are not stationary, but have a slow motion around the geographical poles.

The Land.—The land covers 55,063,000 square miles on the assumption that 250,000 square miles of land remain to be discovered within the arctic regions, and that the supposed antarctic continent has an extent of 2,500,000 square miles within the antarctic circle.

Heights and Depths.—The mean height of the land has been estimated at 2,440 feet; the mean depth of the sea, 11,470 feet (Karstans); the greatest depth of the ocean as yet discovered (in the Pacific, between Guam and Midway) is 31,614 feet. If the whole of the solid crust of the earth were to be leveled, so as to form a spheroid, it would still be covered by an ocean of a uniform depth of 8,000 feet (Prof. Penck).

THE OCEANS.—The oceans, including the inland seas connected with them, cover 141,877,000 square miles, or 72 per cent of the total surface of the earth. There are 2.59 square miles of ocean to every square mile of land. Murray states the greatest depth of the Atlantic Ocean at 27,366 feet; Pacific Ocean, 30,000 feet; Indian Ocean, 18,582 feet; Southern Ocean, 25,200 feet; Arctic Ocean, 9,000 feet. The Atlantic Ocean has an area, in square miles, of 24,536,000; Pacific Ocean, 70,000,000; Indian Ocean, 17,084,000; Arctic Ocean, 5,500,000; Southern Ocean, 30,592,000.

Antarctic Ocean.—Is situated about, or within, the antarctic circle. The great Southern Ocean is that part of the ocean which surrounds the world between the latitude of 40 degrees south and the antarctic circle. The northern portions of this band are often called the South Atlantic, South Indian and South Pacific, while the southern portions are usually called the Antarctic Ocean. The average depth of the continuous ocean which surrounds south polar land is about two miles; it gradually shoals toward antarctic land, which in some places is met with a short distance within the antarctic circle. Life is abundant in the surface waters, and at the bottom of the ocean. Only five navigators, Cook, Weddell, Ross, Scott, and Shackleton have crossed the 70th parallel south.

(See further, Polar Regions).

Arctic Ocean.—Lies to the north of Europe, Asia, and North America, and surrounds the north pole; it is usually defined as the water area within the arctic circle. Physiographically, the Norwegian Sea and Greenland Sea, situated between Norway and Greenland, belong to the same basin as the Arctic Ocean. If the Arctic Ocean be regarded as lying wholly within the arctic circle, then it is almost land-locked, between that circle and the parallel of 70 degrees north. It communicates with the Pacific by Behring strait, and with the Atlantic through Davis strait and the wide sea between Norway and Greenland. The area of the ocean is about 5,500,000 square miles, and into it there drain about 8,600,000 square miles of land.

The coasts of Europe and Asia are low, and have several deep indentations, the principal being the White Sea and Gulf of Obi. The shores of North America are skirted by a most irregular assemblage of islands, forming numerous gulfs, bays, and channels.

(See further, Polar Regions.)

The Atlantic Ocean.—The Atlantic Ocean separates the old world from the new, and has been likened to a longitudinal valley divided by a series of submarine plateaus into an eastern and western half. Upon these plateaus there rise the volcanic islands of the Azores, St. Paul, Ascension, and Tristan da Cunha. The ocean, including the Mediterranean and other inclosed seas, covers an area of 34,301,400 square miles. Its greatest depth (4,561 fathoms) has been sounded to the north of the Virgin islands, and has been named the "international deep."

The currents are primarily originated by the wind. The trade winds, which blow from the northeast and southeast toward the equator, give rise to the northern and southern equatorial currents, which are deflected on reaching the coast of the new world, a portion of the water returning toward the Gulf of Guinea (equatorial current or Guinea current), a portion following the coast of Brazil, and another portion entering the Caribbean Sea and the Gulf of Mexico, whence it issues as the gulf stream. It is to the warm waters of this stream that western Europe owes its mild climate and freedom from icebergs. The cold currents flowing out of Baffin bay, southward along the coast of North America, and from the cold Southern Ocean along the east coast of South America and the west coast of Africa, produce a corresponding lowering of the temperature.

Islands in the Atlantic.—*Iceland* (Danish).—39,756 square miles, population (1901) 78,470. The island consists in the main of a plateau, from which rise glacier-girt mountains (Juköd) including twenty-nine volcanoes. The highest summit is Vatna Jökull, 6,955 feet. There are few trees, and the habitable part of the island does not exceed 16,200 square miles. Climate comparatively mild and equable. The fisheries and sheep-breeding are of importance. The exports include dried fish, wool, blubber, tallow, eiderdown, ponies, etc. Capital is Reykiavik, population 2,500.

Bermudas (British).—A group of coral islands in the northern Atlantic. Area 19 square miles, population (1901) 21,258, including 10,000 whites. Staple exports onions, potatoes, bulbs, nearly all being exported to the United States. Of the tonnage entered 88 per cent is British.

Azores.—A group of volcanic islands in the North Atlantic, mountainous (Pico, 7,710 feet), but fertile. Area 922 square miles, population 257,000, mostly Portuguese and Roman Catholics. The exports include oranges, wine, cereals, etc. The islands form an integral portion of Portugal. Capital is Ponta Delgado, population 17,000, on St. Michael's.

Madeira (Portuguese).—An island of volcanic origin, belonging to Portugal. Hilly (6,100 feet). Climate most equable, and hence sanatorium. Area 314 square miles, population (1900) 150,528, mostly Portuguese. Exports wine, sugar.

Canaries.—A group of islands of volcanic origin near the African coast, mountainous (Pico de Teide, on Tenerife, 12,190 feet). Area 2,820 square miles, population 358,564. Staple exports vegetables, bananas, cochineal. The islands form an integral portion of the kingdom of Spain.

St. Paul.—A rocky volcanic islet, nearly under the equator. Uninhabited.

Fernando de Noronha.—A hilly island with a Brazilian penal settlement.

Trinidad.—Small island, 2,200 feet. Uninhabited. Belongs to Brazil.

Ascension.—A British island of volcanic origin, rising 2,740 feet. Area 38 square miles, population 430. Sanatorium and coaling station. Celebrated for its turtles.

St. Helena.—A British island of volcanic origin, rising 2,700 feet. Area 47 square miles, population 5,200.

Tristan da Cunha (British).—A group of islands in the southern Atlantic; 45 square miles, population 70.

Indian Ocean.—That great body of water which has Asia on the north, the Sunda Isles and Australia on the east, Africa on the west, and the Antarctic Ocean on the south. The Cape of Good Hope and the southern extremity of Tasmania may be considered its extreme southern limits on the west and east. Its length from north to south somewhat exceeds 6,500 miles, its breadth varies from 6,000 to 4,000 miles.

It is traversed by the equatorial current flowing east to west, and its navigation by sailing vessels is more or less modified by the periodic trade-winds and monsoons. Its chief arms are the Bay of Bengal on the east of India, and the Arabian Sea on the west, extensions of the latter being the Persian gulf and Red Sea.

Islands.—Some of the most characteristic coral atolls and islands are to be found toward the central part of the Indian Ocean, such as the great Maldive group, the Chagos, Diego Garcia, and the Keeling islands. Almost all the tropical shores are skirted by fringing and barrier reefs. Christmas island is an upraised coral formation. St. Paul's, Mauritius, Rodriguez, and others are of volcanic origin, while Madagascar, Ceylon, and Socotra are typical continental islands.

Pacific Ocean.—The largest of the great divisions of the ocean, occupying about one-half of the water-surface of the globe and more than one-third of the area of the world. It is almost landlocked toward the north, communicating with the Arctic Ocean by the narrow (40 miles) and shallow Behring strait, whereas it opens widely into the deep Southern and Antarctic oceans. Its length from north to south (the antarctic circle) is about 9,000 miles; its greatest breadth, at the equator, is over 10,000 miles; its area is approximately 70,000,000 square miles. The average depth of the Pacific appears to be greater than that of the Atlantic, and its bed more uniform. Recent soundings between the Friendly islands and New Zealand gave depths of from 5,022 up to 5,155 fathoms (nearly six miles) not far from Kermadec islands.

In the Pacific the tides never attain the maximum heights for which some parts of the Atlantic and Indian Ocean are celebrated. On all the west

coast of America the rise of the tide is usually below 10 feet, and only in the Bay of Panama does it vary from 13 feet to 15 feet.

The trade-winds of the Pacific are not so regular in their limits as those of the Atlantic, and this irregularity extends over a much wider region in the case of the southeast trade-wind than in the case of the northeast. The cause of this is the greater number of islands in the South Pacific Ocean, which, especially in the hot season, disturb the uniformity of atmospheric pressure by local condensations. The northeast trade-wind remains the whole year through within the northern hemisphere. The southeast trade-wind, on the other hand, advances beyond the equator both in summer and winter, still preserving its original direction. In the region stretching from New Guinea and the Solomon islands southeastward there are no regular winds. The zones of the two trade-winds are separated by regions of calms and of light winds, the limits of which vary of course with the varying limits of these zones. In the Chinese seas the terrible typhoon occasionally rages, and may occur at any season of the year.

Islands.—The Pacific Ocean is remarkable for the innumerable small islands and island groups which stud its surface, but the area occupied by the truly oceanic islands is very small; they are principally congregated toward the central and western portions of its basin, while the eastern portion is comparatively free from islands. The larger islands—Borneo, New Guinea, Celebes, Java, Sumatra, etc.—are continental. The oceanic islands—the Hawaiian islands, Ladrones, Carolines, Gilbert islands, Solomons, Fiji, Friendly islands, Samoa, etc.—of the Pacific are all either of volcanic or coral origin, the volcanic islands within the zone of coral-reef builders being fringed with coral reefs, while many are entirely of coral formation.

Early Navigation.—The Portuguese were the first Europeans who entered the Pacific, which they did from the east. Balboa, in 1513, discovered it from the summit of the mountains which traverse the Isthmus of Darien. Magellan sailed across it from east to west in 1520-21. Drake, Tasman, Behring, Anson, Byron, Bougainville, Cook, Vancouver, Laperouse, and others, traversed it in different directions in the seventeenth and eighteenth centuries.

POLAR REGIONS.—Antarctic.—The lands within or near the antarctic circle are imperfectly known, and a very large area around the south pole is altogether unknown. Among land-masses that have long been known to exist in the Antarctic Ocean, though our knowledge of them is very imperfect, are those to which have been attached the names Graham land, Victoria land, Wilkes land, Enderby land, South Shetland islands, etc. The antarctic regions are even colder and more inhospitable than the arctic, and partly on account of their remoteness from maritime nations there have been fewer efforts at their exploration, the south pole being far less a goal of discovery than the north.

Discoveries.—In 1841-2 Sir James Ross reached the highest south latitude attained till recent years, discovering Victoria Land (extending to about 79° south latitude) with its volcanoes Erebus and Terror. His farther progress south was checked by a barrier of solid ice, which he judged to be 300 feet high in parts, and after sailing along this for 100 miles without discovering any break in it he found it stretching away as far as the eye could reach.

A point slightly farther south was attained in 1900 by E. Borchgrevink, but the next great and important advance was made by Capt. Scott, R.N., in command of an English expedition, one of four that set out from Europe to explore the Antarctic Ocean early in the twentieth century. Capt. Scott, who was in command of the *Discovery*, reached Ross' farthest point early in 1902, and then coasted eastward along the great ice-barriers, reaching a mass of high land in longitude 152°-160°, which was named King Edward VII. Land. Turning back to the neighborhood of Mts. Erebus and Terror (found to be on an island, not on the mainland), he made a great sledge journey to the southward, which brought him to latitude 82° 17′. The expedition returned in 1904.

An Antarctic expedition was made by the *Nimrod* in command of Lieut. E. H. Shackleton, of the British navy, in 1908-9, during which a latitude of 88° 23′ was reached—at a point 110 miles from the south pole.

On March 8, 1912, Capt. Roald Amundsen announced that on Dec. 14, 1911, he, with four men and eighteen dogs from his ship, the *Fram*, reached the south pole. Here on a vast plateau, 10,500 feet above sea level, Amundsen unfurled the Norwegian flag and named the discovered region, King Haakon Land. At the time of discovery the temperature was 9.4 degrees below zero.

ANTARCTIC EXPLORATION

Commander	Nationality	Date	South Latitude	Longitude
J. Cook	British	1773	67° 5′	142° W.
J. Cook	British	1774	71° 15′	106° W.
Bellingshausen	Russian	1820	67°	var.
Weddell	British	1824	74° 15′	34° W.
D'Urville	French	1840	66°	140° E.
Wilkes	British	1840	66°	var.
James Ross	British	1840	71° 56′	171° E.
James Ross	British	1843	78° 11′	161° E.
Larsen	Norwegian	1893	68° 10′	60° W.
Christiansen	Swedish	1895	74° 0′	170° E.
De Gerlache	Belgian	1899	71° 36′	87° W.
Borchgrevink	Br.-Nor.	1900	78° 50′	165° W.
Scott	British	1902	82° 17′	163° W.
Bruce	British	1904	74° 0′	24° W.
Shackleton	British	1909	88° 23′	
Amunsden	Norwegian	1911	Reached	pole Dec. 14
Scott	British	1912	Reached	pole Jan. 18

Arctic Regions.—Comprise the regions round the north pole, and extending from the pole on all sides to the arctic circle in latitude 66° 32′ north. The arctic or north polar circle just touches the northern headlands of Iceland, cuts off the southern and narrowest portion of Greenland, crosses Fox's strait north of Hudson's bay, whence it goes over the American continent to Behring strait. Thence it runs to Obdorsk at the mouth of the Obi, crosses northern Russia, the White Sea, and the Scandinavian peninsula, and returns to Iceland.

Though much skill and heroism have been developed in the exploration of this portion of the earth, there is still an area around the pole, estimated at 2,500,000 square miles, which is a blank to geographers.

Valuable minerals, fossils, etc., have been discovered within the arctic regions. In the archipelago north of the American continent excellent coal frequently occurs. The mineral cryolite is mined in Greenland. Fossil ivory is obtained in islands at the mouth of the Lena. In Scandinavia, parts of Siberia, and northwest America, the forest region extends within the arctic circle. The most characteristic of the natives of the arctic regions are the Eskimo. The most notable animals are the white bear, the musk-ox, the reindeer, and the whalebone whale. Fur-bearing animals are numerous. The most intense cold ever registered in those regions was 74° below zero Fahr. The aurora borealis is a brilliant phenomenon of arctic nights.

Islands.—Within the arctic circle, as far as discovered, islands cover an area of 1,233,000 square miles. The more important of these islands are:

Greenland.—838,000 square miles, of which 717,000 are within the arctic circle. The interior, a lofty plateau, is covered with a cap o ice, from which glaciers descend into the sea Only 34,000 square miles are described a habitable. Population 11,895. Of trees ther are only dwarf willows and birches, an a juniper tree in the extreme south. Fishin and hunting are the principal occupations Exports are blubber, cod-liver oil, sealskins Capital is Godthaab.

Arctic Islands of America.—529,000 squar miles (432,000 square miles within the arcti circle). At most a thousand inhabitants All the other islands within the arctic circl are uninhabited.

Spitzbergen.—2,570 square miles, a group o mountainous islands, accessible almos throughout the year along its western shore There are reindeer, ice bears, foxes. Th island is frequented by sealers and whalers but has no permanent inhabitants.

Nova Zembla.—(New Land) 35,500 squar miles. Samoyed fishing settlement.

Franz Josef Land.—7,400 square miles as fa as known. No inhabitants, and difficult o access.

The Anjou Islands.—10,800 square miles off the coast of Siberia, including New Siberia Uninhabited.

Wrangel Land.—1,800 square miles. Uninhabited

The most notable expeditions of discovery in the arctic regions are given in the follow ing table:

ARCTIC EXPLORATION

Commander	Nationality	Date	N. lat. att'nd	Locality
John Davis	British	1587	72° 41′	West Greenland.
Wm. Barentz	Dutch	1594	77° 20′	Nova Zembla.
Henry Hudson	British	1607	80° 23′	Greenland and Spitzbergen
Henry Hudson	British	1610	—	Hudson strait.
William Baffin	British	1616	77° 45′	Smith sound.
V. Bering	Danish	1728	70° 41′	disc. Bering Strait.
Tchelyuskin	Russian	1743	77° 48′	North Siberia.
J. C. Phipps	British	1773	80° 48′	Spitzbergen Sea.
William Scoresby	British	1806	81° 12′	East Greenland.
W. E. Parry	British	1827	82° 43′	Spitzbergen Sea.
John Franklin	British	1846	—	North Canada.
E. K. Kane	Amer.	1854	78° 45′	Smith Sound.
O. Nordenskiold	Swede	1868	81° 42′	Spitzbergen Sea.
C. F. Hall	Amer.	1871	82° 16′	West Greenland coast.
Julius Payer	Austria	1874	82° 5′	disc. Franz Josef Land.
G. S. Nares	British	1876	83° 20′	Grinnell Land.
Nordenskiold	Swede	1876–9	77° 41′	First northeast passage.
A. W. Greely	Amer.	1882	83° 24′	North Greenland.
Fred. Jackson	British	1896	81° 20′	Franz Josef Land.
Fridtjof Nansen	Norw.	1896	86° 14′	North of Franz Josef Land.
Duke of Abruzzi	Italian	1900	86° 33′	North of Franz Josef Land.
R. E. Peary	Amer.	1906	87° 6′	North of Grant Land.
F. A. Cook	Amer.	1908	—	Claimed to have reached the pole, April 21.
R. E. Peary	Amer.	1909	90°	Reached the pole April 6.

THE CONTINENTS.—Europe.—Is geo graphically merely a peninsula of Asia. I is bounded by the Arctic Ocean, the ope Atlantic and the Mediterranean, and sepa rated from Africa and Asia only by narrov straits. Development of coastline 19,82 miles, or one mile of coast to every 182 squar miles. Extent from the North Cape to Cap Matapan 2,400 miles, from Cape St. Vincen to the Kara Strait 3,455 miles. Total are 3,814,273 square miles, including peninsulas and islands.

Surface.—The Alps form the backbone of th most vital part of the continent, and con stitute a well-marked physical boundar between north and south. They sen branches into Italy and the Balkan penin sula, and reappear eastward in the Carpa thians. On their outer side they are encircle by the Cevennes, the Jura, and other range the land thus inclosed constituting a table land. Isolated mountain ranges are thos of Scandinavia, of the Iberian peninsula an the Ural. The great lowland of Europ stretches from the Pyrenees to the Ural, an from the Arctic to the Black Sea. It cover over two million square miles. Minor plain are those of Hungary, of Roumania, and o the Po.

Rivers and Lakes.—Rivers are numerous, an give ready access to the heart of the continen The only continental basin is that of th Caspian Sea, fed by the Volga (drainage are 563,630 square miles). Other large rivers a the Danube (315,416 square miles), Dniep (203,480 square miles), Don (166,120 squa

miles), Dvina (141,080 square miles), Pechora (127,260 square miles), and Rhine (86,640 square miles). Ladoga is the largest lake.

Climate.—The greater part of Europe lies within the temperate zone, and owing to the beneficent influence of the gulf stream the extremes of heat and cold are moderated, and the rainfall is sufficient. Under the arctic circle, on the coast of Norway, the mean temperature is the same as at Quebec, 47° north.

Races.—1. European Aryans, 384,957,000, including 134,073,000 Teutons, 116,056,000 Greco-Latins, 131,221,000 Slavs. 2. Asiatic Aryans (gypsies, etc.) 654,000. 3. Semites (Jews, etc.) 8,965,000. 4. Mongolians (Turks and Tatars, Magyars, Finns, etc.) 23,264,000.

Religions.—1. Christians, 401,002,000 (184,666,000 Roman Catholic, 112,666,000 Greek Catholic, 103,515,000 Protestants, 155,000 Armenians). 2. Jews, 8,680,000. 3. Mohammedans, 6,982,000. 4. Buddhists, etc., 161,000. 5. Heathen (including most of the gypsies), 210,000.

Political Divisions.—Three great state systems (according to language or nationality), *viz.*: 1. Teutonic states, 830,078 square miles, population 150,850,000, of whom Teutons 83 per cent, Protestants 61 per cent. 2. Greco-Latin states (including Belgium and Roumania), population 112,555,200, of whom Greco-Latin 94 per cent, Roman Catholic 92 per cent. 3. Slav states (including Bosnia), population 128,286,000, of whom Slavs 82 per cent, Greek Catholic 76 per cent. 4. Hungary, population 20,025,000, of whom Magyars 45 per cent, Roman Catholic 61 per cent. 5. Turkey, population 6,130,000, of whom Turks 12 per cent, Mohammedans 41 per cent.

Asia.—The great continent of the old world, is really one with Europe, which is merely its largest and most important peninsula, and is joined to Africa by a narrow isthmus. Development of coast line 36,000 miles, or one mile of coast to every 473 square miles. Distance from Asia Minor to Behring strait 5,990 miles; from Cape Chelyuskin to Cape Buru, near Singapore, 5,360 miles. Total area 17,048,000 square miles (of which mainland 16,003,000 square miles) inclusive of peninsulas and islands.

Surface.—The lofty table-land of Tibet rises in the center of Asia like a huge citadel. It is bounded on the south by the Himalaya, on the north by the Kuen-lun; ramifies in the east, and southeast into China and east China, and is continued in the west by the Hindu Kush and the plateaus of Iran, Armenia and Asia Minor. A second plateau, of much inferior height, lies to the north of Tibet, being girt by the Pamir, the Tien-shan and other ranges. It includes the basin of the Tarim, the Turfan basin, believed to be depressed below the sea-level, and the great desert of Gobi. The principal isolated highland regions of Asia are the mountains of Korea, the Deccan, the mountains of Syria and Arabia, the Caucasus, the Caspian through Turkistan and West Siberia to the Arctic Ocean; that of the Euphrates and Tigris, of Hindustan and China.

Rivers and Lakes.—A large portion of inner Asia forms a continental basin, sending no river to the sea, and in many parts riverless. Within it lie the Caspian Sea, (84 feet below sea-level); Lake Aral, fed by the Syr and Amu Daria (Oxus); Lake Balkash with the Ili, Lob Nor, Kuku Nor. The great rivers of the continent are the Ob (drainage area 1,190,000 square miles), the Yenisei (987,000 square miles), which flows through Lake Baikal (12,441 square miles), the Lena (871,000 square miles), the Amur (807,000 square miles), the Hwang-ho (386,000 square miles), the Yangtse-kiang (723,000 square miles), the Ganges 500,000 square miles), and the Euphrates (255,000 square miles).

Climate.—Great contrasts between the dry cold of North Siberia and the hot damp of the Malay archipelago. Temperature is generally lower than that of Europe under similar latitudes, and the range between summer and winter is greater. In Arabia, and parts of central Asia, little or no rain falls.

Races.—1. European Aryans, as colonists or permanent residents, numerous only in Siberia (Russians) and Asia Minor (Greeks), 12,055,400. 2. Asiatic Aryans, *viz.*, Hindus, Afghans, Baluchi, Persians, Kurds, Armenians Caucasians, etc., 259,797,000. 3. Semites (Arabs, Syrians, Jews), 7,965,000. 4. Mongolians, including Mongols, Turks and Tatars, Chinese, Japanese, Tunguz, etc., 509,812,000. 5. Malays, 45,835,000. 6. Dravidas, in India, 64,788,000. 7. Various, 450,000, including a few Eskimo (Chukchi), negroes, etc.

Religions.—1. Christianity, although Asia was its birthplace, only numbers 29,516,000 adherents, of whom 13,215,000 are in the Russian empire. 2. Jews, 462,300. 3. Mohammedans, 173,039,000, of whom 67,115,000 within the British possessions. 4. Aryan Religions, Hindu, Buddhist, Confucian, etc., number 685,109,000 adherents. 5. Heathen, 12,676,000.

Political Divisions.—European possessions, population 390,969,000, including British Asia, population 308,316,000; Dutch Asia, population 30,000,000; Russian Asia, population 27,752,000 (35 per cent European, 41 per cent Mongol and Turk); French Asia, population 25,800,000; American Asia (Philippines), population 7,635,000; Portuguese Asia (Goa, Timor), population 795,000. 2. Mohammedan states (Turkey, Persia, Afghanistan, and independent Asia), population 31,799,000; 3. Mongolian states (China, Japan, Siam, Korea, Nepal, etc.), population 506,000,000.

Africa.—Is attached to Asia by the Isthmus of Suez, separated from Europe by the Mediterranean. Africa extends 4,980 miles from north to south (Cape Blanco in Tunis to Cape Agulhas), and 4,840 miles from west to east (Cape Verde to Cape Guardafui). Its area, including Madagascar and other islands, is 11,520,000 square miles.

Surface.—Nearly all Africa is a plateau. There are no extensive lowlands, but a few localities are depressed below the level of the sea (Shot Melrir, Siwah, Fayum). The mean elevation is 1,975 feet. The Atlas mountains form a distinct highland region (Ayashin, 14,150 feet). In the Abyssinian highlands Ras Dashan rises 15,200 feet, but the loftiest summits of all Africa are found in the East African lake region, Kilimanjaro, 19,270 feet; Kenia, 17,180, feet; Ruwenzori, 16,815 feet).

Rivers and Lakes.—Among the rivers the Nile is the most famous, but the Kongo has the largest basin. Other rivers are the Niger, the Zambesi, and the Orange river. Among the continental basins (having no drainage to the sea), those of Lake Tsad, Lake Ngami, Lake Rudolf and the Hawash are the most considerable. The largest lakes are the Victoria Nyanza, Tsad, Tanganyika, Nyassa and Rudolf.

Climate.—Only one-fifth of Africa lies within the temperate zone. At the sea-level a mean temperature of less than 68° is experienced only in Barbary and in the coast-region of South Africa from Durban to Mossamedes. The Mediterranean coasts and a portion of Cape Colony have winter rains, while the greater part of the continent has tropical rains. Two extensive regions—*viz.*, the Sahara, in the north, and the Kalahari with adjoining districts, in the south—are almost rainless.

Races.—1. Negroes, 87,517,000, classed into Soudan negroes, Bantu, and the scattered tribes of pygmies among them. 2. Hamites, 10,964,000—*viz.*, Berbers and Tuareg, in Barbary and the Sahara; Copts, Beja, and Nuba, in the Nile valley; Agua, etc., in Abyssinia; Danakil, Somal, and Galla, in East Africa. 3. Semites, 26,044,000, including Arabs and Abyssinians, both much mixed with Berber and negro blood. 4. Hottentots and Bushmen, 420,000, in South Africa. 5. Malays, principally in Madagascar, 2,516,000. 6. Europeans, 3,145,000, of whom 961,000 are in continental North Africa, 1,115,000 in South Africa, and only 61,000 in tropical Africa. 7. Hindus and other Asiatics, as laborers in the Mascarenhas, 401,000; Turks, in Egypt, etc.

Religions.—1. Christians, 9,788,000, including Copts and Abyssinians. 2. Mohammedans, 31,272,000, including all Arabs and Berbers, Beja, Nuba, Somal, increasing numbers of other Hamites, and negroes. 3. Jews, 450,000. 4. Buddhists, etc., 304,000. 5. Heathen, 89,879,000.

Political Divisions.—Nearly all Africa has now been absorbed or partitioned by various European powers, but most native tribes or states included within European spheres are still virtually independent. Egypt and the Egyptian Soudan, although nominally under the suzerainty of Turkey, are really controlled by Great Britain. The remaining territory of Africa unoccupied is a part of the great desert of Sahara and the independent states of Abyssinia, Liberia, and Morocco.

North America.—Forms the north and larger section of the new world discovered by Columbus. It is separated from Europe by the Atlantic Ocean and from Asia by Behring strait. Its main mass is triangular in shape, and its outline varied by large peninsulas, broad gulfs and numerous fiords. Development of coast line 28,130 miles. Length, 4,500 miles; breadth, 3,100 miles. Area, 9,419,469 square miles, including Greenland; the arctic archipelago, the West Indies, Newfoundland. Total area of all islands, 1,589,000 square miles.

Surface.—The plateau of the Cordilleras occupies the west, from the Isthmus of Tehuantepec to the Arctic Ocean. In the center it broadens out, and inclosed within is a great basin having no outlet to the sea. The highest summits are Mt. McKinley, in the north; Mt. Harvard, in the Rocky mountains; Mt. Whitney, in the Sierra Nevadas; and the Popocatepetl or Peak of Orizaba, in Mexico. The Appalachian highlands in the east, form the second great mountain system, and are continued to the north of the St. Lawrence in the Laurentides, the Canadian lake plateau and the arctic highlands. A great central plain lies between these mountain regions, extending from the Gulf of Mexico to the arctic regions. The mean height of the continent is 2,720 feet.

Rivers and Lakes.—The great rivers of North America are the Mississippi, which drains 1,240,039 square miles; the St. Lawrence, which has for its reservoirs the Great lakes, and drains 532,100 square miles; the Saskatchewan, known in its lower course as Nelson, which enters Hudson's bay, and drains 449,830 square miles; the Mackenzie, tributary to the Arctic Ocean, drains 679,400 square miles. The great lakes cover 88,200 sq mi.

Climate.—Largely determined by the direction of the mountain ranges. Five climatic regions, *viz.*, an arctic region, whose mean temperature is less than 32° F.; an Atlantic temperate region, extending as far as the Mississippi, with abundant rains and dense woods; an inland temperate region, dry, with steppes or prairies; a Pacific coast region; and a tropical region.

Race.—82,901,000 Europeans, 14,367,000 negroes, 16,021,000 American Indians and Eskimos, 1,168,000 Semites (Jews), 157,300 Mongols (Chinese and Japs), 18,000 Asiatic Aryans (coolies). Of the Indians, only 420,000 are within the British dominions and the United States, while in Mexico and the other Spanish republics they constitute the bulk of the population. Of negroes about 11,280,000 are in the United States and British North America, while only 3,087,000 are to be found in the West Indies and elsewhere.

Religions.—112,379,000 Christians, 1,215,000 Jews, 174,000 Buddhists, etc., 142,000 heathen.

Political Divisions.—British North America, population 7,352,000; United States, not including Porto Rico, population 91,972,266; Latin republics, population 19,498,000; French, population 378,930; Danish, population 42,500; Dutch, population 6,800; Cuba, population 2,048,980; Hayti, population, 1,060,000.

South America.—Forms the south half of the new world. In shape triangular, it extends 4,550 miles from north to south, 3,200 miles from east to west. Its coast line is far less broken than that of North America and there are fewer islands. Development of coast line 15,700 miles, or one mile to

every 435 square miles of mainland. Total area, 6,881,700 square miles; of which islands comprise 51,321 square miles.

Surface.—The Cordilleras de los Andes extend close to the Pacific, from southern extremity of the continent as far as the Carribbean Sea, and send a branch eastward into Venezuela. Their parallel ranges inclose several plateaus, among which that of Bolivia is the most extensive. The loftiest summits are: Aconcagua; Illampu, or Peak of Sorata; Chimborazo. Isolated mountain regions are the Sierra Nevada de Sta. Marta, on the Carribbean Sea; the highlands of Guayana (Roraima), and the Brazilian highlands (Itatiaia). Vast lowland plains, covering altogether nearly 70 per cent of the total area, lie between these mountains, and open out upon the Atlantic. These plains include the llanos or steppe-lands of the Orinoco, the selvas or forests of the Amazon river, and the plains of the Rio de la Plata. Mean elevation of the continent, 2,490 feet.

Rivers and Lakes.—Nearly the whole drainage is toward the Atlantic. The three great rivers are the Orinoco (drains 328,000 square miles), the Amazon (drains 2,700,000 square miles), and the Rio de la Plata (drains 1,240,000 square miles).

Climate.—The Andes form a sharp climatical boundary, and while the rainfall is generally abundant to the east of them, it is deficient or fails altogether on the Pacific coast, from latitute 4 degrees south to 30 degrees south.

Races.—13,360,000 Europeans, 20,062,000 American Indians, 9,072,000 negroes, 200,000 Asiatic Aryans (coolies), 33,500 Semites (Jews and Arabs), 56,000 Mongols (Chinese), 4,000 Malays.

Religions.—40,631,000 Christians, 30,000 Mohammedans, 34,000 Jews, 229,000 Buddhists, etc., 1,863,000 heathen.

Political Divisions.—British South America, population 608,000; French, population 33,000; Dutch, population 136,400; Brazil (Portuguese), population 19,910,646; Spanish states, population 25,510,000.

INDEPENDENT COUNTRIES OF THE WORLD.—TABLE I.—GOVERNMENTS AND RULERS.

Countries	Capital	Form of Government	Title of Ruler	Present Official Head	Born	Acceded	Salary or Income
Abyssinia	Adis Ababa	Feudal monarchy	King	Lidj Jeassu	1896	May 15, 1914	
Afghanistan	Cabul	Monarchy	Ameer	Habibulla Khan	1872	Oct. 3, 1901	
Argentina	Buenos Ayres	Republic	President	Victorino de la Plaza		1914	$ 36,000
Australia	Melbourne	British dependency	Governor-general	Sir R.C. Munro-Ferguson			50,000
Austria-Hungary	Vienna	Monarchy	Emperor	Francis Joseph	Aug. 18, 1830	Dec. 2, 1848	4,520,000
Belgium	Brussels	Monarchy	King	Albert	April 8, 1875	Dec. 23, 1909	623,600
Bolivia	La Paz	Republic	President	Ismael Montes		Oct. 24, 1913	
Brazil	Rio de Janeiro	Republic	President	Wenceslao Braz		1914	40,000
Bulgaria	Sofia	Monarchy	Czar	Ferdinand	Feb. 26, 1861	Aug. 11, 1887	250,000
Canada	Ottawa	British dependency	Governor-general	Prince Alexander of Teck		1914	50,000
Chili	Santiago	Republic	President	Ramon Barros Luco		1911	7,000
China	Peking	Republic	President	Yuan Shih-kai		1912	
Colombia	Bogota	Republic	President	Jose V. Concha		1914	
Costa Rica	San Jose	Republic	President	Don Alfredo Gonzalez			
Cuba	Havana	Republic	President	Mario G. Menocal	1853	Jan., 1913	25,000
Denmark	Copenhagen	Monarchy	King	Christian X.		1912	262,500
Ecuador	Quito	Republic	President	Leonidas Plaza		1912	12,000
Egypt	Cairo	Turkish dependency	Khedive	Abbas Hilmi		1914	500,000
France	Paris	Republic	President	Raymond Poincaire		Feb. 18, 1913	140,000
German Empire	Berlin	Monarchy	Emperor	William II.	Jan. 27, 1859	June 15, 1888	3,700,000
Great Britain	London	Monarchy	King	George V.	June 3, 1865	May 6, 1910	2,350,000
Greece	Athens	Monarchy	King	Constantine	1868	1913	260,000
Guatemala	New Guatemala	Republic	President	Manuel Estrada Cabrera	Dec. 24, 1856	Sept. 25, 1898	
Hayti	Port au Prince	Republic	President	Davilmar Theodore		1914	24,000
Honduras	Tegucigalpa	Republic	President	Dr. Bertrand		1913	
India	Calcutta	British viceroyalty	Viceroy	Lord Hardinge	1858	1910	83,600
Italy	Rome	Monarchy	King	Victor Emmanuel III.	Nov. 11, 1869	July 29, 1900	2,650,000
Japan	Tokyo	Monarchy	Mikado	Yoshihito	1879	1912	2,250,000
Liberia	Monrovia	Republic	President	Daniel Howard		Jan. 1, 1912	
Luxemburg	Luxemburg	Independent	Grand duchess	Marie	April 22, 1852	Nov. 19, 1905	
Mexico	Mexico	Republic	President				
Monaco	Monaco	Principality	Prince	Albert	Nov. 13, 1848	Sept. 10, 1889	
Montenego	Cettinje	Monarchy	King	Nicholas	Oct. 7, 1841	1910	24,000
Morocco	Fez	Despotism	Sultan	Muley Yusoef	1875	1912	
Nepal	Katmandu	Oligarchy	Sovereign	Tribhubana Bir Bikram		1911	
Netherlands	The Hague	Monarchy	Queen	Wilhelmina	Aug. 31, 1880	Sept. 5, 1898	250,000
Nicaragua	Managua	Republic	President	Adolfo Diaz		May, 1911	
Norway	Christiania	Monarchy	King	Haakon VII.	Aug. 3, 1872	Nov. 18, 1905	185,000
Oman	Muscat	Despotism	Sultan	Seyyid Taimur bin Feysil		1913	250,000
Panama	Panama	Republic	President	Belisario Porras		Oct., 1912	24,000
Paraguay	Asuncion	Republic	President	Eduardo Schaerer		1912	9,500
Persia	Teheran	Monarchy	Shah	Ahmed Mirza	1897	1909	
Peru	Lima	Republic	President	Roberta Legua		1914	12,000
Portugal	Lisbon	Republic	President	Manoel de Arriaga	1835	Aug., 1911	
Roumania	Bucharest	Monarchy	King	Ferdinand	Aug. 24, 1865	Oct., 1914	227,520
Russia	St. Petersburg	Monarchy	Czar	Nicholas II.	May 18, 1868	Nov. 2, 1894	12,000,000
Salvador	San Salvador	Republic	President	Carlos Melendez		Feb., 1913	
San Domingo	San Domingo	Republic	President	Dr. Ramon Baez		1914	
Servia	Belgrade	Monarchy	King	Peter (Karageorgevitch)	1844	June 15, 1903	225,000
Siam	Bangkok	Monarchy	King	Vagiravudh	1880	Oct. 23, 1910	2,500,000
Spain	Madrid	Monarchy	King	Alfonso XIII.	May 17, 1886	May 17, 1886	1,344,000
Sweden	Stockholm	Monarchy	King	Gustaf V.	June 16, 1858	Dec. 8, 1907	416,500
Switzerland	Berne	Republic	President	Arthur Hoffmann		1914	3,000
Turkey	Constantinople	Monarchy	Sultan	Mohammed V.	1844	1909	7,500,000
United States	Washington	Republic	President	Woodrow Wilson	1856	Mar. 4, 1913	75,000
Uruguay	Montevideo	Republic	President	Dr. Blas Vidal		1914	36,000
Venezuela	Caracas	Republic	President	Alfredo Gonzales	1839		

TABLE II. STATISTICS AND INDUSTRIES

Countries	Population	Area Square Miles	Public Debt	Miles of Railroad	Miles of Telegraph	Standard Currency	Chief Industries	Leading Products and Exports
Abyssinia	8,000,000	400,000		248	1,056		Grazing.	Ivory, musk, coffee, hides.
Afghanistan	4,500,000	215,400					Manufactur'g and fruits.	Silks, carpets, fruits, shawls.
Argentina	5,884,000	1,135,840	$ 545,712,120	20,000,	34,960	Gold	Grazing and agriculture.	Hides, wool, meats, grain.
Austro-Hungarian Empire	51,340,603	261,100	1,063,725,105					
Austria	28,567,898	115,903	960,997,758	13,423	27,570	Gold	Agriculture.	Grain, fruits, wine, cattle.
Hungary	20,850,700	125,430	1,146,500,658	12,100	16,163		Agriculture.	
Belgium	7,516,730	11,373	663,325,145	2,860	4,520	Gold	Manufacturing.	Glassware, linens, textiles, sugar.
Kongo State	15,000,000	802,000	20,089,409					
Bolivia	2,267,935	709,000	2,853,496	418	2,810	Silver	Agriculture and mining.	Tin, copper, silver, wool, rubber, coffee.
Brazil	19,910,646	3,218,130	657,097,561	11,830	17,014	Gold	Agriculture and mining.	Coffee, cocoa, diamonds, gold, forests.
British Empire	416,320,000	13,663,000						
United Kingdom	45,216,665	120,979	3,669,931,350	23,280	304,562		Agriculture, manufacturing and commerce.	Manufactures, textiles, cutlery, coal.
India	314,955,000	1,770,000	1,346,997,187	31,490	280,955	Gold	Agriculture and mining.	Sugar, cotton, rice, coffee, opium.
Canada	7,323,000	3,745,574	323,930,279	24,104	33,222		Agriculture and mining.	Coal, copper, fisheries, lumber, cereals.

TABLE II. STATISTICS AND INDUSTRIES—Continued

Countries	Population	Area Square Miles	Public Debt	Miles of Railroad	Miles of Telegraph	Standard Currency	Chief Industries	Leading Products and Exports
British Empire—Continued			$					
Australia	5,140,393	3,091,496	1,184,192,157	16,250	44,554	Gold	Agriculture and mining.	Wool, gold, grain.
New Zealand	982,926	104,471	346,439,001	2,711	10,404			Wool, meat, gold, dairy products.
South Africa	5,938,499	473,184	.....	4,242	8,221			Gold, diamonds, wool.
Malay States	.....	.....	.....	.....	.....	.....	.....	Tin, spices, sugar, india-rubber.
Bulgaria	4,035,646	37,189	93,500,975	987	3,687	Gold	Agriculture and grazing.	Cereals, eggs, dairy products.
Central America								
Costa Rica	379,533	18,400	19,693,924	294	1,207	Gold	Agriculture and mining.	Coffee, hides, cedar, rubber.
Guatemala	1,804,000	48,290	19,085,801	400	3,696	Silver		Silver, gold, coffee, rubber.
Honduras	553,446	46,250	110,982,932	69	2,840	Silver		Bananas, coffee, sugar, gold, silver.
Nicaragua	600,000	49,200	6,083,195	172	1,591	Silver		Mahogany, gold, gum arabic, coffee, rubber.
San Salvador	1,707,000	7,225	12,035,397	100	2,800	Silver		Coffee, rubber, sugar, tobacco.
Chili	3,871,000	291,544	167,069,373	3,288	22,403	Gold	Agriculture and mining.	Wheat, nitrate, copper, silver.
China	439,214,000	4,277,170	601,916,605	4,142	25,913	Silver	Agriculture.	Silk, rice, tea, opium, indigo, cotton, sugar.
Colombia	4,500,000	438,436	22,865,640	470	10,400	Gold	Agriculture.	Cotton, sugar, coffee, gold.
Cuba	2,048,980	44,164	48,296,585	996	5,065	Gold	Agriculture.	Sugar, tobacco, coffee, cotton, hard woods.
Denmark	2,659,000	15,388	68,057,034	2,083	8,844	Gold	Agriculture.	Butter, dairy products, rye, barley.
Colonies								
Iceland	78,470	39,756	.....	.....	.....	.....	.....	.....
Greenland	11,895	838,000	.....	.....	.....	.....	.....	.....
West Indies	30,527	138	.....	.....	.....	.....	Agriculture.	Cocoa, rubber, sarsaparilla, coffee.
Ecuador	1,500,000	429,000	21,010,345	325	2,564	Gold		
France and Colonies								
France	39,252,245	207,218	5,898,675,451	.....	.....	.....	Agriculture and Manufacturing.	Textiles, wine, raw silk, wool, art objects
Colonies								
Algeria	5,231,800	184,474	.....	.....	.....	.....	.....	.....
Senegal	1,168,000	80,000	.....	.....	.....	.....	.....	.....
Tunis	2,000,000	51,000	.....	.....	.....	.....	.....	.....
Annam	6,124,000	52,100	.....	.....	.....	.....	.....	.....
Cambodia	1,500,000	37,400	.....	.....	.....	.....	.....	.....
Cochin-China	2,968,600	22,000	.....	.....	.....	.....	.....	.....
Tonkin and Laos	7,641,900	144,400	.....	.....	.....	.....	.....	.....
French Equatorial Africa	5,000,000	667,000	.....	.....	.....	.....	.....	.....
Upper-Senegal Niger	3,000,000	210,000	.....	.....	.....	.....	.....	.....
French Guinea	1,730,000	95,000	.....	.....	.....	.....	.....	.....
Ivory Coast	1,126,000	116,000	.....	.....	.....	.....	.....	.....
Kongo	10,000,000	1,160,000	.....	.....	.....	.....	.....	.....
Madagascar	2,744,000	227,950	.....	.....	.....	.....	.....	.....
German Empire in Europe	.....	.....	1,094,790,575	36,200	130,694	Gold	Manufacturing, agriculture, commerce.	Iron goods, drugs and chemicals, scientific instruments, wines, linens.
Prussia	40,163,333	134,528	.....	.....	.....	.....	.....	.....
Bavaria	6,887,291	29,292	.....	.....	.....	.....	.....	.....
Saxony	4,806,661	5,856	.....	.....	.....	.....	.....	.....
Württemberg	2,437,574	7,534	.....	.....	.....	.....	.....	.....
Baden	2,143,000	5,888	.....	.....	.....	.....	.....	.....
Alsace-Lorraine	1,874,014	5,604	.....	.....	.....	.....	.....	.....
Hesse	1,282,051	2,435	.....	.....	.....	.....	.....	.....
Mecklenburg-Schwerin	639,958	5,068	.....	.....	.....	.....	.....	.....
Hamburg	1,014,664	160	.....	.....	.....	.....	.....	.....
Brunswick	494,339	1,418	.....	.....	.....	.....	.....	.....
Oldenburg	438,856	2,482	.....	.....	.....	.....	.....	.....
Saxe-Weimar	388,095	1,397	.....	.....	.....	.....	.....	.....
Anhalt	331,128	906	.....	.....	.....	.....	.....	.....
Saxe-Meiningen	278,792	945	.....	.....	.....	.....	.....	.....
Saxe-Coburg-Gotha	257,177	763	.....	.....	.....	.....	.....	.....
Bremen	299,526	99	.....	.....	.....	.....	.....	.....
Saxe-Altenburg	216,128	512	.....	.....	.....	.....	.....	.....
Lippe-Detmold	150,937	470	.....	.....	.....	.....	.....	.....
Reuss (Younger line)	152,572	320	.....	.....	.....	.....	.....	.....
Mecklenburg-Strelitz	106,442	1,131	.....	.....	.....	.....	.....	.....
Schwarzburg-Rudolstadt	100,702	363	.....	.....	.....	.....	.....	.....
Schwarzburg-Sondershausen	89,917	333	.....	.....	.....	.....	.....	.....
Lübeck	112,500	115	.....	.....	.....	.....	.....	.....
Waldeck	61,707	438	.....	.....	.....	.....	.....	.....
Reuss (Elder line)	72,769	120	.....	.....	.....	.....	.....	.....
Schaumberg-Lippe	46,626	130	.....	.....	.....	.....	.....	.....
German Africa	14,120,000	931,460	.....	.....	.....	.....	.....	.....
Greece	2,631,952	25,014	157,877,067	845	4,833	Gold	Agriculture.	Fruits, wines, olive oil.
Hayti	2,029,700	10,204	26,468,849	42	.....	Gold	Agriculture.	Coffee, logwood, cocoa, mahogany.
Italy	33,910,000	110,550	2,602,299,757	10,445	31,150	Gold	Agriculture.	Wine, silk, oil, sulphur, cotton, fruit.
Colonies								
Abyssinia	3,500,000	150,000	.....	.....	.....	.....	.....	.....
Eritrea	450,000	88,500	.....	.....	.....	.....	.....	.....
Somal Coast	400,000	100,000	.....	.....	.....	.....	.....	.....
Japan	49,232,822	147,655	1,287,604,261	5,029	19,744	Gold	Agriculture.	Rice, silk, porcelain, tea, sugar, textiles.
Formosa	3,132,100	13,944	.....	.....	.....	.....	.....	.....
Cho-sen	9,781,671	71,000	18,297,238	609	2,170	.....	.....	.....
Liberia	2,500,000	43,000	1,289,571	.....	.....	.....	Agriculture.	Palm oil, coffee, rubber, ivory
Mexico	15,000,000	767,005	219,899,231	15,350	39,865	Gold	Agriculture and mining.	Silver, gold, drugs, copper, fibers, coffee, tobacco
Monaco	16,000	8	.....	.....	.....	Gold	Gambling.	Suicides.
Montenegro	228,000	3,630	.....	21	528	Gold	Grazing and agriculture.	Cattle, corn, tobacco, cereals.
Morocco	5,000,000	314,000	39,758,000	.....	.....	Gold	Grazing and agriculture.	Hides, skins, wool, barley, olive oil.
Nepal	4,000,000	54,000	.....	.....	.....	Silver	Grazing and agriculture.	Hides, drugs, dyes, cereals
Netherlands	5,898,429	12,648	451,309,203	1,908	4,553	Gold	Agriculture, fisheries, and manufacturing.	Food products, drugs, textiles, sugar.
Colonies								
Borneo	2,000,000	284,840	.....	.....	.....	.....	.....	.....
Celebes	1,878,473	71,470	.....	.....	.....	.....	.....	.....
Java and Madura	30,098,008	50,554	.....	.....	.....	.....	.....	.....
Moluccas	410,190	43,864	.....	.....	.....	.....	.....	.....

TABLE H. STATISTICS AND INDUSTRIES—Continued

Countries	Population	Area Square Miles	Public Debt	Miles of Railroad	Miles of Telegraph	Standard Currency	Chief Industries	Leading Products and Exports
Netherlands—Continued								
New Guinea	200,000	151,789	.....	.....	.....	.....	.....	.....
Sumatra	4,029,503	161,612	.....	.....	.....	.....	.....	.....
Surinam	70,007	46,060	.....	.....	.....	.....	.....	.....
Luxemburg	259,891	999	2,316,000	.....	.....	.....	.....	.....
Norway	2,392,698	124,129	88,253,614	1,849	11,725	Gold	Mining and lumbering.	Iron, lumber, copper, fisheries.
Oman	1,500,000	82,000	.....	.....	.....	Silver	Agriculture and fisheries.	Dates, limes, pearls, fish.
Panama	400,000	32,380	.....	47	.....	Gold	Agriculture.	Bananas, rubber, cocoanuts, hides.
Paraguay	635,571	196,349	5,027,141	155	1,960	Silver	Grazing and agriculture.	Meat, tobacco, hides, timber.
Persia	9,300,000	628,000	16,737,500	6	6,312	Silver	Agriculture and manufacturing.	Carpets, wool, fruits, tobacco.
Peru	4,500,000	697,640	24,911,789	1,478	4,540	Gold	Agriculture and mining.	Silver, copper, gold, coffee, wool, guano.
Portugal	5,687,627	35,490	864,561,212	1,758	5,860	Gold	Agriculture.	Wines, silks, fruits, cork, sardines.
Colonies								
Portuguese Africa	8,248,527	793,980	.....	.....	.....	.....	.....	.....
Portuguese Asia	895,789	8,972	.....	.....	.....	.....	.....	.....
Roumania	6,865,739	50,720	277,383,133	2,054	4,756	Gold	Agriculture.	Cereals, wines, petroleum.
Russian Empire	.....	.....	4,558,152,565	51,604	126,238	Gold	Agriculture.	Wheat, rye, oats, timber, flax, hemp, petroleum.
European Russia	118,690,600	1,859,195	.....	.....	.....	.....	.....	.....
Poland	12,129,200	49,084	.....	.....	.....	.....	.....	.....
Caucasia	11,735,100	181,550	.....	.....	.....	.....	.....	.....
Finland	3,030,900	144,211	.....	.....	.....	.....	.....	.....
Central Asia	9,973,400	1,327317	.....	.....	.....	.....	.....	.....
Siberia	8,220,100	817,687	.....	.....	.....	.....	.....	.....
San Domingo	610,000	18,045	13,486,370	112	430	Gold	Agriculture.	Hardwoods, coffee, tobacco, sugar, cocoa, bananas.
Servia	2,688,747	18,630	103,573,257	400	2,200	Gold	Agriculture.	Animal products, cereals, fruits.
Siam	6,000,000	195,000	19,466,000	650	3,000	Gold	Agriculture.	Rice, teakwood, pepper, fish.
Spain	19,503,068	194,783	1,817,674,327	9,020	22,256	Gold	Agriculture.	Wine, cereals, textiles, iron, coal, copper.
Spanish Africa	273,709	253,580	.....	.....	.....	.....	.....	.....
Spanish Islands	127,172	1,957	.....	.....	.....	.....	.....	.....
Sweden	5,521,943	172,876	138,120,699	8,458	19,924	Gold	Agriculture and mining.	Timber, iron, butter, cereals.
Switzerland	3,738,600	15,976	257,400,446	3,200	5,500	Gold	Agriculture and manufacturing.	Textiles, silks, clocks, watches, food products.
Turkish Empire	41,049,720	1,622,080	527,983,636	4,075	28,890	Gold	Agriculture.	Tobacco, cereals, coffee, wine, silk, fruits.
European Turkey	6,130,200	65,350	.....	.....	.....	.....	.....	.....
Asiatic Turkey	17,683,500	693,610	.....	.....	.....	.....	.....	.....
Tripoli	1,000,000	398,000	.....	.....	.....	.....	.....	.....
Egypt	9,821,100	400,000	463,854,243	.....	.....	.....	.....	.....
United States	91,972,266	3,616,484	1,023,861,531	236,869	273,736	Gold	Agriculture, mining and manufacturing.	Corn, tobacco, cotton, coal, petroleum, iron, copper, structural steel, agricultural machinery, textiles, meats, sugar, gold, silver.
United States and Islands	103,992,757	3,756,884	.....	.....	.....	.....	.....	.....
Philippines	7,635,426	122,000	16,000,000	.....	.....	.....	.....	.....
Porto Rico	1,118,012	3,606	.....	.....	.....	.....	.....	.....
Hawaii	154,001	6,449	.....	.....	.....	.....	.....	.....
Tutuila, Samoa	5,800	54	.....	.....	.....	.....	.....	.....
Guam	8,661	200	.....	.....	.....	.....	.....	.....
Uruguay	1,039,978	72,210	134,582,430	1,380	4,945	Gold	Agriculture and grazing.	Wool, hides, skins, meat products.
Venezuela	2,664,000	364,000	38,716,303	502	4,552	Gold	Agriculture and forest products.	Hardwoods, coffee, cocoa, cattle.

NOTABLE FOREIGN CITIES

Cities and Country	Census Year	Population
Aachen (Fr. *Aix-la-Chapelle*), Germany	1905	144,095
Abeokuta, West Africa	est.	150,000
Aberdeen, Scotland	est. 1907	174,579
Adana, Turkey in Asia	est.	60,000
Adelaide, Australia	1906	174,438
Adrianople, Turkey	est.	81,000
Agra, India	1901	188,300
Ahmedabad, India	1901	185,899
Ajmere, India	1901	73,839
Aleppo, Turkey	est.	200,000
Alexandria (Ar. and Turk. *Iskanderi'yeh*), Egypt	1907	332,246
Algiers, Algeria	1906	138,240
Aligarh, India	1901	70,434
Allahabad, India	1901	172,032
Altona, Germany	1905	168,320
Amballah, India	1901	98,638
Amiens, France	1906	90,920
Amoy, China	1906	114,000
Amritsar, India	1901	162,429
Amsterdam, Holland	1906	564,186
Angers, France	1906	82,935
Antananarivo, Madagascar	est. 1904	70,000
Antwerp (Fr. *Anvers*. Sp. *Amberes*.), Belgium	1910	401,513
Arnhem, Netherlands	1906	62,279
Astrakhan, Russia in Europe	1900	121,580
Asuncion, South America	1905	60,259
Athens (Gr. *Athenai*), Greece	1906	170,000
Augsburg, Germany	1905	94,923
Bagdad, Turkey in Asia	est.	145,000
Bahia, Brazil	1900	230,000
Baku, Russia	1900	179,133
Bangalore, India	1901	159,046
Bangkok, Siam	1909	628,675
Barcelona, Spain	1910	560,000
Bareilly, India	1901	131,208
Barfurush, Persia	1909	60,000
Bari, Italy	1906	77,478
Barmen, Germany	1905	156,148
Baroda, India	1901	103,790
Barrow-in-Furness, England	est. 1907	61,635
Basel, Switzerland	1908	129,470
Batavia, Java	1910	149,000
Beirut, Turkey	est.	120,000
Belfast, Ireland	est. 1905	349,180
Belgrade (Serv. *Beograd*), Servia	1910	90,000
Bellary, India	1901	58,247
Benares, India	1901	209,331
Bergen, Norway	1905	80,000
Berlin, Germany	1912	3,475,000
Bern, Switzerland	est. 1907	73,185
Beuthen, Germany	1905	60,078
Bhagalpur, India	1901	75,760
Bhopal, India	1901	77,023
Bialystok, Russia	1900	63,927
Bielefeld, Germany	1905	71,796
Bilbao, Spain	1900	83,306
Birkenhead, England	est. 1907	118,553
Birmingham, England	est. 1907	553,155
Blackburn, England	est. 1907	134,980
Bochum, Germany	1905	118,464
Bogota, Colombia	1905	130,000
Bokhara, Central Asia	est.	75,000
Bologna, Italy	1901	152,009
Bolton, England	est. 1907	182,917
Bombay (Hind. *Bambai*), India	1906	977,822
Bonn, Germany	1905	81,997
Bootle, England	est. 1907	67,114
Borbeck, Germany	1905	59,545
Bordeaux, France	1906	251,947
Bournemouth, England	est. 1907	69,246
Bradford, England	est. 1907	290,323
Bremen, Germany	1910	299,526
Brescia, Italy	1906	70,614
Breslau (Pol. *Wraclaw*), Germany	1905	470,904
Brest, France	1906	85,294
Brighton, England	est. 1907	129,023
Brisbane, Australia	est. 1906	132,468
Bristol, England	est. 1907	367,979
Brunn (Slav. *Brno*), Austria	1901	109,346
Brunswick, Germany	1910	143,854
Brusa, Turkey in Asia	est.	90,000
Brussels (Fr. *Bruxelles*), Belgium	1910	719,080
Bucharest (Rouman. *Bucuresci*), Roumania	1909	294,572
Budapest, Hungary	1910	881,601
Buenos Ayres, South America	1911	1,326,994
Burnley, England	est. 1907	103,947
Bury, England	est. 1907	58,918
Cabul, Afghanistan	1900	60,000
Cadiz, Spain	1900	69,382
Cairo (Ar. *Masr-el-Kahira*), Egypt	1907	654,476
Calais, France	1906	66,627
Calcutta, India	1901	1,026,987
Calicut, India	1901	76,981

LARGEST FOREIGN CITIES—Continued

Cities and Country	Census Year	Population
Campos, Brazil	est.	78,036
Canton (Chinese *Kwang-chow-fu* or *Sang-ching*), China	est. 1910	1,600,000
Cape Town, Africa	1904	169,641
Caracas, Venezuela	1910	85,000
Cardiff, Wales	est. 1907	187,620
Carlsruhe, Baden	1905	111,249
Cartagena, Spain	1900	99,871
Cashmere, India	1901	122,618
Cassel, Germany	1905	120,467
Catania, Sicily	1901	149,295
Cawnpore, India	1901	197,170
Changsha, China	est. 1906	230,000
Charlottenburg, Germany	1905	239,559
Chefu, China	est. 1906	100,000
Chemnitz, Saxony	1910	287,807
Chingtu, China	est.	800,000
Chinkiang, China	est. 1906	170,000
Christchurch, New Zealand	1906	67,878
Christiania, Norway	1910	243,801
Chungking, China	est. 1906	702,000
Cologne (Ger. *Köln*), Germany	1905	428,722
Colombo, Ceylon	1901	158,298
Constantine, Algeria	1906	58,435
Constantinople (Turk. *Stambul*), Turkey	est. 1905	1,125,000
Copenhagen (Dan. *Kjöbenhavn*), Denmark	1909	539,000
Cordoba, Spain	1900	58,275
Cork, Ireland	est. 1906	76,122
Coventry, England	est. 1907	77,626
Cracow, Austria-Hungary	1900	91,323
Croydon, England	est. 1907	154,342
Czernowitz, Austria	1900	67,622
Dacca, India	1901	90,679
Daman, India	1894	64,248
Damascus (Heb. *Dammesek'* Ar. *Dimishk'esh-Sham*), Turkey in Asia	est.	250,000
Danzig (Pol. *Gdansk*), Germany	1905	159,685
Darmstadt, Germany	1910	93,000
Delhi, India	1901	208,575
Derby, England	est. 1907	125,774
Dessau, Germany	1905	55,134
Deutsch Wilmersdorf, Germany	1905	63,538
Devonport, England	est. 1907	79,959
Dijon, France	1906	74,113
Dortmund, Prussia	1905	175,577
Dresden, Germany	1910	548,308
Dublin, Ireland	est. 1905	375,350
Duisburg, Germany	1905	192,346
Dunaburg, Russia	1897	72,231
Dundee, Scotland	est. 1907	165,748
Dunedin, New Zealand	1901	56,020
Durban, South Africa	est. 1906	69,894
Dusseldorf, Germany	1905	253,274
Edinburgh, Scotland	est. 1907	345,747
Ekaterinoslav, Russia	1900	135,552
Elberfeld, Germany	1905	162,853
Elbing, Germany	1905	55,627
Elizabetgrad, Russia	1897	61,488
Erfurt, Germany	1905	98,849
Essen, Germany	1905	231,396
Faizabad, India	1901	75,085
Fez (Ar. *Fas*), Morocco	est.	140,000
Fiesole, Italy	1901	58,000
Florence (It. *Firenze*), Italy	1901	205,589
Frankfurt am Main Prussia	1905	334,978
Frankfurt an der Oder, Germany	1905	64,304
Freiburg, Saxony	1905	74,102
Fuchau, China	est.	700,000
Fukuoka, Japan	1903	71,047
Furruckabad, India	1901	67,338
Furth, Bavaria	1905	60,525
Galatz, Roumania	1899	62,678
Gateshead, England	est. 1907	125,783
Gaya, India	1901	71,288
Gelsenkirchen, Germany	1905	147,037
Geneva (Fr. *Genève*. Ger. *Genf*), Switzerland	1908	118,256
Genoa (It. *Genova*. Fr. *Gênes*), Italy	1901	234,710
Ghent, Belgium	1910	206,460
Glasgow, Scotland	1907	847,584
Gleiwitz, Germany	1905	61,414
Gorakhpur, India	1901	64,148
Gorlitz, Germany	1905	83,768
Gothenburg, Sweden	1907	160,523
Granada, Spain	1900	75,900
Gratz (Slav. *Nimetzki Gradetz*), Austria-Hungary	1900	138,080
Greenock, Scotland	1907	71,269
Greenwich, England	1901	95,770
Grenoble, France	1906	73,022
Grimsby, England	est. 1907	70,574
Groningen, Netherlands	1906	73,278
Guadalajara, Mexico	1900	101,208
Guatemala, Rep. of Guatemala	1904	96,560
Guayaquil, Ecuador	est.	80,000
Haarlem, Netherlands	1906	69,701
Hagen, Germany	1905	77,567
Hague (Dutch *Den Haag*), The, Netherlands	1906	248,995
Hakodate, Japan	1903	85,313
Halifax, England	est. 1907	110,138
Halle-on-Saale, Germany	1905	169,916
Hamborn, Germany	1905	67,494
Hamburg, Germany	1910	1,014,664
Hangchau, China	1901	750,000
Hankau, China	1906	530,000
Hanley, England	est. 1907	67,174
Hanoi, Indo-China	1900	103,188
Hanover, Germany	1905	250,032
Hastings, England	est. 1907	67,477
Havana (Sp. *La Habana*), Cuba	1907	297,159
Havre, France	1906	132,430
Helsingfors, Finland	1903	106,067
Hiroshima, Japan	1903	121,196
Hodmezo Vasarhely, Hungary	1901	60,883
Hongkong, China	est. 1905	466,850
Hornsey, England	est. 1905	84,070
Howrah, India	1901	157,594
Hubli, India	1901	60,214
Huddersfield, England	est. 1907	94,814
Hull, England	est. 1907	266,762
Hyderabad, India	1901	488,466
Indore, India	1901	86,200
Ipswich, England	est. 1907	72,825
Ivanovo-Voznesensk, Russia	1900	64,628
Jaipur, India	1901	160,167
Jassy, Roumania	est.	77,759
Jerez de la Frontera, Spain	1900	63,473
Jhansi, India	1901	55,724
Jodhpur, India	1901	60,437
Johannesburg, South Africa	1904	158,580
Jojokarta, Java	est.	60,000
Jubbulpur, India	1901	90,316
Jullnder, India	1901	67,735
Kabul, Afghanistan	est.	60,000
Kagoshima, Japan	1904	59,000
Kaisarieh, Turkey in Asia	est.	72,000
Kalgau, China	est.	65,000
Kanazawa, Japan	est.	99,657
Karachi, India	1901	116,663
Karlsruhe, Baden	1911	134,000
Kassel, Prussia	1905	120,467
Kazan, Russia	1900	143,707
Kerbela, Turkey in Asia	est.	65,000
Kharkov, Russia	1900	197,468
Khartoum, Nubia	est.	70,000
Kherson, Russia	1897	69,219
Khokan, Russia	1897	81,354
Kiauchau, China	est.	84,000
Kiel, Prussia	1905	163,772
Kiev, Russia	1902	329,000
King's Norton, England	1905	69,630
Kingtechin, China	est.	500,000
Kioto, Japan	1903	380,568
Kishinev, Russia	1900	125,787
Kobe, Japan	1908	345,952
Königsberg, Germany	1905	223,770
Königshütte, Germany	1905	66,042
Kovno, Russia	1903	73,743
Krefeld, Germany	1905	110,347
Kremenchug, Russia	1897	63,007
Kronstadt, Russia	1897	59,525
Kure, Japan	1903	66,066
Kursk, Russia	1897	75,721
Lahore, India	1901	202,964
Lanchow, China	est.	500,000
La Paz, Bolivia	est. 1906	78,910
La Plata, Argentine Rep.	1906	80,000
Leeds, England	est. 1907	470,268
Leghorn (It. *Livorno*), Italy	1901	98,321
Leicester, England	1907	236,124
Leipzig, Germany	1910	589,850
Leith, Scotland	est. 1907	83,668
Le Mans, France	1906	65,467
Lemberg (Pol. *Lwow*), Austria	1900	159,877
Leon, Mexico	1900	63,263
Leyden, Netherlands	1906	57,095
Leyton, England	est. 1905	114,555
Libau, Russia	1897	69,405
Liege (Dutch *Luik*), Belgium	1910	174,768
Lima, Peru	1903	130,233
Limoges, France	1906	88,597
Linden, Germany	1905	57,944
Linz, Austria-Hungary	1900	58,791
Lisbon (Port. *Lisboa*), Portugal	1900	356,009
Liverpool, England	est. 1907	746,144
Lodz, Russia	1900	351,570
London, England	1910	7,252,963
Lorca, Spain	1900	69,836
Lübeck, Germany	1910	112,500
Lucca, Italy	1901	74,971
Lucknow (Hind. *Laksmanavate*), India	1901	264,049
Ludwigshafen-on-Rhine, Bavaria	1905	72,286
Lyons, France	1906	472,114
Macao, China	1899	63,991
Madras, India	1901	509,346
Madrid, Spain	1910	570,000
Madura, India	1901	105,984
Magdeburg, Germany	1905	240,661
Mainz (Fr. *Mayence*), Germany	1905	91,124
Malaga, Spain	1900	130,109
Malmo, Sweden	1907	74,668
Manchester, England	est. 1907	643,148
Manila, Philippine Islands	1903	219,928
Manipur, India	1901	67,093
Mannheim, Germany	1910	194,000
Maria-Theresiopel, Hungary	1900	82,122
Marseilles, France	1906	517,498
Maulmain, Burma	1901	58,446
Mecca, Arabia	est.	60,000
Mechlin (Fr. *Malines*), Belgium	1906	58,800
Meerut, India	1901	118,129
Melbourne, Australia	1906	526,400
Merthyr Tydfil, Wales	est. 1905	73,848
Messina, Italy	1901	93,672
Metz, Germany	1905	60,396
Mexico, Republic of Mexico	1910	470,659
Middlesborough, England	est. 1907	101,783
Milan (It. *Milano*), Italy	1908	520,600
Minsk, Russia	1897	91,494
Mirzapur, India	1901	79,862
Molenbeek, Belgium	1904	63,678
Monterey, Mexico	1900	62,266
Montevideo, Uruguay	est. 1907	309,390
Montpellier, France	1906	77,114
Montreal, Canada	est. 1907	450,000
Moradabad, India	1901	75,128
Moscow (Russ. *Moskva*), Russia	1907	1,359,254
Mosul, Turkey	est.	60,000
Mühlhausen, Germany	1905	94,498
Mülheim am Ruhr, Prussia	1905	93,599
Multan, India	1901	87,394
Munich (Ger. *München*), Germany	1910	596,467
Munster, Prussia	1905	81,468
Murcia, Spain	1900	111,539
Muttra, India	1901	60,042
Mysore, India	1901	68,111
Nagasaki, Japan	1908	169,941
Nagoya, Japan	1904	288,639
Nagpur, India	1901	127,734
Namangan, Russia	1897	62,017
Nancy, France	1905	110,570
Nanking, China	est. 1906	261,000
Nantes, France	1906	133,247
Naples (It. *Napoli*), Italy	1908	563,540
Negapatam, India	1901	57,190
Newcastle, England	est. 1907	272,969
Newport, England	est. 1907	75,585
Nice, France	1906	134,232
Nilgata, Japan	1904	59,576
Nikolayev, Russia	1897	92,060
Nimes, France	1906	80,184
Ningpo, China	est. 1906	260,000
Niuchwang, Manchuria	est. 1906	74,000
Nizhni Novgorod, Russia	1897	90,053
Northampton, England	est. 1907	95,070
Norwich, England	est. 1907	119,191
Nottingham, England	est. 1907	257,489
Nuremberg, Bavaria	1910	333,142
Odessa, Russia	1900	449,673
Offenbach, Germany	1905	59,806
Okayama, Japan	1903	81,025
Oldham, England	est. 1907	141,730
Oporto, Portugal	1900	167,955
Oran, Algeria	1906	106,517
Orel, Russia	1897	70,075
Orenburg, Russia	1897	72,425
Orleans, France	1906	68,614
Osaka, Japan	1908	1,117,151
Osnabrück, Germany	1905	59,580
Otaru, Japan	1903	79,361
Ottawa, Canada	1901	59,928
Padua (It. *Padova*), Italy	1901	82,281
Paisley, Scotland	est. 1907	88,710
Palermo, Italy	1901	309,694
Palma, Spain	1900	63,937
Para, Brazil	1902	100,000
Paris, France	1910	2,846,986
Patna, India	1901	134,785
Peking, China	est. 1905	700,000
Pensa, Russia	1897	61,851
Pernambuco, Brazil	est. 1900	120,000
Pforzheim, Germany	1905	59,307
Pilsen (Bohem. *Plzen*), Austria	1900	68,079
Pistoja, Italy	1901	62,606
Plauen, Saxony	1910	121,272
Plymouth, England	est. 1907	120,063
Poona, India	1901	153,320

LARGEST FOREIGN CITIES—Continued

Cities and Country		Census Year	Population
Port-au-Prince, Hayti		1910	100,000
Porto Alegre, Brazil		1902	80,000
Port Said, Egypt		1905	56,000
Portsmouth, England	est.	1907	208,291
Posen, Germany		1905	137,067
Potsdam, Prussia		1905	61,414
Prague (Bohem. *Praha*), Austria-Hungary		1907	228,645
Pressburg, Austria		1901	65,867
Preston, England	est.	1907	117,093
Puebla, Mexico	est.	1904	98,932
Quebec, Canada		1901	68,840
Quito, Ecuador		est.	80,000
Rampur, India		1901	78,758
Rangoon, Burma		1901	234,881
Ravenna, Italy		1901	64,031
Rawal Pindi, India		1901	87,688
Reading, England	est.	1907	80,311
Reggio, Italy		1901	58,490
Rennes, France		1906	75,640
Reval, Russia		1900	66,292
Rheims, France		1906	109,859
Rhondda, Wales		1905	124,988
Riga, Russia		1900	282,943
Rio de Janeiro, Brazil	est.	1906	811,265
Rixdorf, Prussia		1905	153,650
Rochdale, England	est.	1907	87,999
Rome (It. *Roma*), Italy		1908	489,965
Rosario, Argentine Republic		1906	150,000
Rostock, Germany		1905	60,790
Rostov-on-Don, Russia		1900	119,476
Rotterdam, Netherlands		1906	390,364
Roubaix, France		1906	121,017
Rouen, France		1906	118,459
St. Denis, France		1906	64,790
St. Gilles, Belgium		1905	60,086
St. Helens, England	est.	1907	92,476
St. Petersburg (Russ. *Sankt Peterburg*), Russia		1911	1,907,708
Saigon, Cochin-China			189,000
Salford, England	est.	1907	236,670
Salonika, Turkey		1910	105,000
Samara, Russia		1897	89,999
Samarang, Java		1901	89,286
Samarkand, Russia		1900	58,194
San Luis Potosi, Mexico		1900	61,019
San Salvador, Central America		1901	59,544
Santiago de Chile	est.	1908	389,000
Santiago de Guatemala		1898	74,000
San Paulo, Brazil		1902	332,000
Saragossa (Sp. *Zaragoza*), Spain		1900	99,118
Saratov, Russia		1900	143,431
Sasebo, Japan		1903	68,344
Schaarbeek, Belgium		1905	71,114
Schoeneberg, Prussia		1905	141,040
Seharanpur, India		1901	66,254
Sendai, Japan		1903	100,231
Seoul, Korea		1902	196,646
Seville, Spain		1900	148,315
Shahjehanpur, India		1901	76,458
Shanghai, China	est.	1910	1,000,000
Shasi, China	est.	1905	80,000
Sheffield, England	est.	1907	455,453
Shitomir, Russia		1900	80,787
Sholapur, India		1901	75,288
Singanfoo, China		est.	1,000,000
Singapore, Straits Settlements		1901	228,555
Smethwick, England		1905	62,605
Smyrna, Turkey		est.	201,000
Sofia, Bulgaria		1910	102,769
Southampton, England	est.	1907	119,745
South Shields, England	est.	1907	113,460
Spandau, Germany		1905	70,301
Srinagar, India		1901	122,618
Stettin, Germany		1905	224,119
Stockholm, Sweden		1910	341,986
Stockport, England	est.	1907	100,986
Strassburg, Germany		1910	178,891
Stuttgart, Germany		1910	285,889
Suchau, China		1905	500,000
Sunderland, England	est.	1906	156,029
Surabaya, Java		1900	146,944
Surakarta, Java		1900	109,459
Surat, India		1901	119,306
Swansea (Welsh *Abertawe*), Wales	est.	1906	97,324
Swatau, China		1905	60,000
Sydney, Australia	est.	1906	529,600
Szegedin, Hungary		1900	102,991
Tabriz, Persia		est.	200,000
Tanjore, India		1901	57,870
Taranto (Gr. *Taras.* L. *Tarentum*), Italy		1901	60,733
Tashkent, Russia		1900	156,000
Teheran, Persia		est.	280,000
Tientsin, China	est.	1906	750,000
Tiflis, Russia		1900	160,645
Tokushima, Japan		1903	63,710
Tokyo, Japan		1908	2,186,079
Tomsk, Siberia		1900	63,533
Toronto, Canada		1901	208,040
Tottenham, England	est.	1905	116,232
Toulon, France		1906	103,549
Toulouse, France		1906	149,438
Tourcoing, France		1906	81,671
Tours, France		1906	67,601
Toyama, Japan		1903	56,275
Trichinopoli, India		1901	104,721
Trieste, Austria-Hungary		1909	221,993
Trivandrum, India		1901	57,882
Tsaritsyn, Russia		1897	55,186
Tucuman, Argentina		1906	55,000
Tula, Russia		1900	114,733
Tunis, Africa		est.	250,000
Turin, Italy		1901	335,656
Umballa, India		1901	78,638
Urumiah, Persia		est.	50,000
Utrecht, Holland		1906	114,692
Valencia, Spain		1900	213,530
Valetta, Malta		1900	61,268
Valladolid, Spain		1900	68,789
Valparaiso, Chili		1908	180,600
Venice (It. *Venezia*), Italy		1901	151,840
Verona, Italy		1901	74,271
Vienna (Ger. *Wien.*), Austria		1910	2,031,498
Vilna, Russia		1900	162,633
Vitebsk, Russia		1897	65,871
Voronezh, Russia		1900	84,146
Wakayama, Japan		1903	68,527
Wallasey, England		1905	62,460
Walsall, England	est.	1907	96,171
Warrington, England	est.	1906	70,269
Warsaw (Pol. *Warszawa*), Poland		1901	756,426
Wellington, New Zealand		1906	63,807
Wenchau, China	est.	1906	80,000
West Bromwich, England	est.	1906	69,123
West Ham, England	est.	1906	308,284
West Hartlepool, England	est.	1905	71,313
Wiesbaden, Prussia		1905	100,953
Wigan, England	est.	1906	88,606
Willesden, England		1905	138,080
Winnipeg, Canada		1906	90,153
Wolverhampton, England	est.	1906	102,016
Wuchang, China		est.	500,000
Wuchau, China		1906	59,000
Wuhu, China		1906	123,000
Wurzburg, Germany		1905	30,327
Yarkand, Chinese Turkestan		est.	100,000
Yaroslav, Russia		1900	71,616
Yokohama, Japan		1910	400,000
York, England	est.	1906	84,730
Zanzibar, East Africa		est.	100,000
Zaragoza. See Saragossa			
Zhmitomir, Russia		1900	80,787
Zurich, Switzerland		1908	186,999
Zwickau, Germany		1905	68,225

FAMOUS RIVERS, LAKES, ISLANDS, MOUNTAINS, VOLCANOES AND WATERFALLS

Islands, Most Noted in the World

	Area Square Miles	Population
Borneo	284,840	2,000,000
Celebes	71,470	1,878,473
Ceylon	25,332	4,095,325
Cuba	44,164	2,048,980
Great Britain	88,094	40,834,714
Greenland	838,000	11,895
Hayti	28,249	2,639,700
Honshiu, Japan	87,485	37,413,141
Iceland	39,756	78,470
Ireland	32,583	4,381,951
Java and Madura	50,554	30,098,008
Luzon, Philippines	40,969	3,798,507
Madagascar	227,950	2,743,900
Newfoundland	42,734	217,037
New Guinea	313,183	706,000
New Zealand, North Island	44,468	476,732
New Zealand, South Island	58,525	411,340
Tasmania	26,215	190,898
Tierra del Fuego	20,000	1,703
Sakhalin	29,000	28,113
Sumatra	161,612	4,029,503
Yezo	30,143	922,058

Lakes, Most Noted in the World

Name of Lake	Area in Square Miles	Eleva'n in Feet	Depth in Feet
Aral Sea	26,000	48	....
Caspian Sea	170,000	—84*	3,000
Dead Sea	320	—1,312*	700
Great Salt Lake	2,600	4,200	60
Lake Balkal	12,441	1,600	4,500
Lake Chapala	1,300	7,000	....
Lake Erie	7,750	573	210
Lake Huron	20,000	581	700
Lake Ladoga	7,000	55	730
Lake Michigan	22,000	581	870
Lake Nicaragua	3,650	130	240
Lake Ontario	6,950	247	730
Lake Superior	31,500	602	1,008
Lake Titicaca	4,000	12,874	700
Lake Victoria	40,000	3,300	....

*Below sea level.

Mountains, Most Noted in the World

Name	Location	Height (Feet)
Aconcagua	Chili	23,083
Ararat	Turkey	17,260
Arequipa	Peru	20,320
Ben-Nevis	Scotland	4,406
Black Mountain	North Carolina	6,500
Blackburn	Alaska	16,140
Blanc, Mt.	France	15,780
Brown, Mt.	Canada	16,000
Cenis, Mt.	France	11,755
Chimborazo	Ecuador	20,498
Chinati Peak	Texas	7,730
Clingman Dome	Tennessee	6,619
Condor	Argentina	21,128
Crillon	Alaska	15,900
Dapsang	Tibet	28,278
Dhawalaghiri	Asia	25,500
Dickerman	Washington	15,766
Douglass, Mt.	Montana	11,300
Elburz	Caucasus	18,526
Everest, Mt.	India	29,002
Fremont's Peak	Wyoming	13,790
Geesh	Africa	15,100
Gilbert Peak	Utah	13,687
Harney Peak	South Dakota	7,216
Hermon, Mt.	Palestine	11,000
Hogback, Mt.	Nebraska	5,084
Hood, Mt.	Oregon	11,225
Hooker, Mt.	Canada	15,700
Huascan	Peru	22,051
Hyndman Peak	Idaho	12,078
Illampu	Bolivia	21,490
Itacolumi	Brazil	5,740
Itambe	Brazil	4,300
Jorullo	Mexico	4,265
Kanchanjanga	India	28,156
Katahdin	Maine	5,200
Kenia	East Africa	17,180
Kilauea	Hawaiian Islands	4,040
Kilimanjaro	Africa	19,270
Kosciusko, Mt.	Australia	7,176
Lebanon, Mt.	Syria	11,000
Logan, Mt.	Canada	19,500
Long's Peak	Colorado	14,271
McKinley	Alaska	20,464
Mansfield, Mt.	Vermont	4,364
Marcy, Mt.	New York	5,344
Massive	Colorado	14,424
Matterhorn	Switzerland	14,705
Mercedario	Argentina	22,312
Mercedario	Mexico	22,397
Miltsin, Mt.	Morocco	11,400
Mitchell, Mt.	North Carolina	6,711
Monte Rosa	Italy	15,208
Olympus	Greece	6,600
Olympus	Turkey	9,745
Ophir	Sumatra, East Indies	13,800
Orizaba	Mexico	18,170
Parnassus	Greece	6,000
Perdu, Mont.	France	11,300
Peaks of Otter	Virginia	4,250
Pike's Peak	Colorado	14,108
Rainier	Washington	14,363
Redslate Peak	California	13,400
Roa, Mt.	Hawaii	17,500
Rogers, Mt.	(Grayson Co.) Va.	5,719
Roraima	Venezuela	7,874
Round Top	New York	3,800
Rumenjori		16,815
San Francisco, Mt.	Arizona	12,794
Santa Clara Mountain	New Mexico	11,507
Santa Fé Baldy Peak	New Mexico	12,661
Shasta	California	14,380
Sitting Bull Mountain	Georgia	5,046
Simplon	Alps, Switzerland	11,541
Sinai, Mt.	Turkey	8,593
Sneehattan	Norway	8,110
Snowdon	Wales	3,571
Sorata	Bolivia	21,300
Spruce Mountain	West Virginia	4,860
St. Bernard	Switzerland	8,000
St. Gothard	Switzerland	10,000
Teneriffe Peak	Canary Isles	12,000
Truchas Peak	New Mexico	13,275
Vancouver	Alaska	15,666
Washaku Needle	Arizona	12,000

GREAT RIVERS, LAKES, ISLANDS, MOUNTAINS, VOLCANOES AND WATERFALLS—Continued

Mountains—Continued

Name	Location	Height (feet)
Washington, Mt.	New Hampshire	6,279
Wheeler Peak	Nevada	13,058
Whitney	California	14,502
Williamson	California	14,500
Wrangle, Mt.	Alaska	17,500
Ymesfield	Norway	8,543

Rivers, Most Noted of the World

Name	Length (miles)
Amazon	3,300
Amur	1,500
Arkansas	2,170
Brahmaputra	2,000
Cambodia	2,417
Colorado	2,000
Columbia	1,400
Congo	2,900
Danube	1,800
Dnieper	1,230
Don	1,104
Dwina	700
Elbe	550
Euphrates	1,750
Ganges	1,500
Hoang-Ho	2,700
Indus	2,000
Irrawadi	2,532
Kongo	2,900
Lena	2,500
Loire	598
Mackenzie	2,400
Martaban	2,152
Missouri and Mississippi	4,200
Murray	3,000
Nelson	1,800
Niger	3,500
Nile	3,700
Obi	2,500
Ohio and Allegheny	1,400
Orange	1,152
Orinoco	1,500
Parana	2,211
Red River	1,600

Rivers—Continued

Name	Length (miles)
Rhine	960
Rhone	550
Rio Bravo del Norte	1,800
Rio de la Plata	2,950
Rio Grande	1,800
Rio Madeira	2,300
Rio Negro	1,650
San Francisco	1,680
Saskatchewan	1,918
Seine	497
St. Lawrence	1,030
Thames	215
Ural	1,099
Vistula	598
Volga	2,300
Yangtse	3,000
Yenisei	3,322
Yukon	2,000
Zambezi	1,800

Volcanoes, Greatest of the World

Name	Location	Height (feet)
Altar	Ecuador	17,710
Antisana	Ecuador	19,335
Cayambi	Ecuador	19,255
Cotopaxi	Ecuador	18,880
Demavend	Persia	18,500
Etna	Sicily	9,652
Fujiyama	Japan	12,390
Hecla	Iceland	5,110
Hood, Mt.	Oregon	11,225
Iztaccihuati	Mexico	16,076
Llullaillac	Chili	21,000
Mauna Kea	Hawaii	13,953
Mauna Loa	Hawaii	13,600
Misti	Peru	20,015
Orizaba	Mexico	18,310
Pelée	Martinique, W. I	4,300
Pico, Peak of	Azores	7,013
Popocatepetl	Mexico	17,748
Sahama	Peru	23,000
Sangai	Ecuador	17,459

Volcanoes—Continued

Name	Location	Height (feet)
San José	Chili	20,020
St. Elias, Mt.	Alaska	18,024
St. Helena, Mt.	United States	10,000
Stromboli	Lipari Islands	3,090
Tahiti, Peak of	Friendly Islands	7,400
Teneriffe	Canary Islands	12,000
Tolima	Colombia	18,069
Toluco	Mexico	14,950
Vesuvius	Italy	4,260

Waterfalls, Greatest of the World

Name	Location	Height (feet)
Bridal Veil	California	900
Foyers	Great Britain	205
Gastein Falls	Austria	469
Gavarnie	Pyrenees	1,400
Grand Falls	Labrador	2,000
Great Falls	Montana	500
Hay River	Alaska	200
Kaieteur Falls	Guiana	740
Krimmler Falls	Austria	1,300
Kukenam Fall	Guiana	1,500
Maanelvan	Norway	940
Nevada Fall	California	600
Niagara	New York	165
Oroco Falls	Monte Rosa	2,400
Rjukanfos	Norway	804
Roraima Fall	Guiana	2,000
Rukaufos	Norway	513
Shoshone	Idaho	210
Skykjefos	Norway	700
Staubbach	Switzerland	1,000
Sutherland Falls	New Zealand	1,904
Tequendama	Colombia	475
Tessa Falls	Austria	541
Velino Falls	Italy	591
Vermafos	Norway	984
Vettisfos	Norway	853
Victoria Falls	Zambesi	400
Vöringsfos	Norway	520
Yosemite		2,660

COUNTRIES OF THE WORLD AND THEIR CHIEF DEPENDENCIES

Abyssinia.—A country of North Africa, occupies a highland region southwest of the Red Sea. The country is made up of a number of states, the chief of which are Tigre in the north, Amhara in the west and center, and Shoa in the south.

Surface.—It consists mainly of a huge table-land with a mean elevation of 7,000 feet. The declivity to the bordering tract on the Red Sea is abrupt; toward the Nile basin it is more gradual. The main mass has been cut into a number of island-like sections by the streams, which have worn their channel into ravines of vast depth—as much sometimes as 4,000 feet. Isolated mountains, with naked perpendicular sides, present the most singular forms. The Samen mountains have summits rising to the height of 15,000 feet.

Rivers.—The principal are the head-streams of the Blue Nile, issuing from the great Lake Tzana, Tana, or Dembea, and the Atbara, also a tributary of the Nile; less important are the Mareb and the Hawash.

Climate and Vegetation.—The climate, notwithstanding its tropical position, is on the whole moderate and pleasant owing to its elevation, though in the river valleys and swamps the heat and moisture are suffocating and pestilential. As a whole, the country is exceedingly fruitful; and its productions are of the most varied nature, from the pines, heaths, and lichens of North Europe to the choicest tropical plants. Two, and in some places three, crops can be raised in one year.

Animals.—The larger animals are lions, panthers, elephants, rhinoceroses, hippopotamuses, jackals, hyaenas, bears, numerous antelopes, monkeys, and crocodiles.

People.—The population consists of various elements, the chief being the Abyssiniams proper—brown, well-formed people, belonging to the Semitic stock. The basis of the language is the ancient Ethiopic (see Ethiopia) or Ge'ez, a Semitic tongue which is now the sacred language. The modern dialect of Amhara is the prevalent language of the country. There are Gallas and Somalis in the south and southeast. The Falashas are of Jewish origin, and still retain many of their racial peculiarities.

Towns.—The towns are small—Addis Ababa, capital of Shoa and of Abyssinia; Gondar, in Amhara; Adowa, or Adua, in Tigré; Axum, the old capital—not to speak of Harar, lately annexed. Any foreign trade comes mainly through Massowah. The religion of the Abyssinians proper is a debased Christianity; but the Gallas and other alien tribes are mostly Mohammedans.

Afghanistan.—An inland country of Asia, forms the southeastern portion of the great Iran plateau. Its breadth is about 500 miles, and its length, from the Herat boundary to the Khaibar, about 600 miles. It is bounded on the east by the tribes on the northwest frontier of India under British control; on the south by Baluchistan; on the west by Persia; on the north by the Russian central Asian states. Cabul is the capital.

Surface.—Afghanistan consists chiefly of lofty, bare, uninhabited table-lands, sandy barren plains, ranges of snow-covered mountains, offsets of the Hindu Kush or the Himalayas, and deep ravines and valleys. Many of the last are well watered and very fertile, but about four-fifths of the whole surface is rocky, mountainous and unproductive. The surface on the northeast is covered with lofty ranges belonging to the Hindu Kush, whose heights are often 18,000 and sometimes reach 25,000 feet. The whole northeastern portion of the country has a general elevation of over 6,000 feet, but toward the southwest in which direction the principal mountain chains of the interior run, the general elevation declines to not more than 1,600 feet. In the interior the mountains sometimes reach the height of 15,000 feet. A great part of the frontier toward India consists of the Suleiman range, 12,000 feet high.

There are numerous practicable avenues of communication between Afghanistan and India, among the most extensively used being the famous Khyber pass, by which the river Cabul enters the Punjab; the Gomul pass, also leading to the Punjab; and the Bolan pass on the south, through which the route passes to Sind.

Rivers.—Of the rivers the largest is the Helmund, which flows in a southwesterly direction more than 400 miles, till it enters the Hamoon or Seistan swamp. It receives the Arghandab, a considerable stream. Next in importance are the Cabul in the northeast, which drains to the Indus, and the Hari Rud in the northwest, which, like other Afghanistan streams, loses itself in the sand.

Climate and Vegetation.—The climate is extremely cold in the higher, and intensely hot in the lower regions, yet on the whole it is salubrious. The most common trees are pines, oaks, birch, and walnut. In the valleys fruits, in the greatest variety and abundance, grow wild.

Animals.—The chief domestic animals are the dromedary, the horse, ass, and mule, the ox, sheep with large fine fleeces and enormous fat tails, and goats; of wild animals there are the tiger, bears, leopards, wolves, jackal, hyaenas, foxes, etc.

People.—The population is very mixed. The Afghans (or Duranis) have been predominant since 1747, especially in Kandahar; next come the Ghilzais (military and commercial) and the Tajiks (aboriginals, who are cultivators or retail traders). All are Sunni Mohammedans, except the Hazaras and Kizilbashes, who belong to the Shiite sect. The national tongue is Pushtu.

Towns.—The chief towns are Cabul (the capital), Kandahar, Ghuzni, and Herat.

Argentine Republic.—A vast country of South America, the extreme length of which is 2,300 miles, and the average breadth a little over 500 miles, the total area reaching 1,135,840 square miles. It is bounded on the north by Bolivia; on the east by Paraguay, Brazil, Uruguay, and the Atlantic, on the south by the Antarctic Ocean; and on the west by the Andes. The republic is made up of fourteen provinces and a number of territories. On the west, the Andes divide this republic from Chili; Bolivia bounds the country on the north, while Paraguay, Brazil, Uruguay, and the Atlantic Ocean form the eastern limit. The great island-group of Fuegia, on the south, belongs partly to this republic and partly to Chili.

Surface and Vegetation.—Except for the sub-Andean foothills, and a few other local and unimportant hilly or mountainous tracts, nearly all the country consists of vast plains or pampas. The northern plain region (the Chaco) is in part densely wooded; but most of the pampas country is open, presenting wide ranges of treeless pasture, diversified by patches of huge thistles and other semi-coarse plants. In the Patagonian re-

there are extensive districts interspersed with clumps of thorny brushwood, and having in the hollows many strongly saline ponds or lakes.

Animals.—The native fauna includes the puma, the jaguar, the tapir, the llama, the alpaca, the vicuna, armadillos, the rhea or nandu (a species of ostrich), etc.

Rivers.—The greater part of the republic is well watered and highly fertile, but there are extensive regions of waste land. The rivers Paraná and Uruguay, with their large tributaries, are important channels of trade.

Climate.—The climate in the extreme north is very hot, for it lies north of the tropic of Capricorn. The more remote southern territories have an extremely bleak, windy, and disagreeable climate, but are not really so cold as might be expected from their relatively high latitude. But the country in general enjoys an equable, temperate, and healthful climate.

People.—The people of the country are mostly Spanish in their language and descent, although there are many Italians, French, and other European immigrants. The Gauchos are a race of half-breed cattle-rearers and horse-breakers; they are almost continually on horseback, galloping over the plains, collecting their herds and droves, taming wild horses, or catching and slaughtering cattle. In such occupations they acquire a marvelous dexterity in the use of the lasso and bolas.

Cities.—The principal seaport is Buenos Ayres, the capital and largest city. Among the other large towns are Cordoba, Rosario, La Plata, Mendoza, Tucuman, Corrientes, Salta, and Santa Fé.

Australia.—The smallest of the continents, the largest among the islands of the world. Extends 2,560 miles from west to east, 1,970 miles from north to south, and its coast line has a development of 9,620 miles (exclusive of all minor bays). The commonwealth of Australia was formed in 1901, and consists of the six original states of New South Wales, Victoria, Queensland, South Australia, West Australia, and Tasmania. Most of the coast is barren and uninviting. Inlets and natural harbors abound only in the east, southeast, and northwest. The northern portion of the east coast, for a distance of 1,400 miles, is fringed by coral reefs.

Surface.—The great dividing range runs along the east coast, rising in the Australian Alps to 7,336 feet. The greater part of the interior consists of a table-land of moderate elevation, either barren or fit only for pasturage. The great lowland plains are those of the Murray valley and of Lake Eyre, supposed to lie below the level of the sea.

Rivers.—The Murray, draining an area of 275,000 square miles, is the only river of importance, but even it is navigable only during part of the year.

Climate.—Tropical in the north, temperate in the south. An annual rainfall of over twenty-five inches is experienced only along the southeast, east, and north coasts, and in a small district in the southwest. In the bulk of the interior the annual rainfall is less than ten inches.

Animal and Vegetable Life.—When discovered there were neither carnivorous animals (except the dingo) nor ruminants. Pouched animals (such as the kangaroo), cockatoos, the emu, and birds of paradise, are most characteristic of the continent. The vegetation is equally peculiar, the principal trees being Eucalypti (grass trees, gum trees, iron bark, etc.), acacias, and casuarinas (oaks). The woods are confined to regions of heavier rainfall. Much of the interior is an open grass-land with scattered trees, degenerating in the more arid parts into a veritable desert.

Cities.—The largest cities are Melbourne, capital of Victoria; Sydney, of New South Wales; Adelaide, of South Australia; Brisbane, of Queensland; and Ballarat, and Sandhurst in Victoria.

People.—The population is almost all of European origin, the predominating element being British. The British-born are no longer the most numerous element in the colonial populations, the native-born being now over three-fourths. Chinese and Germans number about 30,000 and 38,500 respectively; there are many Polynesians (Kanakas) in Queensland; also many Scandinavians, Americans, and French.

Austria is the usual name of the great empire now officially called the Austro-Hungarian monarchy. Since 1867 the empire is composed of a union of two states under one emperor, but administratively distinct. The one is Austria, the other Hungary and the lands of the Hungarian crown. The Austrian dominions form geographically a compact territory, with a circumference of about 5,350 miles. The total area is greater than that of any other European state save Russia, and is nearly twice the area of the United Kingdom. The body of the empire lies in the interior of Europe, though it has about 500 miles of sea-coast on the Adriatic.

Bosnia-Herzegovina, which had since the treaty of Berlin in 1878 been occupied and administered by Austria-Hungary, was in 1908 formally annexed to the empire.

Surface.—Three-fourths of Austria is mountainous or hilly, being traversed by three great mountain chains—the Alps, Carpathians, and Sudetes, whose chief ridges are of primitive rock. The Rhætian and Noric Alps stretch from Switzerland to the Danube, and contain the highest points of the Austrian territories, the Ortler Spitze rising to 12,814 feet.

The Carpathian chain, extending for 880 miles, rises on the left bank of the Danube, near Presburg, and, sweeping in a curve, first east, and then southward through Transylvania, again meets the Danube; it culminates at 8,517 feet.

The Sudetes run through the northeast of Moravia and Bohemia, in which last the range is known as the Riesengebirge, or Giant mountains. Continuous with this range, but beginning on the left bank of the Elbe, are the Erzgebirge, or Ore mountains, on the confines of Saxony. The chief plains of the Austrian empire are the vast lowlands of Hungary and the plain of Galicia.

Lakes and Rivers.—The chief lakes are Lake Balaton (382 square miles) and the Neusiedler See, both in Hungary; and remarkable is also the Zirknitz Lake in Illyria.

The leading rivers are the Danube, which has a course of 850 miles within the Austrian dominions, its navigable affluents being the Inn, Save, Drave, March, Waag, and the Theiss, which drains nearly half of Hungary; the Vistula, with its tributary, the Bug; the Elbe, with the Moldau and Eger; the Dniester and Adige.

The climate of Austria varies much on account of the extent and diversity of the surface.

Cities.—The most important cities are the capital, Vienna, and seven other towns above 100,000—Budapest, Prague, Trieste, Lemberg, Gratz, Brünn and Szegedin. Thirteen others have above 50,000.

People.—None of the European states except Russia exhibits such a diversity of race and language as the Austrian empire.

The Slavs—who differ greatly, however, among themselves in language and civilization—amount to 46 per cent of the total population, and form the great mass of the population of Bohemia, Moravia, Carniola, Galicia, Dalmatia, Croatia, Slavonia, northern Hungary, and half the population of Silesia and Bukowina.

The Germans form almost the sole population of Austria, Salzburg, the greatest portion of Styria and Carinthia, almost the whole of Tyrol and Vorarlberg, large portions of Bohemia and Moravia, the whole of West Silesia, etc.; and they are also numerous in Hungary and Transylvania.

The Magyars, or Hungarians, form nearly half of the inhabitants of the kingdom of Hungary and the connected provinces.

Of the Italic or western Romanic stock there are about 750,000, and in the southeast about 3,000,000 of the Roumanian or eastern Romanic stock. The number of Jews is above 2,000,000; and there are other races, such as the gypsies (150,000), who are most numerous in Hungary and Transylvania, and the Albanians in Dalmatia and the adjacent parts.

Belgium is one of the smaller European states, and consists of the southern portion of the former kingdom of the Netherlands, lying between France and Holland, the North Sea and Rhenish Prussia. Its greatest length from northwest to southeast is 173 miles; and its greatest breadth from north to south 105 miles. There are nine provinces—Antwerp, West Flanders, East Flanders, Hainault Liége, Brabant, Limburg, Luxemburg, and Namur, of which Luxemburg is the largest and Limburg the smallest.

Surface.—It is, on the whole, a level, and even low-lying country; diversified, however, by hilly districts. In the southeast, a western branch of the Ardennes highlands separates the basin of the Maas from that of the Moselle. The unfertile Campine, composed of marshes and barren heaths, extends along the Dutch frontier. In Flanders dikes have been raised to check the encroachments of the sea.

Rivers.—The abundant water-system of Belgium is chiefly supplied by the great navigable rivers Scheldt and Maas, both of which rise in France, and have their mouths in Holland. These rivers have numerous and important tributaries, and there are some forty canals.

Cities.—Brussels, the capital, is, with its suburbs, the largest town; Antwerp is half its size; Liége and Ghent have more than 150,000 inhabitants; and there are twenty other towns with over 20,000.

People.—The population of Belgium is of partly Germanic, partly Celtic origin. The Flemings (of Teutonic stock) and Walloons (Celtic in origin) speak each their own dialects of Dutch and French; there are also numbers of Germans, Dutch, and French. East and West Flanders, Antwerp, and Limburg are almost wholly Flemish; and Brabant mainly so. The French language has gained the ascendency in educated society and in the offices of the government; but the Flemish dialect prevails numerically in the proportion of nine to eight.

Bolivia is situated on the west side of South America, and formed till 1825 part of the vice royalty of Buenos Ayres. It is inclosed by Peru, Brazil, Paraguay, the Argentine republic, and Chili. Bolivia lost its coast provinces to Chili through the war carried on by Bolivia and Peru against Chili in 1879-83.

Surface.—Bolivia contains the greater part of the loftiest and most mountainous district of America, as comprising a section of the Andes system at its broadest extension. The lofty plateau of Oruro, with an average height of 13,000 feet, and about 150 miles broad, is inclosed between the Andes proper (now the western boundary of Bolivia), and the Cordillera Real, to the east. There are also intermediate ranges and isolated groups; of the volcanoes, all the western region, Sahama, Illampu, and Illimani, are over 21,000 feet high.

The great plateau falls into two parts, of which the northern is the more inhabited, as containing the lake of Titicaca and many well-watered valleys around it. The southern and lower table-land is chiefly a desert.

The Cordillera Real system descends abruptly, on the north, to the plain of the Amazon: but its eastern edge is a series of terraces, sinking gently to the plains of eastern Bolivia, which in the north belong to the Amazon basin, and in the south to the pampas of the Plata.

Climate and Vegetation.—Although situated entirely within the tropics, Bolivia, from its varied elevation, possesses a wide range of climate and vegetation. In the *punas* (over 11,000 feet high) the climate is cold and dry, and the vegetation scanty. The valleys of the eastern terraces, between 9,500 and 11,000 feet, have a temperate climate, and wheat and corn are produced; in those between 5,000 and 9,500 feet, tropical fruits flourish.

East of the inner cordillera lie the plains under the 5,000-foot limit. This district with its numerous streams, its luxuriant tropical vegetation, its rich forests of valuable trees in the north, and its immense open

savannas in the south, surpasses most countries of South America in fertility and resources.

Lakes.—The waters of Lake Titicaca are conveyed to Lake Aullagas by the Desaguadero. The latter lake (which is salt) has only an insignificant outlet.

People.—The population of Bolivia is a mixture of halfcaste Spaniards and Indians, and a few negroes. The Indians are partly civilized (Quichuas and Aymáras), partly semicivilized (Chiquitos and Moxos), and partly wild.

Brazil, United States of, occupies nearly half of the continent of South America. Greatest length, east to west, 2,630 miles; greatest length, north to south, 2,540 miles; with an area about one-sixth smaller than Europe. It is bounded southeast east, and northeast by the Atlantic Ocean, north by French, Dutch, and British Guiana, and Venezuela; west and southwest by Ecuador, Peru, Bolivia, Paraguay, the Argentine republic, and the republic of Uruguay. Brazil is divided into a federal district, twenty states, many of them larger than Great Britain, and a territory.

Surface.—There are three regions—1. The Brazilian highlands in the southwest, rising boldly from the coast, and culminating in the Itatiayu, 8,200 feet. The western slopes well wooded; in the interior extensive campos. 2. The selvas or forests of the Amazonas in the northwest. 3. The lowlands on the upper Paraguay and the uplands region of Matto Grosso in the west.

Rivers.—Brazil possesses three great river-systems—the Amazon, La Plata, and San Francisco. The Amazon and its tributaries drain fully a half of the country. To the east of the Madeira these tributaries are table-land rivers, broken by rapids and freely navigable for comparatively short distances. West of the Madeira they are lowland rivers, sluggish, bordered by extensive flood-plains, and afford free navigation for long distances.

The La Plata system drains nearly one-fifth of the country through its three branches—the Paraguay, Paraná, and Uruguay. The first of these is a lowland river, freely navigable for a long distance, while the other two are table-land rivers, full of obstructions, and without free outlets for their upper-level navigation.

The San Francisco is a table-land river, flowing northeast between the Goyaz and Maritime mountains, and then, breaking through the latter, southeast to the Atlantic. It is not freely navigable because of the Paulo Affonso falls.

The other coast rivers are generally short.

Climate.—The climate of Brazil varies greatly—the lowlands of the Amazon and a great part of the coast being hot, humid, and unhealthy, while the table-lands and some districts of the coast swept by the trade winds are temperate and healthy.

Vegetable and Animal Life.—The vegetation of Brazil is luxuriant and varied. The vast forests of the Amazon contain hundreds of species of trees, draped and festooned by climbing plants, lianas, orchids, etc. Rosewood, Brazil-wood, and others supply valuable timber; while tropical fruits are abundant.

The number of species of animals is also very large, but the individuals in each are comparatively few. Beasts of prey are the jaguar, puma, tiger-cat and ocelot; the other animals include the monkey, tapir, capybara, peccary, ant-eater, sloth, and boa-constrictor. Alligators, turtles, porpoises, and manatees swarm in the Amazon; and among birds the parrots and hummingbirds are especially numerous.

Cities.—The chief cities above 75,000 are Rio de Janeiro, Bahia, Pernambuco (or Recife) Sao Paulo, Para, and Porto Alegre.

People.—The population of Brazil consists of whites, Indians, negroes, and people of mixed blood. The native Brazilians, mostly descendants of the Portuguese settlers, but often with a mixture of Indian or African blood, are said to be greatly wanting in energy. The white population, which is, perhaps, a third of the whole, has in recent years been increased by Italian, Portuguese, and German immigration.

The negroes are over 2,000,000 in number, and till 1888 were partly slaves. Of the Indians some are semicivilized, but others (estimated at 600,000) roam about in a wild state, and are divided into a great many tribes, speaking different languages.

The state language is Portuguese.

Bulgaria is situated in the Balkan peninsula, between the Danube and the Balkans. It was created by the treaty of Berlin in 1878, and since 1885 eastern Roumelia, lying to the south, has been practically incorporated with it.

Surface and Drainage.—The physical aspects of eastern Roumelia are varied, the surface in the west being broken up by the offshoots of the Albanian ranges, and in the north and northeast by the Balkans and their spurs. The north of Bulgaria is a fertile plain and hilly country; the south is wooded and mountainous. A fine waterway on the northern boundary affords an outlet to the Black Sea.

Cities.—Sofia is the capital, the other principal towns being Varna, Shumla, Rustchuk, Widin, Razgrad, Sistova, Tirnova, and Plevna; Philippopolis is the chief port.

People.—Over three-fourths are Bulgarians, 530,000 Turks, 90,000 gypsies, 72,000 Roumanians, 70,000 Greeks, and 34,000 Jews.

Canada.—The Dominion of Canada consists of the upper portion of the North American continent except part of Labrador, which belongs to Newfoundland, and Alaska, which belongs to the United States. It includes the various provinces of North America formerly known as Upper and Lower Canada (now Ontario and Quebec respectively), New Brunswick, Nova Scotia, Prince Edward Island, British Columbia, and the territories of the Hudson Bay company, now styled Manitoba, Saskatchewan, Alberta, the Northwest territories, and the Yukon territory.

Surface.—The most striking physical features of Canada are the Rocky mountains, the Laurentian range (which forms the watershed between Hudson Bay and the St. Lawrence, and varies in height from 1,000 to 3,000 feet), and the chain of immense fresh-water lakes. The eastern portions of Canada are generally well timbered, as are also British Columbia and the Northwest territories north of the Saskatchewan. Westward of the Red river, between the 49th and 55th parallels of latitude, there is an immense fertile plain, suitable for general agriculture and grazing (the eastern end being about 800 feet, and the western about 3,000 feet above the level of the sea), extending nearly to the Rocky mountains. This range consists of triple chains with valleys between; the most easterly has the greatest elevation near the 52d parallel, the highest peaks being Mount Brown (16,000 feet), Mount Murchison (15,789 feet), and Mount Hooker (15,700 feet). The average height of the chain is from 7,000 to 8,000 feet.

Rivers and Lakes.—Canada is well watered, the map presenting a network of lakes and rivers. The system of the St. Lawrence alone, with the great lakes Superior, Huron, Michigan, Erie, and Ontario, drains an area in Canada of 330,000 square miles. With their outlet the lakes form the greatest fresh-water way in the world. Other important lakes are Winnipeg, Winnipegosis, Manitoba, Lake of the Woods, Great Slave, Great Bear, and Athabasca.

Other rivers are the Saskatchewan and the Winnipeg, flowing into Lake Winnipeg, and the Nelson, flowing from it into Hudson bay; the Assiniboine and the Red river, which flow into Lake Winnipeg; the Albany and the Churchill, emptying into Hudson bay; the Athabasca and the Peace rivers, flowing into Lake Athabasca, and the Slave river, from it into Great Slave lake; the Mackenzie, fed from both the Great Slave and the Great Bear lakes, and emptying into the Arctic Ocean; the Fraser and Thompson, in British Columbia, emptying into the Pacific; the Ottawa and the Saguenay, emptying into the St. Lawrence; and the St. John, in New Brunswick, which it partly separates from the state of Maine.

Climate.—The cold in winter and the heat in summer are frequently extreme, but the climate is a healthy one. The winter may be said to continue from the middle of November to the end of March, or about four and a half months. British Columbia probably possesses the finest climate in North America.

Cities.—The chief towns are Montreal, Toronto, Quebec, Ottawa, (capital of the Dominion), Hamilton, Winnipeg, Halifax, and St. John.

People.—The nationality of the inhabitants is varied. Ontario is settled principally by emigrants from Great Britain and their descendants, with considerable numbers of Germans and Americans. In the province of Quebec the people are mostly French in origin, speech, and customs, being mainly descendants of the French colonists who inhabited the region before it became British. There are, besides, the Indian tribes and the Eskimo, the latter in the extreme north. In the Dominion, Quebec, and Manitoba parliaments, members may address the house in either language. The French spoken by the *habitants*, as the French-Canadians are called, is a patois which in many respects resembles the French of the 17th century more closely than the French of modern Paris.

Ontario (formerly called Upper Canada), area, 260,862 square miles; population 2,519,912 extends along the north shores of the River St. Lawrence and the great lakes, and is important as containing the Dominion capital, Ottawa.

Quebec (formerly called Lower Canada) lies eastward of Ontario, occupying both banks of the St. Lawrence.

Nova Scotia, a province of the Dominion, is a peninsula, and is connected with New Brunswick by a low fertile isthmus about thirteen miles wide.

New Brunswick is situated in the eastern division of the continent of North America.

Manitoba was formerly known as the Red River Settlement, and entered the dominion in 1870. It takes its name from Lake Manitoba, which is situated 60 miles southwest of Lake Winnipeg.

British Columbia, Canada's maritime province on the Pacific, extends from the United States boundary to 60° north latitude, and is bounded on the east by the province of Alberta.

Prince Edward Island lies in St. Lawrence gulf, north of Nova Scotia and between New Brunswick and Cape Breton.

Saskatchewan, a province proclaimed Sept. 1st, 1905, was until that year a part of the Northwest territories. It comprises the eastern half of Athabasca and the greater part of the old districts of Assiniboia and Saskatchewan.

Alberta, a new province proclaimed Sept. 1st, 1905, was carved out of the Northwest territories. It includes the former district of Alberta, the western half of Athabasca, and a strip of Assiniboia and Saskatchewan.

The Northwest Territories comprise those territories formerly known as Rupert's Land, the Northwestern Territory and the district of Keewatin (except the provinces of Manitoba, Saskatchewan and Alberta, and the Yukon territory), together with all British territories and possessions in North America and all islands adjacent to any such territories or possessions, except Newfoundland and its dependencies.

The Yukon Territory was in 1898 constituted a separate territory, and is administered by a commissioner.

Central America, a geographical division, including the stretch of territory from the Isthmus of Panama to the Isthmus of Tehuantepec, but by political arrangements the limits most generally assigned to it include the five republican states of Guatemala, Honduras, San Salvador, Nicaragua, and Costa Rica with British Honduras and the Mosquito coast. It thus has Mexico on the northwest, Panama on the southeast, and the Pacific Ocean and Caribbean Sea on either side. Its entire length is about 800 miles, with a breadth varying from between 20 and 30 to 350 miles. It is generally mountainous, contains a number of active volcanoes, and on the whole is a rich and fertile, but almost totally undeveloped region.

Costa Rica, the most southern state of the republics of Central America; bounded north by Nicaragua, east and north by the Caribbean Sea; east and south by Colombia; and south and west by the Pacific.

Surface.—The country is intersected diagonally by the primary range or cordillera of the isthmus, which throws off numerous spurs on either side. The principal range contains several lofty emi-

nences (the highest 11,740 feet) and volcanoes, both active and extinct or dormant.

Cities.—The capital is San José, and the two established ports are Punta Arenas, on the Pacific side, and Porto Limon, on the Caribbean Sea. The other towns are Cartago, Alajuela, and Heredia.

People.—The inhabitants are chiefly descendants of Spaniards from Galicia. Some negroes and half-breeds dwell on the coast lands, and there are about 5,000 civilized and 3,000 uncivilized Indians.

Guatemala. A republic of Central America, bounded by Mexico, Belize, the Gulf of Honduras, Honduras, San Salvador, and the Pacific.

Surface.—The greater part of Guatemala is mountainous, the highlands having a mean elevation of 7,000 feet above the sea; but the surface presents great variety, with extensive plateaus, terraces, and upland valleys—the last notable for their beauty, fertility, and favorable climate. Of the volcanoes, several are active, the most noted is Tierra del Fuego (12,075 feet). Earthquakes are frequent; sulphur and other hot springs are numerous.

Rivers.—The state is well watered by numerous streams, none of much importance. There are several lakes, the most important being Dulce, through which a great part of the foreign trade of the state is carried on; Amatitlan, Atitlan, and Peten.

Climate.—The climate, except in the low-lying districts where the temperature ranges from 70° to 90°, may be described as perpetual spring, and is generally healthy, but the hot coast lands on the Pacific are liable to yellow fever.

Vegetable and Animal Life.—The forests contain over a hundred kinds of timber trees. Maize, haricot beans, peas, potatoes, wheat and rice grow well in various districts. Other products are coffee (the chief export), sugar, cacao, india-rubber, tobacco, cotton, hemp, sarsaparilla, and many medicinal plants, bananas, and other fruits.

The fauna includes the jaguar, puma, ocelot, coyote, red deer, tapir, peccary, armadillo, several monkeys, iguanas, turtles, and snakes. The birds are of great variety and beauty; the national emblem is the superbly colored quetzal.

Cities.—The capital is Guatemala la Nueva (New Guatemala). The chief port is San José, on the Pacific; Champerico, on the Pacific, and Livingston, in the Bay of Honduras, are the other ports.

People.—About a third of the people are said to be of European descent, and the rest aborigines (Maya-Quichés) and mixed races.

Honduras, the middle state of Central America, is bounded on the north and west by Yucatan; west and south by Guatemala; and east by the Bay of Honduras.

Surface.—Except for a narrow strip of swampland along either coast, the country is a table-land, its series of elevated plateaus broken by broad and fertile plains and valleys, or rising to mountain ridges that culminate in the Montaña de Selaque (10,120 feet). The Cordilleras proper traverse the country irregularly in a northwest and southeast direction.

Rivers and Climate.—Honduras is watered by innumerable (seldom navigable) streams; the Wanks or Segovia, part the boundary with Nicaragua, has a length of 350 miles. Roatan and the other fertile bay islands, off the north coast, belong to Honduras. The climate is hot on the coast, where also fever prevails; but the highlands are cool, and frost is not unknown. The flora and fauna are like those of Guatemala.

Cities.—The capital is Tegucigalpa. The ports are Amapala, on the Bay of Fonseca, Puerto Cortez or Puerto Caballos, Omoa, and Truxillo.

People.—The whites are very few in number, the Indians (including Caribs), negroes, and mixed races including all but some 6,000 or 7,000 of the population.

Nicaragua, is the largest State of Central America, with a long seaboard on both the Atlantic and the Caribbean Sea, and having on the north and northeast the state of Honduras, and on the south Costa Rica.

Surface.—The state is traversed by the Cordillera of Central America, between which and the Pacific coast there is a remarkable depression extending for 300 miles and containing Lake Nicaragua and the smaller Lake Managua at no great elevation above the sea. Along the coast is a chain of volcanic cones, rising in some cases to 7,000 feet. From the Cordillera the surface slopes to the Caribbean coast (Mosquito territory), which is low and swampy.

Rivers.—Flowing eastward are the Coco or Wanks, the northern boundary; the San Juan, which drains Lake Nicaragua and separates Nicaragua from Costa Rica; the Bluefields and the Rio Grande. The low coast belt, called the Mosquito territory, is lined with salt lagoons.

Climate.—The climate is on the whole healthy, especially in the interior and mountainous parts.

Vegetation.—The forests include mahogany, rosewood, logwood, fustic, sandalwood, india-rubber, medicinal plants, gums, and dye-woods. The rich soil of the western region yields maize (the staple food), coffee, cocoa, sugar, cotton, rice, tobacco, indigo, and a great variety of tropical fruits.

People.—Of the population of 600,000, one-third are Indians, and one-half mulattoes and negroes.

Cities.—The western districts contain the chief seats of population; there are the towns Managua, the capital; Leon, Granada, Chinandega, and Rivas.

Salvador, the smallest but by far the most thickly populated of the Central American Republics, consists of a strip of territory stretching between Honduras and the Pacific. It is 140 miles in length by about 60 in average breadth.

Surface.—Except for a narrow seaboard of low alluvial plains, Salvador consists of a plateau, some 2,000 feet above the sea, furrowed by river valleys and broken by numerous volcanic cones, and bounded on the north by the Central American Cordillera. Of the volcanoes many are extinct; earthquakes are frequent.

Rivers and Climate.—The Lempa (140 miles) receives the surplus waters of the Laguna de Cuija, and the San Miguel drains the southeast portion of the republic. The climate is equable, very healthy in the interior, and even along the coast less unwholesome than on the Atlantic side of Central America. The land is well watered, and the soil exceedingly fertile.

Cities.—The ports are Acajutla, La Libertad, and La Union. San Salvador is the capital, other towns being Santa Ana and San Miguel.

People.—The population consists mostly of (Aztec) Indians and mixed races; the whites number 20,000. The Indians almost all speak Spanish.

Chili or **Chile,** a country of South America, extends along the Pacific coast from latitude 18 degrees south nearly to Cape Horn, and including Chiloé and many other islands and part of Tierra del Fuego. It is bounded on the north by Peru (the river Sama being the boundary), on the northeast and east by Bolivia and the Argentine republic, from which it is separated by the chief range of the Cordilleras. Its length from north to south is about 2,400 miles; its breadth, on an average, 120 miles. It is divided into a number of provinces and territories.

Surface.—The surface is greatly diversified, but rises in elevation as it recedes from the coast and approaches the Andes, along the watershed of which a great part of the boundary runs. Some of the summits here rise to 20,000 feet or more, but the elevation decreases toward the south. Chiloé and numerous other islands fringe the coast in the south. Earthquakes are common.

In the Chilian Andes there are twenty volcanoes, at least three of which (Antuco, Villarica, and Osorno) are still active.

Climate.—The climate is remarkably salubrious. In the northern provinces it rarely rains—in some parts perhaps never; in the central parts rain is sufficiently abundant, while in the extreme south there is even an excess of moisture.

Rivers.—The rivers are numerous, but small, and have generally rapid currents; the principal are the Biobio, the Valdivia, Lontue, Maule, Itata, and Chuapa (or Illapel).

Cities.—The chief are Santiago, the capital; Valparaiso, Talca, Concepcion, Iquique, and Chillan: the last four range from 50,000 to 30,000.

People.—The natives of Chili are a mixture of Spanish with the Araucanian Indians. In the upper classes the race has been kept more purely Spanish than in any other South American country. The language spoken in Chili is Spanish, but with many local words of Indian origin.

China, Manchuria, and its dependencies of Mongolia, Ili, and Tibet, constitute the Chinese empire, embracing a vast territory in Eastern Asia only inferior in extent to the total dominions of Great Britain and Russia. The dependencies are not colonies but subject territories. The chief facts concerning the latter follow:

Manchuria, 362,510 square miles, population 7,400,000, the original home of the reigning dynasty, extends from the Gulf of Liautung to the Helung-Kiang or Amur river. Its southern and central portions are fruitful, while coal, gold and silver, and other metals are found in the hills. Manchus and other Tungus still occupy the greater part of the country, but they are outnumbered by Chinese immigrants, who are gradually taking possession of all tracts fit for cultivation.

Three provinces: (*a*) Shingking, in the south (54,780 square miles, population 5,000,000), capital Mukden, 250,000; treaty port Niuchwang, 60,000; Port Arthur (now Japanese): (*b*) Kirin, (105,020 square miles, population 2,000,000), capital Kirin 200,000; (*c*) Helung Kiang (202,710 square miles, population 500,000) capital Tsitsikar, 60,000.

Mongolia, 1,093,100 square miles, population 1,850,000, mainly Buddhist Mongols, but also Calmucks and other Tatar tribes. It is a pastoral region, the desert of Gobi being its great feature. Urga, 70,000, capital, 3,780 feet above the sea.

Sinkiang, 550,590 square miles, population 1,000,000, a province of China proper, includes the basin of the Tarim, between the Thian Shan, or Celestial mountains, and the Kwen Lun (Chinese Turkestan), andt he basin of the Ili, to the north of the former. Most of the country is barren desert. Population much mixed, but the Turkish element and Mohammedanism predominate. Capital, Urumtsi, 25,000; Yarkand (4,000 feet above sea-level), 60,000; Kashgar, 50,000.

KukuNor, a pastoral highland region, named after the lake which occupies its center (10,400 feet), 274,900 square miles, population 150,000, Tangut Mongols.

Tibet, 487,320 square miles, population 1,500,000, the loftiest table land in the world, with mountains covered with eternal snow. The population is concentrated in the valley of the Sangpo or Upper Brahmaputra. The country is ruled by the Dalai Lama, an incarnation of Buddha, and native officials acting under the advice of a Chinese resident. Capital; Lhasa (11,900 feet), 20,000, nearly one half of whom are priests.

Surface.—China proper may be described as sloping from the mountainous regions of Tibet toward the shores of the Pacific on the east and south. The most extensive mountain range is the Nanling (or Southern range), a far-extending spur of the Himalayas. Commencing in Yunnan, it bounds with a continuous barrier (penetrated by only a few difficult passes) Kwangsi, Kwangtung, and Fukien on the north, and, passing through Chekiang, reaches the sea at Ningpo. North of this long range, and west of the 113th meridian, on to the borders of Tibet, the country is mountainous, while to the east and from the great wall on the north, to the Poyang lake in the south, there is the *Great Plain*, comprising the greater part of the provinces of Chih-li and Shantung, Honan, Anhui, and Kiangsu.

Rivers.—The rivers of China—called for the most part *ho* in the north, and *chiang* (*kiang*) in the south, are one of its most distinguishing features. Two of them stand out conspicuous among the great rivers of the world—the Ho, Hoang-Ho, or Yellow river, and the Kiang, or Yangtse Kiang. They rise not far from each other among the mountains of Tibet. The Ho pursues a tortuous course seaward through North China; the Kiang or Yangtse through central China. The terrible calamities caused by the inundations of the Hoang-Ho have procured for it the name of China's Sorrow. So recently as 1887 it burst its southern bank near Kwangchau, and poured its mighty flood, with hideous devastation and the destruction of millions of lives, into the populous province of Honan. The Ho is not much under the Chiang in length—somewhat near 3,000 miles. The Grand Canal, when in good order, afforded water communication from Peking to Hangchau in Chekiang, a distance of more than 600 miles. The lakes are many, but not on so great a scale as the rivers.

Animal Life.—The animals are identical with or differ but little from those of Europe. In the south and southwest the tiger, the rhinoceros, and elephant are found; bears are common in many parts; other carnivora are the wild-cat, badger, lynx, marten, etc. Camels and elephants are used in a domestic state, but the chief domesticated animal is the buffalo. The horses are of a poor breed. Among birds the most beautiful are the gold and silver pheasants. Fish swarm in all inland waters as well as on the coast, the natural supply being immensely increased by artificial means.

Vegetable Life.—As regards the flora of China it is tropical in the south (coco and sago palms, banana, pandanus, etc.), subtropical farther north, and still farther north prevail a number of plants and trees identical with or closely akin to those of middle Europe. Flowering plants, shrubs, and trees are a

exceedingly abundant as to form a feature. The bamboo, from the immense number of uses to which it is put, is one of the most valuable trees. Oaks, the chestnut, hazel, pines, yew, walnut, etc., are among forest trees. Wax and camphor trees abound. Azaleas are exceedingly numerous; other flowering plants are the camellia, rose, passion-flower, cactus, lagerstroemia, etc. Fruits are abundant and varied.

limate.—The greater part of China belongs to the temperate zone, but it has what is called an excessive climate. At Peking in summer the heat ranges from 90° to 100° in the shade, while the winter is so cold that the rivers are usually frozen from December to March. At Shanghai, the maximum temperature reaches 100°, and the minimum falls at least to 20° below freezing-point. In the south the climate is of a tropical character, the summer heat rising to 120°. Here the southwest and northeast monsoons blow with great regularity.

ities.—The capital of China is Peking. Other chief towns are Siangtan; Singan; Canton; Hankau; Tientsin; Shanghai; Fuchau; Chungking; Suchau; Hangchau; Nanking; and Ningpo.

eople.—The Chinese people are the result of a fusion of various invading Mongolian tribes, from B. C. 3000 to 700 A. D., with the aborigines of various stocks; the Manchu dynasty has ruled since 1644. Three types may still be recognized in China—a northern Manchu-Korean, a central and nearly pure Chinese, and a southern with Malayan and other admixtures.

olombia.—A republic occupying the northwest corner of the South American continent, and till 1903, when Panama became independent, including also the Isthmus of Panama.

urface.—The surface of the country is extremely varied, with lofty mountains in the west, and vast plains in the east scarcely above the level of the sea. From the central Cordillera descend the two principal rivers of Colombia, the Magdalena and its tributary the Cauca, which flow north into the Caribbean Sea, besides several affluents of the Amazon in the east, and the Patia, which forces its way to the Pacific through a gorge between cliffs 10,000 to 12,000 feet high.

The eastern Cordillera, by far the largest chain, consists of a series of extensive tablelands, cool and healthy, and is the most thickly populated portion of the republic; on one of its plateaus, at an elevation of 8,694 feet, stands the capital, Bogotá. Eastward from this Cordillera stretch vast *llanos* or plains.

ivers.—The chief rivers are the various tributaries of the Orinoco. Other rivers are the San Juan (navigable 150 miles), on the Pacific coast, and the Atrato and Zulia, flowing north.

limate.—The climate is naturally as varied as the surface of the country, but over a great part of the republic is very hot. At Cartagena, on the Caribbean Sea, and on the Pacific coast, yellow fever is endemic at some places; while in the elevated country, as the plain of Bogotá, 8,000 feet above the sea, the climate is perfectly salubrious, and the temperature seems that of eternal spring.

egetable and Animal Life.—The flora is rich and luxuriant. A great part of the country is still covered with virgin forests, which yield excellent building-wood, Peruvian bark, caoutchouc, vanilla, etc.

The fauna includes the jaguar, puma, tapir, armadillo, sloth, various species of deer, and the gigantic condor.

ities.—The chief towns are Bogotá, the capital, Medellin, Barranquilla, Cartagena, and Bucaramanga.

eople.—The population is mainly descended from the numerous Indian tribes, partly Hispanicized in language and habits. The chief aborigines of the country, the Chibchas or Muyscas, inhabiting the plateau of Bogotá, were a comparatively civilized race at the discovery of the new world; the uncivilized Indians are now mostly confined to the eastern plains, the northern portion of Magdalena, and the district of Darien and the Atrato. The pure whites form about a fifth of the entire population, and the Indian half-breeds more than half; mulattoes and *zambos*, resulting respectively from the union of negroes with whites and Indians, exceed a sixth of the whole.

Cuba, the most westerly and largest of the West Indian islands, since 1902 an independent republic, stretches in the form of a long narrow crescent, convex on the north side, at the entrance of the Gulf of Mexico, which it divides into two channels—the northwest, 124 miles wide, and the southwest, 98 miles at its narrowest part. Cuba is 759 miles long from east to west, with a breadth varying from 27 miles to 90 miles, and a coast line of 1,976 miles.

Rivers.—The rivers, running north and south are navigable for only a few miles by small boats, but are very serviceable for irrigation.

Climate and Vegetation.—The climate, more temperate than in the other West Indian islands, is healthy in the elevated interior, but the coasts are the haunt of fever and ague. No month of the year is free from rain, the greatest rainfall being in May, June, and July. Earthquakes are frequent.

The soil is eminently fertile, a large part still covered with virgin forest containing magnificent mahogany, cedar, etc.

Cities.—The chief commercial ports and harbors are, on the north, Havana (the capital), Matanzas, Cardenas, Sagua, Remedios; on the south, Santiago, Trinidad, Cienfuegos, and Guantanamo.

People.—The population of Cuba may be classified into the following groups; white Cubans (58 per cent), black Cubans and colored Cubans (32 per cent), Spaniards and foreigners (9 per cent). The white Cubans are increasing at a rapid rate, whereas the blacks are barely holding their own. The former comprise the officials and the owners of the soil; the black and colored form the laboring classes; the Spaniards, the commercial class. The aboriginal race is extinct.

Denmark, the smallest of the three Scandinavian kingdoms, consists of the peninsula of Jutland and a group of islands in the Baltic, and is bounded by the Skager-Rak, the Cattegat, the Sound, the Baltic, the Little Belt, Sleswick, and the North Sea.

Surface.—Except in Bornholm, the surface of Denmark is very similar in every part of the kingdom, and is uniformly low, its highest point (in southeast Jutland) being only 564 feet above sea-level. The coast is generally flat, skirted by sand-dunes and shallow lagoons, especially along the west side. Both the continental portion and the islands are penetrated deeply by numerous fiords, the largest being Limfjord, which intersects Jutland, and has insulated the northern extremity of the peninsula since 1825, when it broke through the narrow isthmus which had separated it from the North Sea.

Rivers.—Denmark has numerous streams but no large rivers; the principal is the Guden, which flows northeast through Jutland into the Cattegat. It is navigable for part of its course. Less important streams are the Holm, the Lonborg, and the Stor Aa. All the others are insignificant brooks and streamlets.

The lakes are very numerous but not large, none exceeding 5½ miles in length by about 1½ miles broad. There are numerous winding inlets of the sea that penetrate far into the land. The largest of these, the Limfiord in Jutland, entering from the Cattegat by a narrow channel, winds its way through to the North Sea, thus making northern Jutland really an island. In this fiord, which widens out greatly in the interior and gives off various minor fiords, there are one large and various small islands.

Climate.—The climate is milder, and the air more humid than in the more southern but continental Germany; it is not unhealthy, except in the low-lying islands, such as Laaland, where the short and sudden heat of the summer occasions fevers.

Vegetation.—The center and west of Jutland is nearly bare of wood, but in the other parts of the peninsula the forests, especially of beech, cover about 215,000 acres, and in the islands over 291,000 acres.

Cities.—Copenhagen is the capital; other chief towns are Odense, Aarhuus, Aalborg, Randers and Horsens.

People.—The population of Denmark is composed almost exclusively of Danes, with a few thousand Jews and others. The Danes have regular features, fair or brownish hair, and blue eyes. They still maintain their reputation for seafaring skill and hospitable customs.

Dominican Republic, [or Santo (commonly San) Domingo], a state formed of the eastern portion of Hayti.

Surface and Vegetation.—The country is mountainous, being traversed longitudinally by northern, central, and southern ridges, terminating in headlands on either coast; but between these ranges are wide and fertile plains. The highest peak is Loma Tina.

The mountains are clothed with forests of pine and oak, and the island is rich in mahogany, satinwood, rosewood, and other valuable timbers. Cotton, rice, maize, cocoa, ginger, arrowroot, yams, tobacco, and numerous fruits are indigenous.

Climate.—The climate is hot and moist in the lowlands, the temperature at Port au Prince ranging from 67° to 104° F.; the mean range in the highlands is from 60° to 76° F. Earthquakes are frequent, and occasional hurricanes visit the island.

People.—The population is mainly of mixed race descended from the original Spanish inhabitants and the aborigines. Spanish is the prevailing language.

Ecuador, a republic of South America, so named from its position on the equator, is bounded on the west by the Pacific, and is inserted like a wedge between Colombia and Peru. But its only certain limits are those defined by the ocean, where it has a seaboard of some 400 miles; most of the frontier east of the Andes has never been determined.

Surface.—Ecuador consists of three divisions—the lowlands west of the Andes, the mountainous plateau of the interior, and the less elevated forest country to the east. Besides the main range of the Andes, forming the backbone of the country, there is an outer range, with peaks rising to 15,000 feet; from the cordillera proper numerous long spurs, attaining a height of 14,000 feet, are thrown out toward the east, between which rise great affluents of the Amazon, while the coast range possesses only short and very precipitous spurs.

The principal mountains of Ecuador either are or have been volcanoes. Tunguragua (16,690 feet) broke out in 1887; Pichincha is by no means extinct; Cotopaxi and Sangai (17,459) are constantly active.

Rivers.—Of the coast streams the principal are the Guayaquil river, and the Rio Esmeraldas; east of the Andes the chief rivers are the Napo and its affluents, flowing into the Maranon.

Animal Life.—The country is comparatively poor in mammalia, although various kinds of deer as well as tapirs and peccaries are found in the forests. Parrots and humming birds are also numerous, but perhaps the most remarkable of the birds in Ecuador is the condor, which dwells on the slopes of the Andes. Reptiles, including serpents, are numerous.

Vegetation and Climate.—The forests yield cinchona bark, caoutchouc, sarsaparilla, vegetable ivory, etc. The climate on the plains, both in the east and the west, is moist, hot, and unhealthy. In the higher regions the climate is rough and cold, but in great part the elevated valleys, as that of Quito, enjoy a delightful climate.

Cities.—The principal cities are Quito (the capital), Guayaquil (the chief port), Cuenca, Riobamba, Latacunga, and Ambato.

People.—Of the present population, the aboriginal red race form more than half; the rest are negroes, mulattoes, mestizoes (a degenerate breed of mixed negro and Indian blood), and Spanish creoles or whites. The latter are the chief possessors of the land, but are deficient in energy.

France, a maritime country in the west of Europe, forming one of its most extensive, most populous, and most influential states. It is bounded on the north by the Straits of Dover

and the English channel; west by the Atlantic (Bay of Biscay); south by Spain and the Mediterranean Sea; east and northeast by Italy, Switzerland, Germany, and Belgium. Its greatest length from north to south is 600 miles, and its greatest breadth 547 miles.

Divisions.—France, formerly divided into some 30 provinces (Normandy, Brittany, Champagne, Burgundy, Auvergne, Languedoc, Provence, etc.—see the separate articles), was at the revolution redistributed into departments named generally after the rivers. These departments, mostly between 1,500 and 2,500 square miles in area, are, including Corsica and the territory of Belfort, eighty-seven in number.

Possessions.—The possessions of France outside of Europe, both colonies and protected countries, cover an aggregate of 4,072,076 square miles, and have a population of more than 51,000,000 inhabitants. Of them Algeria is rapidly becoming a part of France proper, and is considered as such for nearly all administrative purposes. The large territory of Tunis has since 1881 been under French protection. By a treaty signed in 1885 Madagascar was placed under the protection of France, which also now holds a large area in West Africa, in Guinea, the Ivory coast, and on the Gaboon and Kongo. In Asia, Tonkin was annexed to France in 1884, and Annam placed under its protectorate, and portions of Siam acquired in 1893. The details of the French colonies and protectorates are given in the subjoined table:

	Area square miles	Pop.
In Asia—		
French India	196	273,000
Cochin-China	22,000	2,968,600
Tonkin and Laos	144,400	7,641,900
Annam	52,100	6,124,000
Cambodia	37,400	1,500,000
In Africa—		
Algeria	184,474	4,739,300
Tunis	51,000	1,900,000
Western Sahara	1,544,000	2,550,000
Senegal	80,000	1,800,000
Senegambia and Niger	210,000	3,000,000
French Guinea	95,000	2,200,000
Ivory Coast	116,000	2,000,000
Dahomey	60,000	1,000,000
Kongo	1,160,000	10,000,000
Somali Coast	45,000	200,000
Réunion	966	173,200
Comoro Isles	620	47,000
Mayotte	140	11,640
Madagascar	227,950	2,706,661
In America—		
Guiana	30,500	32,910
Guadeloupe, etc	688	182,110
Martinique	380	203,780
St Pierre and Miquelon	92	6,250
In Oceania—		
New Caledonia	7,650	51,410
Establishments, Oceania	1,520	29,000
Total	4,072,076	51,139,340

Surface.—The territory of France proper embodies highlands in the south and southeast only: in the south it comprises the northern slopes of the Pyrenees, and toward the southeast frontier part of the Alps. The remainder of the territory is nearly equally divided between extensive lowlands in the northwest and a great plateau which covers the southeastern half, but is separated from the Alps by the broad and deep valley of the Lower Rhone.

Mountains.—The interior is traversed from southwest to northeast by successive chains of mountains, commencing with the Pyrenees and including the Cevennes, the Côte d'Or, the Vosges, and others, forming the watershed, on one side of which the rivers flow west and north into the Atlantic and the English channel, on the other side east and south into the Mediterranean. At its northeastern extremity this system is met by the Alps and the Jura. A considerable portion of the western Alps belongs to southeastern France. Mt. Blanc itself (15,780 feet) is mostly within the French boundary-line. Some lofty Pyrenean peaks are also within French territory, the highest being Vignemale (10,792 feet). Near the center of France, and separate from the great watershed of the country, are several groups of volcanic mountains known by the general name of the mountains of Auvergne, the chief peaks of which are the Plomb du Cantal (5,983 feet), the Puy de Sancy (6,100 feet), and the Puy de Dôme.

Rivers.—The spurs thrown off by the great watershed divide France into seven principal river basins, six of which are on the northwestern slope and one on the southeastern. These are:

1. The basin of the Garonne and its affluents (the Ariège, Tarn, Lot, and Dordogne on the right, and the Gers on the left); with the two secondary basins of the Charente on the north, and the Adour on the south.

2. The basin of the Loire and its tributaries (Nièvre and Maine on the right, the Allier, Loiret, Cher, Indre, Vienne, and Sèvre Nantaise on the left).

3. The basin of the Seine and its tributaries (the Aude, Marne, and Oise on the right, the Yonne and Eure on the left). To the north is the secondary basin of the Somme.

4. The basin of the Meuse, with its affluent the Sambre.

5. The basin of the Escaut or Scheldt, with its affluent the Scarpe. Only the southern portion of these two basins is included within the political boundaries of France.

6. The basin which pours a number of tributaries, the principal of which is the Moselle, into the Rhine. Only a comparatively small portion of this basin also is included within the political boundaries of France.

7. The basin of the Rhone, occupying the whole of the territory which lies to the southeast of the great watershed, the tributaries being the Ain, the Saône, Ardèche, and Gard on the right, and the Isère, Drome, and Durance on the left. The secondary basins are those of the Var and the Aude. The four great rivers of France are the Loire, Seine, Rhone, and Garonne. France has in all more than 200 navigable streams, with a total navigation of about 6,000 miles.

Lakes are few, and individually very limited in extent.

Climate.—France enjoys on the whole a very fine climate; not so continental as that of central Europe, nor so maritime as that of England. If we omit the high hilly tracts of the Alps and the Pyrenees, the coldest region of France is evidently that of the high plateau, with its cold winters, though it has hot summer days. The climate of Brittany is very much like that of the southwest of England; while that of the plains on the Bay of Biscay is warm and dry, and Pau, on the slopes of the Pyrenees, has the deserved reputation of a sanitary station. The climate of Languedoc and Provence assumes to some extent an African character—a temperate winter is succeded by a burning hot summer, moderated from time to time by the *mistral*.

Cities.—More than 8,000,000 people live in the seventy-one chief cities having each more than 30,000 inhabitants. Fifteen cities have populations of more than 100,000: Paris, Marseilles, Lyons, Bordeaux, Lille, Toulouse, St. Etienne, Roubaix, Nantes, Le Havre, Rouen, Rheims, Nice, Nancy and Toulon. There are besides twenty others of over 50,000 inhabitants.

People.—The character of the French people combines the impressionability, the vivacity, the rapidity of conception, and the artistic feeling of the men of the south with the persistence, laboriousness, and rationalism of the men of the north. Their language was developed out of the *lingua Romana rustica* of the Roman conquerors, which displaced the native Celtic tongues, and was afterwards modified in vocabulary and phonetics (but not in structure) by the invading Teutonic Franks, who gave their own name both to the language and to the country. In the south the Provençal, another Romance type, is still the popular dialect. In the northwest the ancient Celtic Breton tongue survives, and in the southwest the distinct and peculiar Basque language is spoken in the department of Basses Pyrènèes. Flemish is spoken in French Flanders; the Walloons speak the own Romance dialect in the northeast of France; and German is still spoken in some districts of those parts of Alsace and Lorraine still left to France.

Germany (or the German empire) lies between the Baltic Sea, Denmark, and the North Sea on the north, and Switzerland and Austria-Hungary on the south. The greatest length, measured from near Memel in the northeast to beyond Mülhausen in the southwest, is 830 miles, and the shortest from Swinemünde at the mouth of the Oder to beyond Bautzen in the (Saxon) Lausitz, 196 miles. The states of the empire, together with their areas, and their populations in 1905, are shown in the following table:

States	Area Eng. Sq. Miles	Population
Kingdoms		
1. Prussia	134,616	37,293,3
2. Bavaria	29,292	6,524,3
3. Saxony	5,789	4,508,6
4. Württemberg	7,534	2,302,1
Grand Duchies		
5. Baden	5,823	2,010,7
6. Hesse	2,966	1,209,1
7. Mecklenburg-Schwerin	5,068	625,0
8. Saxe-Weimar	1,397	388,0
9. Mecklenburg-Strelitz	1,131	103,4
10. Oldenburg	2,482	438,8
Duchies		
11. Brunswick	1,418	485,9
12. Saxe-Meiningen	953	268,9
13. Saxe-Altenburg	511	206,5
14. Saxe-Coburg-Gotha	764	242,4
15. Anhalt	888	328,0
Principalities		
16. Schwarzburg-Sondershausen	333	85,1
17. Schwarzburg-Rudolstadt	363	96,8
18. Waldeck	433	59,1
19. Reuss-Griez	319	144,5
20. Reuss-Schleiz	122	70,6
21. Schaumburg-Lippe	131	44,9
22. Lippe-Detmold	469	145,5
Free Towns		
23. Lübeck	115	105,8
24. Bremen	99	263,4
25. Hamburg	160	874,8
Reichsland		
26. Alsace-Lorraine	5,604	1,814,5
Total	208,780	60,641,2

The following is a list of the various colonies and regions under the protection or influence of Germany, the estimates being necessarily vague:

Colonies and Dependencies	Date of Acquisition	Method of Government	Estimated Area Sq. Miles	Estimated Population
In Africa				
Togoland	1884	Imperial Governor	33,700	1,000,00
Kamerun	1884	Imperial Governor	191,130	3,000,00
German South West Africa	1884–90	Imperial Governor	322,450	120,00
German East Africa	1885–90	Imperial Governor	384,180	10,000,00
Total African Possessions	1884–90		931,460	14,120,00
In Asia				
Kiauchan Bay	1897	Imperial Governor	200*	*33,00
In the Pacific				
German New Guinea				
Kaiser Wilhelm's Land	1885–86	Imperial Governor	70,000	300,00
Bismarck Archipelago	1885		20,000	
Caroline Islands	1899			
Palau or Pelew Islands	1899		560	
Marianne Islands	1899		250	56,00
Solomon Islands	1886		4,200	
Marshall Islands, etc	1886		150	
Samoan Islands				
Savii	1899	Imperial Governor	660	37,00
Upolu	1899		340	
Total Pacific Possessions	1884–99		96,160	393,00
Total Foreign Dependencies	1884–99		1,027,820	14,546,00

*Exclusive of the bay with an area of about 200 square miles, and the neutral zone with an area of abo 2,500 square miles, and population of 1,200,000.

urface and Rivers.—The surface of Germany belongs to three drainage basins. The Danube from its source in the Black forest to the borders of Austria belongs to Germany; and through its channel the waters of the greater part of Bavaria are poured into the Black Sea. By far the greater part of the surface has a northern slope, and belongs partly to the basin of the North Sea, partly to that of the Baltic. The chief German streams flowing into the North Sea are the Rhine, with its tributaries the Neckar, Main, Lahn, Sieg, Wupper, Ruhr, and Lippe on the right, and the Ill and Moselle on the left; the Weser and the Elbe. Into the Baltic flow the Oder, Vistula, Memel, and Pregel.

The natural and artificial waterways of Germany are extensive, especially in the northern plain, and connect the rivers flowing into the Baltic and the North Sea with those flowing into the English channel and the Black Sea. The North Sea and Baltic ship canal, from Brunsbüttel at the mouth of the Elbe to Kiel (1887-95), is intended chiefly for warships.

Numerous lakes occur, but few of them are of any great size. The so-called "haffs" of the north coasts are landlocked salt-water lagoons or coast lakes. Mineral springs occur principally in Nassau, Württemberg, Baden, Bavaria, and Rhenish Prussia.

Climate.—The climate of Germany presents less diversity than a first glance at the map might lead one to infer. Though the country extends over 8½° of latitude, its mean annual temperature is remarkably uniform. This is owing mainly to the different elevations of the surface, the low plains of the north having a higher, while the hills and plateaus of the south have a lower temperature than their latitudes might seem to indicate. The mildest climate is enjoyed by the valleys of the Rhine and the Main.

Cities.—German towns are officially distinguished as large towns (with 100,000 inhabitants and upward); medium towns (20,000 to 100,000 inhabitants); small towns (5,000 to 20,000 inhabitants), and country towns (2,000 to 5,000 inhabitants). In 1905 only 1 town had over 1,000,000 inhabitants; 10 others over 250,000; 30 others over 100,000; 43 between 50,000 and 100,000; and 137 between 20,000 and 50,000. Of these the chief are Berlin (the capital of the empire), Hamburg, Munich, Dresden, Leipzig, Breslau and Cologne.

The Germans are divided into High and Low Germans; the language of the former is the cultivated language of all the German states; that of the latter, known as *Platt deutsch*, is spoken in the north and northwest.

Great Britain is so distinguished from Britannia Minor, or Brittany, in France, and was not officially so called till in 1604 James I. styled himself "king of Great Britain."

Great Britain is the largest island of Europe and is bounded by the Atlantic, the North Sea, the English channel, the Irish Sea, and St. George's channel. The most northerly point is Dunnet head, in Caithness; the most southerly, Lizard point, in Cornwall; the most easterly, Lowestoft Ness, in Suffolk; and the most westerly, Ardnamurchan point, in Argyllshire. Its greatest length is about 608 miles, and its greatest breadth (from Land's End to the east coast of Kent) about 325 miles.

THE BRITISH EMPIRE

Countries	Character of Possession	Form of Government	Executive	Area in Square Miles	How Acquired by England	Date	Population, 1911
HE UNITED KINGDOM							
NGLAND	Constitute the United Kingdom of Great Britain and Ireland.	Constitutional monarchy.	The King through the the ministry.	50,839		....	34,043,076
ALES				7,470	Conquest	1282	2,032,183
COTLAND				29,785	Union	1603	4,759,445
RELAND				32,583	Conquest	1172	4,381,951
SLANDS				302			148,934
OLONIES AND DEPENDENCIES							
UROPE—							
Gibraltar	Colony		Governor	2	Conquest	1704	23,533
Malta, etc.	Colony	Representative	Governor	122	Treaty cession	1814	215,879
SIA—							
India (including Burma)	Viceroyalty		Governor-General	1,800,258	Conquest Transfer fr. E. India Co.	Begun 1757 1858	314,955,000
Ceylon	Colony		Governor	25,365	Treaty cession	1801	4,038,456
Cyprus	Protectorate		High Commissioner	3,584	Convention with Turkey	1878	261,587
Aden and Socotra	Protectorate		Political Resident	3,070	(Aden) Conquest	1839	53,222
Straits Settlements	Colony		Governor	1,500	Treaty cession	1785-1824	620,127
Hongkong	Colony		Governor	30½	Treaty cession	1841	428,888
Labuan	Colony		Governor	31	Treaty cession	1846	8,411
British North Borneo				31,000	Cession to company	1877	204,000
FRICA—							
Union of South Africa (including Cape of Good Hope, Natal, The Transvaal, and Orange River Colony)	Dependency	Commonwealth	Governor-General	473,184	Treaty, conquest and cession	1588-1900	5,938,499
St. Helena	Colony		Governor	47	Conquest	1673	3,553
Ascension	Naval Station		British Admiralty	38	Annexation	1815	266
Mauritius, etc.	Colony	Representative	Governor	1,063	Conquest and cession	1810, 1814	373,336
British East Africa (including the Protectorate of Nyasaland, East Africa, Uganda, Zanzibar and Somaliland)	Protectorate		Governors	420,466	Conquest and cession	1870-1890	8,728,276
British West Africa (including Gambia, Gold Coast Colony, Northern Nigeria, Southern Nigeria, and Sierra Leone)	Protectorate		Governors	495,490	Conquest, annexation, cession	1673-1872	17,442,772
MERICA—							
Dominion of Canada	Dependency	Commonwealth	Governor-General	3,745,574	Conquest and settlement	1670-1858	.....
Ontario	Province	Representative	Lieutenant-Governor	260,862	Conquest	1759-1760	2,519,902
Quebec	Province	Representative	Lieutenant-Governor	347,350	Conquest	1759-1760	2,000,697
New Brunswick	Province	Representative	Lieutenant-Governor	27,985	Treaty cession	1763	351,815
Nova Scotia	Province	Representative	Lieutenant-Governor	21,428	Conquest	1627	461,847
Manitoba	Province	Representative	Lieutenant-Governor	73,732	Settlement	1813	454,691
British Columbia	Province	Representative	Lieutenant-Governor	312,363	Transfer to crown	1858	362,768
Alberta	Province	Representative	Lieutenant-Governor	253,540	Settlement		372,919
Saskatchewan (including Mackenzie, Ungava and Franklin)	Province	Representative	Lieutenant-Governor	250,650	Settlement		453,508
Northwest Territories	Territory	Military	Commissioner	1,418,000	Charter	1670	19,330
Yukon Territory	Territory	Military	Commissioner	196,976	Charter	1670	7,000
Prince Edward Island	Province	Representative	Lieutenant-Governor	2,184	Conquest	1745	93,722
Newfoundland (and Labrador)	Colony	Responsible	Governor	42,734 120,000	Treaty cession	1713	230,000
British Guiana				104,000	Conquest and cession	1803-1814	305,090
British Honduras	Colony		Lieutenant-Governor	8,598	Conquest	1798	44,000
Jamaica	Colony		Governor	4,207	Conquest	1655	831,123
Trinidad and Tobago	Colony		Governor	1,868		....	358,641
Barbadoes	Colony	Representative	Governor	166	Settlement	1605	196,287
Bahamas	Colony	Representative	Governor	5,794	Settlement	1629	55,872
Bermuda	Colony	Representative	Governor	19	Settlement	1612	19,289
Other Islands				8,742		....	255,000
USTRALASIA—							
Commonwealth of Australia (including Australia, Tasmania, and Papua)	Dependency	Commonwealth	Governor-General	3,091,496	Settlement	....	5,140,393
Dominion of New Zealand	Dependency	Responsible	Governor	104,471	Purchase	1845	982,926
Fiji	Colony		Governor	7,435	Cession from the natives	1874	128,404

Surface.—The northern part of Britain is, for the most part, rugged, mountainous, and barren, this being the character of much of Scotland. To the north of a line drawn from the Firth of Clyde on the west to Stonehaven on the eastern coast is the region generally known as the highlands, divided into a northern and a southern portion by the great hollow of Glenmore through, which runs the Caledonian canal.

The chief feature of the southern portion is the mountain mass of the Grampians, the culminating points of which, Ben Nevis and Benmacdhui, are the highest British summits. South of the highlands lies the plain of the Forth and Clyde, a region of coal and iron, in which the chief manufacturing industries of Scotland are carried on. South of this again is the elevated region of the southern highlands or southern uplands, less rugged and more pastoral than the highlands proper.

Toward the southeast are the Cheviot hills, on the borders of England and Scotland. Here commences the long Pennine chain running south into England, branching off into the mountains of Cumberland and the lake district (Cumbrian mountains), and terminating beyond the Peak of Derby, in the heart of England. The highest summit of the English mountains is in the northwest (lake district), namely, Scawfell, 3,210 feet. Farther south and west is the Cambrian range, spread over the greater part of Wales, and containing, among others, the highest mountain of South Britain—Snowdon, 3,571 feet.

Over great parts of England the elevations are mostly insignificant, and the general character of the country is that of undulating plains.

Rivers.—The chief rivers entering the sea on the east coast, proceeding from north to south, are the Spey, Don, Dee, Tay, Forth, Tweed, Tyne, Ouse, Trent, and Thames, the last named in navigable importance the greatest river of the world. No river of importance empties itself either on the north or south coast. From the western coast, the rivers which descend in that direction have generally a short course, and are comparatively unimportant. The two great exceptions to this rule are the Clyde and the Severn.

Owing to the great central flat of Ireland its rivers usually flow on in a gently winding course in different directions to the sea Those of importance are not very numerous; but one of them, the Shannon, is the longest river of the British isles, its length being about 225 miles; while the Thames is 215. The Tay (length 130 miles) is said to have the largest volume of water.

The lakes of the British isles are distinguished for beauty rather than size; the largest, but among the least interesting, is Lough Neagh, in the north of Ireland.

Climate.—Their maritime situation has a favorable effect on the climate of the British isles, making it milder and more equable than that of continental countries in the same latitude. The temperature of the Atlantic, raised by the influx of the gulf stream, is communicated to the winds and vapors which are wafted along its surface, and the prevailing winds in Britain being from the southwest, the country is kept constantly at a relatively high temperature. The southwest winds, too, are charged with vapor, and often bring rain, thus supplying the country with abundant moisture. Ireland, from its more westerly position, has these characteristics in the most marked degree, the warmth and moisture of the west winds making it markedly a "green isle." For the same reason the western shores of the islands have a milder and more equable temperature than the eastern shores, the former being on an average one or two degrees cooler in summer and several degrees warmer in winter.

Cities.—The three largest cities in Wales are Cardiff, Rhondda, and Merthyr Tydfil. The capital of England and of the British empire is London. The cities next in size (in order of population) are Liverpool, Manchester and Salford, Birmingham, Leeds, Sheffield, Bristol, Bradford, Nottingham, and Hull.

The capital of Scotland is Edinburgh. Glasgow, Dundee, and Aberdeen each contain upward of 150,000 inhabitants. After these come, in order of population, Paisley, Leith, Greenock, Coatbridge, Kilmarnock, Kirkcaldy, Perth, Hamilton, Motherwell, and Falkirk.

The capital of Ireland is Dublin; the other chief towns are Belfast, Cork, Limerick, and Londonderry.

People.—The earliest inhabitants of the United Kingdom known to history were Celts, who inhabited both Great Britain and Ireland at the time of the Roman occupation. In the fifth and sixth centuries, however, the Celts were displaced through the greater part of South Britain and in the eastern lowlands of North Britain by the Anglo-Saxons, a Teutonic race from which the modern English and lowland Scotch are mainly descended. The Celts as a distinct people were gradually confined to the mountainous districts of Wales and Cornwall and the highlands of Scotland, and only in Wales and Scotland has the Celtic language survived in Great Britain, being still also spoken by many in the west of Ireland. There is a considerable Celtic element, however, among the population everywhere.

Greece is a maritime kingdom in the southeast of Europe. The country is composed of a continental portion, almost separated into two parts by the gulfs of Patras and Lepanto on the west, and the gulf of Ægina on the east, the archipelago of the Ægean Sea and the Ionian islands, and is divided into twenty-six provinces, called nomarchies.

Surface.—The mountain range which cuts off the peninsula from the continent of Europe is an extension of the Balkans. From it run chains from north-northwest to south-southeast, which form the skeleton of Greece. The western boundary of Thessaly is formed by Pindus, the main offshoot of the Balkans. The eastern boundary is also marked not only by the sea but by important mountains derived from the Balkan system. These are Olympus, Ossa, Mavrovuni, and Pelion. Othrys, a branch of Pindus, forms the south boundary of Thessaly. This branch is continued in the celebrated mountains Parnassus and Helicon, forms the land of Attica, and reappears as the islands of Ceos, Cythnos, Seriphos, and Siphnos. The Peloponnese, "the island of Pelops," or by its modern name the Morea, is connected with northern Greece merely by the narrow isthmus of Corinth, now pierced by a canal; its highest point is Taygetus.

Rivers.—The rivers of Greece are unimportant. The chief in the Peloponnesus are the Eurotas (Basilipotamo), the Alpheus (Ruphia), draining Arcadia and Elis; and the Peneus, draining Elis.

Climate.—The climate is generally mild, in the parts exposed to the sea equable and genial, but in the mountainous regions of the interior sometimes very cold. None of the mountains attains the limit of perpetual snow; but several retain it far into the summer. During summer rain scarcely ever falls, and the channels of the minor streams become dry. Toward the end of harvest rain becomes frequent and copious; and intermittent fevers become common.

Cities.—Athens is the capital; the towns next in size are Patraaes, Piraeus, and Trikhala, all above 20,000; and there are eight others between 20,000 and 10,000.

People.—The Greeks called themselves *Hellenes*, and the inhabitants of Italy called them *Graeci*. The modern Greeks are by no means pure-bred descendants of the ancient Greeks. Indeed, it has been maintained that from the seventh century A. D. there have been no pure Greeks in the country, but only Slavs. It is, however, pretty certain that the 2¼ million of modern inhabitants are descendants of the three races that occupied the soil at the time of the Roman conquest.

Hayti, or Haiti, is, after Cuba, the largest of the West Indian islands, now divided into the independent states of Hayti and the Dominican republic. It is nearly equidistant from Porto Rico, Cuba, and Jamaica. As in the rest of the Greater Antilles, its greatest length (about 400 miles) is in the direction—from west to east—of the chain of which it forms a part; its greatest breadth is 160 miles. Area, including the islands of Tortuga, Gonaive, nearly that of Scotland.

Surface and Rivers.—It is intersected west to east by three chains of mountains, connected by offsets, with extensive plains and savannas between. The central chain contains the highest peak, Loma Tina. The principal plain is the fertile Vega Real, between the northern and central ranges.

The rivers are numerous, but of small size.

Climate.—Hayti as a whole is one of the healthiest of the West Indian islands. The seasons are a wet, during which heavy rains are most frequent in May and June; and a dry, during which little or no rain falls.

Animal and Vegetable Life.—The fauna includes the agouti, European cattle and pigs run wild, snakes, caymans, turtles, etc.

The flora includes pines, mahogany trees, fustic, satinwood, lignum vitae, and other cabinet and dye woods, plantains, bananas, yams, batatas, oranges, pineapples, etc.

Cities.—Among the principal towns in Hayti are Port au Prince, San Domingo, Jacmel, and Cape Haytien.

People.—The population consists of negroes and mulattoes, with a considerable admixture of whites. The dialect is a debased French.

Italy is a kingdom occupying the central of the three great peninsulas of southern Europe, together with Sicily, Sardinia, and some smaller islands. The peninsula, which at the Strait of Otranto approaches within less than 50 miles of Albania, is bounded west and south by that portion of the Mediterranean known as the Tyrrhenian Sea, east by the Adriatic, and north by the Alps, separating it from France, Switzerland, and Austria-Hungary. Its greatest length is 710 miles; the breadth ranges from 351 miles in the north to about 20 between the Gulfs of Sta Eufemia and Squillace, but in most places is about 90 or 100 miles.

Surface.—Among the principal physical features of Italy are the Alps on its northern frontiers, and the chain of the Apennines, which run down the middle of the peninsula through its whole length to the Straits of Messina, while numerous branches are thrown off laterally, and form an endless succession of wooded hills, olive-clad slopes, and fertile valleys.

In the north, inclosed between the ranges of the Alps and Apennines, is a vast and fertile plain, intersected by the Po and its tributaries. Two active volcanoes belong to the kingdom, Vesuvius in South Italy and Etna in Sicily. The eastern shore of Italy is generally flat and uninteresting, presenting particularly along its northern part a series of sandy islands and lagoons, which dam up the mouths of the rivers, and occasion the formation of pestilential marshes.

On the west coast the same thing is occasionally seen, as in the case of the Pontine marshes and the Tuscan Maremma; but as a rule the west coast is more elevated, and often presents delightful scenery, as around the Gulf of Genoa and the Bay of Naples.

Rivers.—Nearly the whole of northern Italy belongs to the basin of the Po. The Adige and Brenta are other streams. Many of the Po's tributaries spread out at the foot of the Alps into considerable bodies of water, among which are the Lago di Garda, Lago Maggiore, and Como. From Rimini to the Gulf of Trieste the Adriatic coast is flat and marshy, and fringed by lagoons.

Climate.—In the south of Italy the climate resembles that of Africa, being dry and burning and subject to the sirocco. In the northern regions, the neighborhood of the Alps, and the abundance of water-courses, serve to maintain a pleasant temperature. Yet this region is at times extremely cold, especially in the interior of the great plains. In general the climate of Italy is healthy, except marshy districts such as the rice-plantations of Lombardy, the Tuscan Maremma, the Campagna of Rome, and the Pontine marshes, which give rise to exhalations engendering fevers. The Riviera, or coast of the Gulf of Genoa, is a favorite winter resort from more northern regions.

Vegetable Life.—The natural productions of the soil of Italy are as various as its climate In the Alpine regions all plants belonging

o temperate climates flourish, while the southern regions possess almost a tropical flora. Its wines are numerous and celebrated, and olives and olive-oil are furnished by Tuscany, Liguria, and the province of Bari; while fruit abounds and is largely exported. The cultivation of silk forms an important agricultural industry.

ities.—The largest city is Naples. Rome is the capital. Milan, Turin, Palermo, Genoa, Florence, rank next. There are four others about 150,000; and 23 towns over 50,000.

ople.—The population of Italy is in general homogeneous. There are, however, varying numbers of French, Teutonic, Albanian, Greek, and Spanish (Catalan) origins, and Slavs.

pan.—This ancient and extensive empire consists of four large and many small islands, said to comprise in all above 4,223, the principal of which are Hondo (the name of the empire being Nihon), Shikoku, Kiushu, Hokkaido or Yezo, situate to the north of the main island, from which it is separated by the Tsugaru straits, and Formosa, called by the Japanese Taiwan. In addition, the Russo-Japanese war gave to Japan the southern portion of the island of Sakhalin; while in 1910 Korea, a protectorate since the conclusion of the same war, was formally annexed.

rface.—The islands of Japan appear to be the highest portions of a huge chain of mountains which rises from a deep ocean bed. This chain, though dotted with volcanoes, is not therefore itself of volcanic origin. Earthquakes occur very frequently in Japan, although the western slope is exempt. Japan is one of the most mountainous countries in the world.

Its plains and valleys, with their foliage of surpassing richness, its forest-clad heights, its alpine peaks, towering above ravines noisy with waterfalls, its foam-fringed headlands, give it a claim to be considered one of the fairest portions of the earth.

The sublime cone of the sacred Fujisan (Fujiyama), a rather dormant volcano, rises to a height of 12,365 feet; and there are six peaks between 8,000 and 10,000 feet (one an active volcano) in Honshu.

The three other large islands also abound in mountains. Yezo has eight active volcanoes. Throughout the empire there are many solfataras and sulphurous springs. The plains, most of the valleys, and many of the lower hills are highly cultivated.

ivers.—The rivers are of no great length; Tonegawa, the longest, is only about 172 miles. Biwa, in the south of Hondo, is the principal lake, being some 50 miles in length, with an extreme breadth of 20 miles.

limate.—The climate ranges from an almost arctic cold in the north to a nearly tropical heat in the south. In the island of Yezo winter begins about October and continues to April, its course being marked by severe frosts and snowstorms; while in Yokohama, again, the winter is genial, with a bright sky, and a temperature much like England. From July to September the thermometer often register as high as 95° in the shade.

egetable and Animal Life.—The vegetation of Japan is very varied, in consequence of its wide range of temperature. The vegetation of the tropics is strangely intermingled with that of the temperate or frigid zone; the tree-fern, bamboo, banana, and palm grow side by side with the pine, oak, and beech, and conifers in great variety. The camellia, the Paulownia, and the chrysanthemum are indigenous.

Wild animals are not numerous, but bears, wild boars, monkeys, deer, small foxes, stoats, and squirrels occur; and there are several varieties of the seal and the whale. The Japanese cat has only a stump of a tail. There are numerous water birds; land birds are less plentiful. Edible fishes, including salmon, are abundant, and insect life is specially varied.

ities.—The capital is Tokyo, formerly called Yedo, the residence of the emperor. Other cities are Osaka, Kiôto (the ancient capital), Nagoya, Kobe, Yokohama, Hiroshima, Nagasaki, Sendai. There are also nineteen other towns of between 50,000 and 100,000.

People.—The Japanese belong to the great Mongolian family, though ethnologists recognize more than one element in the population. They are generally distinguished by broad skulls and high cheek-bones; small black eyes, obliquely set; long black hair, and a yellow or light-olive complexion; some are good-looking, and many are well-made, active, and nimble. They are a frugal, skillful, persevering, courageous race, who combine these characteristics with much frankness, good humor, and courtesy.

Liberia, a negro republic on the Pepper coast (Guinea) of West Africa, extending 500 miles northwest and northeast of Cape Palmas, and reaching 200 miles inland.

Surface.—The coast region consists of mangrove swamps, lying behind a belt of sand dunes, is traversed by numerous rivers, and interrupted by projecting headlands of rock. About 20 miles or so inland the surface begins to rise into undulating uplands.

Climate and Vegetation.—The climate and vegetation are tropical, the temperature ranging between 75° F. and 88° F. The rainy season lasts about seven and the dry season five months. The chief products are coffee, sugar, palm oil and palm kernels, cocoa, arrowroot, caoutchouc, ivory, kola nuts, etc.

People.—These consist of liberated American slaves and their descendants, indigenous negroes, including the Kroomen.

Cities.—There are thirteen ports of entry along the 350 miles of coast, *viz.*, Robertsport, Monrovia, Marshall, Grand Bassa, River Cess, Greensville, Nanna Kroo, Harper, Half Cavalla, Jenne, Webo, Grand Cess, and Garraway.

Mexico is a federal republic of North America, embracing twenty-seven states, a federal district, and two territories.

It extends between the United States and Guatemala, with an extreme length of nearly 2,000 miles; its breadth varies between 1,000 and (in the Isthmus of Tehuantepec) 130 miles. From the southeast and northwest extremities of the republic there extend the peninsulas of Yucatan and Lower California, inclosing the gulfs of Campeche and California respectively.

Surface.—For the most part Mexico consists of an immense table-land, which commences in the United States, and rises to over 8,100 feet at Marquez, 76 miles north by west of Mexico City: at El Paso, on the northern frontier, the elevation is only 3,717 feet. The most important range is the Sierra Madre (over 10,000 feet, and extending from Tehuantepec into the United States); parallel with this run the sierras of the east coast and of Lower California.

The surface of the country is also much broken up by short cross ridges and detached peaks, the principal being the Cordillera de Anahuac, culminating in Orizaba (the highest point in Mexico), and the famous volcano, Popocatepetl. Most of the Mexican volcanoes are extinct or quiescent, and violent earthquakes are of rare occurrence.

On the Atlantic side the plateau descends abruptly to the narrow strip (about 60 miles) of gently sloping coast land; toward the Pacific, where the coast lands vary in width from 40 to 70 miles, the descent is more gradual.

Rivers.—The largest river is the Rio Grande del Norte, forming part of the boundary with the United States; most of the others are rather insignificant. The lakes, which abound, are individually of little importance; some of them have no outlet.

Climate and Vegetation.—In the plateau region the climate is almost that of perpetual spring; but agriculture is dependent on irrigation, and an immense desert tract extends between Chihuahua and Zacatecas. On the coast lands wood and water are abundant, and the soil fertile, but the climate is such that white men cannot work as laborers there.

The coast belt and the terraces up to 3,000 feet constitute the *tierras calientes*, where the temperature ranges from 60° to 110° F., and in the south magnificent tropical vegetation and yellow fever reign. The cold lands, or *tierras frias*, embrace all the country above 8,000 feet. South of about 28° north latitude there are only the wet and the dry season, the former from June to October. Farther north there are four seasons.

The vegetation of Mexico has the same wide range as the climate. In the lowlands dye woods and valuable timbers abound in the virgin forests, as well as medicinal plants, india rubber, palms, etc.; and oranges and bananas, many varieties of cactus, agave, sisal, olives, sugar, coffee, cocoa, rice, indigo, cotton, and tobacco, besides the omnipresent maize, all thrive.

Cities.—The chief cities are Mexico (the capital), Puebla, Guadalajara, San Luis Potosi, Leon, Monterey, Pachuca, Zacatecas, Guanajuato, Merida, Queretaro, Morelia, Oaxaca, Orizaba, Aguascalientes, Saltillo, Durango, Chihuahua, Vera Cruz, Toluca, and Celaya.

People.—The proportion of the different races in the population is believed to be 20 per cent of pure whites, 43 per cent of mixed race, and the remainder Indians. The creoles or half-castes (*mestizos*), are naturally the dominant race. The Spanish language is generally spread over Mexico.

Monaco.—A miniature principality on the Mediterranean, between France and Italy, consisting of the old town of Monaco, La Condamine, and Monte Carlo, where there is a gambling establishment, and comprising a narrow strip of country extending from the Monaco cemetery on the west to St. Roman on the east.

It is about 3 miles long and 1½ miles broad, with a yearly average of over 1,250,000 visitors. The whole available ground is built over, so that there is no cultivation.

Montenegro is a kingdom lying between Northern Albania on the south and Herzegovina on the north.

Surface.—Beyond the low coastal fringe, which has a climate like that of the south of France, comes a rugged mountain region ranging up to 6,500 to 8,000 feet, not in a series of chains but in a confusing maze of peaks and gigantic crags and blocks, wild gorges and natural caves, the bare gray crystalline rock being everywhere visible.

Rivers and Vegetation.—The streams in some cases have underground channels. The center of the country is occupied by the branching valleys of the rivers Zeta and Moratcha, which flow south into Lake Scutari. East and north of them the mountains are well wooded, principally with beech and pine.

Cities.—The capital is Cettinje; other cities are Podgoritza, Dulcigno, Niksic and Antivari.

People.—The Montenegrins belong almost entirely to the Servian branch of the Slav race. They are a brave, warlike, and simple people, noted for their honesty and their chastity. They live in small stone houses, in small villages.

Morocco, or **Marocco,** is an empire or sultanate in that part of northwest Africa bounded on the east by Algeria and on the south by Cape Nun and the Wad Draa, though both here and on the Sahara side of the Atlas the limits of the empire are rather indeterminate.

Surface.—Morocco is, as a rule, mountainous, the Atlas traversing it in several chains from southwest to northeast, and by various spurs both to the coast country and to the desert. There are, however, numerous level plains, some of which are of great extent and very rich. Farther south, and on the other side of the Atlas, sandy wastes are the prevailing characteristic. In western Morocco, though the soil is sometimes thin, actual desert is rare.

Rivers.—The rivers are unimportant, being mostly dry for part of the year, and generally diminishing in volume as they approach the sea. The coast offers few good harbors; the most frequented are Tangier, El-Araish (Laraiche), Rabat, and Mogador.

Climate.—The climate in many parts is pleasant and temperate, in many others the summer heat is insufferable.

Vegetable and Animal Life.—The flora includes the esculent oak and cork oak; in the higher regions of the Atlas the cedar and Aleppo pine, the date-palm and the dwarf-palm east and south of the Atlas. All the fruits of the south of Europe are cultivated to some extent

Among the wild animals are the lion, panther, jackal, hyaena, wild boar, gazelle, and several species of large antelope. The locust is a cause of much devastation. The ostrich is found on the southern frontiers. The spirited small horses for which the country was once famous are still numerous.

Cities.—Morocco has three capitals or imperial residences—Fez, Makinas or Mequinez, and Marakesch or the City of Morocco. Besides these the principal coast towns are Tangier, Tetuan, Larache (El-Arish), Rabat, Sallee, Casablanca, Mazagan, Saffi, and Mogador.

People.—The inhabitants consist of six principal groups—Berbers or Kabyles (Tuaregs, etc.), the aborigines, Arabs, Jews, a few thousand Spaniards, Moors (Arabs with an admixture of Spanish blood, living in towns, though the name is often given to all the Mohammedan inhabitants), and negroes.

Netherlands, The, or **Holland,** a kingdom of Europe, lies on the North Sea north of Belgium and west of part of northern Germany. Its greatest length (north to south) is 195 miles, and its greatest breadth 110 miles. It is little more than one-tenth of the size of Great Britain and Ireland. Luxemburg was till 1890 connected with Holland.

The country is divided into eleven provinces.

Provinces	Area English Sq. Miles	Population Dec. 31, 1909
North Brabant	1,980	628,089
Gelderland	1,965	646,842
South Holland	1,166	1,390,044
North Holland	1,070	1,112,582
Zeeland	690	233,478
Utrecht	534	289,118
Friesland	1,282	363,625
Overijssel	1,291	385,622
Groningen	790	332,941
Drenthe	1,030	175,118
Limburg	850	349,970
Total	12,648	5,898,429

Colonies.—In addition to her European territories Holland possesses extensive colonies and dependencies in the Asiatic archipelago and America; including Java, Sumatra, great part of Borneo, Celebes, part of New Guinea, Surinam or Dutch Guiana, the West Indian islands of Curaçao, Saba, St. Eustatius, etc.

Surface.—The Netherlands (or Low Countries, as the name implies) form the most characteristic portion of the great plain of northern and western Europe. It is the lowest part of this immense level, some portions of it being 16 to 20 feet below the surface of the sea, and nearly all parts too low for natural drainage.

The coast line is very irregular, being marked by the great inlet of the Zuider Zee, as well as by various others, and fringed by numerous islands. In great part the coast is so low that were it not for massive sea dikes large areas would be inundated and lost to the inhabitants. In the interior also dikes are a common feature, being built to protect portions of land from the lakes or rivers, or to enable swamp pieces of land to be reclaimed by draining, the water being commonly pumped up by windmills.

Almost the only heights are the sand hills, about 100 to 180 feet high, forming a broad sterile band along the coast of South and North Holland; and a chain of low hills, of similar origin perhaps, southeast of the Zuider Zee.

Rivers.—The principal rivers are the Rhine, Maas, and Yssel, with the mouths of the Schelde. Many canals, regulated by locks, connect the rivers, and the Yssel forms a link between the Rhine and the canals and meres of Friesland. Thus it is possible to travel on water through the whole of Holland.

Climate.—The climate of Holland is much like the climate of England, especially in its frequent and rapid changes; but, as a rule, the Dutch summer is hotter and the Dutch winter colder. Ague is prevalent in the low-lying regions of the west.

Cities.—The four largest towns are Amsterdam, Rotterdam, the Hague, Utrecht, each with over 100,000 inhabitants.

People.—The great majority of the inhabitants are descendants of the old Batavians, or Teutonic stock. They comprise over 70 per cent of the population, and are chiefly settled in the provinces of North and South Holland, Zeeland, Utrecht, and Gelderland. The Flemings of North Brabant and Limburg, and the Frisians, inhabiting Friesland, Groningen, Drenthe, and Overijssel, form the other groups.

Norway is a country in the north of Europe, bounded on the northeast by Russian Lapland and east by Sweden, and washed on all other sides by the sea—by the Arctic Ocean on the north, the Atlantic and the North Sea on the northwest and west, and the Skager-Rack on the south. It is about 1,080 miles in length, and its greatest breadth is about 275 miles, but toward the north it narrows so much as to be in some places not more than 20 miles.

It is divided into 20 provinces, or amts, as follows:

Amts	Area English Sq. Miles	Population Dec. 1, 1910
Christiania	6.4	243,801
Akershus	2,017.0	127,697
Smaalenene	1,600.0	152,455
Hedemarken	10,600.1	134,468
Kristian	9,785.3	119,081
Buskerud	5,721.1	123,663
Jarlsberg and Larvik	895.6	109,124
Bratsberg	5,864.9	108,049
Nedenes	3,609.5	76,985
Lister and Mandal	2,804.9	82,551
Stavanger	3,531.9	141,064
Söndre Bergenhus	6,026.0	145,926
Bergen (town)	5.2	76,917
Nordre Bergenhus	7,136.1	89,972
Romsdal	5,787.8	144,736
Söndre Trondhjem	7,185.3	147,827
Nordre Trondhjem	8,696.4	84,993
Nordland	14,804.0	163,775
Tromso	10,134.2	81,650
Finmarken	17,917.9	37,964
Total	124,129.7	2,392,698

Surface.—The coast consists chiefly of bold precipitous cliffs, and is remarkable both for the innumerable islands by which it is lined, and the bays or fiords which cut deeply into it in all directions. The surface is very mountainous, particularly in the west and north. Very commonly the mountain masses assume the form of great plateaus or tablelands, called *fjelds* or *fields*, as the Dovre fjeld, Hardanger fjeld, etc. The highest summits belong to the Sogne fjeld, a congeries of elevated masses, glaciers, and snow fields in the center of the southern division of the kingdom, where rise Galdhoepig, the Glitretind, and Skagastölstind. Immense snow fields and glaciers are a feature of Norwegian scenery.

Rivers.—The few important rivers that Norway can claim as exclusively her own have a southerly direction, and discharge themselves into the Skager-Rack; of these the chief are the Glommen (400 miles), and its affluent the Lougen. The most important river in the north is the Tana, which forms part of the boundary between Russia and Norway, and falls into the Arctic Ocean. Lofty waterfalls are numerous. Lakes are extremely numerous, but generally small. The principal is the Miösen Vand.

Vegetable and Animal Life.—The forests are estimated to cover about a fifth of the whole surface, and form a very important branch of national wealth. The principal forest tree is the pine.

The reindeer forms the principal stock in the extreme north. Among the larger wild animals are the wolf, bear, elk, and deer. The fisheries are of very great value; they include the cod, herring, mackerel, salmon, shark, walrus, seal, and lobster, the cod and herring fisheries being by far the most important. The rivers and lakes abound with salmon and salmon-trout, and make Norway one of the best angling countries in the world.

Cities.—The chief cities are the capital, Christiania, and Bergen. Other important towns are Trondhjem, Stavanger, and Drammen.

People.—The people are almost entirely of candinavian origin. A small number of Lapps (called in Norway, Finns) and Qvaens (a Finnish people) dwell in the northern parts. The Norwegian language is radically identical with the Icelandic and with the Danish. For centuries Danish was generally employed as the literary and educated language of the country, as it still is; but during the last century a vernacular literature—claiming to employ the national language—has sprung up.

Oman, or **Muskat,** is a sultanate in the southeast of Arabia, partly on the Persian gulf, partly on the Indian Ocean, whose bounds have been considerably reduced during the last hundred years.

General Features.—The chief features of the country are stretches of barren sand or rock, mountains reaching the height of 10,000 feet; fertile valleys and plains, yielding abundance of grain, sugar, fruits, cotton, coffee, etc., Oman being the richest part of the Arabian peninsula both in agricultural products and in mineral treasures.

The inhabitants are tolerant, but very superstitious and immoral. They are mostly Arabs, but there is a considerable mixture of Persians, Hindus, Africans, and others.

Panama.—The republic of Panama was constituted on Nov. 3, 1903, having previously been a department of the republic of Colombia.

The country is divided into 7 provinces, each under a governor, with other subordinate officials. The chief ports are: on the Atlantic, Colon, Cristobel (canal zone), Bocas del Toro, and Puerto Bello; on the Pacific, Balboa (in canal zone) and Pedregel.

The railway runs from Colon to Panama across the isthmus, a distance of 47 miles, and belongs to the United States government, as does the canal zone, which extends 5 miles on each side of the canal, except the cities of Panama and Colon at the ends. The population of the canal zone is 54,036. The soil is very fertile, but not well cultivated. Bananas are exported, and some rubber, cocoanuts, and hides.

The modern city of Panama, the capital, is the chief city. The majority of the population are of Indian and negro descent, and half-breeds.

Paraguay, a republic of South America, surrounded by the Argentine republic, Brazil and Bolivia; separated from the first by the River Paraná, its tributary the Paraguay and the Pilcomayo, a tributary of the latter from Brazil by the Paraná, a range of hills and the Apa, a tributary of the Paraguay.

Surface and Climate.—The northern portion of Paraguay is in general undulating, covered by low, gently-swelling ridges, separated by large grass plains, dotted with palms. There are mountains in the northeast and northwest corners. The southern portion is one of the most fertile districts of South America consisting of hills and gentle slopes richly wooded, of wide savannas, which afford excellent pasture-ground, and of rich alluvial plains, some of which are marshy, but a large proportion are of extraordinary fertility and highly cultivated.

The temperature occasionally rises to 100° in summer, but in winter is usually about 45°.

Vegetable and Animal Life.—The banks of the rivers Parana and Paraguay are occasionally belted with forest; but in general the lowlands are destitute of trees.

The natural fertility of the soil is shown by a vegetation of almost unequaled luxuriance and grandeur. In the forests are found at least sixty varieties of timber trees, besides dye woods, gums, drugs, perfumes, vegetable oils, and fruits. Many of the hills are covered with the *yerba maté* or Paraguay tea.

The larger plains are roamed over by immense herds of cattle.

Tapirs, jaguars, pumas, ant-eaters, wild boars, peccaries, and deer abound; birds are innumerable; the rivers teem with fish, and their banks are the resort of alligators and coypus. Snakes, including enormous boas, are numerous, but very few of them are venomous.

Cities.—The capital is Asuncion; other towns are Villa Rica, Concepcion, San Pedro, Luque, Carapegua, Paraguari, and Villa del Pilar.

People.—The population of Paraguay is composed of whites of Spanish descent, Indians, a few negroes, and a mixture of races. Trade in the towns is almost wholly in the hands of Italians, French, and Germans.

rsia, called by the natives Iran, the most nportant native kingdom of western Asia, s bounded by Russian Caucasia, the Caspian ea, the Russian Transcaspian provinces, Afghanistan, Baluchistan, the Strait of Ormuz, the Persian gulf, and Asiatic Turkey. t extends 900 miles from east to west, and 00 miles from north to south.

rface.—Persia is an elevated plateau, broken y clusters of hills or chains of rocky mountains, which alternate with extensive plains nd barren deserts; the desert of Khorassan n the northeast alone absorbs about one-eventh of the entire area. Low tracts exist on the Persian gulf and the Caspian.

The interior plains have an elevation of rom 2,000 to 6,000 feet above the sea. This vast central plateau is supported in the north and south by two great mountain chains or systems, and from these all the minor ranges seems to spring.

The north chain, an extension of the Hindu Kush, enters Persia from northern Afghanistan, proceeds across the country, and reaches its greatest elevation on the south of the Caspian, where it takes the name of the Elburz mountains, and attains in Mount Demavend a height of nearly 20,000 feet. Still farther west it becomes linked with the mountains of Ararat. The other great mountain system runs from northwest to southeast nearer the Persian gulf, is of considerable width, and forms several separate ranges. In one of these an elevation of 17,000 feet is reached.

vers.—The rivers are few and insignificant. Not one of them is of any navigable importance, except the Euphrates, which only waters a small portion of the southwest frontier, and the Karun, recently opened to the navigation of the world. The latter is entirely within Persian territory, and flows into the Shat-el-Arab, or united Tigris and Euphrates. Of the streams which flow northward into the Caspian the only important one is the Kizil-Uzen or Sefid Rud (White river), which has a course of about 350 miles. There are a great number of small fresh-water lakes, and a few very extensive salt lakes, the largest being Urumiah in the extreme northwest.

limate.—The climate varies considerably in different provinces, and in the central plateau intense summer heat alternates with extreme cold in winter. The shores of the Persian gulf are scorched up in summer; those of the Caspian Sea, especially the parts covered with dense forest, are humid, but also noted for malaria.

nimal and Vegetable Life.—The forests of the Elburz swarm with wild animals, as wolves, tigers, jackals, boars, buffaloes, foxes, and the Caspian cat. Leopards abound in Mazanderan, and lions in parts of Fars and Arabistan. The horses have always been celebrated for their beauty, speed, and endurance. The Caspian rivers abound with fish, especially sturgeon.

Some parts of the country are of exceeding fertility and beauty; the immense valleys, some of them 100 miles in length, between the various ranges of the Kerman mountains, abound with the rarest and most valuable vegetable products.

Cities.—Teheran is the capital; chief trade centers: Teheran, Tabreez, Ispahan; chief ports, Bushire and Bender Abbas on the Persian gulf. Other large towns are Meshed Balfroosh, Kerman, Yezd, Hamadan, Shiraz, Kazvin, Kom, Resht.

People.—The settled population are chiefly Tajiks, the descendants of the ancient Persian race, with an intermixture of foreign blood. To this class belong the agriculturists, merchants, artisans, etc. The Tajiks are Mohammedans of the Shiite sect, with the exception of the remaining Parsees who are found chiefly at Yezd, and still retain their purity of race and religious faith. The nomad, or pastoral tribes, are of four distinct races—Turks (not Osmanli Turks), Kurds, Luurs, and Arabs. Of the four, the Turk is the most numerous, and to it belongs the present Kajar dynasty.

Peru.—A republic of South America, bounded on the north by Ecuador and Colombia, on the west by the Pacific, on the south by Chili, on the east by Bolivia and Brazil.

Surface and Climate.—The coast extends from the base of the Andes to the Pacific Ocean, and consists of a sandy desert crossed by some forty rivers along whose banks there are fertile valleys; the *sierra*, or region of the Andes, about 250 miles wide, contains stupendous chains of mountains, elevated plains and table-lands, warm and fertile valleys and ravines; and the *montana*, skirting the eastern slopes of the Andes, consists of tropical forests traversed by great tributaries of the Amazon. Since 1570 there have been seventy destructive earthquakes recorded on the west coast, including those of 1868 and 1877.

The Peruvian Andes attain 22,000 feet.

From November to April there is usually constant dryness on the coast, from June to September the sky is obscured for weeks by mist, sometimes accompanied by drizzling rain. The maximum temperature is about 78° in summer and 60° in winter.

The valleys and plateaus between these ranges form the Sierra of Peru, and include every variety of climate and scenery. They may be divided into four sections, commencing from the north; in the third is Cuzco, the capital of the Incas, while the fourth section is the basin of Lake Titicaca, about 150 miles in length and breadth. The lake itself is 80 miles long, and 12,874 feet above the level of the sea. The Sierra of Peru is the original home of the potato.

Animals.—The animals which specially belong to the Peruvian sierra are the domestic llamas and alpacas, and the wild vicunas, the viscacha, the chinchilla, deer, dogs, and foxes; notable among birds are the condor and the flamingoes, geese and wading birds of Lake Titicaca. The fauna of the forests also includes monkeys, bats, bears, pumas, jaguars, tapirs, wildcats, deer, and many rodents; with curassows, ibises, cranes, spoonbills, parrots, toucans, and many snakes.

Vegetation.—The mantana is the region of tropical forests within the basin of the river Amazon; the forests drained by the Maranon, Huallaga, and Ucayali forming the northern portion. The whole length of the montana, from the Maranon to the Bolivian frontier is 800 miles. The subtropical portion, comprising the eastern slopes of the Andes, is the region of the cinchona trees, and of the cocoa, and here coffee and cacao of the finest quality are cultivated. From the forest-covered plains come india-rubber, sarsaparilla, and a great variety of useful and ornamental timber.

Cities.—The principal towns are Lima (the capital), Arequipa, Cuzco, and Truxillo; principal ports, Callao (port of Lima), Mollendo (port of Arequipa), and Truxillo.

People.—The population consists of about 57 per cent aboriginal Indians, 23 per cent mixed Indian races, and 20 per cent of descendants of Spaniards, Europeans (chiefly Italians, French, and Spaniards), and Asiatics (chiefly Chinese).

Portugal, a republic (since 1910) of Europe, lying between Spain and the Atlantic, on the west side of the Iberian peninsula, stretches 350 miles from north to south, and varies in width from 70 to 140 miles. The area is a little larger than Ireland.

The six home provinces are Minho, Trazos Montes, Beira, Estremadura, Alemtejo, and Algarve; to which are to be added the Azores and Madeira, always reckoned not as colonies but as parts of the mother country.

Colonies.—The colonial possessions of Portugal, situated in Africa and Asia, are as follows:

Colonial Possessions	Area English Sq. Miles	Population
Possessions in Africa:		
Cape Verde Islands (1900)	1,480	147,424
Guinea	13,940	820,000
Prince's and St. Thomas' Islands (1902)	360	42,103
Angola	484,800	4,119,000
East Africa	293,400	3,120,000
Total Africa	793,980	8,248,527
Colonial Possessions Continued	Area English Sq. Miles	Population
Possessions in Asia:		
In India—Goa (1900)	1,469	475,513
Damao, Diu (1900)	169	56,285
Indian Archipelago (Timor, etc.)	7,330	300,000
China—Macao, etc. (1900)	4	63,991
Total, Asia	8,972	895,789
Total, Colonies	802,952	9,144,316

Surface.—Portugal is only partially separated from Spain by natural boundaries. Its surface is occasionally bold, and rises to a great height; but the far greater part is low and marshy, and not infrequently lined by sands and reefs, which make the navigation dangerous.

The interior is generally mountainous, a number of ranges stretching across the country, forming a succession of independent river basins, while their ramifications form the watersheds of numerous subsidiary streams, and inclose many beautiful valleys. The loftiest range is the Serra da Estrella, a continuation of the central chain stretching across Spain, which attains the height of 7,524 feet. The nucleus of the mountains is usually granite, especially in the north and middle.

Rivers.—No rivers of importance take their rise in Portugal. The Minho in the north, the Douro, and the Tagus all flow from east to west. The Guadiana is the only large river which flows mainly south. Portugal can only claim as peculiarly her own the Vouga, Mondego, and Sado.

Climate—The vicinity to the ocean tempers the climate, and exempts it from the dry heat of Spain. The inequalities of the surface produce, however, diversities of climate; for, while snow falls abundantly on the mountains in the northern provinces, it is never seen in the southern lowlands. Rain falls abundantly throughout the year. Malaria and fever prevail in the low flat lands and near the salt marshes.

Vegetation.—Few countries have a more varied flora than Portugal. The number of species has been estimated to exceed 4,000, and of these more than 3,000 are phanerogamous. Many of the mountains are clothed with forest trees, among which the common oak and the cork oak are conspicuous. In the central provinces chestnuts are prevalent; in the south both the date and the American aloe are found; while in the warmer districts the orange, lemon, and olive are cultivated with success. The mulberry affords food for the silkworm, and a good deal of excellent silk is produced.

Cities.—The chief towns are Lisbon, Oporto, Braga, Setubal, Funchal (Madeira), Coimbra, Ponta Delgada (Azores), and Evora.

People.—The Portuguese are a mixed race—originally Iberian or Basque, with later Celtic admixture. Jewish and Arabic blood are strongly present in the center, and African in the south. The Portuguese differ widely from the Spanish.

Roumania is a kingdom in southeast Europe, lying mainly between the Carpathians, the Pruth, and the Danube, and bordering on Hungary, Russia, Bulgaria, and Servia. It is crescent-shaped and has an average length of 358 miles and breadth of 190 miles.

Surface and Rivers.—The surface is mainly occupied by undulating and well-watered plains of great fertility, gradually sloping upward to the Carpathians on the north and west borders, where the summits range from 2,650 to 8,800 feet above sea-level.

The entire kingdom is in the basin of the Danube, which has a course of 595 miles in Roumania, forming the boundary with Bulgaria nearly the whole way. Its chief Roumanian tributaries are the Olta (or Aluta), Ardjis, Jalomitza, Sereth, and Pruth (on northwest border). The Danube forms a number of marshy lakes as it approaches the alluvial region of the Dobrudsha, through which it discharges itself into the Black Sea by the St. George, Sulina, and Kilia channels.

Climate.—The climate is much more extreme than at the same latitude in other parts of

Europe; the summer is hot and rainless, the winter sudden and very intense; there is almost no spring, but the autumn is long.

Cities.—The capital of Roumania is Bukharest in Wallachia, about 30 miles from the Danube; and the chief town of Moldavia is Jassy, near the Pruth. Other towns are the seaports of Galatz and Ibrail (or Braila) at the mouth of the Danube, Craiova (Krajova), Botoshani, Ploiesti (Plojeschti), Pitesti, and the ancient capital Curtea d'Ardges.

People.—The Roumanians are descended from the ancient inhabitants—probably Thracians or Dacians—of the country, modified by elements derived from the Roman, Gothic, Bulgarian, and Slavonic invaders. They include many Jews, and gypsies.

Russia, a great empire, is second in area only to the British empire, and third as regards population, the Chinese empire ranking first, the British second. It comprehends most of eastern Europe and all northern and part of central Asia.

The following table exhibits the area and population according to the last issue of the Russian central statistical committee in 1910:

Governments and Provinces	Area English Square Miles	Population 1909
Russia proper (50 Provs.)	1,859,195	118,690,600
Poland (10 Provs.)	49,084	12,129,200
Finland (Grand Duchy)	144,211	3,030,900
Caucasia (11 Provs.)	181,550	11,735,100
Siberia (8 Provs. and Regions)	4,817,687	8,220,100
Central Asia (10 Provs. and Regions)	1,327,317	9,973,400
	8,379,044	163,778,800

Surface.—The leading feature in the physical structure of European Russia is a broad, flat swelling about 700 miles wide, with an average height of 800 feet, which crosses it from southwest to northeast and connects the elevated plains of middle Europe with the Urals. A belt of lowlands stretching from east Prussia to the White Sea fringes this central plateau on the northwest, separating it from the hilly tracts of Finland; while the plains of Bessarabia, Kherson, the Sea of Azov, and the lower Volga limit it on the southeast.

The central plateau is diversified by three or four depressions. The Urals, which separate the lowlands of European Russia from those of Siberia, consist of a series of parallel ridges running southwest to northeast, their chief summits reaching 4,950 to 5,100 feet high.

Beyond the Urals in Asiatic Russia are the vast Siberian plains slightly inclining to the north, and becoming mountainous in some parts toward the south and east. Great swampy areas toward the Arctic Ocean are known as *tundras*. Part of the Thian Shan mountains and of the Altai mountains, on the boundary between the Russian and Chinese empires, belong to Siberia.

Rivers and Lakes.—European Russia is watered by numerous and important rivers, some of great magnitude and running a course of 1,000 to 2,000 miles. The Petchora, the Mezen, Northern Dwina, and Onega are the principal rivers of European Russia which send their waters to the Arctic Ocean; the Neva, Düna, Niemen, and Vistula belong to the Baltic basin; the Black Sea basin comprises the Pruth, Dniester, Dnieper, and the Don; whilst the Caspian receives, besides other rivers, the Ural and the Volga, the latter the largest of all European rivers.

Asiatic Russia has also a number of very large rivers, as the Obi, Yenisei, and Lena in Siberia, and the Amur toward the Chinese frontier. This great river system is of incalculable value to Russia, as by its means internal communication is carried on. Canals connect the navigable rivers, so as to form continuous water-ways. River steam navigation has been much developed of recent years.

The lakes are also on a gigantic scale. Lake Ladoga, near St. Petersburg, is the largest in Europe. Other large lakes in Europe are those of Onega, Peipus, and Ilmen. In Asia there is the Sea of Aral, larger than any of those mentioned, followed by Baikal, Balkash, and others. The Caspian Sea now also forms a Russian lake. From the extent of the plains and steppes, the swamps, moors, desert wastes, and forests of Russia, the scenery as a whole is very monotonous.

Climate.—All over European Russia, except in the Baltic provinces, the south of the Crimea, and a narrow strip of land on the Black Sea, the climate is continental. A very cold winter, followed by a spring which sets in rapidly; a hot summer; an autumn cooler than spring; early frosts; and a small rainfall, chiefly during the summer and the autumn, are the main features. The winter is cold everywhere. All over Russia the average temperature of January is below the freezing point, and it only varies between 22° F. in the west and 5° to 7° in the east. All the rivers are frozen over early in December, and they remain under ice for from 100 days in the south to 160 in the north. In summer the temperature is high all over Russia, and reaches 78° at Astrakhan.

Vegetable Life.—The flora of Russia marks four regions: (*a*) the arctic tundras are chiefly covered with mosses, lichens, and shrubs. (*b*) The forest region, which covers the whole of northern and middle Russia, is either forest-region proper or prairies dotted with forests. (*c*) The steppes are immense plains covered with grass, and devoid of forests. (*d*) The flora of the Mediterranean region occupies a narrow strip along the southern coast of the Crimea.

Animal Life.—The fauna of European Russia is very much like that of middle Europe. Among wild animals are the bear, the wolf, wild hog, elk, and various animals which are hunted for their furs. Both on the coasts and in the rivers a great number of productive fisheries are carried on. In the Arctic Ocean vast numbers of seals are taken. The rivers entering the Caspian and the Sea of Azov, particularly the Ural and Volga, are celebrated for their sturgeon. In the same quarters are also important salmon fisheries. In the regions bordering on the Arctic Ocean large herds of reindeer are kept; and in the south, among the Tartars of the Crimea and the inhabitants of the Caucasus, the camel is often seen.

Cities.—The largest towns are St. Petersburg (the capital), Moscow, Warsaw, Odessa, Lodz, Riga, Kiev, Kharkov, and Tiflis.

People.—Russia contains many different peoples. The Russians form the main body of the Slavonic race. The number of Slavs is fully 92 millions, including over 7 million Poles. There are over 3 million Lithuanians, fully 1,800,000 Germans, nearly 1,200,000 Armenians, over 5 million Jews, nearly 6 million Finns, over 13½ million Turco-Tartars, 2½ million Georgians and other Caucasus races, besides various minor races.

San Marino.—A small republic in the hills near Rimini, on the Adriatic, founded, it is stated, by a pious mason of Dalmatia in the fourth century, and governed by a council of 60, of whom two are elected as regents for six months. The area is 33 square miles, the population 10,489. There is an army of about 1,000. The city of San Marino (population 1,500) occupies the slope of Mount Titan, and has an impregnable castle, where King Berengar of Lombardy took refuge in 950 A. D., a fine church and government palace, and a theater. Agriculture and viticulture flourish.

Servia is a kingdom of the Balkan peninsula, south of the Danube, and borders on Bosnia, Hungary, Roumania, Bulgaria, and Turkey.

Surface.—The surface is elevated and is traversed by ramifications of the Carpathians in the northeast, of the Balkans in the southeast, and of the Dinaric Alps in the west. The summits seldom exceed 3,000 feet, though the highest reaches 6,325. The whole surface belongs to the basin of the Danube, which receives the drainage partly directly, and partly by the frontier river Save, augmented by the Drin and the Timok, but chiefly by the Morava, which flows through the center of the kingdom.

Climate.—The climate is somewhat rigorous i the elevated districts, but mild in the valle and plains. There are extensive forests an uncultivated wastes.

Cities.—The principal towns are Belgrad (the capital), Nish, Kragouyévatz, Leskovat Pozrevatz, Shabatz, Vranyé, and Pirot.

People.—The Servians are a well-built, stalwa Slavonic race, proud and martial by temper ment. The population includes 46,000 Gy sies, and 20,000 of other nationalitie Besides these the Montenegrins are almo all pure Servians by race, as are also t Bosnians and Herzegovinians.

Siam occupies the central portion of t Indo-Chinese peninsula, stretching, a di tance of nearly 1,100 miles; greatest breadt 750 miles.

Surface.—The Malay peninsula excluded, t plain of the Menam valley, the adjoinir eastern coast, and the Korat plateau (fro 400 to 1,000 feet high) occupy the great portion of the country. These plains a fringed by hills up to 5,000 feet high, and t north generally is hilly.

Rivers.—The Menam, with a course of 6 miles, is the principal river. Two oth streams, the Meklong and the Bangpakon flow into the Gulf of Siam. The Mekor has the main part of its course in or alor Siamese territory, but navigation for vesse of any size is impeded by rapids. The rive form the principal trade routes, and in ar around Bangkok there is an intricate netwo of canals. Only the land adjoining the rive is under cultivation, and the greater portic of the country is covered by pathless jungl

Vegetable and Animal Life.—The forests pr duce aloes wood, sappan wood, teak timbe bamboos, rattans, gutta-percha, damma catechu, benzoin, etc. Cocoa and are palms are numerous in Siam; fruits are abu dant and of excellent quality; black peppe tobacco, cardamoms, and gamboge a important products.

Among wild animals are the tiger, leopar bear, otter, orang-outang, single-horne rhinoceros, and elephant, which here attai a size and beauty elsewhere unknown. T last, when of a white color, is held in t highest reverence. The forests abound wi peacocks, pheasants, and pigeons; and the islands are large flocks of the swallov that produce the famed edible birds'-nest Crocodiles, geckoes, and other kinds of li ards, tortoises, and green turtles are nume ous. The python attains an immense siz and there are many species of snakes.

Climate.—The climate is considered health for the tropics; low malarial fever is the mo frequent illness in the European cor munity. There are two seasons—the w and the dry, the former lasting from May t November. The average temperature f the year is 81°.

Cities.—The capital and commercial cent of the kingdom is Bangkok. Other le notable places are Puket, Korat, Pokna and Phrabad.

People.—The Siamese are members of the gre Mongolian family, and of the same race the people of Burma and Anam. In statu they do not average more than 5 feet 3 inch in height; they have a lighter-colored sk than the western Asiatics, but darker th the Chinese. They are generally vai indolent, superstitious, and cowardly, b polite, kind-hearted, and tolerant.

Spain occupies the larger part of the sout western peninsula of Europe, and is bound by the Bay of Biscay, the Pyrenees, t Mediterranean, the Atlantic, and Portug From Fuenterrabia in the north to Ca Tarifa in the south is 560 miles, and fro Cape Finisterre in the northwest to Ca Creux in the northeast is 650 miles.

Surface.—The interior is considerably dive sified, but its characteristic feature is i central table-land, which has an elevati of from 2,200 to 2,800 feet, and a superfici extent of not less than 90,000 square mil It descends gradually on the west towa Portugal; but on the east, toward the pro inces of Catalonia and Valencia, it presen an abrupt steep or line of cliffs, with t character of an ancient sea margin. It bounded on the north by the Asturian a

Cantabrian mountains, reaching an elevation of about 8,500 feet; on the south by the Sierra Morena; and is crossed from east to west by the rivers Douro, Tagus, and Guadiana.

Between these limits it is intersected by two important ranges of mountains running nearly east and west, the northern being the Guadarrama with its continuations, separating the valleys of the Douro and Tagus, and attaining in one of its peaks a height of 8,200 feet; and the southern, the Sierra de Toledo, and its continuations, between the Tagus and the Guadiana.

South of the Sierra Morena is the valley of the river Guadalquivir. Besides these ranges there is the chain of the Pyrenees, which, though partly belonging to France, presents its boldest front to Spain and has its loftiest summits within it. The highest peak in this range is La Maladetta, or Pic de Netou; but the highest peak in Spain is Mulhacén, belonging to the Sierra Nevadas in the south.

The latter chain possesses some of the wildest scenery in Europe.

Rivers.—The chief rivers enter the Atlantic, but in the northeast is the Ebro, a tributary of the Mediterranean. The Douro, Tagus, and Guadiana belong partly to Portugal. The lakes are few and unimportant.

Cities.—There are two cities with over 400,000 inhabitants, Madrid and Barcelona; others of importance are Valencia, Seville, Malaga, and Murcia.

People.—The people of Spain are of very mixed origin, the most ancient inhabitants, the Iberians (now represented probably by the Basques or Biscayans of the northeast), being afterward mingled with Celts, Phenicians, and Carthaginians, Roman colonists, Goths, Jews, and Arabs or Moors. They are generally of medium height and of spare habit, with black hair, dark eyes, and sallow complexion.

Sweden, a kingdom in the north of Europe, forms with Norway the great Scandinavian peninsula. It consists of the three great divisions of Svealand, or Sweden proper, in the middle, Götland, or Gothland, in the south, and Norrland in the north.

Surface.—The country may be generally described as a broad plain sloping southeastward from the Kjölen mountains to the Baltic. The only mountainous districts adjoin Norway; the peaks sink in altitude from 7,000 to 3,800 feet. Immediately south of this point a subsidiary chain strikes off to the southeast, and, threading the lake region of central Sweden, swells out beyond into a table-land with a mean elevation of 850 feet and maximum of 1,240 feet. Fully two-thirds of the entire surface lies lower than 800 feet, and one-third lower than 300 feet, above sea-level.

Rivers and Lakes.—The rivers and lakes are very numerous. To the Baltic basin belong the Tornea, the Lulea, Umea, the Angermann, the Liusne, and the Dal. The principal rivers belonging to the basin of the German Ocean are the Klar and the Göta. In general the rivers are useless for navigation, and the chief natural means of internal communication are the lakes, the chief of which are Lake Wener (area, 2,014 square miles), Lake Wetter (715 square miles), and Lake Mälar, which has the capital on its shores. By canal, lake, and river there is an inland waterway—the Göta canal—from the Kattegat to the Baltic.

Climate and Animals.—There is hardly any spring or autumn intervening between the heat of summer and the cold of winter, which in the north lasts for nine, and in the south for seven months. The extremes of heat and cold are much greater than in Britain, but on the whole the climate is eminently favorable to health. Among the larger wild animals are the wolf, bear, elk, red and roe deer, lynx, glutton, fox, and even the beaver. Among birds the most remarkable are eagles, the eagle-owl, and the capercailzie. The rivers and lakes are well stocked with salmon and trout.

Cities.—These include Stockholm (the capital), Gothenburg, Malmö, Norrköping, Gefle, Helsingborg, Karlskrona, Upsala, Jönköping, and Orebor; and twelve more exceeding 10,000.

People.—The inhabitants of Sweden, with the exception of the Laplanders, numbering about 7,000, and the Finns, numbering about 20,000, found only in the north, belong to the Scandinavian branch of the Teutonic family, and are characterized by a tall, robust build, light hair, blue eyes, and light complexions.

Switzerland is a confederation or republic of twenty-two cantons, three being divided into half-cantons, situated in the center of Europe between France, Germany, Austria, and Italy. The greatest length east to west is 216 miles, the width being 137 miles.

Surface.—The characteristic physical features of Switzerland are its lofty mountain ranges, enormous glaciers, magnificent lakes, and wild romantic valleys. The loftiest mountain chains belong to the Alps, and are situated chiefly in the south.

The central nucleus is Mount St. Gothard, which unites the principal watersheds of Europe, and sends its waters into four large basins—north by the Rhine to the German Ocean, southwest by the Rhone to the Mediterranean, southeast by the Po to the Adriatic, and east by the Danube to the Black Sea. In like manner it forms a kind of starting point for the loftiest ranges of the Alps—the Helvetian or Lepontine Alps, to which it belongs itself; the Pennine Alps, which include Mont Blanc, the culminating point of Europe, extending beyond the Swiss frontiers into Savoy; and the Rhaetian Alps, which stretch east and northeast across the canton of Grisons into the Tyrol.

North of the Alps is the chain of the Jura, and between the two is a sort of upland plain, or wide irregular valley, the most populous part of the country.

Rivers and Lakes.—Owing to the mountainous nature and inland position of the country none of the rivers acquire such a size within its limits as to become of much navigable importance. The Rhine, formed by two head-streams in the canton of Grisons, flows north into the Lake of Constance, and thence west to Schaffhausen, where it forms the celebrated falls of that name. Below these falls its navigation properly begins. Its principal affluent in Switzerland is the Aar.

The Rhone, rising in the Rhone glacier (Valais), flows northwest into the Lake of Geneva. Immediately after issuing from the lake at the town of Geneva it receives the Arve, and about 10 miles below quits the Swiss frontier. The waters which the Po receives from Switzerland are carried to it by the Ticino; those which the Danube receives are carried to it by the Inn.

The largest lakes, that of Geneva in the southwest and of Constance in the northeast, as well as that of Maggiore on the south side of the Alps, belong partly to other countries; but within the limits of Switzerland, and not far from its center, are Lake Neuchâtel, with Morat and Bienne in its vicinity, Thun with its feeder Brienz, Lucerne or Vierwaldstätter-see, Sempach, Baldegg, Zug, Zürich, and Wallenstätter-see. All these internal lakes belong to the basin of the Rhine.

Climate.—Owing to differences of elevation the climate is extremely variable even in the same localities.

Cities.—The largest towns are Zürich, Basel, Geneva, and Bern, the last being the federal capital.

People.—The Swiss are a mixed people as to race and language. German, French, Italian, and a corrupt kind of Latin called Rhaetian or Roumansch, are spoken in different parts. German is spoken by the majority of inhabitants in fifteen cantons, French in five, Italian in one (Ticino), and Roumansch in one (the Grisons).

Turkey is a Mohammedan state of southeastern Europe and western Asia, under the rule of a sultan. In Europe it occupies a considerable portion of the Balkan peninsula, but the larger part of Turkey is in Asia. A number of islands in the Ægean belong to Turkey. Crete and Samos are autonomous. Egypt also is nominally part of the Turkish dominions.

In 1908 Bulgaria declared its independence of Turkey, and Bosnia and Herzegovina were definitely annexed by Austria-Hungary.

Surface and Climate.—European Turkey is traversed in different directions by numerous mountain chains, but the main systems are the Balkan range, stretching from west to east between Bulgaria and eastern Roumelia to Cape Emineh on the Black Sea; Rhodope, south of the Balkans; the Shardagh and Grammos on the west, continued northwestward under various names into Bosnia and Herzegovina.

The most important river basin is that which drains into the archipelago or Ægean Sea, which receives the Vardar, the Struma, the Mista or Karasu, and the Maritza. The Adriatic and Ionian Seas receive from Turkey no rivers worthy of notice, and the Sea of Marmora receives only a few mountain torrents. The chief lakes are those of Skutari, Okhrida, Janina, Prespa, and Takhyno.

There are several plains remarkable for their fertility and beauty. The climate is Mediterranean, with subtropical rains and summer droughts. Temperature is very variable, and owing to the bitter northeast wind is colder than that of Italy or Spain, which are in the same latitude.

Cities.—Chief towns are Constantinople, Salonica, and Adrianople.

Turkey in Asia.—Comprises the peninsula of Asia Minor, the country intersected by the Euphrates and the Tigris, the mountainous region of Armenia between their upper courses and the Black Sea, the ancient lands of Syria and Palestine, and the coast strips of Arabia along the Red Sea and Persian gulf.

Omitting Arabia, the country consists mainly of (1) a high plateau traversed by the mountains of Taurus and Anti-Taurus, and stretching from the archipelago to the borders of Persia; (2) a plateau of less elevation and extent (Syria and Palestine) traversed by the double range of Lebanon; and (3) the extensive plain of Mesopotamia on the Lower Tigris and Euphrates.

Palestine includes the sanjak (or province) of Jerusalem—to which was added in 1906 the kaza of Nazareth—part of the vilayet of Beirut, and part of the vilayet of Syria. A number of Jewish colonies originally founded by Baron E. de Rothschild, but handed over in 1900 to the Jewish Colonization association, are now fairly flourishing in the rich plain of Sharon. There are also some German colonies. The cultivation of the orange is increasing largely. The population of Jerusalem is, approximately, 80,000, of Jaffa 40,000, of Gaza 35,000, and of Nazareth 20,000. The population of the province is increasing.

The chief towns in Asiatic Turkey are Smyrna, Damascus, Bagdad, Aleppo, and Beirut.

People.—In European provinces under immediate Turkish rule, Turks, Albanians, and Greeks, nearly equal in numbers, are 70 per cent of the population; besides Serbs, Bulgars, Roumans, Armenians, Magyars, Gypsies, Jews, and Circassians. In Asiatic Turkey the Turks come first, with four million Arabs, besides Greeks, Syrians, Kurds, Circassians, Armenians, Jews.

United States of America, the most important republic of the world, embraces nearly one-half of the habitable area of the North American continent, and about seven-eighths of its inhabitants.

Its area is more than three-fourths that of all Europe; including Alaska, it is almost equal to it; but its population is less than one-fifth of that of Europe. It occupies the central part of the continent from the Atlantic to the Pacific Ocean, and from Canada on the north to Mexico on the southt Its greatest length, east to west, is abou' 2,700 miles, and its greatest width, north to south, about 1,600 miles.

There are fifty-one political divisions. Of these, forty-eight are states enjoying the full privileges afforded by the federal constitution. The three territories—Alaska, Hawaii, and Porto Rico—all are organized but not yet admitted to statehood. The Philippines have a modified territorial government.

The following tabulations give numerous important facts concerning the states and territories:

STATES AND TERRITORIES OF THE UNION—

State or Territory and Area 1911	Origin and Meaning of Name	Date of Admission Into Union	Settlement: Where, When, By Whom	Original Territory From Which Derived	Population When Admitted or Acquired	Miles of Railroad 1910	Persons to Sq. Mile 1910
Alabama 51,998 sq. miles.	Indian—Here we rest.	1819	Mobile Bay, 1702, by the French.	Louisiana, Georgia and Mississippi and Alabama territories.	127,901	5,165.24	41.
‡Alaska 590,884 sq. miles.	*Al-ay-eska*, meaning "the great country."	1867	Three Saints, 1784, by the Russians.	Purchased from Russia in 1867 for $7,200,000.		302.92	0.1
Arizona 113,956 sq. miles.	Indian—meaning "sand hills."	1911	Tucson, 1580, by the Spanish.	New Mexico territory.	205,000	1,994.36	1.8
Arkansas 53,335 sq. miles.	From a tribe of Indians.	1836	Arkansas Post, 1685, by the French.	Louisiana and Louisiana, Missouri and Arkansas territories.	97,574	5,236.52	30.0
California 158,297 sq. miles.	From an old Spanish romance.	1850	San Diego, 1768, by the Spanish.	New Albion, Upper California.	92,597	7,528.86	15.2
Colorado 103,948 sq. miles.	Spanish—Red, or Ruddy.	1876	Auroria, 1859, by the Americans.	Louisiana and Mexican cession. Colorado territory.	175,000	5,454.43	7.7
Connecticut 4,965 sq. miles.	Indian—Long River.	*1788	Windsor, 1636, by the English.	North Virginia, New England.	237,964	1,004.74	231.3
Delaware 2,370 sq. miles.	In honor of Lord De La Warr.	*1787	Wilmington, 1637, by the Swedes.	New Sweden, New Netherlands, three lower counties on the Delaware.	59,096	336.64	103.0
District of Col. 70 sq. miles.	In honor of Columbus.	1791	Rome, 1663, by the English.	Ceded to government by Maryland and Virginia.		35.27	5,517.
Florida 58,666 sq. miles.	Spanish—Blooming	1845	St. Augustine, 1565, by the Spanish.	Florida territory.	87,445	4,254.05	13.7
Georgia 59,265 sq. miles.	In honor of George II.	*1788	Savannah, 1733, by the English.	One of the original thirteen states.	82,548	6,939.59	44.4
‡Hawaii 6,449 sq. miles.	From the native Owhyhee.		Honolulu, 1820, by the Americans.	Sandwich islands.	154,001	149.34	3.0
Idaho 84,313 sq. miles.	Indian—Gem of the Mountains.	1890	Cœur d'Alene, 1842, by the Americans.	Oregon, Washington, and Idaho territories.	84,385	2,134.30	3.0
Illinois 56,665 sq. miles.	Indian—The Men.	1818	Kaskaskia, 1682, by the French.	Northwest, Indian and Illinois territories.	55,211	11,850.91	100.7
Indiana 36,354 sq. miles.	Indian's Ground.	1816	Vincennes, 1702, by the French.	Northwest and Indiana territories.	147,178	7,382.55	75.2
Iowa 56,147 sq. miles.	Indian—Drowsy Ones.	1846	Dubuque, 1833, by the Americans.	Louisiana, Missouri, Michigan, Wisconsin, and Iowa territories.	182,000	9,751.94	40.0
Kansas 82,158 sq. miles.	Indian—Smoky Water.	1861	Leavenworth, 1854, by the Americans.	Louisiana, Kansas territory.	107,206	8,952.59	20.7
Kentucky 40,598 sq. miles.	Indian—Dark and Bloody Ground.	1792	Boonesboro, 1769, by the English.	Virginia.	73,677	3,467.43	57.0
Louisiana 48,506 sq. miles.	In honor of Louis XIV.	1812	New Orleans, 1718, by the French.	Louisiana, Territory of Orleans.	76,556	5,456.26	36.5
Maine 33,040 sq. miles.	The Main Land.	1820	Saco, 1623, by the English.	New England, Laconia, and Massachusetts.	298,335	2,165.66	24.8
Maryland 12,327 sq. miles.	In honor of Queen Henriette Maria.	*1788	St. Mary's, 1632, by the English.	One of the original states.	319,728	1,445.21	130.5
Massachusetts 8,266 sq. miles.	The Place of Great Hills.	*1788	Plymouth, 1620, by the English.	North Virginia, New England, Massachusetts Bay.	378,787	2,116.10	418.8
Michigan 57,980 sq. miles.	Indian—Great Lake.	1837	Sault Ste. Marie, 1668, by the French.	Northwest, Indiana, and Michigan territories.	212,267	9,058.85	48.0
Minnesota 84,682 sq. miles.	Indian—Cloudy Water.	1858	St. Paul, 1838, by the Americans.	Louisiana and Northwest and Minnesota territories.	172,793	8,568.30	25.7
Mississippi 46,865 sq. miles.	Indian—Great River, or Father of Waters.	1817	Biloxi, 1699, by the French.	Louisiana and Georgia, Mississippi territory.	75,448	4,397.64	38.8
Missouri 69,420 sq. miles.	Indian—Great Muddy.	1821	St. Genevieve, 1755, by the French.	Louisiana and Louisiana and Missouri territories.	66,586	8,045.47	47.9
Montana 146,572 sq. miles.	Spanish—A Mountain.	1889	Yellowstone River, 1809, by the Americans.	Louisiana and Nebraska, Idaho, Dakota and Montana territories.	175,000	4,138.10	2.6
Nebraska 77,520 sq. miles.	Indian—Shallow Water.	1867	Bellevue, 1847, by the Americans.	Louisiana, Nebraska territory.	122,993	6,015.02	15.5
Nevada 110,690 sq. miles.	Spanish—Snow-covered.	1864	Genoa, 1850, by the Americans.	Upper California and Utah and Nevada Territories.	35,000	2,138.23	0.7
New Hampshire 9,341 sq. miles.	Hampshire, England.	*1788	Portsmouth, 1623, by the English.	North Virginia, New England, Laconia.	141,885	1,248.86	47.7
New Jersey 8,224 sq. miles.	In honor of governor of Jersey Island.	*1787	Elizabethtown, 1617, by the Dutch.	New Netherland.	184,139	2,255.79	337.7
New Mexico 122,634 sq. miles.		1911			330,000	3,003.96	2.7
New York 49,204 sq. miles.	In honor of Duke of York.	*1788	New York, 1614, by the Dutch.	New Netherland.	340,120	8,448.18	191.2
North Carolina 52,426 sq. miles.	In honor of Charles II.	*1789	Albemarle Sound, 1653, by the English.	Albemarle colony.	393,751	4,860.24	45.3
North Dakota 70,837 sq. miles.	Indian—Allied.	1889	Pembino, 1859, by the Americans.	Louisiana, Minnesota and Nebraska and Dakota territories.	182,000	4,200.30	8.2

*Original Thirteen States. ‡Organized Territories.

ISTORICAL, GEOGRAPHICAL AND INDUSTRIAL

Chief Productions	Highest and Lowest Altitudes Feet	Public Lands Acres	Motto and Meaning State Flower	Popular Name of State and People
rn, oats, wheat, rice, cotton, sugar, iron, lumber, manufactures, potatoes.	Cheoha Mt. 2,407 Venetia 7	108,210	*Here we rest.* Golden-rod.	**Ala.** "Lizards."
als, salmon, gold, copper, silver, lumber, tin, lead, coal.	Mt. McKinley 20,464 Umga Islet 150	368,914,735	*No motto.*	**‡Alaska.**
pper, gold, silver, alfalfa, fruits, live stock, wheat, barley.	San Francisco Mt. 12,794 Yuma 142	41,491,369	*Ditat deus* (Founded by God). Sequoia cactus.	**Arizona.**
tton, lumber, corn, oats, wheat, fruits, wool, coal, tobacco.	Magazine Mt. 2,800 Camden 71	512,705	*Regnat populi* (The people rule). Apple blossom.	**Ark.** Bear; "Toothpicks."
ld, silver, copper, lead, petroleum, borax, lumber, fruits, wine, olives, beet sugar.	Mt. Whitney 14,502 Death Valley —276	24,864,884	*Eureka* (I have found it). California poppy.	**Cal.** Golden; "Gold Hunters."
ld, silver, coal, copper, vegetables, fruits, live stock, wheat, beet sugar, oats, corn.	Mt. Elbert 14,436 Holmesville 3,291	21,726,192	*Nil sine numine* (Nothing without providence). Columbine.	**Colo.** Centennial; "Rovers."
anufactures, woolen, cotton, notions; tobacco, iron, granite cereals.	Bear Mountain 2,355 New Haven 6	.....	*Qui transtulit sustinet* (He who transplanted still sustains). Mountain laurel.	**Conn.** Land of Steady Habits; Nutmeg; "Wooden Nutmegs."
rn, wheat, tomatoes, fruits, manufactures, leather, iron, steel, machinery.	Brandywine 440 Delaware City 4	.....	*Liberty and independence.* Peach blossom.	**Del.** Blue Hen; Diamond; "Blue Hens."
our mills, manufactures.	Ft. Reno 421 Navy Yard 4	.....	*Justitia omnibus* (Justice to all).	**District of Col.**
uits, vegetables, tobacco, rice, cotton, lumber, turpentine, resin, fish, phosphate.	Mt. Pleasant 301 Cleveland 3	453,009	*In God is our trust.* Orange blossom.	**Fla.** Flower; "Fly-up-the-Creeks."
tton, corn, rice, oats, tobacco, oysters, peaches, melons, marble, clay; cotton goods, lumber, fertilizers, tar.	Brasstown Bald. 4,768 Brunswick 14	.....	Obverse: *Wisdom, justice, moderation.* Reverse: *Agriculture and commerce.* Cherokee rose.	**Ga.** Empire State of the South; "Buzzards;" "Crackers."
gar, fruits, rice, coffee, hides, wool, honey, sisal.	Mt. Mauna Kea 13,805	.....	.....	**‡Hawaii.**
ld, silver, copper, lead, lumber, flour, wheat, oats, barley, live stock.	Hyndman Peak 12,078 Lewiston 738	24,743,804	*Salve* (Hail). Syringa.	**Idaho.**
rn, wheat, oats, potatoes, hay, live stock, wool, meat, manufactures.	Charles Mount 1,257 Brooklyn 284	.....	*National union, state sovereignty.* Violet.	**Ill.** Prairie; "Suckers," "Illini."
rn, wheat, tobacco, vegetables, fruits, wool, coal, clay, flour, machinery.	Carlos 1,208 Evansville 318	.....	*No motto.* Corn.	**Ind.** Hoosier; "Hoosiers."
rn, wheat, oats, potatoes, hay, live stock, butter, coal, lumber, poultry.	Waneta 1,800 Primquar 477	.....	*Our liberties we prize and our rights we will maintain.* Wild rose.	**Iowa.** Hawkeye; "Hawkeyes."
rn, wheat, hay, live stock, fruits, coal, petroleum, salt, meats, Kaffir corn.	West Boundary 4,135 Kings 730	137,180	*Ad astra per aspera* (To the stars through difficulties). Sunflower.	**Kan.** Sunflower; "Jayhawkers."
bacco, hemp, wheat, cotton, live stock, lumber, coal, sorghum, flour.	Big Black Mt. 4,100 Columbus 270	.....	*United we stand, divided we fall.* Golden-rod.	**Ky.** Blue Grass; Dark and Bloody Ground; "Corncrackers."
tton, corn, rice, sugar, lumber, oysters, salt, sulphur.	New Arcadia 359 Port Hickory —8	88,911	*Union, justice, and confidence.* Magnolia.	**La.** Creole; Pelican; "Creoles."
ay, grains, dairying, potatoes, wool, granite, ice, lumber, apples, paper.	Mt. Katahdin 5,268 Eastport 5	.....	*Dirigo* (I direct). Pine cone.	**Maine.** Pine Tree; Lumber; "Foxes."
heat, hay, corn, vegetables, fruits, oysters, coal, wool, canned fruits, vegetables.	Gt. Backbone Mt. 3,400 Annapolis 2	.....	*Fatti maschii, parole femine* (Manly deeds, womanly words.) Golden-rod.	**Md.** Old Line; "Crawthumpers."
anufactures (woolen, cotton), boots, shoes, fish, tobacco, granite, marble.	Greylock 3,505 Boston —5	.....	*Ense petit placidam sub libertate quietem* (With the sword she seeks calm peace under liberty).	**Mass.** Bay; "Beaneaters."
rn, wheat, oats, hay, fruits, vegetables, iron, copper, clay, lumber, manufactures.	Porcupine Mt. 2,023 Rockwood 576	107,890	*Si quæris peninsulam amœnam, circumspice* (If you seek a beautiful peninsula, behold it here). Apple blossom.	**Mich.** Wolverine; "Wolverines."
rn, wheat, oats, barley, flaxseed, wool, live stock, flour, iron, lumber, dairying.	Misquah Hills 2,400 Winona 606	1,563,302	*L'étoile du nord* (The star of the north). Moccasin.	**Minn.** North Star, Gopher; "Gophers."
tton, corn, wheat, oats, potatoes, rice, tobacco, oysters, shrimps.	Holly Springs 602 Claiborne 4	47,058	*No motto.* Magnolia.	**Miss.** Bayou; "Tadpoles."
rn, wheat, oats, rye, cotton, swine, honey, zinc, lead, tobacco, meats.	Cedar Gap 1,800 Maywood 140	2,510	*Salus populi suprema lex esto* (The welfare of the people is the supreme law). Golden-rod.	**Mo.** "Pukes."
heat, wool, live stock, fruit, oats, barley, lumber, copper, lead, silver, coal.	Granite Peak 12,834 Yakt 1,845	36,015,943	*Oro y plata* (Gold and silver). Bitter root.	**Mont.** Mountain; "Bug-eaters;" "Stubtoes."
rn, wheat, oats, live stock, hay, chicory, sugar beets, fruits, potatoes.	Lawton 5,945 Brownville 875	1,879,486	*Equality before the law.*	**Neb.**
old, silver, copper, zinc, wool, live stock, lumber, borax.	Wheeler Peak 13,058 Saratoga Springs 264	56,474,688	*All for our country.*	**Nev.** Silver; "Sage Hens."
ay, corn, potatoes, oats, apples, granite, mica, manufactures.	Mt. Washington 6,290 Hampton Falls 9	.....	*No motto.*	**N. H.** Granite; "Granite Boys."
arket garden crops, cereals, fruits, fisheries, manufactures, textiles, machinery.	High Point 1,799 Crystal Lake 2	.....	*No motto.*	**N. J.** Jersey Blue; "Jersey Blues," "Clam catchers."
old, silver, fruits, vegetables, live stock, wool, lumber, copper, coal, turquoise.	Truchas Peak 13,306 Baldy Peak 2,661	36,454,692	*Crescit eundo* (It increases by going).	**New Mexico.**
arket garden crops, fruits, corn, wheat, dairying, manufactures, clothing, textiles, books, magazines, papers.	Mt. Marcy 5,344 Albany 5	.....	*Excelsior* (Higher).	**N. Y.** Empire; "Knickerbo
otton, corn, tobacco, wheat, shad, oysters, lumber, mining.	Mt. Mitchell 6,711 Edenton Bay 0	.....	*Esse quam videri.* (To be, rather than to seem). Rose.	**N. C.** Old pentine
heat, oats, barley, flaxseed, live stock, wool, minerals.	Summit 3,500 Bowesmont 800	1,410,225	*Liberty and union, now and forever, one and inseperable.* Wild rose.	**N. D.** S "Tuc

STATES AND TERRITORIES OF THE UNION—

State or Territory and Area 1911	Origin and Meaning of Name	Date of Admission Into Union	Settlement: Where, When, By Whom	Original Territory From Which Derived	Population When Admitted or Acquired	Miles of Railroad 1910	Persons to Sq. Mile 1910
Ohio 41,040 sq. miles.	Indian—Beautiful River.	1803	Marietta, 1788, by the Americans.	Northwest territory.	45,365	9,079.19	117.0
Oklahoma 70,057 sq. miles.	Indian—Beautiful Land.	1907	Guthrie, 1890, by the Americans.	Indian and Oklahoma territories.	1,414,042	5,785.06	23.9
Oregon 96,699 sq. miles.	Spanish—WildMarjoram.	1859	Astoria, 1811, by the Americans.	Oregon territory.	52,566	2,159.55	7.0
Pennsylvania 45,126 sq. miles.	Latin—Penn's Woods.	*1787	Chester, 1638, by the Swedes.	Original state.	434,373	11,205.89	171.0
‡Philippines 115,026 sq. miles.	In honor of Philip II.	.....	Cebu, 1565, by the Spanish.	Archipelago de San Lazaro.	7,000,000	.....	66.0
Porto Rico 3,435 sq. miles.	Spanish—Rich Port.	.....	San Juan, 1510, by the Spanish.	.....	953,243	.....	
Rhode Island 1,248 sq. miles.	Rhodes, an island in the Ægean Sea.	*1790	Providence, 1636, by the English.	Providence and Rhode Island plantations.	68,825	212.54	508.5
South Carolina 30,989 sq. miles.	In honor of Charles II.	*1788	Ashley River, 1670, by the English.	Carteret colony.	249,073	3,397.37	49.7
South Dakota 77,615 sq. miles.	Indian—Allied..	1889	Southeast part, 1859, by the Americans.	Louisiana, Minnesota, and Nebraska and Dakota territories.	328,808	3,947.65	7.6
Tennessee 42,022 sq. miles.	Indian—River with the Great Bend.	1796	Fort Loudon, 1757, by the English.	North Carolina, territory south of the Ohio river.	35,791	3,761.03	52.4
Texas 265,896 sq. miles.	From tribe of Indians.	1845	San Antonio, 1692, by the Spanish.	.....	212,592	13,520.64	14.8
Utah 84,990 sq. miles.	Indian—Mountain Dwellers.	1896	Salt Lake City, 1847, by the Americans.	Mexican cession, Utah territory.	207,905	1,956.84	4.5
Vermont 9,564 sq. miles.	French — Green Mountain.	1791	Fort Dummer, 1724, by the English.	New Netherland, New Hampshire grants.	85,425	1,088.27	39.0
Virginia 42,627 sq. miles.	In honor of Elizabeth, the virgin queen.	*1788	Jamestown, 1607, by the English.	South Virginia.	748,308	4,486.64	51.2
Washington 69,127 sq. miles.	After George Washington, first President of United States.	1889	Columbia River, 1811, by the English.	Oregon and Washington territories.	349,390	4,650.63	17.1
West Virginia 24,170 sq. miles.	From Virginia.	1863	Berkeley County, 1726?, by the Americans.	Virginia.	376,688	3,502.40	50.8
Wisconsin 56,066 sq. miles.	Indian—Wild Rushing Channel.	1848	Green Bay, 1745, by the French.	Northwest, Illinois, Michigan and Wisconsin territories.	305,391	7,444.83	42.2
Wyoming 97,914 sq. miles.	Indian—Extensive Plain.	1890	Cheyenne, 1867, by the Americans.	Louisiana (chiefly), Nebraska, Dakota, Idaho, and Wyoming territories.	60,705	1,618.41	1.5

*Original Thirteen States. ‡Organized Territories.

POLITICAL AND STATISTICAL

States and Population 1910	Capitals and Population 1910	Requirements as to Citizenship	Previous Residence Required: In State	In County	In Town	In Precinct	Persons Excluded From Suffrage	Governors: Salaries	L'gth Term Yrs.
Alabama Pop. 2,138,093	Montgomery Pop. 38,136	Citizen of United States or alien who has declared intentions.	2 years	1 year	3 mos.	3 mos.	Convicted of treason or other felonies, idiots or insane.	$5,000	4
Arizona Pop. 204,354	Phoenix Pop. 11,134	Citizen of United States by nativity or naturalization.	1 year	30 days	.....	30 days	Idiot, insane, felon, under guardianship.	3,500	4
Arkansas Pop. 1,574,449	Little Rock Pop. 45,941	Citizen of United States or alien who has declared intentions.	1 year	6 mos.	30 days	30 days	Idiots, insane, convicted of felony, failure to pay poll-tax, U. S. soldiers, or marines.	4,000	2
California Pop. 2,377,549	Sacramento Pop. 44,696	Citizen by nativity, naturalization (90 days prior to election), or treaty of Queretaro.	1 year	90 days	.....	30 days	Chinese, idiots, insane, embezzlers of public moneys, convicted of infamous crimes.	10,000	4
Colorado Pop. 799,024	Denver Pop. 213,381	Citizen, native or naturalized (intentions declared), male or female who is duly registered.	1 year	90 days	30 days	10 days	While confined in public prison, under guardianship, *non compos mentis*, insane.	5,000	2
Connecticut Pop. 1,114,756	Hartford Pop. 98,915	Citizen of United States, who can read English language.	1 year	.....	6 mos.	.....	Convicted of heinous crime, unless pardoned.	4,000	2
Delaware Pop. 202,322	Dover Pop. 3,720	Citizen who shall have paid a registration fee of $1.00.	1 year	3 mos.	.....	30 days	Insane persons and paupers, persons convicted of felony, idiots.	4,000	4
District of Col. Pop. 331,069	Washington Pop. 331,069	District is without suffrage.	.....	.....	.....	.....	District is governed by three commissioners appointed by the President.	6,000	3
Florida Pop. 752,619	Tallahassee Pop. 5,018	Citizen of United States.	1 year	6 mos.	.....	30 days	Idiots, duelists, convicted of felony or any infamous crime.	5,000	4
Georgia Pop. 2,609,121	Atlanta Pop. 154,839	Citizen of United States who can read and has paid all his taxes since 1877.	1 year	6 mos.	.....	.....	Convicted of felony, bribery or larceny, unless pardoned, idiots, and insane, delinquent taxpayer.	5,000	2
Idaho Pop. 325,594	Boise City Pop. 17,358	Citizen of United States, male or female.	6 mos.	30 days	3 mos.	10 days	Idiots, insane, convicted of felony, bigamists, polygamists, under guardianship, Chinese, Indians.	5,000	2
Illinois Pop. 5,638,591	Springfield Pop. 51,678	Citizen of United States.	1 year	90 days	30 days	30 days	Convicted of felony or bribery in elections, unless restored to citizenship.	12,000	4
Indiana 2,700,876	Indianapolis Pop. 233,650	Citizen, or alien who has declared intention and resided one year in United States.	6 mos.	60 days	60 days	30 days	United States soldiers, sailors, and marines, and persons convicted of infamous crime.	8,000	4
[illegible]771	Des Moines Pop. 86,368	Citizen of United States.	6 mos.	60 days	10 days	10 days	Idiots, insane, convicted of infamous crime, U. S. soldiers.	6,800	2
[illegible]	Topeka Pop. 43,684	Citizen of United States or alien who has declared intention.	6 mos.	30 days	30 days	10 days	Convicted of treason or felony, insane, under guardianship.	5,000	2
[illegible]	Frankfort Pop. 10,465	Citizen of United States.	1 year	6 mos.	60 days	60 days	Convicted of treason, felony, or bribery in an election, idiots, and insane.	6,500	4

HISTORICAL, GEOGRAPHICAL AND INDUSTRIAL—Continued

Chief Productions	Highest and Lowest Altitudes Feet		Public Lands Acres	Motto and Meaning State Flower	Popular Name of State and People
orn, wheat, oats, hay, potatoes, fruits, tobacco, live stock, wool, dairying, coal, petroleum, salt, iron, steel, machinery, flour.	Bellefontaine Palestine	1,540 437	.....	*No motto.* Carnation.	**Ohio.** Buckeye; "Buckeyes."
orn, wheat, oats, cotton, flax, live stock, petroleum, minerals.	West Beaver Co. Appalachia	5,000 411	5,007	*Labor omnia vincit* (Labor conquers everything). Mistletoe.	**Okla.** Sooner.
umber, live stock, wheat, hay, fruits, hops, wool, salmon, gold, silver, paper making.	Mt. Hood North Sands	11,225 5	17,580,573	*The union.* Oregon grape.	**Ore.** Beaver, Sunset; "Webfeet."
Manufactures, steel, machinery, textiles, coal, coke, petroleum, natural gas, iron, grains, wool, leather.	Blue Knob Philadelphia	3,136 9	.....	*Virtue, liberty, and independence.*	**Pa.** Keystone; "Pennanites," "Leather-heads."
acao, coffee, tobacco, cotton, hemp, cocoanuts, corn, sugar, rice, timber, dyewoods.	Mt. Davao	10,312	.....	.....	**‡Philippines.**
offee, sugar, tobacco, cotton, citrus fruits, bananas, pineapples, salt.		3,000	.....	.....	**Porto Rico.**
Manufactures, worsted, cotton, jewelry, machinery, rubber, minerals.	Durfee Hill Newport Depot	805 6	.....	*Hope.* The violet.	**R. I.** Little Rhody; "Gun-flints."
otton, wheat, corn, oats, tobacco, rice, oysters, turpentine, lumber, phosphates.	Rich Mt. Port Royal	3,569 5	.....	*Dum spiro, spero. Spes* (While I breathe, I hope. Hope).	**S. C.** Palmetto; "Weasels."
orn, wheat, oats, flax, potatoes, live stock, wool, gold, silver, tin, dairying.	Harney Peak Big Stone Lake	7,240 962	4,562,804	*Under God the people rule.* Anemone patens.	**S. D.** Coyote. "Swinge Cats."
orn, wheat, cotton, potatoes, tobacco, live stock, coal, iron, marble, lumber.	Mt. Guyot Memphis	6,636 117	.....	*Agriculture, commerce.*	**Tenn.** Volunteer; "Butternuts," "Whelps."
otton, corn, oats, wheat, rice, sugar, live stock, wool, fruits, lumber, petroleum, coal.	El Capitan Galveston	8,690 4	.....	*No motto.* Blue bonnet.	**Texas.** Lone Star; "Beef-heads."
old, silver, copper, lead, coal, vegetables, fruits, sugar, wheat, oats, live stock, wool.	Gilbert Peak Washington	13,687 2,720	35,955,554	*Industry.* Sego lily.	**Utah.**
ay, cereals, potatoes, lumber, marble, dairying, maple sugar, manufactures, wood pulp.	Mt. Mansfield Lake Champlain	4,406 96	.....	*Freedom and unity.* Red clover.	**Vt.** Green Mountain; "Green Mountain Boys."
orn, wheat, oats, tobacco, potatoes, cotton, oysters, coal, iron, cotton manufacture.	Rogers Mt. Hampton	5,719 3	.....	Obverse: *Sic semper tyrannis* (Ever so to tryants). Reverse: *Perseverando* (By perseverance).	**Va.** Old Dominion; "Beagles."
umber, coal, wheat, barley, oats, fruits, salmon, live stock, minerals.	Mt. Rainier Tulalip	14,363 —4	3,196,059	*Al-Ki* (Bye-bye). Rhododendron.	**Wash.** Evergreen; "Chinook."
orn, oats, hay, wheat, fruits, cattle, sheep, lumber, coal, petroleum, natural gas, mining.	Spruce Mt. Harper's Ferry	4,860 277	.....	Obverse: *Montani semper liberi* (Mountaineers are always free men). Reverse: *Libertas et fidelitas* (Liberty and fidelity).	**W. V.** Panhandle "Panhandlers."
orn, oats, barley, wheat, hay, potatoes, fruits, beet sugar, dairying, iron, lumber.	Summit Lake Michigan Lake	1,940 579	14,460	*Forward.*	**Wis.** Badger; "Badgers."
ool, lumber, coal, copper, petroleum, minerals.	Grand Teton Old Riverdale	13,790 3,196	34,575,159	*Equal rights.*	**Wyoming.**

ACTS CONCERNING THE STATES

Legislatures: Ann. or Sen.	Limit of Term	Salaries of Members	Members' Terms: Senators	Members' Terms: Representatives	Electoral Vote 1908	Total Assessed Valuation	Per Cent Actual Value	Tax Rate per $1,000	Voting Population 1910: Total	Negroes	All Others*	Colored Population	Foreign Population	Native Population	Name of State
uad.	60 days	$4.00 per diem	4	4	11	$508,568,616	60	$6.50	513,111	213,923	245	827,307	14,592	1,814,105	**Alabama**
ien.	60 days	$4.00 per diem	2	2	0	93,562,749	60	7.00	74,051	764	8,190	1,848	24,233	98,698	**Arizona**
ien.	60 days	$6.00 per diem	4	2	9	327,023,552	40	6.75	395,824	111,365	158	366,856	14,289	1,297,275	**Arkansas**
ien.	60 days	$8.00 per diem	4	2	10	2,373,897,092	50–60	3.53	920,397	8,143	65,955	11,045	367,240	1,117,813	**California**
ien.	90 days	$1,000 per term	4	2	5	.....	.....	.....	271,648	4,283	2,762	8,570	91,155	448,545	**Colorado**
ien.	None	$300 per annum	2	2	7	922,071,592	100	.....	347,692	4,765	535	15,226	238,210	670,210	**Connecticut**
ien.	60 days	$5.00 per diem	4	2	3	86,306,694	60	.....	61,887	9,050	33	30,697	13,810	170,925	**Delaware**
nited ates a	States s legisla	Congress ture.	..	..	..	323,909,530	67	15.00	103,761	27,621	375	86,702	20,119	.....	**Dist. of Col.**
ien.	60 days	$6.00 per diem	4	2	5	136,032,089	50	7.50	214,195	89,659	225	230,730	23,832	504,710	**Florida**
nn.	50 days	$4.00 per diem	2	2	13	604,338,208	.....	5.00	620,616	266,814	233	1,034,813	12,403	2,203,928	**Georgia**
ien.	60 days	$5.00 per diem	2	2	3	.....	20	.....	110,863	328	3,066	293	24,604	137,168	**Idaho**
ien.	None	$1,000 per annum	4	2	27	2,158,648,450	33	3.50	1,743,182	39,983	2,157	85,078	966,747	3,854,803	**Illinois**
ien.	60 days	$6.00 per diem	4	2	15	1,776,132,096	60	3.33	822,434	20,651	352	57,505	142,121	2,374,341	**Indiana**
ien.	None	$550 to $1,150 per annum	4	2	13	624,391,061	25	3.30	663,672	5,528	315	12,693	305,920	1,925,933	**Iowa**
ien.	50 days	$3.00 per diem	[illegible]	2	10	2,752,097,452	100	12.50	508,529	17,931	716	52,006	126,685	1,343,810	**Kansas**
ien.	60 days	$5.00 per diem	4	2	13	828,275,022	65	5.00	603,454	75,694	99	284,706	50,249	2,096,925	**Kentucky**

States and Population 1910	Capitals and Population 1910	Requirements as to Citizenship	Previous Residence Required				Persons Excluded from Suffrage	Governors
			In State	In County.	In Town	In Precinct		Salaries
Louisiana Pop. 1,656,388	Baton Rouge Pop. 14,897	Citizen of United States able to read and write, or possessed of $300.	2 years	1 year	.....	6 mos.	Idiots, insane, felons under indictment, inmates of prison or charitable institution except soldiers' home.	$5,000
Maine Pop. 742,371	Augusta Pop. 13,211	Citizen of United States.	3 mos.	3 mos.	3 mos.	3 mos.	Paupers and Indians not taxed.	3,000
Maryland Pop. 1,295,346	Annapolis Pop. 8,609	Citizen of United States who can read English.	1 year	6 mos.	6 mos.	1 day	Felons not pardoned, lunatics, *non compos mentis*, bribery.	4,500
Massachusetts Pop. 3,366,416	Boston Pop. 670,585	Citizens who can read and write English.	1 year	6 mos.	6 mos.	6 mos.	Paupers (except U. S. soldiers) and persons under guardianship.	8,000
Michigan Pop. 2,810,173	Lansing Pop. 31,229	Citizen of United States or alien who declared intention 2 years and 6 months prior to November 8, 1894.	6 mos.	20 days	20 days	20 days	Indians with tribal relations, duelists, and accessories.	5,000
Minnesota Pop. 2,075,708	St. Paul Pop. 214,744	Citizen of United States who has been such for 3 months preceding election.	6 mos.	30 days	30 days	30 days	Convicted of treason or felony, unpardoned, under guardianship, insane, Indians lacking customs of civilization.	7,000
Mississippi Pop. 1,797,114	Jackson Pop. 21,262	Citizen of United States who can read or understand constitution.	2 years	1 year	1 year	1 year	Insane, idiots, Indians not taxed, felons, persons who have not paid taxes, bigamists.	4,500
Missouri Pop. 3,293,335	Jefferson City Pop. 11,850	Citizen of United States or alien who has declared intention not less than 1 year nor more than 5 before election.	1 year	60 days	60 days	20 days	Persons in poorhouses or asylums at public expense, those in prison, or convicted of infamous crime.	5,000
Montana Pop. 375,053	Helena Pop. 39,165	Citizen of United States.	1 year	30 days	30 days	30 days	Felons not pardoned, idiots, insane, U. S. soldiers, seamen, and marines, Indians.	5,000
Nebraska Pop. 1,192,214	Lincoln Pop. 43,973	Citizen of United States or alien who has declared intention 30 days before election.	6 mos.	40 days	30 days	10 days	Convicted of treason or felony, unless restored to civil rights, persons *non compos mentis*.	2,500
Nevada Pop. 81,875	Carson City Pop. 2,466	Citizen of United States.	6 mos.	30 days	30 days	30 days	Idiots, insane, unpardoned convicts, Indians, Chinese.	4,000
New Hampshire Pop. 430,572	Concord Pop. 21,497	Citizen of United States.	6 mos.	6 mos.	6 mos.	6 mos.	Paupers (except soldiers).	5,000
New Jersey Pop. 2,537,167	Trenton Pop. 96,815	Citizen of United States.	1 year.	5 mos.	.....	.....	Idiots, paupers, insane, convicted of crime, unless pardoned or restored by law.	10,000
New Mexico Pop. 327,301	Santa Fe Pop. 5,072	Citizen of United States.	6 mos.	3 mos.	30 days	30 days	Convicted of felony, unless pardoned, U. S. soldier, sailor, or camp follower, Indians.	5,000
New York Pop. 9,113,614	Albany Pop. 100,253	Citizen who shall have been a citizen for ninety days prior to election.	1 year	4 mos.	30 days	30 days	Offenders against elective franchise rights, guilty of bribery, betting on elections, and persons convicted of bribery or infamous crime and not restored to citizenship by the Executive.	10,000
North Carolina Pop. 2,206,287	Raleigh Pop. 19,218	Citizen of United States who can read.	2 years	6 mos.	.....	4 mos.	Convicted of felony, or infamous crime, idiots, lunatics.	5,000
North Dakota Pop. 577,056	Bismarck Pop. 5,443	Citizen of United States and civilized Indian.	1 year	6 mos.	.....	90 days	Under guardianship, persons *non compos mentis*, or convicted of felony and treason, unless restored to civil rights.	5,000
Ohio Pop. 4,767,121	Columbus Pop. 181,548	Citizen of United States.	1 year	30 days	20 days	20 days	Idiots, insane and felons, persons in U. S. military and naval service on duty in Ohio.	10,000
Oklahoma Pop. 1,657,155	Oklahoma City Pop. 64,205	Citizen of United States and Native Indians.	6 mos.	60 days	60 days	30 days	Felons, idiots, insane.	4,500
Oregon Pop. 672,765	Salem Pop. 14,094	Citizen of United States, male or female, or alien who has declared intention more than 1 year prior to election.	6 mos.	None	None	None	Idiots, insane, convicted of felony, Chinese, U. S. soldiers and sailors.	5,000
Pennsylvania Pop. 7,665,111	Harrisburg Pop. 64,186	Citizen of United States at least 1 month and if 22 years old or more must have paid tax within 2 years.	1 year	.....	.....	2 mos.	Convicted of perjury and fraud as election officers, or bribery of voters, nontaxpayers.	10,000
Rhode Island Pop. 542,610	Providence Pop. 224,326	Citizen of United States.	2 years	.....	6 mos.	.....	Paupers, lunatics, felons.	3,000
South Carolina Pop. 1,515,400	Columbia Pop. 26,319	Citizen of United States.	2 years	1 year	4 mos.	4 mos.	Felons, bribery, unless pardoned, insane, paupers.	3,500
South Dakota Pop. 583,888	Pierre Pop. 3,656	Citizen of United States or alien who has declared intention, Indian who has severed tribal relations.	6 mos.	30 days	10 days	10 days	Under guardianship, insane, convicted of treason or felony unless pardoned, U. S. soldiers, seamen, and marines.	3,000
Tennessee Pop. 2,184,789	Nashville Pop. 110,364	Citizen of United States who has paid poll-tax of preceding year.	1 year	6 mos.	.....	.....	Convicted of bribery or other infamous offense.	4,000
Texas Pop. 3,896,542	Austin Pop. 29,860	Citizen of United States or alien who has declared intention 6 months prior to election.	1 year	6 mos.	6 mos.	.....	Idiots, lunatics, pauper, convicted of felony, United States soldiers, marines, and seamen.	4,000
Utah Pop. 373,351	Salt Lake City Pop. 92,777	Citizen of United States, male or female.	1 year	4 mos.	.....	60 days	Idiots, insane, convicted of treason or crime against elective franchise, unless pardoned.	4,000
Vermont Pop. 355,956	Montpelier Pop. 7,856	Citizen of United States.	1 year	3 mos.	3 mos.	3 mos.	Those who have not obtained the approbation of the local board of civil authority.	2,500
Virginia Pop. 2,061,612	Richmond Pop. 127,628	All persons who have paid state poll-taxes for the three preceding years; who served in time of war in the army or navy of the United States, of the Confederate states, or of any state.	2 years	1 year	1 year	30 days	Idiots, lunatics, paupers, felons.	5,000
Washington Pop. 1,141,990	Olympia Pop. 6,996	Citizen of United States, male or female, and all electors of territory prior to statehood.	1 year	90 days	30 days	30 days	Idiots, lunatics, convicted of infamous crimes, Indians not taxed.	6,000
West Virginia Pop. 1,221,119	Charleston Pop. 22,996	Citizen of the state.	1 year	6 mos.	60 days	.....	Paupers, idiots, lunatics, convicted of treason, felony, or bribery at elections, U. S. soldiers and sailors.	5,000
Wisconsin Pop. 2,333,860	Madison Pop. 25,531	Citizen of United States or alien who has declared intention, and civilized Indians.	1 year	10 days	10 days	10 days	Under guardianship, insane, convicted of crime or treason, betting on elections.	5,000
Wyoming Pop. 145,965	Cheyenne Pop. 11,320	Citizen of United States, male or female.	1 year	60 days	10 days	10 days	Idiots, insane, felons, unable to read state constitution in the English language.	4,000

CONCERNING THE STATES—Continued

Legislatures			Members' Terms		Electoral Vote, 1908	Total Assessed Valuation	Per Cent Actual Value	Tax Rate per $1,000	Voting Population, 1910			Colored Population	Foreign Population	Native Population	States
Ann. or Bien.	Limit of Term	Salaries of Members	Senators	Representatives					Total	Negroes	*All Others				
Bien.	60 days	$5.00 per diem	4	4	9	$529,419,463	...	$5.00	414,919	174,211	683	650,804	52,903	1,328,722	Louisiana
Bien.	None	$300 per annum	2	2	6	428,212,465	100	2.08	235,727	476	396	1,319	93,330	601,136	Maine
Bien.	90 days	$5.00 per diem	4	2	8	820,831,339	..	1.60	367,908	63,963	384	235,064	93,934	1,094,110	Maryland
Ann.	None	$750 per annum	4	1	16	4,770,558,822	....	....	1,021,669	12,591	2,647	31,974	846,324	1,959,022	Massachusetts
Bien.	None	$800 per annum	1	2	14	1,687,155,697	80	2 72	870,876	6,266	2,388	15,816	541,653	1,879,329	Michigan
Bien.	90 days	$500 per annum	4	2	11	1,222,430,377	36	2.70	642,669	3,390	2,376	4,959	505,318	1,246,076	Minnesota
Bien.	None	$400 per session	4	4	10	393,297,175	50–75	6.00	426,953	233,701	511	907,630	7,981	1,543,289	Mississippi
Bien.	70 days	$5.00 per diem	4	2	18	1,547,126,736	50	1.70	973,062	52,921	661	161,234	216,379	2,890,286	Missouri
Bien.	60 days	$10.00 per diem	4	2	3	309,673,699	50	2.50	155,017	851	5,433	1,523	67,067	176,262	Montana
Bien.	60 days	$5.00 per diem	2	2	8	412,138,607	20	5.00	353,626	3,225	1,486	6,269	177,347	888,953	Nebraska
Bien.	50 days	$8.00 per diem	4	2	3	73,856,142	....	....	40,026	229	3,165	134	10,093	32,242	Nevada
Bien.	None	$200 per annum	2	2	4	255,085,571	75	20.58	136,668	200	75	662	88,107	323,481	N. Hampshire
Ann.	None	$500 per annum	3	1	12	.....	....	....	774,702	28,601	1,258	69,844	431,884	1,451,785	New Jersey
Bien.	60 days	$4.00 per diem	2	2	..	62,860,852	20	11.00	94,637	644	5,260	1,610	13,625	181,685	New Mexico
Ann.	None	$1,500 per annum	2	1	39	9,821,620,552	80	None	2,836,773	45,877	7,515	99,232	1,900,425	5,368,469	New York
Bien.	60 days	$4.00 per diem	2	2	12	565,005,223	60	2.50	506,134	146,752	1,771	624,469	4,492	1,889,318	North Carolina
Bien.	60 days	$5.00 per diem	4	2	4	278,594,193	20	4.40	173,890	311	1,638	286	113,091	206,055	North Dakota
Bien.	None	$1,000 per annum	2	2	23	2,352,680,824	60	1.35	1,484,265	39,188	600	96,901	458,734	3,698,811	Ohio
Bien.	60 days	$6.00 per diem	4	2	7	860,000,000	100	2.50	447,266	36,841	15,048	18,831	15,680	769,853	Oklahoma
Bien.	40 days	$3.00 per diem	2	1	4	598,133,963	....	....	257,188	792	11,053	1,105	65,748	347,788	Oregon
Bien.	None	$1,500 per annum	4	2	34	5,769,777,327	....	....	2,309,026	64,272	2,157	156,845	985,250	5,316,865	Pennsylvania
Ann.	60 days	$5.00 per diem	1	1	4	511,960,122	....	1.80	163,834	3,067	355	9,092	134,519	294,037	Rhode Island
Ann.	40 days	$200 per annum	2	2	9	271,106,302	40	5.75	335,046	169,155	122	782,321	5,528	1,334,788	South Carolina
Bien.	60 days	$5.00 per diem	2	2	4	321,070,665	20	4.00	178,189	341	5,126	465	88,508	313,062	South Dakota
Bien.	75 days	$5.00 per diem	2	2	12	458,639,736	....	3.50	552,668	119,142	95	480,243	17,746	2,002,870	Tennessee
Bien.	None	$5.00 per diem	4	2	18	2,309,803,626	....	.40	1,003,357	166,398	981	620,722	179,357	2,869,353	Texas
Bien.	60 days	$4.00 per diem	4	2	3	146,204,050	60	5.00	104,115	568	3,098	672	53,777	222,972	Utah
Bien.	None	$4.00 per diem	2	2	4	188,493,546	....	....	113,506	975	18	826	44,747	298,894	Vermont
Bien.	60 days	$500 per session	4	2	12	579,565,539	....	3.50	623,532	159,593	280	660,722	19,461	1,834,723	Virginia
Bien.	60 days	$5.00 per diem	4	2	5	789,912,979	39	31.00	441,294	3,120	15,455	2,514	111,364	406,739	Washington
Bien.	45 days	$4.00 per diem	4	2	7	1,068,000,000	75	5.00	338,349	22,757	94	43,999	22,451	936,349	West Virginia
Bien.	None	$500 per annum	4	2	13	2,743,180,404	....	13.65	683,743	1,082	2,820	2,542	515,971	1,553,071	Wisconsin
Bien.	40 days	$7.00 per diem	4	3	2	186,560,916	75	2.67	63,201	1,325	2,156	940	17,415	75,116	Wyoming

*Includes Indians and Chinese, Japanese and other Asiatics.

Coast Line.—As compared with Europe the coast of the United States has few indenting bays or projecting peninsulas, though the Gulf of Mexico is of special climatic and commercial importance. Long Island sound, Delaware and Chesapeake bays, Albermarle and Pamlico sounds, the harbors of Charleston and Savannah, though not great geographical features, are of commercial importance. On the Pacific, Puget sound, the Bay of San Francisco, and the harbor of San Diego are almost the only noticeable breaks. Long Island is the largest of the islands.

Surface.—The two great mountain systems of North America, one along the western, the other near the eastern border, form the framework or skeleton of the physical structure.

Appalachian Region.—In the east are the Appalachian mountains, from whose eastern base a coast plain extends to the sea. Narrow in Maine, the system grows gradually wider, until in North Carolina it attains a width of 200 miles. The southern coast region seldom exceeds 100 feet above the sea. It has a sandy soil, and many large swamps near the coast. The middle elevated region is diversified by hills and valleys, and has a productive soil.

Mississippi Valley.—West of the Appalachian system and lying between it and the western highland is the central valley, forming part of the great continental depression which extends from the Arctic Ocean to the Gulf of Mexico. It is almost an absolute plain, rising gradually from the gulf toward the chain of great lakes in the north, and toward the mountains on the east and west. The only important departure from the level is the ridge of the Ozark mountains (500 to 2,000 feet), running from southern Missouri through northwestern Arkansas.

This great valley occupies about half the entire area of the United States, and the fertile prairies and bottom lands of the eastern and central portions make it the most important agricultural basin of the globe. From an irregular line west of the Mississippi river the land rises in an almost imperceptible slope till it reaches the base of the western plateau. Much of this region, known as the great plains, has a light rainfall, but affords admirable pasturage.

Rocky Mountain Region.—The western or Pacific system of mountains is a great plateau of 4,000 to 10,000 feet surmounted by a complex system of ranges, in its widest part more than 1,000 miles broad.

Of this region the Rocky mountains form the eastern and the Sierra Nevada and Cascade mountains and the Coast ranges the western border. In the ranges of central Colorado alone nearly forty of the summits have an altitude of more than 14,000 feet. In the Rocky mountains of Wyoming and Montana are the headwaters of the three great river systems of the United States—those of the Colorado, Columbia, and the Mississippi. Between the Wahsatch range and the lofty mountains in Colorado is a region furrowed by canyons or gorges, whose sides are nearly vertical; and the bed of the Colorado is in some places more than a mile and a quarter below the surface of the plateau.

American Desert.—Between the Wahsatch range and the Sierra Nevada lies the Great Basin, much of it an absolute desert.

Pacific Coast Region.—The Sierra Nevada and the Cascade range are topographically continuous. Most of the peaks of the Sierras are, however, of granite and metamorphic rock, while those of the Cascade range are volcanic. The greatest altitude is attained in Whitney; the sublimity of the scenery is justly celebrated. From 40 degrees there extends northward one of the most remarkable groups of extinct or faintly active volcanoes to be found anywhere in the world; the lava overflows in this region cover an area of upward of 200,000 square miles. The passage of the Columbia river is a grand canyon more than 3,000 feet in depth. North of the Great Basin, between the Cascade range and the Rocky mountains, is the northern or Columbian plateau. The Shoshone falls of the Snake river probably rank next to Niagara in grandeur. Between the Coast range and the Sierra Nevada and Cascade ranges is a series of broad valleys, in Oregon that of the Willamette, and in California those of the Sacramento and the San Joaquin.

Rivers and Lakes.—Besides the chain of great lakes which forms a part of the northern boundary, there are thousands of lakes in the New England states and in New York, nearly ten thousand in Minnesota, and numerous mountain lakes among the Cordilleras. The peculiar lacustrine character of the northern portion of the United States is undoubtedly a legacy of the glacial period.

The drainage areas may be broadly classified as the great lake or St. Lawrence, the Atlantic, the Pacific, and the Great Basin or interior systems of drainage.

The Atlantic system might be subdivided into two classes, one comprising the streams flowing directly to the sea, the other comprehending those of the central valley which discharge their waters into the Gulf of Mexico.

Among the rivers of the Atlantic slope are the Penobscot, Kennebec, Merrimac, Thames and Connecticut in New England, the Hudson, Delaware, Susquehanna, Potomac, James, Roanoke, Neuse, Cape Fear, Great Pedee, Santee, Savannah, Altamaha, and St. John's.

The Mississippi-Missouri, with its tributaries, the Ohio, Platte, Arkansas and Red rivers, is the chief stream of the central valley, and in length and extent of navigable water it surpasses all other rivers of the world. East of the Mississippi are the Mobile and Appalachicola, and to the west the Sabine, Brazos, and Rio Grande.

The Colorado, the Sacramento and San Joaquin, the Willamette and the Columbia are the chief rivers emptying into the Pacific.

CHIEF AMERICAN RIVERS

Name	Length Miles	Source	Mouth
Alabama	175	Junction of Coosa and Tallapoosa, Ala.	Mobile river.
Allegheny	450	Allegany county, N. Y.	Ohio river.
Androscoggin	140	Umbagog lake, Me.	Atlantic Ocean
Arkansas	2170	Rocky mountains, Colo.	Mississippi river
Black	126	Adirondack lakes, N. Y.	Lake Ontario
Black Warrior	300	Formed by Locust and Mulberry forks, Ala.	Tombigbee river
Brazos	750	Highlands, Texas	Gulf of Mexico
Cape Fear	250	Junction of Haw and Deep rivers, N. C.	Atlantic Ocean
Chattahoochee	430	Alleghany mountains, Ga.	Appalachicola R.
Chowan	250	Mott and Meherin, N. C.	Albemarle sound
Colorado	690	Llano Estacado, Texas.	Gulf of Mexico
Colorado	2000	Junction of Green and Grand rivers, Utah	Gulf of Colorado
Columbia	1400	Lewis' and Clark's fork	Pacific Ocean
Connecticut	410	Connecticut lake, Vt.	L. Island sound
Coosa	275	Junction of Oostenaula and Etowah rivers, Ga.	Alabama river
Cumberland	560	Junction of Poor and Straight forks, Ky.	Ohio river.
Delaware	300	Catskill mountains, N. Y.	Delaware bay
Des Moines	400	Lake Shetek, Minn.	Mississippi river
Flint	275	Alleghany mountains, Ga.	Appalachicola R.
Genesee	145	Allegany county, N. Y.	Lake Ontario
Gila	650	Sierra Madre mountains, N. M.	Colorado river
Grand	200	Southern Iowa	Missouri river
Grand	280	Highlands, Mich.	Lake Michigan
Grande del Norte	1800	Rocky mountains, Colo.	Gulf of Mexico
Great Pedee	375	Yadkin river, N. C.	Atlantic Ocean
Green	520	Cumberland mountains, Ky.	Ohio river
Housatonic	150	Taghanic mountains, Mass.	L. Island sound
Hudson	280	Lake Sanford, Adirondack mountains, N. Y.	New York bay
Illinois	435	Des Plaines river, Wis.	Mississippi river
James	450	Jackson and Pastur rivers, Va.	Chesapeake bay
Kalamazoo	200	Highlands, Mich.	Lake Michigan
Kanawha	400	Junction of Greenbrier and New rivers, Va.	Ohio river
Kansas	600	Smoky Hill river, Kan.	Missouri river
Kaskaskia	320	Grand Prairie, Ill.	Mississippi river
Kennebec	160	Moosehead lake, Me.	Atlantic Ocean
Kentucky	300	"Forks" Cumberland mountains, Ky.	Ohio river
Lewis' Fork	750	Rocky mountains, Ore.	Columbia river
Menomonee	160	Junction Brule and Mequacumecum rivers, Wis.	Green bay
Merrimac	150	White mountains, N. H.	Atlantic Ocean
Minnesota	334	Eastern Dakota	Mississippi river
Mississippi	4200	Itasca lake, Minn.	Gulf of Mexico
Missouri		Rocky mountains, Mont.	Mississippi river
Mohawk	135	Oneida county, N. Y.	Hudson river
Monongahela	300	Rich mountains, W. Va.	Ohio river
Nebraska	1260	Junction of Sweetwater and North Fork, Wyo.	Missouri river
Neenah	180	Highlands, Wis.	Green bay
Neuse	250	Table-lands, N. C.	Pamlico sound
Ocmulgee	250	Alleghany mountains, Ga.	Altamaha river
Ohio	950	Junction of Alleghany and Monongahela rivers, Pa.	Mississippi river
Osage	460	Osage county, Kan.	Missouri river
Penobscot	270	East Seboeis lake, Me.	Atlantic Ocean
Potomac	380	Alleghany mountains, Md.	Chesapeake bay
Red	1600	Llano Estacado, Texas.	Mississippi river
Red (of the North)	700	Pine Lake, Minn.	Winnipeg lake
Roanoke	255	Dan and Staunton, Va.	Albemarle sound
Sabine	460	Highlands, Texas.	Gulf of Mexico
Sacramento	450	Sierra Madre mountains, Cal.	San Francisco bay
St. Croix	200	Ontonagon ridge, Wis.	Mississippi river
St. Francis	460	Highlands, Mo.	Mississippi river
St. John	230	Everglades, Fla.	Atlantic Ocean
St. Joseph	260	Highlands, Ind.	Lake Michigan
San Joaquin	350	Sierra Nevada mountains, Cal.	San Francisco bay
Santee	350	Junction of Wateree and Congaree, N. C.	Atlantic Ocean
Savannah	335	Alleghany mountains, S. C.	Atlantic Ocean
Scioto	200	Table-lands, Ohio.	Ohio river
Susquehanna	617		
East Branch	256	Otsego lake, N. Y.	Susquehanna R.
West Branch	208	Alleghany Mountains, N. Y.	Susquehanna R.
Main	153	Junction of east and west branches, Pa.	Chesapeake bay
Tallapoosa	175	Alleghany mountains, Ga.	Alabama river
Tennessee	1200	Alleghany mountains, N. C.	Ohio river
Tombigbee	475	Alleghany mountains, Miss.	Mobile river
Trinity	530	Highlands, Texas.	Gulf of Mexico
Wabash	520	Table-lands, Ohio.	Ohio river
Washita	450	Potean hills, Ark.	Red river
White	650	Boston mountains, Ark.	Arkansas river
Willamette	250	Cascade, Ore.	Columbia river
Wisconsin	400	Ontonagon ridge, Wis.	Mississippi river
Yazoo	540	Junction of Coldwater and Tallahatchee rivers, Miss.	Mississippi river
Yellowstone	1000	National park, Yellowstone lake	Missouri river
Yukon	2000	Eastern Alaska	Behring bay

limate.—The United States, stretching over such a vast area and having such great tracts of mountain and plain, must necessarily present a great variety of climate. The mean annual temperature ranges from under 40 degrees to 75 degrees. The isotherm of 55 degrees mean annual temperature crosses the center of the country from east to west, passing through St. Louis. Places in the latitude of New York and Chicago have nearly the same mean temperature for the year as the British Isles. The mean annual rainfall for the whole country is about 30 inches, but there is a great difference in this respect between different parts. The rainfall is most abundant on the northwest Pacific coast, on the gulf coast, and on the higher mountain ranges. On the great plains it is only 10 to 20 inches, and there are large desert stretches in the Rocky Mountain region with a rainfall of less than 10 inches.

NORMAL TEMPERATURE AND RAINFALL

States and Territories	Stations	Temperature: Mean: January	Temperature: Mean: July	Temperature: Extremes: Highest	Temperature: Extremes: Lowest	Mean Annual Precipitation Rain and Melted Snow (in.)
a	Birmingham	45	80	104	—10	49.5
	Mobile	50	80	102	— 1	62.0
	Montgomery	48	81	107	— 5	51.2
	Flagstaff	27	65	93	—22	23.0
riz	Phoenix	50	90	119	12	7.9
	Yuma	55	91	120	22	3.1
	Fort Smith	38	81	108	—15	41.3
rk	Little Rock	41	81	106	—12	49.9
	Fresno	45	82	115	20	9.7
	Los Angeles	54	70	109	28	15.6
	Red Bluff	45	82	115	18	25.0
al	Sacramento	46	72	110	19	20.1
	San Diego	54	67	101	32	10.0
	San Francisco	50	57	101	29	22.3
	Denver	29	72	105	—29	14.0
ol	Grand Jct.	25	79	104	—16	8.3
	Pueblo	29	74	104	—27	12.0
onn	New Haven	27	72	100	—14	47.2
. C	Washington	33	77	104	—15	43.5
	Jacksonville	54	81	104	10	53.2
	Jupiter	64	81	96	24	60.2
lorida.	Key West	69	84	100	41	38.7
	Pensacola	52	81	103	7	56.2
	Tampa	57	80	96	19	53.1
	Atlanta	42	78	100	— 8	49.4
eorgia	Augusta	46	80	105	3	47.9
	Savannah	50	80	105	8	50.3
aho	Boise	29	73	111	—28	12.7
	Pocatello	25	71	102	—20	12.9
	Cairo	35	79	106	—16	41.7
linois.	Chicago	24	72	103	—23	33.3
	Springfield	26	76	107	—24	37.0
ndiana.	Indianapolis	28	76	106	—25	41.5
	Des Moines	20	76	109	—30	32.4
owa	Dubuque	18	75	106	—32	34.0
	Keokuk	24	77	108	—27	35.1
	Concordia	24	78	110	—25	27.5
ansas.	Dodge	27	78	108	—26	20.8
	Wichita	30	79	107	—22	30.6
y	Louisville	34	79	107	—20	44.3
	New Orleans	53	81	102	7	57.4
a	Shreveport	46	82	110	— 5	45.7
	Eastport	20	60	93	—21	43.3
aine	Portland	22	68	103	—17	42.5
d	Baltimore	33	77	104	— 7	43.2
ass	Boston	27	71	104	—13	43.4
	Alpena	19	66	101	—27	33.2
	Detroit	24	72	101	—24	32.2
ich	Marquette	16	65	108	—27	32.6
	Port Huron	22	69	101	—25	30.6
	Duluth	10	66	99	—41	29.9
inn	Moorhead	3	69	102	—48	24.9
	St. Paul	12	72	104	—41	28.7
iss	Vicksburg	47	80	101	— 1	53.7
	Kansas City	26	78	106	—22	37.4
o	St. Louis	31	79	107	—22	37.2
	Springfield	31	76	106	—29	44.6
ont	Havre	14	68	108	—55	13.7
	Helena	20	67	103	—42	12.8
Mont	Kalispell	20	64	96	—34	16.9
	Miles City	14	73	111	—49	13.2
	North Platte	21	74	107	—35	18.9
Neb.	Omaha	20	76	107	—32	30.7
	Valentine	18	73	106	—38	22.5
Nevada	Winnemucca	29	72	104	—28	8.4
	Charlotte	40	79	102	— 5	49.2
N. C.	Hatteras	46	79	93	8	60.8
	Wilmington	46	79	103	5	51.0
	Bismarck	7	70	107	—44	17.6
N. Dak.	Williston	6	69	107	—49	15.1
N. H.	Concord	21	69	102	—35	40.1
N. J.	Atlantic City	32	72	99	— 7	46.8
	Cape May	34	73	96	— 7	40.8
N. Mex.	Roswell	39	79	110	—29	15.8
	Santa Fe	28	69	97	—13	14.5
	Albany	22	72	104	—24	36.4
	Binghamton	23	70	98	—26	32.9
N. Y.	Buffalo	25	70	95	—14	37.3
	New York City	30	74	100	— 6	44.6
	Oswego	24	70	100	—23	36.2
	Cincinnati	32	78	105	—17	38.3
Ohio.	Columbus	29	75	104	—20	36.9
	Toledo	26	74	102	—16	30.6
Okla.	Oklahoma	35	80	108	—17	31.7
Oregon.	Portland	39	66	102	— 2	45.1
	Roseburg	41	66	106	— 6	34.4
	Erie	26	72	96	—16	38.6
Pa.	Philadelphia	32	76	103	— 6	41.2
	Pittsburgh	31	75	103	—20	36.4
R. I.	Block Island	31	68	92	— 4	44.4
S. C.	Charleston	49	81	104	7	52.1
	Huron	10	72	108	—43	21.1
S. Dak.	Pierre	14	75	110	—40	16.6
	Yankton	16	75	107	—34	25.4
	Chattanooga	41	78	101	—10	50.7
Tenn.	Memphis	40	81	104	— 9	50.3
	Nashville	38	79	104	—13	48.5
	Abilene	43	82	110	— 6	24.7
	Amarillo	34	76	105	—16	22.6
Texas.	El Paso	44	80	113	— 5	9.8
	Galveston	53	83	98	8	47.1
	Palestine	46	82	108	— 6	43.0
	San Antonio	51	82	108	4	26.8
Utah.	Salt Lake City	29	76	102	—20	16.0
Vt.	Burlington	16	68	100	—27	31.6
	Northfield	15	67	98	—35	33.8
	Lynchburg	36	77	102	— 6	43.4
Va.	Norfolk	40	78	102	2	49.5
	Seattle	39	64	96	11	36.6
Wash.	Spokane	27	69	104	—30	18.8
	Walla Walla	33	74	113	—17	17.7
	Elkins	29	70	97	—21	42.8
W. Va.	Parkersburg	31	76	102	—27	40.2
	La Crosse	15	73	104	—43	31.2
Wis.	Milwaukee	20	70	100	—25	31.4
	Cheyenne	26	67	100	—38	13.6
Wyo.	Lander					
	Washakie	17	68	100	—54	13.9

The minus (—) sign indicates temperature below zero.

egetation.—The distribution of forests is partly determined by rainfall. East of the great plains the country is well wooded, but the great plains themselves and a great part of the mountain region are almost treeless. In Washington, Oregon, and northern California there are extensive forests of valuable conifers, including pines, redwood, and sequoias. The principal trees of the east are white pine, now becoming scarce, yellow pine in several varieties, walnut, chestnut, oak, poplar, cherry, spruce, balsam, and hemlock. There is wide variety in the vegetation, which is semitropical in the south and has a semiarctic character in the north. The western deserts are characterized by cactuses, the yucca, and the sagebrush.

Animal Life.—Among the principal native animals, some almost exterminated, are antelopes, deer, bears, bison or buffalo, the American elk, the big-horn or Rocky mountain sheep, the Rocky mountain goat, prairie dogs, coyotes, wolves, opossums, and jackrabbits. The rattlesnake and other snakes are notable among reptiles.

Birds, Reptiles, Fish.—The birds include the great white-headed eagle, several varieties of vultures, and quite a multiplicity of smaller birds of kinds generally common to the world, but a few of which, such as the Baltimore oriole, mocking-bird, etc., are peculiar to this country.

The reptilia furnish many varieties of both poisonous and innocuous serpents; the alligator is an inhabitant of the southern rivers, and venomous insects—mosquitoes in particular—are more plentiful than agreeable.

The coasts and rivers of the republic teem with fish of the finest edible descriptions—cod, mackerel, salmon, trout, bass, shad, etc.—and the mollusks and cetacean varieties are amply represented

Insular Possessions.—**The Philippine Islands** form a large group of the Asiatic archepelago, from which it is separated by the two deep abysses of the Sulu (Mindoro) and Celebes seas, 2000 to 4000 fathoms deep. It is washed on the east side by the Pacific Ocean and on the northwest by the China Sea, and comprises an aggregate of over 2000 islands of all sizes, ranging from mere rocks and reefs to Luzon and Mindanao, the former rather more, the latter somewhat less, than 40,000 square miles in area.

The other chief members of the group, collectively called Visayas, are Mindoro, 9,000 square miles; Palawan (Paragua), 5,500; Samar, 5,000 Panay, 45,000; Negros, 4,300; Leyte, 3,000; Cebu and Bohol, both 1,500; and Masbate, 1,200.

Surface and Rivers.—Two main ridges ramify the group, and comprise several volcanoes; the highest peak being Apo in the southeast of Mindanao (10,400 feet). The shore lines and internal surface of the larger islands are extremely rugged and irregular. Their magnificent mountain ranges are clothed with a gigantic and ever-teeming vegetation; and between these lie extensive slopes and plains of the richest tropical fertility, watered by numerous lakes and rivers, which afford abundant means of irrigation and transport.

Climate.—The climate on the whole is healthy, but hurricanes are common. Earthquakes are frequent and often very destructive. Owing to the prevailing sea breezes, the climate, although moist and hot, is less insalubrious than that of most tropical lands. The temperature varies from about 77° in December to 86° in May.

Vegetation.—The magnificent primeval forests contain dyewoods, hard-grained timbers, and medicinal and other useful plants. The principal agricultural product is rice, and next in importance are sugar-cane, tobacco, and coffee. Fibrous plants are also abundant, and among the chief of these are the well-known manila hemp, the cotton plant, the gomuti palm, ramie, etc. The pineapple is grown both for its fiber and its fruit.

Animals and Minerals.—The largest wild mammal is the buffalo, and next to it the gibbon; there are several other species of apes and lemurs, antelopes and deer. The carnivora are chiefly represented by several species of civet, the insectivora by the porcupine. The only dangerous animals are the crocodile, snakes, and some other reptiles.

Birds are very numerous, of the gallinacean family especially. Insects are very various, and the fresh and marine waters abound in fishes, turtles, mollusks, and sponges.

Of minerals the most widely diffused are coal and iron; copper also occurs, as well as gold, lead, sulphur, cinnabar, quicksilver, alum, besides jasper, marble, and fine building stones.

Cities.—Besides Manila, the capital, there are several other considerable towns: Banang, Lipa, San Miguel, Laoag, Cabaera, and San Carlos.

People.—The original inhabitants of the Philippines were undoubtedly the Negritos, now reduced to a few isolated groups numbering altogether less than 20,000. Half-caste Negrito communities are extremely numerous, the indigenous element having amalgamated with the intruding Indonesian and Malay peoples. The Indonesians (akin to the Polynesians) are mostly pagans, whereas nearly all the Malays are either Roman Catholics or Mohammedans. The Tagal and Visayan languages are the predominant types.

History.—Discovered in 1521 by Magellan, who was killed here, the Philippines were officially annexed to Spain in 1569, and till 1898 remained an integral part of the Spanish dominion. A rebellion in 1896 went on till the Spanish-American war was begun in 1898. As a result of the Philippine war of 1898 the islands were ceded to the United States on a payment of $20,000,000.

The Hawaiian Islands are a group of eight inhabited and four uninhabited islands in the North Pacific. They were annexed to the United States in 1898, attached to the department of California for military purposes, and made a territory in 1900, with one delegate in the United States Congress.

The administration is carried on by a governor with legislatures of two houses, a senate of 15 and a house of 30 members. The natives almost all profess the Christian faith, and education is free.

Exports.—Sugar, rice, coffee, fruits and nuts, hides, wool, whale oil, and bone. The bulk of the trade is with the United States. Steamers connect the islands with America, Australasia, China and Japan.

Population includes over 25,000 Chinese, over 60,000 Japanese, and about 28,500 whites.

Porto Rico, until 1898 a Spanish colony, but then ceded to the United States by the Spanish-American treaty of peace, lies to the east of San Domingo, in the West Indies.

It is administered by a governor with an executive council, consisting of six officials and five natives appointed by the president, and a legislative assembly of thirty-five members elected for two years on a franchise restricted by a small property qualification and a low educational test. The island of Culebra, between Porto Rico and St. Thomas, has been made a United States naval base.

The island is mountainous, the climate healthy, and the chief exports are coffee, fruit, sugar, tobacco, and timber. Free trade between the island and the United States was inaugurated in July, 1901, with very beneficial results on the sugar and tobacco trades. The United States sends the great bulk of the imports and takes most of the exports. The population, census of 1910, is 1,118,012, of whom about 60,000 are negroes

about 300,000 mulattoes, and about 590,000 whites. The chief towns are San Juan and Ponce.

Samoa Islands.—By an agreement between Great Britain and Germany concluded 1899, and approved 1900 by the United States, the Samoa islands, which lie in the Western Pacific, were divided, Upolu and Savaii being assigned to Germany, and Tutuila and the other Samoan islands to the United States, Great Britain renouncing all her rights over the islands. Tutuila (area 54 square miles, population 5,800) has the magnificent harbor of Pago Pago. The other islands have an area of about 25 square miles, with about 2,000 inhabitants.

Guam, the largest of the Marianne or Ladrone islands, was ceded to the United States by Spain in 1898, for use as a coaling station. It has a good roadstead. Area about 200 square miles; population about 8,661. The capital is Agana: population 6,000.

Panama Canal Zone.—Article two of the treaty between the United States and the republic of Panama, ratified by the United States Senate February 23,1904, treaty in effect February 26, 1904, provided for the cession, in perpetuity, by Panama, of a strip of territory adjacent to the canal, as follows:

"The Republic of Panama grants to the United States in perpetuity the use, occupation, and control of the zone of land and land under water for the construction, maintenance, operation, sanitation, and protection of said canal of the width of ten miles, extending to the distance of five miles on each side of the center line of the route of the canal to be constructed; the said zone beginning in the Caribbean Sea, three marine miles from mean low-water mark, and extending to and across the Isthmus of Panama into the Pacific Ocean to a distance of three marine miles from mean low-water mark, with the proviso that the cities of Panamà and Colon and the harbors adjacent to said cities, which are included within the boundaries of the zone above described, shall not be included within this grant.

"The Republic of Panama further grants to the United States in perpetuity the use, occupation, and control of any other lands and waters outside of the zone above described which may be necessary and convenient for the construction, maintenance, operation, sanitation, and protection of the said canal or of any auxiliary canals or other work necessary and convenient for the construction. maintenance, operation, sanitation, and protection of the said enterprise.

"The Republic of Panama further grants to the United States in perpetuity the use, occupation, and control of all islands within the limits of the zone above described, and in addition thereto the group of small islands in the Bay of Panama named Perico, Naos, Culebra, and Flamingo."

Panama Canal.—The idea of connecting the Atlantic and Pacific Oceans by a canal across the Central American isthmus is as old as the sixteenth century; but no steps were taken to carry out any plan until Ferdinand de Lesseps, of Suez fame, convened in Paris in 1879 an international congress to discuss the plan of cutting through the isthmus of Panama.

On February 28, 1881, the first detachment of canal employes arived at Colon; in 1882 the canal company purchased the Panama railway. An expert commission to Panama in 1880 estimated that a canal could be made for 843,000,000 francs, but later De Lesseps announced that a tide-level canal without locks could be completed for 600,000,000 francs.

Work was begun, and loans followed year after year, until the company was forced into liquidation in 1889. The Panama scandals followed (1892-93) with prosecutions and imprisonments (De Lesseps, Eiffel, etc.).

In 1902 the United States arranged to purchase the existing works, with the right to finish the canal; but the necessary treaty was rejected by Colombia in 1903, whereon the department of Panama revolted, and the new republic signed a treaty (see above) with the States in November 1903, giving the United States full control of a strip of land on either side the canal, which is practically a dependency of the United States.

Facts Concerning Construction.—The canal is to be about 50 miles in length from deep water in the Caribbean Sea to deep water in the Pacific Ocean. The distance from deep water to the shore line in Limon bay is about 4½ miles and from the Pacific shore line to deep water is about 5 miles; hence the length of the canal from shore to shore will be approximately 40½ miles.

The channel from mile 0 in the Caribbean to mile 6.70 will be 500 feet wide; from the south end of Gatun locks to mile 23.50 not less than 1,000 feet wide; from mile 23.50 to mile 26.50, 800 feet wide: from mile 26.50 to mile 27.00, 700 feet wide; from mile 27.00 to mile 31.25, 500 feet wide: from mile 31.25 to Pedro Miguel lock (mile 39.36). 300 feet wide, and from Pedro Miguel lock to Miraflores locks and from Miraflores locks to deep water in Panama bay, 500 feet wide.

The average bottom width of the channel in this project is 649 feet and the minimum bottom width is 300 feet.

The canal will have a minimum depth of 41 feet.

Estimated Cost—The cost estimated by the present commission for completing the canal is $325,201,000, which includes $20,053,000 for sanitation and $7,382,000 for civil administration.

These figures do not include the $50,000,000 paid to the New French Canal company and to the Republic of Panama for property and franchises. Hence, it is estimated that the total cost of the canal to the United States will approximate $375,000,000.

Uruguay is the smallest of the South American republics, although its area is three-fifths that of the United Kingdom. The Atlantic washes its shores for 120 miles, the Plate and Uruguay rivers for nearly 600 miles; th Rio Negro flows across the central portion.

Surface and General Features.—The surfac forms a vast undulating plain, generall flat, but broken in the interior by severs ridges of moderate elevation. The extensiv plains are admirably adapted for agricultur which has made rapid progress in recen years, in the growth of wheat, maize, etc.

The principal river is the Negro, whic divides the state into two nearly equal por tions, and on the southeast frontier is th large lake of Merim. The climate is mil and healthy, the general range of the ther mometer being from 32° to 90°.

Montevideo is the capital and chief por There is a small army and navy. The popu lation is made up mainly of half-breed including Gauchos; but the foreign elemen largely Basques and Italians, is rapidl increasing.

Venezuela is a northern republic of South Ame ica, bounded by the Caribbean Sea, th Atlantic, British Guiana, and the republic of Brazil and Colombia.

Surface.—It is a land of mountains and valley in the west and north, of lower mountai and wooded hills in the south, of llan between the Orinoco and the northern range and of lake and swamp and forest (much of pestiferous and uninhabitable) in the nort west. The Andes enter the country sou of Lake Maracaibo, and push northeastwa as the Cordillera de Merida. In Mou Roraima the frontiers of Guiana, Braz and Venezuela meet.

Rivers and Climate.—Innumerable strean find a way over waterfalls and rapids to t Orinoco, chief of the eight river systems the country. The climate is moist; t temperature varies from freezing point abo the snowline to great heat in the coast tow valleys, and llanos.

Vegetation.—Almost everywhere the count is abundantly watered. Vegetation in t hotter region is luxuriant beyond descri tion. In the temperate region coffee produced.

Cities.—The principal cities are Caracas, Vale cia, Maracaibo, Barquisimeto, Tocuyo, M turin, and La Guayra.

People.—The people are mostly half-breeds mulattoes or mestizes (*i. e.*, of crossed whi and Indian blood). Pure negroes (main on the coast) or whites are few. The latt form perhaps 1 per cent. of the populatic

LATITUDE AND LONGITUDE OF IMPORTANT POINTS

Longitude reckoned from Greenwich.

	°	′	″		H.	M.	S.	
Adelaide, S. Australia*	34	55	38	S.	9	14	20. 3	E.
Albany, New York*	42	39	13	N.	4	55	6. 8	W.
Algiers*	36	47	50	N.	0	12	11. 4	E.
Alexandria, Egypt	31	11	43	N.	1	59	26. 7	E.
Amherst, Massachusetts*	42	22	17	N.	4	50	4. 7	W.
Ann Arbor, Michigan*	42	16	48	N.	5	34	55. 2	W.
Annapolis, Maryland*	38	58	54	N.	5	5	56. 5	W.
Archangel, Russia	64	32	6	N.	2	42	14. 0	E.
Armagh, Ireland*	54	21	13	N.	0	26	35. 4	W.
Athens, Greece*	37	58	21	N.	1	34	54. 9	E.
Bahia, Brazil	13	0	37	S.	2	34	8. 4	W.
Baltimore, Maryland	39	17	48	N.	5	6	26. 0	W.
Berlin, Prussia*	52	30	17	N.	0	53	34. 9	E.
Bombay*	18	53	45	N.	4	51	15. 7	E.
Bonn, Germany*	50	43	45	N.	0	28	23. 3	E.
Bordeaux, France*	44	50	17	N.	0	2	5. 4	W.
Boston State House	42	21	28	N.	4	44	15. 3	W.
Brussels, Belgium*	50	51	10	N.	0	17	28. 6	E.
Buenos Ayres	34	36	30	S.	3	53	28. 9	W.
Calcutta	22	33	25	N.	5	53	20. 7	E.
Cambridge, England*	52	12	52	N.	0	0	22. 7	E.
Cambridge, Massachusetts*	42	22	48	N.	4	44	31. 0	W.
Canton, China	23	6	35	N.	7	33	46. 3	E.
Cape May, New Jersey, Lt	38	55	56	N.	4	59	50. 7	W.
Cape Good Hope, Lt	34	21	12	S.	1	13	58. 0	E.
Cherbourg, France	49	38	54	N.	0	6	32. 5	W.
Chicago, Illinois*	41	50	1	N.	5	50	26. 7	W.
Christiania, Norway*	59	54	44	N.	0	42	53. 8	E.
Cincinnati, Ohio*	39	8	19	N.	5	37	41. 3	W.
Colombo, Ceylon	6	55	40	N.	5	19	21. 9	E.
Constantinople	41	0	30	N.	1	56	3. 7	E.
Copenhagen*	55	41	13	N.	0	50	18. 8	E.
Denver, Colorado*	39	40	36	N.	6	59	47. 6	W.
Dublin, Ireland*	53	23	13	N.	0	25	21. 1	W.
Edinburgh*	55	57	23	N.	0	12	43. 1	W.
Florence, Italy*	43	46	4	N.	0	45	1. 5	E.
Geneva, Switzerland*	46	11	59	N.	0	24	36. 8	E.
Glasgow, Scotland*	55	52	43	N.	0	17	10. 6	W.
Greenwich, England*	51	28	38	N.	0	0	0. 0	—
Halifax, N. S.	44	39	38	N.	4	14	21. 1	W.
Hamburg, Germany*	53	33	7	N.	0	39	53. 8	E.
Havana, Cuba	23	9	21	N.	5	29	26. 0	W.
Hongkong, China*	22	18	12	N.	7	36	41. 9	E.

	°	′	″		H.	M.	S.	
Honolulu (Reef Lt.)	21	17	55	N.	10	31	28. 0	W.
Key West, Florida, Lt	24	32	58	N.	5	27	12. 3	W.
Lisbon, Portugal*	38	42	31	N.	0	36	44. 7	W.
Liverpool*	53	24	5	N.	0	12	17. 3	W.
Madras, India*	13	4	8	N.	5	20	59. 4	E.
Madrid, Spain*	40	24	30	N.	0	14	45. 4	W.
Manila, Lt	14	35	25	N.	8	3	50. 0	E.
Marseilles*	43	18	18	N.	0	21	34. 6	E.
Mexico (city)*	19	26	2	N.	6	36	26. 7	W.
Montreal, Quebec*	45	30	17	N.	4	54	18. 7	W.
Moscow*	55	45	20	N.	2	30	17. 2	E.
Mount Hamilton, California*	37	20	24	N.	8	6	34. 1	W.
Munich*	48	8	45	N.	0	46	26. 1	E.
Naples*	40	51	46	N.	0	57	1. 8	E.
Nashville, Tennessee*	36	8	54	N.	5	47	12. 0	W.
New Haven, Connecticut*	41	18	36	N.	4	51	42. 1	W.
New Orleans (Mint)	29	57	46	N.	6	0	13. 9	W.
New York (Columbia University)*	40	45	23	N.	4	55	53. 6	W.
Nice, France*	43	43	17	N.	0	29	12. 2	E.
Norfolk, Virginia (Navy Yard)	36	49	33	N.	5	5	11. 0	W.
North Cape	71	11	0	N.	1	42	40. 0	E.
Odessa, Russia*	46	28	37	N.	2	3	2. 2	E.
Ogden, Utah*	41	13	8	N.	7	27	59. 6	W.
Paris, France*	48	50	12	N.	0	9	20. 9	E.
Philadelphia, Pennsylvania*	39	57	7	N.	5	0	38. 5	W.
Rio de Janeiro*	22	54	24	S.	2	52	41. 4	W.
Rome, Italy*	41	53	54	N.	0	49	55. 6	E.
San Francisco, California*	37	47	28	N.	8	9	42. 8	W.
Seattle, Washington	47	35	54	N.	8	8	19. 9	W.
Shanghai, China	31	14	42	N.	8	5	55. 7	E.
Singapore, India	1	17	11	N.	6	55	25. 0	E.
St. Petersburg, Russia*	59	56	30	N.	2	1	13. 5	E.
Stockholm*	59	20	33	N.	1	12	14. 0	E.
Tokyo, Japan*	35	39	17	N.	9	18	58. 0	E.
Valparaiso, Chili	33	1	53	S.	4	46	34. 8	W.
Venice, Italy*	45	26	10	N.	0	49	22. 1	E.
Vienna, Austria*	48	13	55	N.	1	5	21. 5	E.
Washington, D. C.*	38	55	15	N.	5	8	15. 7	W.
West Point, New York*	41	23	22	N.	4	55	50. 6	W.
Yokohama, Japan	35	26	24	N.	9	18	36. 9	E.

*Observatories. Lt., denotes a light-house.

TRAVEL DISTANCES BETWEEN IMPORTANT CENTERS IN THE UNITED STATES

	Atlanta.	Baltimore.	Boston.	Buffalo.	Chicago.	Cincinnati.	Cleveland.	Denver.	Detroit.	Galveston.	*Havana. Via Tampa.	*Honolulu Via San Francisco.	Indianapolis.	Jacksonville, Fla.	Kansas City.	Little Rock.	Los Angeles.	*Manila, Ph. Is. Via San Fran. and Honolulu.	Milwaukee.	Minneapolis.	Nashville.	New Orleans.	New York.	Omaha.	Philadelphia.	Pittsburg.	Portland, Me.	Portland, Ore.	Saint Louis.	*Salt Lake City.	San Francisco.	*San Juan, P. R. Via New York or Tampa.	*Seattle, Wash.	*Sitka, Alaska. Via Seattle.	Washington.
Atlanta		686	1104	888	731	461	705	1523	722	907	940	5165	548	351	884	553	2267	10800	816	1151	289	496	874	1020	783	774	1212	2839	607	2086	2750	1944	2992	4010	646
Baltimore	686		418	402	802	593	474	1827	653	1561	1393	5571	704	885	1211	1279	3014	11206	887	1222	810	1150	188	1292	97	334	526	3111	934	2358	3156	1747	3039	4057	40
Boston	1104	418		478	999	905	661	2024	724	1979	1811	5768	944	1303	1432	1529	3235	11403	1084	1419	1200	1568	217	1489	321	674	108	3326	1184	2555	3353	1776	3236	4254	458
Buffalo	888	402	478		527	427	183	1552	251	1575	1795	5296	466	1239	954	1051	2757	10931	612	947	722	1253	411	1017	413	235	561	2836	706	2083	2881	1970	2764	3782	442
Chicago	731	802	999	527		294	344	1025	272	1152	1671	4769	183	1096	457	628	2260	10404	85	420	442	915	912	490	821	468	1082	2309	283	1556	2354	2471	2237	3255	813
Cincinnati	461	593	905	427	294		244	1257	261	1210	1413	4996	111	812	618	686	2421	10631	379	714	295	826	757	717	666	313	988	2536	341	1783	2581	2316	2531	3549	553
Cleveland	705	474	661	183	344	244		1369	169	1392	1657	5113	283	1056	771	868	2574	10748	429	764	539	1070	584	834	493	140	744	2653	523	1900	2698	2143	2581	3599	514
Denver	1523	1827	2024	1552	1025	1257	1369		1297	1151	2462	3869	1120	1824	639	1082	1361	9504	1048	902	1234	1348	1937	538	1846	1493	2107	1409	916	657	1454	3496	1595	2613	1810
Detroit	722	653	724	251	272	261	169	1297		1351	1674	5041	272	1073	708	827	2511	10676	357	692	556	1087	662	762	664	321	807	2581	482	1828	2626	2221	2509	3527	668
Galveston	907	1561	1979	1575	1152	1210	1392	1151	1351		1613	4579	1109	1027	840	524	1681	10214	1237	1346	891	411	1749	1040	1658	1490	2087	2560	869	1713	2164	2617	2746	3764	1521
*Havana Via Tampa.	940	1393	1811	1795	1671	1413	1657	2462	1674	1613		6104	1497	586	1823	1474	3144	11739	1756	2091	1229	1202	1581	1960	1490	1655	1919	3779	1547	2954	3689	1120	3951	4969	1353
*Honolulu Via San Francisco.	5165	5571	5768	5296	4769	4996	5113	3869	5041	4579	6104		4885	5360	4479	4714	2897	5635	4789	4643	5010	4859	5681	4279	5590	5237	5851	3161	4692	3285	2415	7240	3373	4391	5582
Indianapolis	548	704	944	466	183	111	283	1120	272	1109	1497	4885		899	492	585	2295	10520	268	603	295	852	825	606	734	381	1027	2425	240	1672	2470	2384	2420	3438	664
Jacksonville, Fla	351	885	1303	1239	1096	812	1056	1824	1073	1027	586	5360	899		1185	833	2462	10995	1181	1516	654	616	1073	1385	982	1125	1411	3204	972	2387	2945	1590	3333	4351	845
Kansas City	884	1211	1432	954	457	618	771	639	708	840	1823	4479	492	1185		470	1803	10114	542	55	595	881	1342	200	1251	898	1515	2019	277	1250	2064	2901	2234	3252	1171
Little Rock	553	1279	1529	1051	628	686	868	1082	827	524	1474	4714	585	833	470		1816	10349	713	919	367	451	1410	670	1319	966	1612	2489	345	1577	2299	2478	2677	3695	1239
Los Angeles	2267	3014	3235	2757	2260	2421	2574	1361	2511	1681	3144	2897	2295	2462	1803	1816		8532	2345	2263	2183	1961	3145	1899	3054	2701	3318	1127	2080	1225	482	4107	1313	2331	2974
*Manila, Ph. Is., Via S. Fran. and Honolulu.	10800	11206	11403	10931	10404	10631	10748	9504	10676	10214	11739	5635	10520	10995	10114	10349	8532		10424	10278	10645	10494	11319	9914	11225	10872	11486	8796	10327	8920	8050	12878	9008	10026	11197
Milwaukee	816	887	1084	612	85	379	429	1048	357	1237	1756	4789	268	1181	542	713	2345	10424		335	527	1000	997	510	906	553	1167	2237	368	1576	2374	2556	2152	3170	898
Minneapolis	1151	1222	1419	947	420	714	764	902	692	1346	2091	4643	603	1516	556	919	2263	10278	335		862	1261	1332	364	1241	888	1502	1901	574	1430	2228	2891	1817	2835	1233
Nashville	289	810	1200	722	442	295	539	1234	556	891	1229	5010	295	654	595	367	2183	10645	527	862		557	998	731	907	608	1283	2550	318	1797	2595	2233	2679	3697	770
New Orleans	496	1150	1568	1253	915	826	1070	1348	1087	411	1202	4859	852	616	881	451	1961	10494	1000	1261	557		1338	1081	1247	1139	1676	2757	700	1838	2444	2206	2943	3961	1110
New York	874	188	217	411	912	757	584	1937	632	1749	1581	5681	825	1073	1342	1410	3145	11319	997	1332	998	1338		1402	91	444	325	3221	1065	2469	3266	1559	3149	4167	228
Omaha	1020	1292	1489	1017	490	717	834	538	762	1040	1960	4279	606	1385	200	670	1899	9914	510	364	731	1081	1402		1311	958	1572	1819	413	1066	1864	2961	2005	3023	1303
Philadelphia	783	97	321	413	821	666	493	1846	664	1658	1490	5590	734	982	1251	1319	3054	11225	906	1241	907	1247	91	1311		353	429	3130	974	2377	3175	1650	3058	4076	137
Pittsburg	774	334	674	235	468	313	140	1493	321	1490	1655	5237	381	1125	898	966	2701	10872	553	888	608	1139	444	958	353		782	2777	621	2024	2822	2003	2705	3723	302
Portland, Me.	1212	526	108	561	1082	988	744	2107	807	2087	1919	5851	1027	1411	1515	1612	3318	11486	1167	1502	1283	1676	325	1572	429	782		3391	1267	2638	3436	1884	3319	4337	566
Portland, Ore.	2839	3111	3326	2836	2309	2536	2653	1409	2581	2560	3779	3161	2425	3204	2019	2489	1127	8796	2237	1901	2550	2757	3221	1819	3130	2777	3391		2232	922	746	4780	186	1204	3122
Saint Louis	607	934	1184	706	283	341	523	916	482	869	1547	4692	240	972	277	345	2080	10327	368	574	318	700	1065	413	974	621	1267	2232		1479	2277	2624	2391	3409	894
*Salt Lake City	2086	2358	2555	2083	1556	1783	1900	657	1828	1713	2954	3285	1672	2387	1250	1577	1225	8920	1576	1430	1797	1838	2469	1066	2377	2024	2638	922	1479		870	4028	1068	2086	2369
San Francisco	2750	3156	3353	2881	2354	2581	2698	1454	2626	2164	3689	2415	2470	2945	2064	2299	482	8050	2374	2228	2595	2444	3266	1864	3175	2822	3456	746	2277	870		4825	958	1976	3167
*San Juan, P. R. Via New York or Tampa.	1944	1747	1776	1970	2471	2316	2143	3496	2221	2617	1120	7240	2384	1590	2901	2478	4107	12878	2556	2891	2233	2206	1559	2961	1650	2003	1884	4780	2624	4028	4825		4708	5726	1787
*Seattle, Wash	2992	3039	3236	2764	2237	2531	2581	1595	2509	2746	3951	3373	2420	3333	2234	2677	1313	9008	2152	1817	2679	2943	3149	2005	3058	2705	3319	186	2391	1068	958	4708		1018	3027
*Sitka, Alaska. Via Seattle.	4010	4057	4254	3782	3255	3549	3599	2613	3527	3764	4969	4391	3438	4351	3252	3695	2331	10026	3170	2835	3697	3961	4167	3023	4076	3723	4337	1204	3409	2086	1976	5726	1018		4045
Washington	646	40	458	442	813	553	514	1810	668	1521	1353	5582	664	845	1171	1239	2974	11197	898	1233	770	1110	228	1303	137	302	566	3122	894	2369	3167	1787	3027	4045	

The figures in this table are taken from the "official table of distances" used by the war department of the United States government, except the distances to cities marked with an asterisk (*), which are computed along the best routes of travel. All distances are in statute miles.

WORLD TRAVEL DISTANCES

The chief ports of the world are named in alphabetical order across the top and down the sides of the tables. The distance between any two ports will be found at the intersection of the two columns which contain the names of the selected ports. Thus the distance from Baltimore to Bombay is given as 8,431, and the small "s" shows that the route is via Suez Canal. Distances are for full-powered steam vessels reckoned in nautical miles.

	Amsterdam.	Antwerp.	Barbados.	Belfast.	Bombay.	Boston.	Bremen.	Buenos Ayres.	Cape Town.	Cherbourg.	Genoa.	Glasgow.	Hamburg.	Havana.	Havre.	Hongkong.	Liverpool.	London.	Melbourne.	New Orleans.	New York.	Plymouth.	Rio de Janeiro	San Francisco.	Shanghai.	Singapore.	Southampton.	Valparaiso.	Yokohama.
Amsterdam	—	135	3877	733	s 6336	3164	272	6370	6193	303	2237	818	290	4335	267	9764	711	201	11131	4837	3346	385	5280	M 13639	10507	s 8324	277	M 8869	11226
Antwerp	135	—	3841	697	s 6300	3128	357	6334	6157	267	2201	782	385	4299	231	9728	675	180	11095	4801	3310	349	5244	M 13603	10471	8288	238	8833	11190
Baltimore	3638	3602	1823	3204	s 8431	674	3851	5898	6913	3357	4332	3250	3869	1112	3423	s 11859	3328	3562	c 12703	1614	410	3265	4808	M 13167	s 12602	s 10419	3383	M 8397	s 13327
Barbados	3877	3841	—	3637	s 8199	1880	4090	4169	5284	3596	4100	3719	4108	1472	3662	s 11627	3624	3801	c 11047	2115	1825	3549	3079	M 11438	12370	s 10187	3622	M 6668	s 13089
Belfast	733	697	3637	—	6245	2730	880	6271	6089	459	2146	113	891	3899	528	9673	137	663	s 11040	4401	2912	360	5168	M 13527	10535	8233	488	8757	s 11135
Bermuda	3248	3112	1222	2958	7876	707	3459	5175	6181	2967	3771	2885	3477	1141	3033	s 11627	2945	3172	c 11972	1643	699	2875	4085	M 12444	s 12376	s 9864	2956	M 7678	s 13094
Bombay	s 6336	s 6300	s 8199	6245	—	s 7962	6549	c 8349	4604	6040	4473	6327	6567	s 9000	6115	4090	6223	6260	6535	9502	8153	5997	c 7824	9780	4633	2450	6090	M 9875	5352
Boston	3164	3128	1880	2730	s 7962	—	3377	5804	6776	2883	3863	2777	3395	1422	2949	11390	2854	3088	12534	1924	379	2791	4714	13073	s 12133	s 9950	2909	M 8303	12852
Bremen	272	357	4090	880	6549	3377	—	6583	6406	513	2450	922	171	4548	480	9977	924	409	s 11344	5050	3559	598	5501	M 13852	s 10720	8537	479	9082	s 11439
Buenos Ayres	6370	6334	4160	6271	c 8349	5804	6583	—	3778	6074	6130	6350	6601	5669	6151	c 10643	6258	6294	9099	6255	5838	6029	1135	M 7536	c 11386	9376	6124	M 2766	c 12105
Cape Town	6193	6157	5284	6089	4604	6776	6406	3778	—	5897	5972	6168	6424	6716	5966	6898	6076	6117	5814	7347	6795	5852	3267	10217	7641	5631	5947	5447	8360
Charleston	3846	3810	1630	3561	s 8388	845	4059	5790	6828	3565	4459	3498	4077	605	3631	s 11986	548	3770	c 12620	1107	614	3473	4700	13059	s 12729	s 10546	3591	M 8289	s 13448
Cherbourg	303	267	3596	459	6040	2883	513	6074	5897	—	1941	544	531	4029	71	s 9468	437	227	s 10835	4531	3065	108	4984	M 13343	10211	8028	83	M 8573	s 10930
Colon	4818	4782	1225	4543	9283	2173	5031	5318	6410	4537	5184	4625	5049	1380	4603	s 12711	4530	4742	c 12203	1380	1972	4445	4228	M 12587	s 13454	s 11271	4563	M 7817	s 14173
Constantinople	2898	3158	5057	3103	3837	4820	3407	7381	s 6137	2898	1312	3185	3425	5852	2975	7266	3081	3118	8633	6354	5011	2855	5997	M 14352	8009	5826	2948	9583	8728
Galveston	5031	4995	2240	4595	9696	2118	5244	6378	7470	4725	5591	4641	5262	765	4816	13124	4719	4955	13263	380	1893	4658	5288	M 13649	s 13861	s 11678	4776	M 8877	s 14586
Genoa	2237	2201	4100	2146	4473	3863	2450	6130	5972	1941	—	2228	2468	4895	2018	7901	2124	2161	9268	5397	4054	1898	5040	M 13399	8644	6461	1991	M 8626	s 9363
Gibraltar	1389	1353	3252	1298	4953	3015	1602	5282	5124	1093	854	1380	1620	4047	1162	s 8381	1276	1313	9748	4549	3206	1050	4192	H 12551	9124	6941	1143	M 7781	s 9843
Glasgow	818	782	3719	113	6327	2777	922	6350	6168	544	2228	—	1049	3945	610	9755	210	745	11122	4447	2959	442	5158	M 13609	10498	8315	570	M 8839	s 11217
Hamburg	290	385	4108	891	6567	3395	171	6601	6424	531	2468	1049	—	4566	498	9995	942	427	11362	5068	3577	616	5519	M 13870	10738	8555	497	M 9100	s 11457
Havana	4335	4299	1472	3899	s 9000	1422	4548	5669	6716	4029	4895	3945	4566	—	4120	s 12428	4023	4259	12512	597	1197	3962	4579	M 12974	s 13165	s 10982	4080	M 8168	s 13890
Havre	267	231	3662	528	6115	2949	480	6151	5966	71	2018	610	498	4120	—	9537	503	194	10904	4622	3131	175	5061	M 13412	s 10280	8097	105	M 8642	11999
Hongkong	9764	9728	s 11627	9673	4090	11390	9977	c 10643	6898	s 9468	7901	9755	9995	s 12428	9537	—	9651	9688	5031	s 12924	s 11580	9425	c 10118	6041	853	1440	s 9518	10536	1580
Honolulu	M 13882	M 13776	M 11611	M 13700	8375	M 13246	M 14025	M 7709	M 10390	M 13516	M 12386	M 13782	M 14043	M 13111	M 13585	4858	M 13690	M 13736	4916	M 7340	M 13280	M 13473	M 8587	2089	4333	5925	13566	5916	3445
Jamaica	4314	4278	1040	4039	s 8844	1658	4527	5166	6260	4033	4739	4121	4545	716	4099	s 12266	4026	4238	c 12051	1115	1457	3941	4076	M 12471	13009	s 10826	4059	7665	s 13728
Lisbon	1111	1087	3085	1020	5249	2797	1324	5304	5148	815	1150	1102	1342	4174	884	8677	998	1035	s 10044	4676	3025	770	4214	M 12573	s 9420	7237	865	M 7803	10139

K, via Kiel canal. S, via Suez canal. C, via Cape of Good Hope. M, via Strait of Magellan. H, via Cape Horn. T, via Torres strait.

WORLD TRAVEL DISTANCES—Continued

The chief ports of the world are named in alphabetical order across the top and down the sides of the tables. The distance between any two ports is found at intersection of the two columns which contain the names of the selected ports. Thus the distance from New York to Melbourne is given as 11,586, and the small "c" shows that the route is via Cape of Good Hope. Distances are for full-powered steam vessels reckoned in nautical miles.

	Amsterdam.	Antwerp.	Barbados.	Belfast.	Bombay.	Boston.	Bremen.	Buenos Ayres.	Cape Town	Cherbourg.	Genoa.	Glasgow.	Hamburg.	Havana.	Havre.	Hongkong.	Liverpool.	London.	Melbourne.	New Orleans.	New York.	Plymouth.	Rio de Janeiro.	San Francisco.	Shanghai.	Singapore.	Southampton.	Valparaiso.	Yokohama.
Liverpool	711	675	3624	137	6223	2854	924	6258	6076	437	2124	210	942	4023	503	9651	—	638	s 11018	4525	3036	345	5158	m 13517	s 10394	8211	463	m 8747	s 11113
London	201	180	3801	663	6260	3088	409	6294	6117	227	2161	745	427	4259	194	9688	—	638	s 11055	4761	3270	309	5204	m 13563	s 10437	8248	201	m 8793	s 11150
Manila	9667	9631	11530	9576	3793	s 11293	s 9880	10546	6801	9371	7804	9658	9898	s 12325	9440	640	s 9554	s 9591	T 4511	s 12827	11584	9328	c 10021	6238	1130	1435	s 9421	10406	1768
Melbourne	11131	11095	c 11047	s 11040	6535	12534	s 11344	9099	5814	s 10835	9268	11122	11362	c 12512	10904	5031	s 11018	11055	—	c 13140	c 12586	10792	s 8827	6966	5234	3823	s 10885	6280	4875
Montreal	3317	3281	2715	2645	8141	1222	3530	6421	7108	3036	4042	2693	3548	2475	3102	s 11569	2760	3241	s 12936	2977	1451	2944	5331	m 13690	s 12312	s 10129	3062	m 8290	s 13031
New Orleans	4837	4801	2115	4401	9502	1924	5050	6255	7347	4531	5397	4447	5068	597	4622	s 12924	4525	4761	c 13140	—	1699	4464	5160	m 13524	s 13667	s 11484	4582	m 8754	s 14386
Newport News	3514	3478	1699	3080	8307	550	3727	5774	6789	3233	4208	3126	3745	988	3299	11735	3204	3438	c 12579	1490	286	3141	4590	m 13043	s 12478	s 10295	3259	m 8273	s 13203
New York	3346	3310	1825	2912	8153	379	3559	5838	6995	3065	4054	2959	3577	1227	3131	11580	3053	3270	c 11586	1699	—	2973	4748	m 13107	s 13324	s 10141	3091	m 8337	s 13042
Panama	m 11383	m 11347	m 9182	m 11274	m 12386	m 10817	m 11596	m 5280	m 7961	m 11087	m 11143	m 11353	m 11614	m 10682	m 11156	9324	m 11261	m 11307	7949	m 11268	m 10851	m 11042	6158	3277	8672	13405	m 11137	2613	7702
Para	4319	4193	1142	4056	s 8262	2943	4442	3235	4330	3933	4163	4138	4460	2577	4010	c 11204	4043	4153	c 10120	3136	2915	3883	2145	m 10504	c 11947	10250	3983	m 5734	c 12666
Philadelphia	3482	3446	1828	3048	8284	517	3694	5870	6861	3201	4185	3094	3712	1158	3267	s 11712	3172	3406	c 12652	1660	234	3109	4782	m 13141	s 12455	s 10272	3227	m 8371	13174
Plymouth	385	349	3594	360	5997	2791	598	6029	5852	108	1898	442	616	3962	175	9425	345	309	10792	4464	2973	—	4939	m 13300	10168	s 7985	129	8530	10887
Portland, (Me.)	3086	3050	1927	2652	7912	98	3299	5849	6787	2805	3807	2698	3317	1479	2871	s 11334	2776	3010	s 12579	1972	427	2713	4759	m 13118	s 12077	s 9894	2831	s 8348	s 12796
Rio de Janeiro	5280	5244	3079	5168	7824	4714	5501	1135	3265	4984	5040	5250	5519	4579	5061	c 11118	5158	5204	8827	5160	4748	4939	—	8414	c 10861	c 8851	5034	m 3644	c 11580
St. Petersburg	1070	K 1165	4888	1606	7353	4052	951	K 7381	7204	1311	3248	1648	860	5346	K 1275	K S 10755	1716	K 1207	12142	5848	4234	1396	6299	m 14650	11518	9335	1277	m 9880	12237
St. Thomas	3846	3810	440	3586	8265	1516	4059	4629	5708	3570	4160	3668	4077	1040	3639	s 11687	3573	3770	c 11499	1590	1435	3473	3539	11898	s 12430	10247	3591	7128	13149
San Francisco	m 13639	m 13603	m 11438	m 13527	9780	m 13073	m 13852	7536	m 10217	13343	m 13399	m 13609	m 13870	m 12974	m 13412	6041	m 13517	m 13563	6966	13524	m 13107	m 13300	m 8414	—	5491	7330	m 13393	5140	4521
San Juan	3867	3831	502	3600	8307	1480	4080	4694	5773	3583	4202	3681	4098	975	3652	s 11730	3588	3791	c 11564	1525	1428	3494	3604	m 11963	s 12473	10289	3612	m 7193	s 13192
Savannah	3916	3880	1648	3443	8640	928	4129	5820	6860	3684	4535	3489	4147	634	3701	s 12062	3618	3840	12650	1136	695	3543	4730	m 13089	s 12805	10622	3661	m 8319	13524
Seattle	m 14418	m 14382	m 12217	m 14306	9515	m 13852	m 14631	m 8315	m 10990	m 14122	13509	m 14388	m 14649	m 13753	m 14191	5779	m 14296	m 14342	7326	m 14303	m 13886	m 14079	m 9193	799	5209	7068	m 14092	5917	4259
Shanghai	10507	10471	12370	10535	4633	s 12133	10720	c 11380	7641	s 10211	8644	10498	s 10738	s 13165	10280	853	s 10394	10437	5234	s 13667	s 12324	10168	c 10861	5491	—	2183	10267	10266	1030
Singapore	8324	8288	10187	8233	2450	s 9950	8537	9376	5631	8028	6461	8315	8555	10982	8097	1440	8211	8248	3823	s 11484	s 10141	7985	c 8851	7330	2183	—	8078	m 10899	2902
Southampton	277	238	3622	488	6090	2909	479	6124	5947	83	1991	570	497	4080	105	s 9518	463	201	s 10885	4582	3091	129	5034	m 13393	s 10261	8078	—	8623	10980
Suez	3376	3340	5239	3285	2960	5002	3589	8154	5259	3080	1513	3367	3607	6034	3157	6388	3263	3300	7755	6536	5193	3037	6179	12278	7131	4948	3130	9768	7850
Valparaiso	m 8869	m 8833	m 6668	m 8757	m 9875	m 8303	m 9082	m 2766	m 5447	m 8573	m 8626	m 8839	m 9100	m 8168	m 8642	10536	m 8747	m 8793	6280	m 8754	m 8337	m 8530	m 3644	5138	10266	m 10899	m 8623	—	9339
Yokohama	11226	11190	s 13089	11135	5352	s 12852	11439	c 12105	8360	10930	9363	11217	11457	s 13890	10999	1580	11113	11150	4875	s 14386	s 13043	10887	c 11580	4521	1030	2902	10980	9339	—

K, via Kiel canal. S, via Suez canal. C, via Cape Town. M, via Strait of Magellan. H, via Cape Horn. T, via Torres strait.

USEFUL MISCELLANY

Air is the gaseous substance which fills the atmosphere surrounding our planet. It is elastic, and is destitute of taste, color, and smell. It contains by weight, oxygen 23.10 parts, and of nitrogen 76.90; and by volume, of oxygen 20.90, and of nitrogen 79.10; or of 10,000 parts there are in perfectly dry air, of nitrogen 7,912, oxygen 2,080, carbonic acid 4, carbureted hydrogen 4, with a trace of ammonia. But air never is dry; it has always in it a varying amount of watery vapor. When exhaled from the lungs it is saturated with moisture, and contains about 4.35 parts of carbonic acid. The prevalence of this latter gas in abnormal quantity is prejudicial to human life, while air with a high percentage of oxygen in it is healthful and invigorating.

The density of air being fixed at the round number 1,000, it is made the standard with which the specific gravity of other substances is compared. If water be made unity, then the specific gravity of dry air is .0012759. At 62 degrees Fahr. it is 810 times lighter than water, and 11,000 times lighter than mercury. At the surface of the sea the mean pressure is sufficient to balance a column of mercury 30 inches, or one of water 34 feet in height.

The exact height of the atmosphere is unknown. At 2.7 miles above the surface of the earth half its density is gone, and the remainder is again halved for every further rise of 2.7 miles. Some small density would remain at 45 miles high. At 80 miles this would have all but disappeared. But from sundry observations, made at Rio Janeiro and elsewhere, on the twilight arc, M. Liais infers that the extreme limit of the atmosphere is between 198 and 212 miles. In the lower strata of the atmosphere the temperature falls at least a degree for every 352 feet of ascent; hence, even in the tropics, mountains of any considerable elevation are snowcapped. The atmosphere appears to us blue, because absorbing the red and yellow solar rays, it reflects the blue ones. It revolves with the earth, but being extremely mobile, winds are generated in it, so that it is rarely long at rest. The atmosphere always contains free electricity, sometimes positive and sometimes negative.

Almighty Dollar.—In this phrase, coined by Washington Irving, we have a personification of the supposed object of American worship. It is intended as a satire on the mad race for wealth that has at different times and in divers places characterized the American people.

The almighty dollar, that great object of universal devotion throughout our land, seems to have no genuine devotees in these peculiar villages.—*The Creole Village.*

American Rhine.—The Hudson River, "unrivalled among American rivers for picturesque and magnificent scenery." Though destitute of the numerous architectural remains of bygone ages that crowd with interesting reminiscences the banks of its Old World namesake, the Huddon is equally enriched by Nature, and is not without its share of legendary lore.

Apostles, Fate of.—It is generally believed that only one of Christ's Apostles, John escaped martyrdom.

Matthew is supposed to have been slain with a sword in Ethiopia.

James, son of Zebedee, was beheaded at Jerusalem.

James, the brother of our Lord, was thrown from a pinnacle of the Temple and then beaten to death with a fuller's club.

Philip was hanged up against a pillar at Hieropolis, a city of Phrygia.

Bartholomew was flayed alive at Albanapolis, in Armenia.

Andrew suffered matyrdom on a cross at Patræ, in Achaia.

Thomas was run through the body with a lance at Coromandel, in the East Indies.

Thaddeus was shot to death with arrows.

Simon Zelotes was crucified in Persia.

Peter was crucified, head downward it is said, during the Neronian persecution.

Matthias was first stoned and then beheaded, and Paul was beheaded at Rome by the tyrant Nero.

Judas Iscariot, after the betrayal of our Lord, hung himself.

April Fool's Day.—The origin of the custom of April fooling cannot be traced with any degree of certainty. In the literature of the eighteenth century there are found many references to it, and yet beyond that it is scarcely possible to go. One suggestion is that the custom of playing tricks on the first day of April, was derived from some ancient pagan custom, such as the Huli festival among the Hindus, or the Roman Feast of the Fools. One fact, however, we do know, and that is that the practice prevails in many countries, under various names, which would seem to indicate that it dates away back to the early history of the race. There is a tradition among the Jews that the custom of making fools on the first of April arose from the fact that Noah sent out the dove on the first of the month corresponding to our April, before the water had abated. To perpetuate the memory of the great deliverance of Noah and his family, it was customary on this anniversary to punish persons who had forgotten the remarkable circumstance connected with the date, by sending them on some bootless errand similar to that on which the patriarch sent the luckless bird from the windows of the ark.

Astral Spirits.—The spirits of the stars. According to the mythology of the Persians, Greeks, Jews, etc., each star had its special spirit, which may be termed its soul, or vital principle. Paracelsus maintained that every man had his attendant star, which received him at death, and took charge of him till the great resurrection.

Anatomy and Physiology, Interesting Facts About.—The following facts of human anatomy and physiology have been gathered from a number of authentic sources:

Blood—An adult has ordinarily 28 pounds of blood; at each pulsation of the heart, 10 pounds are sent through the arteries and veins. The pulsations average 120 per minute in infancy, 80 in manhood, and 60 in old age, and are rather more rapid in women than in man.

Temperature of the Human Blood

Good Health	98.6 (Fahrenheit).
Fever	101.3 (Fahrenheit).
Strong Fever (morning)	102.2 (Fahrenheit).
Strong Fever (evening)	104.0 (Fahrenheit).

Brain—According to Bastian and others, the following brain-weights are given of different nationalties:

Scotch	50.0 oz.
Germans	49.6 oz.
English	49.5 oz.
French	47.9 oz.
Zulus	47.5 oz.
Chinese	47.2 oz.
Pawnees	47.1 oz.
Italians	46.9 oz.
Hindus	45.1 oz.
Gypsies	44.8 oz.
Bushmen	44.6 oz.
Esquimaux	43.9 oz.

Capacity of Brain-Case—

Anglo-Saxon	105 cu. in.
German	105 cu. in.
Negro	96 cu. in.
Ancient Egyptian	58 cu. in.
Hottentot	58 cu. in.

The average weight of the human brain, as given by Quain, is 49½ ounces avoirdupois for males, and 44 ounces for females. This general result was obtained by comparing and combining the tables prepared by Sims, Clendinning, Tiedemann, and Reid. The number of male brains weighed was 278, and of female brains, 191. In males, the minimum weight was 34 ounces, and the maximum, 65 ounces. In females, the minimum weight was 31 ounces, and the maximum, 56 ounces. In new-born infants, the brain weighs about 11.65 ounces for the male, and 10 ounces for the female.

In both sexes, the weight of the brain generally increases rapidly up to the seventh year, then more slowly to between 31 and 40 at which time it reaches its maximum point. Beyond that period, there appears a slow but progressive diminution in weight of about one ounce during each subsequent decennial period; thus confirming the opinion that the brain diminishes in advanced life.

Table of Brain Weights.—

Cromwell, aged 59 (not accepted by physiologists)	82.29 oz.
Byron, aged 36 (not accepted by physiologists)	79.00 oz.
Bricklayer, aged 38; fair intelligence, but could neither read nor write (reported by Dr. James Morris)	67.00 oz.
Cuvier, aged 63 (Archives generales de medecine, 1832)	64.33 oz.
Abercrombie, aged 63 (reported by Dr. Adam Hunter)	63.00 oz.
Congenital epileptic idiot (reported by Dr. Tuke)	60.00 oz.
Ruloff, aged 53; above medium stature; executed for murder in 1871; well versed in languages, imagining that he had discovered new and important principles in philology (reported by Dr. George Burr)	59.00 oz.
James Fisk, Jr., killed in New York, in 1872; illiterate, but said to possess great executive ability; notor-	

ious for colossal and unscrupulous financial speculations (reported by by Dr. Marsh) ..... 58.00 oz.
Spurzheim (Medico-Chirurgical Review, 1836) ..... 55.06 oz.
Adult man; an idiot since two years of age (Wagner) ..... 54.95 oz.
Daniel Webster, aged 70 (reported by Dr. John Jeffries) ..... 53.50 oz.
Executed criminal, aged 45; medium stature; of less than ordinary intelligence, and uncultivated (Lelut) 53.12 oz.
Dupuytren, aged 58 (Cruveilhier, Husson, and Bouillaud) ..... 49.68 oz.
Day-laborer, aged 49 (Wagner) ..... 48.85 oz.
Celebrated philologist, aged 54; 5 feet 7 ½ inches tall (Wagner) ..... 47.90 oz.
Executed criminal, aged 34; small stature; intelligence developed and cultivated (Lelut) ..... 47.79 oz.
Celebrated mineralogist, aged 77; above medium stature (Wagner) ..... 43.24 oz.
Man, 44 years of age; idiocy very profound; a little below medium stature (Lelut) ..... 34.39 oz.

A careful study of the weights given in this table shows the impossibility of applying to individuals an absolute rule that the greatest brain-power is connected with the greatest amount of brain-substance.

Coughing—We cough because the respiratory organs are excited by the presence of some body foreign or unnatural to them. A cough is an effort on the part of the air tubes to free themselves from some source of irritation. And so important are the organs of breathing to the welfare of the body, that the muscles of the chest, back, and abdomen, *unite in the endeavor to get rid of the exciting substance.*

Hair—The number of hairs on an adult's head averages from 129,000 to 150,000.

Hiccough is caused by a spasmodic twitching of the diaphragm, a thin muscular membrane which divides the chest from the abdomen. It generally arises from sympathy with the stomach; and it is highly probable that the muscular twitches and jerks are so many efforts on the part of the diaphragm to *assist the stomach to get rid of some undigested matter.*

Laughter—Laughing is caused by the very opposite influences that produce sighing. The nervous system is highly excited by some external cause. The impression is so intense, and the mind so fixed upon it, that the respiratory process is irregular, and uncontrolled. Persons excited to a fit of laughter generally hold their breath until they can hold it no longer, and then suddenly there is a quick expiration causing eccentric sounds, the mind being too intently fixed upon the cause of excitement *either to moderate the sounds, or to control the breathing.*

Pulse—The beat or shock felt in any artery when slight pressure is made on it, caused by the systole of the heart. At birth the number of beats are about 140, at the end of the first year 120, at the end of the second 110; during middle life between 70 and 80, and in old age usually a little more. It is slower in man than in woman, and is also affected by the position of the body, being about five beats more in the sitting than in the recumbent posture, and 10 more per minute in the standing than in the sitting posture.

Co-relation of Pulse and Temperature—As a general rule the co-relation of pulse and temperature may be stated as follows, namely:—

An increase of temperature of one degree above 98 degrees Fahr. corresponds with an increase of 10 beats of the pulse per minute, as in the following table:—

Temperature of 98° corresponds with a pulse of 60.
Temperature of 99° corresponds with a pulse of 70.
Temperature of 100° corresponds with a pulse of 80.
Temperature of 101° corresponds with a pulse of 90.
Temperature of 102° corresponds with a pulse of 100.
Temperature of 103° corresponds with a pulse of 110.
Temperature of 104° corresponds with a pulse of 120.
Temperature of 105° corresponds with a pulse of 130.
Temperature of 106° corresponds with a pulse of 140.

Respiration—Respiration is the act of inhaling air into the lungs, and again expelling it. The quantity of carbonic acid gas exhaled in 24 hours is as follows:

Person	Age	Ounces Exhaled
Girl	10	9
Boy	10	10
Woman	19	12
Boy	16	16
Man	28	17

Frequency of Respiration.—

Respiration and pulsation in the adult female is usually a trifle faster than in the male, especially during pregnancy.

Two months to two years ..... 35 per minute
Two to six years ..... 23 per minute
Six to twelve years ..... 20 per minute
Twelve to fifteen years ..... 18 per minute
Fifteen to twenty-one years, 16-18 per minute

Sighing—The action of sighing arises from very similar causes to those of yawning. But in sighing, the nervous depression is caused by *grief;* while in yawning, it is the result of *fatigue.* In sighing, the effect is generally caused by an *expiration*—in yawning by an *inspiration.* The mind, wearied and weakened by sorrow, omits for a few seconds to continue the respiratory process; and then suddenly there comes an involuntary expiration of the breath, causing a faint sound as it passes the organs of the voice.

Sleep is understood to be that state of the body in which *the relation of the brain to some parts of the body is temporarily suspended.*

There are some parts of the body that *never sleep;* such are the heart, the lungs, the organs of circulation, and those parts of the nervous system that direct their operations.

But when sleep overtakes the system, it seems as if the *relations* of those parts under the control of the will were temporarily suspended; as if, for instance, those nerves which move the arms, the legs, the eyes, the tongue, etc., were all at once unfastened, just as the strings of an instrument are relaxed by the turning of a key, or the throwing down of a bridge over which they were stretched.

What is meant by the suspension of the relation of the brain to some parts of the body, may be thus explained. Notice a man when he sits dozing in a chair; at first his head is held up, the brain controlling the muscles of the neck, and keeping the head erect. But drowsiness comes on, the brain begins to withdraw its influence, and the muscles of the neck becoming as it were "unstrung," the head drops down upon the breast. But the sleep is unsound, and disturbed by surrounding noises. The brain is therefore frequently excited to return its influence to the muscles, and draw up the head of the sleeper. He gives a sudden start, every muscle is tightened in an instant, up goes the head, the eyes open, the ears listen, until a feeling of security and composure returns; the sleep again deepens, *the nervous connection is again withdrawn,* and then down drops the head as before.

Sneezing—We sneeze because particles of matter enter the nostrils and excite the nerves of feeling and of smell. In sneezing, as in coughing, the effort is to free the parts affected from the intrusion of some matters of an objectionable nature. And in this case, as in the former one, there is a very general sympathy of other organs with the part affected, and an energetic effort to get rid of the evil.

Snoring is caused by air sweeping through the passages that lead from the mouth through the nostrils, and which, in our waking moments, are capable of certain muscular modifications to adapt them to our breathing. But as in sleeping the nervous control over them is withdrawn, they are left to the action of the air which, in sweeping by them, *sets them in vibration.*

Weight.—The following scale of normal weights for height is given by Banting:

61 in.	120 lbs.	67 ins.	148 lbs.
61 ins.	120 lbs.	67 ins.	148 lbs.
62 ins.	126 lbs.	68 ins.	155 lbs.
63 ins.	133 lbs.	69 ins.	162 lbs.
64 ins.	136 lbs.	70 ins.	169 lbs.
65 ins.	142 lbs.	71 ins.	174 lbs.
66 ins.	145 lbs.	72 ins.	178 lbs.

Chemical Composition of Man.—Huxley's table on the "Chemical composition of man of the average weight of 154 pounds" was for years the standard, but it has recently been superseded by a new one given out by the French Academy of Sciences. The table is appended.

Elements	Pounds	Ounces	Grains
Oxygen	111	8	0
Hydrogen	21	6	0
Carbon	21	0	0
Nitrogen	3	10	0
Phosphorus	1	2	88
Calcium	2	0	0
Sulphur	0	0	219
Chlorine	0	2	47
Sodium (Salt)	0	2	116
Iron	0	0	100
Potassium	0	0	290
Magnesium	0	0	12
Silica	0	0	2

Armies of the World.—Compiled from the latest available data which best represent the armies as they exist in time of peace—that is to say, the enlisted or peace strength. The exceptions are Russia and Switzerland where the official figures are somewhat exaggerated, especially in the case of Switzerland, whose actual uniformed force is less than half of the 200,000 men set down in the table, for it includes the militia. As to the total war strength, the numbers that could be put into the field, at once, would by no means be efficient as a working whole, with perhaps the exception of Germany, France and Great Britain. The unorganized force, represented as "available for duty," are simply untrained citizens who would be of no value in a sharp, decisive modern war.

Armies of the World

Countries	Peace Strength	Reserves	Total War Strength	Available for Duty Unorganized
Argentina	17,000	250,000	267,000	500,000
Austria-Hungary	360,000	1,640,000	2,000,000	3,000,000
Belgium	42,000	138,000	180,000	400,000
Bolivia	3,000	50,000	53,000	125,000
Brazil	28,000	500,000	528,000	1,000,000
Bulgaria	52,500	297,000	350,000	100,000

Armies of the World—Continued

Countries	Peace Strength	Reserves	Total War Strength	Available For Duty Unorganized
Chile	15,000	132,000	147,000	250,000
China	180,000	100,000	280,000	
Colombia	6,500	80,000	86,500	200,000
Denmark	13,000	57,000	70,000	125,000
Ecuador	4,300	50,000	54,000	50,000
France	560,000	2,440,000	3,000,000	1,000,000
Germany	620,000	3,380,000	4,000,000	2,000,000
Great Britain	254,500	545,500	800,000	2,000,000
Greece	25,000	25,000	50,000	200,000
Guatemala	7,000	75,000	82,000	50,000
Haiti	6,000		6,000	100,000
Italy	240,000	960,000	1,200,000	1,200,000
Japan	230,000	970,000	1,200,000	2,000,000
Mexico	31,000	60,000	91,000	1,000,000
Netherlands	34,000	126,000	160,000	150,000
Nicaragua	3,000	27,000	30,000	20,000
Norway	22,000	88,000	110,000	100,000
Peru	4,000	46,000	50,000	75,000
Portugal	30,000	70,000	100,000	200,000
Roumania	75,000	250,000	325,000	175,000
Russia	1,200,000	3,300,000	4,500,000	5,200,000
Salvador	3,000	18,000	21,000	40,000
Servia	35,000	140,000	175,000	90,000
Spain	115,000	185,000	300,000	800,000
Sweden	28,000	322,000	350,000	200,000
Switzerland	140,000	135,000	275,000	50,000
Turkey	375,000	350,000	725,000	2,000,000
United States	112,000	122,000	234,000	14,750,000
Uruguay	7,000	75,000	82,000	50,000
Venezuela	5,600	75,000	80,600	300,000

Ashes.—When a tree grows it takes up from the earth, by means of its roots, certain minerals called salts. These salts, which all plants need as much as they do air, become a part of the wood of the tree. When a stick of wood is burned, most of it is turned into gas, and goes off into the air. All that is left is the ashes, which cannot burn, as they are only the salts which the tree took up from the earth when growing. If the ashes be spread over the ground, the salts will go back into the earth again, and this is the reason why wood ashes make good manure for land: the salts which have been taken from it by growing plants are given back to it in the ashes, and help other trees and plants to grow. Some kinds of wood give more ashes when burned than others. Willow wood gives more than twice as much as oak, and about one-fourth more than elm. The bark of all trees makes more ashes than the solid wood. The salts found in ashes are valuable and are much used in the arts.

Astrology.—A term originally applied to the science of the heavenly bodies and their supposed influence over human affairs. At the present day, however, the word is limited in its meaning to the doctrine of the influence of the stars over the destinies of men. Astrology is one of the oldest of superstitions, and has been sedulously cultivated by the Egyptians, Chaldæans, Hindus, Chinese, and Etruscans. The Arabs also pursued the study with great zeal from the seventh to the thirteenth century, and it was in great vogue in Italy and France during the sixteenth century. In England it was cultivated by Bede (673-745) and Roger Bacon (1214-1292). Queen Elizabeth (1558-1603) was a dupe of the astrologer Dee, and Lord Burleigh is said to have calculated the nativity of the "Virgin Queen." Sir William Lilly was frequently consulted by Charles I. (1625-1649). Nostradamus was the great astrologer of the sixteenth century, after which time this pseudo-science failed to attract superior minds. The discoveries of Copernicus, Kepler, and Galileo were death-blows to astrology, which, however, continues to exist even at the present day. Astrological almanacs are still published, and fortune-tellers still drive a thriving trade among the ignorant and superstitious.

Aurora Borealis, or northern lights, the bright clouds of light which are often seen in the northern sky in the night. *Aurora* is a Latin word meaning the light of the dawn or morning, and *borealis*, also Latin, means northern; and the two together mean the northern morning-light, because it often looks like the daybreak in the east. It would be better to call it the polar light, because it is seen at the south pole as well as at the north pole. The aurora is sometimes very beautiful, forming across the sky great arches of light through which flash bright streaks of red, blue, green, purple, and yellow flame. It is supposed to be made by electricity or lightning passing through bodies of air of different thickness. A similar appearance may be produced by sending electric sparks through a glass vessel filled with rarefied air.

Barber's Pole.—The spiral red stripe on a barber's pole is said to symbolize the winding of a ribbon or bandage around the arm of a patient upon whom the barber had operated in the capacity of surgeon. In former times, when the operation of bleeding was extensively practiced, blood-letting formed a part of the duties of a barber.

Bay State, Old.—Massachusetts, whose shores are washed by Cape Cod Bay. Prior to the adoption of the United States Constitution Massachusetts was known as "the Colony of Massachusetts Bay."

When first the pilgrims landed on the Bay State's iron shore,
The word went forth that slavery should one day be no more.—*Lowell.*

Beacon Hill.—A famous locality in Boston, Mass. "The old beacon, shown in all the early plans of the town, and which gave the name to Beacon Hill, was erected in 1634-1635 to alarm the country in case of invasion. It stood near the present State House, the exact spot being the southeast corner of the reservoir formerly standing on Temple Street. It was a tall mast, standing on cross timbers placed upon a stone foundation, supported by braces, and was ascended by treenails driven into it; and, 65 feet from the base, projected a crane of iron, from which an iron skeleton frame was suspended, to receive a barrel of tar or other combustibles.

Bears and Bulls.—Words often used in connection with the purchase and sale of stocks. The "bears" are those who seek to depress the value of stocks and securities, while the "bulls" are those whose interests prompt them to act in the other direction.

Birth Stones.—

January, the jacinth or hyacinth, symbolizing constancy and fidelity.

February, the amethyst, symbolizing peace of mind and sobriety.

March, the bloodstone or jasper, symbolizing courage and success in dangerous enterprise.

April, the sapphire and diamond, symbolizing repentance and innocence.

May, the emerald, symbolizing success in love.

June, the agate, symbolizing long life and health.

July, the carnelian, symbolizing cure of evils resulting from forgetfulness.

August, the sardonyx or onyx, symbolizing conjugal felicity.

September, the chrysolite, symbolizing preservation from folly, or its cure.

October, the aquamarine, opal, or beryl, symbolizing hope.

November, the topaz, symbolizing fidelity and friendship.

December, the turquoise or ruby, symbolizing brilliant success.

Blarney Stone, The.—Blarney is a village in Ireland, in the County of Cork, about five miles from the far-famed city of that name. It is chiefly celebrated as giving the name to a peculiar kind of eloquence which is said to be characteristic of the light-hearted natives of the Emerald Isle. The old castle at Blarney contains the identical stone, the kissing of which is believed to give the person peculiar skill in speech. It is one of those superstitions which can be traced back until the mind of man runneth not to the contrary.

Blue Laws, The Famous Connecticut.—These laws, enacted by the people of the "Dominion of New Haven," became known as the blue laws because they were printed on blue paper. They were as follows:—

The governor and magistrates convened in general assembly are the supreme power, under God, of the independent dominion. From the determination of the assembly no appeal shall be made.

No one shall be a freeman or have a vote unless he is converted and a member of one of the churches allowed in the dominion.

Each freeman shall swear by the blessed God to bear true allegiance to this dominion and that Jesus is the only king.

No dissenter from the essential worship of this dominion shall be allowed to give a vote for electing of magistrates or any officer.

No food or lodging shall be offered to a heretic.

No one shall cross a river on the Sabbath but authorized clergymen.

No one shall travel, cook victuals, make beds, sweep houses, cut hair, or shave on the Sabbath Day.

No one shall kiss his or her children on the Sabbath or feasting days.

The Sabbath Day shall begin at sunset Saturday.

Whoever wears clothes trimmed with gold, silver, or bone lace above one shilling per yard shall be presented by the grand jurors and the selectmen shall tax the estate £300.

Whoever brings cards or dice into the dominion shall pay a fine of £5.

No one shall eat mince pies, dance, play cards, or play any instrument of music except the drum, trumpet or jewsharp.

No gospel minister shall join people in

marriage. The magistrate may join them, as he may do it with less scandal to Christ's church.

When parents refuse their children convenient marriages, the magistrate shall determine the point.

A man who strikes his wife shall be fined £10.

A woman who strikes her husband shall be punished as the law directs.

No man shall court a maid in person or by letter without obtaining the consent of her parents; £5 penalty for the first offence; £10 for the second, and for the third imprisonment during the pleasure of the court.

ue Stockings.—The term "blue stocking" originated in England about a century ago. Its invention is traced to the days of Doctor Johnson and was applied then as now to ladies who cultivated learned conversation, and found enjoyment in the discussion of questions which had been monopolized by men. It is said by Dr. John Doran, who, in his work "A Lady of the Last Century," gave an account of Mrs. Montagu and the "blue stockings" of her time, that in 1757 it was quite the thing for ladies to from evening assemblies, when they might participate in talk with literary and ingenious men. One of the best known and most popular members of one of these societies was said to have been a Mr. Stillingfleet, who always wore blue stockings, and when at any time he happened to be absent from these gatherings it was usually remarked that "we can do nothing without blue stockings"; and by degrees the term "blue stockings" was applied to all clubs of the kind described, and eventually to the ladies who attended their meetings.

ooks, Sizes of.—The name indicates the number of pages in the sheet, thus: in a folio book, 4 pages or 2 leaves = 1 sheet; a quarto, or 4to, has 8 pages or 4 leaves to a sheet; an octavo, or 8vo, 16 pages or 8 leaves to a sheet. In a 12mo, 24 pages or 12 leaves = one sheet, and the 18mo, 36 pages, or 18 leaves = 1 sheet, and so on. The following are the approximate sizes of books:—

Royal Folio	19 inches	×	12
Demy	18 inches	×	11
Super Imp. Quarto (4to)	15 ½ inches	×	13
Royal 4to	12 ½ inches	×	10
Demy 4to	11 ½ inches	×	8 ½
Crown 4to	11 inches	×	8
Royal Octavo	10 ½ inches	×	6 ½
Medium 8vo	9 ½ inches	×	6
Demy 8vo	9 inches	×	5 ½
Crown 8vo	7 ½ inches	×	4 ½
Foolscap 8vo	7 inches	×	4
12mo	7 inches	×	4
16mo	6 ½ inches	×	4
Square 16mo	4 ½ inches	×	3 ½
Royal 24mo	5 ½ inches	×	3 ¼
Demy 24mo	5 inches	×	2 ¾
Royal 32mo	5 inches	×	3
Post 32mo	4 inches	×	2 ½
Demy 48mo	3 ¾ inches	×	2 ¼

ride, Throwing Shoe after.—The custom of throwing a shoe after a departing bride and groom originated so far back in the dim and mystical past that the memory of man stretcheth not back to its beginning. It is by some thought to typify an assault, and is a lingering trace of the custom among savage nations of carrying away the bride by violence. Others claim that it has a likeness to a Jewish custom mentioned in the Bible. Thus, in Ruth, when the kinsman of Boaz gave up his claim to the inheritance of Ruth, and to Ruth also, he indicated his assent by plucking off his shoe and giving it to Boaz. Also, we read in Deuteronomy that when the brother of a dead man refused to marry his widow she asserted her independence of him by "loosing his shoe."

Bridge.—A roadway over a stream, a valley, or low ground. A bridge for carrying a canal or water to supply a city is called an *aqueduct* (water leader); one over which a railway passes is sometimes called a viaduct (road leader). The first bridges were made of wood by laying beams from one bank of a stream to the other, or, when these were too wide apart, resting them on posts or stone piers in the middle. The Chinese built bridges at a very early date, but it is supposed that the Romans were the first to construct stone bridges, and some of them, more than 2000 years old, are still in use.

Geographical necessities in a country intersected by large and rapid streams compelled the Romans to give much attention to the building of bridges. A splendid bridge was built by Augustus, near Narnia, on the Flaminian road, about 60 miles from Rome. Some of the arches, as is attested by one which is still standing, had a span of 150 and a height of 100 feet; but the greatest of all Roman bridges was that of Trajan across the Danube. It rested on twenty piers 150 feet in height from their foundation, and 170 feet apart, its width being 60 feet. This bridge was destroyed by the next emperor, Hadrian, who pled for his act the danger that the barbarians might get possession of it.

After the fall of the Roman empire not much was done in the way of bridge-building for some centuries. In the twelfth century the order of the Fréres Pontiers was established, and by them the great bridge of Avigon, since destroyed, was built. It was about 3,000 feet long and rested on 18 arches. A bridge built over the Allier in 1454 had an arch 184 feet in span, almost the greatest reached by any existing stone bridge. The span of the Rialto of Venice is 98½ feet. Perronet's bridge over the Seine, at Neuilly, consists of five arches each of 128 span, with a rise of 32 feet.

As wooden bridges are apt to catch fire, those made of iron and steel are now taking their place on railway lines. Among the most wonderful of these are the wrought iron bridge over the Menai Strait, called the Britannia bridge, and the Conway bridge, both in Great Britain, and the Victoria bridge over the St. Lawrence River at Montreal, Canada. These are all what are called tubular bridges, being made of great iron tubes or pipes, through which railway trains run. The Victoria bridge is a huge square iron tube, two miles long, supported on great stone piers.

Among the most remarkable bridges are those not held up from below, but hung on some kind of ropes or chains, and called therefore suspension bridges (Latin *suspendere*, to hang). The Chinese in very ancient times constructed this kind of bridge of iron chains and the Peruvians made them of bark ropes. Modern suspension bridges are built of large and strong cables, of many small wires twisted together. Among the most celebrated suspension bridges are those of Fribourg, which has a span of 880 feet, of Pesth, over the Danube, with a span of 666 feet, of Menai, by Telford, with a span of 570 feet, and that of Niagara, over the St. Lawrence, constructed by Roebling, with a span of 821 feet.

Bridges are sometimes made so that they can be moved in order to let a vessel pass. These are of various kinds; drawbridges are made to raise and lower; swing bridges to turn round on a pivot; and rolling or sliding bridges, to roll backward and forward on little wheels or rollers. Bridges that are to be used for only a little while, like those built by soldiers to cross rivers in time of war, are sometimes made by fastening many small boats together and laying a floor over them. Casks and rafts have also been used for the same purpose. Military bridges are usually supported by floats called pontoons, made of frames of timber covered with copper, tin, leather, tarred sail-cloth, or india-rubber cloth, or of copper cylinders. The pontoons are laid from bank bank and securely fastened, and the bridge platform is then placed upon them.

Notable Bridges of the World.

Albany, N. Y.—(over the Hudson). Iron drawbridge; length of draw, 400 feet.

Berne, Switzerland.—Over the river Aar main span, 367 feet.

Blackwell's Island, N. Y.—Crosses East River steel cantilever, 7,636 feet long; cost $12,500,000.

Britannia Tubular Bridge, carrying the Chester and Holyhead railway across the Menai straits, consists of two parallel rectangular wrought-iron tubes resting on three piers. There are two central spans of 459 feet, and two shore spans of 230 feet. The central pier is built on the Britannia rock, and its erection was begun 1846. The height of the tube within is 30 feet at the center, diminishing to 23 feet at the shore ends. The bridge has a clear headway above high-water of 103¼ feet. The four tubes of the central spans were floated into position and gradually raised to the required height by hydraulic presses.

Brooklyn Bridge.—A wire cable suspension bridge connecting New York with Brooklyn; designed by John A. Roebling, and built by his son, W. A. Roebling. It has a total length of carriageway, 5989 feet, and including extension, 6537 feet, a central span of 1595 feet, two side spans of 930 feet each, with a clear headway under the center of the bridge of 135 feet above high water; total height of towers above high-water, 278 feet; there are four suspension cables, composed of 5296 galvanized steel wires, bound together, but not twisted; width of bridge, 85 feet; cost, $15,000,000; bridge begun 1870, opened May, 1883.

Cabin John's Bridge, D. C.—Stone aqueduct with span of 220 feet; constructed, 1857-1864 at which time it was the longest stone arch in the world.

Cairo, Ill.—Over Ohio River; steel, 10,560 feet, embracing 50 spans.

Chicago, Ill.—(1) Halsted Street Bridge over Chicago River; most noted lift bridge built, with towers of steel framework, and a suspended truss span. (2) Rush Street Bridge, erected in 1884, at a cost of $132,000, is the largest general traffic drawbridge in the world. Its roadway will accommodate four teams abreast, and its footways are seven feet wide.

Cincinnati and Covington (over the Ohio).—Built 1867; reconstructed, 1897; length, 2,720 feet; suspension.

Cincinnati Iron Truss Railway Bridge (across the Ohio River).—Planned for a double-track railroad and two roadways and two sidewalks in addition. Total structure one mile in length; the center span 550 feet, and two spans flanking the main channel 490 feet each. Caissons sunk in 1887; completed, 1890.

Cleveland, Ohio, Viaduct.—Length, 3,211 feet; width, 64 feet; contains a drawbridge 332 feet in length, 46 feet wide, and 68 feet above the ordinary water mark.

Clifton, now known as the Upper Arch (over Niagara River). Length, 1,268 feet. Longest single steel arch span in the world. Blown down 1889, rebuilt in 1898, replacing the Niagara and Clifton suspension.

Clifton Suspension Bridge.—A chain bridge cross-the Avon below Bristol, England. It was partly constructed of the Hungerford foot-

bridge, which was taken down in July, 1862. It is said to have the longest span of any chain bridge in the world (702 feet), and is 250 feet above high-water. Begun in 1862; opened December, 1864.

Danube (near Stadlan, Austria).—Iron suspension; length, 2520 feet.

Douro Bridge, an arched iron structure near Oporto, Portugal; total length, 1150 feet, span of arch, 520 feet, height from low-water to crown of arch, 198 feet. Begun, 1875; opened to travel by the king of Portugal, November, 1877.

Bridge of the Holy Trinity (at Florence, Italy).—Was built in 1569. It is 322 feet long, constructed of white marble, and stands unrivaled as a work of art.

Forth Bridge.—Over the Firth of Forth, Scotland; cantilever; iron and steel; length, nearly two miles, including approaches. Opened March, 1890; cost $15,800,000.

Freiburg Suspension Bridge.—Over the Sarine valley, Switzerland. 870 foot span; 167 feet above the river; built by N. Chaley, 1833-34.

Garabit Viaduct.—Over the Truyere, in the south of France. The total length is 1849 feet; the main portion, 1469 feet in length, is of steel, and consists of five openings of from 170 to 182 feet, spanned by lattice girders and a trellis parabolic arch with a span of 541 feet, and a clear height above the river of 356 feet. The rail level is 401 feet above the river. (Highest bridge in the world.) Designed by M. Eiffel and built without scaffold. Begun, 1879; completed, 1884.

Harlem River Aqueduct (High Bridge).—Stone; length, 1450 feet; semi-circular arch.

Hartford, Conn.—Stone arch bridge, 1192 feet in length, over the Connecticut River. Completed in 1907. Has nine semi-elliptical arches. Made of granite with macadam roadway. Cost about $1,600,000. Piers founded on solid bottom by pneumatic caisson process.

Hooghly Bridge, India, carrying the East Indian railway across the Hooghly River at a height of 53 feet above low-water. It has one central span of 95 ½ feet and two end spans of 520 feet. It was begun in 1883, and completed at a cost of $1,305,000 in 1886.

Karlsbrucke (Charles' Bridge), over the Moldau at Prague. Built by Emperor Charles IV. of Germany, 1384. 1855 feet long. Gate towers at either end, ornamented with groups of statuary. Greatly damaged by flood, September, 1890; since repaired.

Kinzua Viaduct (R. R.).—On Bradford branch of New York, Lake Erie and Western R. R., near Bradford, Pa., iron; height, 301 feet; length, 2050 feet.

Loa Viaduct, a lattice girder iron bridge by which the Antofagasta railway of Bolivia crosses the canon of Loa at an altitude of 10,000 feet above the sea level. The bridge was put together in nine months under the supervision of Peter and John Fisher, who went from England for the purpose.

London Bridge.—One is said to have existed, 978. A bridge built of wood, 1014, was partly burned in 1136. The old London bridge was the first stone bridge. It was commenced in 1176, and completed in 1209. Its founder, Peter of Colechurch, was buried in the crypt of the chapel erected on the center pier.

New London Bridge, designed by John Rennie, and built by his sons, John and George; total cost $7,291,000; length of central span, 152 feet. The first pile was driven 200 feet to the west of the old bridge, March, 1824; the first stone was laid by the lord mayor, alderman Garratt, June, 1825; opened by William IV. and his queen, August, 1831.

Louisville, Ky. (Over the Ohio).—Length, 5310 feet.

Luxemburg, Germany.—Stone, containing span of 277 feet; largest single arch stone bridge in the world.

Maintenon Aqueduct.—Stone; length 16,367 feet; semi-circular arch.

Menai Suspension Bridge.—A chain bridge built by Telford across the Menai straits, 102 feet above high-water. The entire length of the chains is 1710 feet; length of span, 570 feet; bridge begun, July, 1818; and opened for traffic, January, 1826; a new bridge was built, 1850; cost, $3,000,000.

Minneapolis Suspension Bridge.—Completed, 1876; length, with approaches, one mile.

Montpellier Aqueduct.—Stone; length, 3214 feet; semi-circular arch.

Niagara Cantilever.—Steel bridge over the Niagara River; length, 910 feet.

Niagara Suspension.—(Now replaced by steel and known as the Lower Arch.) Total length, about 2220 feet; width of span, 821 feet; height above river, 245 feet.

Niagara Falls Suspension Bridge.—Across the gorge, two miles below the falls. Built by John A Roebling. Length of span between towers, 800 feet; supported by four wire cables, each containing 3640 No. 9 wires; height of track above the water, 245 feet; carriage-way beneath the track; cost of bridge, $400,000; work begun, 1852; first locomotive crossed, March, 1855.

Pavia.—The covered bridge at Pavia, over the Ticino, was built in the fourteenth century. The roof is held by 100 granite columns.

Poughkeepsie, N. Y. (Over the Hudson River).—Iron cantilever; length, 6767 feet; opened in 1889.

Queensborough, N. Y.—Iron cantilever, 3724 feet in length; here crosses East River; largest cantilever bridge in the world, bearing traffic; cost over $17,000,000; has four elevated railroad tracks, two promenades, four trolley tracks. Opened, 1909.

Rialto.—Masonry arch bridge at Venice over the Grand Canal. Single span of 98 ½ feet; rise of span, 20 feet; width of footway, 72 feet. Built by Antonio da Ponte, 1588.

Rockville Bridge.—Near Harrisburg, Pa., is the largest four-track stone railway bridge in the world. Length, 3810 feet. It contains forty-eight 70-foot stone arches and cost $1,000,000.

St. Louis (Across the Mississippi).—Minnesota and North Western R. R.; iron; 1825 feet long, draw span 412 feet long, the latter being one of the largest and heaviest in the world. The width on top, between rails, is 50 feet. The piers rest on the bedrock of the river, 136 feet below high-water mark. Captain James B. Eads was the engineer; cost, $10,000,000.

Southwark Bridge, South London, was designed by John Rennie. It consists of three cast-iron arches of 210, 240 and 210 feet span, resting on massive stone piers and abutments; cost about $4,000,000; begun, 1814; completed, 1819.

Sukkur Cantilever Bridge, crossing the Rori branch of the Indus at Sukkur, with a single span of 790 feet; opened, June, 1889.

Tay Bridge, the longest girder bridge in the world, crosses the Tay at Dundee, Scotland. The original bridge consisted of 85 spans, some over 90 feet above water level, and has a total of length 10,612 feet. Engineer, Sir Thomas Bouch. Over 20 lives lost during its construction. Work commenced, June, 1871; completed, August, 1877; and opened, May, 1878. Partly destroyed by a gale while a N. British mail-train was passing over it; the train and 75 to 90 passengers disappeared, none escaping. A gap of about 3000 feet was made in the bridge.

Tower Bridge.—Steel and masonry draw-bridge across the Thames. A bascule bridge crossing the Thames below London bridge. It has a central opening of 200 feet between two high towers, connected near the top by a fixed foot-bridge 139 ½ feet above the river and reached by elevators or stairways in the towers. There are two side spans of 270 feet covered by chain suspension bridges, and between the towers, at a height of 29 ½ feet above high-water, a double bascule, each leaf 100 feet in length and forming a flat arch when down, at a level with the main bridge. Foundation laid in 1886; opened in 1894. Cost, $48,610,000.

Victoria Bridge over the Thames at Pimlico, London, consists of four very wide wrought-iron arches. Begun, 1859; completed, 1860; and widened, 1865-66.

Victoria Bridge, Montreal, one of the most famous in the world, is nearly two miles in length. Was erected by James Hodges under the superintendence of Robert Stephenson and A. M. Ross, engineers. It is about two miles in length and rests on 24 piers, the height being 60 feet above summer level of the river; cost, $8,000,000; work begun, May, 1854; bridge damaged by floating ice while under construction, January, 1855; formally opened by the Prince of Wales, August, 1860. Replaced, 1898-1899, by a pin-connected truss bridge of 25 spans; and in 1906 by a new steel bridge.

Washington Bridge (Across Harlem River valley, N. Y.); two steel arches of 510 feet span; roadway 80 feet wide; length, 2375 feet; height above the Harlem River, 136 feet; built, 1886-89. Cost, $2,850,000.

Waterloo Bridge (Over the Thames at London.) Length within abutments, 1242 feet; width within balustrades, 42 feet; span of each arch, of which there are nine, 120 feet. It was opened on the anniversary of the Battle of Waterloo, the duke of Wellington and others being present, June, 1817. Cost, $2,400,000.

Westminster Bridge.—Old bridge was built of Portland stone, after a design of M. Labelye. Begun, 1738; opened for passengers, 1750; length, 1223 feet; cost, $2,150,000; commissioners of works empowered to rebuild, 1853; one-half of the bridge opened early in 1860, the whole, 1862.

Williamsburg.—Across East River, connecting Manhattan and Brooklyn. Total length 7275 feet; main span, 1600 feet; width, 118 feet; height above mean-high water, 135 feet; cost, $12,000,000, exclusive of real estate. Begun, 1897.

British Lion.—This term symbolizes the spirit of pugnacity of the British nation, as opposed to "John Bull," which symbolizes the substantiality, obstinacy, and solidity of the British nation, with all its prejudices and national peculiarities. To rouse John Bull is to tread on his corns; to rouse the British lion is to blow the war-trumpet in his ears.

Brother Jonathan is a collective personification of the people of the United States. When General Washington, after being appointed commander of the army of the Revolutionary war, came to Massachusetts to organize it and make preparations for the defense of the country, he found a great want of ammunition and other means necessary to meet the porwerful foe he had to contend with and great difficulty to obtain them. In attacked in such condition, the cause at once might be hopeless. On one occasion, at that anxious period, a consultation of the officers and others was had, when it seemed no way could be devised to make such preparation as was necessary. His excellency Jonathan Trumbull, the elder, was then governor of the state of Connecticut, on whose judgment and aid the General placed the greatest reliance, and remarked: "We must consult Brother Jonathan on the subject." He did so, and the governor was successful in supplying many of the wants of the army. When difficulties afterward arose and the army was spread over the country it became a by word, "We must consult Brother Jonathan."

Bunker Hill Monument.—The corner stone of this monument was laid on the fiftieth anniversary of the battle of Bunker Hill, June 17, 1825, by Lafayette, and the oration was pronounced by Daniel Webster. It is a square shaft of Quincy granite, 22 feet high, 31 feet square at the base, and 15 feet at the top. Inside the shaft is round, hollow cone, 7 feet wide at the bottom, and 4 feet 2 inches at the top, encircled by a winding staircase containing 224 stone steps, which lead to a chamber 11 feet in diameter immediately under the apex. The chamber has four windows and contains two cannons, named Hancock and Adams, respectively, which were used in the war. The monument was completed and was dedicated June 17, 1843.

Bury the Hatchet.—Let by-gones be by-gones. The "Great Spirit" commanded the North American Indians, when they smoked the calumet or peace-pipe, to bury their hatchets, scalping-knives and war-clubs in the ground, that all thought of hostility might be buried out of sight.

> Buried was the bloody hatchet;
> Buried was the dreadful war-club;
> Buried were all warlike weapons,
> And the war-cry was forgotten:
> Then was peace among the nations.
>
> LONGFELLOW, *Hiawatha*

arpet-baggers.—Corrupt and often ignorant politicians—mostly from the North—who flocked to the South during the era of reconstruction. They were uniformly "on the make," and were responsible for much of the venality and rascality that disgraced that period of the history of the South.

Caste Among the Hindoos.—Caste is a term applied to the division into social classes in India. To each of these classes certain pursuits are limited by the Laws of Manu, B. C., 960.

1. The *Brahmans* or sacerdotal class, which "issued from the mouth of Brahma."

2. The *Chuttree* or military class, which "sprang from the arm of Brahma."

3. The *Bais* or mercantile class, which "sprang from the thigh of Brahma."

4. The *Sudras* or servile class, which "sprang from the foot of Brahma."

The *Pariahs* and *Chandalas* are nobodies or worse, for it is a pollution to be touched by such "scum of the earth."

CALENDAR FOR READY REFERENCE

For ascertaining any Day of the Week for any given Time within Two Hundred Years from the introduction of the New Style, 1753 to 1952, inclusive.

YEARS 1753 TO 1952								Jan	Feb	Mar	Apr	May	June	July	Aug	Sept.	Oct.	Nov.	Dec.
1753g 1754d	1781g 1782d	1800e 1801a	1828q 1829a	1856q 1857a	1884q 1885a	1900g 1901d	1928h 1929d	a	4	7	7	3	5	1	3	6	2	4	7	2
1755e 1756p	1783e 1784p	1802b 1803c	1858b 1831c	1858b 1859c	1886b 1887c	1902e 1903a	1930e 1931a	b	5	1	1	4	6	2	4	7	3	5	1	3
1757c 1758f	1785c 1786f	1804h 1805d	1832h 1833d	1860h 1861d	1888h 1889d	1904k 1905f	1932k 1933f	c	6	2	2	5	7	3	5	1	4	6	2	4
1759g 1760q	1787g 1788q	1806e 1807a	1834e 1835a	1862e 1863a	1890e 1891d	1906g 1907d	1934g 1935d	d	2	5	5	1	3	6	1	4	7	2	5	7
1761a 1762b	1789a 1790b	1808k 1809f	1836k 1837f	1864k 1865f	1892k 1893f	1908l 1909b	1936l 1937b	e	3	6	6	2	4	7	2	5	1	3	6	1
1763c 1764b	1791c 1792h	1810g 1811d	1838g 1839d	1866g 1867d	1894g 1895d	1910c 1911f	1938c 1939f	f	7	3	3	6	1	4	6	2	5	7	3	5
1765d 1766e	1793d 1794e	1812l 1813b	1840l 1841b	1868l 1869b	1896l 1897b	1912m 1913e	1940m 1941e	g	1	4	4	7	2	5	7	3	6	1	4	6
1767a 1768k	1795a 1796k	1814c 1815f	1842c 1843f	1870c 1871f	1898c 1899f	1914a 1915b	1942a 1943b	h	7	3	4	7	2	5	7	3	6	1	4	6
1769f 1770g	1797f 1798g	1816m 1817e	1844m 1845e	1872m 1873e		1916n 1917g	1944n 1945g	k	5	1	2	5	7	3	5	1	4	6	2	4
1771d 1772l	1799d	1818a 1819b	1846a 1847b	1874a 1875b		1918d 1919e	1946d 1947e	l	3	6	7	3	5	1	3	6	2	4	7	2
1773b 1774c		1820n 1821g	1848n 1849g	1876n 1877g		1920p 1921c	1948p 1949c	m	1	4	5	1	3	6	1	4	7	2	5	7
1775f 1776m		1822d 1823e	1850d 1851e	1878d 1879e		1922f 1923g	1950f 1951g	n	6	2	3	6	1	4	6	2	5	7	3	5
1777e 1778a		1824p 1825c	1852p 1853c	1880p 1881c		1924q 1925a	1952q	p	4	7	1	4	6	2	4	7	3	5	1	3
1779b 1780n		1826f 1827g	1854f 1855g	1882f 1883g		1926b 1927c		q	2	5	6	2	4	7	2	5	1	3	6	1

Note.—The letters in the list of "Years from 1753 to 1952," refer to the table headed with the Month, figures in which refer to the same figures at the head of the table of Days. For example: To know on at day July 4, 1911, fell, look for 1911 in the table of Years. The letter "f" is attached. Look for the ne letter in the table of Months and in a parallel line under July is the figure 6, which directs to column 6 the table of Days below, in which it will be seen that July 4, 1911, fell on Tuesday.

TABLE OF DAYS

1	2	3	4	5	6	7
onday 1	Tuesday 1	Wednesday 1	Thursday 1	Friday 1	Saturday 1	SUNDAY 1
esday 2	Wednesday 2	Thursday 2	Friday 2	Saturday 2	SUNDAY 2	Monday 2
dnesday 3	Thursday 3	Friday 3	Saturday 3	SUNDAY 3	Monday 3	Tuesday 3
ursday 4	Friday 4	Saturday 4	SUNDAY 4	Monday 4	Tuesday 4	Wednesday 4
day 5	Saturday 5	SUNDAY 5	Monday 5	Tuesday 5	Wednesday 5	Thursday 5
urday 6	SUNDAY 6	Monday 6	Tuesday 6	Wednesday 6	Thursday 6	Friday 6
NDAY 7	Monday 7	Tuesday 7	Wednesday 7	Thursday 7	Friday 7	Saturday 7
onday 8	Tuesday 8	Wednesday 8	Thursday 8	Friday 8	Saturday 8	SUNDAY 8
esday 9	Wednesday 9	Thursday 9	Friday 9	Saturday 9	SUNDAY 9	Monday 9
dnesday 10	Thursday 10	Friday 10	Saturday 10	SUNDAY 10	Monday 10	Tuesday 10
ursday 11	Friday 11	Saturday 11	SUNDAY 11	Monday 11	Tuesday 11	Wednesday 11
day 12	Saturday 12	SUNDAY 12	Monday 12	Tuesday 12	Wednesday 12	Thursday 12
urday 13	SUNDAY 13	Monday 13	Tuesday 13	Wednesday 13	Thursday 13	Friday 13
NDAY 14	Monday 14	Tuesday 14	Wednesday 14	Thursday 14	Friday 14	Saturday 11
onday 15	Tuesday 15	Wednesday 15	Thursday 15	Friday 15	Saturday 15	SUNDAY 15
esday 16	Wednesday 16	Thursday 16	Friday 16	Saturday 16	SUNDAY 16	Monday 16
dnesday 17	Thursday 17	Friday 17	Saturday 17	SUNDAY 17	Monday 17	Tuesday 17
ursday 18	Friday 18	Saturday 18	SUNDAY 18	Monday 18	Tuesday 18	Wednesday 18
day 19	Saturday 19	SUNDAY 19	Monday 19	Tuesday 19	Wednesday 19	Thursday 19
urday 20	SUNDAY 20	Monday 20	Tuesday 20	Wednesday 20	Thursday 20	Friday 20
NDAY 21	Monday 21	Tuesday 21	Wednesday 21	Thursday 21	Friday 21	Saturday 21
onday 22	Tuesday 22	Wednesday 22	Thursday 22	Friday 22	Saturday 22	SUNDAY 22
esday 23	Wednesday 23	Thursday 23	Friday 23	Saturday 23	SUNDAY 23	Monday 23
dnesday 24	Thursday 24	Friday 24	Saturday 24	SUNDAY 24	Monday 24	Tuesday 24
ursday 25	Friday 25	Saturday 25	SUNDAY 25	Monday 25	Tuesday 25	Wednesday 25
day 26	Saturday 26	SUNDAY 26	Monday 26	Tuesday 26	Wednesday 26	Thursday 26
urday 27	SUNDAY 27	Monday 27	Tuesday 27	Wednesday 27	Thursday 27	Friday 27
NDAY 28	Monday 28	Tuesday 28	Wednesday 28	Thursday 28	Friday 28	Saturday 28
onday 29	Tuesday 29	Wednesday 29	Thursday 29	Friday 29	Saturday 29	SUNDAY 29
esday 30	Wednesday 30	Thursday 30	Friday 30	Saturday 30	SUNDAY 30	Monday 30
dnesday 31	Thursday 31	Friday 31	Saturday 31	SUNDAY 31	Monday 31	Tuesday 31

Center of Area and Population of the United States.—The center of area of the United States, excluding Alaska and Hawaii and other recent accessions, is in northern Kansas, in approximate latitude 39 degrees, 55 minutes, and approximate longitude 98 degrees, 50 minutes.

The center of population, indicated below, is, therefore, about three-fourths of a degree south and more than thirteen degrees east of the center of area.

Date	Center of Population Approximate Location by Important Towns	Westward Movement During Preceding Decade, Miles
1790	23 miles east of Baltimore, Md	
1800	18 miles west of Baltimore, Md	41
1810	40 miles northwest by west of Washington, D. C.	36
1820	16 miles north of Woodstock, Va	50
1830	19 miles W. S. W. of Moorfield, in the present State of W. Va.	39
1840	16 miles south of Clarksburg, in the present State of W. Va	55
1850	23 miles S. E. of Parkersburg, in the present State of W. Va.	55
1860	20 miles south of Chillicothe, Ohio	81
1870	48 miles east by north of Cincinnati, Ohio	42
1880	8 miles west by south of Cincinnati, Ohio	58
1890	20 miles east of Columbus, Ind	48
1900	6 miles southeast of Columbus, Ind	14
1910	Bloomington, Ind	39

Chalk, a soft kind of limestone or carbonate of lime. It is composed almost entirely of the shells of little sea animals, which in the course of ages have become packed together so closely, and in such immense numbers, that in some parts of the world they form vast cliffs twenty times the height of a house. Though generally yellowish-white, it is sometimes snow-white in color. It is usually soft, but is often hard enough to be employed for building purposes. When burned it makes excellent lime for *mortar*, and a good manure; and when ground and purified by washing it is called whiting or Spanish white, with which metals and glass are polished. Chalk is given as a medicine, and is used for cleaning the teeth, as well as for marking on black-boards.

Character by the Month.—Here is an old astrological prediction, said to indicate, with tolerable certainty, the character of the girl according to the month she happens to be born in:

If a girl is born in January, she will be a prudent housewife, given to melancholy, but good-tempered.

If in February, a humane and affectionate wife and tender mother.

If in March, a frivolous chatterbox, somewhat given to quarreling.

If in April, inconstant, not intelligent, but likely to be good-looking.

If in May, handsome and likely to be happy.

If in June, impetuous, will marry early, and be frivolous.

If in July, passably handsome, but with a sulky temper.
If in August, amiable and practical, and likely to marry rich.
If in September, discreet, affable, and much liked.
If in October, pretty and coquettish, and likely to be unhappy.
If in November, liberal, kind, of a mild disposition.
If in December, well proportioned, fond of novelty, and extravagant.

Christmas Tree.—The Christmas Tree, which has become an almost universal symbol, and is by most persons supposed to have originated in Germany, had its origin in Egypt at a period long before the Christmas era. The palm-tree is known to put forth a branch every month, and a spray of this tree, with 12 shoots on it, was used in Egypt at the time of the winter solstice, as a symbol of the year completed.

Cities, Soubriquets of.—Certain cities have received popular appellations because of their identification with particular religious beliefs, observances, educational or literary pre-eminence, topography, resemblances to other cities, location, dominant industries, surroundings, and other reasons. Among such are the following:

Aberdeen, Scotland.—Granite City, from the prevalence and use of this stone.

Agra, India.—Rome of Hindustan. It was the seat of the Mohammedan empire in India, and its ancient structures are on a scale of great magnificence.

Alexandria, Egypt.—(1) Delta City, from the delta of the Nile. (2) Mother of Books, because there was deposited the largest collection of books ever gathered together prior to the invention of printing.

Allahabad, India.—Holy City of the Indian Mohammedans.

Amiens, France.—Little Venice, because it is so intersected by different branches of the Somme and the numerous bridges over them, as to have moved Louis XI. to bestow on it the above name.

Antioch.—(1) Queen of the East, because it was formerly the capital of Syria, and the place of residence of the Macedonian kings and Roman governors. (2) Mother of Christian Mission. From thence (Acts xiii, 1-3) Paul started on his first missionary journey.

Aquiljar, Austria.—Second Rome, because in the time of the Romans it was the entrepôt and commercial centre of northern and western Europe, and the Emperor Augustus often resided there. It was taken and burned by Attila, at which time its population was reckoned at 100,000.

Athens, Greece.—(1) The Violet Crowned, so named by Pindar, in allusion to the violet crowns offered to the god at the Dionysiac festivals. It soon became a stock phrase, and, according to Aristophanes, every stump orator could win over his audience by judicious use of "violet-crowned city," or "ancient violet-crowned Athens."

(2) Religious City, a name given by the old writers. It is said that there were thirty thousand temples, statues, and sacred places dedicated to worship of the heathen gods.

(3) Eye of Greece, because the most renowned of Greek Cities.

Athens the eye of Greece, mother of arts
And eloquence, native to famous wits
Or hospitable.
Milton, *Paradise Regained*, Book iv.

Atlanta, Ga.—The Gate City, so named by Jefferson Davis during the Civil war, it being, in his estimation, the most important inland position, from a military point of view, in the South.

Baalbec, Syria.—City of the Sun, the Heliopolis of the Greeks, is often referred to by this title, which is a translation of its two names. It is celebrated for its superb ruins, yet extant, of an ancient temple dedicated to the sun.

Bagdad, Arabia.—City of Peace.

Balkh (the ancient Bactra), Central Asia.—Mother of Cities, so named by Orientals in allusions to its great antiquity. The modern town covers but a fraction of the surface embraced by the ancient city, the remains of which cover a space twenty miles in circumference.

Baltimore, Md.—Monumental City. It contains the Washington and Battle monuments and many others; whence its title.

Berlin, Prussia.—City of Intelligence, from its numerous intellectual institutions.

Binghampton, N. Y.—Parlor City; name given by its admirers because finer homes and better kept lawns are seldom seen than line some of its streets.

Birmingham, Ala.—Magic City, so named on account of its rapid rise into size and prominence.

Birmingham, England.—The Midland Capital, from its geographical location.

Bokhara, Asia.—Treasury of Sciences, from its position as an Asiatic center of learning. It has 103 colleges with 10,000 students, besides a host of schools and 360 mosques.

Bologna, Italy.—The Fat City. In the days of the Italian Republics the city of Bologna was so named.

Boston, Mass.—(1) Athens of America, because famed alike for its institutions of learning and for the high order of the intelligence and culture of its citizens.

(2) City of "Notions," numerous manufactured articles of all kinds commanding a large sale.

(3) Tri-Mountain City, from the three hills on which it was originally built.

(4) Hub of the Universe; a humorous appellation popularly applied, originated with Dr. O. W. Holmes.

Boston State-house is the hub of the solar system. You couldn't pry that out of a Boston man if you had the tire of all creation straightened out for a crowbar.—*The Autocrat of the Breakfast-table.*

Batavia, in Java.—Queen of the East, being the metropolis of the Dutch East Indian possessions.

Benares, India.—Holy City of the Hindus.

Brighton, England.—Queen of Watering Places, "London-super-Mare."

Brisbane, Australia.—Montpellier of Australia, so named on account of the salubrity of its climate.

Brooklyn.—City of Churches, from the number of churches it contains.

Buffalo, N. Y.—Queen City of the Lakes, because of its commanding position on the great lakes, and of much commercial importance.

Calcutta, India.—City of Palaces, from the large number of elegant European residences.

Chicago.—(1) Garden City, from the number and beauty of its private gardens; (2) Windy City from the constant winds blowing from the lakes.

Cincinnati.—Queen City, so called when it was the commercial metropolis of the Middle West.

Cleveland.—Forest City from the number of trees on its streets.

Cologne, Germany.—(1) City of the Three Kings, in reference to the old legend which makes Cologne the burial place of Balthazar, Melchoir, and Jasper, the "wise men of the East."

(2) Rome of the North, so called (says Hope) in the Middle Ages, from its wealth, power, and ecclesiastical foundations.

Columbus, Ohio.—The Arch City.

Constantinople.—City of the Golden Horn.

Cordova, Spain.—Athens of the West; under its Mohammedan rulers it attained great eminence in the domain of letters.

Cork, Ireland.—Athens of Ireland, because it was the domicile or the birthplace of many erudite and eminent Irishmen.

Cusco, Peru.—Holy City of the Ancient Incas.

Denver, Colo.—Queen of the Plains.

Detroit.—City of the Straits, from its location on the straight connecting Lake St. Clair and Lake Erie.

Dresden, Saxony.—(1) Elbe Florence, so called from the important part which the river Elbe plays in the city's life and topography.

(2) German Florence, so named for its wealth in works of art and scientific treasures.

Duluth, Minn.—Zenith City of the Unsalted Seas; thus named by Proctor Knott in a famous speech in Congress.

Edinburgh.—(1) Auld Reekie, so named on account either of (a) its filthy and ill-smelling thoroughfares, or (b) the canopy or cloud of smoke that seems to overhang the city when viewed from a distance.

(2) Maiden Town. An old legend has it that it was to this place the fair daughters of the Pictish monarchs were consigned for safety in time of war.

(3) Modern Athens. It is the headquarters of learning in Scotland; as a literary town it is second only to London, and it is the seat of the supreme courts of Scotland. The good taste and culture of its people are marked. It contains a great university and many schools, and it is famed for the many distinguished men who have been born or who have resided there. Lastly, its topographical situation is very similar to that of its ancient namesake.

Florence, Italy.—(1) Lily of the Arno; (2) The Gentle. In the palmy days of the Italian republics Florence was so named. 'In the mouth of an Italian this adjective includes all the amenities and agreeableness resulting from a high state of civilization."

Galway, Ireland.—City of the Tribes, because, in 1235, there settled here thirteen clans, named Athy, Blake, Browne, Budkin, Burke, D'Arcy, Ffont, Joyce, Kirwan, Lynch, Martin, Morris and Skerrett.

Geneva, Switzerland.—Rome of Protestantism. Under the guidance of Calvin and his associates it became a stronghold of the Reformation.

Hannibal, Mo.—Bluff City, from its location on the bluffs of the Missouri River.

Holyoke, Mass.—Paper City. It has the most extensive paper mills in the world.

Iglesias, Sardinia.—City of the Mines, on account of the magnitude of its mining operations.

Indianapolis.—Railroad City, from its being a great railroad center.

Italian Cities.—In the days of the Italian republics the chiefs of the sisterhoods of cities were known by some special epithet, supposed to be descriptive of their peculiar charms or of the idiosyncrasies of their inhabitants. Thus we have Naples, the Beautiful; Rome the Eternal City; Genoa, the Superb; Lucca, the Industrious; Padua, the Learned; Bologna, the Fat; and Florence, the Gentle.

Jerusalem.—(1) City of Peace; its ancient name, Salem, signifies "peace;" (2) Holy City of the Jews and Christians; (3) City of the Great King, so named in the Scriptures; (4) City of David, so named by King David, who captured it from the Canaanites, 1049, B. C.

Keokuk, Iowa.—Gate City, from its situation at the foot of the Mississippi Rapids.

Liverpool.—The Modern Tyre.

Lhasa, Thibet.—Rome of Buddhism. It is the "holy city" of the Buddhists in Asia.

London.—(1) City of Masts, so named from the spectacle presented by its vast array of shipping.

(2) Modern Babylon. In point of size it is the greatest in the modern world, as Babylon is believed to have been of the ancient. But there is also an allusion in the term to the luxury and licentiousness common to both cities.

(3) Lud's Town. So called after Lud, a mythical king of Britain.

And on the gates of Lud's town set your heads.—Shakespeare, *Cymbeline.*

Louisville, Ky.—Falls City, from the falls of the Ohio River, here located.

Lowell, Mass.—City of Spindles, from its large manufacturing interests.

Lucknow, India.—City of Roses, because embowered with them.

Lynchburg, Va.—Hill City; Tobacco City; tobacco is one of the chief staples of trade.

Manchester, England.—Cottonopolis, on account of its extensive manufactures of cotton.

Mecca, Arabia.—Holy City of the Mohammedans.

Medina, Arabia.—Prophet's City. To this place Mohammed fled for refuge during the Hegira, July 16, 622, and here is his tomb.

Mero, Turkestan.—Queen of the World, because of its pre-eminent situation.

Milan, Italy.—Little Paris, in allusion to its similarity to the Gallic capital in point of gaiety and dissipation.

Minneapolis.—Flour City, from its extensive flour mills.

Montreal, Canada.—Island City. It is built on an island of the same name.

Moscow, Russia.—Holy City of the Russians or Slavs.

Nashville, Tennessee.—City of Rocks, from its natural surroundings.

New Haven.—City of Elms, from the great number of these trees it contains.

New Orleans.—Crescent City, from its position on a curve of the Mississippi.

Newport, R. I.—(1) City by the Sea, famous as a fashionable summer resort; (2) City of Mansions.

New York.—(1) Empire City, from its being the chief city of the United States.

(2) Gotham, a colloquial term applied in "Salmagundi" by Washington Irving and James K. Paulding, and is supposed to hint sarcastically at the worldly wisdom of its inhabitants.

Paris.—City of the Lily, or City of Louis.

Pernambuco, Brazil.—City of the Reef; the harbor is protected by an extensive reef of rocks.

Perth, Scotland.—The Fair City, because elegantly built and picturesquely situated.

Philadelphia.—(1) City of Brotherly Love, from the meaning of the name.

(2) Quaker City, planned and colonized by William Penn and other members of the Society of Friends.

(3) City of Homes. So named on account of the large number of private dwellings it contains, and the almost total absence of tenement-houses.

Pittsburg, Pa.—Iron City, from the extent of its iron manufactures; and Smoky City, from the smoke which overhangs it.

Portland, Me.—Forest City, from the number of trees in its streets.

Rochester, N. Y.—Flower City, from the profusion of flowers and extensive nurseries there.

Rome.—(1) Holy City; (2) City of Seven Hills; (3) Mistress of the World; (4) Imperial City; (5) City of Palaces.

Santa Fe.—City of the Holy Faith.

San Francisco.—City of the Golden Gate.

Salt Lake City.—City of the Saints; here is located the headquarters of the Mormon hierarchy, "the Church of Latter-Day Saints of Jesus Christ."

Seattle, Wash.—Queen City of Puget Sound.

Seven Cities, The.—Egypt, Jerusalem, Babylon, Athens, Rome, Constantinople, and either London or Paris. They are often grouped under this title, as embodying wealth, antiquity, greatness and magnificence.

Sheraz, Persia.—Athens of the East. It has numerous colleges, and anciently was the home of poetry and the arts. It gave birth to more distinguished Persian poets than any other Persian city.

If Mohammed had tasted the pleasures of Sheraz, he would have begged of Allah to make him immortal there.—*Persian Saying.*

St. Louis, Mo.—Mound City, from the artificial mounds found there.

St. Petersburg.—(1) City of Perspectives; its streets and quays are famous for the long vistas they present; (2) City of Snow; for nine months in every year it is shrouded in a canopy of snow.

Springfield, Mass.—City of Homes, from the many people who own their own homes.

Springfield, Ohio.—Flower City, from the beauty of its surroundings.

Thessalonica (Modern Salonica).—Orthodox City. It was for centuries a bulwark of Christianity, but in 1430 was captured by Amurath II.

Venice.—City of St. Mark; City of the Seventy Isles.

Washington.—City of Magnificent Distances, from its being laid out on a large and regular scale.

Worcester, Mass.—The Faithful City, so called from its motto: *Floreat Semper Civitas Fidelis.*

Coal.—A carbonaceous mineral substance, black, shiny or dull, easily broken, often splintery, inflammable, and used for fuel. It is composed of carbon (75 per cent), hydrogen, oxygen, and some nitrogen, with siliceous and other earthy impurities (ash). It consists of compressed and chemically altered vegetable matter, chiefly extinct kinds of lycopodiaceous trees. As the successive jungle-growths accumulated their stems, leaves, and spores, hydrogen and oxygen were evolved with some of the carbon. The relative proportion of carbon in the mass was increased, the woody fiber reduced in volume to one-ninth, or even one-fifteenth, of its original bulk, and the mass became black, shiny hydrocarbons, with imbedded charcoal ("mother-coal"), due to decomposition of trees lying exposed to the air, or dull black hydrocarbons, resulting from the consolidation of decomposed vegetable pulp, like soft peat.

Dana divides what may be called the species, termed by him Mineral Coal, into the following varieties: (1) Anthracite, (2) Native Coke, (3) Caking Coal, (4) Non-caking Coal, (5) Cannel Coal (Parrot Coal), (6) Torbanite, (7) Brown Coal (Lignite), (8) Earthy Brown Coal, (9) Mineral Charcoal. The first variety has only three-forty-sixths per cent of bituminous matter, the second has none, and the rest vary in this respect.

Coke.—There are two kinds of coke—gas coke and coke which is made in heaps or ovens. Coke is charred bituminous coal, just as charcoal is charred wood, and it consists only of carbon mixed with some earthy matters. When it is charred in heaps the coal is piled up in a stack, which is sometimes round and sometimes oblong, with openings left for the air. Fire is then set to it, and it is allowed to burn until smoke no longer rises from it. The air holes are then stopped by covering the heap with coal dust, and the coke is left to cool. During the burning, smoke, watery vapor, coal gas, and coal tar are given off, and the remainder is coke. A better way to make coke is to char the coal in great ovens built of firebrick for the purpose. The coal is put in at the top, and a little air let in at openings in the front. As soon as the smoky vapor ceases to pass off, the oven is tightly closed and allowed to cool for a day. The coke is then raked out, and if still aglow the fire is put out with water.

Coke is lighter than coal, and porous, or full of little holes. When used as a fuel it gives a great and steady heat without smoke, and leaves but little ashes. It is largely used in countries where anthracite coal is lacking, in furnaces for smelting metals and in furnaces where smoke is not wanted.

Congressional Gold Medals.—Awarded by Special Act of Congress.

George Washington.—The Capture of Boston 1776
Horatio Gates.—Surrender of the British Army 1777
Anthony Wayne.—Capture of Stony Point 1779
Francois L. T. de Fleury (Silver Medal).—Capture of Stony Point 1779
Henry Lee.—Surprise of Pawlus Hook 1779
John Paulding, David Williams, Isaac Van Wart (Silver Medal).—Capture of Major Andre 1780
Daniel Morgan, Victory of Cowpens 1781
William A. Washington (Silver Medal). Victory of Cowpens 1781
John Eager Howard (Silver Medal).—Victory of Cowpens 1781
John Paul Jones.—Capture of *Serapis* 1787
George Washington.—First President of the United States 1787
John Adams.—Second President of the United States 1787
Thomas Truxton.—Action with the *Vengeance* 1800
Thomas Jefferson.—President of the United States 1800
Edward Preble.—Naval operations against Tripoli 1805
James Madison.—President of the United States 1805
Isaac Hull.—Capture of the *Guerriere* 1813
Jacob Jones.—Capture of the *Frolic* 1813
Stephen Decatur.—Capture of the *Macedonian* 1813
William Bainbridge—Capture of the *Java* 1813
Edward R. McCall.—Capture of the *Boxer* 1814
William Burrows (Nearest relative).—Battle on Lake Erie 1814
Oliver H. Perry.—Battle on Lake Erie 1814
Jesse Duncan Elliott.—Battle on Lake Erie 1814
James Lawrence (Nearest relative).—Capture of the *Peacock* 1814
Thomas Macdonough.—Victory of Lake Champlain 1814
Robert Henley.—Victory of Lake Champlain 1814
Stephen Cassin.—Victory of Lake Champlain 1814
Lewis Warrington.—Capture of the *Epervier* 1814
Johnston Blakeley.—Capture of the *Reindeer* 1814
Jacob Brown.—Victories of Chippewa, Niagara, and Erie 1814
Peter Buel Porter.—Victories of Chippewa, Niagara, and Erie 1814
Eleazer Wheelock Ripley.—Victories of Chippewa, Niagara, and Erie 1814
James Miller.—Victories of Chippewa, Niagara, and Erie 1814
Winfield Scott.—Victories of Chippewa, Niagara, and Erie 1814
Edmund P. Gaines.—Victory of Erie 1814
Alexander Macomb.—Victory of Plattsburgh 1814
Andrew Jackson.—Victory of New Orleans 1815
Charles Stewart.—Capture of the *Cyane* and of the *Levant* 1816
James Biddle.—Capture of the *Penguin* 1816
James Monroe.—President of the United States 1816
William Henry Harrison.—Victory of the Thames 1818
John Quincy Adams.—President of the United States 1818
Andrew Jackson.—President of the United States 1818
George Croghan.—Defence of Fort Stephenson 1835
Martin Van Buren.—President of the United States 1835
John Tyler.—President of the United States 1835
John Knox Polk.—President of the United States 1835
Zachary Taylor.—Victories on the Rio Grande 1846
Zachary Taylor.—Capture of Monterey 1847
Winfield Scott.—Mexican Campaign 1848
Zachary Taylor.—Victory of Buena Vista 1848
Zachary Taylor.—President of the United States 1848
Millard Filmore.—President of the United States 1848
Franklin Pierce.—President of the United States 1848
Duncan N. Ingraham.—Release of Martin Koszta 1854
James Buchanan.—President of the United States 1854
Frederick Henry Rose.—Kindness and humanity (Dr. Rose was a British subject who by permission of his commander boarded a United States war vessel that had been visited by an epidemic of yellow fever and took care of the sick) 1858
Abraham Lincoln.—President of the United States 1858
Ulysses S. Grant.—Victories of Fort Donelson, Vicksburg, and Chattanooga 1863
Cornelius Vanderbilt.—Free gift of steamship *Vanderbilt* 1864
Andrew Johnson.—President of the United States 1864
Cyrus West Field.—Laying of the Atlantic Cable 1867
George Peabody.—Promotion of Industrial Education 1867
Ulysses S. Grant.—President of the United States 1867
George Foster Robinson.—For saving

the life of William H. Seward, Secretary of State, on April 14, 1865, when he was attacked by the assassin Payne, one of the conspirators against Lincoln and his cabinet 1871

John Horn, Jr.—For saving over one hundred people from drowning on various occassions 1874

J. S. Crandall and others.—For rescuing the passengers and crew of the steamer *Metis* off Watch Hill, R. I. 1874

Joseph Francis.—For life-saving appliances 1888

David H. Jarvis, Ellsworth P. Bertholf, Samuel J. Call.—In recognition of the heroic services rendered by them in connection with the expedition of 1879-1898, for the relief of the whaling fleet in the Arctic regions 1902

Orville Wright and Wilbur Wright.—For services rendered the science of aerial navigation 1909

Capt. Arthur Henry Rostron.—For services in giving relief to passengers of the wrecked steamship, *Titanic* 1912

Continental Congress, Presidents of.—

Peyton Randolph, Virginia 1774
Henry Middleton, South Carolina 1774
Peyton Randolph, Virginia 1775
John Hancock, Massachusetts 1776
Henry Laurens, South Carolina 1777
John Jay, New York 1778
Samuel Huntington, Connecticut 1779
Thomas McKean, Delaware 1781
John Hanson, Maryland 1781
Elias Boudinot, New Jersey 1782
Thomas Mifflin, Pennsylvania 1783
Richard Henry Lee, Virginia 1784
Nathaniel Gorham, Massachusetts 1786
Arthur St. Clair, Pennsylvania 1787
Cyrus Griffin, Virginia 1788

Crescent.—According to tradition, "Philip, father of Alexander, meeting with great difficulties in the siege of Byzantium, set the workmen to undermine the walls, but a crescent moon discovered the design, which miscarried; consequently the Byzantines erected a statue to Diana, and the crescent became the symbol of the state." By another legend, Othman, the sultan, saw in a vision a crescent moon, which grew until it reached from east to west, whereupon he adopted the crescent for his standard.

Death Sentence Passed Upon Jesus Christ.—The following is a copy of the most memorable judicial sentence which has every been pronounced in the annals of the world—namely, that of death against the Savior, the knowledge of which must be interesting in the highest degree to every Christian. The sentence is word for word as follows:—

SENTENCE PRONOUNCED BY PONTIUS PILATE, INTENDENT OF THE PROVINCE OF LOWER GALILEE, THAT JESUS OF NAZARETH SHALL SUFFER DEATH BY THE CROSS. IN THE SEVENTEENTH YEAR OF THE REIGN OF THE EMPEROR TIBERIUS AND ON THE 25TH OF THE MONTH OF MARCH, IN THE MOST HOLY CITY OF JERUSALEM, DURING THE PONTIFICATE OF ANNAS AND CAIAPHAS, PONTIUS PILATE, INTENDANT OF THE PROVINCE OF LOWER GALILEE, SITTING IN JUDGMENT IN THE PRESIDENTIAL SEAT OF THE PRÆTORS, SENTENCES JESUS CHRIST OF NAZARETH TO DEATH ON A CROSS BETWEEN TWO ROBBERS, AS THE NUMEROUS AND NOTORIOUS TESTIMONIALS OF THE PEOPLE PROVE:—1. JESUS IS A MISLEADER. 2. HE HAS EXCITED THE PEOPLE TO SEDITION. 3. HE IS AN ENEMY TO THE LAWS. 4. HE CALLS HIMSELF THE SON OF GOD. 5. HE CALLS HIMSELF FALSELY THE KING OF ISRAEL. 6. HE WENT INTO THE TEMPLE FOLLOWED BY A MULTITUDE CARRYING PALMS IN THEIR HANDS. ORDERS:—THE FIRST CENTURION, QUINTUS CORNELIUS, TO BRING HIM TO THE PLACE OF EXECUTION, FORBIDS ALL PERSONS, RICH OR POOR, TO PREVENT THE EXECUTION OF JESUS. THE WITNESSES WHO HAVE SIGNED THE EXECUTION AGAINST JESUS ARE:—1. DANIEL

The sentence is engraved on a plate of brass in the Hebrew language, and on its sides are the following words:—"A similar plate has been sent to each tribe." It was discovered in the year 1280 in the city of Aquill (Aquilla.) in the kingdom of Naples, by a search made for the discovery of Roman antiquities, and remained there until it was found by the Commissaries of Art in the French army of Italy. Up to the time of the campaign in

DECLARATION OF INDEPENDENCE—SIGNERS OF

Name	Order*	Colony	Occupation	Born	Birthplace	Died	Age†
Adams, John	6	Massachusetts Bay	Lawyer	Oct. 19, 1735	Braintree, Mass.	July 4, 1826	92
Adams, Samuel	2	Massachusetts Bay	Merchant	Sept. 22, 1722	Boston, Mass.	Oct. 3, 1803	81
Bartlett, Josiah	9	New Hampshire	Physician	Nov., 1729	Amesbury, Mass.	May 19, 1795	67
Braxton, Carter	51	Virginia	Planter	Sept. 10, 1736	Newington, Va.	Oct. 10, 1797	62
Carroll, Charles	31	Maryland	Lawyer	Sept. 20, 1737	Annapolis, Md.	Nov. 14, 1832	96
Chase, Samuel	44	Maryland	Lawyer	April 17, 1741	Somerset Co., Md.	June 19, 1811	71
Clark, Abraham	14	New Jersey	Lawyer	Feb. 15, 1726	Elizabethtown, N. J.	Sept. 1794	69
Clymer, George	38	Pennsylvania	Merchant	Jan. 24, 1739	Philadelphia, Pa.	Jan. 23, 1813	75
Ellery, William	22	R. I. and Prov. Plan.	Lawyer	Dec. 22, 1727	Newport, R. I.	Feb. 15, 1820	93
Floyd, William	5	New York	Farmer	Dec. 17, 1734	Setauket, N. Y.	Aug. 1, 1821	87
Franklin, Benjamin	46	Pennsylvania	Printer	Jan. 17, 1706	Boston, Mass.	April 17, 1790	85
Gerry, Elbridge	8	Massachusetts Bay	Merchant	July 17, 1744	Marblehead, Mass.	Nov. 23, 1814	71
Gwinnett, Button	40	Georgia	Merchant	1732	England	May 27, 1777	45
Hancock, John	1	Massachusetts Bay	Merchant	Jan. 12, 1737	Braintree, Mass.	Oct. 8, 1793	57
Hall, Lyman	47	Georgia	Physician	1731	Conn.	1784	53
Harrison, Benj	54	Virginia	Farmer	1740	Berkeley, Va.	April, 1791	51
Hart, John	13	New Jersey	Farmer	1715	Hopewell, N. J.	1780	65
Hewes, Joseph	35	North Carolina	Lawyer	1730	Kingston, N. J.	Nov. 10, 1779	49
Heyward, Jr., Thos.	56	South Carolina	Lawyer	1746	St. Luke's, S. C.	March, 1809	63
Hooper, Wm.	23	North Carolina	Lawyer	June 17, 1742	Boston, Mass.	Oct. 1790	49
Hopkins, Steph.	12	R. I. and Prov. Plan.	Farmer	March 7, 1707	Scituate, Mass.	July 13, 1785	79
Hopkinson, Francis	29	New Jersey	Lawyer	1737	Philadelphia, Pa.	May 9, 1791	54
Huntington, Sam'l	11	Connecticut	Lawyer	July 3, 1732	Windham, Conn.	Jan. 5, 1796	64
Jefferson, Thos.	32	Virginia	Lawyer	April 13, 1743	Shadwell, Va.	July 4, 1826	83
Lee, Richard Henry	48	Virginia	Soldier	Jan. 20, 1732	Stratford, Va.	June 19, 1794	63
Lee, Francis Lightfoot	55	Virginia	Farmer	Oct. 14, 1734	Stratford, Va.	April, 1797	63
Lewis, Francis	7	New York	Merchant	March, 1713	Llandaff, Wales	Dec. 30, 1803	91
Livingston, Philip	3	New York	Merchant	Jan. 15, 1716	Albany, N. Y.	June 12, 1778	63
Lynch, Jr., Thos.	43	South Carolina	Lawyer	Aug. 5, 1749	Pr. George's Co. S. C.	1779	30
M'Kean, Thos.	39	Delaware	Lawyer	March 19, 1734	New London, Pa.	June 24, 1817	84
Middleton, Arthur	50	South Carolina	Lawyer	1743	Middleton Pl., S. C.	Jan. 1, 1788	44
Morris, Lewis	15	New York	Farmer	1726	Morrisania, N. Y.	Jan. 22, 1798	72
Morris, Robert	24	Pennsylvania	Merchant	Jan. 20, 1734	Lancashire, England	May 8, 1806	73
Morton, John	16	Pennsylvania	Surveyor	1724	Ridley, Pa.	April 1777	53
Nelson, Jr., Thos.	49	Virginia	Statesman	Dec. 26, 1738	York, Va.	Jan. 4, 1789	51
Paca, William	28	Maryland	Lawyer	Oct. 31, 1740	Wye Hall, Md.	1799	59
Paine, Robert Treat	4	Massachusetts Bay	Lawyer	1731	Boston, Mass.	May 11, 1814	84
Penn, John	18	North Carolina	Lawyer	May 17, 1741	Carolina Co., Va.	Sept. 1788	48
Read, George	41	Delaware	Lawyer	1734	Cecil Co., Md.	1798	64
Rodney, Caesar	52	Delaware	General	1730	Dover, Del.	1783	53
Ross, George	37	Pennsylvania	Lawyer	1730	Newcastle, Del.	July, 1779	49
Rush, Benjamin	46	Pennsylvania	Physician	Dec. 24, 1745	Berberry, Pa.	April 19, 1813	68
Rutledge, Edward	34	South Carolina	Lawyer	Nov., 1749	Charleston, S. C.	Jan. 23, 1800	51
Sherman, Roger	19	Connecticut	Shoemaker	April 19, 1721	Newton, Mass.	July 23, 1793	73
Smith, James	36	Pennsylvania	Lawyer	1710	Ireland	July 11, 1806	96
Stockton, Richard	10	New Jersey	Lawyer	Oct. 1, 1730	Princeton, N. J.	Feb. 28, 1781	51
Stone, Thomas	30	Maryland	Lawyer	1742	Pointoin Manor, Md.	Oct. 5, 1787	45
Taylor, Geo.	33	Pennsylvania	Physician	1716	Ireland	Feb. 23, 1781	65
Thornton, Matthew	17	New Hampshire	Physician	1714	Ireland	June 24, 1803	89
Walton, George	53	Georgia	Lawyer	1740	Frederick Co., Va.	Feb. 2, 1804	64
Whipple, William	20	Connecticut	Sailor	1730	Kittery, Me.	Nov. 28, 1785	55
Williams, William	26	Connecticut	Statesman	April 8, 1731	Lebanon, Conn.	Aug. 2, 1811	81
Wilson, James	42	Pennsylvania	Lawyer	1742	St. Andrews, Scotland	Aug. 28, 1798	56
Witherspoon, John	21	New Jersey	Minister	Feb. 5, 1722	Yester, Scotland	Nov. 15, 1794	73
Wolcott, Oliver	25	Connecticut	Physician	Nov. 26, 1726	Windsor, Conn.	Dec. 1, 1797	72
Wythe, George	45	Virginia	Lawyer	1726	Elizabeth Co., Va.	June 8, 1806	80

*Order in which they signed. †Age at death.

uthern Italy it was preserved in the sacristy the Carthusians, near Naples, where it was pt in a box of ebony. Since then the relic s been kept in the Chapel of Caserta. The rthusians obtained by their petitions at the plate might be kept by them, which as an acknowledgment of the sacrifices hich they made for the French army. The rench translation was made literally by embers of the Commission of Arts. The ove account still obtains some currency, ut is without any historical basis.

Dew.—Moisture condensed from the atmosphere upon the surface of certain bodies. The higher the temperature the more queous vapor can the atmosphere retain solution. The diminution, therefore, of eat, which takes place when day is succeeded by night, in many cases renders the ir incapable of retaining some of the moisure which it held in the form of vapor luring the day. This is deposited on any odies which at the time are colder than he adjacent atmosphere. It scarcely ever appens that the air is saturated with vapor, or, as it is more correctly worded, hat the aqueous vapor is in the condition of greatest possible density for the temperature. As Aristotle long ago observed, dew is deposited chiefly on calm and serene nights. It is more plentiful in spring and autumn than in summer. A cloudy night interferes with the condensation, for the clouds intercept radiation from the earth, and, in many cases, prevent the temperature falling to the dew-point. Dew when congealed becomes hoar-frost.

in the custom of finding two sureties on arresting a person, who were bound over in heavy penalties that the Pursuer should prove the justice and the legality of his claim; otherwise, the Pursued should receive indemnity from the parties thus bound over. This custom, however, in process of time, degenerated into the mere nominal recognizances or sureties of "John Doe and Richard Roe." In 1852, these two celebrated characters ceased to have any legal existence.

Dollar Mark, $.—Writers are not agreed as to the derivation of this sign to represent dollars. Some say it comes from the letters U. S., which after the adoption of the Federal Constitution, were prefixed to the federal currency, and which afterward, in the hurry of writing, were run into one another, the U being made first and the S over it. The more probable explanation is that it is a modification of the figure eight, and denotes a piece of eight reals, or, the dollar which was formerly divided into eight parts. It was then designated by the figures 8-8.

Domes of the World, Great.

	Diam. feet	Hgt. feet
Pantheon, Rome	142	143
Duomo, Florence	139	310
St. Peter's, Rome	139	330
Capitol, Washington, D. C.	135½	287½
St. Sophia, Constantinople	115	201
Baths of Caralla (ancient), Rome	112	116
St. Paul's, London	112	215

DIAMONDS OF NOTE

Carats (uncut)	Carats (cut)	Name	Discovered	Possessor
1,025¾	516½	Cullinan I	1905	King Edward VII.
	309¾	Cullinan II	1905	
1,680(.)	*Never cut*	Braganza	1741	King of Portugal.
787½	367.9	Rajah of Mattan	1756	Rajah of Mattan (Borneo).
.....	194¾	Orloff	....	Czar of Russia (scepter).
.....	139½	Florentine	....	Emperor of Austria.
242½	.....	Tavernier	1668	Stolen in 1792.
150	138½	.....	1775	King of Portugal.
410	136⅞	Pitt or Regent	1702	King of Prussia.
254	127	Star of the South	1853	*A Brazilian diamond.*
186½	106.1	Koh-i-noor	B. C. 56	Queen of England.
.....	86	Shah	....	Czar of Russia.
89¾	78⅝	Nassac	....	Lord (Marquis of) Westminster.
288⅝	.....	*Light Yellow*	....	Stewart (diamond).
150	.....	Porter Rhodes	1872	*Found in South America.*
112	67⅛	*Blue*	....	
83	52½	Sancy	15th Cent.	Czar of Russia.
.....	49	Pigott	....	Bought by Messrs. Rundell and Bridge.
83½	46½	Star of South Africa	1867	
88½	44½	Dudley	....	Earl of Dudley.
.....	49½	Hope	....	Mr. Henry Hope's family.
.....	40	Pacha of Egypt	....	Khedive of Egypt.
.....	28	Charles the Bold	....	

Dixie.—Popularly applied to the States south of Mason and Dixon's line, the former boundary of slavedom. Also, in folklore, a fabulous realm of peace, plenty, and indolence, whose charms form the burden of many a negro melody. Brewer says that a Mr. Dixie was a slaveholder of Manhattan Island, compelled by public opinion to remove his human chattels to the South. In their new abode they had to toil ceaselessly, and often sighed for their old home at the North, which lapse of time and distance invested with a halo of paradisaic pleasures. This "Dixie Land" became to the entire colored race in the South a species of Utopia, similar to the Scottish "Land 'o the Leal" or the Fortunate Islands of the ancients.

Doe, John and Roe, Richard.—Formerly, two well-known names representing a species of legal fiction. They originated

Draconian Laws.—In modern parlance, statutes of unusual severity. The laws of Draco, enacted by him when archon of Athens (B. C. 621), on account of their rigor were said to be written in blood. This code was set aside by the laws of Solon B. C. 594, which were founded on the principle of making *property*, not *birth*, the title to the honors and offices of the state.

Eagle.—Is chosen to support the lectern, or reading-desk, in churches, because the eagle is the natural enemy of the serpent. The two Testaments correspond to the outspread wings of the eagle. In royal banners, we find it as the ensign of the ancient kings of Babylon and Persia, of the Ptolemies, Seleucides, and Romans. The French under the empire adopted the same device. The *two-headed eagle* signifies a double empire, assumed by Austria, which claims to be the successor of the Caesars and Charlemagne; in 802 the second head was added to her standard, on the union of Rome and Germany. Russia, by virtue of uniting Poland to her possessions, has the same emblem. It was first used by Constantine. The *golden eagle* and the *spread eagle* descend to us from the Crusades, where they were first employed by the emperors of the East.

Earthquake.—A quaking, vibratory, undulating, or other movement of a portion of the earth's crust produced by forces acting from beneath. Certain premonitory symptoms are believed to herald the approach of a great earthquake. These are: irregularities in the seasons, sudden gusts of wind interrupted by dead calms; violent rains at unusual seasons, or in countries where they rarely occur; a reddening of the sun's disc and a heaviness in the air continuing, it may be, for months; an evolution from the soil of electric matter, inflammable gas, with sulphurous and mephitic vapors; subterranean noises like those of carriage-wheels, artillery, or thunder; cries of distress emitted by animals; and drowsiness with a feeling of seasickness in men.

When the fatal moment arrives, the ground at some spot is heaved up, and becomes the center of vibration or undulations, reminding us of those produced by the ripple wave propagated in a continually enlarging circle around the spot where a pebble has been cast into a pond. The earth swells and heaves like a rolling sea; cracks and rents are produced in all directions, like those on a window pane. Great funnel-like holes yawn open. New lakes are formed. The houses and other erections may, with their inhabitants, be destroyed over the greater part of a city in a few moments, though it is a suggestive fact that this destruction is often limited to those built on one geological stratum. Precipitous cliffs fall into adjacent seas or rivers, in the latter case more or less damming them up and producing floods. Landslips take place with similar consequences. Cattle feeding on cliffs fall into the sea and are drowned. The sea becomes agitated, and after first receding from the land, then rolls in upon it with a wave of enormous height. This is more especially the case if the focus of agitation be beneath the sea. The sensation on board ship when an earthquake occurs is as if the vessel had struck a rock.

There are certain regions to which both the points of volcanic eruption and the movements of great earthquakes are confined. The two, therefore, have probably a common origin, steam, molten matter, etc. which have forced exit to the external atmosphere, generating a volcano, and similar explosive material still seeking for vent, producing an earthquake. Connected with the latter, as with the former, are such phenomena as the ejection from the ground of torrents of water discolored by mud, and emitting mephitic vapors which, if intense, are fatal to animal life. Not uncommonly, an old volcano goes into eruption, or, more rarely, its upper part and crater fall in and a new one is generated in the midst of an earthquake. Great upheavals of land are its normal effects, though in exceptional cases there are subsidences instead of elevation.

It is supposed that, on a very moderate estimate, an earthquake occurs somewhere every day. What runs up the number of such occurrences is that there is generally a series of shocks at a place instead of a single one. Most of these are on a small scale; but others affect a wide area, and are most destructive.

Notable Earthquakes.

B. C.

One which made Euboea an Island..... 425

Ellice and Bula, in Peloponnesus, swallowed up..... 372

One at Rome, when, in obediance to an oracle, M. Curtius, armed and mounted on a stately horse, leaped into the dreadful chasm it occassioned (*Livy*)..... 358

Duras, in Greece, buried, with all its inhabitants; and twelve cities in Campania also buried..... 345

Lysimachia and its inhabitants totally buried..... 283

A. D.

Ephesus and other cities overturned..... 17

One accompanied by the eruption of Vesuvius; the cities of Pompeii and Herculaneum buried..... 79

Four cities in Asia, two in Greece, and two in Galatia overturned..... 107

Antioch destroyed..... 115

Nicomedia, Cæsarea, and Nicæa overturned..... 126

In Asia, Pontus, and Macedonia, 150 cities and towns damaged..... 357

Nicomedia again demolished, and its inhabitants buried in its ruins..... 358

One felt by nearly the whole world..... 543

At Constantinople; its edifices destroyed, and thousands perished..... 557

In Africa; many cities overturned..... 560

Awful one in Syria, Palestine, and Asia; more than 500 towns were destroyed and the loss of life surpassed all calculations..... 742

In France, Germany, and Italy..... 801

Constantinople overturned; all Greece shaken..... 936

One felt throughout England..... 1089

One at Antioch; many towns destroyed, among them Mariseum and Mamistria..... 1114

Catania, in Sicily, overturned, and 15,000 persons buried in the ruins..... 1137

One severly felt at Lincoln..... 1142

At Calabria; one of its cities and all its inhabitants overwhelmed in the Adriatic Sea..... 1186

One again felt throughout England; Glastonbury destroyed..... 1274

In England; the greatest known there..... 1318

At Naples, 40,000 persons perished..... 1456

At Lisbon; 1,500 houses and 30,000 persons buried in the ruins; several neighboring towns ingulfed with their inhabitants..... 1531

On felt in London; part of St. Paul's and the Temple churches fell..... 1580

In Japan; several cities made ruins, and thousands perished..... 1596

Awful one at Calabria..... 1638

One in China, when 300,000 persons were buried in Pekin alone..... 1662

One severely felt in Ireland..... 1690

One at Jamaica, which totally destroyed Port Royal, whose houses were ingulfed forty fathoms deep, and 300 persons perished..... 1692

One in Sicily, which overturned fifty-four cities and towns, and 300 villages. Of Catania and its 18,000 inhabitants not a trace remained; more than 100,000 lives were lost..... 1693

Palermo nearly destroyed; 6,000 lives lost..... 1726

Again in China; and 100,000 people swallowed up at Pekin..... 1731

In Hungary; a mountain turned round..... 1736

One at Palermo, which swallowed up a convent; but the monks escaped..... 1740

Lima and Callao demolished; 18,000 persons buried in the ruins..... 1746

In London; a slight shock, February 8th; but severer shock, March 8th..... 1750

Adrianople nearly overwhelmed..... 1752

At Grand Cairo; half of the houses and 40,000 persons swallowed up..... 1754

Quito destroyed..... 1755

Great earthquake at Lisbon. In about eight minutes most of the houses and upward of 50,000 inhabitants were swallowed up, and whole streets buried. The cities of Coimbra, Oporto, and Braga suffered dreadfully, and St. Ubes was wholly overturned. In Spain, a large part of Malaga became ruins. One-half of Fez, in Morocco, was destroyed, and more than 12,000 Arabs perished there. About half of the Island of Madeira became waste; and 2,000 houses in the Island of Mytilene, in the Archipelago, were overthrown. This awful earthquake extended 5,000 miles; even to Scotland 1755

In Syria, extended over 10,000 square miles; Baalbec destroyed..... 1759

At Martinico, 1,600 persons lost their lives..... 1767

At Guatemala, which, with 8,000 inhabitants, was swallowed up..... 1773

A destructive one at Smyrna..... 1778

At Tauris; 15,000 houses thrown down, and multitudes buried..... 1780

Messina and other towns in Italy and Sicily overthrown; 40,000 persons perished..... 1783

Archindschan wholly destroyed, and 12,000 persons buried in its ruins..... 1784

At Borgo di San Sepolcro; many houses and 1,000 persons swallowed up..... 1789

Another fatal one in Sicily..... 1791

In Naples; Vesuvius overwhelmed the city of Torre del Greco..... 1794

In Turkey, where, in three towns, 10,000 persons lost their lives..... 1794

The whole country between Santa Fe and Panama destroyed, including Cusco and Quito, 40,000 people buried in one second..... 1797

At Constantinople, which destroyed the royal palace and an immensity of buildings, and extended into Romania and Wallachia..... 1800

A violent one felt in Holland..... 1804

At Frosolone, Naples, 6,000 lives lost..... 1805

At the Azores; a village of St. Michael's sunk, and a lake of boiling water appeared in its place..... 1810

Awful one at Caraccas (*which see*)..... 1812

Several throughout India; district of Kutch sunk; 2,000 persons buried..... 1819

Genoa, Palermo, Rome, and many other towns greatly damaged; thousands perish..... 1819

One in Calabria and Sicily..... 1826

In Spain; Mercia and numerous villages devastated; 6,000 persons perish..... 1829

In the Duchy of Parma; no less than forty shocks were experienced at Borgotaro; and at Pontremoli many houses were thrown down, and not a chimney was left standing..... 1834

In Calabria; Cosenza and villages destroyed; 1,000 persons buried..... 1835

In Calabria; 1,000 buried at Rossano, etc. 1836

In many cities of Southern Syria, by which hundreds of houses were thrown down, and thousands of lives lost..... 1836

At Martinique; nearly half of Port Royal destroyed; nearly 700 persons killed, and the whole island damaged 1839

At Ternate; the island made a waste, and thousands of lives lost..... 1840

Awful and destructive earthquake at Mount Ararat, in one of the districts of Armenia; 3,137 houses were overthrown, and several hundred persons perished..... 1840

Great earthquake at Zante, where many persons perished..... 1840

At Cape Haytien, St. Domingo, which destroyed nearly two-thirds of the town; between 4,000 and 5,000 lives were lost..... 1842

At Point à Pitre, Guadaloupe, which was entirely destroyed..... 1843

At Rhodes and Macri, when a mountain fell in at the latter place, crushing a village, and destroying 600 persons 1851

At Valparaiso, where more than 400 houses were destroyed..... 1851

In South Italy; Melfi almost laid in ruins; 14,000 lives lost..... 1851

At Philippine Isles; Manila nearly destroyed..... 1852

In northwest of England, slight..... 1852

Thebes, in Greece, nearly destroyed..... 1853

St. Salvador, South America, destroyed 1854

Amasca, in Japan, and Simoda, in Nippon, destroyed; Jeddo much injured. 1854

Broussa, in Turkey, nearly destroyed..... 1855

Several villages in Central Europe destroyed..... 1855

Jeddo nearly destroyed..... 185

At the Island of Great Sanger, one of the Moluccas, volcanic eruption and earthquake; nearly 3,000 lives lost..... 185

In the Mediterranean; at Candia, 500 lives lost; Rhodes, 100; and other islands, 150..... 185

In Calabria, Montemurro and many other towns destroyed, and about 22,000 lives lost in a few seconds..... 185

Corinth nearly destroyed..... 185

At Quito; about 5,000 persons killed, and an immense amount of property destroyed..... 185

At Erzeroum; Asia Minor; above 1,000 persons said to have perished..... 185

At San Salvador; many buildings destroyed, no lives lost..... 185

In Cornwall, slight..... 1859-186

At Perugia, Italy; several lives lost..... 186

At Mendoza, South America; about two-thirds of the city and 7,000 lives lost 186

In Greece; North Morea, Corinth, and other places injured..... 186

Guatemala; 150 buildings and fourteen churches destroyed..... 186

Manila, P. I., great destruction of property..... 186

Cities of Arequipa, Iquique, Tacna, and Chincha, and many small towns in Peru and Ecuador destroyed; about 25,000 perished..... 186

Cities in Guatemala destroyed; great loss of life..... 187

Shock at Brieg, Switzerland; several killed..... 188

Java and neighboring Isles desolated..... 188

Severe shocks in eastern counties of England..... 188

Several Spanish towns destroyed..... 188

In province of Granada, Spain; 690 perished..... 188

Shocks throughout eastern United States; at Charleston, S. C., 41 lives and $5,000,000 worth of property lost. 188

Slight shocks at and around Charleston, causing panic..... 188

Severe shock in southern Europe, especially in the Riviera; estimated that 2,000 perished..... 188

In Japan; officially estimated that 4,000 perished and that 50,000 houses were destroyed..... 189

Islands of Zante and Stromboli, the former west of Greece, the latter one of the Lipari group, west of Calabria, Italy, severaly shaken. Great loss of lives and property at Zante..... 189

In Assam, India; much damage; many killed..... 189

Severe shocks in California wrecked San Francisco and adjacent towns, and caused the greatest fire in history, lasting two days. Great loss of life, and $300,000,000 of property destroyed; over 300,000 homeless. Stanford University buildings were damaged to the extent of $2,800,000, including the fine Memorial Church. ..... April 18, 190

At Valparaiso, Chile, causing great destruction of life and property..... August 16, 17, 190

Large part of Kingston, Jamaica, destroyed..... 190

In Sicily and southern Italy, Messina and many towns and villages desolated. Appalling loss of life; thousands buried alive; the survivors homeless; greatest earthquake of modern times if not of all time..... 190

Echo.—The repetition of a sound in the ai caused by its being reflected from son obstacle. A very sharp, quick sound ca produce an echo when the reflecting surfa is 55 feet distant. At 112.5 feet c monosyllables can be reflected; at twi that distance dissyllables; at three tim as far off trisyllables, and so on for great distances.

Execution in Various Countries.

Country	Mode	Publici
Austria	Gallows	Pub
Bavaria	Guillotine	Priva
Belgium	Guillotine	Pub.

Brunswick	Ax	Private
China	Sword or Cord	Public
Denmark	Guillotine	Public
Ecuador	Musket	Public
France	Guillotine	Public
Great Britain	Gallows	Private
Hanover	Guillotine	Private
Italy	Sword or gallows*	Public
Netherlands	Gallows	Public
Oldenberg	Musket	Public
Portugal	Gallows	Public
Prussia	Sword	Private
Russia	Musket, gallows, or sword	Public
Saxony	Guillotine	Private
Spain	Garrote	Public
Switzerland—		
Fifteen cantons	Sword	Public
Two cantons	Guillotine	Public
Two cantons	Guillotine	Private
United States (other than N. Y., Ohio, Mass. and Dist. of Columbia)	Gallows	Mostly Private
N. Y., Ohio, and Mass.	Electricity	Private

*Capital punishment abolished in 1876.

Expectation of Life

Age	Expectation in Years	Age	Expectation in Years	Age	Expectation in Years	Age	Expectation in Years	Age	Expectation in Years
0	28.15	20	34.22	40	26.04	60	15.45	80	5.85
1	36.78	21	33.84	41	25.61	61	14.86	81	5.50
2	38.74	22	33.46	42	25.19	62	14.26	82	5.16
3	40.01	23	33.08	43	24.77	63	13.66	83	4.87
4	40.73	24	32.70	44	24.35	64	13.05	84	4.66
5	40.88	25	32.33	45	23.92	65	12.43	85	4.57
6	40.69	26	31.93	46	23.37	66	11.96	86	4.21
7	40.47	27	31.50	47	22.83	67	11.48	87	3.90
8	40.14	28	31.08	48	22.27	68	11.01	88	3.67
9	39.72	29	30.66	49	21.72	69	10.50	89	3.56
10	39.23	30	30.25	50	21.17	70	10.06	90	3.43
11	38.64	31	29.83	51	20.61	71	9.60	91	3.32
12	38.02	32	29.43	52	20.05	72	9.14	92	3.12
13	37.41	33	29.02	53	19.49	73	8.69	93	2.40
14	36.79	34	28.62	54	18.92	74	8.25	94	1.98
15	36.17	35	28.22	55	18.35	75	7.83	95	1.62
16	35.76	36	27.78	56	17.78	76	7.40		
17	35.37	37	27.34	57	17.20	77	6.99		
18	34.98	38	26.91	58	16.63	78	6.59		
19	34.59	39	26.47	59	16.04	79	6.21		

to take place quickly, both heat will be felt and light will be seen. When the heel of your boot strikes a stone, you often see a spark fly from it. This is burning iron. The iron nail in your heel strikes the stone, a bit of it is knocked off, and heat enough is made by the blow to cause the iron to unite with the oxygen of the air, and thus we see it burn. A piece of iron or steel may easily be heated enough to make it burn in a jar of oxygen, and a most brilliant light will be given off by it. When wood or coal is set on fire, it gives out both heat and light; but if we could give it still more oxygen it would burn still brighter. We do this when we blow a fire with the bellows, and this is the reason why it then blazes up and burns more briskly. Some things take fire—that is, unite with oxygen much more easily than others. When we scratch a match it at once bursts into flame. This is because it has a little *phosphorus* on the end, and this has such a liking for oxygen that it has usually to be kept in water to keep it from uniting with it. The phosphorus on the end of the match is mixed with glue, which keeps it from taking fire; but when the match is scratched on any rough thing heat enough is made to cause the phosphorus to unite quickly with the oxygen of the air, and it bursts into flame. Wood and coal have not so great a liking for oxygen as phosphorus, and need much more heat to make them unite with oxygen.

Fires, Great and Historic.—

London, 1212.—Began at London bridge on the Southwark side, extended to the other side and hemmed in a crowd; about 3000 were drowned, and much of the city, north and south, burned.

London, September 2-6, 1666.—89 churches, many public buildings, and 13,200 houses destroyed; 400 streets laid waste, 200,000 persons homeless. The ruins covered 436 acres.

Richmond, Va., Dec. 26, 1811.—Theatre; the governor and many leading citizens perished.

FAIRS, WORLD'S GREATEST

Where Held	Year	Area Covered* Acres	Exhibitors	Visitors†	Days Open	Receipts
London	1851	21	13,937	6,039,195	141	$1,780,000
Paris	1855	24½	20,839	5,162,330	200	644,100
London	1862	23½	28,653	6,211,103	171	1,614,260
Paris	1867	37	50,226	8,805,969	217	2,103,675
Vienna	1873	40	50,000	6,740,500	186	1,032,385
Philadelphia	1876	60	30,864	10,164,489	159	3,813,724
Paris	1878	60	40,366	16,032,723	194	2,531,650
Sydney	1879	26	9,345	1,117,536	210	200,000
Melbourne	1880	.....	.....	1,330,279	210	.....
Fisheries Exhibition, London	1883	9	3,000	2,703,051	147	585,000
Health Exhibition, London	1884	.....	.....	4,153,390	151	892,545
Inventions Exhibition, London	1885	.....	.....	3,760,581	163	750,000
Colonial and Inland, London	1886	13	.....	5,550,745	164	1,025,000
Glasgow	1888	.....	.....	5,748,379	161	566,330
Paris	1889	75½	55,000	28,149,353	185	8,300,000
Chicago	1893	633	.....	27,539,521	184	14,000,000
Paris	1900	.....	75,501	50,000,000	212	.....

*Buildings and covered structures.

†The largest number of visitors in any one day was 400,000 in 1889 in Paris, and 716,881 in Chicago in 1893, and 600,000 in Paris in 1900. It will be noticed that the Paris Exposition of 1900 admitted the largest number of paying visitors—50,000,000—ever attending any exposition, almost doubling the total number of paying visitors attending the Chicago Exposition.

Fire.—Burning is only the union of oxygen with something else. When this union takes place slowly, heat is made, but we see no fire or light; when it takes place quickly, both heat is felt and fire or flame is seen. When iron rusts it is the same kind of burning as when wood blazes in the fire; but the oxygen of the air unites with the iron so slowly that the heat is not enough to be felt. If the union be made

New York, Dec. 16, 1835.—600 buildings; loss $20,000,000.

New York, Sept. 6, 1839.—$10,000,000 worth of property.

Washington, D. C., Dec. 15, 1836.—General post-office and patent office destroyed, with 10,000 valuable models, drawings, etc.

Pittsburgh, April 10, 1845.—1000 buildings; loss, $6,000,000.

Philadelphia, July 9, 1850.—350 buildings; loss, $1,500,000; 25 persons killed; 9 drowned; 120 wounded.

St. Louis, May 4, 1851.—Large portion of the city burned; loss, $15,000,000.

San Francisco, May 3-5, 1851.—2,500 buildings; loss, $3,500,000; many lives lost.

San Francisco, June 22, 1851.—500 buildings; loss, $3,000,000.

Washington, D. C., Dec. 24, 1851.—Congressional library, 35,000 volumes, with works of art burned.

Santiago (Spain), Dec. 8, 1863.—A fire in the church of the Campania, beginning amid combustible ornaments; 2,000 persons killed, mostly women.

Charleston, S. C., Feb. 17, 1865.—Almost totally destroyed, with large quantities of naval and military stores.

Richmond, Va., April 2 and 3, 1865.—In great part destroyed by fire at time of Confederate evacuation.

Portland, Me., July 4, 1866.—Almost entirely destroyed; loss, $15,000,000.

Chicago, Oct. 8-9, 1871.—Three and one-half square miles laid waste; 17,450 buildings destroyed; 200 persons killed; 98,500 made homeless; loss over $200,000,000.

Chicago, July 14, 1874.—Another great fire; loss, $4,000,000.

Great forest fires in Michigan and Wisconsin Oct. 8-14, 1871.—2,000 lives lost.

Boston, Nov. 9-11, 1872.—800 buildings; loss $73,000,000; 15 killed.

Fall River, Mass., Sept. 19, 1874.—Great factory fires; 60 persons killed.

St. John, N. B., June 20, 1877.—Loss, $12,500,000.

Brooklyn Theater burned, Dec. 5, 1876.—300 lives lost.

Seattle and Spokane, Wash., 1889.—About $10,000,000 each.

Jacksonville, Fla., May 3, 1901.—Property loss $10,000,000.

Iroquois Theater, Chicago, Dec. 30, 1903.—Entailed a loss of 639 lives.

Baltimore, Md., Feb. 7-8, 1904.—More than 75 city blocks destroyed, covering 140 acres; financial loss, $85,000,000.

Rochester, N. Y., Feb. 26, 1904.—Fire in business center, loss, $2,700,000.

Toronto, Canada, April 19, 1904.—Destruction in business district of $12,000,000.

San Francisco, Cal., April 18-19, 1906.—Fire and earthquake (see earthquakes); loss, $350,000,000; most disastrous fire recorded.

Iloilo, Island of Panay, P. I., April 19, 1907.—20,000 homeless.

Coney Island, N. Y., July 28, 1907.—Loss $1,500,000.

Boyerstown, Pa., January 13, 1908.—250 persons burned in a theatre.

North Collinwood, Cleveland, Ohio., March 4, 1908.—167 children burned in a public school.

Chelsea, Mass., April 12, 1908.—Loss, $6,000,000.

Kootenay Valley, B. C., Aug. 4, 1908.—Forest fires burned three towns and $6,000,000 worth of property.

New Orleans, La., Aug. 30, 1908.—Loss, $1,500,000.

Flag, United States.—On June 14, 1777, the United States Congress passed a resolution declaring "that the flag of the thirteen United States be stripes alternate red and white; that the union be thirteen stars, white in a blue field, representing the new constellation." In 1794, Congress decreed that after May 1, 1795, "the flag of the United States be fifteen stripes, alternate red and white, and that the union be fifteen stars white in a blue field." This change was made to mark the admission of Vermont and Kentucky into the Union. The stars and stripes were then equal and a star and stripe were to be added with the admission of each new state. It was realized, however, that the addition of a stripe for each new state would soon render the flag too large, and a resolution was accordingly passed by Congress, April 4, 1818, reducing the number of stripes to thirteen—representing the original Union—and making the stars twenty in number. It was furthermore enacted that a new star should be added for each new state admitted into the Union. The flag now contains

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forty-six stars, corresponding to the forty-six states.

According to tradition the first flag, known as the "Stars and Stripes," was made by Mrs. Betsy Ross of Philadelphia, about whom succeeding years have thrown a glamour of patriotic romance.

Floods and Inundations, Great.—

Sea at Dort.—drowned 72 villages and 100,000 people 1421

Severn overflowed 10 days, carried away families in their beds, and covered hills; the flood was called the Great Waters for 100 years after 1483

General inundation by failure of dikes in Holland; 400,000 said to be drowned 1530

At Catalonia.—50,000 persons perished 1617

Part of Zealand overflowed; 1300 inhabitants drowned; vast damage at Hamburg 1717

In Yorkshire.—A dreadful inundation, called Ripon Flood 1771

In Navarre.—2000 persons lost by torrents from the mountains 1787

Inundation of the Liffey.—Immense damage in Dublin 1802

Lorca, a city of Murcia, in Spain, destroyed by a bursting reservoir; inundated more than 20 leagues, and killed 1000 persons besides cattle 1802

At Pesth (near Presburg).—the Danube destroyed 24 villages and their inhabitants 1811

Inundations in Hungary, Austria, and Poland, summer of 1813

Danube overwhelmed a Turkish corps of 2000 men on a small island near Widdin 1813

In Silesia.—6000 inhabitants perished; the ruin of Macdonald's French army accelerated by the floods; in Poland 4000 lives supposed to have been lost 1813

In Germany.—Vistula overflowed; many villages laid under water, with great loss of life and property 1816

In England.—5000 acres deluged in the Fen countries 1819

At Dantzic.—The Vistula breaking dykes; 10,000 head of cattle and 4000 houses destroyed; numerous lives lost 1829

"Moray floods," in Scotland.—Caused by rainfall; the Spey and Findhorn rose in placed 50 feet above ordinary level, with great destruction of property and life whole families, taking refuge on elevated places, were with difficulty rescued 1829

At Vienna.—The dwellings of 50,000 under water 1830

10,000 houses swept away, and about 1000 persons perished at Canton, in China, in an inundation from incessant rains. Similar calamity in other parts of China 1833

Awful inundation in France.—The Saone and Rhone broke their banks, and covered 60,000 acres; Lyons inundated; in Avignon 100 houses swept away, 218 at La Guillotiere; and upward of 300 at Vaise, Marseilles, and Nimes; the Saone higher than for 238 years 1840

Inundation in the center, west, and southwest of France; numerous bridges, with the Orleans and Vierzon viaduct (cost 6,000,000 francs) swept away. The damage exceeded 100,000,000 francs. The Loire rose 20 feet in one night 1846

Great inundation at New Orleans, La.—1600 houses flooded 1849

Bursting of the Bradfield reservoir (Sheffield).—About 250 persons drowned 1864

Floods in north of England, in Yorkshire, Lancashire, and Derbyshire.—Farms destroyed, mines flooded, mills thrown down, railways stopped; much suffering at Leeds (about 20 drowned), Manchester, Preston, Wakefield, etc. 1866

Inundations from mountains in northern Italy.—Po and other rivers overflow; thousands of people unhoused; Mantua, Ferrara, etc., suffer 1872

Mill River valley (near Northampton, Mass.).—Several villages destroyed by bursting reservoir; above 144 perished 1874

Eureka, Nevada.—Through rain and a waterspout; between 20 and 30 persons perish 1874

Pittsburgh and Allegheny, Western Pennsylvania.—Storm of rain; rivers overflow; about 220 persons drowned 1874

Toulouse partly destroyed by the Garonne.—About 1000 lives lost and much property (St. Cyprien quarter a sepulchre) 1875

Szegedin, Hungary.—Through storms, dams of the Theiss gave way; town nearly destroyed; of 6566 houses, only 331 stood; about 77 persons drowned; thousands homeless 1879

Inundations in Murcia, Spain.—Through heavy rains; provinces of Andalusia, Alicante, Almeria, and Malaga; about 1000 lives lost, and much property, about 2000 houses 1879

Floods in Iowa, Kansas, Minnesota, Missouri 1881

Ohio and Mississippi valleys flooded.—Lives lost and much property, Feb. 1882. Governor of Mississippi appeals for aid 1882

In Pennsylvania, Ohio, and Kentucky.—Very severe at Cincinnati 1883

Ohio River.—About 15 deaths and 5000 homeless 1884

Floods in Pennsylvania, New York, and New England.—Great loss of property 1886

Storm and flood in Texas.—Houses in Galveston washed away; 38 lives lost and more than $5,000,000 damage 1886

Johnstown, Pa., flood.—Was caused by the breaking of a dam on the upper waters of the Conemaugh River, which confined a great lake on top of the Allegheny Mountains. The flood swept down the valley faster than a railroad train in speed. Several small towns and the city of Johnstown were swept away, and 6111 persons perished 1889

The Galveston flood.—A hurricane along the southern coast of the United States reached the climax of its fury near Galveston, Texas, at 1 o'clock at night, literally blowing the Gulf waters over the island on which Galveston is situated, causing a loss of life and property unparalleled by any similar disaster in the United States. The city of Galveston was well-nigh annihilated, 7,000 lives being lost, and $30,000,000 worth of property destroyed in the city and near by on the mainland 1900

Frost, crystals of frozen dew. When the watery vapor in the air is so cool that it cannot condense, or turn to water, without going below the freezing point (32 degrees Fahr.), it will fall to the earth in the shape of frost crystals instead of dew. This is called *Hoar Frost*, and sometimes white frost. This is different from freezing, commonly called frost, which is simply the hardening of water and moisture from the cold of winter. The frost work on the inside of window panes in warm rooms in cold weather, which sometimes takes the form of ferns or feathers of ice, is also a freezing, and not a true frost. Moisture from the warm air of the room gathers on the glass, just as dew falls on grass, and is cooled and frozen there. But true frost is not frozen dew, that is, moisture which falls as dew and freezes afterward, but moisture which falls already formed in ice crystals. *Black Frost* is caused by a cold so severe that plants freeze and turn black, without showing any signs of hoar frost on the outside.

Gardens of the World, Popular.—

Garden of Eden.—(1) First abode of man, supposed to be located near the city of Babylon. (2) A name often applied to Eden Park, Cincinnati, Ohio.

Garden of England.—The Isle of Wight, and the counties of Worcestershire and Kent have all been so named.

Garden of Erin.—Carlow in Leinster, Ireland.

Garden of Europe.—Italy; an appellation well deserved on account of its healthful climate, picturesque scenery, astonishing fertility, and the great variety of its agricultural products.

Garden of France.—The Department of Indre-et-Loire, a district noted for its rich soil and lovely landscapes.

Garden of Gethsemane.—East of Jerusalem, near the Brook Kedron.

Garden of Helvetia.—Name given to Thurgau, Switzerland.

Garden of Hesperides. In the western part of the mythological world.

Garden of India.—Oude.

Garden of Italy.—The Island of Sicily, which bears the same relation to Italy, in respect of beauty and fertility, that Italy bears to the rest of Europe.

Garden of Kentucky.—Bourbon County, in that State.

Garden of Scotland.—Morayshire has been so named.

Garden of Spain.—Andalusia. It is fertile to the highest degree.

Garden of South Wales.—The southern division of Glamorganshire.

Garden of the West.—A name sometimes applied to the whole of that vast arable district west of the Mississippi, on account of its generous yield of grain, but more particularly applied to Kansas.

Garden of the World.—An appellation often bestowed on that vast expanse of country watered by the Mississippi and its tributaries—a region whose soil is of unsurpassed productiveness.

Garden of Argentina.—Turcuman, a province of Argentina.

Garden of the East.—Ceylon and Burmah. Both so called. Ceylon is also called "The Resplendent"; the "Jewel of the Eastern Sea;" the "Gem of Paradise." Its climate and productions are quite unrivaled.

Gas.—The common gas which we burn for light is obtained from coal. It can be made very easily by breaking a piece of bituminous or soft coal into little bits, filling the bowl of a tobacco pipe with them, and covering the mouth over with moist clay. When the clay is well dried the bowl of the pipe should be put into the fire, where it will heat red hot. In a short time a kind of yellow smoke will issue from the stem of the pipe, which when lighted will burn with a bright flame.

This smoke is coal gas, but it is not pure like that which we burn in our houses. If the end of the pipe stem be put under water, the gas will rise up through the water in bubbles. These bubbles of gas can be collected in a small bottle or other vessel in a very simple way. Fill the bottle full of water and turn it upside down in a bowl of water. The water will not run out of the bottle, because the pressure of the air on the water in the bowl will keep it in its place. If now the end of the pipe stem be put under the mouth of the bottle, the bubbles of gas will ascend into it, and gradually push the water down; if there be gas enough in the pipe bowl, it will fill the bottle, taking the place of the water. Thus will have been obtained a bottle of gas, which will burn when lighted. All the coal gas used in cities and towns is made and collected in the same way, only the coal is heated in great brick or iron ovens, instead of in tobacco pipes, and the gas is collected in immense iron gas-holders instead of in bottles.

If now the clay be removed from the pipe, some coke will be found in the bowl. This is some of the carbon of the coal; a part only of the carbon having gone of with all the hydrogen to make the gas, and this being all that is left. When we burn

coal in the open air we get from it flame and ashes, but when it is consumed in tight ovens, gas and coke are obtained. In making gas the coal is not really burned, but distilled, and the gas passes from the coal without making any flame. The ovens for distilling coal are called retorts. Several are usually built together, so that they may all be heated by one furnace, for there must be a fire outside the retort to heat the coal inside. When the retorts are filled with coal, the doors are closed tightly and the coal inside is heated red hot, when it gives off air, steam, tar, ammonia and gas. All these pass off by means of a great pipe at the back of the retorts; the tar and ammonia run off into cisterns, and the hot gas goes into coolers, where it is cooled. It is next purified by passing over lime, which takes up all the acids in it, and lastly it is put into the gasometers for use.

eysers.—Certain intermittent hot springs in various portions of the earth, the most notable specimens being those in the Yellowstone region of the Rocky Mountains and those of the southwestern division of Iceland, about 30 miles from Mount Hecla. Nearly 100 of the latter are said to break out within a circle of two miles. Few of them play longer than five or six minutes at a time, although sometimes they go on for half an hour. The largest is called the Great Geyser. It has a pipe 78 feet in vertical depth, and from eight to ten feet in diameter, but gradually widening as it rises into the basin. The latter is 56 feet long by 46 feet broad, and is lined with an incrustation of silica deposited from the hot water, the process being aided by the alkali soda, which, with minute quantities of various salts, exists in the water. When the geyser is about to act, subterranean noises are heard like the distant firing of cannon, and the earth is slightly shaken; then a column of the liquid element is thrown up to the height of 100 or 200 feet. Steam after a time makes its way out of the rent, and the fountain ceases to play. The second in size is the Strokkur. If stones or turf be thrown down its pipe, an eruption will follow in a few minutes and eject them with great force. Geyser action is produced by the heating of the lower part of the geyser tube, as Professor Tyndall was able to show experimentally.

There are geysers in New Zealand, in the Northern Island, as remarkable as those of the Yellowstone Park or of Iceland. They are on three parallel lines running in a direction north 36 degrees east by the compass.

iant's Causeway.—A remarkable group of basaltic rocks on the north coast of County Antrim, Ireland, eight miles east by north east of Portrush. It consists of a vast number of columns, generally pentagonal or hexagonal. The causeway proper is a low promontory formed of closely packed columns. Altogether there are about 40,000 pillars, fitting into each other most perfectly, and jointed horizontally. Various more or less detached groups are known as the Giant's Loom, Giant's Organ, Lady's Fan, etc. East of the causeway proper is the Giant's Amphitheatre, a small bay with cliffs 350 feet high, formed in its upper part of two tiers of basaltic columns from 60 to 80 feet in height. Beyond this is Spanish Bay, the scene of the wreck of an armada vessel; and still farther east the noble promontory of Pleaskin Head, 400 feet high, with double tiers of lofty columns separated by a band of ochre. The peculiar columnar structure of the causeway rocks is shown by geologists to result from the contraction in cooling of the lava of which they are composed. The Giant's Causeway derives its name from the legend which ascribes its construction to Finn M'Coul or Fingal, who bridged the channel between Ireland and Scotland, in order that the giants might pass from Antrim to Staffa.

Glacier.—A river of ice slowly descending a mountain side. A glacier commences primarily as a frozen mass of snow, formed above the line of perpetual congelation, and consolidated partly by pressure and partly by the freezing of water infiltered into it from its surface. In the Swiss Alps the glaciers are between 20 and 30 miles long, their greatest breadth two or three miles, and their depth more than 600 feet. Why the glacier descends has been a very disputed question. Saussure attributed it to its weight, aided by the water beneath it. Charpentier and Agassiz to dilatation produced by the freezing of water in the interstices, a view which Hopkins opposed on mathematical and mechanical grounds. Agassiz and Prof. James Forbes discovered that the glacier, like an ordinary river, moved faster on the surface than below, and in the middle than at the sides. Forbes therefore believed that viscosity was the cause of the glacier's action. Tyndall attributed it chiefly to regelation, that is, to parts of it melting and freezing again. When, in descending a mountain-side, the glacier has to force its way through a narrow channel, the brittle ice is crushed and broken, but by virtue of "regelation" it freezes anew when it has cleared the obstruction. Prof. Tyndall has imitated the whole process artificially on a small scale, and his is now the accepted explanation of glacier-movement. As a glacier descends, it carries with it stones, which, on its melting, are deposited in a moraine. By these moving beneath it, and projecting from it, the subjacent rocks are polished and scored with parallel furrows. It makes also a dome-shaped mass of smoother rock, called in Switzerland *roches moutonnées*. It scoops out lakes. If it reach the sea, and descend into it, huge masses of it float off as icebergs.

Gunpowder.—Gunpowder consists of nitre or *saltpetre*, *charcoal*, and *sulphur*, and all nations prepare it in nearly the same way, using about 75 pounds of nitre, 15 pounds of charcoal, and 10 pounds of sulphur for 100 pounds of gunpowder. The materials are first made as pure as possible, the nitre being soaked in spring water, then boiled and cooled, then filtered through canvas bags and allowed to harden again. This is done twice until it becomes perfectly white. The sulphur is also purified twice by being kept melted for several hours in gun-metal pots. The charcoal, which is made from dog-wood, alder, or willow, is burned in large vessels of iron instead of in the open air, as in the case of most charcoal, and must be thoroughly charred and soft.

The three substances are first ground separately to a fine powder, and are then ground together with a little water until they are thoroughly mixed. The mixture, now called "millcake," is next pressed very hard in a hydrostatic press into thin smooth cakes, called "presscake," which is afterward broken up between toothed rollers and rubbed through sieves until it is made into grains of the right sizes. The next thing is glazing, which is done by putting the grains into canvas bags or into a barrel, which is turned round very fast. The grains, by rubbing against each other, are thus worn round and smooth, and get a glaze or polish. This is very important, because glazed powder keeps dry and bears shaking better than other powder. After glazing, the powder is dried in rooms heated by steam pipes.

The manufacture of gunpowder is very dangerous, because it is liable to explode and blow up the mill. When gunpowder explodes, that which was a solid is suddenly turned into a gas, and takes up about 2000 times as much room as it did in its previous state. As this gas must find room for itself, it drives everything out of its way; it blows up a house in which it is stored, splits open rocks in a quarry or mine, or forces a ball out of a cannon. In making *fireworks* gunpowder is used in many different forms.

Halloween, is the night of October 31st, the eve of All Saints', all All-hallows Day, which is November 1st, and is probably a relic of pagan times or of mediæval superstitions, as it has nothing whatever to do with the church festival. In England and Scotland it is especially selected as the time for trying spells and divinations in love affairs. The superstitious tradition regarding it is that it is the night of all others when supernatural influences prevail; when spirits of the invisible and visible world walk abroad, for on this mystic evening it was believed that the human spirit was enabled, by the aid of supernatural power, to detach itself from the body and wander through the realms of space. There is a similar superstition in Germany concerning "Walpurgis night"—the night preceding the first of May. On this night, the German peasants believe that there is a witch festival, or gathering of evil spirits, on the summit of the Brocken in the Hartz Mountains, and the malign influence of this convocation was believed to be felt all over the surrounding country. It was an old custom, and still observed in some places, to light great bonfires of straw or brush on that night, to drive away the spirits of darkness supposed to be hovering in the air. Considering that All Saints' Day was originally kept on May 1st, there would appear to be but little doubt that Allhallow eve and Walpurgis night have a common origin, which, doubtless, dates back to the earliest belief in a personal and all-powerful Evil One—the Chaldean's Power of Darkness.

Hail.—There are two kinds of hail; the small grains, like fine shot, which often fall in winter, but rarely in summer, and which generally come before snow; and larger hail, which falls usually in hot weather, and is most severe in very hot hot climates. The first is caused by the freezing of rain drops as they pass in falling through colder air than that from which they started; the second, or common hail, results from the meeting of two currents of air, one very warm and loaded with vapor, and the other very cold.

It is known, by going up in balloons and in other ways, that the air is not all of the same heat, but is divided into cold and warm parts or layers, a layer of very cold air, much below freezing, often lying between two warm parts. When bodies of warm damp air move upward into one of these layers of cool dry air, the damp air is at once changed into ice, and hail falls. Sometimes the hailstones thus formed are very small, and sometimes many meet and freeze together into large masses. They are usually not much larger than a walnut or a pigeon's egg, but some have been seen

as large as an orange. In 1860, during a storm which took place while an English ship was off the Cape of Good Hope, hailstones of the size of half a brick fell and hurt many of the sailers. Hailstones often do great harm to crops, especially in France, Germany, and India.

Harp of Ireland.—The origin of the harp in the arms of Ireland, is said to be as follows:—On Henry the Eighth being presented by the Pope with the harp of Brian Borhu, he was induced to change the arms of Ireland, by placing on her coins a representation of the relic of her most celebrated native king.

Highest Buildings, Monuments, etc.—

	Feet
Eiffel Tower, Paris	989
Washington Monument	555
City Hall, Philadelphia, Pa	548
Pyramid, Cheops, Egypt	543
Cathedral, Cologne	511
Cathedral, Antwerp	476
Cathedral, Strassburg	474
Tower, Utrecht	464
Steeple, St. Stephen's, Vienna	460
Pyramid, Khafras, Egypt	456
St. Martin's Church, Bavaria	456
Chimney, Port Dundas, Glasgow	454
St. Peter's, Rome	448
Notre Dame, Amiens	422
Salisbury Spire, England	406
Cathedral, Florence	380
Cathedral, Cremona	372
Cathedral, Freiburg	367
St. Paul's, London	365
Cathedral, Seville	360
Pyramid, Sakkarah, Egypt	356
Cathedral, Milan	355
Notre Dame, Munich	348
Invalides, Paris	347
Parliament House, London	340
Cathedral, Magdeburg	337
St. Patrick's New York	328
St. Mark's, Venice	328
Statue of Liberty, New York	321
Cathedral, Bologna	306
Cathedral, Norwich, England	309
Cathedral, Chichester, England	300
Cathedral, Lincoln, England	300
St. James' Cathedral, Toronto	316
Capitol, Washington	300
Trinity Church, New York	283
Cathedral, Mexico	280
Cathedral, Montreal	280
Campanile Tower, Florence	276
Column, Delhi	260
Cathedral, Dantzic	250
Porcelain Tower, Nankin	248
Custom House, St. Louis	240
Canterbury Tower, England	235
Notre Dame, Paris	232
Chicago Board of Trade	230
St. Patrick's, Dublin	226
Cathedral, Glasgow	225
Bunker Hill Monument	220
Notre Dame, Montreal	220
Cathedral, Lima	220
Cathedral, Rheims	220
Cathedral, Garden City, L. I.	219
St. Peter and Paul, Philadelphia, Pa	210
Washington Monument, Baltimore	210

Ice.—Water congealed so as to be rendered solid by cold. Dana ranks water as a mineral species, and notes that its crystals are hexagonal and occur usually in compound stellate forms. Ice is transparent owing to the close contact of the crystals which compose it: this makes the individual particles so blend as to render the mass optically, as well as mechanically, continuous. Its specific gravity is 0.194. Water freezes at 32 degrees of Fahr., at zero (0) Centigrade. Its greatest density is at about 40 degrees Fahr., four or five degrees Centigrade, hence ice floats on water. The surface of sheets of water is frozen while their mass remains liquid. Ice one inch and a half thick will support a man; four inches thick will support cavalry; five inches thick will support an 84 pound cannon; 10 inches thick will support a multitude; 18 inches thick will support a railroad train.

Iceberg.—A hill of ice which is either floating in the ocean or has somewhere taken the ground. The genesis of an iceberg is generally on the shore; it exists first as a glacier but when this in its onward progress reaches the cliffs and glides down them into the ocean, it loses the name of glacier and takes that of iceberg. Scoresby counted 500 of them drifting between latitude 69 degrees and 70 degrees north. The magnitude of some icebergs is very great. Captain Sir John Ross saw several of them together in Baffin's Bay aground in water 1,500 feet deep. One seen off the Cape of Good Hope was two miles in circumference and a 150 feet high. Others were from 250 to 300 feet above the sea. For every cubic foot above there must be at least eight below. The rotation of the earth makes the icebergs which escape from the North Polar regions in proximity to Europe drift partly to the westward and they rarely reach Britain, though Cowper has a poem "On the Ice-islands seen floating in the German Ocean, March 19, 1799." Many impinge upon the eastern shores of Iceland; escaping that island they are born away in the direction of the eastern shores of America. They do not approach the equator nearer than about 40 degrees north and 36 degrees to nine degrees south. When an iceberg reaches a coast and melts, it generates chilling fogs, and so reduces the temperature as temporarily to deteriorate the climate of the adjacent land. They carry with them earth, rocks, etc., obtained when they were in the glacier state. These, when the ice melts, fall to the bottom of the sea and form moraines. When they scrape their way over the bed of the ocean they score the several rocks over which they pass. They often transport animals and seeds of plants to great distances.

John Bull.—A collective nickname for the English people, first used in Arbuthnot's ludicrous "History of Europe." It is now also applied to characteristic English traits.

Labyrinth.—One of the wonders of ancient Egypt. It consisted of 12 palaces, beneath which were vast subterraneous excavations, equal in size to the palaces above, in which were preserved the bodies of the kings who constructed them, and the sacred crocodiles which the Egyptians worshipped as deities.

Liberty Bell was cast in London in 1752 by order of the Pennsylvania Assembly, for use in their State House. The bell reached Philadelphia the following year, but it cracked without any apparent reason when it was rung to test the sound, and it was necessary to have it recast. This was done by Philadelphia workmen, and in June, 1753, it was again hung in the belfry of the State House. On July 4, 1776, when the Continental Congress declared the colonies independent of Great Britain, the bell was rung for two hours, so the story goes, by the old bellman, who was so filled with enthusiasm and excitement that he could not stop. It was taken down when the British threatened Philadelphia in 1777, and removed to Bethlehem, Pa., but was returned to the State House in 1778, and a new steeple was built for it. A few years afterward it cracked under a stroke of the hammer, and although an attempt has been made to restore its tone by sawing the crack wider, it has been unsuccessful. During the World's Fair in New Orleans in 1885, the bell was sent there for exhibition. It left Philadelphia, January 24th, in charge of three custodians appointed by the mayor of the city, who did not leave it day or night until it was returned in June of the same year. The train carrying the bell was preceded over the entire route by a pilot engine. The following words are inscribed around it: "By Order of the Assembly of the Province of Pennsylvania, for the State House, in the City of Philadelphia, 1752," and underneath, "Proclaim liberty through all the land unto all the inhabitants thereof—Levit. xxv. 10." Its weight is about 2,000 pounds.

Lightning.—The dazzling light emitted by a large spark darting from clouds charged with electricity. In the lower regions of the atmosphere it is white, in the upper one somewhat violet, as is the spark of an electrical machine in a vacuum. It does not uniformly take the zigzag form conventionally represented. It is seen sometimes like a sharp and rugged antler standing upright, and across it a line of gleaming circles like a series of huge golden coins or a string of illuminated beads, and other forms. In the upper regions of the sky, where the air is rarefied, it tends to take the form of sheet-lightning, sometimes called heat lightning; in the lower regions it becomes more concentrated and moves in lines. As a rule lightning strikes objects from above, though occasionally ascending lightning has been seen. The loftiest buildings are most in danger from its effects, and so are tall trees, expecially oaks and elms; the resin of pines, interfering with their efficiency as conductors, makes them more safe. When it sinks deeply into the ground, it sometimes vitrifies the rocks, producing fulgurites. Light travels with such speed that a flash is seen the instant it occurs. Thunder, which is simply the noise of the explosion, takes about five seconds to travel a mile, hence the distance of any flash, followed by thunder, may be calculated. If a mile distant, the danger is but slight.

Longevity, Human.—The following list of instances of remarkable longevity is given on the authority of Prichard, Whitehurst, Bailey, and others.

	Died	Age
Apollonius of Tyana	99 A. D.	130
St. Patrick	491 A. D.	122
Attila	500 A. D.	124
Llywarch Hên	500 A. D.	150
St. Coemenge	618 A. D.	120
St. Mongah or Kentigern	781 A. D.	185
Piastus, King of Poland	861 A. D.	120
Countess of Desmond	1612 A. D.	145
Thomas Parr	1635 A. D.	152
Thomas Damme	1648 A. D.	154
Dr. Mead, Hertfordshire	1652 A. D.	148
James Bowles, Kenilworth	1656 A. D.	152
Henry Jenkins	1670 A. D.	169
William Edwards	1688 A. D.	168
Petrarch Czartan	1724 A. D.	185
Margaret Patten	1739 A. D.	137
John Roven	1741 A. D.	172
Mrs. John Roven	1741 A. D.	164
John Effingham, Cornwall		144
Thomas Winslow, a captain under Cromwell	1766 A. D.	146
Draakenburg, a Dane	1772 A. D.	146
Jonas Warren, Ballydole	1787 A. D.	167
Jonas Surington, Bergen, Norway	1797 A. D.	159
Demetrius Grabowsky, Poland	1830 A. D.	169
Bridget Devine	1845 A. D.	147

Lynch Law.—Summary punishment without form of law; mob law; or, as in the case of the Vigilance Committee of the Far West, the mode of ridding an outraged community of its incorrigible offenders. There are various accounts of the origin of the term. One, which is perhaps as probable as any, is to the effect that the name of "Lynch Law" was derived from a native of Campbell Co., Va., old Colonel

Lynch, who was in the habit of administering summary punishment and miscreants of every description without paying any attention to the ordinary processes of law. Hence he was called "Judge Lynch;" and this, it is said, is the true origin of the terms "lynching" and "lynch law."

aelstrom, The, which means, literally, "grinding stream," is situated on the Norwegian coast, southwest of the Loffoden Isles, and is the most remarkable whirlpool in the world. It runs between the Island of Moskenes and a large solitary rock in the middle of the straits. The strong currents, rushing between the Great West Fjord and the outer ocean, through the channels of the Loffoden Isles, produce a number of whirlpools, of which the maelstrom is by far the most dangerous. During severe storms from the west, for instance, the current runs continually to the east at the rate of six knots an hour, without changing its direction for rising or falling tide, and the stream will boil and eddy in such mighty whirls that the largest steamer could hardly contend successfully, with the waters. The depth of the Whirlpool is only 20 fathoms, but just outside the straits soundings reach from 100 to 200 fathoms.

Iammoth Cave.—The largest known cavern in the world, situated in Edmonson County, Kentucky, 99 miles from Louisville; discovered in 1809. The immediate district is one abounding in large caves and the surface is characterized by thousands of sinkholes. It is estimated that there are 4000 sinkholes and 500 open caverns. An area of 8000 square miles in Kentucky and Tennessee is more or less marked by this character. There is almost no surface drainage, the surface water immediately finding its way into the sinks and through the subterranean caverns and channels that everywhere abound. Green river, which gathers most of these waters, flows from 300 to 600 feet below the general level of the upland country and many of the caverns reach down to this underground water level. This action is now known to be the origin of the caves and sinks. The Oolitic sub-carboniferous limestone in which most of them occur has been dissolved along its joints by the percolating water, a not unusual process in other limestones regions.

Mammoth Cave is in reality a complex series of more than 200 so-called rooms, chambers, domes, abysses, pits, grottoes, avenues, and galleries extending nine miles underground. In certain of the lower caverns there are rivers, cataracts, and lakes, varying in volume with local rain supply.

The most remarkable portions are the great pits and domes, which are caverns of unusual vertical extent. They are in reality the same, pits extending downward and domes upward from the main points of observation. Crevice Pit with Klett's Dome, which is a part of it, is 150 feet in total vertical measurement. The Bottomless Pit is 105, and Scylla is 135 feet deep. Cleveland Avenue is two miles long, and Silliman's is one and one-half, and in places 200 feet wide. Many parts of the cave are beautifully incrusted with gypsum and other deposits, while stalactites and stalagmites are abundant in some of the lower portions. Where these crusts are covered with crystals, their sparkling is especially impressive, as in Star Chamber.

The Dead Sea, Lake Lethe, the Styx, and the Roaring and Echo rivers are the largest stretches of water.

The outer galleries of the cave are inhabited by millions of bats. There are two species of blind fish, crayfish, crickets with abnormally long antennæ, and a few insects. All of these are believed to have descended from former normal surface types and to have become modified by their subterranean environment.

Man in the Moon.—This is one of the most ancient as well as one of the most popular superstitions. It is supposed to have originated in the account given in the Book of Numbers, of a man punished with death for gathering sticks on the Sabbath-day. In one of the drawings representing this extraordinary and familiar character, he appears as a man with a staff over his shoulder, on which he carries his fatal bundle of sticks, followed by a dog.

Mardi-Gras.—The Mardi-Gras is the festival preceding the first day of Lent, or Ash Wednesday. Most of the distinctive ceremonies now annually performed in New Orleans were originally introduced by the French population as early as 1827. The day is a legal holiday, and the entire city is for the time ostensibly placed under the control of a king of the carnival, the great "Rex." There are two principal pageants. The first, in the daytime, is the escort of the "beloved Rex," through his favorite city; the other, or night pageant, is known as the "Mystic Krewe of Comus." This has a character altogether unique. The first display was in 1857. On Twelfth night (January 6), the "Knights of Momus" have a display analogous to the Mardi-Gras, but more exclusively burlesque, and in which they satirize the follies of the age. The arrangements for these celebrations come within the control of quite an elaborate organization. The Mardi-Gras is held on Shrove Tuesday, a day of pleasure in most Roman Catholic countries. It is the carnival of the Italians, the Mardi-Gras of the French, and the Pancake Tuesday of former times in England.

Mayflower's Passengers.—The following is a true list of the male passengers landed at Plymouth in the Mayflower, 1620.

Isaac Allerton,	William Mullins.
Jno. Alden.	Edmund Margeson.
Jno. Allerton.	Degony Priest.
William Bradford.	Thomas Rogers.
William Brewster.	John Rigdale.
John Billington.	Edward Fuller.
Peter Brown.	Moses Fletcher.
Richard Britterage.	John Goodman.
John Carver.	Richard Gardiner.
Francis Cook.	George Soule.
James Chilton.	Capt. Miles Stanish.
John Crackton.	Edward Tilly.
Richard Clarke.	John Tilly.
Edward Dotey.	Thomas Tinker.
Francis Eaton.	John Turner.
Thomas English.	Edward Winslow.
Samuel Fuller.	William White.
John Howland.	Richard Warren.
Stephen Hopkins.	Thomas Williams.
Edward Leister.	Gilbert Winslow.
Christopher Martin.	

Servants as follows:

Carter.	More.
Cooper.	Power.
Ely.	Sampson.
Holbeck.	Story.
Hooke.	Thompson.
Langmore.	Trevore.
Latham.	Wilder.
Minter.	

Mason and Dixon's Line.—A name given to the southern boundary line of the free state of Pennsylvania which formerly separated it from the slave states of Maryland and Virginia. It was run—with the exception of about 22 miles by Charles Mason and Jeremiah Dixon, two English mathematicians and surveyors, between November 15, 1763, and December 26, 1767. During the excited debate in Congress, in 1820, on the question of excluding slavery from Missouri, the eccentric John Randolph of Roanoke made great use of this phrase, which was caught up and re-echoed by every newspaper in the land, and thus gained a celebrity which it still retains.

Metals, Value of.—The following table gives the names and prices of all the known metals of pecuniary worth:—

	Price, Av. Pound
Gallium	$68,600.00
Vanadium	10,780.00
Rubidium	9,800.00
Thorium	8,330.00
Glucinium	5,800.00
Calcium	4,900.00
Lanthanum	4,900.00
Lithium	4,900.00
Indium	4,410.00
Tantalum	4,410.00
Yttrium	4,410.00
Didymium	4,410.00
Strontium	4,200.00
Arium	3,675.00
Erbium	3,675.00
Ruthenium	2,695.00
Niobium	2,450.00
Rhodium	2,450.00
Barium	1,960.00
Titanium	1,102.00
Zirconium	1,040.00
Osmium	1,040.00
Uranium	980.00
Palladium	560.00
Tellurium	490.00
Chromium	490.00
Gold	300.00
Molybdenum	245.00
Platinum	144.00
Thallium	122.50
Iridium	112.00
Tungsten	36.00
Potassium	28.00
Selenium	18.80
Cobalt	8.00
Magnesium	4.50
Bismuth	2.75
Sodium	2.50
Cadmium	1.30
Manganese	1.10
Arsenic	.40
Aluminium	.34
Tin	.25
Copper	.25
Antimony	.16
Zinc	.11
Lead	.08

Missing Link.—The link between the monkey and man. According to Darwin, the present host of animal life began from a few elemental forms, which developed, and by natural selection propagated certain types of animals, while others less suited to the battle of life died out. Thus, beginning with the larvæ of ascidians (a marine mollusk), we get by development to fish lowly organized (as the lancelet), thence to ganoids and other fish, then to amphibians. From amphibians we get to birds and reptiles, and thence to mammals, among which comes the monkey, between which and man is a "Missing Link."

Molly Maguires.—The first organization of this name was formed in Ireland, with the object, it is believed, of generally misusing process-servers and others engaged in the prosecution and eviction of tenants, and was composed of young men who, in some localities, assumed women's clothing, blackened their faces, and otherwise disguised themselves. It remained, however, for the American "Mollies" to terrorize whole counties, and leave a blood-red trail behind them in the coal regions of Pennsylvania. To give even a record of the murders and

outrages they committed would require an entire volume; but they were numbered by hundreds, and the unfortunate victims were, in most cases, well known and respected men. The American organization was composed of the restless and reckless element drawn to the coal regions through the opening of the coal fields. There is no recorded instance where the disguise of women's clothes was assumed in the United States. Through the effort of James McParlan, a detective, the secrets of the order were finally revealed, and many of its members were brought to justice.

Moonshiners.—Those who distil illicit whisky and evade the payment of the government excise tax, their operations being carried on chiefly at night. The term arose in the mountains of North Carolina and Tennessee, where this practice is very common.

Morganatic Marriage.—Otherwise termed a left-handed marriage, between a man of superior and a woman of inferior station; in which it is stipulated that the woman and her children shall not enjoy the rank nor inherit the possessions of her husband. Such marriages are not uncommon in the families of the sovereign princes and of the higher nobility, in Germany; but they are restricted to personages of these exalted classes.

Mourning.—

Black. The color of mourning in Europe, also in ancient Greece and Rome.

Black and white striped. Expressive of sorrow and hope combined; worn by the South Sea Islanders.

Grayish brown. The color of the earth; worn in Ethiopia.

Pale brown. The color of withered leaves; worn in Persia.

Sky blue. Expressive of hope for the deceased; worn in Syria, Cappadocia, and Armenia.

Deep blue. The mourning of Bokhara, in Central Asia; worn also by the Romans under the republic.

Purple and *violet.* Denotes royalty: worn for cardinals and the kings of France. *Violet* is the mourning of Turkey.

White. Mourning of China. Henry VIII. wore white for Anne Boleyn. Until 1498 it was the mourning of Spain.

Yellow. Mourning worn in Egypt and Burmah. Anne Boleyn wore yellow for Catherine of Arragon. Yellow may be regarded as a token of exaltation.

Niagara Falls.—Four of the Great Lakes of the St. Lawrence river system differ little in elevation. Superior, the first of the series, lies at 602 feet, and Erie, the last of these four, at 573 feet above sea level. But Ontario, the fifth, lies in a broad valley 300 feet below the upper plain on which Lake Erie rests, the difference between the the two bodies of water being 326 feet. The upland plain joins the low valley along a bold escarpment of 200 feet or more that extends east and west continuously through western New York, passing between the two lakes into Canadian territory.

The connecting streams between all of the lakes have rapids or river characters, but that connecting Lakes Erie and Ontario, because of their great difference of level and the presence of this escarpment, had developed a cataract and series of rapids that form one of the natural wonders of the world. The stream is Niagara river and the cataract Niagara Falls.

Niagara river is only about 28 miles in length, and for about 19 miles of that distance, from Buffalo to Niagara Falls, it flows as a broad, smooth stream with low drift banks, presenting no unusual characters. There the rapids begin, and for half a mile, in which distance the descent amounts to 50 feet, the waters become a boiling torrent. In this portion several islands appear, the largest one, Goat Island, dividing the river into two unequal parts. Both plunge over the precipice into a narrow, deep gorge, which turns away almost at a right angle and with a succession of foaming rapids and whirlpools finally reaches the open, low valley at its bordering escarpment seven miles below. One sharper turn than the others is known as the Great Whirlpool.

The separation by Goat Island makes two falls. The smaller lies to the American side and is known as the American Fall. It has a crest of 1060 feet, a depth of less than 10 feet, and a fall of 167 feet. Under the ledges which form the chief support the spray has succeeded in forming cavernous recesses, one of which is accessible and is known as the "Cave of the Winds." The part between Goat Island and the Canadian shore is much the larger. It forms a great curve with a crest 3010 feet long, known as the Canadian or "Horseshoe Fall." The amount and depth of water pouring over this crest are much greater than at the American Fall, but its fall is somewhat less—158 feet. A further descent of 104 feet is reached by the seven miles of rapids through the gorge.

The average flow of water over both falls is estimated by the United States engineers, from the mean flow of water over a period of 40 years from Lake Erie at Buffalo, to be 222,400 cubic feet per second. This volume of water has a potential value of probably more than 3,800,000 horsepower. The American side shows a recession of half a foot per year; the Horseshoe Falls recedes two to four feet.

The Falls were discovered in 1678 by Father Hennepin, whose description and estimates of proportions are somewhat extravagant. The first accurate surveys were conducted by James Hall in 1842. Since that time several have been made and it is on these instrumental observations that the rate of recession is based. New York established a reservation of 107 acres on the American side at an expense of $1,500,000. A somewhat larger reservation has been secured by Ontario for the Canadian side. Several great bridges cross the gorge and river. Eight hundred thousand people visit this place annually to see the cataract.

Old Dominion.—Virginia. In colonial days acts of Parliament relating to the Virginian settlements (which at that time included all the British dominions in North America) always designated them as the "Colony and Dominion of Virginia." In the maps of the time this colony was described as "Old Virginia," is contradistinction to the New England settlements, which were called "New Virginia." The transition from "Old Virginia" to "Old Dominion" would be an easy and a natural one.

Passion Flower.—So called by early Spanish settlers, who fancied it to be a representation of our Lord's passion.

The *leaf* is symbolic of the spear that pierced his side.

The five *anthers*, the marks of the wounds.

The *tendrils*, the cords or whips.

The column of the *ovary*, the upright of the cross.

The *stamens*, the hammer.

The three *styles*, the nails.

The *filamentous processes*, the crown of thorns.

The *calyx*, the glory or halo.

The *white* tinge, purity.

The *blue* tint, heaven.

It remains open for three days, and typifies his three years' ministry.

Patron Saints.—This designation was given, during the Middle Ages, to those saints that were supposed to watch over and protect the interests of particular persons, places, and trades. The following is a list of some of the more prominent of these:

Aberdeen, St. Nicholas.
Antwerp, St. Norbert.
Austria, Sts. Colman and Leopold.
Brussels, St. Gudule.
Cologne, St. Ursula.
Edinburgh, St. Giles.
England, SS. George and Mary.
Flanders, St. Peter.
France, SS. Mary, Michael, and Denis.
Genoa, St. George.
Germany, SS. Martin, Boniface, and George
Holland, St. Mary.
Ireland, St. Patrick.
Italy, St. Anthony.
Lisbon, St. Vincent.
Milan, St. Ambrose.
Naples, St. Januarius.
Paris, St. Genevieve.
Portugal, SS. Sebastian, James, and George
Prussia, SS. Mary, Adalbert, and Andrew.
Rome, SS. Peter and Paul.

NAVIES OF THE WORLD

Powers	Modern Battleships	Cruiser Battleships	Older Battleships	First Class Cruisers	Second Class Cruisers	Third Class Cruisers	Gunboats	Monitors	Destroyers	Torpedo Boats	Submarines	Personnel Officers and Men
Great Britain	43	9	15	42	38	36	...	...	173	54	67	*134,000
Germany	31	5	5	9	6	34	47	...	89	48	8	‡ 35,500
United States	26	...	9	15	3	14	21	10	50	32	34	† 53,375
France	15	...	9	15	12	21	14	...	65	191	61	30,599
Japan	11	1	4	13	7	13	6	...	58	48	12	**40,000
Russia	11	...	3	6	8	2	8	...	97	32	81	60,000
Italy	10	...	2	7	3	15	13	...	21	43	7	30,000
Austria-Hungary	9	...	3	8	5	...	4	...	9	18	...	12,899
Brazil	2	...	2	1	1	3	5	...	...	...	...	8,000
Argentina	2	...	2	5	2	2	2	...	4	8	...	5,000
Sweden	...	...	12	1	...	...	5	11	6	51	10	4,000
Netherlands	...	...	9	7	...	...	1	1	...	50	1	8,575
Norway	...	...	4	...	...	...	3	2	...	29	...	1,130
Chile	2	...	1	2	3	1	2	...	6	14	2	10,000
Denmark	...	...	1	...	...	...	4	3	...	13	...	4,000
Spain	...	...	1	8	...	...	...	...	5	6	...	5,000
Portugal	...	...	...	6	...	...	19	...	2	4	2	6,000
Greece	...	...	...	...	...	...	8	3	...	12	...	4,000
Turkey	...	...	2	1	2	2	2	2	4	8	...	30,000
China	...	...	...	1	3	...	...	...	...	...	...	.....
Mexico	...	...	...	...	...	5	...	...	2	...	...	1,200
Siam	...	...	...	...	1	...	...	...	...	...	...	5,100

*Naval Reserve Seamen, 24,700. †Naval Militia, 7,035 men.
‡Reserve of 110,000 men. **Reserve of 114,000 men.

Russia, SS. Nicholas, Andrew, Wladimir, and Mary.
Scotland, St. Andrew.
Spain, SS. James the Great, Michael, Thomas à Becket, and Edward.
Venice, SS. Mark, Justina, and Theodore.
Vienna, St. Stephen.
Wales, St. David.

awnbroker's Sign, Origin of.—It is generally held that the three golden balls used by pawnbrokers as a sign were adopted from the armorial bearings of the Medici family of Italy by the Lombard merchants, among whom were several representatives of that family. This sign was used in London in very early times by some of those merchants who had emigrated from Italy and established the first money-lending establishments in England.

eat.—A deposit formed in bogs by the decay of vegetable matter, frequently consisting almost entirely of Sphagnum, or bog-moss. In composition it differs from coal only in the relative proportion of its constituents. Thus, peat contains: Carbon, 55.62; hydrogen, 6.88; oxygen and nitrogen, 37.50; while coal consists of: Carbon, 88 to 94 per cent; hydrogen, 2.5 to 5.5; oxygen, 2.5 to 6.0. It forms extensive deposits in various parts of northern Europe, and notably in parts of Ireland, where it is commonly known as turf, and is largely used as fuel.

hrenology.—A system of Physics-psychology founded by Dr. Gall (1758-1828), a German physician, and afterward expounded and developed by his pupil, Dr. Spurzheim. It is based on four fundamental principles;

(1) The brain is the organ of the mind.

(2) The mental faculties can be analyzed and reduced to a definite number.

(3) Different parts of the brain are appropriated to these different mental faculties.

(4) Capacity and character are indicated by the external form of the skull.

According to phrenologists, the mind is commonly divided into 35 faculties, associated with a corresponding number of areas on the cranium. These faculties are as follows:

Amativeness. Philoprogenitiveness. Inhabitiveness or Concentrativeness. Adhesiveness. Combativeness. Destructiveness and Alimentiveness. Secretiveness. Acquisitiveness. Constructiveness. Self-esteem. Love of Approbation. Cautiousness. Benevolence. Veneration. Firmness. Conscientiousness. Hope. Wonder. Ideality. Wit. Imitation. Individuality. Form. Size. Weight. Coloring. Locality. Number. Order. Eventuality. Time. Tune. Language. Comparison. Causality.

Anatomy and physiology have proved that the exterior surface of the brain is by no means an index to mental processes or characters; still less is such a guide furnished by the minute variations in the shape of the skull, which in a general way correspond to the exterior surface of the brain. Size of brain does not correspond directly to mental power of activity; nor is the superficial conformation the most important feature of the brain. Parts of the external surface known to have functions other than those attributed by phrenologists; the frontal sinus of the skull is sometimes large enough to occupy the region allotted to four or five phrenological organs; and there are many esteological differences in the various bones of the skull which obviously have nothing to do with brain-functions or mental processes.

ymouth Rock.—On December 22, 1620, the Pilgrim Fathers first set foot on a bare rock on the bleak coast of Massachusetts Bay, "while all around the earth was covered with deep snow." This rock became known as "Plymouth Rock," and is to New England what the Palladium was to ancient Troy, or the shield of Minerva to Athens. In course of time the rock became broken into two pieces. One part remained in its original position at Hedge's Wharf, Plymouth; the other was taken to the center of the town and surrounded by an iron railing. In 1880 this portion which had been dragged into Plymouth by 20 yoke of oxen in 1774, and over which the Whigs erected a liberty-pole was returned to its original position.

Potter's Field.—"Potter's Field" was a piece of ground which, according to the statement in Matthew, xxvii. 7, was purchased by the priests with the 30 pieces of silver rejected by Judas, and converted into a burial-place for Jews not belonging to the city. Here is the passage: "And they took counsel and bought with them the potter's field to bury strangers in." With us the term "potter's field" denotes the ground where unidentified persons and the bodies of unclaimed paupers are buried; and the term undoubtedly had its origin in the transaction alluded to by Matthew.

Printer's Devil.—The origin of this term is ascribed to the fact that in the early days of printing the apprentice's duties included the inking of the forms with bags containing ink or besmeared with it. In the performance of this work his face and hands became so daubed with ink that in appearance he suggested the devil. Hence the name.

Rain.—The fall of water in drops from the clouds, or the drops which fall. A cloud consists of aqueous vapor, the individual vesicles of which are very small. When by the constant condensation of fresh aqueous vapor these vesicles become large and heavy, and several of them unite, they are unable to resist the action of gravity and fall as rain.

Rainbow.—A luminous bow or arch appearing in the clouds opposite to the sun when they are resolved into rain. Theoretically several bows may co-exist; generally, however, there is but one. Sometimes there are two, very rarely three or even four—the largest number authentically on record. Every rainbow exhibits the prismatic colors. When there are two bows, the lower, or primary, is very bright, and has the red highest; the outer, or secondary, is more faint, and has the violet the highest color. They are produced chiefly by the refraction and dispersion of the light in passing through the raindrops, partly also by its reflection from the back of the drops, without which the appearances would not reach the eye. The secondary bow ceases to be visible when the sun is 54 degrees above the horizon.

Rubicon, the ancient name of a small stream—thought to be the modern Fiumicino—which formed the boundary between Italy and Cisalpine Gaul. It is celebrated from Cæsar's having hesitated about crossing it with his army, and initiating civil war, in the year 49 B. C. When he came to the river he paused upon the brink, but finally saying, "The die is cast," he spurred on his horse, and dashed into the water. Hence, "To pass the Rubicon" has become a proverbial phrase, to denote the taking of the first step in a momentous undertaking, from which one cannot or will not recede.

Sabbath Day's Journey.—"A Sabbath day's journey, according to Dr. Adam Clark, was seven and one-half furlongs, or about 1,650 yards. The Rabbins fix it at 2,000 cubits, which is about 1,350 yards. Josephus says that the Mount of Olives was five stadia, or 625 paces, from Jerusalem, which would make the allowable Sabbath day's journey about 1,050 yards."

St. Valentine's Day.—The custom of sending valentines can, without doubt, be traced, in origin, to a practice among the ancient Romans. At the feast of the Lupercalia, which was held on the 15th of February, in honor of the great god Pan, the names of all the virgin daughters of Rome were put in a box and drawn therefrom by the young men, and each youth was bound to offer a gift to the maiden who fell to his lot, and to make her his partner during the time of the feast. This custom became allied to the name of St. Valentine, probably, only through a coincidence in dates. St. Valentine was bishop of Rome during the third century. He was of most amiable nature, and possessed remarkable gifts of eloquence, and was so very successful in converting the pagan Romans to Christianity that he incurred the displeasure of the Emperor, and was martyred by his order February 14, A. D. 270. When the saint came to be placed in the calendar, his name was given to the day of his death, and this was made a festival to offset that of the Lupercalia, and an effort was made to substitute the names of saints for those of girls in the lottery, but naturally without success. Many other customs of mediæval and later times, which have become allied in name to a holy saint of the church, are unquestionably of purely secular, even pagan, origin.

Salutes, United States National and International.—Salute to the Union. This is one gun for each state, and is commemorative of the Declaration of Independence. It is fired at noon of the Fourth of July, at every military post, and on board commissioned naval vessels belonging to the United States.

The National Salute, 21 guns. This is the salute for the national flag, the President of the United States, presidents of foreign republics, or sovereigns of foreign states, visiting the United States.

Vice-President of the United States, American and foreign ambassadors, 19 guns.

The President of the Senate, Speaker of the House of Representatives, Members of the Cabinet, the Chief Justice, a Congressional Committee, Governors within their respective states or territories, Viceroy or Governor General of provinces belonging to foreign states, General of the Army, Admiral of the Navy, and same ranks in foreign armies and navies, 17 guns.

American or foreign Envoys, or Ministers Plenipotentiary, Assistant Secretaries of the Navy or War, Lieutenant General, or a Major General commanding the army and corresponding ranks in the navy, and foreign armies and navies, 15 guns.

Ministers-Resident accredited to the United States, Major General, Rear Admiral, and corresponding ranks of foreign armies and navies, 13 guns.

Charges d' Affaires, Brigadier General, Commodore, and corresponding ranks in foreign armies and navies, 11 guns.

Consul Generals accredited to the United States, 9 guns.

Salutes are only fired between sunrise and sunset, and not on Sundays, except in international courtesies. The national colors are always displayed at the time of saluting. The salute of the flag is the only

salute which is returned, and this must be done within twenty-four hours. United States vessels do not return salute to the flag in United States waters if there is any fort or battery there to do it, nor do United States vessels salute United States forts or posts.

If there are several batteries or forts within sight or six miles of each other, one of them is designated as the saluting fort, and returns all salutes of foreign men-of-war. In New York, Castle William, on Governor's Island, is the saluting fort.

Santa Claus.—The children's Christmas deity is known in the United States by this name, the Dutch form *Santa Klaas*, being simply the abbreviation of Nicholas, a patron saint of unquestionable Holland ancestry.

Science, The Five Follies of.—These are usually said to be the following: The squaring of the circle; the establishment of perpetual motion; the philosopher's stone; charmation, or the discovering of secrets by magic; and judicial astrology.

Scylla and Charybdis.—Two geographical sobriquets frequently met in ancient and modern literature. Scylla is a rocky cape on the west coast of South Italy, jutting out boldly into the sea so as to form a small peninsula just at the northern entrance to the Straits of Messina. About the beginning of the fifth century B. C. a fort was built upon the rock (which is about 200 feet high, and much hollowed out below by the action of the waves), and in course of time a small town grew up, straggling down the slopes toward the sea. The navigation at this place was looked upon by the ancients as attended with immense danger, which, however seems to have been much exaggerated, for at the present day the risk is no more than attends the doubling of any ordinary cape. Charybdis (modern name Galofaro) is a celebrated whirlpool in the Straits of Messina, nearly opposite the entrance to the harbor of Messina in Sicily, and in ancient writings always mentioned in conjunction with Scylla. The navigation of this whirlpool is, even at the present day, considered to be dangerous, and must have been exceedingly so to the open ships of the ancients.

Smoke.—Any volatile, and specially any carbonaceous matter escaping from a burning substance. When wood or coal is in process of combustion, it emits, not merely minute particles of unconsumed carbon, but invisible gaseous matter. Appliances for consuming smoke aim simply at preventing the rise of the carbonaceous particles, ignoring the unseen gases. They turn on the furnishing of a supply of air containing an abundance of oxygen, the absence of which is the reason why any carbon escapes unconsumed.

Sphinx, Riddle of.—A famous enigma of antiquity. The story runs that Juno sent a monster named the Sphinx to ravage the territory of Thebes. This monster had been taught riddles by the Muses, and she propounded one to the Thebans: "What is that which has one voice, is four-footed, two-footed, and at last three-footed;" or, as some have it, "What animal is that which goes on four feet in the morning, on two at noon, and on three at evening." An oracle told the Thebans that they would not be delivered from her until they had solved her riddle. They often assembled to try their skill, but as often failed, when the Sphinx always carried off and devoured one of their number. At length Odipus came forward and gave the correct answer, "Man," who when an infant creeps on all fours, at manhood stands erect on two legs, and in old age hobbles about with the aid of a crutch.

Tammany, Society of, or Columbian Order was formed in 1789, being the effect of a popular movement in New York, having primarily in view a counterweight to the so-called "aristocratic" Society of the Cincinnati. It was essentially anti-Federalist or Democratic in its character, and its chief founder was William Mooney, an upholsterer, and a native-born American of Irish extraction. It took its title from a noted, ancient, wise, and friendly chief of the Delaware tribe of Indians, named Tammany, who had, for the want of a better subject, been canonized by the soldiers of the Revolution as the American patron saint. The first meeting was held May 12, 1789. The act of incorporation was passed in 1805. The Grand Sachem and thirteen Sachems were designed to typify the President and the Governors of the thirteen original States. The society is nominally a charitable and social organization, and is distinct from the general committee of the Tammany Democracy, which is a political organization.

Thunder.—The violent report which follows a flash of lightning. It commences the same moment as the flash; but, as the sound travels only at the rate of about 1100 feet a second, while light does so at the rate of 200,000 miles, the flash of the lightning is the first to be perceived, and thus a means is afforded of calculating the distance of the lightning. The noise of the thunder arises from the disturbance produced in the air by the electric discharge, but why the sound should be so prolonged has been differently explained. The old hypothesis was that the sound was echoed from every precipice, from every building, and from every cloud in the sky. Another is that the lightning itself is a series of discharges, each producing a particular sound according to the distance at which it commences, and the varying densities of the portions of air which it traverses before reaching the ear. A third conjecture is that the noise arises from the zigzag movement of the electric fluid, the air at each salient angle being at its maximum compression.

Train Management.—Standard Code.—A train while running must display two green flags by day and two green lights by night, one on each side of the rear of the train.

After sunset, or when obscured by fog or other cuase, must display headlight in front, and two red lights in rear.

Two green flags by day and two green lights by night, displayed in the places provided for that purpose on the front of an engine, denote that the train is followed by another train running on the same schedule, and entitled to the same timetable rights as the train carrying the signals.

Two white flags by day or two white lights by night, carried in the same manner, denote that the train is an extra.

A blue flag by day and a blue light by night, placed on the end of a car, denotes that car inspectors are at work under or about the car or train, and that it must not be coupled to or moved until the blue signal is removed.

Colored Flag or Lantern Signals—Torpedoes. Standard Code.—Red signifies danger.

Green signifies caution, go slowly.

White signifies safety.

Green and white signifies stop at flag stations for passengers or freight.

One cap or torpedo on rail means stop immediately.

Trees, Noted

Burgoyne Elm.—At Albany, N. Y., associated with that ill-fated British general, during the War of Independence.

Cary Tree.—Planted by the roadside in 1832 by Alice and Phœbe Cary, is a large sycamore, standing on the turnpike from College Hill to Mount Pleasant, Hamilton County, Ohio.

Charter Oak, The.—A tree celebrated in American (legendary) history, which formerly stood in Hartford, Conn. According to tradition, when Governor Andros came to Hartford in 1687 to demand of the Assembly the surrender of the colonial charter, the debate in that body over the governor's demand was prolonged beyond daylight, when suddenly the lights were extinguished, and in the darkness a patriot, Captain Wadsworth, escaped with the charter and hid it in a hollow oak. There is, however, no contemporary record of this event. The Charter Oak was overthrown by a storm in 1856.

Elm, Old Liberty.—A famous tree on Boston Common, which stood near the "long walk," at the foot of Flagstaff Hill, and was in its day considered the "oldest inhabitant" of Boston. It was a tree of unknown age, and was believed to have stood there before the settlement of the town in 1630. It was already decrepit as long ago as 1755. It was over seventy-two feet high, and measured twenty-two and a half feet in circumference one foot above the ground. After resisting many a storm, it was blown down in the winter of 1876. An iron fence surrounds the spot where it stood.

Fairlop Oak.—A giant oak-tree in Hainault Forest, Essex, England, whose girth was forty-eight feet, and beneath whose widely spreading branches an annual fair was held on the first Friday in July. The tree was blown down in February, 1820.

Judas Tree.—A corruption of Kuamos tree; *i. e.* the leguminous or bean tree. The corrupt name has given rise to the tradition that it was upon one of these trees that Judas Iscario hanged himself.

Mather's Willow.—The weeping-willow over the grave of Cotton Mather in Cop's burying ground, near Bunker Hill, taken from a tree that shaded the grave of Napoleon at St Helena.

Mt. Vernon Ashes.—The immense ash tree planted by General Washington at Mount Vernon, and now the admiration of visitors.

"Old Moses."—The largest tree in the world is one discovered, in 1874, in a grove near Tule River, in California. Though the top has broken off, it is 240 feet high, and the diameter of the tree where it has been broken is 12 feet. This giant of the forest is called "Old Moses," from a mountain in the neighborhood, and is calculated to be 4840 years old! The hollow of its trunk, which is 11 feet, will hold 150 persons, and is hung with scenes of California, is carpeted, and fitted up like a drawing room, with table, chairs, sofa, and pianoforte. A section of this tree 74 feet round and 25 feet across, was exhibited in New York, in 1879.

The Washington Elm still stands at Cambridge, Mass. It is on Garden street, a short distance from the colleges, and is a large, well preserved tree. An iron fence is built around it, and on a stone in front is the following inscription: "Under This Tree George Washington Took Command of the American Army, July 3, 1775."

"Uncle Sam,"—The practice of calling the United States Government "Uncle Sam" is believed to have originated in the following manner: During the Revolutionary war a man named Samuel Wilson was a beef inspector at Troy, N. Y., and was very popular with the men in his employ, who always called him Uncle Sam. After the inspection of the beef, it was shipped by him to a contractor named Elbert Anderson, and was always marked "E. A. U. S." A joking workman, being asked what those letters were the abbreviations of, replied that he did not know, unless they were for Elbert Anderson and "Uncle Sam." The joke was kept up and spread, until it became common to refer to all packag

marked "U. S." as belonging to "Uncle Sam."

Union Jack.—The origin of the term Union Jack has never been precisely ascertained. It would appear, however, that the word "union" arose from the union of the three kingdoms into one great political power. As an alteration in the banner of St. George occurred in the reign of James the First, it may, with great probability, be supposed to have been a rendering of the word "Jacobus," abbreviated into Jack.

Vision, Limits of.—Vary with elevation, conditions of the atmosphere, intensity of illumination, and other modifying elements in different cases. On a clear day an object one foot above a level plain may be seen at a distance of 1.31 miles; one ten feet high, 4.15 miles; one twenty feet high, 5.86 miles; one 100 feet high, 13.1 miles; one a mile high, as the top of a mountain, 95.23 miles. This allows seven inches; or, to be exact, 6.99 inches, for the curvature of the earth, and assumes that the size and illumination of the object are sufficient to produce an image.

Washington Monument.—Notwithstanding the fact that the plan of a monument to General Washington was approved by Congress in the latter part of December, 1799, nothing was done in the matter until 1833, when an association of prominent persons undertook the raising of the needed funds by subscription, and on July 4, 1848, had so far succeeded in their undertaking that the cornerstone of a monument was laid, and during the succeeding eight years the shaft was carried to a height of 156 feet. The work was then suspended, at first for lack of funds, then because of the Civil War, and finally because the foundations were believed to be insecure. In 1876 Congress undertook the completion of the monument. The base was first strengthened, and the work of rebuilding the shaft was resumed in August, 1880, and was finished August 9, 1884. The shaft is 555 feet high, and the entire height of the monument, including the foundations, is 592 feet. The base is 55 feet 1½ inch square. At 500 feet above the ground the monument has four sides, each of which is 35 feet wide. Its area at this point is that of a comfortable six-room house, each room of which might be 12x61 feet. This square forms the base of the pyramidal top which runs from it 55 feet until it terminates in a metallic point. This point is constructed of the largest piece of aluminium ever made. The stones of which the monument is constructed are great blocks of crystal marble from Maryland, and in some cases are nine feet long, two feet thick, and three or more feet wide. There are more than 18,000 of them.

Watches of the Night.—The Jews, like the Greeks and Romans, says the Rev. Dr. William Smith in his "Bible Dictionary," divided the night into watches instead of hours, each watch representing the period for which sentinels or pickets remained on duty. The proper Jewish reckoning recognized only three such watches, entitled the first or "beginning of the watches" (Lamentations ii, 19), the middle watch (Judges vii, 19), and the morning watch (Exodus xiv, 24; I Samuel xi, 11). These would last, respectively, from sunset to 10 o'clock P. M., from 10 o'clock P. M. to two o'clock A. M., and from two o'clock A. M. to sunrise. After the establishment of the Roman supremacy the number of the watches was increased to four, which were described either according to their numerical order, as in the case of the "fourth watch" (Matthew xiv, 25), or by the terms "even," "midnight," "cockcrowing," and "morning" (Mark xiii, 35). These terminated, respectively, at nine o'clock P. M., midnight, three o'clock A. M., and six o'clock A. M.

Weather Forecasting.—Almanac predictions can be nothing but conjecture, the earth's subjection to many unknowable and undeterminable forces rendering such calculations impossible. It is practicable, however, by the following rules, drawn from actual results during very many years and applied with due regard to the subjects of solar and lunar attraction with reference to this planet, to foresee the kind of weather most likely to follow the moon's change of phase.

Prognostications.

If New Moon, First Quarter, Full Moon or Last Quarter Happens	In Summer	In Wint
Between midnight and 2 A. M...	Fair.....(1 and 2).	Frost, unless win
Between 2 and 4 A. M...	Cold and showers....	Snow and storm
Between 4 and 6 A. M...	Rain.....	Rain.
Between 6 and 8 A. M...	Wind and rain.....	Stormy.
Between 8 and 10 A. M...	Changeable.....	Cold rain if win
Between 10 and 12 A. M...	Frequent showers.(3)	Cold and high w
Between 12 and 2 P. M...	Very rainy.....(4)	Snow or rain.
Between 2 and 4 P. M...	Changeable.....(5)	Fair and mild.
Between 4 and 6 P. M...	Fair.....	Fair.
Between 6 and 8 P. M...	Fair if wind N. W....	Fair and frosty
Between 8 and 10 P. M...	Rainy if S., or S. W..	Rain or snow i
Between 10 and midnight..	Fair.....	Fair and frost

Observations.—1. The nearer the moon's change, first quarter, full
midnight, the fairer will be the weather during the next seven days.

2. The space for this calculation occupies from ten at night till two next morn

3. The nearer to midday or noon the phase of the moon happens, the more foul or w
may be expected during the next seven days.

4. The space for this calculation occupies from ten in the forenoon to two in the afternoon. These observations refer principally to summer, though they affect spring and autumn in the same ratio.

5. The moon's change, first quarter, full and last quarter happening during six of the afternoon hours, *i. e.*, from four to ten, may be followed by fair weather, but this is mostly dependent on the wind, as is noted in the table.

6. Though the weather, from a variety of irregular causes, is more uncertain in the latter part of autumn, the whole of winter and the beginning of spring, yet, in the main, the above observations will apply to these periods also.

7. To prognosticate correctly, especially in those cases where the wind is concerned the observer should be within sight of a vane where the four cardinal points of the compass are correctly placed.

Water.—A clear, colorless, transparent liquid, destitute of taste and smell, and possessing a neutral reaction. It is one of the most important and most widely-distributed substances in nature, occurring universally in one or other of its three physical states—liquid, solid, or gaseous. As a liquid it constitutes the great mass of the oceans, rivers, and lakes, which cover nearly three-fourths of the earth's surface in the solid state it exists permanently in the form of ice or snow in the polar regions; and as a vapor is a constituent of the aerial envelope of the earth, and the exhalations of volcanoes and boiling springs. It occurs in combination in many mineral substances, and also in organic bodies, animals and plants containing from 80 to 90 per cent. Water is the most efficient of all solvents, there being few substances which are not, to some extent, affected by it, hence natural waters never occur absolutely pure, but contain in solution more or less of the constituents of the strata through which they have passed.

Rain-water contains substances derived in minute quantities from the atmosphere, such as ammonia, nitrate of ammonia, carbonic acid, nitrous and sulphurous acids.

Spring-water always contains a much larger proportion of dissolved substances than rain-water. When this is so highly charged with saline or gaseous constituents as to have a peculiar taste or smell, and is unfitted for ordinary use, it is called mineral water, and when the amount of these constituents does not sensibly affect its taste, etc., it is described as fresh-water.

Sea-water is essentially a mineral water, its saline constituents consisting of the chlorides and sulphates of sodium, potassium, magnesium, and calcium, together with minute quantities of silica, bromine, iodine, phosphoric acid, etc. The total solid contents of sea-water in mid-ocean varies from 30 to 40 grms. per litre, being largest near the equator and smallest
the poles.

A cubic inch of fresh w
weighs .036126 pounds
weighs 62.321 pounds.

tains 6.2321 gallons. One gallon weighs 10 pounds. A ton comprises 35.943 cubic feet. Salt water is slightly heavier than fresh.

Water was long regarded as an element, but toward the end of the seventeenth century it was shown by Lavoisier to be a compound, and to consist of two parts by weight of hydrogen to sixteen of oxygen, or two volumes of hydrogen to one of oxygen. When pure it is free from taste and smell, and at ordinary pressure is liquid between 0 degrees and 100 degrees, boils at 100 degrees, and freezes at 0 degrees C, expanding to the extent of one-eleventh of its volume. The quantity of heat absorbed in the melting of ice is sufficient to raise the temperature of an equal weight of water 79.2 degrees, and the quantity of heat rendered latent by water at 100 degrees becoming vapor would raise the temperature of water 5.37 times as much as from 0 degrees to 100 degrees. Water is 825 times heavier than air, and when converted into steam expands to nearly 1,600 volumes. One cubic centimetre at four degrees, and under a pressure of 760 mm. of mercury, weighs 15.432349 grains, or one gramme, the unit of weight in the metric system.

Water in its gaseous form. It is a colorless, invisible gas, quite distinct from the visible cloud which issues from a kettle,

etc., which is composed of minute drops of water produced by the condensation of the steam as it issues into the colder air. Under ordinary atmospheric pressure, water boils in an open vessel at a temperature of 212 degrees, and the steam always has this temperature, no matter how fast the water is made to boil. The heat which is supplied simply suffices to do the work of converting the liquid water at 212 degrees into gaseous steam at 212 degrees, without raising the temperature of the steam at all. If the temperature of steam at 212 degrees is lowered by only a very small amount, part of the steam is [illegible]ensed; hence steam at this tempera- [illegible]med moist or saturated steam. [illegible]tures and pressures, steam [illegible] perfect gas; but at lower [illegible]at temperatures near the [illegible]f water, its behavior differs [illegible] that of perfect gases; and [illegible] properties has to be taken [illegible]in all calculations connected [illegible]pansion of steam in steam-

[illegible]ng Anniversary

[illegible] comes the Cotton Wedding
[illegible] ..... Paper Wedding
[illegible] ..... Leather Wedding
[illegible] ..... Wooden Wedding
[illegible] ..... Woolen Wedding
[illegible] ..... Tin Wedding
[illegible] and Fine Linen Wedding
[illegible] ..... Crystal Wedding
[illegible] ..... China Wedding
[illegible] ..... Silver Wedding
[illegible] ..... Pearl Wedding
[illegible] ..... Ruby Wedding
[illegible] ..... Golden Wedding
[illegible] ..... Diamond Wedding

[illegible]ing had its origin in the most [illegible] antiquity. The ring was used [illegible] as binding ceremonies, making agreements, grants, etc., and evidently extended to the most solemn of engagements—marriage. The ancient Greeks held that a small nerve runs from the ring finger to the heart; and that therefore it was honored with the office of bearing the ring because of its connections with that master mover of the vital function. A Roman writer claimed that a small artery connected the ring finger with the heart.

White House.—The residence of the president of the United States is officially known as the Executive Mansion, which means that it is the residence of the head of the executive branch of the government; but it is seldom called; in ordinary talk, either by those who live in it, or by the American people in general, anything but the White House. This is a very unpretentious title, and it is interesting to note how the residence of the president, in a country which is full of white houses, came to bear this simple name as its special property.

The explanation is easily found. The first Executive Mansion at Washington was occupied in 1800. It was built of freestone, and was unpainted; but in 1814 the British army occupied Washington, and burned, with other public buildings, the president's house, leaving it a blackened ruin.

The house was rebuilt on the same site, and the same walls were used in its construction; but they were so discolored by smoke that, on the suggestion of General Jackson, they were painted white, not only to improve their appearance, but in token of the successful defiance of British fire by the American Republic.

The mansion soon became the "White House" in the mouths of the people, on account of its dazzling color, and from that day to this it has been repainted white every ten years. Its name commemorates a patriotic feeling, therefore, as well as serves to describe the appearance of the mansion, for the original coat of white paint was a sort of protest against the vandalism of the British, and every subsequent coat has served to perpetuate the protest.

White House Weddings.—The first wedding to occur in the White House was that of Miss Todd, a relative by marriage of President Madison. Then, in their order, came the weddings of Elizabeth Tyler, a daughter of President Tyler; John Quincy Adams, Jr.; Miss Easten and Miss Lewis, both during General Jackson's administration; Martha Monroe; Nellie Grant; Emily Platt, a niece of President Hayes; President Cleveland, and last, Miss Alice Roosevelt.

Wind.—A current of air moving in the atmosphere in any direction or with any velocity. Winds are produced by variations of temperature in different latitudes, or at different portions of the same latitude.

Heated air tends to ascend, and, to prevent a void from arising in the lower portion of the atmosphere from which it has ascended, a current of air, colder, and therefore denser, takes its place. This phenomenon is most obvious in the tropics, from which hot rarefied air is ever ascending, one part toward the northern, and the other toward the southern Pole. From these two regions, cold currents of air proceed near the surface of the ground or the ocean to supply the threatened void. Were the earth at rest, the hot currents would depart from, and the cold currents strike the equator at right angles, but owing to the rotation of the earth from west to east, more quickly than its friction can carry the atmosphere with it, the latter is somewhat deflected to the westward, the hot currents leaving and the cold one striking the equatorial line at an oblique instead of a right angle. As the circles to be traversed by the rotating sphere or spheroid vary in magnitude in every latitude, cyclones tend to be generated which rotate in one direction, when they arise to the north, and in another when they are generated south of the equator.

The heat of the vertical or nearly vertical sun rarefies the atmosphere in the tropics over both land and water, not, however, to the same extent. Land is easily heated during the day and cooled during the night. Water is less easily changed in temperature, hence every tropical island is like a separate furnace, at work during the day rarefying the air and sending it upward, while, falling below the temperature of the ocean during the night, it modifies, suspends, or reverses the process, especially if the absence of clouds make radiation great. Hence, land and sea breezes arise; the former blowing during the day from the sea to the land, the latter during the night in a contrary direction.

Next, every high mountain is a refrigerating apparatus, capable of sending down its slope cooled air on all its sides, and consequently from every point of the compass. Even apart from these local complications, the higher the heated air which ascends from the tropics rises, the colder the atmospheric region into which it enters; it therefore ultimately parts with the caloric which enabled it to ascend and begins to fall, while the cold polar currents blowing toward the equator become heated, especially where their course is over the land, and ascend.

Observation shows that in consequence of these causes, there are eight principal directions in which winds blow: From the north, the northeast, the east, the southeast, the south, the southwest, the west, and the northwest. A north wind is one which blows from the north, not one blowing to that region, and so with the others. Classified according to the direction in which they blow, winds are divided into Regular, Periodical, and Variable Winds. The first are winds which blow all the year round in the same direction, as the Trade winds; the second those which blow regularly at the same seasons and the same hours of the day, as the monsoons, the land and sea breezes, and the simoon the third, which blow sometimes in one direction and sometimes in another, as the prevalent winds of the temperate and arctic zones. The direction of the wind is easily ascertained by a vane.

World's Seven Wonders.—The seven wonders of the ancient world are: The Pyramids, the Colossus of Rhodes, Diana's Temple at Ephesus, the Pharos of Alexandria, the Hanging Gardens at Babylon, the Statue of the Olympian Jove, and the Mausoleum by Artemisia at Halicarnassus.

The Pyramids are numerous, and space forbids anything like even a list of them. The great piles were constructed of blocks of red or syenitic granite, and of a hard calcareous stone. These blocks were of extraordinary dimensions, and their transportation to the sites of the pyramids and their adjustment in their places, indicate a surprising degree of mechanical skill. The Great Pyramid covers an area of between twelve and thirteen acres. The masonry consisted originally of 89,028,000 cubic feet, and still amounts to about 82,111,000 feet. The present vertical height is 450 feet, against 479 feet originally, and the present length of the sides is 746 feet, against 764 feet originally. The total weight of the stone is estimated at 6,316,000,000 tons.

The City of Rhodes was besieged by Demetrius Poliorcetes, King of Macedon, but, aided by Ptolomy Soter, King of Egypt, the enemy were repulsed. To express their gratitude to their allies and to their tutelary deity, they erected a brazen statue to Apollo. It was 105 feet high, and hollow, with a winding staircase that ascended to the head. After standing fifty-six years, it was overthrown by an earthquake, 224 years before Christ, and lay nine centuries on the ground, and then was sold to a Jew by the Saracens, who had captured Rhodes, about the middle of the seventh century. It is said to have required nine hundred camels to remove the metal, and from this statement it has been calculated its weight was 720,000 pounds.

The Temple of Diana, at Ephesus, was built at the common charge of all the Asiatic States. The chief architect was Chersiphon, and Pliny says that 220 years were employed in completing the temple, whose riches were immense. It was 425 feet long, 225 broad and was supported by 125 columns of Parian marble (60 feet high, each weighing 150 tons) furnished by as many kings. It was set on fire the night of Alexander's birth by an obscure person named Erostratus, who confessed on the rack that the sole motive which prompted him was the desire to transmit his name to future ages. The temple was again built, and once more burned by the Goths in their naval invasion, A. D. 256.

The Colossal Statue of Jupiter in the temple of Olympia, at Elis, was by Phidias. It was in gold and ivory, and sat enthroned in the temple for 800 years, and was finally destroyed by fire about A. D. 475.

From the best information, it is believed that the Mausoleum at Halicarnassus was a rectangular building surrounded by an Ionic portico of thirty-six columns, and surmounted by a pyramid, rising in 24 steps, upon the summit of which was a colossal marble quadriga with a statue of Mausolus. The magnificent structure was erected by Artemisia who was the sister, wife, and successor of Mausolus.

Hanging Gardens of Babylon, so celebrated among the Greeks, contained a square of four lethra—that is, 400 feet on every side—and ere carried up aloft into the air in the man-er of several large terraces, one above nother, till the height equaled that of the alls of the city. The ascent was from errace to terrace by stairs ten feet wide. The whole pile was sustained by vast arches, aised upon other arches, one upon another, nd strengthened by a wall, surrounding it n every side, of twenty-two feet thickness. On the top of the arches were first laid large at stones, sixteen feet long and four broad; ver these was a layer of reeds, mixed with a uantity of bitumen, upon which were two ows of bricks, closely cemented together with laster. The whole was covered with thick heets of lead, upon which lay the mold of the arden; and all this flooring was contrived to eep the moisture of the mold from running way through the arches. The mold, or arth, laid theron was so deep that the reatest trees might take root in it; and with uch the terrace were covered, as well as ith all other plants and flowers that were roper for a garden of pleasure. In the upper errace there was an engine or kind of pump y which water was drawn up out of the iver, and from hence the whole garden was vatered. In the spaces between the several rches, upon which the whole structure ested, were large and magnificent apartments hat were very light, and had the advantage f an exceedingly beautiful prospect.

e Statue of the Olympian Jove was a colossal hryselephantine statue of Zeus by Phidias, laced in the temple at Olympia, Greece. It was removed to Constantinople in the 5th century A. D., and burned in 476.

e Light-house of Pharos or Tower of Ptolemy Philadelphus of Alexandria was built by Sostratus, the son of Desiphanes and completed about 283 B. C. It was of white marble, and on the top fires were constantly kept to direct sailors in the bay.

A twentieth century poll of scientists of world-wide reputation, taken by a popular mechanical periodical, established the following as the seven wonders of the modern world:

Wireless Telegraphy, Telephone, Aeroplane, Radium, Antiseptics and Antitoxins, Spectrum Analysis and X-rays.

Yankee, Origin of the Name.—The theories which have been advanced as to the origin of this name are numerous. According to Thiernyt was a corruption of Jankin, a diminutive of John, which was a nickname given by the Dutch colonists of New York to their neighbors in the Connecticut settlements. In a history of the American war, written by Dr. William Gordon, and published in 1789, was another theory. Dr. Gordon said that it was a cant word in Cambridge, Mass., as early as 1713, used to denote especial excellence—as Yankee good horse, Yankee good cider etc. He supposed that it was originally a byword in the college, and, being taken by the students into parts of the country, gradually obtained general currency in New England, and at length came to be taken up in other parts of the country, and applied to New Englanders as a term of slight reproach. Aubury, an English writer, says that it is derived from a Cherokee word—*eankke*—which signifies coward and slave. This epithet was bestowed on the inhabitants of New England by the Virginians for not assisting them in war with the Cherokees. The most probable theory, however, is that advanced by Mr. Heckewelder, that the Indians, in endeavoring to pronounce the word English, English, made it Yengees, or Yangees, and this originated the term.

Yankee-Doodle.—The air known as "Yankee-Doodle" was originally "Nankee-Doodle," and is sold as the time of Cromwell. It was known in New England before the Revolution, and is said to have been played by the English troops in derisive allusion to the then popular nickname of the New Englanders; and afterward the New Englanders, saying that the British troops had been made to dance to "Yankee-Doodle," adopted the air.

Yellowstone National Park.—A tract of land originally comprising 3,575 square miles in northwestern Wyoming was set apart by act of Congress in 1872 as a national park to preserve from destructive molestation the most wonderful group of natural features and phenomena known within the boundaries of the United States. It is readily reached over the Northern Pacific R. R., which has a branch from Livingston to Gardiner just outside the north park boundary, 36 hours' ride from St. Paul; or it may be reached from the Oregon Short Line R. R. from the west side by a more difficult stage connection.

The whole park plateau lies between 6,000 and 8,000 feet above sea-level. The mountains rise in great grandeur upon this plateau, giving evidence of their volcanic origin, though now extinct, by their form, and their rock structure, and the many evidences of pent up heat that one sees in the hot springs and geysers for which the locality is justly famous. Twenty-four peaks rise over 10,000 feet, several over 11,000. Electric Peak on the border is 11,155 feet. Many have been glaciated. Just outside the Tetons, peaks rise to nearly 14,000 feet. It is a part of the continental divide and from Two-ocean Pond the waters may flow into either the Atlantic or the Pacific. The Yellowstone, Snake, and Madison rivers are fed by the waters from this area.

The surface of the peak is dotted with lakes, the largest being Yellowstone Lake, standing 7,741 feet above sea-level, 10 by 20 miles in average dimensions, the largest body at so great elevation in the United States.

The streams contain numerous falls and rapids, 25 of special interest, some as picturesque as the Falls of the Yellowstone though not on such a grand scale, and some far removed from the usual routes of travel. The falls and cañons of the Yellowstone are considered among the most wonderful in the world. The cañon is cut more than 2,000 feet deep into the lavas and sediments, exhibiting the most fantastic carvings of erosion modified by an exquisite blending of colors. Into it it plunges the river by two great leaps, the Upper and the Lower Falls, 112 and 310 feet high respectively, and then flows on as a narrow ribbon scarcely more than 160 to 200 feet wide for 12 miles of this wonderfully beautiful chasm.

Yellowstone Park includes within its borders the largest geysers in the world. There are about 70 in all, included in six groups or geyser basins. Norris, Upper, Middle, and Lower basins, 10 to 15 miles apart, are on the headwaters of the Madison, here called Five Hole river. The Upper is most active and is called the Great Geyser Basin. A group is also at Shoshone Lake at the head of Snake river, and another group at Heart Lake. Fifty geysers spout water and steam from 30 to 250 feet into the air. Some spout from open bowl-shaped basins, and others have built cones or tubes by their deposits. Extinct geysers are marked by the remains of these cones, among which is Liberty Cap. Excelsior geyser is the largest of all. It has a bowl-shaped opening 200 by 300 feet, flows 4,000 gallons of boiling hot water per minute, and throws a 50-foot column of water and steam 75 to 250 feet high. Giant throws a five-foot column over 200 feet high for an hour. Old Faithful, so named because of its exceptional regularity, every 64 to 65 minutes without a failure within the memory of the oldest observers, discharges a column 150 feet high amounting to one and a half million gallons of water at each eruption. There is every gradation in size and violence and periodicity.

In the Mammoth Hot Springs area, near the northern boundary, where there are 50 active springs within an area of 170 acres, there is a travertine accumulation of 1,000 feet. Others deposit silica in similar manner, both types aided much by algous plant growth in the mineralized warm waters. In some places sulphur has been deposited.

Nine-tenths of the whole area is forest. The tree limit varies from 9,400 to 9,700 feet. Few of the plateau localities are bare. Pine, poplar, balsam, cedar, and spruce grow abundantly and many to large size. In the spring and geyser localities the trees are often covered by deposits and buried. Whole forests have been thus entombed. Petrified trees are common. Wild animals are wholly unmolested. Deer, elk, buffalo, and bear may be seen and approached near enough to photograph. Trout abound in the waters throughout.

Yosemite Park.—A tract of land in Mariposa County, California, which has been reserved from settlement and is to be maintained perpetually as a public park. The Yosemite Valley is a gorge, cut chiefly by glacial action. Five glaciers united at the [illegible] and gouged it out. What other forces may have aided in confining the action so completely to an excavation of the bottom of the canon is not clear, but the result is a number of hung-up tributaries that now leap from the precipitous valley walls from prodigious heights. This characteristic development is not more than seven miles in length, with an average width at the bottom of about half a mile and from cliff to cliff of a mile and a half.

The features which distinguish it from all other known valleys are the almost vertical walls, their great height, the small amount of talus at the base, and the number of magnificent falls that occur in so small area. Its depth below the average marginal upland is from 2,800 to [illegible] 5,000 feet. The cliffs and domes form the most prominent feat[illegible] walls are of solid granite. E[illegible] (7,630 feet) and Half Dome (6[illegible] are the most striking in appearan[illegible] with almost vertical [illegible] feet respectively fro[illegible]

The Merced riv[illegible] valley. The lit[illegible] tributary to it n[illegible] main valley, and th[illegible] cañons have many [illegible] their own. The c[illegible] valley and con[illegible] Park is a rollin[illegible] from 8,000 to [illegible] There is little [illegible] scattered fore[illegible] still remain n[illegible] the adjacent [illegible] peaks rise st[illegible] while in the [illegible] more consta[illegible] is more varie[illegible]

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Siberia, …,817,687, 8D......
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Sierra leone Protectorate, 30,000 2E ......
Society islands, 630, 11I.....
Sokotra, 2,995, 4D......
Solomon isls., British, 8,357 6D ......
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Somaliland, 8E......
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South African Republic, se… Transvaal, 6H......
South America, 6,881,700...
South Australia, 903,690, 3G
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South Georgia islands, 1,000.
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Sudan, Egyptian, 950,000....
Sudan, French, 300,000......
Sumatra, 161,612, 5D......
Swaziland, 8,500, 8E......
Sweden, 172,876, 3D......
Switzerland, 15,976, 2F......

Tahiti islands, 600, 12E.....
Tasmania, 26,215, 5H......
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Texas, …65,896......
Tibet, …7,320, 6H......
Timor Archipelago, 25,156, 2D
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Turkey in Asia, 693,610, 4G..
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Wales, …0......
Washington, 69,127 ......
Western Australia, 975,920...
Western Hemisphere......
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West Indies ......
West Virginia, 24,170......
Westward Isls. (Hawaiian chain)......
Wisconsin, 56,066......
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Wurttemberg, Kingdom of, 7,534 ......
Wyoming, 97,914 ......

Yukon, …76, 1C ......

Zanzibar, …20, 7F......
Zululand, …450, 7H......

IMPORTANT BATTLES CIRCLED AND NUMBERED IN RED
1 Liege
2 Namur
3 Antwerp
4 Ypres
5 Lille
6 Maubeuge
7 Cambria
8 St Quentin
9 Cantigny
10 Chateau Thierry (Marne)
11 Reims
12 Verdun
13 Seicheprey
NORTH SEA
German Submarine Base
Zeebrugge
OSTEND
BRUGES
Nieuport
Furnes
Dixmude
DUNKIRK
CALAIS
Bergues
Roulers
Ypres
Courtrai
Audenarde
Popering
ST. OMER
Hazebrouck
Tourcoing
ROUBAIX
LILLE
Aire
TOURNAI
Etaples
Montreuil
Bethune
Lens
DOUAI
Condé
St-Pol
VALENCIENNES
ARRAS
Doullens
Cambrai
Abbeville
Le Cateau
Landrecies
Peronne
AMIENS
ST. QUENTIN
Roye
Noyon
Laon
Beauvais
Clermont
Compiegne
Soissons
Meaux
Mantes
St. Denis
St. Germain
PARIS
VERSAILLES
Sezanne
Melun
Provins
Advance
WESTERN BATTLE FRONT
Fortresses and Fortified Towns
Forts
Airship Bases
Railways
Highways
Canals
Scale of Miles

EFFECTS OF THE PEACE TREATY ON WESTERN EUROPE

MAINE.
Towns—Cont.

Town.	Key.	Pop.
Augusta	18F	13
Baileyville	11P	1
Bangor	15K	24
Bar Harbor	18N	3
Bath	21F	9
Belfast	18J	4
Belgrade	18F	1
Benton	17G	1
Berwick	21B	2
Biddeford	23C	17
Blaine	6N	1
Blue Hill	18K	1
Boothbay	21G	1
Boothbay Harbor	21G	2
Bowdoinham	20E	1
Brewer	16K	5
Bridgewater Cen	6O	1
Bridgton	20B	2
Bristol	20G	2
Brooksville	18K	1
Brunswick	21E	6
Bucksport	17K	2
Buxton	22C	1
Calais	13Q	6
Camden	19J	3
Canton	18D	1
Cape Elizabeth	22D	1
Caribou	4N	5
Carmel	16J	1
Chelsea	19F	3
Cherryfield	17N	1
China	17G	1
Clinton	16G	1
Coopers Mills	1	1
Corinna	16H	1
Corinth	15J	1
Cumberland	21D	1
Danforth	11N	1
Dayton	23C	3
Deer Isle	19L	1
Dexter	14H	3
Dixfield	17C	1
Dover	13H	2
Durham	20E	1
Eaglelake	3L	1
East Livermore	18E	2
East Machias	16P	1
Easton	5O	1
Eastport	15H	4
Eden	18M	4
Eliot	25B	1
Ellsworth	17L	3
Fairfield	17G	4
Falmouth	21D	1
Farmington	16E	3
Fort Fairfield	5N	4
Fort Kent	2L	3
Foxcroft	13J	1
Freeport	17K	1
Franklin	17M	1
Frenchville	1M	1
Gardiner	19F	5
Gorham	22C	2
Gouldsboro	17N	1
Grant Isle	1N	1
Gray	21D	1
Greenville	12G	1
Greenville Jc.	12G	1
Guilford	13H	1
Hallowell	18F	2
Hampden	16K	1
Hampden Cor.	16K	1
Harpswell Cen.	21F	1
Harrington	17O	1
Hartland	16H	1
Hermon	15J	1
Hodgdon	9O	1
Hollis	22C	1
Houlton	8O	5
Island Falls	9M	1
Jay	17D	3
Jefferson	19G	1
Jonesport	17P	2
Kennebunk	23C	3
Kennebunk Port	24C	2
Kittery	25B	3
Knightsville	22D	1
Lebanon	23A	1
Lewiston	20E	26
Limestone	4N	1
Lincoln	12L	1
Lincolnville	18J	1
Lisbon	20E	4
Lisbon Falls	20E	1
Litchfield	19F	1
Littleton	8O	1
Livermore	18D	1
Livermore Falls	18E	1
Lubec	15R	3
Machias	16P	2
Machiasport	16Q	1
Madison	15F	3
Mapleton	5M	1
Mars Hill	6N	1
Mattawamkeag	12M	517

SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED TYPE.

NEW HAMPSHIRE AND VERMONT

NEW HAMPSHIRE.
Towns—Cont.
Town. Key. Pop.
Conway 4D.....2
Cornish 5B.....1
Derry 6D.....5
Dover 5E.....13
East Concord 5C 1
East Jaffrey 6B 1
East Rochester 5E 1
Enfield 4C.....1
Epping 5D.....1
Exeter 6D.....4
Farmington 5D.2
Fitzwilliam 6B.1
Franklin 5C.....6
Goffstown 6C...2
Gonic 5D.....1
Gorham 3D.....2
Greenville 6C.....1
Groveton 2C.....1
Hampton 6E...1
Hanover 4B.....2
Haverhill 3B...3
Henniker 5C...1
Hillsboro 5C...2
Hinsdale 6B...1
Hooksett 5D...1
Hudson 6D....1
Jaffrey 6B.....1
Jefferson 2C....1
Keene 6B.....10
Kingston 6D...1
Laconia 5D...10
Lebanon 4B....5
Lancaster 2D...3
Lincoln 4B....1
Lisbon 3C.....2
Littleton 3C....4
Littletonville 3C 3
Londonderry 6C 1
Lyme 4B.....1
Manchester 6C.70
Marlboro 6B...1
Meredith 4D...1
Merrimack 6C..1
Milford 6C....3
Milton 5D.....1
Nashua 6C....26
New Market 6E.3
Newport 5B....3
North Conway 4D 1
Northfield 5C...1
North Londonderry 6D.....1
North Umberland 2D 2
Northwood 5D..1
Ossipee 4D.....1
Pembroke 5D...3
Penacook 5C...2
Petersboro 6C..2
Pittsfield 5D...2
Plaistow 6D...1
Plymouth 4C...2
Portsmouth 5E 11
Raymond 5D...1
Rochester 5D...8
Rollinsford 5E.1
Rye 6E.....1
Salem 6D.....2
Salmon Falls 5E 1
Sanbornville 4D 1
Seabrook Sta. 6E 1
Somersworth 5E 6
Stewartstown 1D 1
Sunapee 4C.....1
Suncook 5C....3
Swanzey 6C....1
Tilton 5C.....1
Troy 6B.....1
Wakefield 4D...1
Walpole 5B....2
Warner 5C.....1
Weare 5C.....1
West Concord 5C 1
West Derry 6D.2
West Lebanon 4C 1
Whitefield 3C...1
Wilton 5C.....1
Winchester 5B...1
Wolfeboro 2C...1
Woodsville 1B..1
Wright's 4C.....1

NEW HAMPSHIRE
Pop., 430,572

COUNTIES

	Pop. Thous.
Belknap 5D	21
Carroll 4D	16
Cheshire 6B	30
Coos 2D	30
Grafton 3C	41
Hillsboro 6C	126
Merrimac 5C	53
Rockingham 6D	52
Strafford 5E	38
Sullivan 5B	19

TOWNS

Town. Key.	Pop.
Allenstown 5C	1
Alton 5D	1
Amherst 6C	1
Andover 5C	1
Antrim 5C	1
Ashland 4C	1
Barnstead 5D	1
Bartlett 3D	1
Bedford 6C	1
Belmont 5C	1
Berlin 3D	11
Berlin Mills 3D	2
Bethlehem 3C	1
Boscawen 5C	1
Bristol 4C	1
Canaan 4C	1
Charlestown 5B	1
Claremont 5B	7
Colebrook 2C	1
Concord 5C	21
Conway 4D	2
Cornish 5B	1
Derry 6D	5
Dover 5E	13
East Concord 5C	1
East Jaffrey 6B	1
East Rochester 5E	1
Enfield 4C	1
Epping 5D	1
Exeter 6D	4
Farmington 5D	2
Fitzwilliam 6B	1
Franklin 5C	6
Goffstown 6C	2
Gonic 5D	1
Gorham 3D	2
Greenville 6C	1
Groveton 2C	1
Hampton 6E	1
Hanover 4B	2
Haverhill 3B	3
Henniker 5C	1
Hillsboro 5C	2
Hinsdale 6B	1
Hooksett 5D	1
Hudson 6D	1
Jaffrey 6B	1
Jefferson 2C	1
Keene 6B	10
Kingston 6D	1
Laconia 5D	10
Lebanon 4B	5
Lancaster 2D	3
Lincoln 4B	1
Lisbon 3C	2
Littleton 3C	4
Littletonville 3C	3
Londonderry 6C	1
Lyme 4B	1
Manchester 6C	70
Marlboro 6B	1
Meredith 4D	1
Merrimack 6C	1
Milford 6C	3
Milton 5D	1
Nashua 6C	26
New Market 6E	3
Newport 5B	3
North Conway 4D	1
Northfield 5C	1
North Londonderry 6D	1
North Umberland 2D	2
Northwood 5D	1
Ossipee 4D	1
Pembroke 5D	3
Penacook 5C	2
Petersboro 6C	2
Pittsfield 5D	2
Plaistow 6D	1
Plymouth 4C	2
Portsmouth 5E	11
Raymond 5D	1
Rochester 5D	8
Rollinsford 5E	1
Rye 6E	1
Salem 6D	2
Salmon Falls 5E	1
Sanbornville 4D	1
Seabrook Sta. 6E	1
Somersworth 5E	6
Stewartstown 1D	1
Sunapee 4C	1
Suncook 5C	3
Swanzey 6C	1
Tilton 5C	1
Troy 6B	1
Wakefield 4D	1
Walpole 5B	2
Warner 5C	1
Weare 5C	1
West Concord 5C	1
West Derry 6D	2
West Lebanon 4C	1
Whitefield 3C	1
Wilton 5C	1
Winchester 5B	1
Wolfeboro 2C	1
Woodsville 1B	1
Wright's 4C	1

VERMONT.
Towns—Cont.
Town. Key. Pop.
Barton 1C.....3
Bartonsville 2C..3
Beldens 2A.....1
Bennington 5A.8
Berkshire 1B...1
Berlin 2B.....5
Bethel 3B.....1
Bradford 3C...1
Brandon 3B...2
Brattleboro 5B.7
Bristol 2A.....1
Brighton 1D...1
Brookfield 2B..1
Burke 1D.....1
Burlington 2A.20
Cadys Falls 1B.1
Cabin 2C.....1
Castleton 3A...1
Cavendish 4B...1
Charlotte 7D 1
Chelsea 10K 1
Chester 2C.....6
Chester 2C.....6
Chittenden 2C..1
Cornith 2C.....1
Craftsbury 1C..1
Danby Four Cor. 4A 1
Danville 2C....1
Derby 2N 1C...3
Dorset 1DE 4A.1
East Montpelier 2C 1
Enosburg 1B....1
Essex Jc. 1A...1
Fairfax 1A.....1
Fairfield Sta. 1B 1
Fairhaven 3A...3
Ferrisburg 2A..1
Franklin 1B...1
Georgia 1A....1
Guilford 1D...7
Hardwick 1C...7
Hartford 3C...1
Hartland 1B...1
Hartland 1C...1
Hyde Park 1C...4
Island Pond 1D.1
Jericho 2A.....1
Lowell 1C.....1
Ludlow 4B.....1
Lyndon 1D.....1
Lyndonville 1D.1
Manchester Cen. 4A 2
Marshfield 7K..1
Middlebury 3A..2
Montgomery Ctr. 1B.1
Montgomery Cen. 1B.1
Montpelier 2B..7
Morrisville 2B..1
Morrisville 1B..1
Newport 2M 1C 3
Newport 2L 1C.2
Newfane 5B.....1
North Bennington 2B.....3
Northfield 2B..3
North Hero 1A 4
Norwich 3B....1
Orwell 3A.....1
Pawlet 15D 4A.1
Pittsford 12E 3A 3
Poultney 3A...3
Proctor 12E 3A.2
Randolph 3B...3
Randolph Cen. 3B 1
Richford 1B...2
Rochester 2B..1
Rockingham 4C.6
Royalton 1H 3B 3
Rutland 3A...13
Saint Albans 3B 6
Saint Johnsbury 2C 6
Saint Johnsbury Cen. 6N 2C..6
Shaftsbury 5A..1
Shelburne 1A..1
Sheldon Jc. 1A.1
Shoreham 2A..1
Springfield 4C..4
Stockbridge 1C..1
Thetford 3C...1
Thetford Center 3C 1
Troy 1C.....5
Underhill 1B...1
Vergennes 2A 1
Wallingford 4A.1
Waterbury 2B.3
Waterbury Cen. 1B 1
Weathersfield 4C 1
Weathersfield Cen. 4C 1
Westminster 5B.1
West Rutland 3B 3
White River Jc. 3C 1
Williamstown 2B 1
Williston 2A...1
Windsor 4C....1
Winooski 2A...1
Wolcott 1B...1
Woodstock 4B..2

VERMONT.
Pop., 355,956.

COUNTIES

	Pop. Thous.
Addison 2A	20
Bennington 5H	21
Caledonia 5C	26
Chittden 5C	26
Essex 1D	7
Franklin 1B	29
Grand Isle 1A*	3
Lamoille* 1B	12
Orange* 2C	18
Orleans 1C	23
Rutland 3A	48
Washington 2B	41
Windham, Newfane* 5B	26
Windsor, Woodstock 4B	33

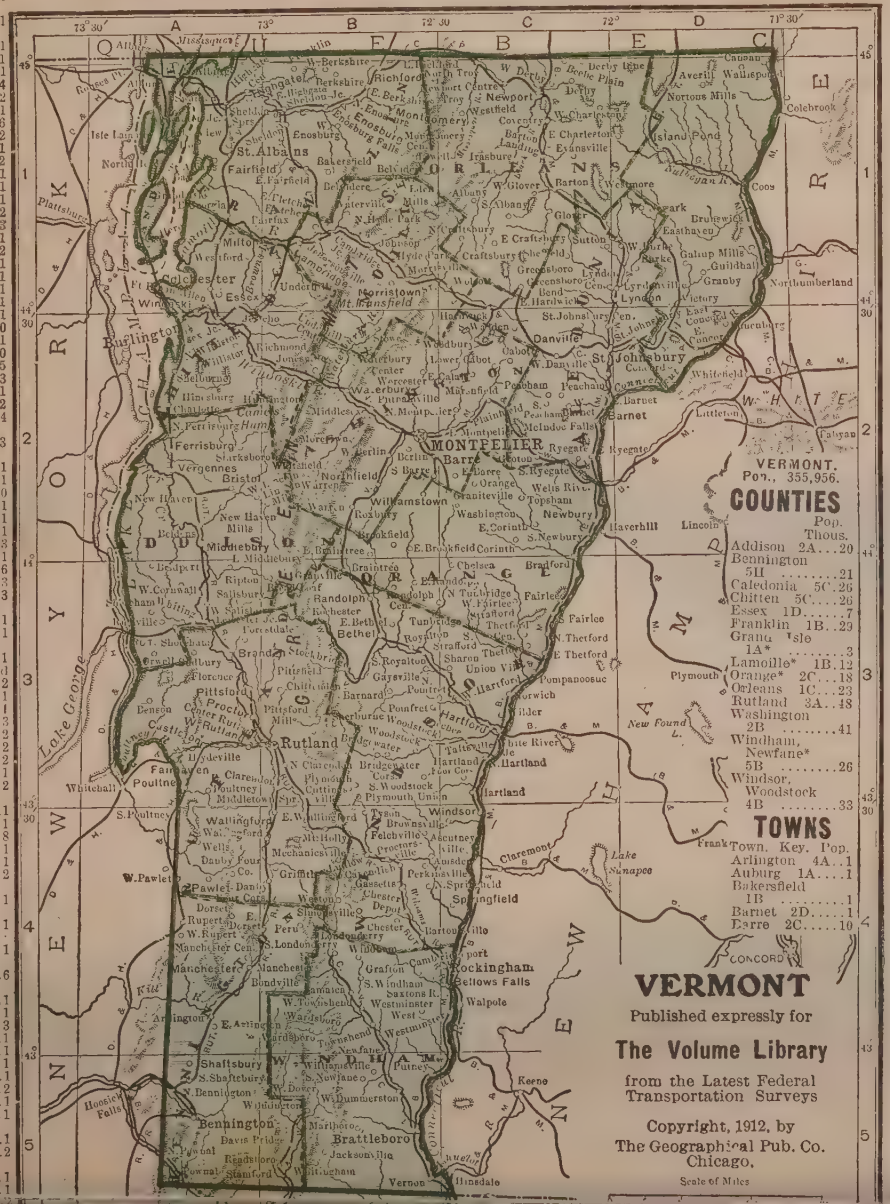
TOWNS

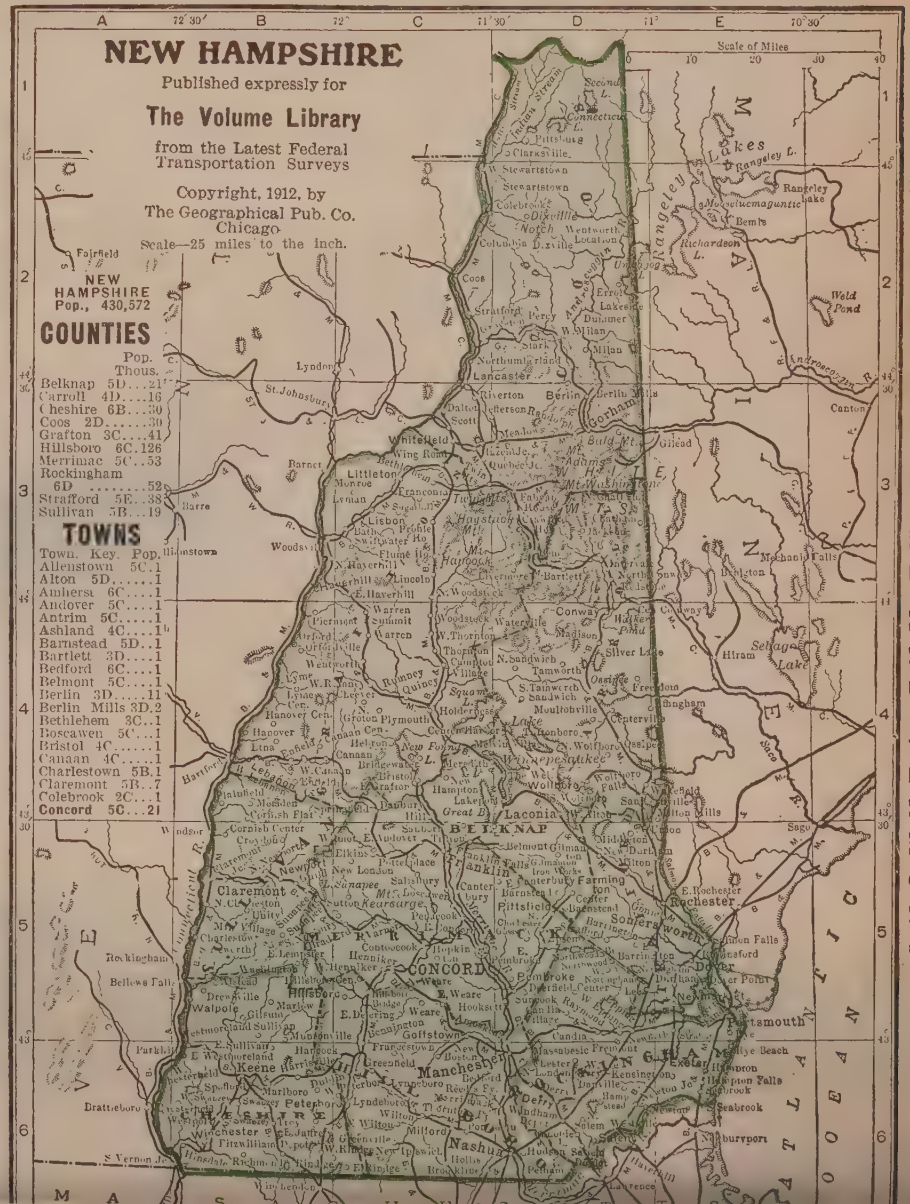
Town. Key.	Pop.
Arlington 4A	1
Auburg 1A	1
Bakersfield 1B	1
Barnet 2D	1
Barre 2C	10

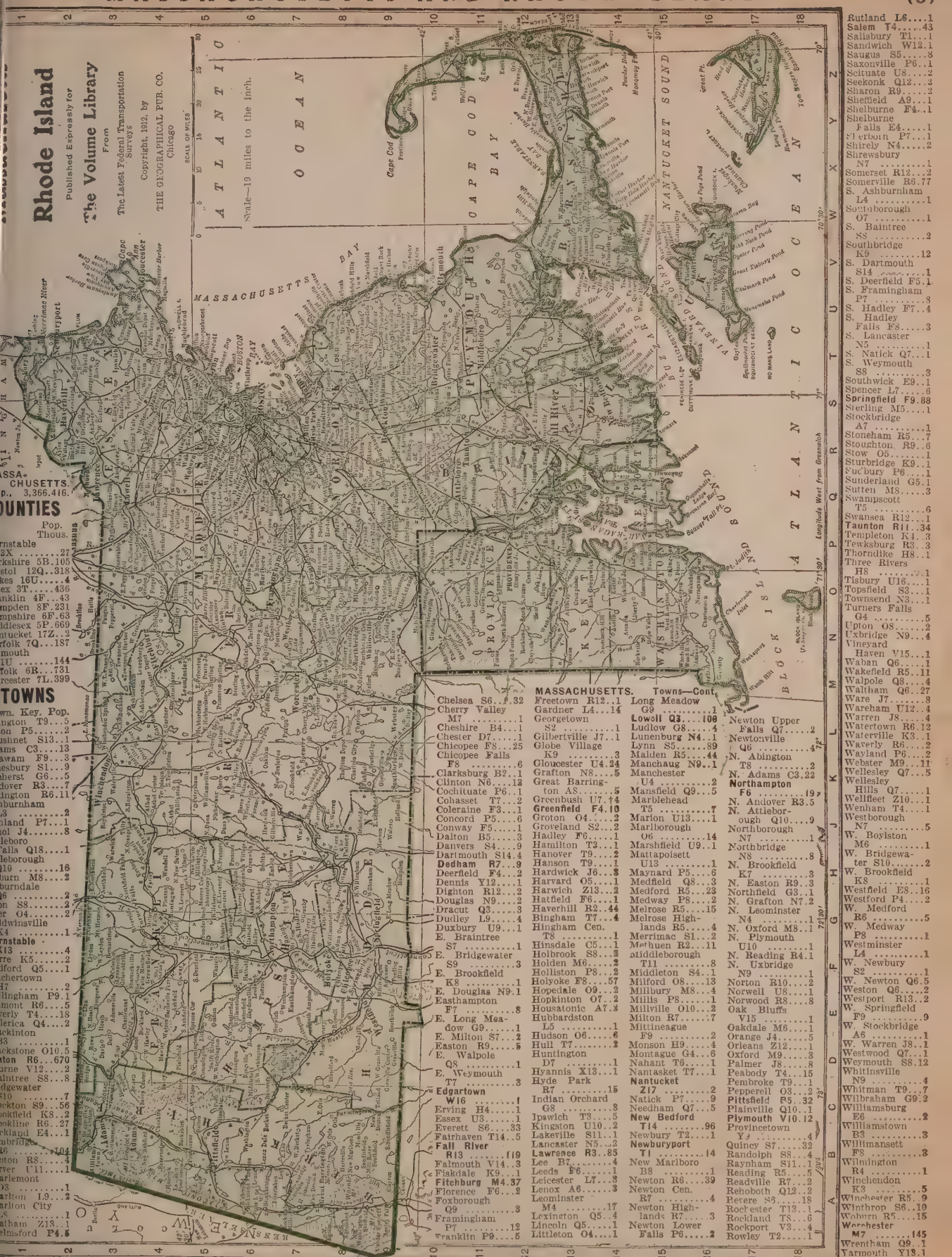
*POP. SHOWN IN HUNDREDS.

*POP. OF COUNTY SEAT BELOW 1 THOUSAND.

COUNTY SEATS IN HEAVY FACED



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SCALE OF MILES
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ATLANTIC OCEAN
CAPE COD BAY
NANTUCKET SOUND
MASSACHUSETTS BAY
BOSTON BAY
BUZZARDS BAY
NARRAGANSETT BAY
MASSACHUSETTS
CONNECTICUT
RHODE ISLAND
Cape Cod
Nantucket Sound
Block Island
Longitude West from Greenwich
MASSACHUSETTS.
Pop., 3,366,416.
COUNTIES
Pop. Thous.
TOWNS
Town. Key. Pop.
Pop., 542,610.
COUNTIES
Pop. Thous.
TOWNS
Town. Key. Pop.
Chelsea S6...32
Cherry Valley M7 ...1
Cheshire B4...1
Chester D7...4
Chicopee F8...25
Chicopee Falls F8 ...6
Clarksburg B2...1
Clinton N6...12
Cochituate P6...1
Cohasset T7...2
Coleraine F3...1
Concord P5...6
Conway F5...1
Dalton B5...3
Danvers S4...9
Dartmouth S14...4
Dedham R7...9
Deerfield F4...2
Dennis Y12...1
Dighton R12...2
Douglas N9...2
Dracut Q3...3
Dudley L9...4
Duxbury U9...1
E. Braintree S7 ...1
E. Bridgewater S9 ...3
E. Brookfield K8 ...1
E. Douglas N9...1
Easthampton F7 ...8
E. Long Meadow G9...1
E. Milton S7...2
Easton R9...5
E. Walpole Q8 ...1
E. Weymouth T7 ...3
Edgartown W16 ...1
Erving H4...1
Essex J3...1
Everett S6...33
Fairhaven T14...5
Fall River R13 ...119
Falmouth V14...3
Fiskdale K9...1
Fitchburg M4...37
Florence F6...2
Foxborough Q9 ...3
Framingham P7 ...12
Franklin P8...5
Freetown R12...1
Gardner L4...14
Georgetown S2 ...1
Gilbertville J7...1
Globe Village K9 ...3
Gloucester U4...24
Grafton N8...5
Great Barrington A8...5
Greenbush U7...4
Greenfield F4...10
Groton O4...2
Groveland S2...2
Hadley F6...1
Hamilton T3...1
Hanover T9...2
Hanson T9...1
Hardwick T6...3
Harvard O5...1
Harwich Z13...2
Hatfield F6...1
Haverhill R2...44
Bingham T7...4
Hingham Cen. T8 ...1
Hinsdale C5...1
Holbrook S8...3
Holden M6...2
Holliston P8...2
Holyoke F8...57
Hopedale O9...2
Hopkinton O7...2
Housatonic A7...3
Hubbardston L5 ...1
Hudson O6...6
Hull T7...2
Huntington D7 ...1
Hyannis X13...1
Hyde Park R7 ...15
Indian Orchard G8 ...3
Ipswich T3...5
Kingston U10...2
Lakeville S11...1
Lancaster N5...2
Lawrence R3...85
Lee B7...4
Leeds F6...1
Leicester L7...3
Lenox A6...3
Leominster M4 ...17
Lexington Q5...4
Lincoln Q5...1
Littleton O4...1
Long Meadow G9 ...1
Lowell Q3...108
Ludlow G8...4
Lunenburg N4...1
Lynn S5...89
Malden R5...44
Manchaug N9...1
Manchester U4 ...2
Mansfield Q9...5
Marblehead T5 ...7
Marion U13...1
Marlborough O6 ...14
Marshfield U9...1
Mattapoisett U13 ...1
Maynard P5...6
Medfield Q8...3
Medford R5...23
Medway P8...2
Melrose R5...15
Melrose Highlands R5...4
Merrimac S1...2
Methuen R2...11
Middleborough T11 ...8
Middleton S4...1
Milford O8...13
Millbury M8...4
Millis P8...4
Millville O10...2
Milton R7...7
Mittineague F9 ...2
Monson H9...4
Montague G4...6
Nahant T6...1
Nantasket T7...1
Nantucket Z17 ...2
Natick P7...9
Needham Q7...5
New Bedford T14 ...96
Newbury T2...1
Newburyport T1 ...14
New Marlboro B8 ...1
Newton R6...39
Newton Cen. R7 ...4
Newton Highlands R7...3
Newton Lower Falls P6...2
Newton Upper Falls Q7...2
Newtonville Q6 ...4
N. Abington T8 ...2
N. Adams C3...22
Northampton F6 ...197
N. Andover R3...5
N. Attleborough Q10...9
Northborough N7 ...1
Northbridge N8 ...8
N. Brookfield K7 ...3
N. Easton R9...3
Northfield G3...1
N. Grafton N7...2
N. Leominster N4 ...1
N. Oxford M8...1
N. Plymouth U10 ...1
N. Reading R4...1
N. Uxbridge N9 ...1
Norton R10...2
Norwell U8...1
Norwood R8...8
Oak Bluffs V15 ...1
Oakdale M6...1
Orange J4...5
Orleans Z12...1
Oxford M9...3
Palmer J8...8
Peabody T4...15
Pembroke T9...1
Pepperell O3...2
Pittsfield B5...32
Plainville Q10...1
Plymouth V10...12
Provincetown Y4 ...4
Quincy S7...32
Randolph S8...4
Raynham S11...1
Reading R5...5
Readville R7...2
Rehoboth Q12...2
Revere S6...18
Rochester T13...1
Rockland T8...6
Rockport V3...4
Rowley T2...1
Rutland L6...1
Salem T4...43
Salisbury T1...1
Sandwich W12...1
Saugus S5...8
Saxonville P6...1
Scituate U8...2
Seekonk Q12...2
Sharon R9...2
Sheffield A9...1
Shelburne F4...1
Shelburne Falls E4...1
Sherborn P7...1
Shirely N4...2
Shrewsbury N7 ...1
Somerset R12...2
Somerville R6...77
S. Ashburnham L4 ...1
Southborough O7 ...1
S. Braintree S8 ...2
Southbridge K9 ...12
S. Dartmouth S14 ...1
S. Deerfield F5...1
S. Framingham P7 ...8
S. Hadley F7...4
S. Hadley Falls F8...3
S. Lancaster N5 ...1
S. Natick Q7...1
S. Weymouth S8 ...3
Southwick E9...1
Spencer L7...6
Springfield F9...88
Sterling M5...1
Stockbridge A7 ...1
Stoneham R5...7
Stoughton R9...6
Stow O5...1
Sturbridge K9...1
Sudbury P6...1
Sunderland G5...1
Sutton M8...3
Swampscott T5 ...6
Swansea R12...1
Taunton R11...34
Templeton K4...3
Tewksburg R3...3
Thorndike H8...1
Three Rivers H8 ...1
Tisbury U16...1
Topsfield S3...1
Townsend N3...1
Turners Falls G4 ...5
Upton O8...2
Uxbridge N9...4
Vineyard Haven V15...1
Waban Q6...1
Wakefield R5...11
Walpole Q8...4
Waltham Q6...27
Ware J7...8
Wareham U12...4
Warren J8...4
Watertown R6...12
Waterville K3...1
Waverly R6...2
Wayland P6...2
Webster M9...11
Wellesley Q7...5
Wellesley Hills Q7...1
Wellfleet Z10...1
Wenham T4...1
Westborough N7 ...5
W. Boylston M6 ...1
W. Bridgewater S10...2
W. Brookfield K8 ...1
Westfield E8...16
Westford P4...2
W. Medford R6 ...5
W. Medway P8 ...1
Westminster L4 ...1
W. Newbury S2 ...1
W. Newton Q6...5
Weston Q6...2
Westport R13...2
W. Springfield F9 ...9
W. Stockbridge A6 ...1
W. Warren J8...1
Westwood Q7...1
Weymouth S8...12
Whitinsville N9 ...4
Whitman T9...7
Wilbraham G9...2
Williamsburg E6 ...2
Williamstown B3 ...3
Willimansett F8 ...3
Wilmington R4 ...1
Winchendon K3 ...5
Winchester R5...9
Winthrop S6...10
Woburn R5...15
Worchester M7 ...145
Wrentham Q9...1
Yarmouth Y13...1
Bristol 12Q...17
Kent 12P...35
Newport 14Q...39
Providence 12P...424
Washington 15Q...24
Anthony 12Q...1
Apponaug 12Q...1
Barrington 13Q...2
Block Island 16Q...1
Bristol 12Q...8
Burrillville 14Q...7
Centerville 13Q...1
Central Falls 14P...22
Charlestown 16Q...1
Chepachet 13Q...1
Cranston 13P...21
Crompton 12Q...1
Cumberland 16P...10
East Greenwich 12P...3
East Providence 12Q...15
Foster 14N...1
Glocester 14P...1
Hope Valley 15N...1
Hopkinton 15Q...2
Jamestown 11P...1
Johnston 14P...5
Kingston 15Q...42
La Fayette 11P...1
Lincoln 14Q...9
Little Compton 11R...3
Lonsdale 15P...4
Manville 16P...2
Middletown 11Q...1
Narragansett 15P...3
Newport 14Q...27
New Shoreham 11Q...1
No. Kingstown 11Q...4
No. Providence 14P...5
No. Smithfield 14Q...2
No. Tiverton 12R...1
Oakland 16N...1
Pascoag 16N...1
Pawtucket 14P...51
Peace Dale 11Q...3
Phoenix 13Q...1
Portsmouth 10Q...2
Providence 12P...224
Richmond 14N...1
River Point 12Q...1
Riverside 13P...1
Scituate 14N...3
Smithfield 15Q...5
Stonington 11Q...1
Slatersville 16Q...1
Tiverton 12R...4
Valley Falls 15P...3
Wakefield 10P...3
Warren 13Q...6
Warwick 13Q...45
West Barrington 13Q...1
Westerly 10M...8
Wickford 11P...1
Woonsocket 16Q...88
SHOWN IN HUNDREDS.
*POP. OF COUNTY SEAT BELOW 1 THOUSAND.
COUNTY SEATS IN HEAVY FACED TYPE.

CONNECTICUT
Pop. 1,114,756

COUNTIES

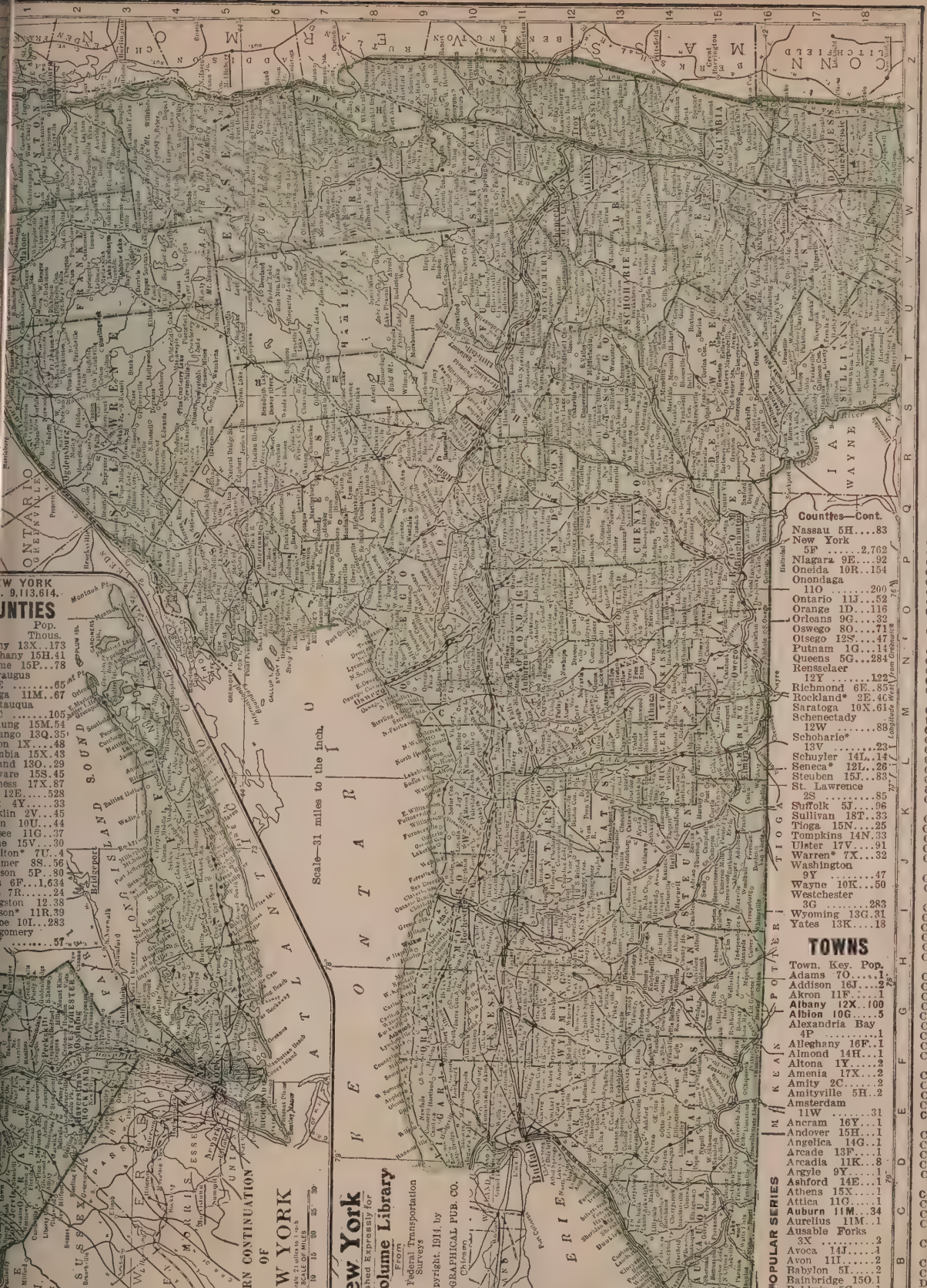
Pop. Thous.

Fairfield 13D 245
Hartford 5J..250
Litchfield 6E..70
Middlesex 10K 45
New Haven 11G 337
New London 9O 91
Tolland 4M...26
Windham 4P...48

TOWNS

Town. Key. Pop.
Ansonia 12F..15
Avon 4H.....1
Beacon Falls 11F 1
Berlin 8J.....3
Bethel 12C.....3
Bloomfield 4J...1
Branford 13H.6
Bridgeport 15E 102
Bristol 7G....13
Broadbrook 3K 1
Brookfield 10C.1
Brooklyn 5P...1
Burlington 5G.1
Canton 4G.....2
Chatham 9K...2
Cheshire 10G...1
Chester 11L....1
Clinton 14K...1
Collinsville 4G 1
Cornwall 4D...1
Coventry 5M...1
Cromwell 8J....2
Danbury 11C..23
Danielson 5P..2
Darien 17C.....3
Deep River 12L 1
Derby 13F.....8
E. Haddam 11L 2
E. Hampton 8K 2
E. Hartford 5J 8
East Haven 13H 1
East Lyme 12N 1
Easton 14D....1
E. Windsor 3K 3
Ellington 3L...1
Enfield 2K.....9
Essex 12L.....2
Fairfield 16D..6
Farmington 6H 3
Forestville 7G..1
Gildersleeve 8K 1
Glastonbury 6K 4
Granby 2H.....1
Greenwich 17B 16
Griswoldo 8P..4
Groton 12O ..6
Guilford 13J...3
Haddam 10K...1
Hamden 11G...5
Hartford 5J..98
Harwinton 5F.1
Hockanum 6J..1
Huntington 13E 6
Jewett City 8P 3
Kent 6C.....1
Killingly 4P...6
Lakeville 2C...1
Lebanon 8N...1
Ledyard 11O...1
Litchfield 6E..3
Madison 13K...1
Manchester 5K 13
Mansfield 4M. 1
Meriden 9H...32
Middlefield 9J..1
Middletown 9J.20
Milford 14F...4
Monroe 12E....1
Montville 11O.2
Moodus 10L...1
Moosup 6P.....1
Mt. Carmel 11C 2
Mystic 12P.....2
Naugatuck 10F 12
Naugatuck Jc. 15F 13
New Britain 7H 43
New Canaan 15C 3
New Hartford 3G 2
New Haven 13G 133
Newington 6J..1
New London 12O 19
New Milford 8C 5
Newtown 11D..3
Niantic 12N...1
Noank 13P....1
Norfolk 1E....1
N. Canaan 1D.2
N. Grosvenor Dale 1P.....2
North Haven 13G 3
N. Stonington 11P 1
Norwalk 16C 24
Norwich 9O...23
Oakville 8F.....1
Old Lyme 12M 1
Old Saybrook 13L 1
Orange 13F.....11
Oxford 11E.....1
Plainfield 7P..6
Plainville 7H..2
Plantsville 8G 1
Plymouth 7F...6
Pomfret 3P...1
Poquonock 15O.1
Portland 8K...3
Preston 9P...1
Putnam 3P...7
Redding 13C.1
Ridgefield 13C.3
Rockville City 4L 7
Rocky Hill 7J 1
Salisbury 1C..3
Sandy Hook 11D 1
Saybrook 13L.1
Seymour 11F...4
Shelton 13F...4
Simsbury 3H...2
Somers 2L....1
Southbury 10E.1
S. Coventry 5M 1
S. Glastonburg 7K 1
Southington 8G 6
S. Manchester 5K 8
S. Norwalk Cy. 16C 8
Southport 16D.1
S. Windsor 4K 2
Sprague 8O....2
Stafford 1M...5
Stafford Sprs 1L 8
Stamford 17D.29
Sterling 6O...1
Stonington 12P.9
Stony Creek 14J 1
Stratford 15F..5
Suffield 2J....3
Taftcville 9O...2
Terryville 7F...3
Thomaston 7F.3
Thompson 2Q..4
Thompsonville 1K 4
Tolland 4M....1
Torrington 4F.16
Trumbull 14E.1
Union City 1K 2
Unionville 5G..2
Vernon 4L....9
Wallingford 10H 11
Warehouse Pt 2K 4
Washington 7D.1
Waterbury 9F.73
Waterford 12O.3
Watertown 8F..3
Waurgan 8F..1
W. Hartford 5J 4
W. Haven 13G.8
Westport 16D 4
Wethersfield 6N 3
Willimantic 3M.11
Willington 15C.1
Wilton 16C..1
Winchester 3F.8
Windham 6N.12
Windsor 4J...4
Windsor Locks 4J 2

*POP. SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED



SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED TYPE.

NEW YORK.
Towns—Cont.
Town. Key. Pop.
Greenfield Center 10X.....1
Green Island 12Y 4
Greenport 3M...3
Greenville 14W.1
Greenwich 10Y.2
Greenwood 15I..1
Groton 13N....1
Grooland 12I..2
Guilderland 12X 3
Guilford 14Q...2
Hague 7Y.....1
Hamburg 12D..2
Hamden 15S...1
Hamilton 12Q..1
Hamlin 9H....2
Hammondsport 14K 1
Hancock 16R...1
Harrison 4G...4
Hartford 9Z...1
Hartland 9F...2
Hartwick 13S..1
Hastings 9O...2
Hastings-upon-Hudson 3F...4
Haverstraw 2F.5
Hebron 9Z.....1
Hector 14L....3
Hempstead 5G.4
Henrietta 11I..1
Herkimer 11S..7
Hicksville 5H..1
Highland Falls 1F 2
Highlands 17W.6
Highland Station 1F.....1
Hillburn 3E....1
Hillsdale 15Y..1
Hinsdale 15F..1
Holley 10H....1
Homer 13O....2
Honeoye Falls 11I 1
Hoosick 17Z...8
Hoosick Falls 11Z 5
Hopewell 18X..1
Hopkinton 2T..1
Horicon 7X....1
Hornellsville 14I 13
Horseheads 15L.1
Howard 14I....1
Hudson 15X...11
Hudson Falls 9V 5
Hume 14G.....1
Huntington 1H 12
Huron 10L.....1
Hydepark 17W.3
Ilion 11S.....6
Independence 16H 1
Indian Lake 7V 1
Inwood 6G.....2
Irondequoit 10L3
Irvington 3F...2
Islip 5I.....18
Ithaca 14M...14
Jamaica 5G...18
Jamestown 16C 31
Jasper 16I.....1
Jay 3X.....2
Jerusalem 13X.2
Jewett 15V.....1
Johnstown 11N.10
Keene 4X.....1
Keeseville 3Y...1
Kendall 9H....1
Kenmore 12E..1
Kingston 16W.25
Kortright 14T..1
Lackawanna 12D 14
Lafayette 11O..1
Lagrange 12H..1
Lake Placid 4W 1
Lake Pleasant 8V .....+4
Lake George 9X .....+6
Lancaster 11E..4
Lansing 8N....2
Larchmont 3G.1
Lasalle 10D....1
Lawrence 5H...1
Lebanon 12Q...1
Leroy 11H.....3
Lestershire 16O.3
Lexington 15V..1
Liberty 17T....2
Lindenhurst 5H 1
Lindley 16K...1
Lisbon 2R.....2
Little Falls 11T 12
Little Valley 15D 1
Liverpool 10O..1
Lockport 10E. 17
Lodi 15L.....1
Longlake 6V...1
Lowville 7Q...2
Luzerne 9X....1
Lynbrook 6G...1
Lyons 10L.....4
Lyonsdale 8R..1
Lysander 10N..4
Maine 15O.....1
Malone 1V.....6
Mamaroneck 4G 5
Manlius 11P...1
Marathon 14O..1
Marion 10K....2
Maryland 13T..1

NEW JERSEY
Pop. 2,537,167.

COUNTIES

Pop. Thous
Atlantic 20K..71
Bergen 4P...138
Burlington* 15K 66
Camden 6G..142
Cape May 24H.19
Cumberland 21F 55
Essex 6N....512
Gloucester 18F.37
Hudson 7O..537
Hunterdon 9G.33
Mercer 12J...125
Middlesex 10L 114
Monmouth 12N 94
Morris 6L.....74
Ocean 15N....21
Passaic 4N...215
Salem 19D....26
Somerset 9K..38
Sussex 2J....26
Union 8N....140
Warren 6G....43

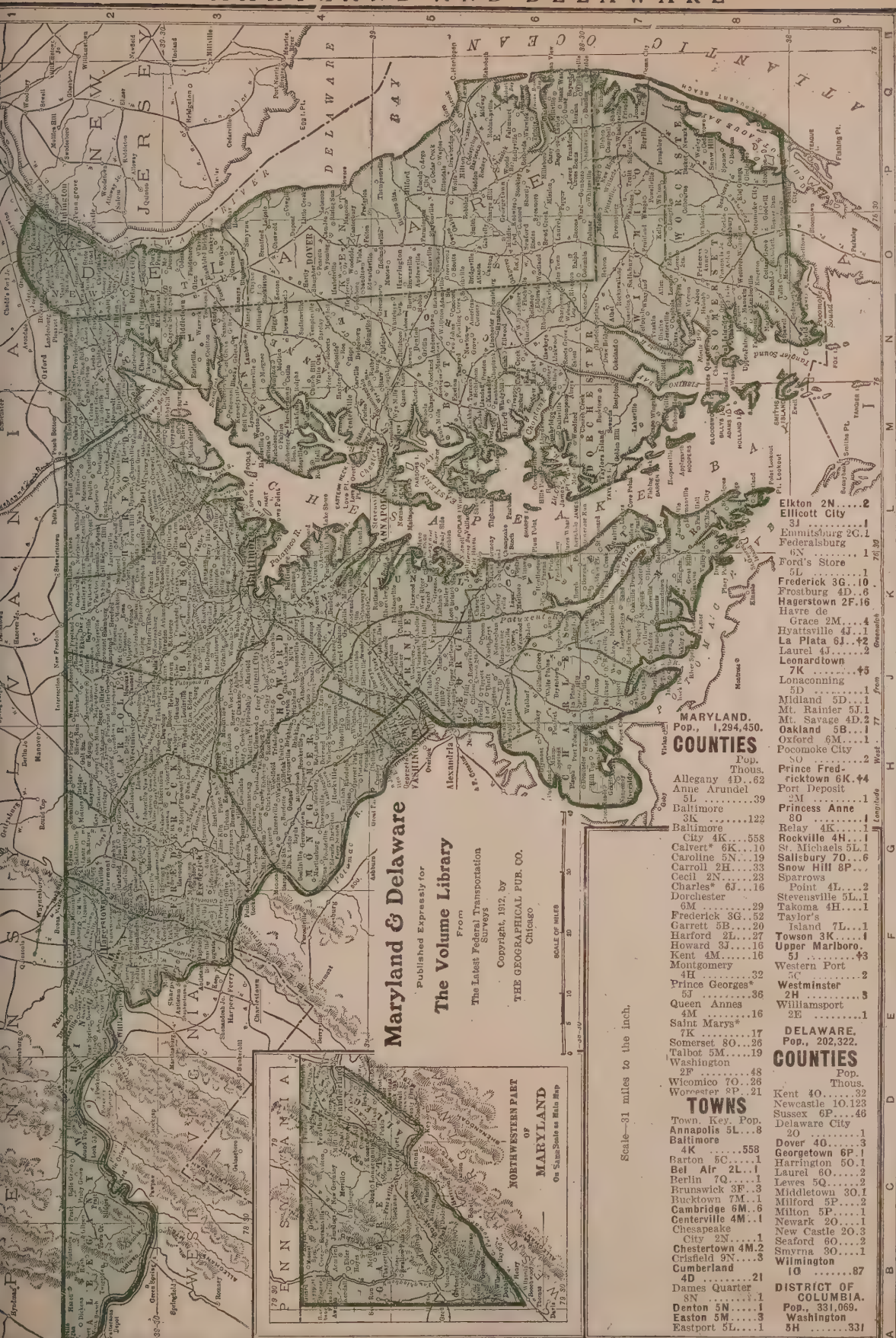
TOWNS

Town. Key. Pop.
Andover 4J....1
Arlington 6O..14
Asbury Park 12P 10
Atlantic City 22M 46
Atlantic Highlands 10P...1
Audubon 17G..1
Bargaintown 21K 1
Barnegat 17N..1
Bayonne 7O..55
Belleville 6O..10
Belmar 13P....1
Belvidere 6F...1
Berlin 17H....1
Bergensfields 5P 1
Beverly 14H...2
Blairstown 4G.1
Bogota 6P.....1
Bloomfield 6N.15
Bloomingdale 4M 2
Boonton 5M...4
Bordentown 13J 4
Boundbrook 9L 3
Bradley Beach 13P 1
Bridgeton 21E.14
Burlington 14H.8
Butler 4M.....2
Caldwell 6M...2
Camden 15F..94
Cape May 26H.2
Carlstadt 5B...3
Cedarville 22E 1
Chatham 7M...1
Chester 6J.....1
Clayton 18F...1
Cliffside Park 5P 3
Clifton 5O.....1
Closter 4P.....1
Collingswood 15F 4
Cranbury 11L..1
Cranford 8N...3
Delford 5P.....1
Dover 5L.....7
Dumont 4P....1
Dunellen 8L...1
East Newark 7O 3
East Orange 7N 34
East Rutherford 6O 4
Edgewater 6P..2
Egg Harbor City 20K 2
Elizabeth 7N..73
Elmer 19E.....1
Englewood 5P..9
Fairview 6P...2
Flemington 9H.2
Florence 17H..1
Fort Lee 5P...4
Franklin Furnace 3K.....1
Freehold 12N..3
Garfield 5O...10
Garwood .8N....1
Glen Ridge 7N.3
Glen Rock 5P...1
Gloucester 16F.9
Greenwich 21D.1
Guttenburg 6P.5
Hackensack 5P.14
Hackettstown 5H 2
Haddonfield 16G 4
Haddonheights 16G 1
Haledon 5N....2
Hammonton 18F 5
Hanover 6M...5
Harrison 1L..14
Hasbrouck Heights 5P..2
Hawthorne 5O.3
Hibernia 4L...1
High Bridge 7H 1
Highland Park 10M 1
Highlands 10P..1
Hightstown 12L 1
Hoboken 7P..70
Holly Beach 26J 1
Hopewell 10J...1
Jamesburg 11L.2
Jersey City 7P 267
Kearny 7O....18
Keyport 10O...3
Lakewood 14N.3
Lambertville 11G 4
Leonia 5P.....1
Little Falls 5N.3
Little Ferry 5P.2
Livingston 6N..1
Lodi 5O.....4
Long Branch City 12P 13
Long Branch 11P 12
Madison 7L....4
Manasquan 13P 1
Mattawan 10N.1
Mays Landing 20J 1
Medford 16H...1
Melrose 16H...1
Merchantown 6K..1
Merchantville 15G 1
Metuchen 9M..2
Midland Park 4O 2
Millburn 7N...3
Millstown 10M.1
Millville 21G..12
Montclaire 5N.21
Montville 5M..1
Moorestown 15G 3
Morris Plains 6L 2
Morristown 6L 12
Mt. Holly 15H..6
Netcong 5J....1
Newark 7O...347
New Brunswick 9L 23
New Egypt 14L.1
Newport 22E...1
Newton 3J....4
North Plainfield 8M 6
Nutley 6O.....6
Ocean City 22L.1
Ocean Grove 12P 2
Orange 6N....29
Oxford 6G....3
Palisades Park 5P 1
Palmyra 14G...2

NEW JERSEY
Towns—Cont.
Town. Key. Po
Park Ridge 7P..
Passaic 5O....
Paterson 5O..12
Paulsboro 16E
Penn Grove 17C
Perth Amboy 9N .....
Phillipsburg 7E .....
Pitman Grove 17F .....
Plainfield 8M.2
Pleasantville 21L .....
Point Pleasant 14P .....
Pompton Lakes 4N .....
Port Norris 23G
Princeton 11K
Prospect 17D.
Rahway 8N....
Ramsey 3O....
Raritan 8K....
Red Bank 11P
Ridgewood 4O
Riverton 14G.
Rockaway 5L.
Roselle 7M....
Roselle Park 7M .....
Roosevelt 8N..
Rumson 12O..
Rutherford 6O
Salem 19C....
Sayreville 10M
Sea Bright 11M
Secaucus 7P..
Somerville 8K
South Amboy 9N .....
South Boundbrook 9L..
South Orange 7N .....
South River 10M .....
Springfield 7N
Stanhope 5J..
Summit 7L..
Sussex 2C....
Swedesboro 17D .....
Tenafly 5P...
Titusville 11H
Toms River 15
Totowa 4M...
Trenton 12J..
Tuckerton 19
Union 7N....
Verona 6N...
Vineland 20C
Wallington 5
Washington 6
Weehawken 6I
Westfield 8M.
West Hoboke 7P .....
West Milford 2M .....
West New Y 7P .....
West Orange 16N .....
Westville 16
Westwood 4
Wharton 5K
Williamstown 18G .....
Woodbine 23
Woodbridge
Woodbury 1
Woodridge
Woodstown 1

NEW YORK.
Towns—Cont.
Mason Ville 15R..1
Matteawan 1F...6
Mayville 15B..1
Mechanicsville 11X 6
Medina 10P...5
Meridian 11J...2
Meredith 11T..1
Mexico 8O....1
Middleburg 13Y 1
Middlefield 15D 1
Middleport 10P..1
Middletown 1D 15
Milbrook 17X..1
Milo 13L.....5
Milton 18W...1
Mina 15A.....1
Mineola 5G....1
Mohawk 11X..2
Moira 1U.....1
Monroe 1E....1
Montezuma 11M 2
Monticello 18T..1
Montour Falls 14L 1
Moravia 12N...1
Moriah 5Y.....6
Morrisville 11Q .....+5
Mount Kisco 2G 2
Mount Morris 1S..2
Mount Vernon 4P 30
Movers 1Y.....1
Naples 13J....1
Newark 11K..6
New Baltimore 14X 1
New Berlin 13R..1
New Berlin Center 1R 1
New Berlin 13R.....1
New Bremen 6R 1
Newburgh 18W.27
Newburgh Junction 2E.....5
New City 3F +2
New Haven 9E..4
New Hartford 10R 1
Newfane 8N....1
Newfane 9E....1
New Lebanon 3C 1
New Lisbon 14Z 1
New Paltz 17W..1
New Rochelle 4P 28
New York 5F 4,766
New York Mills 10R 1
Niagara Falls 10D..20
Nichols 12N.....2
Nichols 1T.....2
Northampton 10W 2
North Collins 13D 6
North Elba 4W..3
North Norwich 13Q 8
North Pelham 3G 1
Northport 4H..2
North Tarrytown 3M 3
North Tonawanda 10D.11
Northville 10Y 1
Northumberland 9W..1
Norwich 13Q..7
Norwood 1S.....1
Nunda 13N.....4
Nyack 3F.....4
Oakfield 10G..1
Oakland 9Q..11
Oakwood 14S..3
Oneida 10Q...8
Oneonta 14S..9
Ontario Beach

+POP. SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED



MARYLAND.
Pop., 1,294,450.

COUNTIES

	Pop. Thous.
Allegany 4D	62
Anne Arundel 5L	39
Baltimore 3K	122
Baltimore City 4K	558
Calvert* 6K	10
Caroline 5N	19
Carroll 2H	33
Cecil 2N	23
Charles* 6J	16
Dorchester 6M	29
Frederick 3G	52
Garrett 5B	20
Harford 2L	27
Howard 3J	16
Kent 4M	16
Montgomery 4H	32
Prince Georges* 5J	36
Queen Annes 4M	16
Saint Marys* 7K	17
Somerset 8O	26
Talbot 5M	19
Washington 2F	48
Wicomico 7O	26
Worcester 8P	21

TOWNS

Town.	Key.	Pop.
Annapolis	5L	8
Baltimore 4K		558
Barton	5C	1
Bel Air	2L	1
Berlin	7Q	1
Brunswick	3F	3
Bucktown	7M	1
Cambridge	6M	6
Centerville	4M	1
Chesapeake City	2N	1
Chestertown	4M	2
Crisfield	9N	3
Cumberland 4D		21
Dames Quarter	8N	1
Denton	5N	1
Easton	5M	3
Eastport	5L	1
Elkton	2N	2
Elcott City 3J		1
Emmitsburg	2C	1
Federalsburg 6N		1
Ford's Store 5L		1
Frederick	3G	10
Frostburg	4D	6
Hagerstown	2F	16
Havre de Grace	2M	4
Hyattsville	4J	1
La Plata	6J	†2
Laurel	4J	2
Leonardtown 7K		†5
Lonaconning 5D		1
Midland	5D	1
Mt. Rainier	5J	1
Mt. Savage	4D	2
Oakland	5B	1
Oxford	6M	1
Pocomoke City 8O		2
Prince Frederick	6K	†4
Port Deposit 2M		1
Princess Anne 8O		1
Relay	4K	1
Rockville	4H	1
St. Michaels	5L	1
Salisbury	7O	6
Snow Hill 8P		1
Sparrows Point	4L	2
Stevensville	5L	1
Takoma	4H	1
Taylor's Island	7L	1
Towson 3K		1
Upper Marlboro. 5J		†3
Western Port 5C		2
Westminster 2H		3
Williamsport 2E		1

DELAWARE.
Pop., 202,322.

COUNTIES

	Pop. Thous.
Kent 4O	32
Newcastle 1O	123
Sussex 6P	46
Delaware City 2O	1
Dover 4O	3
Georgetown 6P	1
Harrington 5O	1
Laurel 6O	2
Lewes 5Q	2
Middletown 3O	1
Milford 5P	2
Milton 5P	1
Newark 2O	1
New Castle 2O	3
Seaford 6O	2
Smyrna 3O	1
Wilmington 1O	87

DISTRICT OF COLUMBIA.
Pop., 331,069.
Washington 5H 331

NEW YORK.
Towns—Cont.

Town.	Key.	Pop.
Oswego Center 9M		2
Otselic	12Q	1
Ovid	13L	†5
Owego	16N	4
Oxford	14Q	1
Oyster Bay	4H	21
Painted Post 15K		1
Palermo	9N	1
Palmyra	10K	2
Parishville	2T	1
Parma	10H	2
Patchogue	5T	3
Patterson	18Y	1
Pavilion	11H	1
Pearl River	3E	1
Peekskill	2F	15
Pembroke	11F	2
Penn Yan	13K	4
Perry	12H	
Perrysburg	13C	
Persia	14D	
Peru	2Y	
Petersburg	12Z	1
Phelps	11K	1
Philmont	15Y	1
Phoenix	10N	1
Piermont	3F	1
Pierrepont	3S	1
Pine Plains 16X		1
Pittsford	10T	1
Plattsburg	1Y	11
Pleasantville 3F		2
Pomfret	14B	1
Port Byron 10N		1
Port Chester 3G		12
Port Ewen 17W		1
Port Henry	5Y	2
Port Jefferson 4T		2
Port Jervis	1B	9
Portland	14B	3
Port Washington	1G	1
Potsdam	2S	4
Poughkeepsie 17W		27
Pulaski	8O	1
Ramapo	3E	11
Randolph	15D	1
Ravena	14X	1
Reading Center 14L		1
Rensselaer 13X		10
Rensselaerville 13W		10
Rhinebeck	16X	1
Richfield Spring	12S	1
Richland	8O	3
Richmond	6E	1
Richfield Spgs. 11T		1
Ridgeway	9F	6
Ripley	9H	2
Riverhead	4L	5
Rochester 101		218
Rockville Center	6G	3
Rodman	6P	1
Rome	9R	20
Romulus	12L	2
Rose	10L	1
Rosendale	17W	1
Roslyn	5G	1
Rouse Point 1Y		1
Roxbury	15U	2
Rush	11I	2
Rushford	14G	1
Russell	8S	1
Rye	3G	3
Sag Harbor 8N		3
St. Johnsville 11U		2
St. Regis Falls 2U		1
Salamanca	15E	5
Salem	10Z	1
Salisburg	10T	1
Sandlake	13Y	2
Sandyhill	9Y	5
Saranac	2X	3
Saranac Lake 4W		4
Saratoga Sprgs. 10X		12
Sardinia	13H	1
Saugerties 16W		3
Sayville	5T	1
Scarsdale	3H	1
Schenectady 12U		72
Schoharie 13Y		†9
Schuyler	11S	1
Schuyler Falls 2Y		1
Schuylerville 10F		1
Scio	15H	1
Scotia	12W	2
Sea Cliff	4G	1
Seneca	12D	6
Seneca Falls 11U		7
Seward	12U	1
Shandaken 16V		2
Shelby	10H	3
Sheridan	13C	1
Shortsville	11K	1
Sidney	15R	2
Silver Creek 13C		2

VIRGINIA
Pop. 2,061,612.
COUNTIES
Total Towns 91.36

Accomac* 9Y...36
Albemarle 4S..29
Alexandria 4S..10
Alleghany 5E..14
Amelia* 10U..8
Amherst 9K..18
Appomattox* 10L..8
Arlington 7K..3
Augusta 7K..32
Bath* 7G..6
Bedford 10H..29
Bland* 11B..5
Botetourt 10F..17
Brunswick 15F..19
Buchanan 9J..12
Buckingham* 9M..15
Campbell* 10M..23
Caroline* 7R..16
Carroll* 13C..21
Charles City* 10S..5
Charlotte* 12M..15
Chesterfield* 11P..21
Clarke 9P..11
Craig* 8P..13
Culpeper* 8P..13
Cumberland* 10N..9
Dickenson* 2E..9
Dinwiddie* 11Q..15
Elizabeth City 11V..21
Essex* 8T..12
Fairfax 4R..20
Fauquier 8P..22
Floyd* 12E..14
Fluvanna 8N..8
Franklin* 12G..26
Frederick 10U..12
Giles 13D..11
Gloucester* 10T..12
Goochland* 9P..9
Grayson* 13A..19
Greene 7N..9
Greensville* 13Q..16
Halifax 13L..11
Hanover 8Q..17
Henrico 10R..23
Henry 13C..16
Highland* 6H..5
Isle of Wight 12U..14
James City 11S..3
King and Queen* 9S..9
King George* 9S..9
King William* 11R..6
Lancaster* 9U..8
Lee* 4B..23
Loudoun 3Q..21
Louisa 8P..16
Lunenburg* 12N..16
Madison 6N..12
Mathews 10V..11
Mecklenburg* 13N..18
Middlesex 9U..8
Montgomery 11E..17
Nansemond 13U..26
Nelson* 9L..16
New Kent* 10S..7
Northampton 10Y..17
Northumberland* 10V..16
Nottoway* 11O..10
Orange 7O..13
Page 5N..13
Patrick* 13E..17
Pittsylvania 12J..50
Powhatan 10P..6
Prince Edward 10N..12
Prince George* 9S..7
Princess Anne 11X..11
Prince William 5Q..12
Pulaski 12C..17
Rappahannock* 5O..8
Richmond* 9T..7
Roanoke 10F..19
Rockbridge 9J..21
Rockingham 5K..34
Russell* 3F..23
Scott* 4D..23
Shenandoah 6H..20
Smyth 4H..20
Southampton 13Q..26
Spotsylvania 7Q..9
Stafford 6R..3
Surry 11T..9
Sussex* 12R..13
Tazewell 2J..24
Warren 4O..8
Warwick* 11U..6
Washington 4F..32
Westmoreland* 7U..9
Wise* 3D..34
Wythe 12B..20
York* 11V..7

TOWNS

Town. Key. Pop.
Abingdon 4G...1
Accomac 9Y..+3
Alexandria 4S..15
Almagro 13J...1
Amelia 10O...+2
Amherst 9K..+6
Appalachia 3D..1
Appomattox 10L..+4
Ashland 9Q....1
Barton Heights 9R....1
Basic City 7L..1
Bedford City 10H....2
Berkley 12V....5
Berryville 3P..+8
Big Stone Gap 4D....2
Blackstone 11O..1
Bland 11B....+2
Bowling Green 7R....+4
Boydton 13N..+4
Bristol 5F....6
Buckingham 9M....+3
Buenavista 9J....3
Burkes Garden 11A....1
Cape Charles 11W....1
Charlotte 12M..+3
Charlottesville 8M....6
Chase City 13M....1
Chatham 12J...1
Chincoteague 8Z....1
Christiansburg 11E....1
Charles City 10S....+1
Chesterfield 10Q....+60
Clifton Forge 8G....5
Clintwood 2E +3
Courtland 12S.+2
Covington 8F...4
Crewe 11O....1
Cumberland 10N....+1
Culpeper 6P....1
Damascus 5H..1
Danville 13J..19
Denbigh 11U..+1
Dendron 11S...1
Dinwiddie 11Q....+40
Dorchester 3D..1
Eastville 10G..+3
Emporia 13Q...2
Ettricks 11R...1
Fairfax 4R....+4
Falls Church 4S....1
Farmville 10N..2
Fincastle 10G.+4
Finneywood 12N....1
Floyd 12E....+3
Fort Monroe 12V....1
Franklin 13T...2
Fredericksburg 6R....5
Front Royal 4O....1
Galax City 5F..4
Towns—Cont.
Town. Key. Pop.
Graham 11A...1
Grundy 2G....+2
Hanover 8Q...+1
Hampton 12V..5
Harrisonburg 6L....4
Heathsville 8V....+2
Highland Park 9R....1
Hillsville 13C.+2
Houston 13L..+5
Independence 13B....+2
Isle of Wight 12U....+10
James River 10K....2
Jonesville 4B..+3
King George 6S....+30
King William 9S....+45
King and Queen 9S....+25
Lancaster 9U.+40
Lawrenceville 13P....1
Lebanon 4G...+3
Leesburg 3Q....1
Lexington 9J...2
Louisa 8P....+2
Lovingston 9L....+3
Lowmeer 9G...1
Lunenburg 12N....+09
Luray 5N....1
Lynchburg 10K....29
Madison 6N...+3
Manassas 5Q...1
Marion 3J....2
Martinsville 13G....3
Mathews 10V.+1
Monterey 6H..+2
Montrose 7U..+1
New Kent 10S.+1
Newcastle 10F....+7
Newport News 12V....20
Norfolk 12V...67
Norton 3D....1
Nottoway 11O.+1
Omancock 9X..1
Orange 7O....+6
Palmyra 8N...+2
Pearisburg 10C....+4
Petersburg 11R....24
Phoebus 12V...2
Pocahontas 10A....2
Portsmouth 12V....33
Princess Anne 13X....+05
Prince George 11R....
Powhatan 10P....+07
Pulaski City 11C....4
Radford 11D...4
Richmond 10R....127
Roanoke 10F..34
Rockymount 12G....+9
Rustburg 11K.+3
Salem 10F....3
Saltville 4I...1
Saluda 9U....+1
Shenandoah 6M....1
Smithfield 12T....1
South Boston 13L....3
Stafford 6R...+1
Spottsylvania 7Q....+06
Staffordsville 7N....+03
Staunton 7K..10
Stone Gap 3D..2
Stuart 13E....+3
Suffolk 13U....7
Surry 11T...+07
Sussex 12R..+01
Tappahannock 8T....+4
Tazewell 11A...1
Vinton 10G....1
Warrenton 5P..1
Warm Springs 7G....+5
Warsaw 8T...+3
Washington 50....+2
Waverly 12S...1
Waynesboro 7K....1
Westpoint 10T..1
Williamsburg 11S....2
Winchester 30.5
Wise 3E....+8
Woodstock 4M..1
Wytheville 12B....3
Yorktown 11U....+1

WESTERN PORTION OF VIRGINIA
Same scale as main map
Scale—30 miles to the inch.

Virginia

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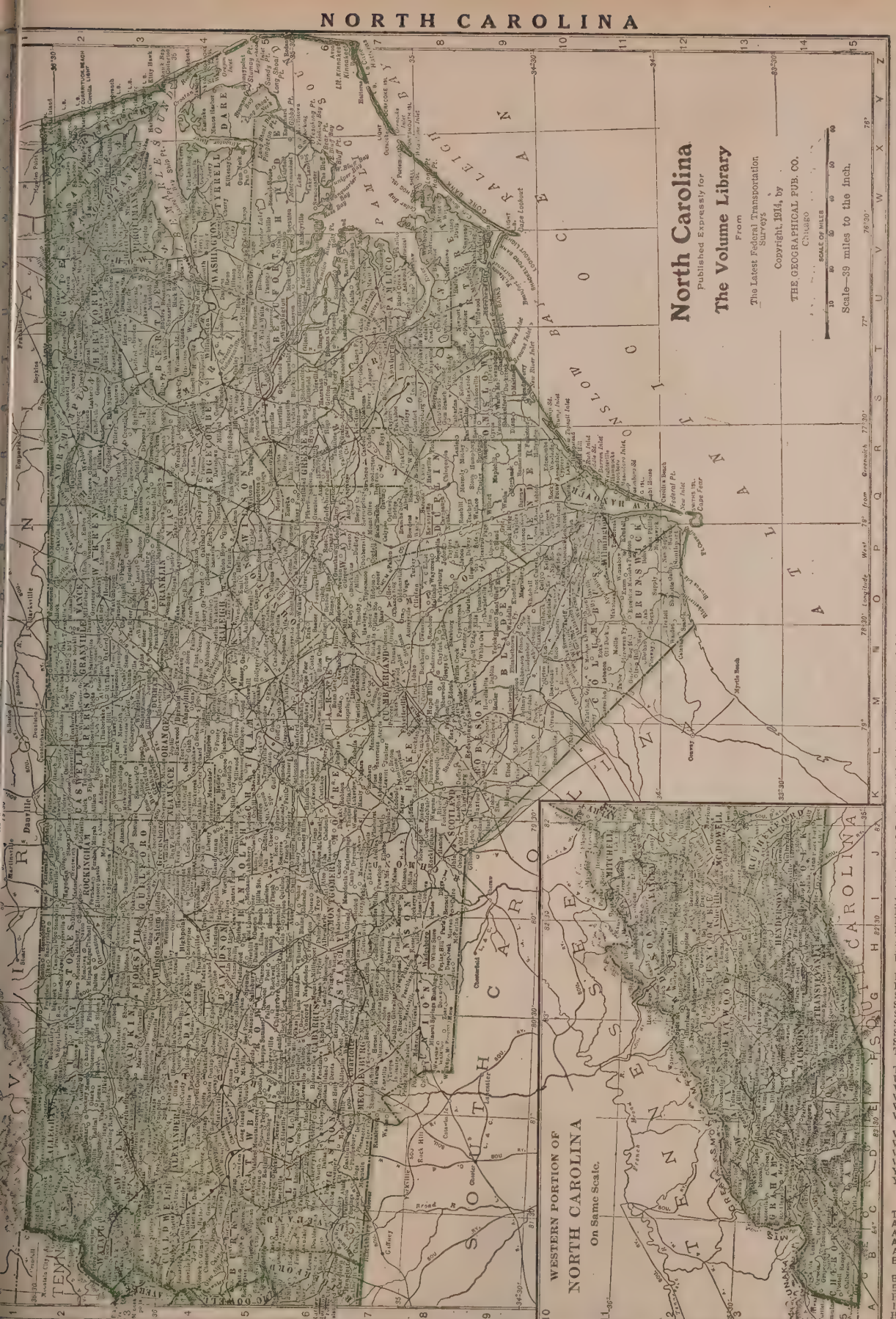
SCALE OF MILES
0 10 20 30 40 50 60

*POP. SHOWN IN HUNDREDS.
*POP. OF COUNTY SEAT BELOW 1 THOUSAND.
COUNTY SEATS IN HEAVY FACED TYPE.



NO. CAROLINA
Pop. 2,206,287.

COUNTIES

Pop. Thous.

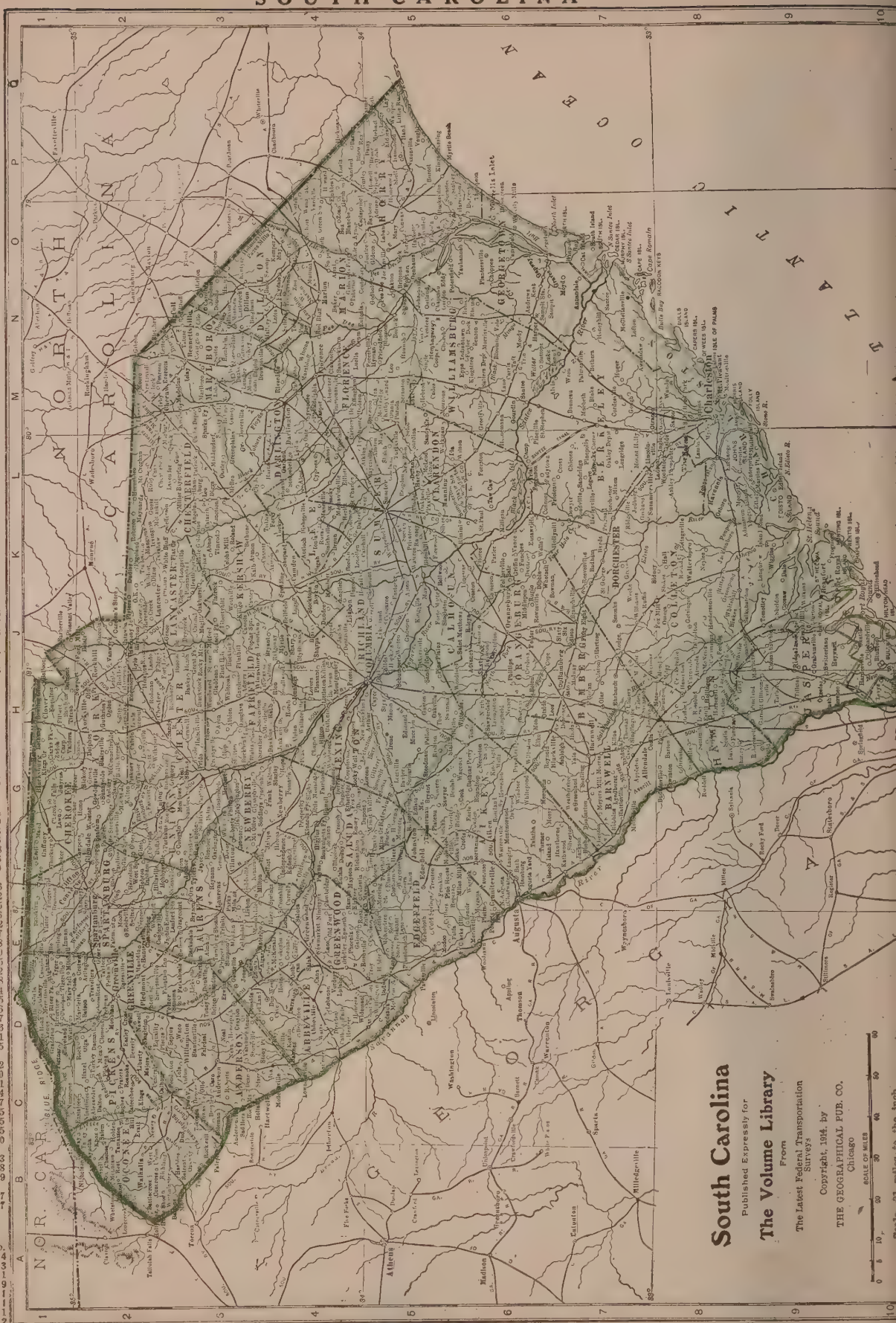
Alamance 3K. 28
Alexander* 1H 11
Alleghany* 2D 7
Anson 8H....25
Ashe* 2B.....17
Avery* 11J.....
Beaufort 5U..30
Bertie* 3T....23
Bladen* 9N...18
Brunswick 11P 14
Buncombe 14H 49
Burke 5B.....21
Cabarrus 6F..26
Caldwell 4B..20
Camden* 2W...5
Carteret 9V...13
Caswell* 2K..14
Catawba 5C...27
Chatham 5L..22
Cherokee* 15B 14
Chowan* 3V..11
Clay 15C 3
Cleveland 6B..29
Columbus 11N.28
Craven 7T....25
Cumberland 7M 35
Currituck* 2X.7
Dare* 4Y.....4
Davidson 5H..29
Davie 4F.....13
Duplin 7Q....25
Durham 3M..35
Edgecombe 4R 32
Forsyth 3G...47
Franklin 3O..21
Gaston 6D....37
Gates* 2T.....10
Graham 14C...4
Granville 2N..25
Greene* 6R...13
Guilford 3I...60
Halifax* 2R..37
Harnett* 6M..22
Haywood 13G.21
Henderson 14I.16
Hertford* 2U..15
Hoke* 8K.....8
Hyde* 5X.....8
Iredell 5E...34
Jackson 14F..12
Johnson 5O...41
Jones* 7S.....8
Lee 6L.....11
Lenoir 7R....22
Lincoln 6C....17
McDowell 12J.13
Macon* 15E..12
Madison* 12G.20
Martin 4T.....17
Mecklenburg 7E 67
Mitchell* 11J.17
Montgomery 6I 14
Moore* 6K....17
Nash* 3Q.....33
New Hanover 11R 32
Northampton* 2S 22
Onslow* 9S...14
Orange* 3L...15
Pamlico* 7V...9
Pasquotank 2W 16
Pender* 9Q...15
Perquimans 3W 11
Person 2M....17
Pitt 5S.....36
Polk 11J.....7
Randolph 5I..29
Richmond 8L.19
Robeson 9L...51
Rockingham 2I 36
Rowan 5F....37
Rutherford 6A.28
Sampson 8O..29
Scotland 8K..15
Stanly 6G....19
Stokes* 2H...20
Surry 2F.....29
Swain* 13E...10
Transylvania* 14G 7
Tyrrell* 4X....5
Union 8F.....33
Vance 2Q.....19
Wake 4N.....63
Warren* 2P...20
Washington 4V 11
Watauga* 3A.13
Wayne 6P....35
Wilkes 3D....30
Wilson 5Q....28
Yadkin* 3E...15
Yancey* 11L..12

TOWNS

Town. Key. Pop.
Albemarle 6H..2
Ashboro 5I.....1
Asheville 13H.18
Ashburn 5I...+9
Bakersville 11J .....+4
Bayboro 7U...+3
Beaufort 9V...2
Belhaven 5V...2
Belmont 7D...1
Bessemer City 6C 1
Bethel 7P.....+1
Beulaville 9Q...+6
Biltmore 13G.+1
Bladenboro 9N...+1
Blowing Rock 2A.+1
Boone 2A.....+1
Brevard 13F...+1
Bryson City 9Q...+6
Burgaw 9Q....+9
Burlington 3K.4
Burnsville 11I .....+7
Camden 2X....+7
Canton 13G...1
Carthage 6M.....+9
Caroleen 7A...+9
Chadbourn 10M.1
Chapel Hill 4L 1
Charlotte 7E..34
Cherryville 6C.1
Clayton 5O.....1
Clinton 8O.....1
Columbia 7L .....+8
Concord 6F...8
Currituck 2Y .....+1
Dallas 6D.....1
Danbury 2H.+2
Davidson 6E...1
Dunn 6N.....4
East Spencer 5G 1
Edenton 3V....2
Elizabeth City 3X 8
Elizabethtown 11L.+1
Elkpark 11L..+3
Enfield 3R...+1
Fayetteville 7M.7
Fremont 9O.....1
Franklin 14E .....+3
Gastonia 7D...5
Gatesville 2T .....+2
Gibsonville 3J..1
Goldsboro 6P...6
Graham 3K....2
Greensboro 3I..15
Greenville 8S..4
Halifax 2R....+3
Hamlet 8U.....2
Haysville 15C .....+1
Henderson 3O..4
Hendersonville 14I 2
Herrietta 3O...1
Hertford 2U...1
Hickory 6C...3
Highmount 4H..3
Hillsboro 3L .....+8
Jackson 2S...+5
Jacksonville 9S .....+5
Jefferson 2B..+1
Kenansville 9Q .....+2
Kernersville 3H 1
Kings Mountain 7C 2
Kinston 7R....6
Lagrange 6Q...1
Laurinburg 9J..2
Leaksville 2I...1
Lenoir 4B.....3
Littleton 4G..4
Lillington 6M .....+3
Lincolnton 6C..2
Littleton 2O...1
Louisburg 3O...1
Lumberton 9M..2
Madison 2I...+4
Manteo 4Z.....+4
Marion 12J.....1
Marshall 12H .....+8
Maxton 9K...+1
Mocksville 4F..1
Monroe 8F...4
Mooresville 5E.3
Morehead City 9V 2
Morganton 8B..2
Mountain View 7P.1
Murphy 15C..+1
Nashville 4O..+7
Newbern 7T...9
Newton 5D.....2
Northwilkesboro 3D 4

Cont'd on P. 10

P. SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED TYPE



NO. CAROLINA.
Towns—Cont.
Town. Key. Pop.
Oxford 3N.....3
Pittsboro 5L..+5
Plymouth 4U...2
Raeford 8K...+5
Raleigh 4N....19
Ramseur 5J.....1
Randleman 4I..1
Reidsprings 9L.1
Reidsville 2J...4
Roanoke Rapids
2R 1
Rockingham 8I.2
Rockymount 4Q.8
Robbinsville
14C .....+1
Roxboro 2M....1
Rutherfordton
14K 1
Salem 3G.....5
Salisbury 5F...7
Sanford 6L.....2
Scotland Neck
3S 1
Selma 6O.....1
Shelby 6B.....3
Smithfield 6O..1
Snowhill 6R..+4
Southport 12P...1
Spencer 5G.....1
Spray 2I.....5
Springhope 1P 1
Sparta 2D....+5
Statesville 5E 4
Swanquarter
6X .....+1
Tarboro 4R....4
Taylorsville
4D .....+6
Thomasville
4H 3
Trenton 8S...+3
Troy 6I.....1
Wadesboro 8H..2
Wake Forest
4N 1
Warrenton
2P .....+8
Washington 5T.6
Waynesville
15F 2
Weldon 2R.....1
Webster 14F..87
Wentworth
2I .....+1
Whiteville 10M.1
Williamston 4T.1
Wilmington
11P 25
Wilson 5O.....6
Windsor 3T...+6
Winston 3G...17
Winton 2U...+6
Yadkinville
3F .....+4
Yanceyville
2K .....+3

SO. CAROLINA
Pop. 1,515,400.

COUNTIES

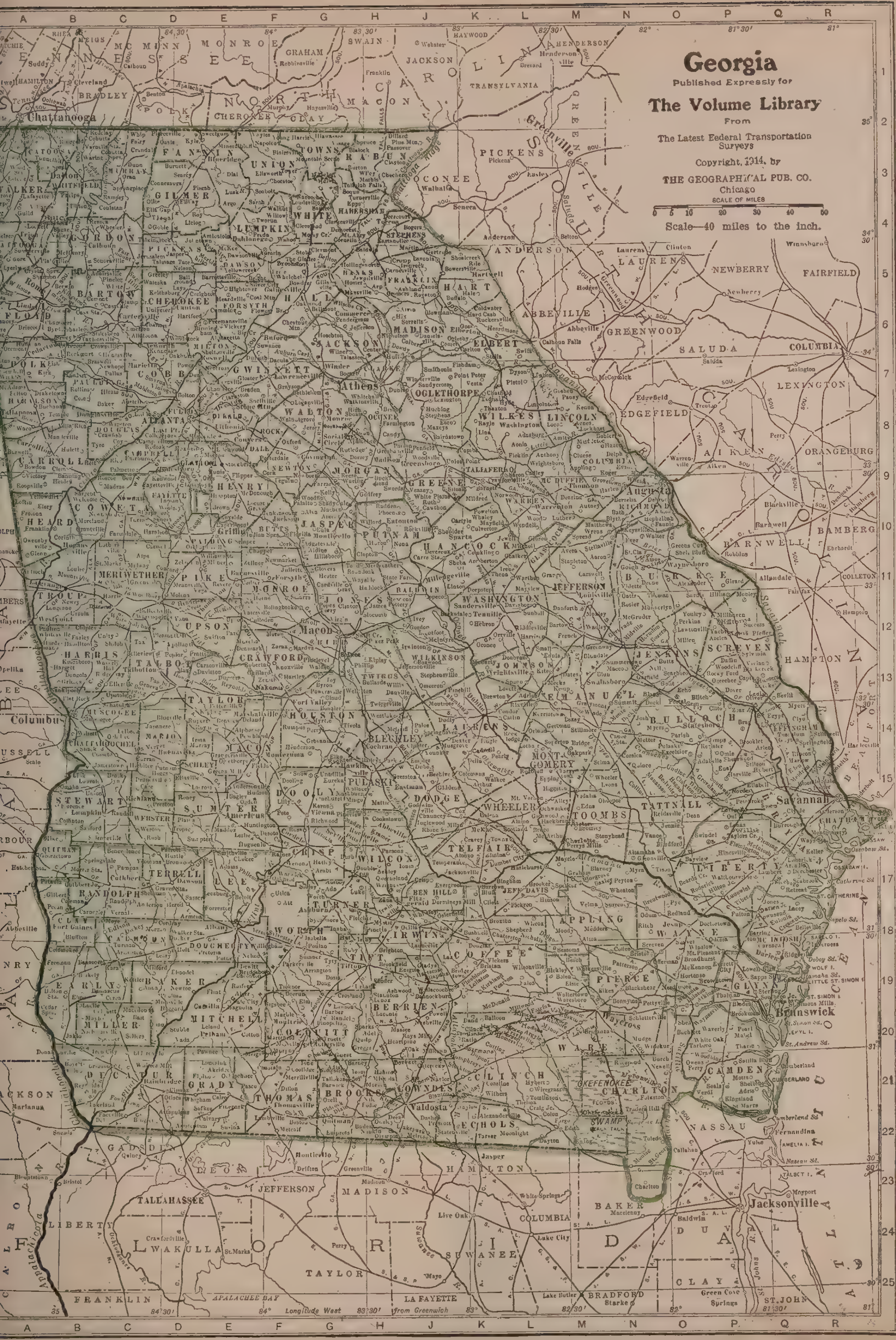
Pop.
Thous.
Abbeville 4D..34
Aiken 6F.....41
Anderson 3D..69
Avery .....
Bamberg 7H...18
Barnwell 7G...31
Beaufort 10J..39
Berkeley 7L..23
Calhoun 5J...16
Charleston 8M.88
Cherokee 1P..26
Chester 2H...29
Chesterfield*
2L 26
Clarendon 5L.32
Colleton 8K...32
Darlington 4M.38
Dillon 3N....22
Dorchester 7K.17
Edgefield 5F..28
Fairfield 3H..29
Florence 4M..35
Georgetown 6O.22
Greenville 2D..68
Greenwood 4E.34
Hampton* 9H.25
Horry 5O.....22
Kershaw* 3K.27
Lancaster 2J..26
Laurens 3F...41
Lee 4L.....25
Lexington*
5H 32
Marion 4N....20
Marlboro 3M..31
Newberry 4G..34
Oconee 2B....27
Orangeburg 6J.55
Pickens* 2C...25
Richland 4J...55
Saluda* 4F...20
Spartanburg
2F 83
Sumter 5L....38
Union 2G.....29
Williamsburg
6M 37
York 2H.....47

TOWNS

Town. Key. Pop.
Abbeville 4D...4
Aiken 6F.....3
Allendale 7H..1
Anderson 3D...9
Bamberg 7H...1
Barnwell 7G...1
Batesburg 5G..1
Beaufort 9J....2

SO. CAROLINA.
Towns—Cont.
Town. Key. Pop.
Belton 3D.....1
Bennettsville
3M 2
Bishopville 4L..1
Blacksburg 1G..1
Blackville 6H..1
Blufton 10J...1
Branchville 7J..1
Camden 3K...8
Charleston 8M.53
Cheraw 2J....4
Chester 2H....4
Chesterfield
2L 618
Clifton 2F.....1
Clinton 2F.....3
Clover 1H.....1
Columbia 5H..26
Converse 5F...2
Conway 5O....1
Cottageville 7L..1
Darlington 4M.3
Denmark 7H...1
Dillon 3N.....1
Eau Claire 1C.1
Edgefield 5F..1
Elloree 2M....7
Florence 4M...7
Gaffney 1F 1J..4
Georgetown 6O.5
Glendale 2F..1
Graniteville 6F.1
Greenville 2D.15
Greenwood 4E.6
Greer 2E.....1
Hampton 8H 748
Harleyville 8L.1
Hartsville 3L.682
Hemingway 3O.1
Kershaw 3K.682
Kingstree 6M..1
Lake City 5M..1
Lancaster 2J..2
Latta 4N.....1
Laurens 3F...4
Lexington 5H.709
Liberty 2E....1
Marion 4N.....3
Monks Corner
7M 232
Moultrieville
8M 1
Mount Pleasant.1
Mullins 4O....1
Newberry 4G...5
N. Augusta 6F.1
Orangeburg 6J.5
Pelzer 2D.....4
Pickens 2C..897
Piedmont 2E..3
Ridgeland 9H.2
Rockhill 2H..7
St. Matthews
5J 610
Saluda 4F...610
Seneca 2C.....1
Spartanburg
2F 17
Summerville 7L.2
Sumter 5L.....3
Timmonsville
4M 1
Union 2G.....5
Walhalla 2B...1
Walterboro 8K.1
Westminster 2B.1
Whitmire 3G..1
Williamston 2D.1
Winnsboro 3H..1
Woodruff 2F...1
Yorkville 2H..2

†POP. SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED T



GEORGIA
Pop. 2,609,121.

COUNTIES

Pop. Thous.

Appling* 17M 12
Baker* 19O....7
Baldwin 11J..1[illegible]
Banks* 5H....11
Bartow 6C....25
Ben Hill 17H.11
Berrien* 20J..22
Bibb 12G......56
Bleckley 14H....
Brooks 2Q.....23
Bryan 16Q 6
Bulloch 14P..26
Burke 4O.....27
Butts 10F.....13
Calhoun* 18G.11
Camden* 21Q..7
Campbell 9D..10
Carroll 9B.....30
Catoosa* 2B....7
Charlton* 21O.4
Chatham 16R.79
Chattahoochee* 15C 5
Chattooga* 1A 13
Cherokee 6D..16
Clarke 7H.....23
Clay 18B.......8
Clayton* 9E...10
Clinch* 20L.....8
Cobb 7D.......28
Coffee 18K....21
Colquitt 20G..19
Columbia* 9M 12
Coweta 10G...28
Crawford* 13F 8
Crisp 16G.....16
Dade* 3A.......4
Dawson 5E.....4
Decatur 21G..29
DeKalb 8E....27
Dodge 15G....20
Dooly 16G.....20
Dougherty 18E.16
Douglas 8C.....8
Early 19B......18
Echols* 22K....3
Effingham* 14Q 9
Elbert 6K......24
Emanuel 13M.25
Fannin* 3E....12
Fayette* 9D...10
Floyd 5A.......36
Forsyth* 6E..11
Franklin* 5H.17
Fulton 8D...177
Gilmer* 4D.....9
Glascock* 10L..4
Glynn 20Q.....15
Gordon 4B.....15
Grady 21E.....18
Greene 8J......18
Gwinnett 7F..28
Habersham* 4H 10
Hall 5G.........25
Hancock 10K.19
Haralson* 7A.13
Harris* 12B..17
Hart 5K........16
Heard* 10B....11
Henry* 9E.....19
Houston* 14G.23
Irwin* 18J.....10
Jackson 6H....30
Jasper 10G....15
Jeff Davis 17L..6
Jefferson 12M.21
Jenkins 12O....11
Johnson 13L..12
Jones* 11H....13
Laurens 14K..35
Lee* 17E.......11
Liberty* 17P..12
Lincoln* 8M....8
Lowndes 21J..24
Lumpkin* 4F.....5
McDuffie 9M...10
McIntosh 19Q..6
Macon* 15F..15
Madison* 6J...16
Marion 14O......9
Meriwether* 11C 25
Miller* 20G.....7
Milton* 6E......7
Mitchell 20E..22
Monroe 11F....20
Montgomery* 16L 19
Morgan 9H.....19
Murray* 3G.....9
Muscogee 14B.36
Newton 9G....16
Oconee* 8H....11
Oglethorpe* 7J 18
Paulding 7G..14
Pickens* 4D.....9
Pierce 19N....10
Pike* 11E.....19
Polk 7A.........20
Pulaski 15H...22
Putnam 10H..13
Quitman* 17A..4
Rabun* 3H......5
Randolph 17G.18
Richmond 9O.58
Rockdale 8F....8
Schley* 15E.....5
Screven 13P...20
Spalding 10E.19
Stephens 4H....9
Stewart 16G...13
Sumter 16E...29
Talbot 13D....11
Taliaferro* 9K..8
Tattnall* 16N.18
Taylor* 13E...10
Telfair 16K...13
Towns* 2G....3
Troup 11B....26
Turner 18G...10
Twiggs* 13H..10
Union* 3F.....6
Upson 12E.....12
Walker 3A......18
Walton 8G......23
Ware 20M.....22
Warren 10L....11
Washington 12K 28
Wayne 18O...13
Webster* 16D..6
Wheeler 16L.....
White* 4G.....5
Whitfield 3B.15
Wilcox 16J....13
Wilkes 8L.....23
Wilkinson* 12J 10
Worth 18F.....19

TOWNS

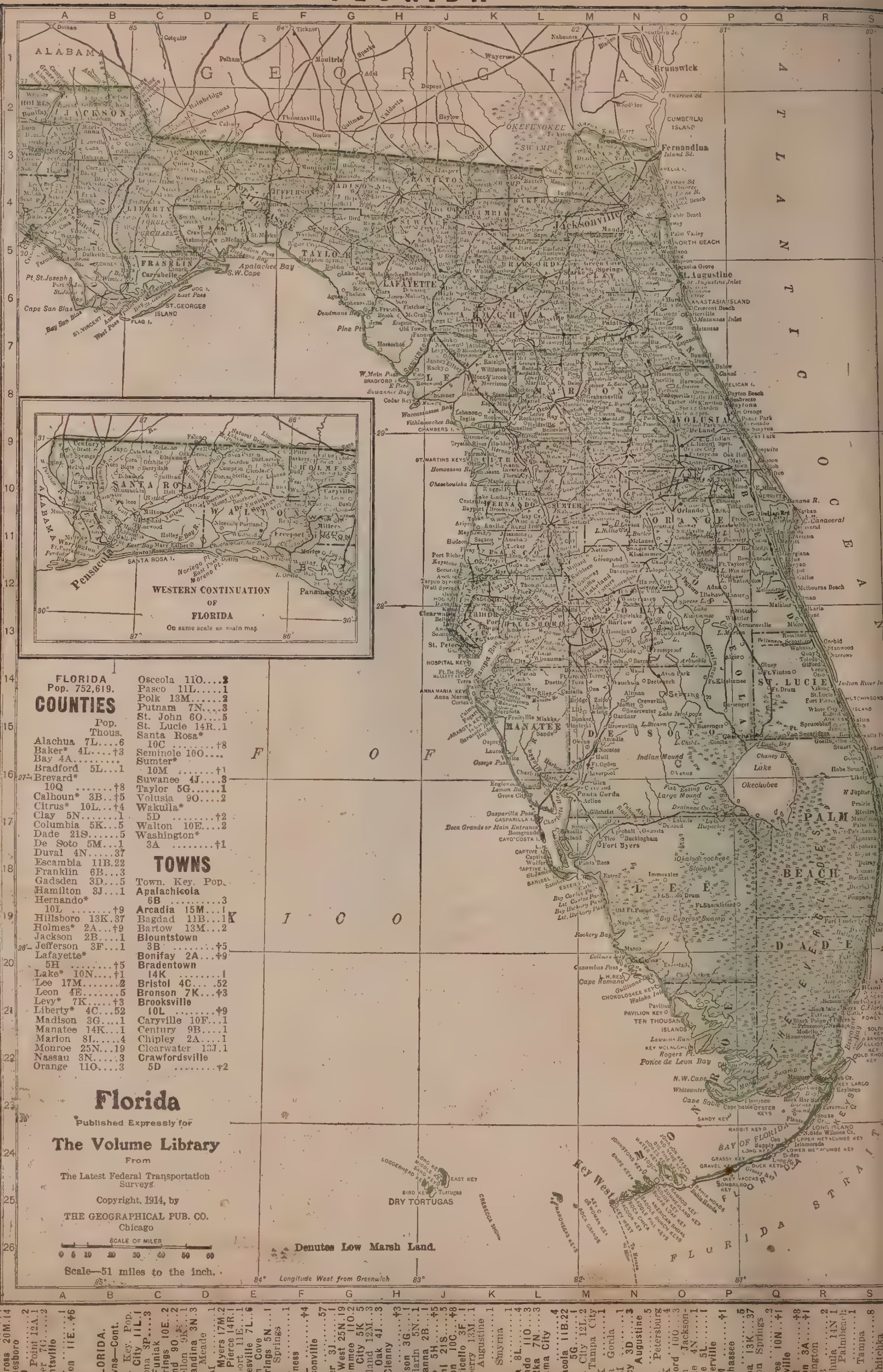
Town, Key, Pop.
Abbeville 16J....1
Acworth 6C.....1
Adel 20H.......1
Alamo 16I......2
Albany 18E.....8
Alpharetta 6E.†3
Americus 16E...8
Amsterdam 22D 2
Appling 9M...†1
Arlington 18C...1
Ashburn 18G...2
Athens 7H.....14
Atlanta 8D...154
Augusta 9O...41
Bainbridge 21C.4
Barnesville 11E.3
Baxley 17M....†8
Blackshear 19N..1
Blairsville 3F..†2
Blakely 19B.....1
Blueridge 3E...†8
Boston 22G.....1
Broxton 18K.....1
Brunswick 20Q.10
Buchanan 7A..†4
Buena Vista 14D 1
Buford 6F.......1
Butler 13E....†7
Cairo 21E......1
Calhoun 4B......1
Camilla 20E.....1
Canton 6D.......2
Carrollton 9B...3
Carnesville 5H ....†3
Cartersville 6C.4
Cedartown 7A..3
Clarkesville 4H ....†5
Claxton 15O.....1
Clayton 3H....†5
Cleveland 4G..†2
Clyde 16Q....†1
Cochran 14H...1
Collegepark 8D 2
Colquitt 20C..†6
Columbus 14B.20
Commerce 6H...2
Conyers 8F.......1
Cordele 16G.....5
Cornelia 4H......1
Covington 9G....2
Crawfordville 9K ....†6
Cumming 6E...†3
Cusseta 15C...†3
Cuthbert 17C...3
Dahlonega 4F.†8
Dallas 7C.......1
Dalton 3B.......5
Danielsville 8J ....†3
Darien 19Q.....1
Dawson 17D....3
Dawsonville 5E ....†1
Decatur 8E......2
Dorchester 17Q.......†2
Douglas 18K....9
Douglasville 8C 1
Dublin 14K.....5
Eastman 15J...2
East Point 8D..3
Eatonton 10H..2

Cont'd on page 12

OWN IN HUNDREDS. *POP. OF COUNTY SEAT BEL OW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED TYPE.

FLORIDA

GEORGIA.
Towns —Cont.
Town. Key. Pop.
Elberton 6K....6
Ellaville 15E..+6
Ellijay 4D....+6
Fairburn 9D...1
Fayetteville 9D ....+7
Fitzgerald 17H 5
Folkston 21O..+3
Forsyth 11F....2
Fort Gaines 18B 1
Franklin 10B.+3
Gainesville 5G..5
Georgetown 17A ....+3
Gibson 10L....+3
Grantville 10C.1
Gray 11H.....+2
Greensboro 9J..2
Greenville 11C ....+9
Griffin 10E.....7
Hamilton 12B.+4
Hampton 9E...1
Harrisonville 10N 1
Hartwell 5K....2
Hawkinsville 15H 3
Hazlehurst 17L.1
Hiawassee 2G.+3
Hinesville 17P.+1
Hogansville 10B.1
Homer 5H....+2
Homerville 20L ....+4
Irwinton 12J..+2
Irwinville 18J.+1
Jackson 10F....1
Jasper 4D.....+3
Jefferson 6H....1
Jeffersonville 13H ....+7
Jesup 18O......1
Jonesboro 9E..+9
Kirkwood 8E..1
Knoxville 13F.+2
Lafayette 3A...1
Lagrange 11B..5
Lavonia 5J.....1
Lawrenceville 7F 1
Leesburg 17E.+7
Lexington 7J..+5
Lincolnton 8M.+3
Lindale 5A....2
Lithonia 8E....1
Louisville 12M..1
Lumber City 17L 1
Lumpkin 16C...1
Lyons 15M....+9
McCarysville 3E 1
McDonough 9E ....+8
McRae 16K....1
Macon 12G....40
Madison 9H....2
Marietta 7D....5
Marshallville 14F 1
Milledgeville 11J 4
Millen 12O.....2
Milltown 21J...1
Monroe 8G.....3
Montezuma 15F 1
Monticello 10G.1
Morgan 18C...+3
Moultrie 20G...3
Mount Vernon 16L ....+6
Nashville 20J.+9
Newnan 10C...5
Newton 19D...+3
Ocilla 18J.....2
Oglethorpe 15F ....+9
Pelham 20E....1
Perry 14G.....+6
Preston 16D..+2
Quitman 22H...3
Reidsville 16N.+4
Richland 16C..1
Ringgold 2B..+3
Rockmart 7B..1
Rome 5A......12
Rossville 2A...1
Roswell 7E....1
Royston 5J.....1
Saint Marys 21Q ....+6
Sandersville 12K 2
Savannah 16R.65
Senoia 10D....1
Social Circle 8G 1
Sparta 10K....1
Springfield 14Q ....+5
Springplace 3C.+2
Statenville 22K ....+1
Statesboro 14P.2
Stone Mountain 8E 1
Summerville 4A ....+6
Summerville 9N 4
Swainsboro 13M 1
Sylvania 13P...1
Sylvester 18F..1
Talbotton 13D..1
Tallapoosa 8A..2
Tennille 12L...1
Thomaston 12E.1
Thomasville 21F 6
Thomson 9M...2
Tifton 19H.....2
Toccoa 4H.....3
Trenton 3A...+3
Trion 4A........1
Unadilla 15G..1
Union Point 9J 1
Valdosta 21J.....7
Vidalia 15M...1
Vienna 16G.....1
Warrenton 10L..1
Washington 8L 3
Watkinsville 8H ....+4
Waycross 20M.14
Waynesboro 11O 2
West Point 12A.1
Winder 7G....2
Wrightsville 13L 1
Zebulon 11E..+6



FLORIDA
Pop. 752,619.

COUNTIES

Pop. Thous.
Alachua 7L....6
Baker* 4L....+3
Bay 4A.........
Bradford 5L...1
Brevard* 10Q ....+8
Calhoun* 3B..+5
Citrus* 10L...+4
Clay 5N.......1
Columbia 5K...5
Dade 21S......5
De Soto 5M...1
Duval 4N.....37
Escambia 11B.22
Franklin 6B...3
Gadsden 3D...5
Hamilton 3J...1
Hernando* 10L ....+9
Hillsboro 13K.37
Holmes* 2A...+9
Jackson 2B....1
Jefferson 3F...1
Lafayette* 5H ....+5
Lake* 10N....+1
Lee 17M.......2
Leon 4E.......5
Levy* 7K.....+3
Liberty* 4C...52
Madison 3G....1
Manatee 14K...1
Marion 8L.....4
Monroe 25N...19
Nassau 3N.....3
Orange 11O.....3
Osceola 11O....2
Pasco 11L.....1
Polk 13M......2
Putnam 7N....3
St. John 6O....5
St. Lucie 14R..1
Santa Rosa* 10C ....+8
Seminole 10O....
Sumter* 10M ....+1
Suwanee 4J....3
Taylor 5G......1
Volusia 9O....2
Wakulla* 5D ....+2
Walton 10E....2
Washington* 3A ....+1

TOWNS

Town. Key. Pop.
Apalachicola 6B 3
Arcadia 15M...1
Bagdad 11B...1
Bartow 13M...2
Blountstown 3B ....+5
Bonifay 2A...+9
Bradentown 14K 1
Bristol 4C.....52
Bronson 7K...+3
Brooksville 10L ....+9
Caryville 10F...1
Century 9B....1
Chipley 2A....1
Clearwater 13J.1
Crawfordsville 5D ....+2

FLORIDA.
Towns—Cont.
Town. Key. Pop.
Dade City 11L.1
Daytona 3P....3
De Funiak Springs 10E..2
Deland 9O....2
Dunellon 9K...1
Fernandina 3N.3
Fort Meade 13M..........1
Fort Myers 17M.2
Fort Pierce 14R..1
Freeport 11E....1
Gainesville 7L..6
Green Cove Springs 5N...1
High Springs 6K..........1
Inverness 10L.........+4
Jacksonville 4N..........57
Jasper 3J........1
Key West 25N.19
Kissimmee 11O.2
Lake City 5K 5
Lakeland 12M...3
Live Oak 4J...3
MacClenny 4L.........+3
Madison 3G...1
Mandarin 5N...1
Marianna 2B...1
Mayo 5H.........+5
Miami 21S.........5
Milton 10C........+8
Monticello 3F...1
Mulberry 13M...1
New Augustine 6O..........1
New Smyrna 9P..........1
Ocala 8L.........4
Orlando 11O........3
Palatka 7N........3
Panama City 4A.........4
Pensacola 11B.22
Perry 5G.........1
Plant City 12L.2
Port Tampa City 13K..........1
Punta Gorda 16M..........1
Quincy 3D.........3
Saint Augustine 6O..........5
Saint Petersburg 13K..........4
Sanford 10O..........3
South Jacksonville 4N..........1
Starke 5L..........1
Sumterville 10M..........+1
Tallahassee 4E..........5
Tampa 13K.........37
Tarpon Springs 12J.........2
Tavares 10N...+1
Titusville 10Q..........+8
Vernon 3A..........+1
Warrington 11B..........2
Wauchula 14N 1
West Palmbeach 17S..........1
West Tampa 12K..........8
Wewahitchka

Florida
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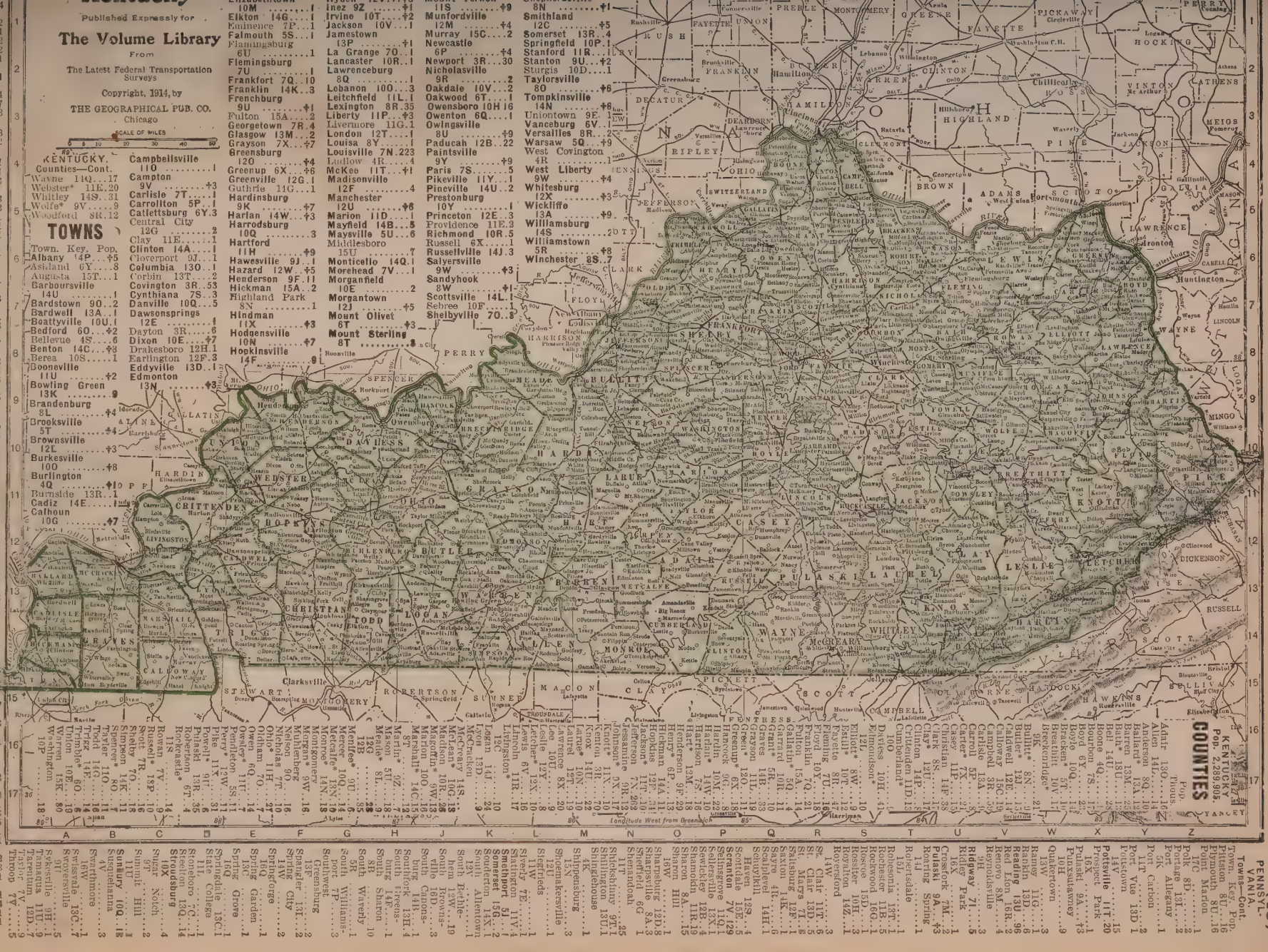
SCALE OF MILES
0 5 10 20 30 40 50 60
Scale—51 miles to the inch.

+POP. SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED T

KENTUCKY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SCALE OF MILES
KENTUCKY.
Counties—Cont.
TOWNS
Town. Key. Pop.
COUNTIES
KENTUCKY
Pop. 2,289,903.
Longitude West from Greenwich
PENNSYLVANIA.
Towns—Cont.
Pop.
Thous.
*POP. OF COUNTY SEAT BELOW 1 THOUSAND.
COUNTY SEATS IN HEAVY FACED TYPE.
SHOWN IN HUNDREDS.

OHIO

OHIO
Pop. 4,767,121

COUNTIES

Pop. Thous.

Adams 3I.....24
Allen 2D.....56
Ashland 5C...22
Ashtabula 8A.59
Athens 6G....47
Auglaize 1D..31
Belmont 8E...76
Brown 2H.....24
Butler 1G.....70
Carroll 8D....15
Champaign 2E 26
Clark 2F.....66
Clermont 1H..29
Clinton 2G....23
Columbiana 8D 76
Coshocton 6E.30
Crawford 4D..34
Cuyahoga 6B.637
Darke 1E.....42
Defiance 1B...24
Delaware 4E..27
Erie 4B.....38
Fairfield 5E...39
Fayette 3G....21
Franklin 4F..221
Fulton 2B....23
Gallia 51.....25
Geauga 7A....14
Greene 2F....29
Guernsey 7F..42
Hamilton 1H 460
Hancock 3C...37
Hardin 3D....30
Harrison 8E..19
Henry 2B.....25
Highland 3H..28
Hocking 5G...23
Holmes 6D....17
Huron 5B.....34
Jackson 5H...30
Jefferson 8E..65
Knox 5E.....30
Lake 7A.....22
Lawrence 51...39
Licking 5E....55
Logan 2E.....30
Lorain 6B....76
Lucas 3A.....192
Madison 3F...19
Mahoning 8C.116
Marion 4D....33
Medina 6C....23
Meigs 6H.....25
Mercer 1D....27
Miami 1E.....45
Monroe 3E....24
Montgomery 1F 163
Morgan 6F....16
Morrow 4D....16
Muskingum 6F 57
Noble 7F.....18
Ottawa 4B....22
Paulding 1C...22
Perry 5F.....35
Pickaway 4G..26
Pike 4H.....15
Portage 7C...30
Preble 1F....23
Putnam 2C...29
Richland 5D..47
Ross 4G.....40
Sandusky 4B..35
Scioto 4I.....45
Seneca 4C....42
Shelby 2E....24
Stark 7D.....122
Summit 7C..108
Trumbull 8B..52
Tuscarawas 7D 57
Union 3E.....21
Van Wert 1C..29
Vinton 5H....13
Warren 1G....24
Washington 7G 45
Wayne 6D....38
Williams 1B..25
Wood 3B.....46
Wyandot 3C...20

TOWNS

Town. Key. Pop.
Ada 2D.....2
Addyston 1H...1
Akron 7C.....69
Alliance 8C...15
Amherst 5B...2
Amsterdam 8D.1
Antwerp 1B....1
Arcanum 1F...1
Archbold 1B...1
Ashland 5C...6
Ashtabula 8A.18
Athens 6G....5
Barberton 7C..9
Barnesville 8F.4
Batavia 1H....1
Bedford 7B...2
Bellaire 8E...13
Bellefontaine 2E 8
Bellevue 4B...5
Bellville 5D...1
Belpre 7G.....1
Berea 6B.....2
Bergholz 8D...1
Bethel 2H.....1
Bethesda 8F...1
Blanchester 3G.1
Bluffton 2C...1
Bowling Green 3B 8
Bradford 1E...1
Bradley 8E...1
Bridgeport 8B 3
Brookville 1F.3
Bryan 1B 3
Buchtel 5G...8
Bucyrus 4D...8
Byesville 7F...1
Cadiz 8E.....1
Caldwell 7F...1
Cambridge 7F.11
Canal Dover 7D 50
Carlington 4D.1
Carey 3C.....4
Carrollton 8D...1
Cartlage 1H...3
Celina 1F.....3
Chagrin Falls 7B 1
Chardon 7A...1
Chevlot 1H...1
Chicago 4G...2
Chillicothe 4G 14
Cincinnati 363
Circleville 4G...6
Cleveland 6B.560
Cleveland Hts 6B 2
Clyde 4B.....2
Cleves 1K.....2
Coal Grove 51 1
Coalton 5H...1
College Hill 6B.1
Columbus 4F.181
Columbus Grove 1C.....6
Conneaut 8A...6
Continental 1C 1
Corning 6G...1
Coshocton 6E.9
Covington 1E...3
Cresline 4D...3
Crooksville 7C 4
Cuyahoga Falls 7C 16
Dalton 1F.....16
Dennison 7E...4
Deshler 2D...4
Dillonvale 8E...1
Dresden 6F...4
Dunkirk 3D...1
E. Cleveland 7B 9
E. Liverpool 8D 20
E. Palestine 8C 3
E. Youngstown 8C 4
Eaton 1F.....3
Edgerton 1B...1
Elmwood Place 1H 3
Elyria 6B.....14
Euclid 7A.....4
Fairport 7A...1
Findlay 3C...14
Forest 3D...1
Ft. Recovery 1D 1
Fostoria 3C...9
Franklin 1G...2
Fredericktown 1D 1
Fremont 4B...9
Galion 4D...7
Gallipolis 51...5
Garrettsville 8B 1
Washington C. H. 3G.....7
Wauseon 2B...4
Waverly 4H....
Wellington 5C...
Wellston 5H...
Wellsville 8D...
W. Alexander 1F .....
W. Carrollton 1F .....
W. Jefferson 3F .....
W. Liberty 3E...
W. Milton 1F...
Westerville 4F...
W. Union 3I...
Willoughby 7A .....
Wilmington 2G...
Woodsfield 8F...
Woodstock 3E.4
Wooster 6D...
Wyoming 1H...
Xenia 2F.....
Yellow Springs 2F .....
Youngstown 8C 7
Zanesville 6F..2

Gibsonburg 3B 2
Girard 8C.....2
Glendale 1G...1
Glen Roy 5H..1
Glouster 6G...2
Granville 5E...1
Greenfield 3G..
Greenville 1E...
Hamden Jc 5H 1
Hamilton 1G...35
Harrison 1G...1
Hartwell 1H...2
Hicksville 1B...2
Hillsboro 3H...4
Holgate 2B....1
Hubbard 8C....1
Hudson 7B.....1
Huron 5B.....1
Irondale 8D...1
Ironton 51.....13
Jackson 5H....5
Jacksonville 6G 1
Jamestown 2G..1
Kelleys Island 4A.....1
Kenmore 7B...1
Kent 7C.....4
Kenton 3D.....7
Lakewood 6B..15
Lancaster 5F..13
Lebanon 1G....2
Leetonia 8C....2
Leipsic 2C.....1
Lima 2D.....30
Lisbon 8D.....3
Lockland 1H...3
Lodi 6C.....1
Logan 5G.....4
London 3F.....3
Lorain 5B.....28
Loudonville 5D 1
Louisville 7C...1
Loveland 1H...1
Lowellville 8C..1
McArthur 5H...1
McComb 2C....1
McConnelsville 6F 1
Madisonville 1H 5
Manchester 3I..1
Mansfield 5D..20
Marblehead 4B 1
Marietta 7G...12
Marion 4D....18
Martins Ferry 8E 9
Marysville 3E..3
Massillon 7C..13
Maumee 3B....2
Mechanicsburg 3E 1
Medina 6C....2
Miamisburg 1C.4
Middleport 6H.3
Middletown 1G 13
Milford 1H....1
Millersburg 6D.2
Mineral City 7D 1
Minerva 7D....1
Mingo Junction 8E 4
Minster 1D....1
Mogadore 4B.1
Montpelier 1A..2
Mt. Gilead 4D.1
Mt. Healthy 1H 1
Mt. Sterling 3F 1
Mt. Vernon 5E 9
Murray 5G....1
Napoleon 2B...4
Navarre 7D....1
Nelsonville 5G..6
Newark 5E...25
New Boston 4H 1
New Bremen 1D 1
Newburg 7B...5
New Carlisle 2F 1
New Comerstown 7E.....2
New Lexington 5F 2
New London 5C 1
New Philadelphia 7D.....8
New Richmond 1H 1
New Straitsville 5G 2
Niles 8B.....8
N. Baltimore 3B 2
N. Lawrence 7C 1
N. Olmsted 6B.1
Norwalk 5B...7
Norwood 1H..16
Nottingham 7A 2
Oak Harbor 4B 1
Oak Hill 5H...1
Oakley 3K.....1
Oberlin 5B.....4
Orrville 6C....3
Ottawa 2C.....2
Oxford 1G.....2
Painesville 7A..5
Pauiding 1C...2
Payne 1C.....1
Pemberville 3B.1
Perrysburg 3B..1
Piqua 1E.....13
Plain City 3E..1
Pleasantridge 1H 1
Plymouth 5C...1
Pomeroy 6H....4
Port Clinton 4B 3
Portsmouth 41.23
Struthers 3C...3
Stryker 1B.....1
Swanton 2A....1
Sylvania 3A....1
Syracuse 6H...1
Tallmadge 7C..1
Tiffin 4C.....11
Tippecanoe City 1F 2
Toledo 3A.....168
Toronto 8D....4
Troy 1E.....6
Uhrichsville 7D.4
Union City 1F.1
Upper Sandusky 3C 3
Urbana 2E.....7
Utica 5E.....1
Van Wert 1C..7
Vermilion 5B...1
Versailles 1E...1
Wadsworth 6C.3
Wapakoneta 1D 5
Warren 8B....11
Ravenna 7C....5
Reading 1H....3
Richwood 3D...1
Ripley 2I.....1
Rockford 1D...1
Rockport 6B...3
Rocky River 6B 1
Roseville 5F...2
Sabina 3G.....1
St. Bernard 1H 5
St. Clairsville 8E 1
St. Marys 1D..5
St. Paris 2E...1
Salem 8C.....8
Salineville 8D..2
Sandusky 4B..19
Sebring 8C....2
Shawnee 5G...2
Shelby 5C.....4
Shreve 6D.....1
Sidney 2E.....6
Somerset 5F...1
S. Charleston 3F 1
S. Newbury 7B 1
Spencerville 1D 1
Springfield 2F.46
Steubenville 8E 22

Lockland 1H...3
Lodi 6C.....1
Logan 5G.....4
London 3F.....3
Lorain 5B.....28
Loudonville 5D 1
Louisville 7C...1
Loveland 1H...1
Lowellville 8C..1
McArthur 5H...1
McComb 2C....1
McConnelsville 6F 1
Madisonville 1H 5
Manchester 3I..1
Mansfield 5D..20
Marblehead 4B 1
Marietta 7G...12
Marion 4D....18
Martins Ferry 8E 9
Marysville 3E..3
Massillon 7C..13
Maumee 3B....2
Mechanicsburg 3E 1
Medina 6C....2
Miamisburg 1C.4
Middleport 6H.3

Newburg 7B...5
New Carlisle 2F 1
New Comerstown 7E.....2
New Lexington 5F 2
New London 5C 1
New Philadelphia 7D.....8
New Richmond 1H 1
New Straitsville 5G 2
Niles 8B.....8
N. Baltimore 3B 2
N. Lawrence 7C 1
N. Olmsted 6B.1
Norwalk 5B...7
Norwood 1H..16
Nottingham 7A 2

Oak Harbor 4B 1
Oak Hill 5H...1
Oakley 3K.....1
Oberlin 5B.....4
Orrville 6C....3
Ottawa 2C.....2
Oxford 1G.....2
Painesville 7A..5
Pauiding 1C...2
Payne 1C.....1
Pemberville 3B.1
Perrysburg 3B..1
Piqua 1E.....13
Plain City 3E..1
Pleasantridge 1H 1
Plymouth 5C...1
Pomeroy 6H....4
Port Clinton 4B 3
Portsmouth 41.23

Struthers 3C...3
Stryker 1B.....1
Swanton 2A....1
Sylvania 3A....1
Syracuse 6H...1
Tallmadge 7C..1
Tiffin 4C.....11
Tippecanoe City 1F 2
Toledo 3A.....168
Toronto 8D....4
Troy 1E.....6
Uhrichsville 7D.4
Union City 1F.1
Upper Sandusky 3C 3
Urbana 2E.....7
Utica 5E.....1
Van Wert 1C..7
Vermilion 5B...1
Versailles 1E...1
Wadsworth 6C.3
Wapakoneta 1D 5
Warren 8B....11

Ravenna 7C....5
Reading 1H....3
Richwood 3D...1
Ripley 2I.....1
Rockford 1D...1
Rockport 6B...3
Rocky River 6B 1
Roseville 5F...2
Sabina 3G.....1
St. Bernard 1H 5
St. Clairsville 8E 1
St. Marys 1D..5
St. Paris 2E...1
Salem 8C.....8
Salineville 8D..2
Sandusky 4B..19
Sebring 8C....2
Shawnee 5G...2
Shelby 5C.....4
Shreve 6D.....1
Sidney 2E.....6
Somerset 5F...1
S. Charleston 3F 1
S. Newbury 7B 1
Spencerville 1D 1
Springfield 2F.46
Steubenville 8E 22

Ohio

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SCALE OF MILES
0 5 10 15 20 25 30

Scale—35 miles to the inch.

†POP. SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACE

INDIANA
Pop. 2,700,876.

COUNTIES

	Pop Thous
Adams 8D	21
Allen 8C	93
Bartholomew 6H	24
Benton 3D	12
Blackford 8E	15
Boone 5F	24
Brown* 6H	7
Carroll* 5D	17
Cass 5D	36
Clark 7K	30
Clay* 4H	32
Clinton 5E	26
Crawford* 5K	12
Daviess* 4J	27
Dearborn 9I	21
Decatur 7H	18
DeKalb 8B	25
Delaware 7E	51
Dubois 4K	19
Elkhart 7A	49
Fayette 8G	14
Floyd 7K	30
Fountain 3F	20
Franklin 8H	15
Fulton 6G	16
Gibson 3K	30
Grant 6H	51
Greene 4I	36
Hamilton 6F	27
Hancock 7G	19
Harrison 6K	20
Hendricks 5G	20
Henry 8F	29
Howard 6E	33
Huntington 7C	28
Jackson 6I	24
Jasper 4C	13
Jay 8E	24
Jefferson 8J	20
Jennings* 7I	14
Johnson 6H	20
Knox 3J	39
Kosciusko* 6B	27
Lagrange 7A	15
Lake 3B	82
Laporte 5A	45
Lawrence 5I	30
Madison 7F	65
Marion 6G	263
Marshall 6B	24
Martin 4J	12
Miami 6D	29
Monroe 5H	23
Montgomery 4F	29
Morgan 5H	21
Newton 3O	10
Noble 7B	24
Ohio 9I	4
Orange 5J	17
Owen* 4H	14
Parke 4G	22
Perry 4L	18
Pike 3J	19
Porter 4B	20
Posey 2L	21
Pulaski 5G	13
Putnam 4G	20
Randolph 8F	29
Ripley 8I	19
Rush 7G	19
St. Joseph 6A	84
Scott 7G	8
Shelby 7G	26
Spencer 4L	20
Starke 5B	10
Steuben 8A	14
Sullivan 3L	32
Switzerland 8J	9
Tippecanoe 4E	40
Tipton 6E	17
Union 9G	6
Vanderburg 3L	77
Vermilion* 3F	18
Vigo 3G	87
Wabash 7D	26
Warren 3E	10
Warrick 3L	21
Washington 6J	17
Wayne 9G	43
Wells 8O	22
White 4D	17
Whitley 7C	16

TOWNS

Town. Key.	Pop.
Albany 8E	1
Albion 7B	1
Alexandria 7E	5
Anderson 7F	22
Angola 8A	2
Argos 6B	1
Attica 3E	3
Auburn 8B	3
Aurora 9I	4
Batesville 8H	2
Bedford 5I	8
Berne 8D	1
Bicknell 3J	2
Bloomfield 4I	2
Boonville 3L	3
Bourbon 6E	1
Brazil 4G	+9
Bremen 6B	2
Brook 3C	1
Brownstown 6I	2
Brookville 8H	1
Butler 9B	1
Cambridge City NF	2
Camden 4L	1
Centerville 8G	1
Chesterton 4A	1
Clay City 4H	1
Clinton 5E	6
Colfax 6D	1
Columbia City 7C	1
Columbus 6H	8
Connersville 8G	7
Converse 6D	1
Corydon 6K	1
Covington 3F	2
Crawfordsville 4F	9
Crothersville NJ	1
Crown Point 3B	2
Daleville 7E	1
Dalton 5G	4
Delaware 8D	2
Dunlap 3D	1
Dunkirk 8E	3
Eaton 8D	1
Edinburg 6H	2
Elkhart 6K	11
Elwood 6E	5
English 5K	+5
Evansville 3L	69
Fairmount 7E	2
Farmsburg 3H	1
Flora 5D	1
Fort Branch 3K	1
Fortville 6F	1
Fort Wayne 9C	63
Fowler 3D	1
Frankfort 6E	2
Franklin 6H	4
French Lick 5J	1
Gary 3A	16
Garrett 8B	3
Gas City 7E	3
Geneva 8D	1
Goodland 3D	1
Goshen 7A	8
Green Castle 4G	3
Greenfield 7G	4
Greensburg 7H	5
Greentown 6D	1
Hammond 3A	20
Harmony 4G	1
Hartford City 8E	6
Hobart 3B	1
Hope 7H	1
Howe 2L	1
Huntingburg 4K	2
Huntington 7C	10
Hymera 3H	1
Indianapolis 6G	233
Jasonville 4I	3
Jasper 4K	2
Jeffersonville 7K	10
Jonesboro 7E	1
Kendallville 8B	4
Kentland 3D	1
Knightstown 4G	2
Knox 5B	1
Kokomo 6E	17
Ladoga 4F	1
La Grange 7A	1

SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED TYPE.

MICHIGAN

MICHIGAN
Pop. 2,810,173

COUNTIES

	Pop. Thous.
Alcona*	13N...5
Alger	5J.....7
Allegan	21F...39
Alpena	12N...19
Antrim	13H...15
Arenac*	16M...9
Baraga*	4E.....6
Barry	21H...22
Bay	17M.....68
Benzie	14F....10
Berrien	23E...53
Branch	23F...25
Calhoun	22J..56
Cass	23G.....20
Charlevoix 11H	19
Cheboygan	8P.17
Chippewa	5P...24
Clare	16K.....9
Clinton	20K...23
Crawford	13K..3
Delta	7H.....30
Dickinson	7F.20
Eaton	21J.....30
Emmet	9O....18
Genesee	20M..64
Gladwin*	16K..8
Gogebic	5A...23
Grand Traverse 13H	23
Gratiot	18K...28
Hillsdale	23K.29
Houghton	3E..88
Huron	17O....34
Ingham	21K...53
Ionia	20J.....33
Iosco	15N.....9
Iron	6E.....19
Isabella	17K..23
Jackson	22L...53
Kalamazoo 22G	60
Kalkaska	18J..8
Kent	20G....159
Keweenaw	2F..7
Lake*	16G.....4
Lapeer	19N...26
Leelanau* 12G	10
Lenawee	24L. 47
Livingston 21M	17
Luce	5N.....4
Mackinac	7O....9
Macomb	21P...32
Manistee	15F..26
Marquette	5H..46
Mason	16E.....21
Mecosta	17H..19
Menominee 10G	25
Midland	17L..14
Missaukee* 15J	10
Monroe	24N...32
Montcalm	19J..32
Montmorency* 12L	3
Muskegon 19F	40
Newaygo	18G.19
Oakland	21N..49
Oceana	17F...18
Ogemaw	15L...8
Ontonagon	4C..8
Osceola*	17H..17
Oscoda*	13L...2
Otsego	12K....6
Ottawa	19F...45
Presque Isle* 8R	11
Roscommon 14K	2
Saginaw	18M.89
St. Clair	20P.52
St. Joseph* 23G	25
Sanilac*	18P..33
Schoolcraft	7L.8
Shiawassee 20L	33
Tuscola	18O...34
Van Buren 22G	33
Washtenaw 22M	44
Wayne	22O..531
Wexford	15H..20

TOWNS

Town.	Key.	Pop.
Adrian	24L	...10
Albion	22K	...5
Algonac	21P	...1
Allegan	21F	...3
Allenville	6O	...2
Allouez	2E	...2
Alma	18K	...2
Alpena	12N	...12
Ann Arbor 22M		...14
Atlanta	12L	..†08
Atlantic Mine 3E		...1
Bad Axe	17O	..1
Baldwin	16G	..†5
Bangor	22F	...1
Baraga	4E	...1
Bark River 8H		...1
Battle Creek 22H		...25
Bay City	17M	.45
Belding	19H	..4
Bellaire	13H	..1
Benton Harbor 23E		...8
Bessemer	5A	..4
Big Rapids 17H		...4
Birmingham 21O		...1
Blissfield	24M	..1
Boyne City	12J	.5
Bronson	24H	..1
Brookfield	22J	..1
Buchanan	24E	.1
Cadillac	15H	..8
Calumet	2E	..21
Caro	18O	...2
Carrollton 18N		...1
Cass City	17O	..1
Cassopolis	23G	.1
Centerville 23G		..†6
Charlevoix 11H		...2
Charlotte	21J	..4
Chassell	3E	...1
Cheboygan	8P	..6
Chelsea	22M	..1
Chesaning	19L	.1
Clare	17K	...1
Clinton	23M	..1
Coldwater	23J	.5
Constantine 24G		...1
Corunna	20L	..1
Crosswell	18P	..1
Crystal Falls 6E		...3
Decatur	23F	..1
Delray	22O	...6
Detroit	22O	..465
Dowagiac	23F	..5
Eagle River 2F		..†1
East Jordan 12J		...2
East Lake	15F	.1
East Tawas 15N		...1
Eaton Rapids 21K		...2
Ecorse	22N	...1
Elk Rapids 13H		...1
Escanaba	7H	..13
Essexville 17N		...1
Evart	16H	...1
Fenton	20M	..2
Flint	20M	...38
Ford City	20N	.1
Ford River 7H		...1
Frankfort	14F	..1
Fremont	18F	..2
Gaylord	12K	..†1
Gladstone	7H	..4
Gladwin	16K	.†9
Grand Haven 19F		...5
Grayling	13K	..1
Greenland	4D	..1
Greenville	19H	.4
Grand Rapids 20G		...112
Grand Ledge Hauptranck 22O		...3
Hancock	2E	...8
Harbor Beach 17P		...1
Harbor Springs 8O		...1
Harrison 16K		..†5
Harrisville 13N		..†4
Hart	17F	...1
Hartford P. 23F		...1
Hastings	21H	..4
Hersey	17H	..†3
Highland Park 22O		...4
Hillsdale	23K	..5
Holland	20F	..10
Holly	20N	...1
Homer	23J	...1
Houghton	3E	..5
Howard City 18H		...1
Howell	21M	...2
Hubbell	2E	...1
Hudson	24K	..2
Imlay City 20O		...1
Ionia	20J	...5
Iron Mountain 7F		...9
Iron River	6E	..2
Ironwood	5A	..12
Ishpeming	5G	.12
Ithaca	18K	...1
Jackson	22L	..31
Jonesville	23K	..1
Kalamazoo 22G		...39
Kalkaska	13J	..1
Lake City 15J		...†7
Lake Linden 2E		...2
Lake Odessa 20J		...1
L'Anse	4E	...†7
Lapeer	19N	..3
Lansing	21K	..31
Mt. Clemens 21P		...7
Mt. Pleasant 17K		...3
Munising	3J	..2
Muskegon Hgts	19F	.24
Nahma	8G	...1
Nashville	21J	..1
Natina	7J	...1
Newberry	5N	...5
Niles	24F	.22
Northville	22O	..4
Norway	7G	...2
Ontawa	9Q	...2
Ontonagon	4C	..2
Otsego	21G	...1
Ovid	19L	...9
Owosso	20L	...1
Oxford	20N	...1
Paw Paw 22G		...1
Pellston	8O	...1
Petersburg	17D	.4
Petoskey	9O	..1
Plainwell	23G	.1
Plymouth	22N	..1
Pontiac	21N	...18
Port Huron 20P		...1
Portland	20J	..1
Quincy	23J	..1
Reading	24K	..1
Red Jacket	3E	.4
Reed City	16H	.1
Republic	5F	..2
Richmond	20P	.1
River Rouge 22O		...4
Rockford	21O	.1
Rockland	4C	..†7
Rogers	20O	..1
Roscommon 14K		..†4
Royalaak	21O	.1
Saginaw	18M	.50
Saint Charles 18L		...1
St. Clair	20Q	.2
St. Clair Hgts 22O		...1
St. Ignace	7O	.2
St. Johns	20K	.3
St. Joseph 23E		...5
St. Louis	15K	.1
Sandusky 18P		..†9
Sault Ste. Marie 5P		...12
Schewaing 17N		...1
Shelby	17L	...1
South Haven 22F		...3
South Range 3E		...1
Sparta	19J	...1
Standish	16M	..†6
Stanton	19J	...3
Sturgis City 15N		...1
Tecumseh	23M	.2
Three Oaks 24E		...1
Three Rivers 23G		...5
Traverse City 13H		..12
Trenton	23O	..1
Union City	23J	.1
Vassar	18N	..1
Vicksburg	23G	.1
Vulcan	7G	...1
Wayne	22N	..1
West Branch 16L		...1
Whitehall	18F	.1
Williamston	21L	...1
Wyandotte	22O	...8
Yale	19P	...1
Ypsilanti	22N	.6

*POP. SHOWN IN HUNDREDS.

*POP. OF COUNTY SEAT BELOW 1 THOUSAND.

COUNTY SEATS IN HEAVY FACED T

WISCONSIN
Pop. 2,333,860.

COUNTIES

	Pop. Thous.
Adams* 6H	8
Ashland 4C	21
Barron 2E	29
Bayfield 3C	15
Brown 8G	54
Buffalo 2G	16
Burnett* 1D	9
Calumet 8H	16
Chippewa 3F	32
Clark 4F	30
Columbia 6I	31
Crawford 3I	16
Dane 6J	77
Dodge 7I	47
Door 9F	18
Douglas 2C	47
Dunn 2F	25
Eau Claire 3F	32
Florence 8D	3
Fond du Lac 7H	51
Forest 7D	6
Grant 4J	39
Green 6K	21
Green Lake 7H	15
Iowa 5J	22
Iron 5C	4
Jackson 4C	17
Jefferson 7J	34
Juneau 5H	19
Kenosha 9K	32
Kewaunee 9G	16
La Crosse 3H	43
Lafayette 5K	20
Langlade 7E	17
Lincoln 5E	19
Manitowoc 9H	44
Marathon 5F	55
Marinette 8E	33
Marquette 6H	10
Milwaukee 9J	433
Monroe 4H	28
Oconto 8F	25
Oneida 6D	11
Outagamie 8G	49
Ozaukee 9I	17
Pepin 2G	7
Pierce 1F	22
Polk 1E	21
Portage 6G	30
Price 5D	13
Racine 9J	57
Richland 4I	18
Rock 7K	55
Rusk 3E	11
Saint Croix 1F	25
Sauk 5I	32
Sawyer 3D	6
Shawano 7F	31
Sheboygan 8H	54
Taylor 4E	13
Trempealeau* 3G	22
Vernon 3I	28
Vilas 6D	6
Walworth 8K	29
Washburn* 2D	8
Washington 8I	23
Waukesha 8I	27
Waupaca 6F	2
Waushara* 6H	18
Winnebago 8H	62
Wood 5G	30

TOWNS

Town.	Key.	Pop.
Albion	7J	1
Algoma	10G	2
Alma	2G	1
Antigo	7F	7
Appleton	8G	16
Arcadia	6D	2
Arcadia	3G	1
Ashland	4C	11
Augusta	5G	1
Baraboo	6I	6
Barron	2E	1
Bayfield	4B	2
Balsam Lake 1E		229
Beaver Dam	7L	6
Beloit	7K	15
Berlin	7H	4
Black River Falls	4G	1
Bloomer	3F	1
Boscobel	4J	1
Brodhead	6K	1
Burlington	8K	3
Cedarburg	9I	1
Chilton	8H	1
Chippewa Falls 3F		8
Clintonville	7G	1
Columbus	7I	2
Crandon	7E	1
Cudahy	9J	3
Cumberland	2E	1
Darlington	5K	1
Dartford	7H	563
Delavan	8K	2
De Pere	8G	4
Dodgeville	5J	1
Durand	2G	1
Eagle River	6D	1
Eau Claire	3F	18
Edgerton	7J	2
Elkhorn	8K	1

WISCONSIN. Towns—Cont.

Town. Key. Pop.
River Falls 1F 1
Seymour 8G 1
Shawano 8F 2
Sheboygan Falls 9H 26
Shell Lake 2D 1
Shullsburg 5K 1
South Milwaukee 9J 1
Sparta 4H 3
Spirit 5E 1
Spooner 2D 2
Stanley 4F 1
Stevens Point 6F 1
Stoughton 7I 4
Sturgeon Bay 10F 1
Sun Prairie 7J 1
Superior 2B 40
Tomah 4H 3
Tomahawk 6D 2
Two Rivers 9H 4
Viroqua 4I 2
Washburn 4B 3
Waterloo 7J 1
Waukesha 8I 8
Waupaca 6F 2
Waupun 7I 3
Wausau 6F 16
Wauwatosa 9J 3
West Allis 9I 6
West Bend 9I 2
West Milwaukee 9J 1
Whitehall 3G 1
Whitewater 7J 3
Winchester 7G 1
Wittenberg 7F 1

Fremont 8J 1
Florence 8D 1
Fond du Lac 7H 18
Fort Atkinson 7J 3
Fountain City 2H 1
Friendship 4I 2
Grand Rapids 6G 1
Grantsburg 2D 1
Greenville 9J 2
Green Bay 9G 25
Hartford 8I 1
Hayward 3D 3
Highland 5J 1
Horicon 8I 1
Hudson 1F 2
Hurley 5C 1
Irondale 5C 1
Iron River 3C 1
Janesville 7K 13
Jefferson 7J 1
Kaukauna 8G 4
Kenosha 9K 21
Kewaunee 9G 1
Kiel 9H 1
Kilbourn 6I 1
La Crosse 3H 30
Ladysmith 4E 2
Lake Geneva 8K 1
Lake Mills 7J 1
Lancaster 4J 1
Land O' Lakes 1E 1
Little Chute 8G 1
Loyd 6I 1
Madison 6J 26
Manitowoc 9H 13
Marinette 9F 14
Marshfield 5G 1
Mason 4C 1
Mauston 5H 1
Maxville 8I 1
Medford 4F 1
Menasha 8G 6
Menomonie 2F 3
Merrill 6F 5
Milwaukee 9J 373
Mineral Point 5J 2
Mondovi 3G 1
Monroe 6K 4
Montello 6H 1
Mount Horeb 7J 1
New Glarus 5H 1
Neenah 8H 5
Neillsville 4G 1
Nekoosa 6G 1
New Lisbon 5H 1
New London 7G 3
New Richmond 1F 1
Niagara 8D 1
North Fond du Lac 7H 1
North Milwaukee 9J 1
Oconomowoc 8J 3
Oconto 9F 5
Oconto Falls 8F 1
Ontarah 4C 1
Onreo 7H 1
Onaiaska 3H 1
Oshkosh 8H 33
Park Falls 5D 1
Pewaukee 9J 1
Phillips 5E 1
Phillips 8E 2
Pine River 6F 1
Platteville 4J 4
Plymouth 9H 3
Portage 6I 5
Port Washington 9I 1
Prairie du Chien 3J 3
Princeton 7H 38
Racine 9J 77
Redgranite 6F 5
Reedsburg 5J 2
Rhinelander 6E 1
Ripkake 5E 2
Rice Lake 2E 3
Richland Center 5I 2
Ripon 7H 5

POP. SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED TYPE.

ILLINOIS
Pop. 5,638,591.

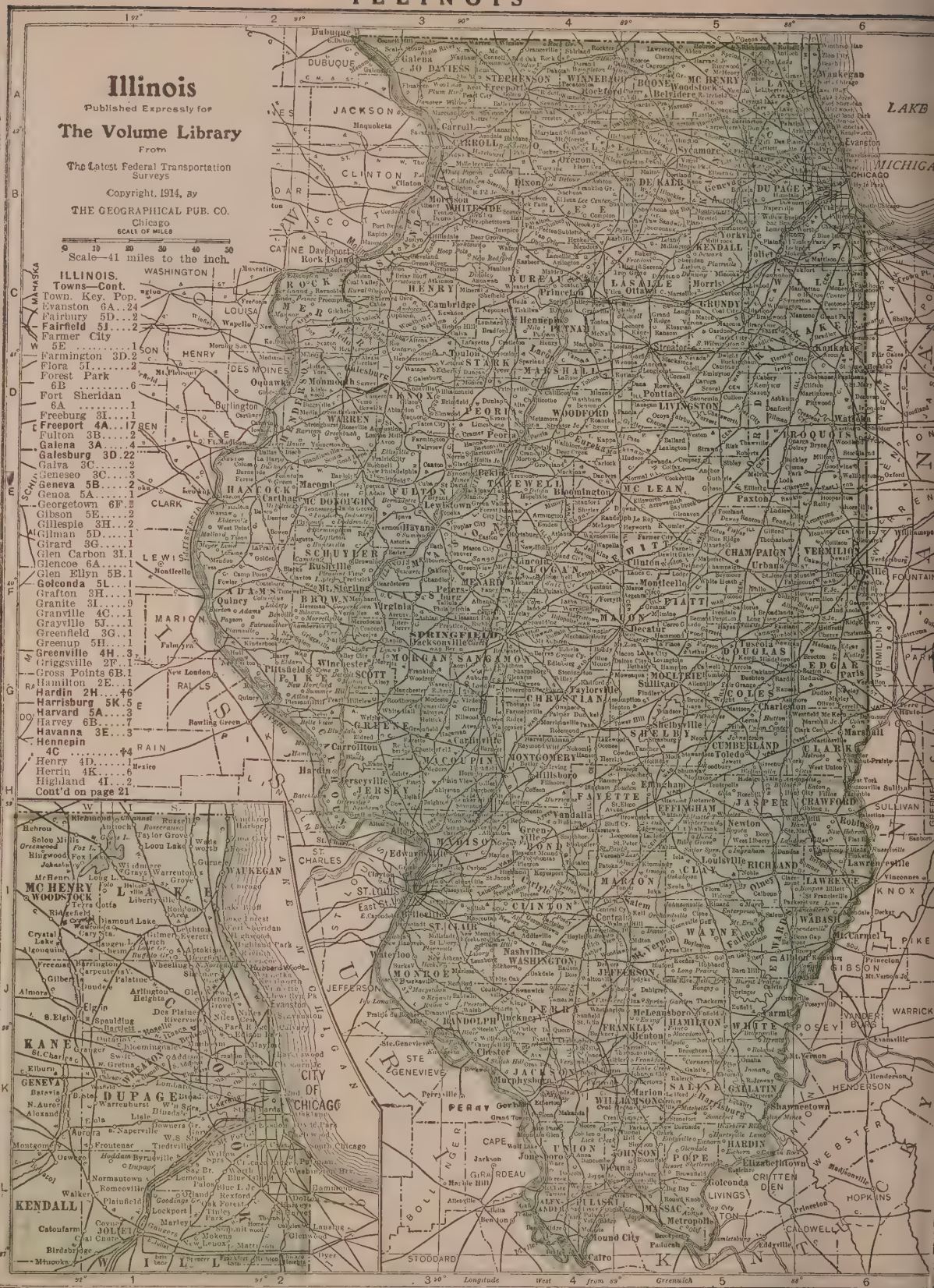
COUNTIES

	Pop. Thous.
Adams 2F	6
Alexander 4L	2
Bond 1H	1
Boone 5A	15
Brown 2F	1
Bureau 4C	13
Calhoun* 2H	8
Carroll 6I	18
Cass 3F	17
Champaign 5F	51
Christian 4G	34
Clark 6G	23
Clay* 5I	18
Clinton 4I	22
Coles 5G	34
Cook 6B	2,405
Crawford 6H	26
Cumberland* 5H	14
Dekalb 5B	33
Dewitt 4F	18
Douglas 5G	19
Dupage 5B	33
Edgar 6G	27
Edwards 5G	10
Effingham 5H	20
Fayette 4H	28
Ford 5E	17
Franklin 4J	25
Fulton 3E	49
Gallatin 5K	14
Greene 3H	22
Grundy 5C	24
Hamilton 5G	18
Hancock 2E	30
Hardin* 5L	7
Henderson* 2D	9
Henry 3C	41
Iroquois 6D	35
Jackson 4K	35
Jasper 5H	18
Jefferson 4J	29
Jersey 3H	13
Jo Daviess 3A	22
Johnson 4L	14
Kane 5B	91
Kankakee 6C	40
Kendall* 5B	10
Knox 3D	46
Lake 5A	55
Lasalle 5C	90
Lawrence 6I	22
Lee 4B	27
Livingston 5D	39
Logan 4F	30
McDonough 2E	26
McHenry 5A	32
McLean 4E	68
Macon 4F	54
Macoupin 3H	50
Madison 3J	90
Marion 4I	35
Marshall 4D	15
Mason 3E	17
Massac 5L	14
Menard 3F	12
Mercer* 2D	19
Monroe 3G	13
Montgomery 4H	35
Morgan 5G	34
Moultrie 5G	14
Ogle 4B	27
Peoria 4D	100
Perry 4J	22
Piatt 5F	16
Pike 2G	28
Pope 5L	11
Pulaski 4L	15
Putnam* 4C	7
Randolph 3K	29
Richland 5I	15
Rock Island 2C	70
St. Clair 5A	119
Saline 5K	30
Sangamon 4F	91
Schuyler 2F	14
Scott 3G	10
Shelby 5G	31
Stark 3D	10
Stephenson 4A	36
Tazewell 4E	34
Union 4L	21
Vermilion 6F	77
Wabash 6I	14
Warren 2D	23
Washington 4J	18
Wayne 5J	25
White 5J	23
Whiteside 3B	34
Will 5C	84
Williamson 4K	45
Winnebago 4A	63
Woodford 4D	20

TOWNS

Town.	Key.	Pop.
Abingdon	3D	2
Albion	**5G**	**1**
Aledo	2C	2
Altamount	5H	1
Alton	3H	17
Amboy	4B	1
Anna	4L	2
Arcola	5G	2
Arlington Heights	6A	1
Arthur	5G	1
Ashland	3F	1
Assumption	4G	1
Astoria	3F	1
Athens	4E	1
Atlanta	4E	1
Auburn	3G	1
Augusta	2E	1
Aurora	5B	21
Averyille	4D	1
Barrington	5A	1
Barry	2G	1
Beardstown	3F	6
Belleville	3D	21
Belvidere	**5A**	**7**
Benent	5F	1
Berlin	3H	1
Benton	**4I**	**2**
Berwin	6B	5
Bloomington	**4E**	**23**
Blue Island	6B	3
Bluffdale	6C	1
Bracco	4I	2
Bridgeport	6I	2
Brookfield	6B	2
Brookport	5L	1
Brooklyn	3I	1
Bunker Hill	3H	1
Bushnell	3E	1
Cairo	**4L**	**14**
Cambridge	**3C**	**1**
Camp Point	1	
Canton	3E	10
Carbondale	4K	5
Carlin	5D	1
Carlinville	**3H**	**3**
Carlyle	**4I**	**2**
Carmi	**5I**	**2**
Carpenterville	1	
Carriers Mills	5A	1
Carrollton	3H	2
Carrollton	**3K**	**1**
Carthage	**2E**	**2**
Casey	5G	1
Central City	4I	1
Centralia	4L	7
Champaign	5F	12
Charleston	**5G**	**5**
Chatsworth	5D	1
Cherion	4E	1
Cherry	6F	1
Chester	**3K**	**2**
Chicago	**6B**	**2,165**
Chicago Heights	6B	1
Chillicothe	4D	1
Christian	6F	1
Christopher	4K	1
Chrisna	6B	1
Clinton	4F	5
Coal City	5C	2
Colchester	2E	1
Collinsville	3L	2
County	3C	31
Crystal Lake	5A	1
Cuba	3E	2
Dallas	2E	1
Danville	**6F**	**27**
Decatur	**4F**	**31**
Dekalb	5B	8
Delavan	4E	1
Depue	4C	1
Des Plaines	6A	1
Dixon	**4B**	**7**
Dolton	6B	1
Dorrisville	5K	1
Downers Grove	6B	2
	5A	2
Dundee	4J	5
Dwight	5D	2
Earlville	4D	1
East Dubuque	1	
East Dundee	**1**	
	5A	1
East Moline	3C	2
East Peoria	4D	1
East St. Louis	3L	58
Edwardsville	**3L**	**5**
Effingham	**5H**	**3**
Elburn	5A	1
Elgin	5B	23
Elmhurst	5B	2
Elmwood	3D	1
Elsah	3L	1

†POP. SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED T



TENNESSEE
Pop. 2,184,789.

COUNTIES

Pop. Thous.
Anderson 7V..17
Bedford 10N..22
Benton* 7H...12
Bledsoe* 10S...6
Blount 9W...20
Bradley 12T..16
Campbell* 6W 27
Cannon* 9P...10
Carroll 8F....23
Carter 2Y.....19
Cheatham* 6L.10
Chester 10P...9
Claiborne* 6X.23
Clay* 6R.....9
Cocke 8Z.....19
Coffee* 10P...15
Crockett* 9D..16
Cumberland* 8S 9
Davidson 7M.149
Decatur* 10G.10
Dekalb* 8P...15
Dickson* 7K..19
Dyer 8C.....27
Fayette 11C...30
Fentress* 6T..7
Franklin 11O.20
Gibson 8D....41
Giles 11L.....32
Grainger* 7Y..13
Greene 3X.....31
Grundy* 9Q...8
Hamblen 7Z...13
Hamilton 12R.89
Hancock* 6V.10
Hardeman 11D.23
Hardin 11G...17
Hawkins 6Z...23
Haywood 10C.25
Henderson 9F.17
Henry 7G.....25
Hickman 9J..16
Houston* 7J...6
Humphreys* 7H 13
Jackson* 6Q...15
James* 12T....5
Jefferson* 8Y..17
Johnson* 1Z..13
Knox 8W.....94
Lake* 6C.....8
Lauderdale 9B.21
Lawrence 11K.17
Lewis* 10K....9
Lincoln 11M..25
Loudon* 9V...13
McMinn 10U..21
McNairy* 11F.16
Macon* 6P....14
Madison 10E..39
Marion* 10Q..18
Marshall 10M.16
Maury 10L....40
Meigs* 10T....6
Monroe* 10V..20
Montgomery 6L 33
Moore* 11O....4
Morgan* 7U..11
Obion 6D.....29
Overton 6S....15
Perry* 10J.....8
Pickett* 5S....5
Polk* 12V.....14
Putnam 7R....29
Rhea 10S.....15
Roane* 8U....22
Robertson 7G.25
Rutherford 9N.33
Scott* 6U.....12
Sequatchie 10R.4
Sevier* 8X....22
Shelby 12A..191
Smith* 7P....18
Stewart 6J....14
Sullivan* 1Y..28
Sumner 6N....25
Tipton 10B...29
Trousdale* 6O..5
Unicoi 6J.....7
Union* 7W....11
Van Buren* 9R.2
Warren 9Q....16
Washington* 2X 23
Wayne* 11J....15
Weakley* 7F..31
White* 8R....15
Williamson 8M 24
Wilson 7O....25

TOWNS

Town. Key. Pop.
Alamo 9D....+3
Asland 6L....+6
Athens 10U....2
Altamont 9Q .....+1
Benton 12V...+3
Blountville 1Y .....+2
Binghampton 11A 1
Bolivar 11D....1
Bristol 1Y.....7
Brownsville 10C.2
Byrdstown 5S .....+1
Camden 7H...+6
Carthage 7P...+9
Celina 6R....+4
Centreville 9J...1
Chattanooga 12R 44
Clarksville 6L..8
Cleveland 12T..5
Clinton 7V.....1
Charlotte 7K .....+2
Coal Creek 7W.1
Columbia City 10L 5
Cookeville 7R...1
Covington 10B..2
Crossville 8S .....+7
Dandridge 8Y .....+4
Dayton 10S....1
Decatur 10T..+1
Decaturville 10G .....+3
Decherd 11P...1
Dickson 7K....1
Dover 6J.....+4
Dresden 7F...+7
Dunlap 10R....1
Dyer 8D.....1
Dyersburg 8C...4
Elizabethtown 2Y 2
Erin 7J.....+9
Erwin 6J.....1
Etowah 10U....1
Fayetteville 11M 3
Franklin 8M...2
Gainsboro 6Q .....+2
Gallatin 6N....2
Glass 7D.....1
Greeneville 3X..1
Greenfield 7F..1
Harriman 8U..3
Hartsville 6O .....+6
Henderson 10F.1
Hohenwald 10K .....+8
Humboldt 9E...3
Huntington 8F.1
Huntsville 6U .....+2
Jacksboro 6W .....+8
Jackson 10E...17
Jackson City 6Q 15
Jamestown 6T .....+4
Jasper 12Q...+9
Jefferson 7Y....1
Jefferson City 7X 1
Jellico 6W.....1
Johnson 2X....8
Jonesboro 2X .....+8
Kingston 8U .....+8
Knoxville 8W 36
Lafayette 6P .....+6
Lafolletie 6W..2
Lawrenceburg 11K 1
Lebanon 9V....3
Lenoir 9Y....3
Lewisburg 10M..1
Lexington 9F..1
Linden 10Z....+3
Louisville 9S....1
Lynchburg 9Y...+4
110 .....+9
McKenzie 7F..1
McMinnville 9Q.2
Madisonville 10V .....+4
Manchester 10S .....+9
Martin 6E.....2
Maryville 9W..2
Maynardville 7W .....+4
Memphis 12A.131
Milan 8E.....1
Monterey 7R...1
Morristown City 7Z.4
Mountain City 1Z .....+5
Mountainriver 8X 1
Mount Pleasant 10M 1
Murfreesboro 7N...+4
Nashville 7N..116
Newport 8Z....1
Obion 7D.....1
Ooltewah 12T .....+2
Paris 7G.....3
Park City 8W..5
Pikeville 10S .....+6
Pulaski 1L....2
Ripley 9B....3
Rockwood 8X....3
Rogersville 6Z..1
Rutledge 7Y .....+3
Savannah 11G..1
Selmer 11F...+5
Sevierville 8X .....+6
Shelbyville 10N.2
Smithville 8P .....+8
Sparta 8R.....1
South Pittsburg 12P .....+3
St. Elmo 11S...2
Somerville 11C.1
South Fulton 6D 1
Spring City 9T 1
Springfield 7G..2
Springfield 6L..1
Sweet Water 10U 1
Tullahoma 11O.3
Union City 6D.4
Waverly 7H...+9
Waynesboro 11 .....+3
Wilburg 7U .....+2
Winchester 11O 1
Woodbury 9P .....+6
Whitewell 15R..2
Tiptonville 8C .....+5
Tracy City 12P .....+6
Trenton 8D....2
Union City 6D.4
Waverly 7H...+9
Wilburg 7U .....+2
Winchester 11O 1
Woodbury 9P .....+6
Whitewell 15R..2
Tullahoma 11O.3
Sparta 8R.....1
South Pittsburg 12P .....+3
St. Elmo 11S...2
Somerville 11C.1
South Fulton 6D 1
Spring City 9T 1
Springfield 7G..2
Springfield 6L..1
Sweet Water 10U 1
Tullahoma 11O.3
Union City 6D.4
Waverly 7H...+9
Waynesboro 11 .....+3
Wilburg 7U .....+2
Winchester 11O 1
Woodbury 9P .....+6

TENNESSEE
Towns—Cont.
Town. Key. Pop.
Lebanon 7O....3
Lenoir 9Y....3
Lewisburg 10M..1
Lexington 9F..1
Linden 10Z....+3
Louisville 9S....1
Lynchburg 9Y...+4
110 .....+9
McKenzie 7F..1
McMinnville 9Q.2
Madisonville 10V .....+4
Manchester 10S .....+9
Martin 6E.....2
Maryville 9W..2
Maynardville 7W .....+4
Memphis 12A.131
Milan 8E.....1
Monterey 7R...1
Morristown 7Z.4
Mountain City 1Z .....+5
Mountainriver 8X 1
Mount Pleasant 10M 1
Murfreesboro 7N...+4
Nashville 7N..116
Newport 8Z....1
Obion 7D.....1
Ooltewah 12T .....+2
Paris 7G.....3
Park City 8W..5
Pikeville 10S .....+6
Pulaski 1L....2
Ripley 9B....3
Rockwood 8X....3
Rogersville 6Z..1
Rutledge 7Y .....+3
Savannah 11G..1
Selmer 11F...+5
Sevierville 8X .....+6
Shelbyville 10N.2
Smithville 8P .....+8
Sparta 8R.....1
South Pittsburg 12P .....+3
St. Elmo 11S...2
Somerville 11C.1
South Fulton 6D 1
Spring City 9T 1
Springfield 7G..2
Springfield 6L..1
Sweet Water 10U 1
Tullahoma 11O.3
Union City 6D.4
Waverly 7H...+9
Waynesboro 11 .....+3
Wilburg 7U .....+2
Winchester 11O 1
Woodbury 9P .....+6

ILLINOIS.
Towns—Cont.
Town. Key. Pop.
Highland Park 6A 4
Highwood 6A...1
Hillsboro 4H...3
Hindsboro 5G .....+4
Hinsdale 5B...2
Homer 6F.....1
Hoopeston 6E..4
Jacksonville 5G 15
Jerseyville 3H..4
Johnstown 5G 3
Joliet 5C.....34
Jonesboro 4L...1
Kankakee 6C..13
Keithsburg 2C..1
Kewanee 3C....9
Knoxville 3D...1
Lacon 4D.....1
Ladd 4C.....1
La Grange 6B.5
La Grange Park 6B 1
La Harpe 2E...1
Lake Forest 6A.3
Lanark 4A.....1
Lasalle 4C....11
Lansing 6B....1
Lawrenceville 6I 3
Lebanon 3I....1
Lemont 5B.....2
Lena 3A.....1
Le Roy 5E....1
Lewistown 3E..2
Lexington 5E...1
Lincoln 4F....10
Litchfield 3H...5
Livingston 3I..1
Lockport 5C....2
Lovington 5G..1
Louisville 5I .....+6
McHenry 5A...1
McLeansboro 5G 1
Macomb 2E....5
Madison 3J....5
Manteno 6C....1
Marengo 5A....1
Mark 4C.....1
Marion 4K.....7
Marissa 3J.....2
Marsa 4F.....1
Marseilles 5C..3
Marshall 6G...2
Martinsville 6G.1
Maywood 6B...8
Mascoutah 3I..2
Mason City 3F.1
Mattoon 5G...11
Melrose Park 6B 4
Mendota 4C...3
Metropolis 5L..4
Milford 6E.....1
Millstadt 3I....1
Minonk 4D....2
Moline 3C....24
Momence 6C...2
Monmouth 2D..9
Monticello 5F..1
Morgan Park 6B 3
Morris 5C....4
Morrison 3B...2
Morton 4E.....1
Mound City 4L 2
Mounds 4L....1
Mount Carmel 6I 6
Mount Carroll 3A 1
Mount Olive 3G 3
Mount Sterling 2F 1
Mount Vernon 4I 8
Mowequaqua 4G.1
Murphysboro 4K 7
Naperville 5B..3
Nashville 4J....2
Nauvoo 2E.....1
Neoga 5G.....1
New Athens 3J 1
New Baden 4L.1
Newman 5G....1
Newton 5H.....2
Nokomis 4H...1
Normal 4E.....4
Norris City 5K.1
North Chicago 6A 3
Oak Park 6B.19
Oakland 5G....1
Oblong 6H.....1
Odell 5D.....1
Odin 4I.....1
O'Fallon 3I....2
Olney 5I.....5
Onarga 5D.....1
Oquawka 2Q...1
Oregon 4B.....2
Ottawa 5C....9
Palatine 5A....1
Palestine 6H...1
Pana 4G.....6
Paris 6G.....7
Park Ridge 6B.2
Pawnee 4G....1
Paxton 5E.....2
Pecatonica 4A..1
Pekin 4E.....9
Peotone 6C....1
Peoria 4D.....66
Percy 4J.....1

SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED TYPE.

Pop. 2,138,093.

ALABAMA

ALABAMA

COUNTIES

	Pop. Thous.
Autauga	14J..20
Baldwin*	23E.18
Barbour	17P..32
Bibb*	11G....22
Blount*	6K...21
Bullock	16N...30
Butler	18J....29
Calhoun	7N...39
Chambers	12P.36
Cherokee*	5O..20
Chilton	12L...23
Choctaw*	16B.18
Clarke*	18D...30
Clay	10N.....21
Cleburne*	8P..13
Coffee	19M....26
Colbert	3E....24
Conecuh	19H..21
Coosa*	11L....16
Covington	20L.32
Crenshaw	18L.23
Cullman	6J....28
Dale	19O.....21
Dallas	15G....53
Dekalb	3N....28
Elmore	13N...28
Escambia	21H.18
Etowah	6M...39
Fayette*	8E...16
Franklin	4D..19
Geneva*	21N..26
Greene	12D...22
Hale	13E.....27
Henry	19P....20
Houston	21P..32
Jackson	2M...32
Jefferson	9H..226
Lamar*	7C....17
Lauderdale	1E.30
Lawrence*	4G.21
Lee	13P.....32
Limestone	2H.26
Lowndes*	16J.31
Macon	14O....26
Madison	2K...47
Marengo	15D..39
Marion*	5D...17
Marshall	1L...28
Mobile	22C....80
Monroe*	19F..27
Montgomery	15L.....82
Morgan	4H...33
Perry	13F.....31
Pickens*	10C..25
Pike	18M.....30
Randolph*	10P.....24
Russell*	15P..25
Shelby	10K...26
St. Clair*	7L.20
Sumter*	14C..28
Talladega	10M 37
Tallapoosa	12M 31
Tuscaloosa	10F 47
Walker	7F....37
Washington*	20C 14
Wilcox*	17F..33
Winston*	5F..12

TOWNS

Town.	Key.	Pop.
Abbeville	18Q	..1
Adger	9H	1
Alabama City	6M	4
Albertville	5L	..1
Alexander City	11N	1
Altoona	6L	1
Andalusia	20K	.2
Anniston	8N	..12
Ashland	10N	...1
Ashville	7L	2
Athens	2H	1
Atmore	21F	1
Attalla	6M	2
Auburn	13P	1
Battelle	3O	1
Bessemer	9H	..10
Birmingham	9J	132
Blocton	11G	..2
Boaz	5L	1
Brewton	21H	..2
Bridgeport	1N	..2
Brighton	9H	...1
Brookwood	10G	.1
Butler	16C	1
Camden	16C	6
Carbon Hill	7F	.1
Carrollton	10C	.4
Center	5O	3
Centerville	12G	.7
Clanton	12K	...1
Clayton	17P	1
Columbia	20Q	1
Columbiana	10K	1
Cordova	7G	1
Cullman	5J	2
Dadeville	12N	..1
Daphne	24D	5
Decatur	3H	4
Demopolis	14D	.2
Dothan	20P	7
Double Springs	5F	1
Edwardsville	80	 3
Elba	19M	..20
Eufaula	17Q	.4
Eutaw	12D	1
Evergreen	19H	..1
Fackler	2M	2
Fayette	8D	6
Fort Payne	4N	6
Florence	2E	..6
Gadsden	6M	.10
Georgiana	18J	.1
Girard	14R	.4
Greensboro	13D	.2
Greenville	17K	.3
Guntersville	4L	1
Hamilton	5D	..4
Haleyville	5E	.1
Hartford	21N	.1
Hartselle	4H	.1
Headland	20P	.1
Huntsville	2K	.7
Jackson	19D	...1
Jacksonville	TN	2
Jasper	7F	1
Jonesboro	9H	..1
Lanett	12Q	...3
Linden	15D	...1
Lineville	10O	..1
Livingston	13C	.8
Lockhart	21L	.1
Luverne	18L	..1
Marion	13G	...1
Mobile	23C	...51
Monroeville	10F	6
Montgomery	15L	33
Moulton	4G	...3
Mount Vernon	21C	.1
New Decatur	3H	6
Oakman	8F	...1
Opelika	13P	...4
Oneonta	8K	...6
Ozark	19O	2
Phoenix	11R	.3
Prattville	14K	.2
Roanoke	10T	.2
Rockford	12L	.2
Russellville	3E	.2
Samson	21M	..1
Sarrton	8J	...1
Scottsboro	3M	..3
Seale	15O	...1
Selma	14H	...13
Sheffield	2E	...1
St. Stephens	17E	1
Sylacauga	10L	..1
Talladega	9M	.5
Tallassee	14N	..1
Thomas	8J	1
Thomasville	17E	1
Troy	17N	4
Tuscaloosa	10E	.8
Tuskegee	14O	.2
Union Springs	15O	4
Uniontown	14H	.1
Vernon	7O	1
Wedowee	9F	..4
Wetumpka	13N	.2
Whistler*	23C	..3

Scale—38 miles to the in/a.

Alabama

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SCALE OF MILES

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†POP. SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACE

MISSISSIPPI

Pop. 1,797,114.

COUNTIES

	Pop. Thous.
Adams	19G...25
Alcorn	1P...18
Amite*	20E...22
Attala	11L...28
Benton*	2M...10
Bolivar*	7E...48
Calhoun*	6L...17
Carroll*	9J...23
Chickasaw	6N ...22
Choctaw*	9M.14
Claiborne	17E.17
Clarke*	16P...21
Clay	8P.....20
Coahoma	5G..34
Copiah	17G...35
Covington	18L.16
De Soto*	2J...23
Forrest	20M...20
Franklin*	19E.15
George*	22P...6
Greene*	20P...6
Grenada	7K...15
Hancock	25M.11
Harrison	25N.34
Hinds*	15G...63
Holmes	11J...39
Issaquena*	12E 10
Itawamba	4Q..14
Jackson	25P...15
Jasper*	16N...18
Jefferson*	18D.18
Jefferson Davis*	18K ...12
Jones	18N....29
Kemper*	12P...20
Lafayette	4L 21
Lamar*	21M...11
Lauderdale	14P 46
Lawrence*	19H 13
Leake*	12E...18
Lee	5P.....28
Leflore	8H....36
Lincoln	18G...28
Lowndes	8Q...30
Madison	13J...33
Marion	20K...15
Marshall*	2L.26
Monroe	7P....35
Montgomery	9K 17
Neshoba	12N..17
Newton	14N..23
Noxubee	11P..28
Oktibbeha	9O.19
Panola*	4J...31
Pearl River	22L 10
Perry*	20N....7
Pike	21G....37
Pontotoc	5N..19
Prentiss	3P...16
Quitman*	5G.11
Rankin*	15J...23
Scott	14L.....16
Sharkey*	12E.15
Simpson*	16K.17
Smith*	16L...16
Sunflower	9F.28
Tallahatchie	6G 29
Tate	3J.....19
Tippah*	2N...14
Tishomingo	2R 13
Tunica*	2G...18
Union	3N.....18
Warren	14E...37
Washington	9D 48
Wayne*	18P...14
Webster*	8M...14
Wilkinson	21C.18
Winston	10M..17
Yalobusha*	6K 21
Yazoo	12F....43

TOWNS

Town. Key.	Pop.
Aberdeen	7P...3
Ackerman	10N..1
Amory	6P.....2
Ashland	2M...+1
Batesville	4J..+7
Bay Saint Louis	25M 3
Belen	5G...+1
Belzona	10G...1
Biloxi	24O...8
Booneville	3P...1
Brandon	15J..+7
Brookhaven	18G 5
Canton	13J.....3
Carrollton	9J..+6
Carthage	12L..+3
Charleston	6J...1
Chester	9M...+1
Clarksdale	5G..4
Cleveland	7F...1
Coffeeville	6K.+4
Collins	18L....2
Columbia	20K..2
Columbus	8Q...8
Corinth	1P....5
Crystal Springs	16G 1
Decatur	14N..+2
Dekalb	12P ...5
Durant	11K....1
Ellisville	18N..2
Fayette	1L 1
Flora	10J...+3
Fulton	4F...+3
Gattman	9D...1
Greenville	9D...6
Greenwood	8H...2
Grenada	7K...2
Gulfport	25N...6
Hattiesburg	20M 11
Hazlehurst	17G..2
Hernando	2L.+6
Holly Springs	2L 2
Houston	7N...1
Indianola	9F...1
Iuka	2R...1
Jackson	15H...21
Johnstons Station	2L 1
Kosciusko	11L...2
Laurel	18N...1
Leaksville	20P.+4
Leland	9D...1
Lexington	11J..+5
Liberty	20E...1
Long Beach	25O...1
Louisville	10N...1
Lucedale	22P..+7
Lumberton	21E..2
McComb	20G...1
Macon	11P...1
Magnolia	21G...1
Mayersville	12E 1
Meadville	19E..+2
Mendenhall	14P..23
Meridian	16K.+6
Monticello	19H ...+6
Mossponit	21G..3
Mount Olive	17E 1
Natchez	19C...11
New Albany	3N 2
New Augusta	20 1
Newton	13N...1
Ocean Springs	25O...1
Okolona	6O...2
Pascagoula	25O...3
Pass Christian	25M 3
Paulding	16N.+3
Pearlington	25L..1
Philadelphia	12N...3
Pittsboro	6M..+2
Pontotoc	5N ...3
Poplarville	22L..1
Port Gibson	17E ...+6
Prentiss	13K..+6
Purvis	21M..+7
Raltimer	16P..+9
Raymond	15G..+3
Richton	19O..+7
Ripley	2N ...+7
Rolling Fork	12E 1
Rosedale	7E...1
Sardis	4J...1
Senatobia	3J...1
Shelby	7J...1
Starkville	9O...2
Stonewall	16O...1
Summit	20G...+3
Sumner	6G...+3
Tunica	2G...+5
Tupelo	5P...+5
Vaiden	9K...+7
Vicksburg	12E..27
Vicksburg	12E 20
Waterville	4L 1
Waynesboro	18P ...+6
Walthall	8M..+1
Wesson	16G...2
Winona	8K...4
Woodville	21C...6
Yazoo City	12F ...6

SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED TYPE.

MINNESOTA

MINNESOTA
Pop. 2,075,708.

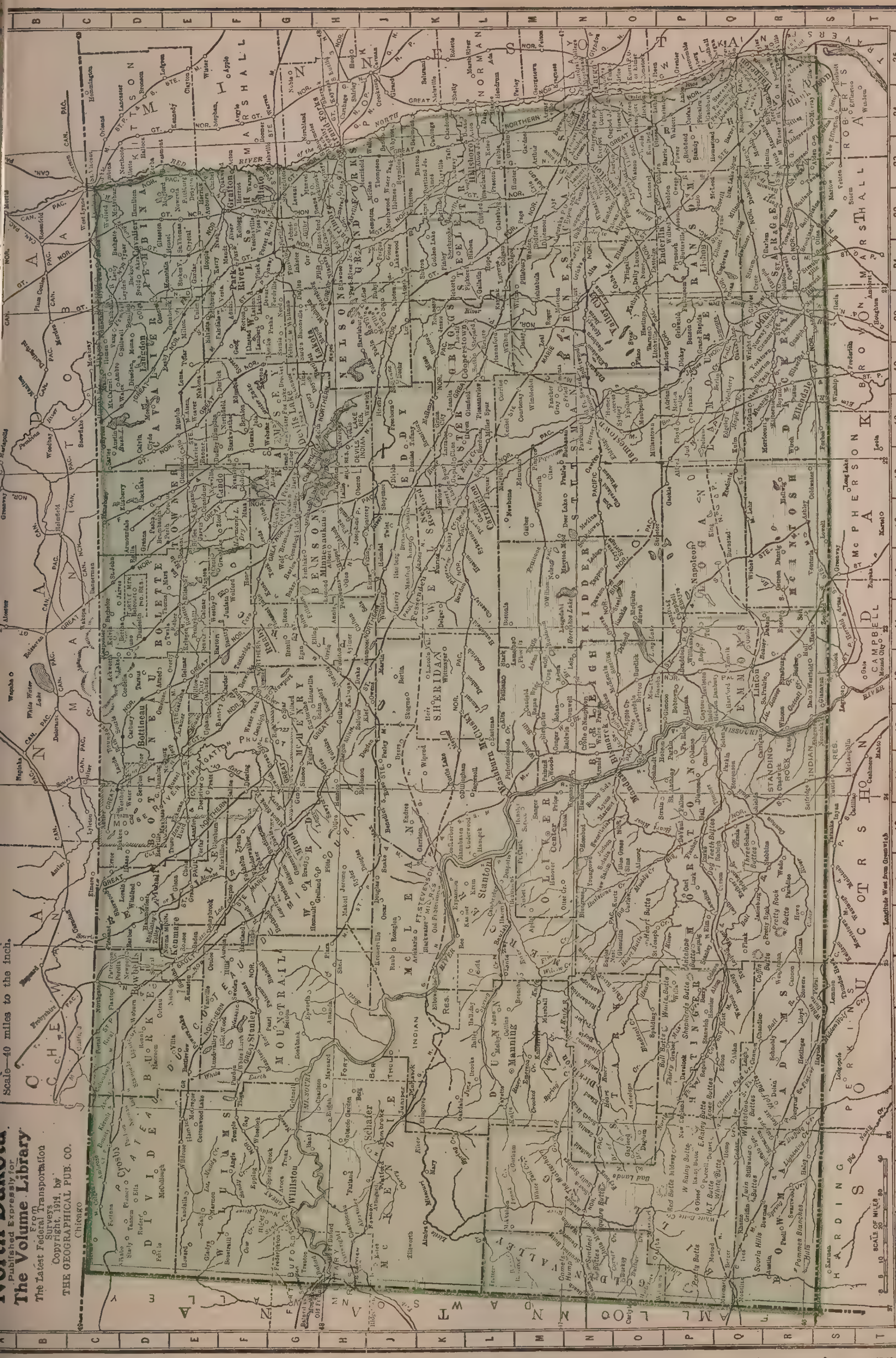
COUNTIES

County	Pop. Thous.
Aitkin 4F	10
Anoka 4I	12
Becker 2F	18
Beltrami 3E	19
Benton* 4H	11
Bigstone 1I	9
Blue Earth 4K	29
Brown 3K	20
Carlton* 5F	17
Carver 4J	17
Cass* 3E	11
Chippewa 2J	13
Chisago* 5L	13
Clay 1F	19
Clearwater* 2E	6
Cook* 6B	1
Cottonwood 2L	12
Crow Wing 3G	16
Dakota 5J	25
Dodge* 5K	12
Douglas 2H	17
Faribault 3L	19
Fillmore 5L	25
Freeborn 4L	22
Goodhue 5J	31
Grant* 2H	9
Hennepin 4J	333
Houston 6L	14
Hubbard 2F	9
Isanti* 4H	12
Itasca 4E	17
Jackson 2L	14
Kanabec* 4H	6
Kandiyohi 2I	18
Kittson* 1B	9
Koochiching 4C	6
Lacqui Parle 1I	15
Lake 6E	8
LeSuer 4K	18
Lincoln* 1K	9
Lyon 2K	15
McLeod 3J	18
Mahnomen* 2E	3
Marshall 1G	16
Martin 3L	17
Meeker 3I	17
Mille Lacs 4H	10
Morrison 3H	24
Mower 5L	22
Murray* 2L	11
Nicollet 4K	14
Nobles 2L	15
Norman 1E	13
Olmsted 5K	22
Ottertail 1G	46
Pine 5H	15
Pipestone 1K	9
Polk 1D	36
Pope 2H	12
Ramsey 4J	223
Red Lake 1D	15
Redwood 2J	18
Renville* 3J	23
Rice 4K	25
Rock 1L	10
Roseau* 2B	11
St. Louis 5F	163
Scott 4J	14
Sherburne* 4L	8
Sibley* 4K	15
Stearns 3H	47
Steele 4K	16
Stevens 2H	8
Swift 2I	12
Todd 3H	23
Traverse 1H	8
Wabasha 6K	18
Wadena 2G	8
Waseca 4K	13
Washington 5I	26
Watonwan 3L	11
Wilkin 1G	9
Winona 6K	33
Wright 4I	28
Yellow Medicine 2J	15

TOWNS

Town. Key.	Pop.
Ada 1E	1
Adrian 2L	1
Aitkin 4F	1
Akely 3F	1
Albert Lea 4L	6
Alexandria 2H	3
Anoka 4I	3
Appleton 2I	1
Aurora 5E	1
Austin 5L	6
Bagley 2E	†8
Barnesville 1F	1
Belle Plaine 4J	1
Bemidji 3E	5
Benson 2I	1
Biwabik 5E	1
Blue Earth 3L	2
Bovey	1
Brainerd 3G	8
Breckenridge 1G	1
Brown Valley 1H	1
Buffalo 4I	1
Buhl 5E	1
Caledonia 6L	1
Cambridge 4H	†9
Canby 1J	1
Cannon Falls 5K	1
Carlton 5F	†5
Cass Lake 3E	2
Center City 5I	†2
Chaska 4J	2
Chatfield 5L	1
Chisholm 5E	7
Cloquet 5F	7
Coleraine 4E	1
Crookston 1D	7
Dawson 1J	1
Delano 4I	1
Detroit 2F	2
Duluth 5F	78
East Grand Forks 1D	2
Edina	1
Elbow Lake 2H	†7
Elk River 4I	†8
Ely 6D	3
Eveleth 5E	7
Excelsior 4J	1
Fairmont 3L	2
Faribault 4K	9
Farmington 4J	1
Fergus Falls 1G	6
Foley 4H	†7
Fort Snelling 4J	1
Fosston 2D	1
Frazee 2F	1
Gilbert	1
Glencoe 3J	1
Glenwood 2H	2
Grand Marais 6B	†3
Grand Rapids 4E	2
Granite Falls 2J	1
Hallock 1B	†9
Hastings 5J	3
Henderson 4K	†7
Hibbing 5E	8
Hopkins 4J	2
Hutchinson 3J	2
International Falls 4C	1
Ivanhoe 1K	†4
Jackson 2L	1
Janesville 4K	1
Jordan 4J	1
Kenyon 5K	1
Lake City 5K	3
Lake Crystal 3K	1
Lester Prairie 3J	†4
Leseuer 4K	1
Leseuer Center 4K	†7
Litchfield 3I	2
Little Falls 3H	6
Little Falls 4D	5
Long Prairie 3H	1
Luverne 1L	2
Madelia 3K	1
Madison 1I	1
Mahnomen 2E	†7
Mankato 4K	10
Mantorville 5K	†4
Marshall 2K	2
Melrose 3H	2
Milaca 4H	1
Minneapolis 4J	301
Montevideo 2J	3
Montgomery 4K	1
Moorhead 1F	4
Mora 4H	†8
Morris 2H	1
Mountain Lake 3L	1
Mount Iron 5E	1
Nashwauk 4E	2
New Prague 4J	1
New Ulm 3K	5
Northfield 4K	3
North Mankato	

†POP. SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED T[YPE]



MINNESOTA.
Towns—Cont.

Town. Key. Pop.
Ortonville 1I...1
Osakis 3H.....1
Owatonna 4K...5
Park Rapids 2F 1
Pelican Rapids 1F 1
Perham 2F.....1
Pine City 5H...1
Pipestone 1K...2
Plainview 5K...1
Plainview Junction 5L......1
Preston 5L......1
Princeton 4H...1
Proctor 5F....2
Red Lake Falls 1D 1
Red Wing 5J...9
Redwood Falls 2J 1
Renville 2J......1
Richfield 2
Rochester 5K...7
Roseau 2B....†6
Rushford 6L...1
Saint Charles 5L 1
Saint Cloud 3H 10
Saint James 3L..2
Saint Louis Park 4J......1
Saint Paul 4J 214
Saint Peter 4K 4
Sandstone 5G..1
Sauk Center 3H 2
Sauk Rapids 3H 1
Shakopee 4J...2
Slayton 2L....†8
Sleepy Eye 3K 2
South Saint Paul 4J......[illegible]
South Stillwater 5J........1
Springfield 3K..1
Spring Valley 5L 1
Staples 3G.....[illegible]
Stillwater 5I..10
Thief River Falls 1C.....[illegible]
Tower 5D......1
Tracy 2K......1
Two Harbors 6E ....[illegible]
Virginia 5E...10
Wabasha 6K...[illegible]
Wadena 2G....1
Walker 3E....†9
Warren 1C.....1
Waseca 4K.....[illegible]
Waterville 4K..1
Wells 4L.......[illegible]
West Minneapolis 3
West Saint Paul 2
Wheaton 1H....1
White Bear 5I..1
Willmar 2I....4
Windom 2L....1
Winnebago 3L..1
Winona 6K...1[illegible]
Winthrop 3J....1
Worthington 2L ....[illegible]
Zumbrota 5K...[illegible]

N. DAKOTA.
Pop., 577,056.

COUNTIES

Pop. Thous.
Adams ....[illegible]
Barnes 20N...18
Benson* 16H..12
Billings* 3M..10
Bottineau 13D.17
Bowman* 3R...[illegible]
Burke* 7D.....[illegible]
Burleigh 11D..13
Cass 24N.....33
Cavalier 19D..15
Dickey 19S.....9
Divide* 3D.....[illegible]
Dunn* 6L......[illegible]
Eddy* 17J......[illegible]
Emmons* 13Q..[illegible]
Foster 17L.....5
Grand Forks 23H 27
Griggs 20L.....6
Hettinger* 6P..6
Kidder* 14Q...5
Lamoure* 19Q.10
Logan* 15P....6
McHenry* 13F.17
McIntosh* 16R.7
McKenzie* 4J..5
McLean* 11L.14
Mercer* 9L....4
Morton 11O...25
Mountrail* 8Q..[illegible]
Nelson 19H...10
Oliver* 10M....3
Pembina* 22C.14
Pierce 14F.....9
Ramsey 17G...15
Ransom 21P...10
Renville* 9D...7
Richland 25Q..19
Rolette* 15D...9
Sargent* 22R...9
Sheridan* 12K..8
Stark 5N......12
Steele* 21K.....7
Stutsman 18N..18
Towner 16E.....8
Traill 23L.....12
Walsh 22F.....19
Ward 10G......25
Wells* 15K.....11
Williams 3J...14

TOWNS

Town. Key. Pop.
Ashley 16R...†6
Beach 1N 1
Bismarck 11O...5
Bottineau 13D.1
Bowbells 7D...†6
Bowman 3R...†4
Brinsmade 16G ....†2
Buffalo 11N...13
Cando 16E.......1
Carrington 17L..1
Casselton 23N..1
Center 10M...†1
Cooperstown 20L 1
Crosby 4C....†2
Devils Lake 17G 5
Dickinson 5N....3
Ellendale 19S...1
Enderlin 22P...1
Fargo 24N.....14
Fessenden 15K ....†7
Forman 22R...†3
Grafton 22F...2
Grand Forks 23H 12
Hankinson 24R.1
Harvey 14J.....1
Hillsboro 23L..1
Jamestown 18N.4
Kenmare 7C....1
Lakota 19H....1
Lamoure 19Q..†9
Langdon 19D...1
Larimore 22H...1
Lidgerwood 23R 1
Linton 13Q....†6
Lisbon 21P.....1
Manning 6L.....
McClusky 12K.†5
Mandan 11O....3
Mayville 23K...1
Medora 3M....†8
Mott 6P.....†6
Minnewaukan 16H..........†5
Minot 10G.......6
Mohall 9D.....†4
Napoleon 15P...†3
New Rockford 17J ....†8
Oakes 20R......1
Park River 21F.1
Pembina 22C.†7
Rolla 15D.....†5
Rugby 14F......1
Schafer 4J....†1
Sherbrooke 21K ....†6
Stanton 9L....†3
Stanley 8Q....†5
Steele 14O....†5
Towner 13F...†6
Valley City 20N 4
Wahpeton 25Q.2
Washburn 11L.†6
Williston 3J...3

SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED TYPE.

SOUTH DAKOTA

S. DAKOTA.
Pop., 583,888.

COUNTIES

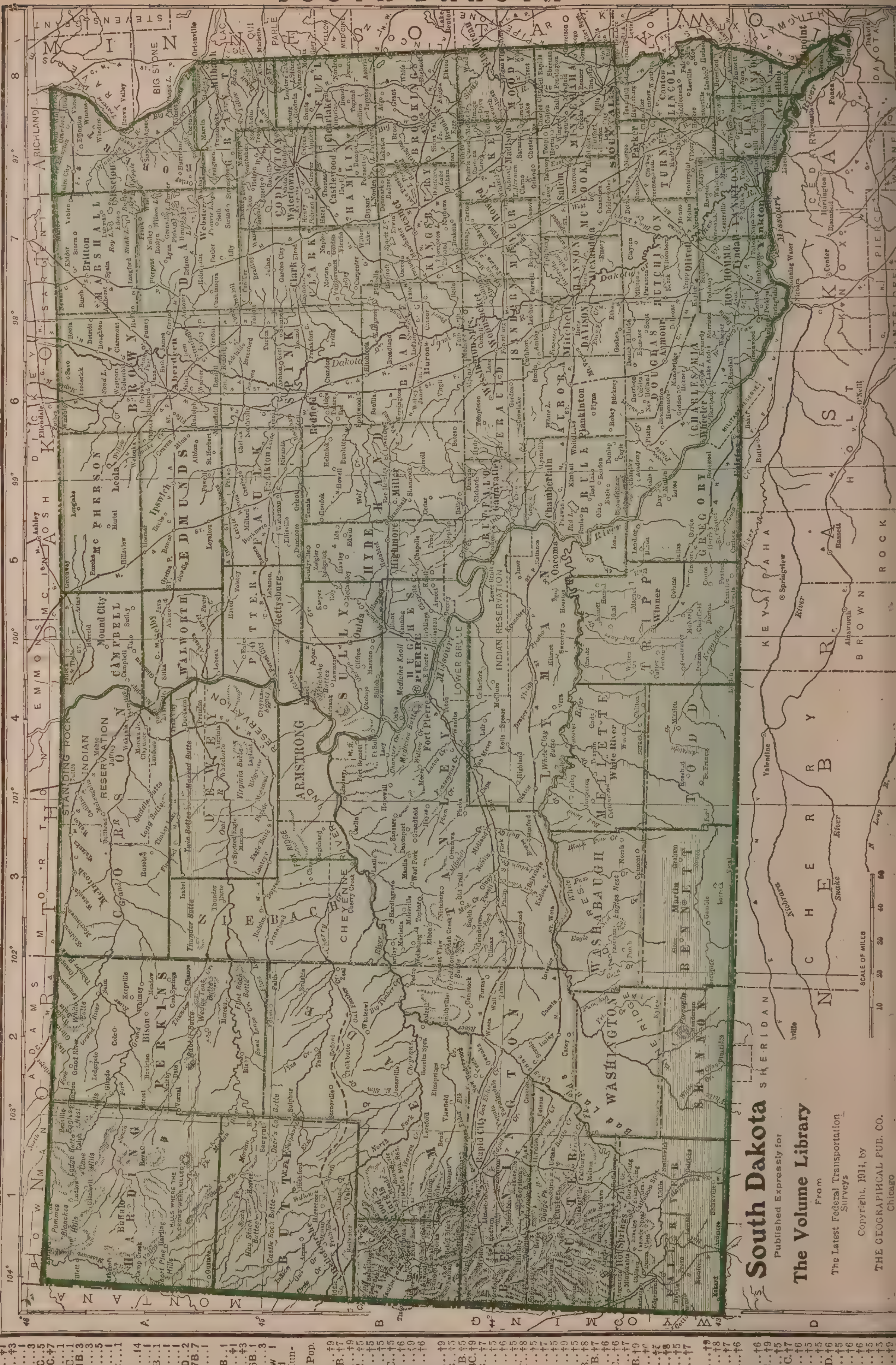
Pop. Thous.

Armstrong* 4B ....†6
Aurora* 6C....6
Beadle 6B....15
Bennett* 3D.....
Bonhomme 7D.11
Brookings 8B..14
Brown 6A.....25
Brule 5C.......6
Buffalo* 5B....1
Butte 1B.......4
Campbell* 4A..5
Charles Mix 6C 14
Clark 7B......10
Clay 8D.......8
Codington 7B..14
Corson* 3A.....2
Custer* 1C.....4
Davison 6C....11
Day 7A.......14
Deuel* 8B......7
Dewey* 4A.....1
Douglas* 6C....6
Edmunds* 5A..7
Fall River 1C..7
Faulk* 5B.....6
Grant 8A.....10
Gregory* 6D...13
Hamlin* 7B....7
Hand 6B.......7
Hanson* 7C....6
Harding 1A....4
Hughes 4B.....6
Hutchinson* 7C 12
Hyde 5B.......3
Jerauld 6B.....5
Kingsbury 7B.12
Lake 7C......10
Lawrence 1B..19
Lincoln 8C....12
Lyman* 4C...10
McCook 7C.....9
McPherson* 6A.6
Marshall* 7A..8
Meade 1B.....12
Mellette 4C....1
Meyer 4C.......
Miner 7C......7
Minnehaha 8C.29
Moody 8B......8
Pennington 1B.12
Perkins 2A....11
Potter* 5B.....4
Roberts 7A....14
Sanborn 6B....6
Shannon 2C.....
Spink 6B......15
Stanley* 4B...14
Sully* 4B......2
Todd 4D.......2
Tripp 5C.......8
Turner 7C.....13
Union 8D.....10
Walworth* 4A 6
Washabaugh* 3C ....
Washington 2C..
Yankton 7D...13
Zieback* 3A.....

TOWNS

Town. Key. Pop.

Aberdeen 6A..10
Alexandria 7C.†9
Allen 3C.....†.
Armour 6C...†9
Bangor ....
Bellefourche 1B 1
Beresford 8C..1
Bison 2A.....†1
Britton 7A...†9
Brookings 8B..2
Buffalo 1A....†9
Canton 8C....2
Castlewood 7B ....†5
Chamberlain 5C 1
Cheyenne Agency 4A..†2
Clark 7B......1
Clearlake 8B.†7
Custer 1C....†6
Dallas 5C.....1
Deadwood 1B..3
Dell Rapids 8C.1
Desmet 7B....1
Elkpoint 8D....1
Fairfax 6D...†5
Faulkton 5B..†8
Flandreau 8B.1
Fort Pierre 4B ....†7
Gamble ....
Gannvalley 5B ....†40
Gettysburg 5B.†9
Gregory 5C....1
Groton 6A 1
Highmore 5B.1
Hot Springs 1C 2
Howard 7C....1
Huron 6B....5
Ipswich 5A..†8
Keystone 1C...1
Lake Preston 7B 1
Lead 1B.......8
Lemmon 2A...1
Leola 6A.....†4
Little Eagle ...
McIntosh 3A.†4
Madison 7C...3
Millbank 8A...2
Miller 6B......1



SO. DAKOTA.
Towns—Cont.

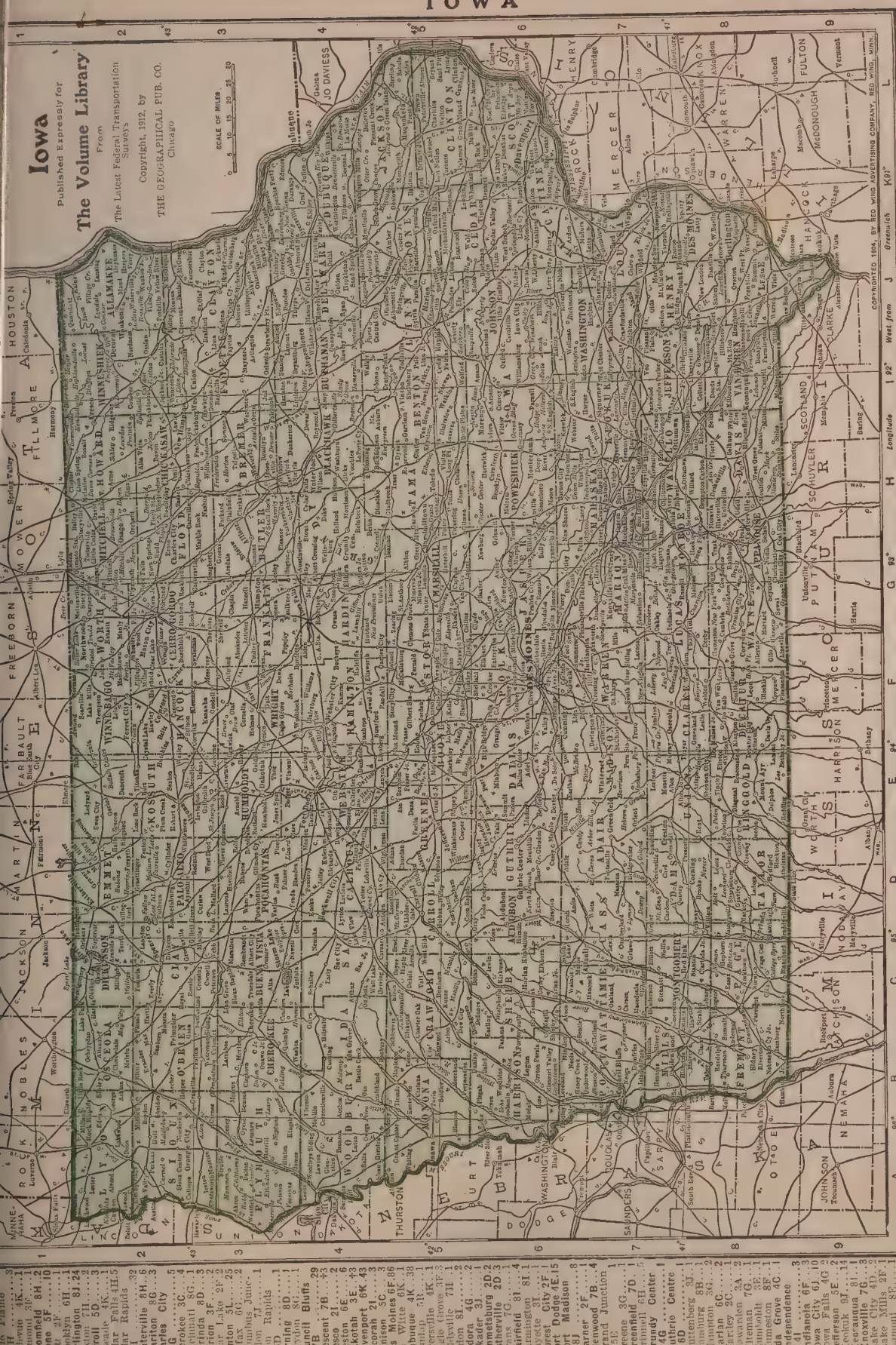
Town. Key. Pop.

Mitchell 6C...6
Molridge 4A...1
Mound City 4A ....†9
Oacoma 5C..†3
Olivett 7C...†1
Onida 4B.....†3
Parker 7C.....1
Pierre 4B.....3
Pineridge 2C..5
Plankinton 6C.†7
Platte 6C.....1
Porcupine 2C..1
Rapid City 1B.3
Redfield 6B...3
Rosebud 4C...5
Salem 7C.....1
Scotland 7C...1
Sioux Falls 8C 14
Sisseton 7A...1
Spearfish 1B..1
Strugis 1B....1
Tyndall 7D...1
Vermilion 8D..2
Watertown 7B.7
Webster 7A...1
Wessington Springs 6B..1
Wheeler 6C...†1
Winner 5C...†3
Woonsocket 6B.1
Yankton 7D...3

Towns below 1 Thousand
Pop. in Hundreds

Town. Key. Pop.

Alexandria 7C.........†9
Arlington 7B.†7
Armour 6C...†9
Artesian 7C..†5
Bigstone 8A...†5
Blunt 5B.....†5
Bonesteel 5C..†5
Bowdle 5A...†6
Britton 7A...†9
Bryant 7B...†6
Bridgewater 7C..........†9
Carthage 7B..†5
Castlewood 7B.†5
Centerville 8C.†9
Clearlake 8B..†7
Conde 6A....†5
Custer 1C.....†6
Doland 6B....†5
Edgemont 1C..†8
Egan 8C......†5
Elkton 8B....†7
Estelline 8B...†5
Eureka 5A....†9
Fairfax 6D...†5
Faulkton 5B..†8
Ft. Pierre 4B.†7
Freeman 7C...†6
Garretson 8C..†6
Geddes 6C....†7
Gettysburg 5B.†9
Hartford 8C..†[illegible]
Hurley 7C....†[illegible]
Ipswich 5A...†8
Iroquois 7B..†5
Kimball 6C...†7
Lake Andes 6C ....†9
Lamro 5C....†8
Lennox 8C....†7
Menno 7C....†6
Mount Vernon 6C.....†6
Parkston 7C..†9
Philip 3C....†5
Plankinton 6C.†7
Presho 4C.....†6
Selby 4A.....†5
Spencer 7C...†5
Springfield 7D.†6
Summit 7A...†5
Trippe 7C....†6
Terraville 1B..†6
Terry 1B.....†5
Volga 8B.....†5
Wagner 6C....†9



IOWA
Pop. 2,224,771.

COUNTIES

	Pop. Thous.
Adair 7D	14
Adams 7D	16
Allamakee 2J	17
Appanoose 8G	28
Audubon 6C	12
Benton 5J	23
Black Hawk 4H	44
Boone 5E	27
Bremer 3H	15
Buchanan 1H	19
Buena Vista 3C	15
Butler 3G	17
Calhoun 4D	17
Carroll 5D	20
Cass 7C	19
Cedar 6J	17
Cerro Gordo 2G	25
Cherokee 3B	16
Chickasaw 2H	15
Clarke 7F	10
Clay 2C	12
Clayton 3J	25
Clinton 5K	45
Crawford 5C	20
Dallas 6E	23
Davis 8H	13
Decatur 8F	16
Delaware 4J	17
Des Moines 7J	36
Dickinson 2C	8
Dubuque 4K	37
Emmet 2D	9
Fayette 3I	27
Floyd 2G	17
Franklin 3G	14
Fremont 8B	15
Greene 5D	16
Grundy 4G	13
Guthrie 6D	17
Hamilton 4F	19
Hancock 2F	12
Hardin 4G	20
Harrison 6B	23
Henry 7J	18
Howard 2H	12
Humboldt 3E	12
Ida* 4B	11
Iowa 6I	18
Jackson 5K	21
Jasper 6G	27
Jefferson 7I	15
Johnson 6J	25
Jones 5J	19
Keokuk 7H	21
Kossuth 2F	21
Lee 8J	36
Linn 5J	60
Louisa 7J	12
Lucas 7G	13
Lyon 2A	14
Madison 7E	15
Mahaska 7H	29
Marion 7G	22
Marshall 5G	30
Mills 7D	15
Mitchell 2G	13
Monona 5A	16
Monroe 7G	25
Montgomery 7C	16
Muscatine 6J	29
O'Brien 2B	17
Osceola 2B	8
Page 8C	24
Palo Alto 2D	13
Plymouth 3A	23
Pocahontas 3D	11
Polk 6F	110
Pottawattomie 7B	55
Poweshiek 6H	19
Ringgold 8E	12
Sac 4C	16
Scott 6K	60
Shelby 6B	16
Sioux 2A	25
Story 5F	24
Tama 5H	22
Taylor 8D	16
Union 7E	16
Van Buren 8I	15
Wapello 7H	37
Warren 7F	18
Washington 7I	19
Wayne 8F	16
Webster 4E	34
Winnebago 2F	11
Winneshiek 2I	21
Woodbury 4A	67
Worth 2G	9
Wright 3F	17

TOWNS

Town.	Key.	Pop.
Ackley	4G	1
Adel	6E	1
Afton	6E	1
Akron	3A	1
Albia	7H	4
Alnona	2E	2
Allison	3H	4
Alton	3B	1
Ames	5F	4
Anamosa	5J	2
Anita	6D	1
Atlantic	6D	4
Audubon	6D	1
Avoca	6C	1
Bedford	8D	1
Belle Plaine 4H	4	3
Bellevue 4K	1	1
Belmond 3B	1	1
Bloomfield 8H	2	3
Boone 5F	10	11
Britt 2F	1	1
Brooklyn 6H	1	1
Burlington 8J	24	32
Buxton 7H	2	3
Carroll 5D	3	3
Cedar Falls 4H	5	5
Cedar Rapids 5I	32	32
Centerville 8H	6	7
Chariton 8G	3	3
Charles City 2G	5	5
Cherokee 3C	4	5
Chillicothe 8G	1	1
Clarinda 8D	3	3
Clarion Lake 2D	2	2
Clinton 5K	25	25
Colfax 6G	2	2
Columbus Junction 7J	1	1
Coon Rapids 5D	1	1
Corning 8D	1	1
Corydon 8E	1	1
Council Bluffs 2G	29	29
Creston 7B	13	13
Cresco 2I	2	2
Creston 6E	13	13
Dakotah 3E	13	13
Davenport 6K	43	43
Decorah 2I	3	3
Denison 5C	3	3
Des Moines 6F	86	86
De White 4K	38	38
Dubuque 5K	38	38
Dyersville 4K	1	1
Eagle Grove 3F	3	3
Eldora 4G	2	2
Elkader 3J	2	2
Emmetsburg 2D	2	2
Estherville 2D	3	3
Evans 6C	1	1
Fairfield 8I	4	4
Farmington 8I	1	1
Forest City 2F	1	1
Fort Dodge 4E	15	15
Fort Madison 8J	8	8
Garner 2F	1	1
Glenwood 7B	4	4
Grand Junction 5E	1	1
Greene 3G	1	1
Greenfield 7D	1	1
Grundy Center 4G	1	1
Guthrie Centre 6D	1	1
Gutenberg 3J	1	1
Hamburg 8B	1	1
Hampton 3G	2	2
Harlan 6C	2	2
Hartley 2C	1	1
Hawarden 2A	1	1
Hull 2D	1	1
Humboldt 3E	1	1
Humeston 8F	1	1
Ida Grove 4C	1	1
Independence 4I	3	3
Indianola 6F	3	3
Iowa City 6J	10	10
Iowa Falls 4G	2	2
Jefferson 3E	1	1
Keokuk 8J	14	14
Knoxville 7G	3	3
Lake City 4D	2	2
Lake Mills 2F	1	1
Lamoni 8E	1	1
Lansing 2J	1	1
La Porte City 4H	1	1
Lemars 3A	4	4
Lenox 8D	1	1
Leon 8E	3	3
McGregor 3G	1	1
Madrid 5E	1	1
Malvern 8B	1	1

Cont'd on page 28

* SHOWN IN HUNDREDS.

*POP. OF COUNTY SEAT BELOW 1 THOUSAND.

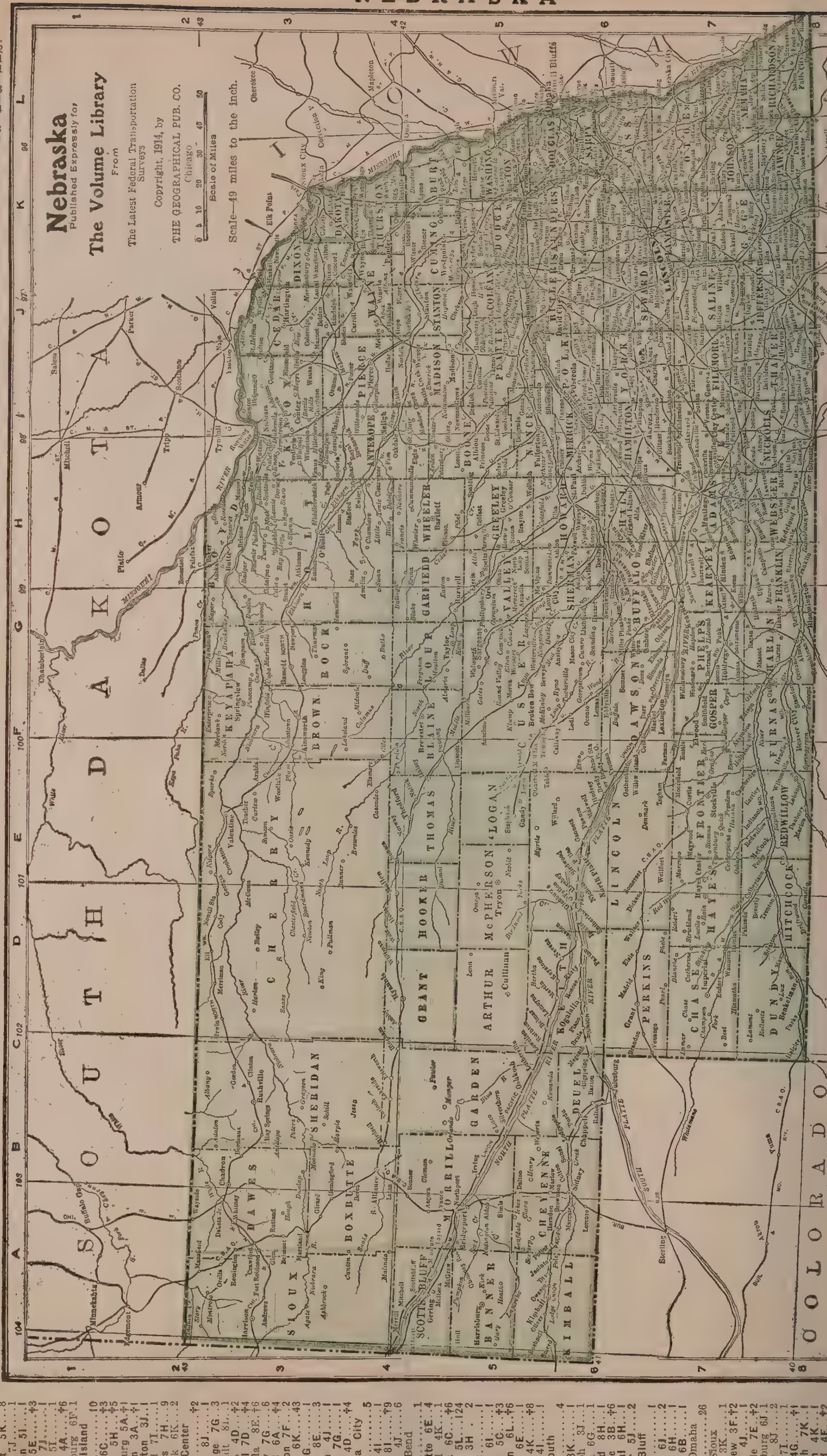
COUNTY SEATS IN HEAVY FACED TYPE.

IOWA.
Towns—Cont.

Town. Key. Pop.
Manchester 4J..2
Manning 5C...1
Manson 4D....1
Mapleton 5B...1
Maquoketa 5K.3
Marengo 6I....1
Marion 5J.....4
Marshalltown 5G 13
Mason City 2G.11
Missouri Valley 6B.......3
Montezuma 6H.1
Monticello 4K..2
Mount Ayr 8E.1
Mount Pleasant 8G 3
Mount Vernon 5J 1
Muscatine 6I.16
Mystic 8H.....2
Nashua 3H.....1
Nevada 5F.....2
New Hampton 2H 2
New London 8J.1
New Sharon 6H.1
Newton 6G....4
Northwood 2G.1
Oakland 7C....1
Odebolt 4C....1
Oelwein 3I.....6
Ogden 5E......1
Onawa 5B.....2
Orange City 2B.1
Osage 2H......2
Osceola 6F....2
Oskaloosa 7H...9
Ossian 2I.......1
Ottumwa 7H..22
Panora 6E.....1
Pella 6G.......3
Perry 5E......4
Pocahontas 3D ....†9
Primghar 2B ....†7
Red Oak 8C...4
Reinbeck 4H...1
Remsen 3B....1
Rock Rapids 2A 2
Rock Valley 2A.1
Rockwell City 4D 1
Sac City 4D...2
Sanborn 2B....1
Seymore 8G....2
Sheldon 2B....2
Shenandoah 8C.4
Sibley 2B.....1
Sidney 8B.....1
Sigourney 7I...2
Sioux Center 2A 1
Sioux City 4A.47
Spencer 2C....3
Spirit Lake 2C.1
Storm Lake 3C.2
Story City 5F.1
Strawberry Point 3J.....1
Stuart 6E.....1
Sumner 3I.....1
Tama 5H......2
Tipton 6K.....2
Toledo 5H.....1
Traer 5H......1
Valley Junction 6F 2
Villisca 8D....2
Vinton 5I......3
Wapello 7K....1
Washington 7J.4
Waterloo 4H..26
Waukon 2J....2
Waverly 3H....3
Webster City 4F 5
West Burlington 8K 1
West Liberty 6J 1
West Union 3I.1
What Cheer 7H.1
Williamsburg 6I 1
Wilton 6K.....1
Winterset 6E...2
Woodbine 6B..1

NEBRASKA
Towns—Cont.

Town. Key. Pop.
Bassett 3G....†3
Beatrice 7K....9
Beaver City 8F ....†9
Benkelman 8D.†5
Benson 5L......3
Blair 5L.......2
Bloomfield 3I...1
Bloomington 8G ....†5
Brewster 4F...†2
Bridgeport 5A.†5
Broken Bow 5F 2
Burwell 5G....†9
Butte 2H......†5
Cambridge 8F..1
Center 3I.....†1
Central City 6I 2
Chadron 2B....2
Chappell 6B..†3
Clay Center 7I 1
Collegeview 6K 1
Columbus 5J...5
Creighton 3I....1
Cozad 6F......1
Crawford 3A...1
Crete 7J.......2
Dakota City 3K ....†4
David City 6J..2
Dundee 5L.....1
Edgar 7I.......1
Elwood 7F....†4
Fairbury 8J....5
Fairfield 7I....1
Falls City 8L..3
Florence 5L....1
Fremont 5K...8
Friend 7J......1
Fullerton 5I....1
Gandy 5E.....†3
Geneva 7J......1
Genoa 5I......1
Gering 4A....†6
Gothenburg 6F.1
Grand Island 6H 10
Grant 6C.....†3
Greeley 5H...†5
Harrisburg 5A.†1
Harrison 3A..†1
Hartington 3J..1
Harvard 7I.....1
Hastings 7H...9
Havelock 6K...2
Hayes Center 7D ....†2
Hebron 8J.....1
Holdredge 7G..3
Humboldt 8L..1
Hyannis 4D...†2
Imperial 7D...†4
Indianola 8E.†6
Kearney 7G....6
Kimball 6A...†4
Lexington 7F...2
Lincoln 6K....43
Loup 4G.......1
McCook 8E.....3
Madison 4J....1
Minden 7G.....1
Mullen 4D....†4
Nebraska City 7L 5
Neligh 4I......1
Nelson 8I.....†9
Norfolk 4J.....6
North Bend 5K 1
N. Platte 6E..4
Oakland 4K...1
Ogalalla 6C...†6
Omaha 5L...124
O'Neill 3H . 2
Ord 5G........1
Osceola 6I.....1
Oshkosh 5C...†3
Papillion 6L..†6
Pawnee 6E.....1
Pender 4K....†8
Pierce 4I......1
Plattsmouth 6L 4
Ponca 3K......1
Randolph 3J...1
Ravenna 6G....1
Redcloud 8H...1
Rushville 3B..†6
St. Paul 6H...1
Schuyler 5J....2
Scotts Bluff 4G 1
Seward 6J.....2
Shelton 6H.....1
Sidney 6B.....1
South Omaha 6L 26
South Sioux City 3K.....1
Springview 3F.†2
Stanton 4J.....1
Stockville 7E..†2
Strombsburg 6J.1
Superior 8J....2
Sutton 7I......1
Taylor 4G.....†1
Tecumseh 7K..1
Tekamah 4K...1
Thedford 4E..†2
Trenton 8D...†4
Tryson 5D....†1
University Place 6K 3
Valentine 2E...1
Wahoo 6K.....2
Wayne 4J.....2
Weeping Water 6L 1
Westpoint 4K..1
Wilber 7K.....1
Wisner 4K....1



NEBRASKA
Pop. 1,192,214.

COUNTIES

County	Pop. Thous.
Adams 7H	20
Antelope 4I	14
Banner* 5A	1
Blaine* 4F	1
Boone 5I	13
Box Butte 4B	6
Boyd* 2H	8
Brown 3F	6
Buffalo 7G	21
Burt 4K	12
Butler 6J	15
Cass 6L	19
Cedar 3J	15
Chase* 7D	3
Cherry 2E	10
Cheyenne 6B	4
Clay 7I	15
Colfax 5J	11
Cuming 4K	13
Custer 5F	25
Dakota 3K	6
Dawes 2B	8
Dawson 7F	15
Douel* 6B	1
Dixon 3K	11
Dodge 5K	22
Douglas 5L	168
Dundy* 8D	4
Fillmore 7J	14
Franklin* 8G	10
Frontier* 7E	8
Furnas* 8F	12
Gage 7K	30
Garden* 5C	3
Garfield* 5G	3
Gosper* 7F	4
Grant* 4D	1
Greeley* 5H	8
Hall 6H	20
Hamilton 6I	13
Harlan 8G	9
Hayes* 7D	3
Hitchcock* 8D	5
Holt 3H	15
Hooker 4D	†9
Howard 6H	19
Jefferson 8J	16
Johnson 7K	10
Kearney 7G	9
Keith* 6C	3
Keya Paha* 3F	3
Kimball* 6A	1
Knox* 3I	18
Lancaster 6K	73
Lincoln 6E	15
Logan* 5E	1
Loup* 4G	2
McPherson 5D	2
Madison 4J	19
Merrick 6I	10
Morrill* 5A	4
Nance 5I	8
Nemaha 7L	13
Nuckolls* 8I	13
Otoe 7L	19
Pawnee 6E	10
Perkins* 6C	2
Phelps 7G	10
Pierce 4I	10
Platte 5J	19
Polk 6I	10
Red Willow 8E	11
Richardson 8L	17
Rock* 3G	3
Saline 7K	17
Sarpy* 6L	9
Saunders 6K	21
Scotts Bluff* 4A	8
Seward 6J	15
Sheridan* 3B	7
Sherman* 4G	8
Sioux* 3A	5
Stanton 4J	7
Thayer 8J	14
Thomas* 4E	1
Thurston* 4K	8
Valley 5G	9
Washington 5L	12
Wayne 4J	10
Webster 8H	12
Wheeler* 4H	2
York 6J	18

NEBRASKA.
TOWNS

Town. Key. Pop.
Ainsworth 3F..1
Albion 5I......1
Alliance 4B....3
Alma 8G.......1
Ashland 6K....1
Auburn 7L.....2
Aurora 6I......2
Bartlett 4H...†1

KANSAS.
Towns—Cont.

Town. Key. Pop.
Lacrosse 5C...†8
Laharpe 6G....2
Lakin 6A.....†3
Larned 5C....2
Lawrence 4G 12
Leavenworth 3H 19
Leoti 5A.....†2
Liberal 7B.....1
Lincoln 4D....1
Lindsborg 5E...1
Lyndon 4G...†7
Lyons 5D.....2
McAllister 4A...2
McPherson 5E.3
Manhattan 3F..5
Mankato 2D....1
Marion 5E.....1
Marysville 2F..2
Meade 7B.....†6
Medicine Lodge 7D 1
Mineral 7H...1
Minneapolis 3E.1
Mound City 5H ....†6
Mulvane 7E....1
Neodesha 7G...2
Ness City 5C.†7
Newton 6E.....7
Nickerson 5D..1
Norton 2C....1
Oakland 3G....1
Oberlin 2B....1
Olathe 4H.....3
Osage City 4G 2
Osawatomie 5H.1
Osborne 3D....1
Oskaloosa 3G.†8
Oswego 7G....2
Ottawa 4G.....7
Palco 3C.....†2
Paola 4H.....3
Parsons 7G...12
Peabody 5E....1
Phillipsburg 2C.1
Pittsburg 7H.14
Plainville 3C...1
Pleasanton 5H.1
Pratt 6D.......3
Redfield 5H..†2
Richmond 5G.†3
Rosedale 3H...5
Russell 4D....1
Russell Sprs. 4A ....†08
Sabetha 2G....1
Saint Francis 2A ....†4
St. John 6D...1
St. Marys 3F..1
Salina 4E.....9
Santa Fe 7A.†07
Scammon 7H...2
Scott 4B.....†9
Sedan 7F.....1
Seneca 2F....1
Sharon Springs 4A ....†4
Smith Center 2D 1
Stafford 6D....1
Sterling 5D...2
Stockton 3C...1
Syracuse 6A....1
Tonganoxie 3G.1
Topeka 3G....43
Tribune 5A...†1
Troy 2G.......†9
Ulysses ....†1
Valley Falls 3G 1
Wakeeney 4C.†8
Wamego 3F....1
Washington 2E.1
Weir 7H.......2
Washington 2E.1
Wellington 7E..7
Westmoreland 3F ....†4
Wichita 6E....52
Winfield 7E....6
Yates Center 6G 2

KANSAS.
Pop., 1,690,949.

COUNTIES

Pop. Thous.
Allen 6G.....27
Anderson 5G..13
Atchison 3G..28
Barber 7D.....9
Barton 5D...17
Bourbon 6H..24
Brown 2G....21
Butler 6F.....23
Chase* 5F.....7
Chautauqua 7F 11
Cherokee 7H..38
Cheyenne* 2A.4
Clark* 7C.....4
Clay 2E.....15
Cloud 2E....18
Coffey 2G....15
Comanche* 7C.3
Cowley 7E...31
Crawford 7H.51
Decatur 2B....8
Dickinson 4E.24
Doniphan* 2G.14
Douglas 4G...24
Edwards 6C...7
Elk 7F.......10
Ellis 4C.....12
Ellsworth 4D.10
Finney 6B....6
Ford 6B.......11
Franklin 4G..20
Geary 4F.....12
Gove* 4B.....6
Graham* 3C...8
Grant* 6A....1
Gray* 6B.....3
Greeley 5A....1
Greenwood 6F.16
Hamilton 6A...3
Harper 7D...14
Harvey 6E....19
Haskell* 7A..†9
Hodgeman* 5C.2
Jackson 3G...16
Jefferson* 6G.15
Jewell 2D....18
Johnson 4H...18
Kearny* 6A...3
Kingman 6D..13
Kiowa 6C.....6
Labette 7G...31
Lane* 5B.....2
Leavenworth 3H 41
Lincoln 4D...10
Linn* 5H....14
Logan* 4A....4
Lyon 5F......24
McPherson 5E.21
Marion 5E....22
Marshall 2F..23
Meade* 7B....5
Miami 4H....20
Mitchell 3D..14
Montgomery 7G 49
Morris 4F....12
Morton 6H....1
Nemaha 2F..19
Neosho 6G....23
Ness* 5C......5
Norton 2C....11
Osage* 4G....19
Osborne 3D...12
Ottawa 3E....11
Pawnee 5C....8
Phillips 2C...14
Pottawatomie 3F 11
Pratt 6D.....11
Rawlins* 2A...6
Reno 6E......37
Republic* 2E.17
Rice 5D......15
Riley 3F.....15
Rooks 3C.....11
Rush* 5C.....7
Russell 4D....10
Saline 4E....20
Scott* 4B.....3
Sedgwick 6E..73
Seward 7B....4
Shawnee 3G..61
Sheridan* 3B..5
Sherman 3A...4
Smith 2D....15
Stafford 6D...12
Stanton* 7A...1
Stevens* 7A...2
Sumner 7E...30
Thomas 3A....5
Trego 4C......5
Wabaunsee 4F.12
Wallace* 4A..2
Washington 2E 20
Wichita* 5A...2
Wilson 7G....19
Woodson 6G...9
Wyandotte 3H 100

Town. Key. Pop.
Abilene 4E....4
Alma 4F....1
Altoona 7G....1
Anthony 7D...2
Arkansas City 8E.....7
Ashland 7C...†9
Atchison 3G...16
Atwood 2A....†6
Augusta 6F....1
Baldwin 4G....1
Baxter Springs 8H....1
Belleville 2E....2
Beloit 3D....3
BlueRapids 2F.1
Bonner Springs 3H....1
Burlingame 4G....1
Burlington 5G.2
Burroak 2D....1
Caldwell 8E....2
Caney 8G....3
Chanute 6G....9
Cherokee 7H....1
Cherryvale 7G....4
Chetopa 8G....1
Cimarron 6B..†5
Clay Center 2E.3
Clyde 2E....1
Coffeyville 8G....12
Colby 3A....1
Columbus 7H..3
Colwich 6E..†2
Concordia 2E..4
Conway Springs 7E....1
Cottonwood Falls 5F....†8
Council Grove 4F....2
Dighton 5B..†3
Dodge City 6B.3
Downs 3D....1
Eldorado 6F...3
Ellis 4C....1
Ellsworth 4D..2
Empire City 7H....1
Emporia 5F....9
Erie 6G....1
Eureka 6F....2
Florence 5F....1
Fort Riley 3F..2
Fort Scott 6H....10
Frankfort 2F....1
Fredonia 7G....3
Frontenac 7H...3
Galena 8H....6
Garden City 6B....3
Garnett 5G....2
Gas 6G....1
Girard 7H....2
Goodland 3A..†1
Gove 4B....†1
Greatbend 5D...4
Greensburg 6C...1
Halstead 6E....1
Hanover 2F....1
Harper 7D....1
Hays 4C....1
Herington 4F...3
Hiawatha 2G...2
Hill City 3C..†9
Hillsboro 5E...1
Hoisington 5D..2
Holton 3G....3
Horton 2G....3
Howard 7F....1
Hoxie 3B....†5
Hugoton 7A.†1
Humboldt 6G....2
Hutchinson 6E....16
Independence 7G....10
Iola 6G....9
Jetmore 5C..†3
Johnson 7A.†01
Junction City 4F....5
Kansas City 3H....82
Kingman 6D..2
Kinsley 6C....1
Kiowa 8D....1

POP. SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED TYPE

TOWNS

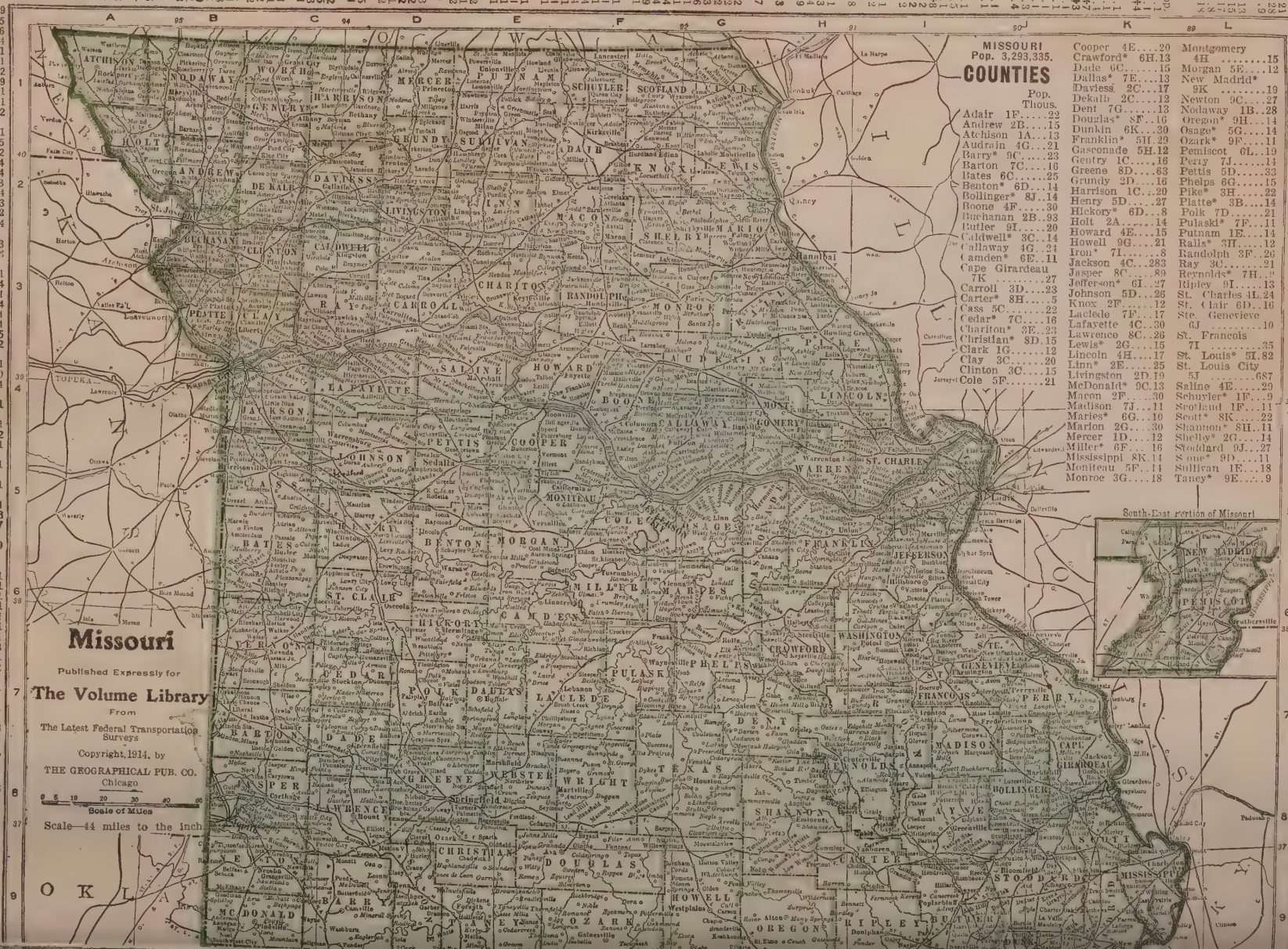
Town, Key, Pop.

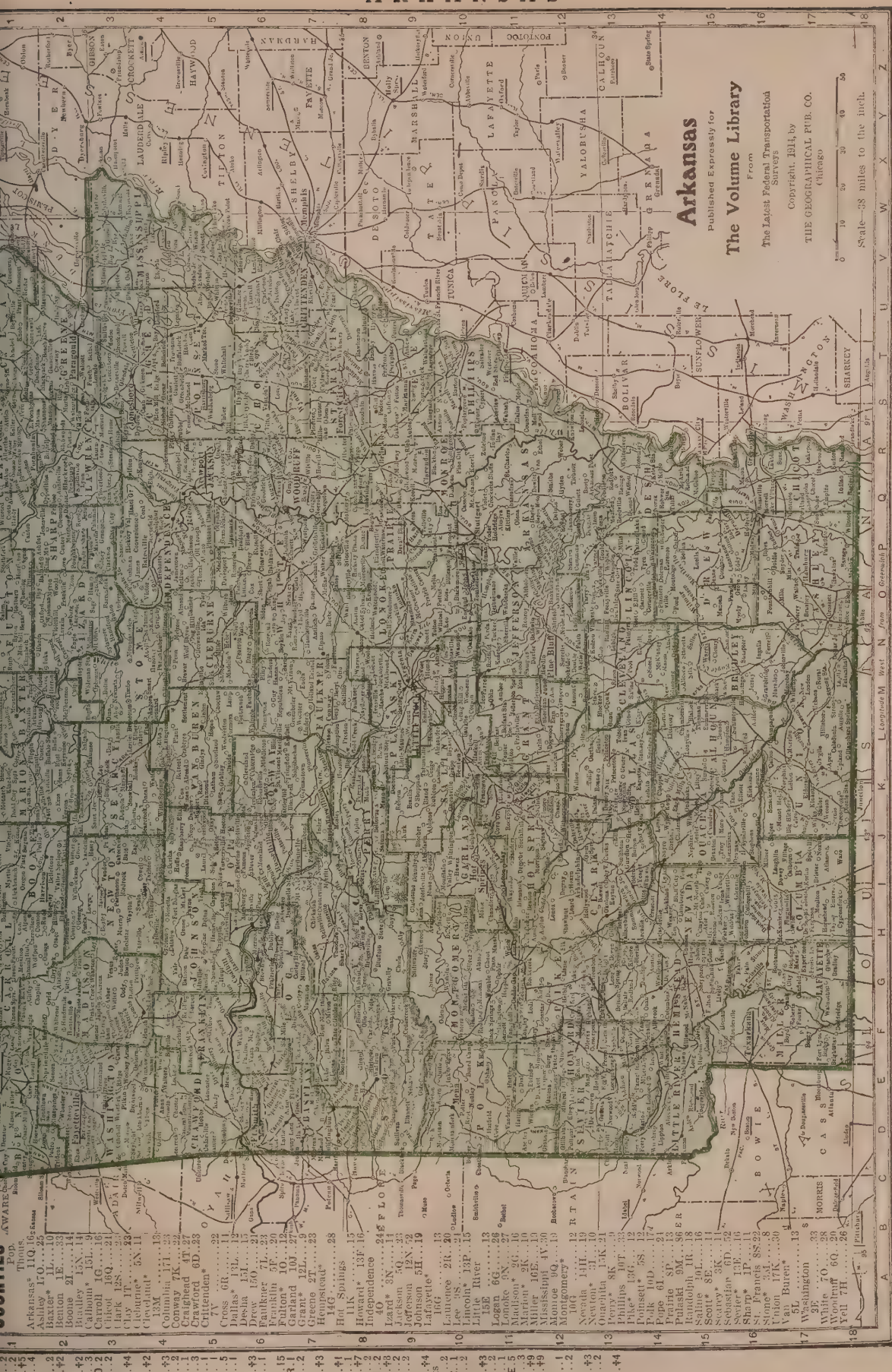
Alba 8D....1
Albany 1C....4
Alton 9H....4
Appleton City 4H....1
Ash Grove 8D....1
Aurora 8D....4
Ava 8F....3
Benton 8K....3
Bethany 1C....4
Boonville 2F....1
Bowling Green 4E....4
Bramer 3D....1
Brookfield 2E....3
Brunswick 3E....1
Buffalo 7E....8
Butler 6C....5
California 5E....2
Cameron 2C....2
Campbell 5K....1
Canton 2G....1
Cape Girardeau 8K....8
Carl Junction 8B....1
Carrollton 3D....3
Carthage 8B....3
Caruthersville 6L....3
Chillicothe 2D....6
Clarence 5D....4
Clayton 5L....2
Clinton 5G....4
Columbia 9D....9
Crystal City 6L....1
Danville 4H....1
Deepwater 6D....1
Deepwater 6D....1
Desloge 6L....1
DeSoto 7L....1
Doerun 7L....1
Dunnegan 8B....1
Doniphan 9L....1
Dunnegan 8B....1
East Prairie 8K....1
Edina 2F....1
Elsberry 4L....2
Elvins 7L....1
Eminence 8H....1
Excelsior Springs 3C....3
Farmington 7L....2
Fayette 4E....2
Ferguson 3C....1
Festus 6L....2
Fort Riley 5J....1
Frederickstown 7L....2
Forsyth 9E....1
Fulton 4G....5
Galena 9D....1
Gallatin 2C....3
Gainesville 9F....1
Glasgow 4E....1
Granby 9C....2
Grandin 9C....1
Grant City 1C....1
Greenfield 6C....1
Greenville 8L....9
Hamilton 2C....1
Hannibal 3H....18
Harrisonville 5C....8
Hartville 8F....5
Hayti 6L....1
Hermann 5H....1
Hermitage 6D....3
Hillsboro 6L....2
Hillsdale 3F....1
Hillsville 3F....1
Hinkson 3F....1
Hollister 3F....1
Holden 5C....6
Houston 8G....6
Huntsville 3F....2
Independence 4C....9
Ironton 7L....7
Jackson 7K....2
Jefferson City 5F....11
Joplin 8B....32
Kahoka 1G....1
Kansas City 1B....248
Kennett 6K....3
Keytesville 3E....9
Kingston 3C....5
Kirksville 1F....6
Kirkwood 5L....4
Labelle 2G....1
Lagrange 2G....1
Lamar 7C....2
Lancaster 1F....9
Laplata 2E....1
Lathrop 3C....1
Lebanon 7F....2
Lees Summit 4C....1
Lexington 4C....5
Liberty 3C....2
Linn 5G....4
Linncreek 6E....4
Linneus 2E....8
Louisiana 3H....4
Macon 2F....3
Malden 5L....2
Maplewood 4C....4
Marble Hill 8J....3
Marceline 3E....3
Marionville 8D....1
Marshall 4E....4
Marshfield 8E....1
Maryville 1B....4
Maysville 2C....1
Memphis 1F....1
Mexico 4G....5
Milan 1E....2
Mine Lamotte 7J....1
Moberly 3F....10
Monett 9C....4
Monroe City 3G....1
Montgomery City 4G....1
Monticello 2G....2
Morehouse 9K....1
Mound City 1A....1
Mountain Grove 8F....1
Mount Vernon 8C....1
Neosho 9C....3
Nevada 7C....7
New London 3H....9
New Madrid 5L....1
Norborne 3D....1
Novinger 1F....1
Odessa 4C....1
Oran 8K....1
Oregon 2A....1
Orongo 8B....1
Osceola 6D....1
Ozark 8D....3
Pacific 5L....1
Palmyra 2G....2
Paris 3G....1
Pattonsburg 2C....1
Perryville 7J....1
Piedmont 8L....1
Pierce City 9C....2
Pineville 9C....5
Platte City 3B....7
Plattsburg 3C....1
Pleasant Hill 4C....2
Poplar Bluff 9L....6
Potosi 6L....7
Princeton 1D....1
Rich Hill 6C....2
Richmond 3C....3
Rockport 1A....1
Rolla 6G....2
Saint Charles 4L....9
Sainte Genevieve 6J....1
Saint James 6G....1
Saint Joseph

*POP. OF COUNTY SEAT BELOW 1 THOUSAND.

+POP. SHOWN IN HUNDREDS.

COUNTY SEATS IN HEAVY FACED





MISSOURI.

Towns—Cont.

Town, Key, Pop.
Salisbury 3E....1
Sarcoxie 8C....1
Savannah 2B..1
Sedalia 5D...17
Senath 6K.....1
Shelbina 3G..2
Shelbyville 2G+6
Sikeston 9K...3
Slater 4E.....2
Sweet Springs 1D 1
Springfield 8D 35
Stanberry 1B .2
Steelville 6H..+7
Stockton 7C..+5
Tarkio 1A.....1
Thayer 9H.....1
Tipton 5E.....1
Trenton 2D....5
Troy 4H 1
Tuscumbia 6F.+2
Union 5H....+9
Unionville 1E..2
University 5L..2
Vanburen 8H.+4
Vandalia 3H..1
Versailles 5E...1
Vienna 6G....+2
Warrensburg 5D 4
Warrenton 4H.+7
Warsaw 6D...+8
Washington 5H.3
Waynesville 7F+2
Webb City 8B 11
Webster Grove 5I.....7
Wellston 5L....7
Wellsville 1G..1
Weston 3B.....1
Westplains 9G..2
Willow Springs 8G 1
Windsor 5D...2

ARKANSAS.

TOWNS

Town, Key, Pop.
Argenta 9M...11
Arkadelphia 12J 2
Arkansas City 15I 1
Ashdown 15E..1
Atkins 7J.....1
Augusta 6Q....1
Batesville 4O...3
Benton 10L....1
Bentonville 1E.1
Berryville 1G .....+7
Blackrock 2Q...1
Blytheville 3W.3
Bonneville 3S..1
Booneville 7F..1
Brinkley 8Q....1
Camden 15K...3
Centerpoint 13F .....+3
Centerpoint 6E .....+5
Clarendon 9Q..2
Clarksville 5H..1
Clinton 5L....+3
Coalhill 6G....1
Conway 7L.....2
Corning 1T....1
Cottonplant 8Q.1
Crossett 17N..2
Danville 7H..+8
Dardanelle 7I..1
De Queen 13D.2
Dermott 15Q...1
Desarc 8P.....1
Devalls Bluff 9P .....+9
Dewitt 11Q...+8
Earle 6U.....1
Eldorado 17K..4
England 10N...1
Eureka Springs 1G 3
Evening Shade 2O .....+2
Fayetteville 2E.4
Fordyce 14L...2
Forrest City 8S.2
Fort Smith 6D.23
Greenwood 7D..1
Gurdon 13I....1
Hamburg 17O..1
Hampton 15L .....+3
Hardy 1P.....+3
Harrisburg 5S .....+9
Harrison 2I....1
Hood 3D....1
Helena 10T....8
Heber Springs 5N .....+8
Hope 15G.....3
Hot Springs 10J 14
Huntington 7D.1
Hutrig 18M....1
Huntsville 2C .....+5
Jasper 3I....+2
Jonesboro 4R..7
Junction City 18K 1
Lake City 4T .....+4
Lake Village 16Q 1
Leslie 3L.....1
Lewisville 16G .....+5
Little Rock 9M 45

Magnolia 17I....2
Malvern 11K..2
Marshall 3K..+5
Marianna 9S..4
Marked Tree 6T.....2
Marion 7V....+2
Melbourne 3N .....+2
Mena 10D.....3
Monticello 15O.2
Morrilton 7K.2
Mountainhome 1L .....+4
Mountainview 3M .....+2
Mount Ida 10G .....+3
Nashville 13F.2
Nettleton 4S..1
Newport 5Q...3
Osceola 4V...1
Ozark 3F.....1
Paragould 2T..5
Paris 5G.....1
Perryville 8K .....+3
Piggott 1U.....1
Pine Bluff 12N 15
Pocahontas 1R.1
Prescott 14H..2
Princeton 13L .....+3
Pyramid 12L .....+1
Rector 1U.....1
Rison 13M...+7
Rogers 1E.....2
Russellville 6I..2
Salem 1O.....+8
Searcy 7O.....2
Sheridan 3S...2
Siloam Springs 12L .....+4
Springdale 2K..1
Stuttgart 10F.2
Sugar Loaf 16E.5
Texarkana 6D..+3
Van Buren 3P..+3
Walnut Ridge 8E .....+9
Warren 15N.....1
Washington 14G .....+3
Wynne 6R.....2
Yellville 2K .....+4

SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED TYPE.

OKLAHOMA

OKLAHOMA. Pop., 1,657,155.

COUNTIES

	Pop. Thous.
Adair* 6Y	10
Alfalfa 2I	18
Atoka 14S	13
Beaver* 7CH	13
Beckham 6C	19
Blaine 7H	29
Bryant 16R	29
Canadian 8K	23
Caddo 1LJ	35
Carter 15O	25
Cherokee 6X	16
Choctaw 16X	16
Cimarron* 1HJ	21
Cleveland 10M	13
Coal 14S	15
Comanche 13J	39
Craig 3X	17
Creek 6X	26
Custer* 8F	23
Delaware* 3Y	11
Elbert* 6F	14
Ellis* 16V	15
Garfield 4L	33
Garvin 12N	26
Grady 21K	30
Grant 11D	18
Greer 11D	16
Harmon* 12D	16
Harper* 2C	13
Haskell* 10W	18
Hughes 11R	24
Jackson 13E	23
Jefferson 16Y	17
Johnston 13E	26
Kay 1O	26
Kingfisher 7L	18
Kiowa 11F	17
Latimer 11W	11
Leflore 11Y	29
Lincoln 8O	31
Logan 6N	34
Love 21K	30
McCurtain 17Y	20
McIntosh 9V	20
Murray 13O	12
Muskogee 7V	52
Noble 4X	14
Nowata 2U	14
Okfuskee 9R	19
Oklahoma 9M	85
Okmulgee 8T	21
Osage 8X	21
Ottawa 2U	17
Pawnee 4P	17
Payne 5O	33
Pittsburg 11Y	47
Pontotoc 19O	21
Pottawatomie 10O	43
Pushmataha 15U	10
Roger Mills* Ford du Lac 8C	10
Rogers 13K	22
Seminole 9V	17
Sequoyah 4U	17
Stephens 13K	19
Texas 18E	14
Tillman 14F	18
Tulsa 5S	34
Wagoner 6V	22
Washington 2T	17
Washita 9F	15
Woods 2G	17
Woodward 3D	16

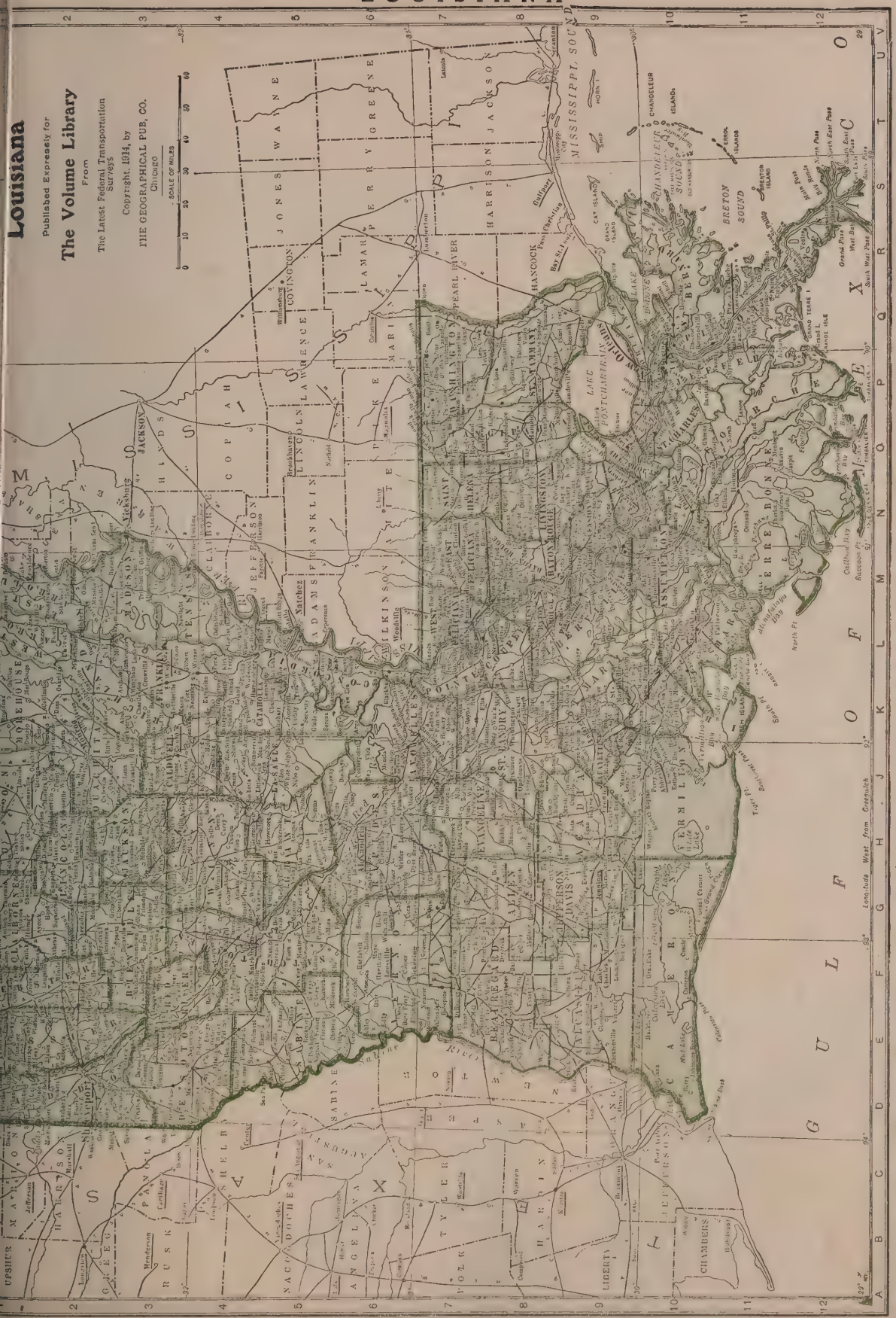
TOWNS

Ada 12Q 4
Afton 2X 1
Altus 13E 4
Alva 2G 4
Anadarko 11J 3
Antlers 15U 3
Arapaho 8F 7
Ardmore 15O 8
Arnett 5C 5
Atoka 14S 5
Bartlesville 2T 6
Beaver 17H 3
Blackwell 2N 3
Boise City 17B 1
Boley 9R 1
Bristow 2R 1
Broken Arrow 6T 1
Buffalo 2C 1
Caddo 15S 1
Capitol Hill CM 5
Chandler 8O 3
Checotah 9V 2
Chelsea 3Y 1
Cherokee 2C 1
Cheyenne 8C 4
Chickasha 11K 10
Claremore 4U 2
Cleveland 4R 1
Clinton 8F 6
Collinsville 13S 3
Comanche 11K 1
Cordell 9F 1
Coweta 6U 1
Cushing 6P 1
Davis 14O 1
Dewey 13K 2
Duncan 13K 2
Durant 16R 5
Edmond 8M 2
Elk City 9D 3
El Reno 8K 7
Enid 4L 13
Eufaula 10U 1
Fairview 4H 2
Fort Gibson 7W 1
Frederick 14F 3
Geary 8J 1
Granite 11D 1
Grove 3Y ..... +8
Guthrie 6N 11
Guymon 18E 1
Haileyville 12U 2
Hartshorne 12V 2
Hennessey 5L 1
Henryetta 9S 1
Hobart 11F 3
Holdenville 11R 2
Hollis 12B ..... +9
Hughes 11X 2
Hugo 16V 4
Idabel 17Y 1
Kiefer 6S 1
Kingfisher 7L 2
Kiowa 12T 1
Krebs 11U 2
Lawton 13J 7
Lehigh 14S 1
Lindsay 12M 1
McAlester 11T 12
Madill 16P 1
Mangum 11D 3
Marietta 16O 1
Marlow 13K 1
Medford 2L 1
Miami 1X 2
Muskogee 7V 25
Newkirk 10 1
Norman 10M 3
North McAlester 11U 1
Nowata 2U 3
Okemah 9R 1
Oklahoma 9M 64
Okmulgee 8T 4
Pauls Valley 12N 2
Pawhuska 2R 2
Pawnee 4P 1
Perry 4N 3
Ponca 2O 2
Pondcreek 2L 1
Poteau 11Y 1
Prague 9Q 1
Pryor 4V 1
Purcell 11N 2
Roff 13P 1
Ryan 16K 1
Sallisaw 9Y 2
Sapulpa 6S 8
Sayre 9C 1
Shattuck 4B 1
Shawnee 9P 12
Snyder 13F 1
Spiro 10Y 1
Stigler 10W 1
Stillwater 5O 3
Stillwell 7Y 1
Stroud 7Q 1
Sulphur 13O 3
Tahlequah 6X 2
Taloga 6F ..... +4
Tecumseh 10O 1
Thomas 7G 1
Tishomingo 15Q 1
Tonkawa 2N 1
Stigler 10W 1
Tulsa 5S 18
Vinita 3W 4
Wagoner 6V 4
Walter 14J 1
Watonga 7H 1
Waurika 15K 2
Waynoka 3G 1
Weatherford 8C 3
Weleetka 9S 1
Westville 6Y ..... +8
Wetumka 10S 1
Wewoka 10Q 1
Wilburton 11W 2
Woodward 3D 2
Wynnewood

*POP. SHOWN IN HUNDREDS.

*POP. OF COUNTY SEAT BELOW 1 THOUSAND.

COUNTY SEATS IN HEAVY FACED



LOUISIANA
Pop. 1,656,388.

PARISHES

Pop. Thous.

Acadia 9J.....31
Allen 8G.....
Ascension 9N.23
Assumption 10M 24
Avoyelles 6J...34
Beauregard A.D.
Bienville 2G..21
Bossier* 2D...21
Caddo 2D.....58
Calcasieu 9F...62
Caldwell* 3J...8
Cameron* 10F..4
Catahoula* 4K.10
Claiborne 1G..25
Concordia 5L..14
DeSoto 4D....27
East Baton Rouge 8M...34
East Carroll 1M 11
East Feliciana* 7M 20
Evangeline* 8J .....
Franklin* 3K.11
Grant 5G.....15
Iberia 10K....31
Iberville 9M...30
Jackson* 2H..13
Jefferson 11P..18
Jefferson Davis 9G.....
La Salle* 5J...9
Lafayette 9J..28
Lafourche 10N.33
LaSalle 5J.....
Lincoln 2H...18
Livingston 8N.10
Madison* 2M.10
Morehouse* 1K 18
Natchitoches 4F 36
Orleans 10P..339
Ouachita 2J...25
Plaquemines 11Q 12
Pointe Coupee 8L 25
Rapides* 6U...44
Red River* 4E.11
Richland 2K..15
Sabine* 5E...19
Saint Bernard* 10Q 5
Saint Charles* 10O 11
Saint Helena* 7N 9
Saint James 9N 23
Saint John the Baptist* 9O.14
Saint Landry 8J 66
Saint Martin 9K 23
Saint Mary 10L 39
Saint Tammany 8P 18
Tangipahoa 8O 29
Tensas* 1M...17
Terrebonne 11N 28
Union* 1H...20
Vermilion 10U.26
Vernon 6F....17
Washington 10L 18
Webster 2F...19
West Baton Rouge* 8M..12
West Carroll* 1L 6
West Feliciana* 7L 13
Winn 3H.....18

TOWNS

Town, Key, Pop.

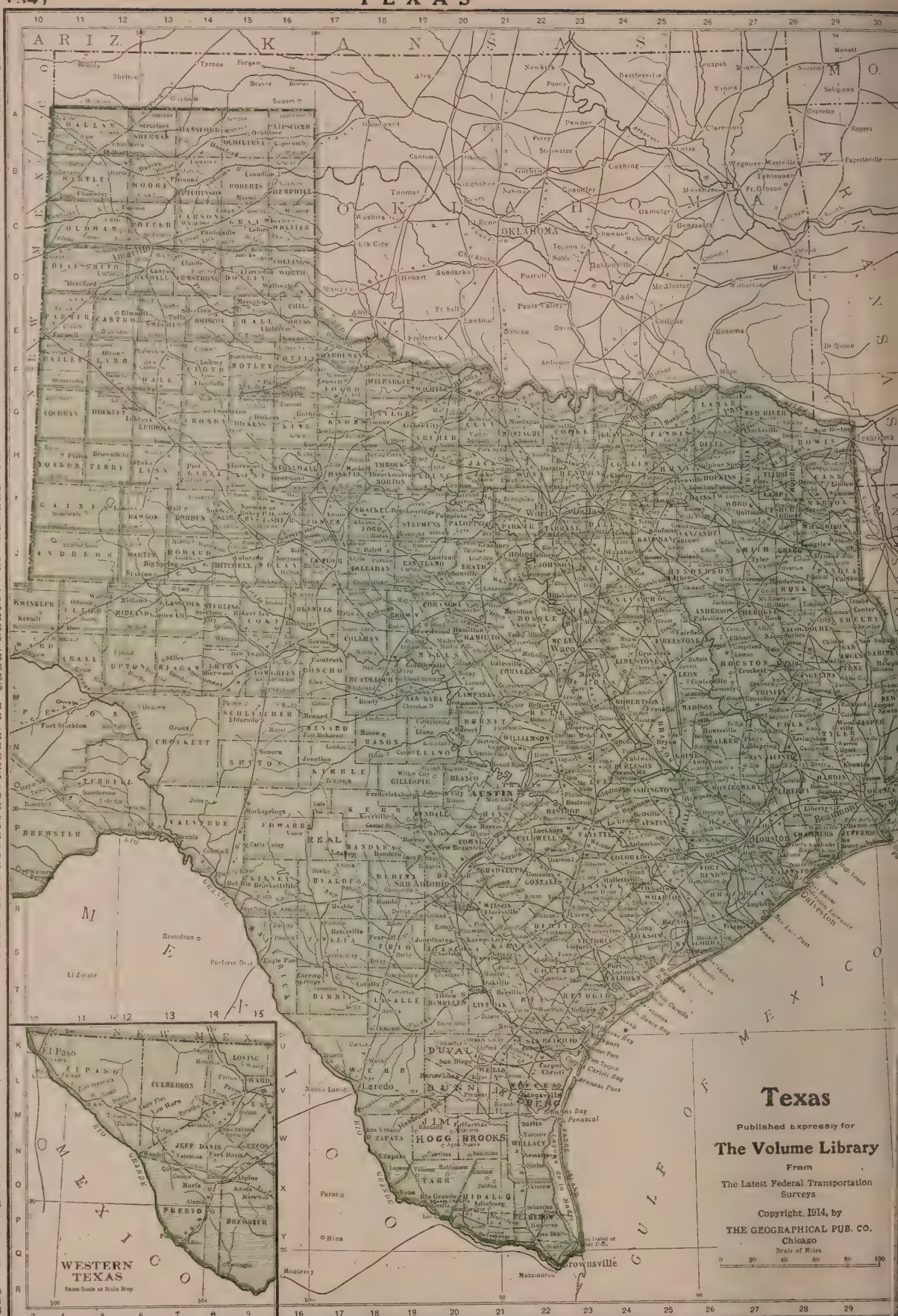
Abbeville 10J...2
Alexandria 6U.11
Amite 8O.....1
Arcadia 2G.....1
Bastrop 1K...*8
Baton Rouge 8M 14
Benton 2D....*3
Berwick 10M...2
Breaux Bridge 9K 1
Bunkie 7J.....1
Cameron 10F *1
Clinton 7M...*5
Colfax 5G.....1
Convent 9N.....1
Coushatta 4E.*5
Covington 8P ..2
Crowley 9J.....5
De Ridder 7F...2
Donaldsville 9N 4
Edgard 9O....*6
Eunice 8H.....1
Farmerville 1H *5
Franklin 10L...3
Fullerton 6F...1
Gilmore 2F...1
Greensburg 7N.*2
Gretna 10P ..3
Gueydan 10H..1
Hammond 8O..2
Harrisonburg 4K *3
Hahnville 10O.*4
Homer 1F.....1
Houma 11N....5
Independence 8O 1
Jackson 7N...2
Jennette 10L.2
Jena 5J.....*6
Jennings 9G...3
Jonesboro 2G...1
Kenner 10P....1
Lake Providence 1M *1
Leesville 6F...2
Leesville 9N...1
Lutcher 9N....1
Madisonville 8P 1
Mandeville 8P..1
Mansfield 4D..1
Many 5E *6
Marksville 6J..1
Minden 2K....3
Monroe 2J 10
Morgan City 11N 5
Napoleonville 10M 1
Natchitoches 4F 2
Neame 7P 1
New Iberia 10K.7
New Orleans .339
New Roads 8L.1
Opelousas 8J..4
Patterson 11M.2
Packing 7P...1
Plaquemine 6H..1
Plaquemine 9M
Pte. a la Hache 10Q 1
Ponchatoula 8O 1
Port Allen 8M.*2
Rayne 9J.....3
Rayville 2K...1
Ruston 2H....3
St. Bernard 10Q *2
St. Francisville 7N *9
St. Joseph 4M.*7
St. Martinville 9K 2
Shreveport 2D.28
Shiell 9Q.....2
Springville 8N *93
Tallulah 2M..*8
Thibodaux 10N.*2
Vernon 3H *7
Vidalia 5L 1
Ville Platte.8J.*6
Washington 8J.1
Webb 9G.....1
West Monroe 2J 1
White Castle 9N 2
Winfield 4H...2
Winnsboro 3K.*8

TOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED TYPE.

TEXAS
Pop. 3,896,542.

COUNTIES

	Pop. Thous.
Anderson 26L	29
Andrews 11J	†9
Angelina 28M	17
Aransas 23U	2
Archer 20G	6
Armstrong 14D	2
Atascosa 20S	10
Austin 24P	17
Bailey 11F	†3
Bandera 18Q	4
Bastrop 22P	25
Baylor 18G	8
Bee 22T	12
Bell 22N	49
Bexar 20R	110
Blanco 20O	4
Borden 14L	1
Bosque 22L	19
Bowie 29G	4
Brazoria 26R	13
Brazos 25N	18
Brewster 10P	5
Briscoe 14E	2
Brown 19L	22
Burleston 24O	18
Burnet 20N	10
Caldwell 22Q	24
Calhoun 24T	3
Callahan 18J	12
Cameron 22Y	27
Camp 27I	9
Carson 14C	2
Cass 28H	27
Castro 12E	1
Chambers 28P	4
Cherokee 27K	29
Childress 16E	9
Clay 20G	17
Cochran 11G	†65
Coke 16K	6
Coleman 18L	22
Collin 24H	49
Collingsworth 16D	5
Colorado 24Q	18
Comal 20P	8
Comanche 20K	27
Concho 17M	6
Cooke 22G	26
Coryell 21M	21
Cottle 16F	4
Crane 11M	†3
Crockett 13N	1
Crosby 14G	1
Dallam 12A	4
Dallas 23I	135
Dawson 13L	2
Deaf Smith 12D	4
Delta 26G	14
Denton 22H	31
Dewitt 22R	23
Dickens 15G	3
Dimmit 17T	3
Donley 15D	5
Duin 20K	
Duval 20V	8
Eastland 19J	23
Ector 11K	1
Edwards 16P	3
Ellis 23J	53
El Paso 5L	52
Erath 20J	32
Falls 23M	35
Fannin 25G	41
Fayette 23Q	29
Fisher 16I	12
Floyd 14F	4
Foard 17I	5
Fort Bend 26Q	18
Franklin 27H	9
Freestone 25L	20
Frio 19S	8
Gaines 11I	1
Galveston 27Q	44
Garza 14H	1
Gillespie 19O	9
Glasscock 14L	1
Goliad 22S	9
Gonzales 22R	28
Gray 15C	3
Grayson 23G	65
Gregg 28J	14
Grimes 25N	21
Guadalupe 21P	24
Hale 13F	7
Hall 15E	8
Hamilton 20L	15
Hansford 14A	†9
Hardeman 17F	11
Hardin 29O	12
Harris 26P	115
Harrison 28I	37
Hartley 12B	1
Haskell 17H	16
Hays 21P	15
Hemphill 16B	3
Henderson 25S	20
Hidalgo 21Y	13
Hill 23K	46
Hockley 12G	†1
Hood 21J	10
Hopkins 26H	31
Houston 26M	29
Howard 14J	8
Hunt 25H	48
Hutchinson 14B	†8
Irion 15M	1
Jack 20H	11
Jackson 24O	6
Jasper 29N	14
Jeff Davis 8N	1
Jefferson 29P	38
Jim Hogg 20W	•
Jim Wells 21V	•
Johnson 22J	54
Jones 17I	24
Karnes 21S	14
Kaufman 24I	35
Kendall 19P	4
Kent 15H	2
Kerr 18P	5
Kimble 17O	3
King 16G	†8
Kinney 19R	7
Kleberg 21U	9
Knox 17G	6
Lamar 26G	45
Lamb 12F	15
Lampasas 20M	9
La Salle 19T	4
Lavaca 23R	26
Lee 23O	13
Leon 25M	16
Liberty 28O	10
Limestone 24L	34
Lipscomb 16A	2
Live Oak 21T	3
Llano 19O	6
Loving 9K	†2
Lubbock 13G	3
Lynn 13H	1
McCulloch 18M	13
McLennan 22L	73
McMullen 20T	1
Madison 25N	10
Marion 28I	10
Martin 13J	1
Mason 18N	5
Matagorda 25S	13
Maverick 16T	5
Medina 19R	13
Menard 17N	2
Midland 13K	3
Milam 23N	36
Mills 20L	8
Mitchell 15J	8
Montague 21G	25
Montgomery 26O	15
Moore 13B	†5
Morris 28H	10
Motley 15F	2
Nacogdoches 28L	27
Navarro 24K	47
Newton 30N	10
Nolan 16J	11
Nueces 22Y	21
Ochiltree 15A	1
Oldham 12C	†3
Orange 30P	9
Palo Pinto 20I	19
Panola 26J	20
Parker 21I	26
Parmer 11E	1
Pecos 11N	2
Polk 28N	17
Potter 13C	12
Presidio 7P	5
Rains 25I	6
Randall 13D	3
Reagan 14M	†3
Real 16Q	1
Red River 27G	28
Reeves 2ZT	3
Refugio 23Q	4
Roberts 15B	†9
Robertson 24M	27
Rockwall 24I	8
Runnels 17K	20
Rusk 28J	26
Sabine 30L	8
San Augustine 29L	9
San Jacinto 27N	7
San Patricio 22U	11
San Saba 19M	7
Schleicher 16N	4
Scurry 15I	10
Shackelford 18H	4
Shelby 28L	26
Sherman 12A	1
Smith 27J	21
Somervell 21K	3
Starr 19X	13
Stephens 19I	7
Sterling 15K	1
Stonewall 16H	5
Sutton 16O	1



†POP. SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACE

New Mexico

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SCALE OF MILES
0 10 20 30 40 50 60 70 80

COUNTIES

NEW MEXICO Pop. 327,301

Counties	Pop. Thous.
Bernalillo 6F	23
Chaves 10L	16
Colfax 3K	16
Curry 7N	11
Dona Ana 12P	12
Eddy 12M	12
Grant 11C	14
Guadalupe 7K	10
Lincoln 9L	7
McKinley 2H	13
Mohkinley 5C	12
Mora 5K	12
Otero 11H	7
Quay 6N	14
Rio Arriba 3F	16
Roosevelt 8M	12
Sandoval 5F	8
San Juan 3C	8
San Miguel 5K	22
Santa Fe 5G	14
Sierra 10E	3
Socorro 9F	14
Taos 3H	16
Torrance 7H	11
Union 4N	11
Valencia 7D	13

TOWNS

Town. Key.	Pop.
Alamogordo 11H	1
Albuquerque 6F	11
Artesia 11L	1
Aztec 3D	1
Bernalillo 6F	1
Carlsbad 12L	7
Carrizozo 9H	1
Chaperito 6K	1
Clayton 4N	1
Clovis 8N	3
Deming 12D	1
East Las Vegas 5K	1
Estancia 7G	1
Gallup 5B	2
Hillsboro 11D	1
Isleta 6F	1
Las Vegas 12F	3
Las Vegas 5J	3
Lincoln 10J	5
Los Lunas 12B	1
Lordsburg 7F	1
Mogollon 10A	1
Nara Visa 5N	1
Ocate 4J	1
Mora 4H	2
Penasco 4H	1
Portales 8N	1
Raton 3L	6
Roswell 9L	6
San Antonio 9B	1
San Marcial 9F	1
San Rafael 6D	1
Santa Fe 5H	5
Santa Rita 11D	1
Santa Rosa 7K	1
Silver City 11C	3
Socorro 8F	1
Taos 4H	2
Tierra Amarilla 3F	1
Tucumcari 6M	2
Tularosa 10G	1
Van Houten 3K	1
Wagonmound 5K	1
Willard 7G	1
Zuni 12D	1

TEXAS Counties—Cont.

Counties	Pop. Thous.
Throckmorton 18H	4
Titus 27H	16
Tom Green 16L	17
Travis 21O	55
Trinity 27M	12
Tyler 29N	10
Upshur 27L	19
Upton 13L	†5
Uvalde 17R	11
Valverde 14Q	8
Van Zandt 25I	25
Victoria 23S	14
Walker 26N	16
Waller 25P	12
Ward 10L	2
Washington 24O	25
Webb, Laredo 18V	22
Wharton 25R	21
Wheeler 16C	5
Wichita 19F	16
Willbarger 18F	12
Williamson 22O	42
Wilson 21R	17
Winkler 10K	†1
Wise 21H	26
Wood 26I	23
Yoakum 11H	†6
Young 19H	13
Zapata 19X	3
Zavalla 17S	1
Willacy 22X	...

TOWNS

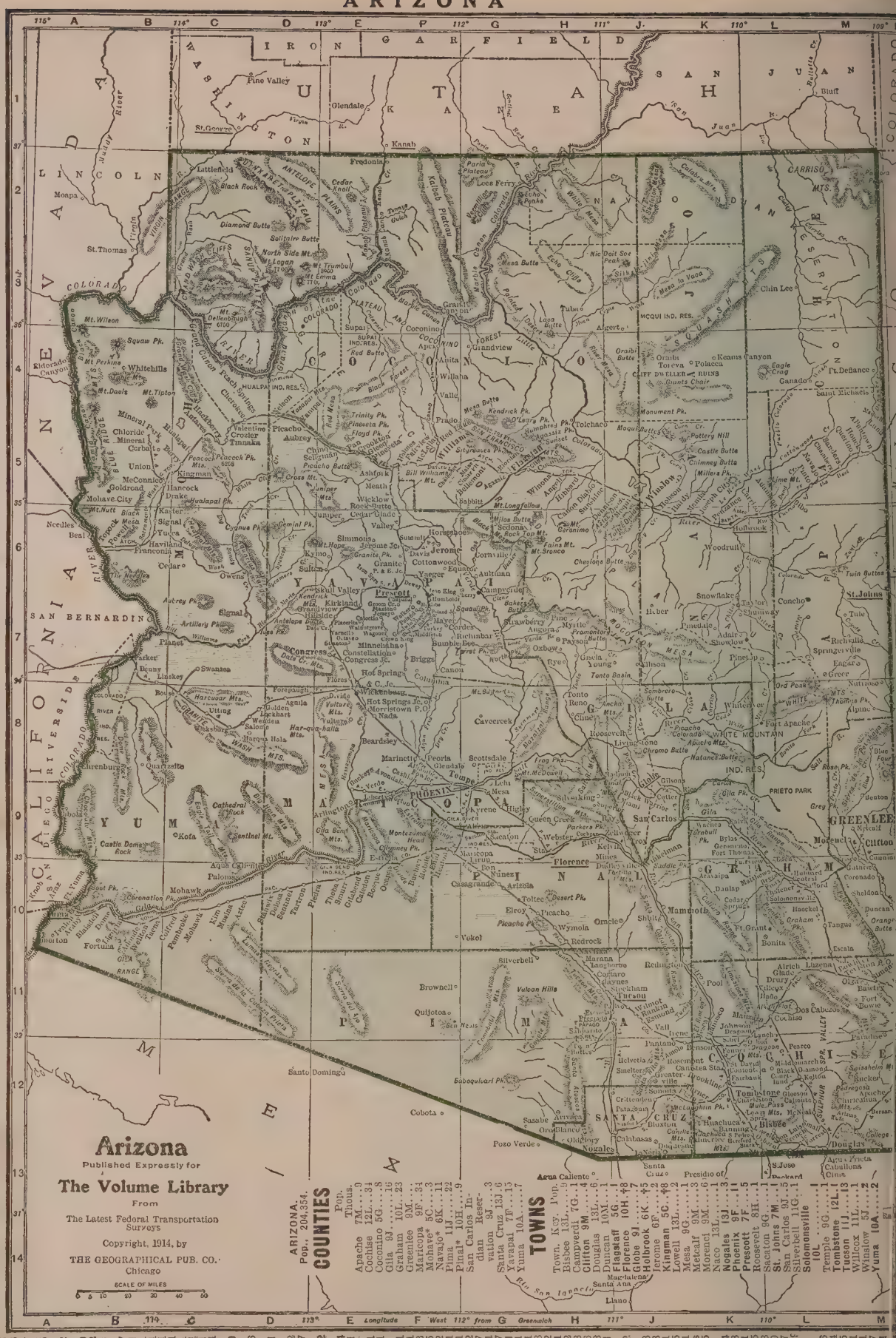
Town. Key.	Pop.
Abilene 17J	9
Alba 26I	1
Albany 18J	1
Alice 21V	2
Alpine 9P	1
Alvarado 23J	1
Alvin 27Q	1
Alvord 22H	1
Amarillo 13C	9
Anderson 26Q	†6
Angleton 27R	1
Anson 17J	1
Aransas Pass 23U	1
Archer City 20H	†8
Aspermont 16H	†8
Athens 25K	2
Atlanta 29I	1
Austin 21P	29
Baird 18J	1
Ballinger 17L	3
Bandera 19Q	†3
Barstow 9L	†6
Bartlett 22N	1
Bastrop 23P	1
Batesville	†1
Bay City 25R	3
Beaumont 29P	20
Beeville 22T	3
Beene 25M	3
Bellevue 20H	†6
Bellville 25P	1
Belton 22N	4
Benavides 21V	5
Benjamin 17H	†5
Big Sandy 27J	1
Big Spring 14K	4
Boerne 29Q	†8
Bonham 25H	4
Boston 28H	†3
Bowie 21H	2
Brackettville 16R	2
Brady 18N	2
Breckenridge 19J	†9
Brenham 25P	4
Bridgeport 21H	2
Bronson 30M	1
Brownfield 12H	†5
Brownsville 22Y	10
Brownwood 19L	6
Bryan 24O	4
Burkburnett 20M	1
Burnet 20N	†9
Caldwell 24O	1
Call 29N	1
Calvert 24N	2
Cameron 23N	3
Canadian 16B	1
Canton 22J	†5
Canyon 13D	1
Caro 28L	1
Carrizo Springs 18T	†6
Carthage 29K	2
Center 29L	1
Centerville 26M	†3
Channing 11C	†5
Chico 21H	1
Childress 16E	3
Chillicothe 18F	1
Circo 19J	2
Clairemont	†1
Clarendon 15D	1
Clarksville 27G	2
Claude 14D	†6
Cleburne 22K	10
Cleveland 27O	1
Clifton 22L	1
Coleman 13L	†6
Colorado 15K	1
Columbus 24Q	2
Comanche 26H	2
Conroe 26I	2
Cooper 26H	1
Corpus Christi 22V	8
Corsicana 25K	9
Cotulla 19T	1
Crockett 27M	3
Crowell 17F	1
Cuero 22R	3
Dainderfield 26I	1
Dalhart 12A	2
Dallas 24I	92
Decatur 22I	1
Dekalb 28G	1
De Leon 26K	1
Dublin 20K	2
Dumas 25Q	†1
Eagle Lake 16T	3
Eagle Pass 20K	†8
Eastland 24S	†5
El Campo 24U	1
Eldorado 16N	†5
Elgin 23O	3
El Paso 4L	39
Emory 26I	†2
Ennis 24K	5
Fairfield	†6
Farmersville 24H	1
Ferris 24J	1
Floresville 21R	1
Floydada 13F	†6
Forney 24I	1
Fort Davis 9O	†9
Fort Stockton 11N	†3
Fort Worth 22J	73
Fostoria 24H	1
Franklin 21P	1
Fredericksburg 19R	2
Gail 13L	†4
Gainesville 22H	7
Galveston 28R	36
Garden City 13L	†3
Gatesville 22M	1
Georgetown 22O	3
Giddings 24P	1
Gilmer 27J	1
Glen Rose 22K	1
Goliad 18I	2
Goldthwaite 20M	1
Gonzales 23Q	3
Goree 16H	1
Graham 20I	1
Granbury 21J	1
Grand Saline 28I	1
Grand View 23K	1
Granger 22N	1
Graysburg 25I	8
Groesbeck 24L	1
Groveton 27M	4
Gurley 16G	†5
Guthrie 24R	1
Hallettsville 24R	1
Hamilton 21L	1
Hamlin 27I	2
Hansford	†1
Harlingen 27L	1
Haskell 24N	2
Hebbronville 20W	1
Hemphill 30M	2
Hempstead 25P	2
Henderson 28K	2

Cont'd on page 38

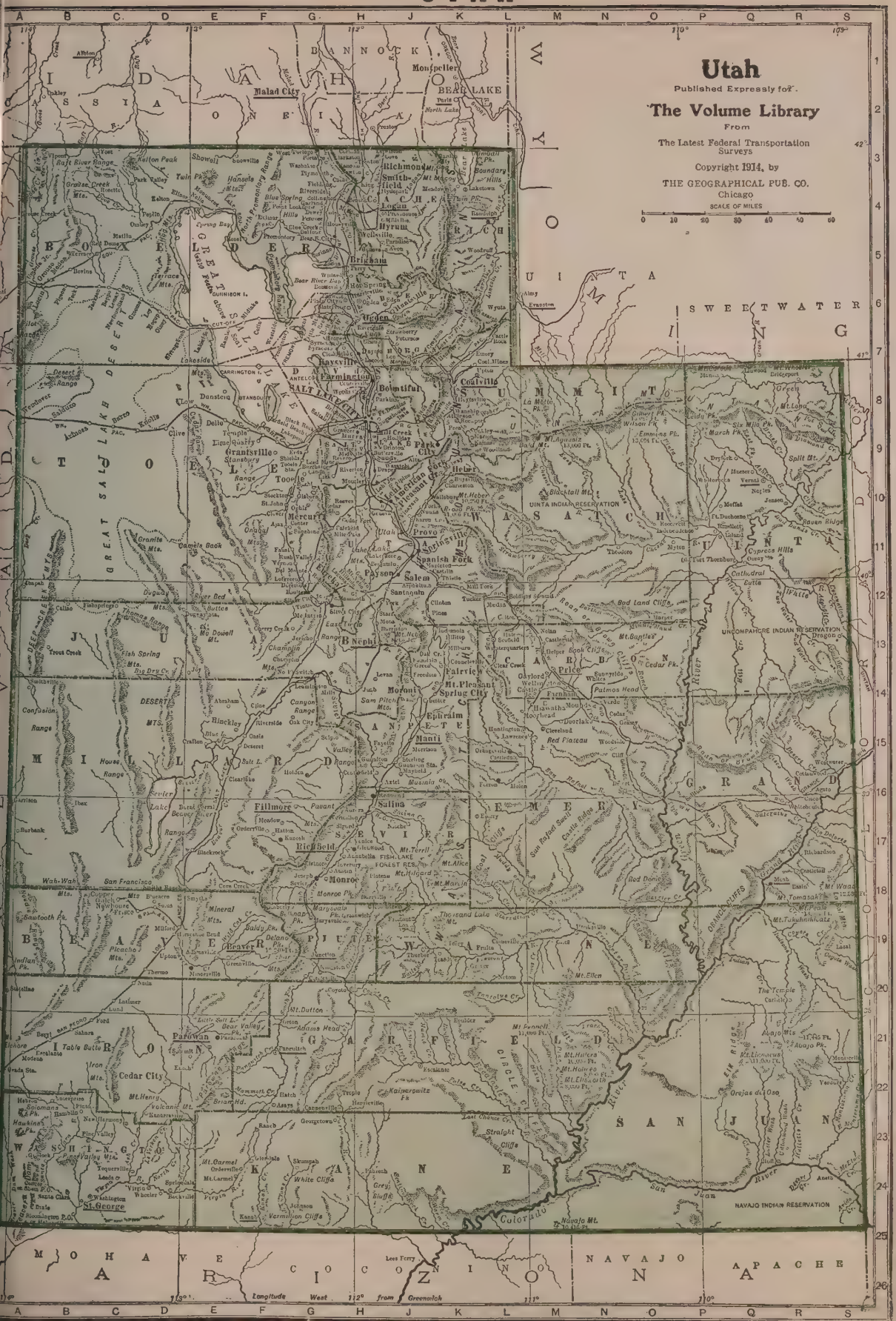
SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED TYPE.

ARIZONA

TEXAS
Towns—Cont.
Town. Key. Pop.
Henrietta 21G.2
Hereford 11D..1
Hico 21K.....1
Hidalgo 21Y..†6
Higgins 16A...1
Hillsboro 23K..6
Honuo 19R....2
Honey Grove 25H 2
Houston 27Q..78
Houston Heights 27P..6
Hubbard 23L...1
Humble 27P...3
Huntsville 26N.2
Italy 23K.....1
Itasca 23K....1
Jacksboro 20I..1
Jacksonville 26K 2
Jasper 29N...†4
Jefferson 29I...2
Johnson City 20O 1
Junction 18O.†8
Karnes City 21R 1
Kaufman 25J..1
Keltys 28M....1
Kemp 25J.....1
Kenedy 21S....1
Kenneth 1
Kerrville 19P..1
Killeen 22N....1
Kingsville 1
Kirbyville 29N.2
Knox City 17G 1
Kountze 29O..†6
Ladonia 26H..1
Lagrange 23P.1
Lamesa 1
Lampasas 20N.2
Lancaster 24J..1
Laredo 18V....1
Leakey 16J2...5
Lipscomb ...†1
Lexington 24O.1
Liberty 21P...†9
Linden 28I..†5
Livingston 28N.1
Llano 20N.....1
Lockhart 22P...2
Longview 28J..5
Lott 23M 1
Lubbock 3G...1
Lufkin 28M...2
Luling 22Q....1
Lyra 1
McAllen 1
McGregor 22M.1
McKinney 24I..4
Mabank 25J...1
Madisonville 26N 1
Marble Falls 20O 1
Marfa 8O...†7
Marion 21Q....1
Marlin 24M ...3
Marshall 29J..11
Mart 23L....2
Mason 18N....1
Matador 15G..†7
Memphis 15D..1
Menard 18N..†5
Mercedes 21Y..1
Meridian 22L.†7
Merkel 17J....2
Mexia 24L.....2
Miami 15B...†5
Midland 12L..2
Miles 16L.....1
Mineola 26J...1
Minera 17V.....1
Mineral Wells 20J 3
Mingus 20J....1
Mission 20Y...1
Mobeetie 16C.†6
Montague ....†2
Mount Pleasant 28I 3
Mount Vernon 27H 1
Nacogdoches 28L 3
Naples 28H....1
Navasota 25O..3
New Boston 29H 2
New Braunfels 21Q 3
Newton 30N...1
Nixon 1
Noack 1
Nocona 21G...1
Oakville 21T..†7
Ochiltree 15A †5
Odessa 12L....1
Olney 19H.....1
Olton 12F.....
Orange 30P....5
Ozona 14N....1
Paducah 16F...1
Paint Rock 17M .....†5
Palacios 1
Palestine 26L..10
Palo Pinto 20J .....†7
Panhandle 14C .....†5
Paris 22G....11
Pearsall 19S...1
Pecos 9M.....1
Pilot Point 23H 1
Pittsburg 1
Plainview 13F.2
Plains 11H 1
Pleasanton 20S .....†6
Plemons .....†1
Port Arthur 7
Port Lavaca 24T 1
Post 14H ...†5
Quanah 17F ..3
Quitman 27I ..†4
Ranger 20T ..†5
Refugio 23T ..†5
Richmond 26Q.1
Robert Lee 16L.1
Roby 16J ...†9
Rockdale 23O..2
Rockport 23U..1
Rocksprings 18O .....†7
Rockwall 24I...1
Rogers 22N..1
Rosebud 23N..1
Rosenberg 29Q..1
Rotan 1
Royse City 24I..1
Runge 23S....1
Rusk 27L....1
Sabinal 17H..1
Sabinas 23P..3
San Angelo 15M ...10
San Antonio 20R ...96
San Augustine 29L 1
San Benito 22Y 2
Sanderson 12P.†7
San Diego 2
San Marcos 21P 4
San Saba 20M.1
Santa Anna 18L 1
Saratoga 28O..1
Sealy 23Q....1
Seguin 21Q...3
Seminole 11J..5
Seymour 18H..2
Shafter 7P...1
Shamrock 16C.1
Sherman 24H.12
Silverton 23Q..1
Sinton 22U ..†7
Smithville 23P..1
Smiley 22R...1
Snyder 15J ...2
Somerville 24O.2
Sonora 15N...†8
Sourlake 28P..6
Stamford 16J..3
Stanton 13K..1
Stephenville 20K 2
Sterling City 15L .....†8
Stiles 21R..1
Stockdale 22R..1
Stratford 12A..1
Strawn 20J...1
Sulphur Springs 26I 5
Sweet Water 4
Tahoka 16J ...†8
Taylor 22O ...5
Teague 3
Temple 23N...10
Terrell 25J ...7
Texarkana 29H .....
Throckmorton 18I .....†6
Thurber 20J ..4
Tilden 23H...1
Timpson 29K..1
Tolar 23H...1
Toyah 9M....1



*POP. SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED



TEXAS

Towns—Cont.

Town. Key. Pop.
Van Alstyne
24H 1
Velasco 26R ..1
Vernon 18F...3
Victoria 23S...3
Waco 23K....26
Waelder 23Q...1
Wallisville
28P .....†3
Walnut Springs.
21K 1
Waxahachie
23F 6
Weatherford
21J 5
Wellington
16D .....†5
West 23L.....1
Wharton 25R..1
Whitesboro
23H 1
Whitewright
24H 1
Wichita Falls
20G 8
Willis 27O.....1
Wills Point
25J 1
Winnsboro 27I 1
Winters 17L...1
Wolfe City
25F 1
Woodville 28N †9
Yoakum 23R...4
Yorktown 22R.1
Ysleta 8L.....2
Zapata .....†2

UTAH
Pop. 373,351.

COUNTIES

Pop.
Thous.
Beaver 19E....4
Boxelder 5H..13
Cache 4H.....23
Carbon 13M...8
Davis 7H.....10
Emery 15L....6
Garfield 21F...3
Grand 18Q.....1
Iron 21E.....3
Juab 13H.....10
Kane 24F.....1
Millard 16G...6
Morgan 7J.....2
Piute 14G.....1
Rich 14L.....1
Salt Lake
8H 131
San Juan 22R.2
Sanpete 15J...16
Sevier 17G.....9
Summit 8K....8
Tooele 9F.....7
Uinta 10Q.....7
Utah 11J.....37
Wasatch 9K...8
Washington
24H 5
Wayne 19J.....1
Weber 6H....35

TOWNS

Town. Key. Pop.
American Fork
10J 2
Beaver 19E...1
Bingham 9G...2
Bountiful 8H..1
Brigham 5H...3
Castledale
15L 693
Cedar City 22D.1
Coalville 8K.976
Ephraim 15J...2
Eureka 12G.....3
Fairview 13K..1
Farmington
7H 1
Fillmore 16G..1
Forest Dale 9H.1
Grantsville 9F.1
Heber 9K.....2
Hooper 7H.....1
Huntsville 6H..1
Hyrum 4J.....1
Junction 19G.206
Kanab 24F..733
Lehi 10H.....2
Loa 19J.....250
Logan 4H.....7
Mammoth 12G.1
Manti 15J.....2
Mercur 10G.....1
Midvale 9H....1
Milford 19D...1
Monticello
22R 375
Moab 18Q...615
Monroe 18G...1
Moroni 14J.....1
Morgan 7J...756
Mount Pleasant
11K 2
Murray 9H.....4
Nephi 13H.....2
Ogden 6H.....25
Pangultch 21F.1
Park City 9J..3
Parowan 21E..1
Payson 12J....2
Pleasant Grove
10J 1
Price 13M...1
Providence 4H.1
Provo 11J.....8
Randolph 14L.533
Richfield 17G..2
Richmond 3H..1
St. George 24B.1
Salina 16H...1

Sandy 9J.....1
Smithfield 3H..1
Spanish Fork
11J 3
Spring City
11J 1
Springville 11J.3
Summit 9J.....1
Tooele 9F.....2
Vernal 10Q..836
Wellsville 4H..1

Towns below 1 Thousand Pop. in Hundreds

Alpine 10 H..44
Bear G 5 41
Brighton 9H..46
Castledale 15 L 46
Castlegate 13 M.....46
Centerville 8 H 47
Clarkston 3 H..45
Clearcreek 13 L 43
Cleveland 15 M 44
Coalville 8 K..40
Collinston 4 G 41
Deseret 15 E..45
Draper 9 H..47
Elsinore 17G..46
Emery 16 K..45
Escalante 21 J 46
Ferron 16 L 46
Fountaingreen 13 J 46
Garland 14 H..44
Genola 12 H..44
Greenriver 16Q 46
Gunnison 15 J..40
Helper 13 M..48
Hinckley 15E.....45
Holliday 9 H..47
Huntington 15 L 48
Hyderpark 41H..46
Kamas 9 K..44
Kanab 24F..47
Kanosh 17 F..45
Kaysville 7 H..43
Layton 7 H..47
Lehi 14 H..47
Levan 14 H..46
Lewiston 3 H..40
Manavalley 11H..47
Mayfield 16J..44
Mendon 5H..41
Midway 9K..48
Minersville 19J 45
Moab 18Q 46
Mona 12H 47
Morgan 3H 45
Newton 3H 45
Oak City 17H..46
Paradise 5H..46
Peoa 8K 45
Plain City 6H 48
Randolph 14L..45
Richmond 16H..45
Riverton 9H..46
St. John 10F..44
Santaquin 12H 46
Salem 11J 40
Scipio 15G..45
Scofield 13L..46
Sunnyside 14N 47
Thurber 19J..43
Toquerville 24C 44
Tremonton 4F..43
Vernal 10Q..36
Vernon 11G..43
Willard 5H..45

*POP. SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED TYPE.

COLORADO

Colorado
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SCALE OF MILES
0 5 10 20 30 40 50
COLORADO
Pop. 799,024.
COUNTIES
Pop. Thous.
Adams* 63S...8
Arapahoe* 18S...8
Archuleta* 16L..3
Baca* 16S...30
Bent 13X...5
Boulder 5Q...30
Chaffee 10Q..7
Cheyenne* 10Z..3
Clear Creek* 7Q...5
Conejos* 17Q..15
Costilla* 17Q..15
Crowley 13Q...1
Custer* 13Q...1
Delta 10H...13
Denver 7R...213
Dolores* 15G...1
Douglas* 8S...6
Eagle* 7M...3
Elbert* 8N...5
El Paso 10S..13
Fremont 10R..13
Garfield* 6T...9
Gilpin 6P...1
Grand* 5N...1
Gunnison 11L..5
Hinsdale* 13K...1
Huerfano 15S..13
Jackson* 3N...1
Jefferson 6R..14
Kiowa* 11Y...2
Kit Carson* 8Z..7
Lake 9N...10
La Plata 16H..10
Larimer 3Q..25
Las Animas 17T...23
Lincoln* 9V...5
Logan 3X...9
Mesa 9F...15
Mineral* 15L..1
Moffat* 2Y...3
Montezuma* 17J..10
Montrose 11H..10
Morgan 4V...9
Otero* 13V...20
Ouray* 13J...3
Park* 9O...3
Phillips* 3Z...3
Pitkin 9L...4
Prowers 13Z...9
Pueblo 13S..52
Rio Blanco* 2Z...4
Rio Grande* 15N...6
Routt 3L...7
Saguache* 13O..4
San Juan 11H..3
San Miguel 11H...4
Sedgwick* 2Z...3
Summit* 8N...14
Teller 11R...3
Washington* 4Z...6
Weld 4S...39
Yuma 5Z...8
TOWNS
Town. Key. Pop.
Alma 5X..60..3
Aspen 9L..60..9
Boulder 5Q...9
Breckenridge 8N...8
Brighton 6X..10..1
Buena Vista 10O..1
Burlington 6Z...3
Cañon City 8Z...3
Central City 6P...1
Cheyenne Wells 10Z...2
Colorado Cy. 10S...4
Colorado Sprgs. 17Q..29
Cortez 16F...5
Cripple Creek 11R...6
Del Norte 15N...8
Denver 7R...213
Delta 10H...13
Durango 17H..1
Eads 8S...1
Eaglerock 9Q...2
Fairplay 9O...2
Florence 12R..8
Fort Collins 3Q..8
Fort Morgan Sta. 4V...2
Georgetown 7P...9
Glenwood Sprgs. 9T...4
Golden 6R...2
Grand Junction 9F...7
Greeley 4S...8
Gunnison 11L..1
Hahn's Peak 13S...1
Holyoke 3Z...1
Idaho Sprgs. 7P...3
Julesburg 2Z...9
Lafayette 5R..1
Lagunita 14W..4
Lake City 13K...4
Lamar 13Z...2
Las Animas 13X...2
Leadville 9N...7
La Junta 13V..4
Littleton 7R...1
Longmont 5R..4
Louisville 5R...1
Loveland 4R...3
Manitaw 10R...1
Meeker 5H...8
Montevista 15O..2
Montrose 11H..3
New Windsor 3R...1
North Creede 15L...1
Ordway 13V..7
Ouray 13J...1
Pagosa Sprgs. 16L...6
Paonia 10J...1
Pueblo 12S...44
Redcliffe 7M...3
Rico 15G...3
Rockvale 12R...1
Rockyford 13V..3
Rouse 15S...1
Saguache 13O...7
Salida 11O...4
San Luis 17Q...9
Silvercliff 13Q...2
Silverton 14J..2
Sopris 17S...1
S. Canon 7K...1
Steamboat Sprgs. ...1
Starkville 17T..2
Sterling 3X...3
Springfield 16Z...1
Sulphur Sprgs. 5N...7
Telluride 14H..1
Trinidad 17T..18
Victor 11R...3
Walden 3N...1
Walsenburg 15S...2
Wray 5Z...1
Towns below 1 Thousand
Pop. in Hundreds
Aguilar ...8
Akron 5X...6
Antonito 17O..6
Arvada ...8
Aurora ...6
Berthoud 4R..7
Black Hawk 6P...6
Blancos 15Q..7
Breckenridge 8N...8
Brighton ...8
Brush 15V...9
Capulin 16O..6
Coalcreek 12R..6
Creede 14L...7
Crested Butte 10L...9
Delagua 16S..9
Del Norte 15N...8
Edgewater ...7
Fowler 11V...9
Fruita 9F...8
Georgetown 7P...9
Hastings 16S..6
Holly 13Z...7
Holyoke 3Z...6
Julesburg 2Z..9
Laveta 15R...6
Limon 8V...5
Manassa 17O..7
Marble 9K...7
Meeker 5H...8
Ohio City...7
Ordway 13V..7
Palisades 9G...9
*POP. SHOWN IN HUNDREDS.
*POP. OF COUNTY SEAT BELOW 1 THOUSAND.
COUNTY SEATS IN HEAVY FACED TYPE.
SWEETWATER
CARBON
WASATCH
GRAND
WAYNE
GARFIELD
SAN JUAN
NAVAJO
APACHE
ARIZONA
MORGAN
WASHINGTON
YUMA
KIT CARSON
LINCOLN
CHEYENNE
KIOWA
CROWLEY
PROWERS
BACA
OTERO
BENT
LAS ANIMAS
HUERFANO
COSTILLA
ALAMOSA
RIO GRANDE
MINERAL
SAN JUAN
DOLORES
MONTEZUMA
LA PLATA
ARCHULETA
SAGUACHE
GUNNISON
MONTROSE
OURAY
SAN MIGUEL
MESA
DELTA
PITKIN
EAGLE
GARFIELD
RIO BLANCO
MOFFAT
ROUTT
JACKSON
LARIMER
WELD
PHILLIPS
SEDGWICK
LOGAN
KIMBALL
DEUEL
CHEYENNE
LARAMIE
SUMMIT
CLEAR CREEK
JEFFERSON
DOUGLAS
ELBERT
ARAPAHOE
ADAMS
BOULDER
GILPIN
GREELEY
WELD
TELLER
EL PASO
PUEBLO
FREMONT
CHAFFEE
LAKE
PARK
GRAND
Glenwood Springs
Grand Junction
Aspen
Leadville
Breckenridge
Crested Butte
Buena Vista
Gunnison
Salida
Colorado Springs
Cripple Creek
Pueblo
Rocky Ford
Las Animas
Trinidad
Creede
Durango
Pagosa Springs
Ft. Collins
Ft. Morgan
Greeley
Loveland
Denver
Cheyenne
Sterling
Julesburg
Holyoke
Lamar
Eads
Ordway
Rocky Ford
Montrose
Ouray
Silverton
Rico
Dolores
Cortez
Mancos
Ignacio
Pagosa Springs
Saguache
Monte Vista
Alamosa
Walsenburg
Trinidad
Aguilar
Ludlow
Lamar
Eads
Holyoke
Julesburg
Sterling
Fort Morgan
Greeley
Longmont
Boulder
Denver
Cripple Creek
Victor
Canon City
Salida
Leadville
Aspen
Glenwood Springs
Grand Junction
Delta
Montrose
Gunnison
Crested Butte
Durango
Creede
Pagosa Springs
Ft. Collins
Loveland
Brighton
Denver
Colorado Springs
Pueblo
Rocky Ford
Las Animas
Trinidad
Walsenburg
Alamosa
Monte Vista
Saguache
Ouray
Silverton
Rico
Dolores
Cortez
Mancos
Ignacio
Pagosa Springs
Ft. Collins
Ft. Morgan
Greeley
Longmont
Boulder
Denver
Cripple Creek
Victor
Canon City
Salida
Leadville
Aspen
Glenwood Springs
Grand Junction
Delta
Montrose
Gunnison
Crested Butte
Durango
Creede
Pagosa Springs
Ft. Collins
Loveland
Brighton
Denver
Colorado Springs
Pueblo
Rocky Ford
Las Animas
Trinidad
Walsenburg
Alamosa
Monte Vista
Saguache
Ouray
Silverton
Rico
Dolores
Cortez
Mancos
Ignacio
Pagosa Springs
Ft. Collins
Ft. Morgan
Greeley
Longmont
Boulder
Denver
Cripple Creek
Victor
Canon City
Salida
Leadville
Aspen
Glenwood Springs
Grand Junction
Delta
Montrose
Gunnison
Crested Butte
Durango
Creede
Pagosa Springs
Ft. Collins
Loveland
Brighton
Denver
Colorado Springs
Pueblo
Rocky Ford
Las Animas
Trinidad
Walsenburg
Alamosa
Monte Vista
Saguache
Ouray
Silverton
Rico
Dolores
Cortez
Mancos
Ignacio
Pagosa Springs

WYOMING
Pop. 145,965.

COUNTIES

	Pop. Thous.
Albany 17U	11
Bighorn* 4M	8
Campbell* 1U	
Carbon 15P	11
Converse 11V	6
Crook* 3Y	6
Fremont 10K	11
Goshen 13Y	
Hot Springs 6Y	
Johnson 4Q	3
Laramie 17X	26
Lincoln 8E	
National Park Reservation 12E	†5
Natrona 10S	4
Niobrara 9X	
Park 3J	4
Platte 13W	
Sheridan 2Q	16
Sweetwater 16H	11
Uinta 17D	16
Washakie 5N	
Weston* 6Y	4

TOWNS

Town. Key.	Pop.
Basin 4M	†7
Buffalo 4Q	1
Casper 10S	2
Cheyenne 17X	11
Cody 3J	1
Cumberland 16E	1
Douglas 11V	2
Evanston 17D	2
Frannie 14E	1
Gillette 4U	†4
Green River 16H	1
Hanna 15R	1
Lander 10K	1
Laramie 17U	8
Newcastle 6Y	†9
Rawlins 15P	4
Rock Springs 16I	5
Sheridan 2Q	8
Sundance 3Y	†2
Thermopolis 7M	1

Towns below 1 Thousand

	Pop. in Hundreds
Afton 11D	†5
Aladdin 2Y	†1
Almy 17C	†2
Alta 6D	†1
Arapahoe 10L	†1
Atlantic City 12K	†1
Baggs 18N	†2
Basin 4M	†7
Bedford 10D	†1
Bighorn 2Q	†1
Bridger 16E	†3
Buford 18V	†1
Burns 10G	†1
Byron 2K	†1
Cambria 5Y	
Carpenter 18Y	
Centennial 17T	†2
Clark 1J	†1
Clearmont 2R	†1
Cowley 2L	†5
Dayton 2P	†3
Diamondville 15E	†6
Dixon 18O	†2
Dubois 7H	†1
Encampment 17Q	†4
Fairview 11D	†2
Fort Washakie 9J	†1
Gillette 4U	†4
Glenrock 10T	†3
Grey Bull 3M	†2
Guernsey 13X	†2
Gunn 15I	†2
Hartville 12X	†2
Hillsdale 17Y	†1
Hudson 10K	†3
Jackson 7D	†1
Kemmerer 15E	†8
Lovell 2L	†6
Lusk 11Y	†4
Manville 11X	†2
Medicine Bow 14S	†1
Meeteetse 5K	†2
Moorcroft 4W	†1
Newcastle 6Y	†9
Opal 15F	†2
Otto 4L	†1
Pathfinder 11Q	†2
Pine Bluff 17Z	†2
Riverton 9L	†4
Saratoga 16Q	†5
Shoshoni 8M	†6
Sublett 14E	†3
Sundance 3Y	†2
Sunrise 12X	†7
Tie Siding 18U	†2
Upton 5X	†2
Wheatland 14W	†7
Worland 5M	†2
Yellowstone Park 1E	†1

SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED TYPE.

MONTANA

MONTANA
Pop. 376,053.

COUNTIES

Pop. Thous.

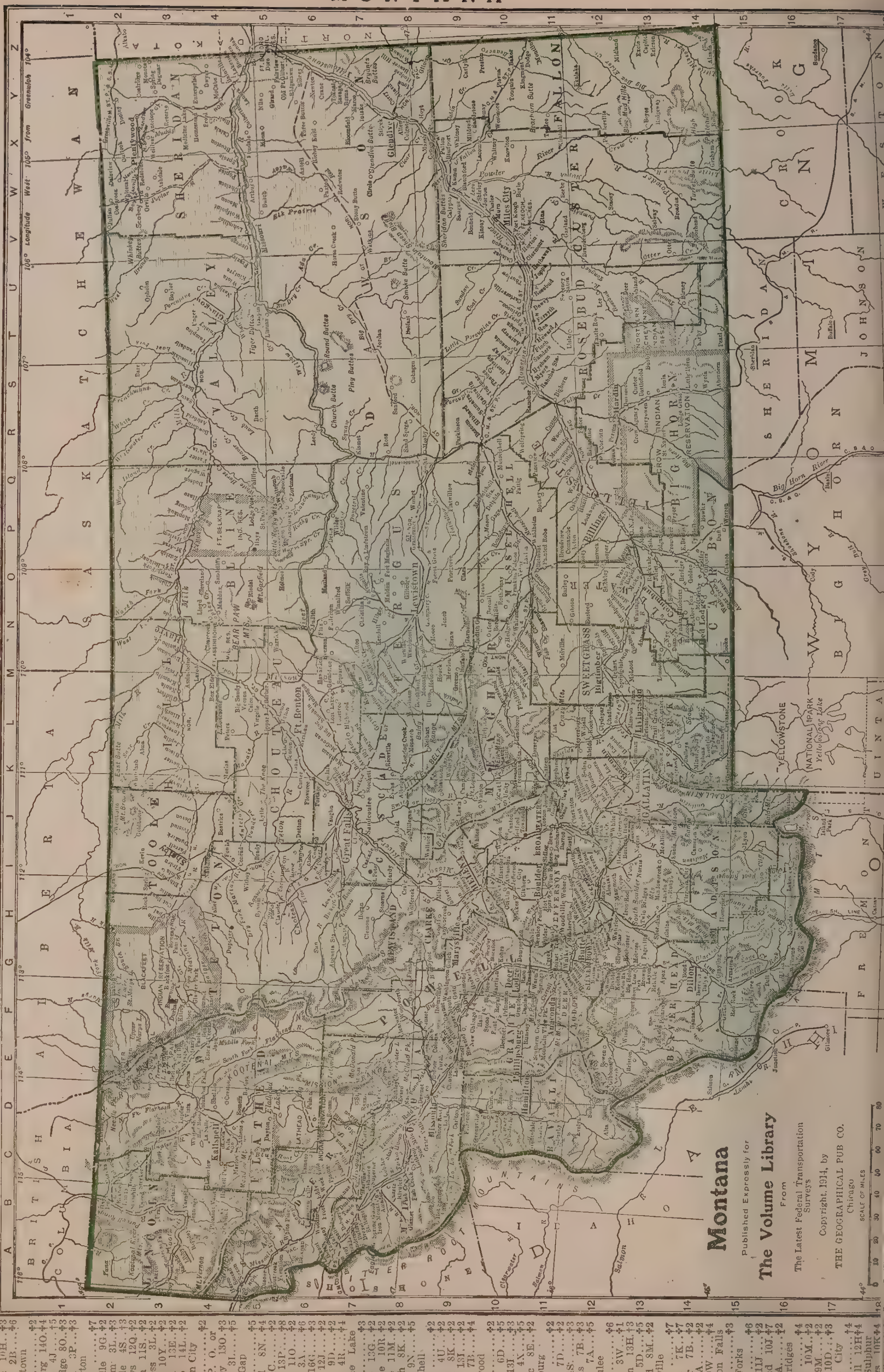
Beaverhead 14G 6
Big Horn 13S...
Blaine 4O.......
Broadwater* 10J 3
Carbon 14O...13
Cascade 7J....28
Chouteau 6L..17
Custer 10V....14
Dawson 8Y...12
Deerlodge 11F.12
Fallon 12Y......
Fergus 8N....17
Flathead 4D..18
Gallatin 13K..14
Granite 10F....2
Hill 3K.........
Jefferson* 11H.5
Lewis & Clark 10I 21
Lincoln* 3A...3
Madison* 14I..7
Meagher* 10K.4
Missoula 9D..23
Musselshell 10P ....
Park 13L.....10
Powell 10G....5
Ravalli 11D...11
Rosebud 10T...7
Sanders 6B....3
Sheridan ....
Silverbow 12G.56
Stillwater ......
Sweet Grass 12M 4
Teton* 5H.....9
Toole 3I........
Valley 4T.....13
Yellowstone 12P 22

TOWNS

Town. Key. Pop.
Anaconda 11F.10
Belt 7K.......1
Bigtimber 12M.1
Billings 12P...10
Boulder 11H..‡7
Bozeman 13K..5
Butte 12G.....39
Chinook 3O....7
Chouteau 5H..‡5
Columbus 12N..5
Deer Lodge 10G 2
Dillon 14G.....1
Ekalaka 12Y...1
Forsyth 10T....1
Fort Benton 6L.1
Glasgow 4T...1
Glendive 8Y...2
Great Falls 7J.13
Hamilton 11D..2
Hardin 12R....2
Havre 3N......3
Helena 10I....12
Kalispell 4D...5
Lewistown 8N..2
Libby 3A.....‡6
Livingston 13L.5
Miles City 10V.4
Missoula 9D..12
Phillipsburg 10F 1
Plentywood 3Y 1
Red Lodge 14O.4
Roundup 10P...1
Shelby 3I 2
Thompson 6B.‡3
Townsend 10J.‡7
Virginia City 14I ....‡4
Walkerville 11G 2
Whitefish 4D...1
White Sulphur Springs 10K.‡4

Towns below 1 Thousand Pop. in Hundreds

Absarokee 13N‡1
Albright 8K..‡1
Aldridge 15K.‡2
Armstead 15G ....‡2
Augusta 7H...‡1
Austin 9H....‡3
Bainville 4Z..‡3
Baker 10Z....‡3
Ballantine 12Q ....‡3
Bannack 14F.‡1
Basin 11H...‡4
Bear Creek 14O ....‡3
Belfry 14O...‡2
Belgrade 12J.‡5
Benchland 8M ....‡3
Bigfork 5D...‡3
Big Sandy 4M ‡2
Bonner 9E....‡3
Boulder 11H.‡7
Bridger 14O..‡5
Broadview 11O ....‡2
Browning 3G.‡2
Buffalo 9M...‡1
Chester 3K...‡8
Chestnut 13K.‡3
Chinook 3O...‡7
Clancy 10I....‡5
Clyde Park 12L ....‡4
Columbia Falls 4D ....‡6
Columbus 13O.‡5
Conrad 5I....‡8
Dayton 5D...‡2
Dewey 11A...‡1
Dodson 4Q...‡2
Dorsey 11K...‡1
Drummond 9F ....‡3
Dutton 6J....‡2
East Helena 10I ....‡8
Ekalaka 12Y..‡2
Elliston 10H..‡3
Eureka 2B....‡6
Frenchtown 8D ....‡2
Fromberg 14O.‡4
Galata 4J....‡5
Gilt Edge 8O..‡3
Harlem 3P....‡3
Harlowton 10M ....‡7
Helmville 9G.‡2
Hingham 3L..‡3
Hinsdale 4S..‡3
Huntleys 12Q.‡2
Hysham 11S..‡2
Inverness 3L.‡2
Ismay 10Y..‡2
Jackson 13E..‡2
Jardine 14L..‡2
Jefferson City 10I ....‡2
Joliet P. O. or Wilsey 13O.‡3
Joplin 3L....‡5
Judith Gap 9N ....‡5
Kendall 8N..‡4
Kila 4C.....‡2
Laurel 13P....‡8
Lavina 11O....‡2
Libby 3A.....‡6
Lima 16G.....‡3
Logan 12J....‡2
Lo Lo 9D.....‡2
Malta 4R.....‡4
Medicine Lake 2Y ....‡3
Melrose 13G..‡2
Melstone 10R.‡2
Melville 11M..‡2
Monarch 8K..‡2
Moore 9N....‡5
Musselshell 10Q ....‡2
Nashua 4U...‡2
Neihart 8K...‡2
Norris 13I....‡2
Plains 7B....‡4
Plentywood 2X ....‡2
Polson 6D....‡5
Pony 13I.....‡3
Poplar 4X....‡5
Potomac 8E..‡2
Radersburg 11 I ....‡2
Ronan 7D....‡2
Saco 4S.....‡3
St. Regis 7B..‡3
Saltese 7A...‡5
Sandcoulee 7J ....‡6
Scobey 3W...‡1
Sheridan 13H.‡3
Somers 5D...‡5
Stanford 8M..‡2
Stevensville 10D ....‡7
Stockett 7K..‡7
Superior 7B..‡2
Taft 7A......‡2
Terry 9W....‡4
Thompson Falls 6B ....‡3
Three Forks 12J ....‡6
Toston 11J....‡2
Townsend 10J.‡7
Troy 3A.....‡2
Twin Bridges 13H ....‡4
Twodot 10M..‡2
Utica 9M....‡2
Victor 10D...‡3
Virginia City 14I........‡4
Whitehall 12H‡4
White Sulphur Springs 10K‡4



‡POP. SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED

IDAHO

Pop. 325,594.

COUNTIES

	Pop. Thous.
Ada 12D	29
Adams 9C	X
Bannock 13N	19
Bear Lake 14O	7
Bingham 12M	23
Blaine 12H	8
Boise* 10E	5
Bonner 2C	13
Bonneville 12N	X
Canyon 11C	25
Cassia 14J	7
Clearwater 5D	X
Custer* 10H	3
Elmore 12E	4
[illegible] 14N	[illegible]
Fremont 10M	24
Gooding 13G	[illegible]
Idaho 7E	12
Jefferson 11L	[illegible]
Kootenai 3C	22
Latah 5C	18
Lemhi 9H	4
Lewis 6C	X
Lincoln 13H	12
Madison 11N	[illegible]
Minidoka 13J	[illegible]
Nez Perce 6C	24
Oneida 14M	15
Owyhee 13C	4
Power 13L	[illegible]
Shoshone 4E	13
Twin Falls 14G	13
Washington 10C	11

X Formed after 1910 census was taken.

TOWNS

Town, Key, Pop.	
American Falls 13L	**!**
Blackfoot 12M	**2**
Boise 11D	**17**
Bonners Ferry 1D	1
Burke 4E	1
Burley 14J	1
Caldwell 11C	**3**
Challis 10H	**†3**
Coeur d'Alene 3C	**7**
Emmet 11C	1
Gooding 13G	**1**
Grangeville 7D	**!**
Hailey 12H	**!**
Idaho City 11E	**†2**
Idaho Falls 12M	4
Kellogg 3D	1
Lewiston 6C	6
Malad City 14M	**!**
Minidoka 13J	**!**
Montpelier 14O	1
Moscow 5C	**3**
Mountainhome 12E	**!**
Nampa 11C	4
Oxford 14M	†2
Paris 14O	**!**
Payette 10C	**1**
Pocatello 13N	**9**
Preston 14N	2
Rexburg 11N	1
Rigby 11N	5
Roberts 11M	[illegible]
Saint Anthony 11N	**!**
Salmon 8J	1
Sandpoint 2C	**2**
Shoshone 14H	**!**
Silver City 12C	**!**
Twin Falls 14G	**5**
Wallace 4E	**3**
Wardner Station 3E	1
Weiser 10C	**2**

Towns below 1 Thousand

	Pop. in Hundreds
Albion 14J	†3
Almo 15J	†4
American Falls 13L	†9
Ammon 12N	†2
Archer 11N	†2
Arco 11K	†3
Ashton 10N	†5
Athol 3C	†2
Atlanta 11F	†2
Basalt 12M	†2
Bellevue 12H	†7
Bliss 13G	†2
Bloomington 14O	†4
Bourne 10C	†5
Bryan Creek 12M	†3
Buhl 14G	†6
Cambridge 9C	†3
Carey 12H	†2
Challis 10H	†3
Clayton 10H	†2
Camas 11M	†79
Cottonwood 6D	†5
Council 9D	†3
Culdesac 6C	†4
Cibbonsville 14O	†4
Cilt 7H	†7
Glenns Ferry 13F	†8
Granite 2C	†2
Gray 13O	†2
Hadon 11O	†6
Harrison 4C	†9
Hope 2D	†2
Horseshoe 11D	†2
Idaho City 11E	†2
Independence 11N	†4
Iola 2D	†2
Iona 12N	†5
Irwin 12O	†5
Jerome 13H	†9
Juliaetta 5C	†4
Kanab 6C	†3
Kendrick 5C	†5
Ketcham 11H	†3
Kenterville 6D	†4
Kimberly 14H	†4
Kooskia 6E	†3
Kuna 12D	†2
Laclede 2C	†2
Lago 14N	†3
Lewisville 12M	†3
Lorenzo 11N	†2
McCammon 13M	†3
Mackay 11J	†6
Marion 14J	†3
Marsville 14O	†2
Meadows 9D	†2
Menan 11M	†2
Meridian 11D	†6
Middleton 11C	†3
Minkcreek 14N	†3
Mount Idaho 7D	†2
Murray 3E	†3
New Plymouth 11C	†2
Nezperce 66D	†5
Oakley 14J	†9
Orofino 6D	†3
Oxford 14M	†2
Parker 11N	†4
Parma 11C	†3
Peck 6D	†2
Pine 12F	†2
Postfalls 3C	†2
Priest River 2C	†2
Prospect 11N	†3
Rathdrum 3C	†4
Rigby 11N	†5
Rockcreek 14H	†2
Rupert 13J	†2
St. Charles 14N	†3
St. Maries 4D	†8
Salubria 9C	†3
Samuels 14M	†3
Shelley 12M	†5
Soda Springs 13N	†5
Soldier 12G	†3
South Boise 11D	†8
Southwick 5D	†2
Spalding 6C	†2
Spirit Lake 3C	†9
Star 11D	†3
Stites 6E	†3
Sugar 11N	†4
Teton 11N	†4
Thatcher 14N	†3
Troy 5C	†5
Vanwyck 10D	†2
Victor 11O	†5
Vollmer 6D	†3
Warren 13G	†4
Wendell 13G	†4
Westlake 9D	†2
Weston 15N	†2
Wilkeola 7D	†2

SHOWS IN HUNDREDS — *TOWN OF COUNTY SEAT BELOW 1 THOUSAND — COUNTY SEATS IN HEAVY FACED TYPE

WASHINGTON

WASHINGTON
Pop. 1,141,990

COUNTIES

Pop. Thous.

Adams 11U...10
Asotin* 14Y...5
Benton 15Q....7
Chehalis 11O..35
Chelan 9O....15
Clallam 6E....6
Clarke 17G...26
Columbia 14V..7
Cowlitz* 16G..12
Douglas* 8R...9
Ferry* 4S......4
Franklin 15S...5
Garfield 13X...4
Grant* 10Q....8
Island* 6G.....4
Jefferson* 7F...8
King 8I.....284
Kitsap* 9G....17
Kittitas 11M..18
Klickitat 17M.10
Lewis 11E....32
Lincoln 8V....17
Mason 10F....6
Okanogan* 4P.12
Pacific 13D...12
Pend Oreille 5X.
Pierce 10H...120
San Juan* 4F..3
Skagit 5I.....29
Skamania* 17J.2
Snohomish 7I.59
Spokane 8X..139
Stevens 4V....25
Thurston 11G.17
Wahkiakum* 15E 3
Wallawalla 15U 31
Whatcom 2H.49
Whitman 11X.33
Yakima 13N..41

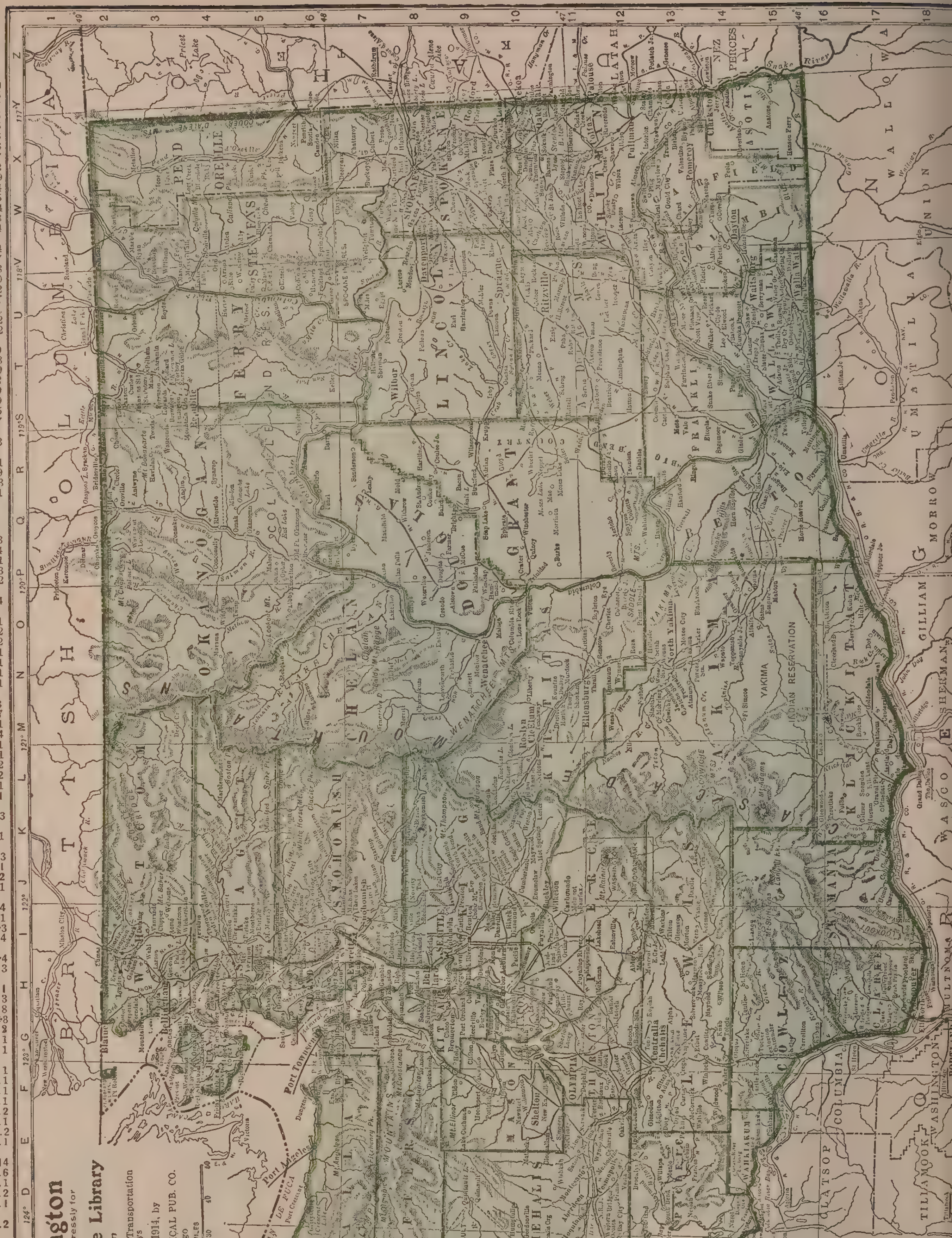
TOWNS

Town. Key. Pop.
Aberdeen 11D.13
Anacortes 4H..4
Arlington 6I...1
Asotin 14Y....†8
Ballard 8H...12
Bellingham 2H 24
Black Diamond 10I 1
Blaine 2G.....2
Bremerton 9G..2
Buckley 10I....1
Burlington 4I..1
Camas 18H....1
Carbonado 11H.1
Cathlamet 15E ....†3
Centralia 12F..7
Charleston 8G..1
Chehalis 11E...4
Cheney 9U.....1
Clarkston 14Y..1
Cle Elum 10M.2
Colfax 11X.....2
Columbia 9I...1
Colville 4V.....1
Conconully 4P ....†3
Cosmopolis 11D 1
Coupeville 6G ....†3
Davenport 8V..1
Dayton 14V....2
Edmonds 8H...1
Ellensburg 11M 4
Elma 10E......1
Ephrata 10Q..†3
Everett 7I.....24
Friday Harbor 4F ....†4
Georgetown 9I.3
Goldendale 17M 1
Hillyard 8X....3
Hoquiam 11C..8
Kalamo 16G..†8
Kelso 15G.....2
Kennewick 15S.1
Kent 9I.......1
Leavenworth 9M 1
Lynden 2H....1
Marysville 6I...1
Medical L. 8W.1
Montesano 11D.2
Monroe 7I.....1
Mt. Vernon 5I..2
Newport 6Y....1
North Yakima 13N 14
Olympia 11G...6
Palouse 11Y...1
Pasco 15S.....2
Pomeroy 13X...1
Port Angeles 6E 2
Port Orchard 9G ....†6
Port Townsend 6J 4
Prosser 15Q....1
Pullman 12Y...2
Puyallup 10I...4
Raymond 13C..2
Renton 9I.....2
Republic 4S..†9
Ritzville 11U...1
Roslyn 10M....3
Seattle 8I....237
Sedro Wooley 4I 2
Shelton 10F....1
Snohomish 7I..8
South Bend 13D 3
Spokane 8X..104
Sprague 10V...1
Stevenson 17J ....†3
Sunnyside 14P.1
Tacoma 10H..83
Tekoa 10Y.....1
Tenino 12G....1
Toppenish 14O.1
Vancouver 17G.9
Waitsburg 14V.1
Walla Walla 15U 19
Waterville 8P ....†9
Wenatchee 9O..4
West Seattle 9H 1
Winlock 14F...1

Towns below 1 Thousand

Pop. in Hundreds

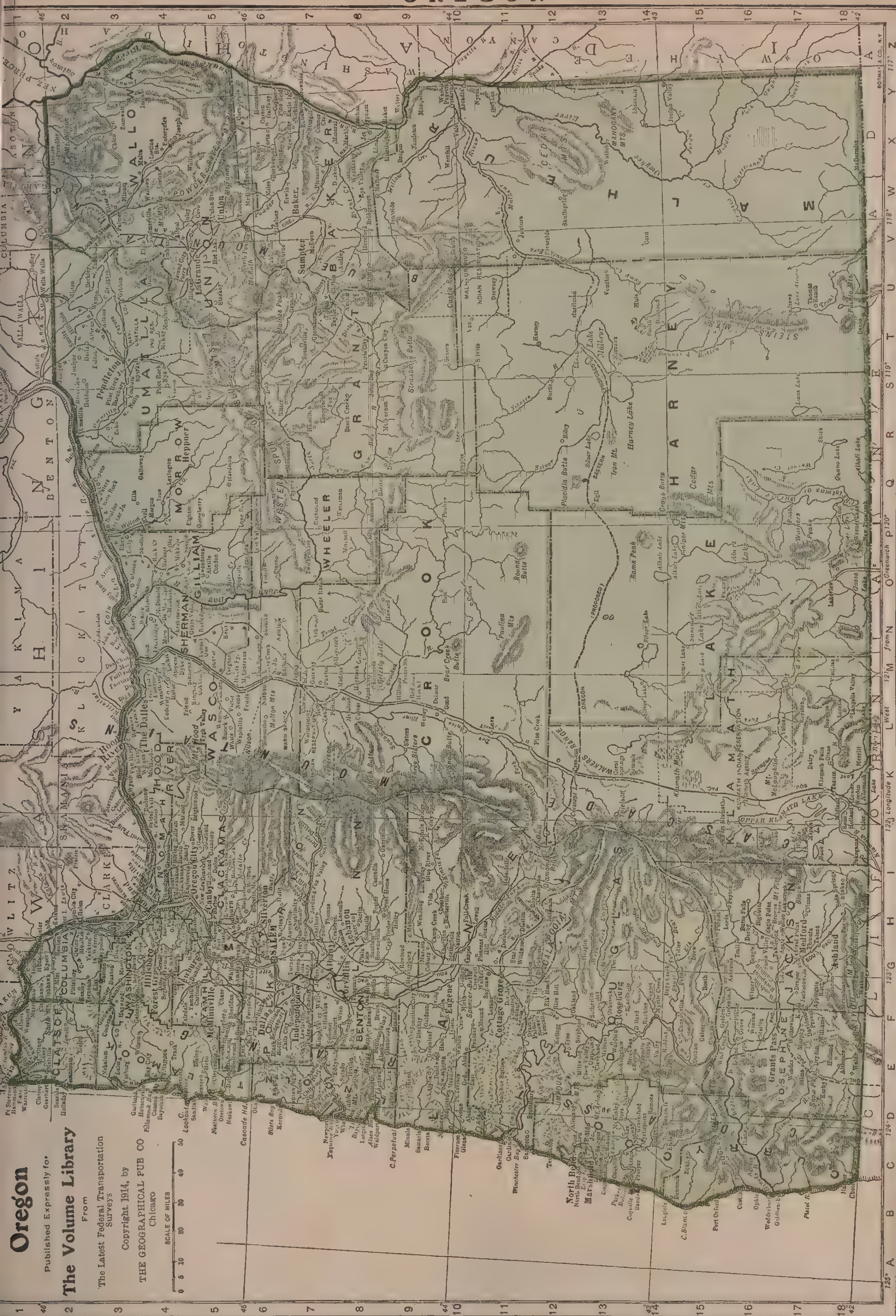
Town. Key. Pop.
Asotin 14Y...†8
Auburn 10I...†9
Bothell 8Q....†5
Bridgeport 7Q.†4
Bucoda 12G..†7
Castle Rock 14F........†9
Cashmere 6N.†6
Chelan 7P....†6
Chewelah 5W.†8
Chinook 14C..†5
Cliff 17N.....†4
College Place 15U.......†4
Concrete 4H..†9
Connell 13S...†5
Deerpark 7X..†8
Eatonville 12Q........†7
Elk 6X.......†4
Endicott 11W.†4
Enumclaw 10I.†4
Farmington 11Y........†4
Ferndale 3H..†6
Franklin 10J..†4
Garfield 11Y..†9
Granite Falls 6J..........†7
Harrington 9U.........†6
Ilwaco 14B...†6
Ione 3X......†6
Issaquah 9I...†6
Kalamo 16G..†8
Kirkland 8I....5
Laconner 5H..†6
Lind 11T.....†8
Little Falls 14F........†6
Mabton 15P...†6
New Castle 9I.........†6
Oakesdale 10Y.†8
Odessa 10T...†5
Okanogan 5Q..†6
Orting 11I....†7
Pe Ell 13E...†8
Port Gamble 7H.........†5
Port Orchard 9G.........†6
Prescott 14U..†5
Réardon 8V..†5
Republic 4S..†9
Rockford 9Y..†6
Rosalia 10X..†7
Ruston 11H..†7
Spanaway 11H........†5
Stanwood 5I..†5
Starbuck 13V.†7
Sultan 7J.....†5
Sumas 2I.....†9
Sumner 10I...†8
Waterville 8P.†9
Wellington 8L.†6
White Salmon



†POP. SHOWN IN HUNDREDS.

*POP. OF COUNTY SEAT BELOW 1 THOUSAND.

COUNTY SEATS IN HEAVY FACED T



OREGON
Pop. 672,765.

COUNTIES

Pop. Thous.

Baker 7W....18
Benton 8F....10
Clackamas 5L.29
Clatsop 2E....16
Columbia 2G..10
Coos 13D.....17
Crook 9M......9
Curry 17D.....2
Douglas 13G..19
Gilliam 4O.....3
Grant* 8S.....5
Harney* 14S...4
Hood River 4K.8
Jackson* 17G.25
Josephine 17E..9
Klamath 17K..8
Lake 16N......4
Lane 10H.....33
Lincoln 7D....5
Linn 8I.......22
Malheur 13W..8
Marion 6H....39
Morrow* 4Q...4
Multnomah 4I.........226
Polk 6F.......13
Sherman 4N....4
Tillamook 4E..6
Umatilla 4T..20
Union 4V.....16
Wallowa 3X....8
Wasco 5L.....16
Washington 3G 21
Wheeler* 7P...2
Yamhill 5F...16

TOWNS

Town. Key. Pop.

Albany 8G.....4
Ashland 18H 5
Astoria 1E....9
Baker City 7V.6
Bandon 14B...1
Burns 12S....†9
Canyon City 8S ....†3
Condon 5P.....1
Coquille 13C...1
Corvallis 8F....4
Cottage Grove 11G 1
Dallas 6F......2
Elgin 4V.......1
Enterprise 4X..1
Eugene 10G....9
Forest Grove 4G 1
Fossil 6O......†4
Goldbeach 17D ....†1
Grants Pass 16F 3
Heppner 5Q...†8
Hillsboro 4G...2
Hood River 3L 2
Independence 7G 1
Jacksonville 17F ....†7
Klamath Falls 17K 2
La Grande 5V.4
Lakeview 18O..1
Lebanon 8G....1
McMinnville 5G 2
Marshfield 13C.2
Medford 17G..8
Milton 2U......1
Monavilla 4I...1
Moro 4N......†3
Mount Tabor 4I 1
Newburg 5G...2
North Bend 12C 1
North Bend Station 12C..2
Ontario 10Y....1
Oregon City 4I.4
Pendleton 3S..4
Portland 4H.207
Prineville 9N...1
Rainier 1H......1
Roseburg 13F..4
Saint Helen 2H ....†7
Saint Johns 3H 4
Salem 6G......14
Seaside 2E.....1
Sheridan 13C..1
Silverton 6H....1
Springfield 10G.1
The Dalles 3M.4
Tillamook 4E...1
Toledo 7D.....†5
Union 5V.......1
Vale 10X .....†3
Woodburn 5H...1

Towns below 1 Thousand

Pop. in Hundreds

Town. Key. Pop.

Amity 5G.....†4
Arlington 3P...†3
Athena 3T....†5
Beaverton 4H.†3
Bend 10L.....†5
Bridal Veil 4J..........†4
Brownsville 8G..........†9
Burnes 12S....†9
Canby 5H.....†5
Canyon City 8S..........†3
...K.......†4
Central Point 17G.......†7
Clatskanie 1G.......†7
Clifton 7U......†5
Coburg 9G......†6
Cornelius 4G...†4
Cove 5V.......†3
Creswell 10G...†3
Dayton 5G.....†5
Drain 11F.....†3
Dufur 4M......†5
Echo 3R.......†4
Estacada 5L...†4
Falls City 6F..†9
Florence 10D...†3
Fossil 6O.....†4
Freewater 2U...†5
Gardiner 11C...†3
Glendale 15F...†6
Goldhill 16G...†4
Grass Valley 4N.......†3
Gresham 4L....†5
Haines 6V.....†4
Halsey 8G.....†3
Hammond 1E....†4
Hermiston 3T...†6
Harrisburg 9G..†3
Heppner 5Q....†8
Houlton 2H....†3
Hubbard 5H....†2
Huntington 9X.......†6
Jacksonville 17F.......†7
Jefferson 7G...†4
Joseph 4X.....†7
Junction City 9G.......†7
Lafayette 5G...†4
Madras 8M.....†3
Mill City 7L...†4
Milwaukee 4I...†8
Monmouth 7F...†4
Moro 4N.......†3
Mount Angel 6H.......†5
Myrtle Creek 14F.......†4
Myrtlepoint 14C.......†8
New Astoria 1E.......†9
Newport 7D....†7
North Powder 6V.......†4
Nyssa 10Y.....†4
Oakland 12F...†4
Oswego 4H.....†4
Philomath 8F.......†5
Prairie City 8T.......†3
Richland 7Y...†3
Saint Helens 2H.......†7
Shaniko 6N....†4
Sheridan 5F...†7
Stayton 7H....†7
Sumpter 7U....†6
Toledo 7D.....†3
Troutdale 3I...†3
Vale 10X......†3
Wallowa 4W....†7
Warrenton 1E...†3
Wasco 4N......†3
Weston 2U.....†4
Willamette 4H..†3
Willamina 5F...†3
Woodstock 4I...†4
Yamhill 4G....†3

†POP. SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED TYPE.

CALIFORNIA.
Pop., 2,377,549

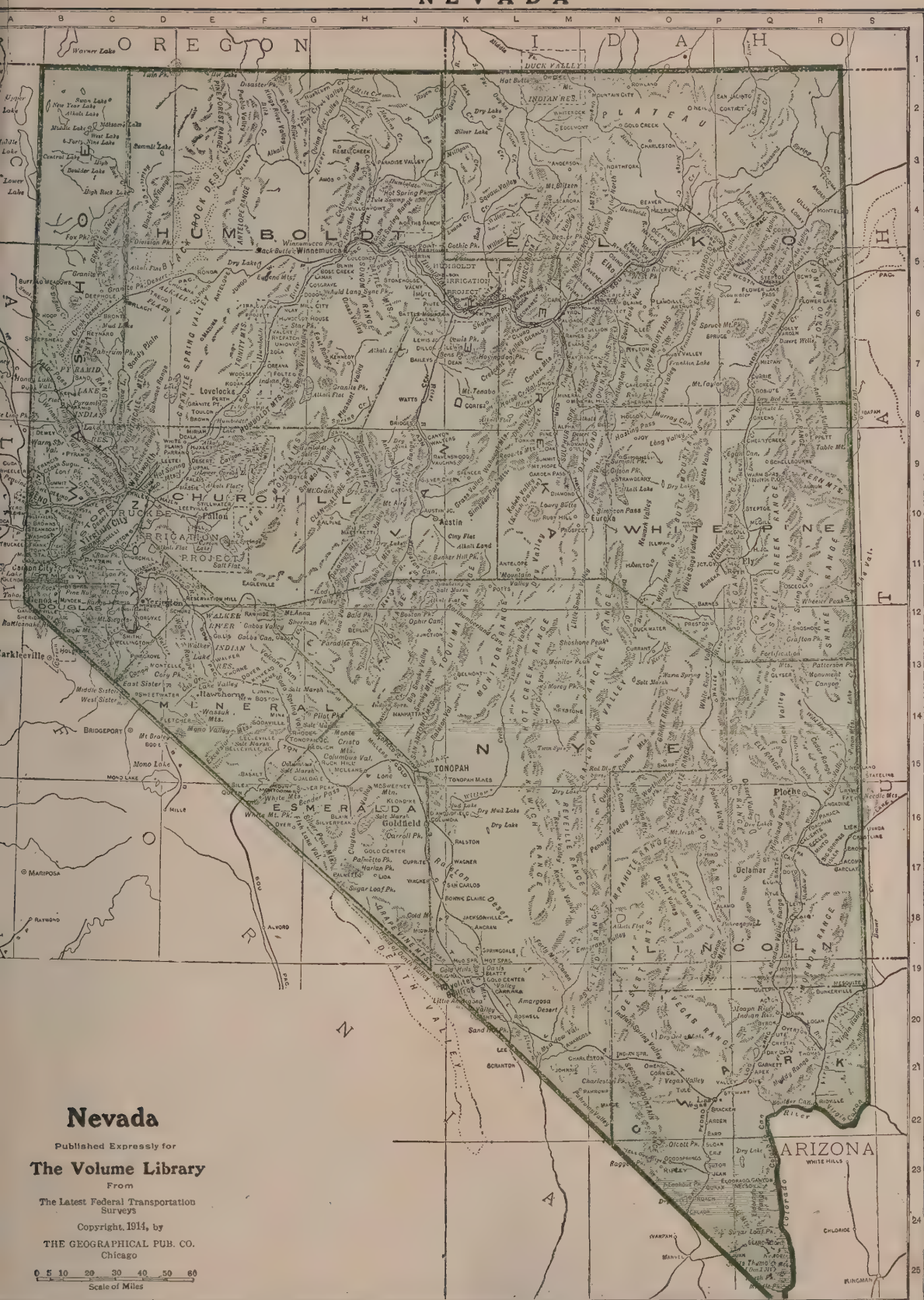
COUNTIES

Pop. Thous.
Alameda 3F..246
Alpine* 4E....†3
Amador 4E....9
Butte 3D.....27
Calaveras 4F...9
Colusa 2E.....7
Contra Costa 3F 31
Del Norte 1B..2
Eloorado 4E...7
Fresno 5G.....75
Glenn 2D.....7
Humboldt 1C.33
Imperial 8K...13
Inyo* 6G.....6
Kern 5I.....37
Kings 4H.....16
Lake* 2E.....5
Lassen* 4C....4
Los Angeles 6J 504
Madera 4G.....8
Marin 2F.....25
Mariposa* 4G..3
Mendocino 1D 25
Merced 3G.....15
Modoc* 4B....6
Mono* 5F.....2
Monterey 3H..24
Napa 2E.....19
Nevada 4D...14
Orange 6K....34
Placer 4E.....18
Plumas* 4D...5
Riverside 8K..34
Sacramento 3E 67
San Benito 3H 8
San Bernardino 7I.....56
San Diego 7K 61
San Francisco 2F 416
San Joaquin 3F 50
San Luis Obispo 3I...19
San Mateo 2F 26
Santa Barbara 4J 27
Santa Clara 2G 83
Santa Cruz 2G 26
Shasta 3C....18
Sierra* 4D.....4
Siskiyou 2B...18
Solano* 3E...27
Sonoma 2E...48
Stanislaus 3G.22
Sutter 3E.....6
Tehama 2D...11
Trinity 2C.....3
Tulare 5H....35
Tuolumne 4F 9
Ventura* 5J..18
Yolo 3E.....13
Yuba 3E.....10

TOWNS

Town. Key. Pop.
Alameda 2F..23
Alhambra 6J 5
Alturas 4B....†9
Anaheim 6J....2
Angels Camp 4E 3
Antioch 3F....1
Arcata 1C.....1
Auburn 4E....2
Avalon 6K....1
Azusa 6J.....1
Bakersfield 5I 12
Banning 7J....1
Benicia 3F....2
Berkeley 2F...40
Bishop 6G.....1
Bridgeport 5F.†3
Burlingame 2F 1
Chico 3D.....3
Chino 6J.....1
Claremont 6J..1
Clovis 5G.....1
Coachella 1
Coalinga 4H...4
Colton 6J.....3
Colusa 2E.....1
Corona 6J.....3
Coronado 7K..1
Covina 6J.....1
Crescent City 1B 1
Crockett 2F....1
Downey 5J.....1
Downieville 4D .....†5
Dunsmuir 2B..1
East San Jose 2G.....1
El Centro 8K 1
Emeryville 2F.2
Escondido 7K..1
Eureka 1C.....11
Fairfield 3E..†8
Fernando (P. O. name San Fernando) 6J 1
Folsom City 3E 1
Fort Bragg 1E 4
Fresno 4G.....24
Fullerton 6J...1
Gilroy 3G.....2
Glendale 6J...2
Glendora 6J...1
Glen Ellen 2F 1
Grass Valley 4E 4
Half Moon 2G 1
Hamilton City 1 1
Hanford 4H..4
Haywards 3F..2
Healdsburg 2E 2
Highland 7J...2
Hollister 3H..2
Huntington 6J 1
Imperial 8K...1
Independence 6G .....†4
Inglewood 6J...1
Irvington 3F...1
Jackson 4E....2
Kennett 2C....2
Kern 5I.....2
Keswick 2C....1
Lakeport 2E..†8
Lemoore 3H...1
Lincoln 3E....1
Lindsay 5H....1
Livermore 3F...2
Lodi 3F.....1
Lompoc 4J....1
Longbeach 6J..17
Los Angeles 6J 319
Los Gatos 2G 2
Madera 4G....2
Martinez 3F...4
Marysville 3E..4
Markleeville 4E 1
Mayfield 2G...1
Mendocino 1D..3
Merced 3G....5
Mono 1
Mill Valley 1
Modesto 3G....4
Montclair 6J...3
Monterey 3H...4
Mountain View 3G....5
Nana 2E.....1
National City 7I.....1
Needles 9L....1
Nevada City 4D .....†4
Niles 1D 3G...2
Oakdale 3G...1
Oakland 1D..150
2F 150
Oceanpark 6J..3
Ontario 11H 6J 1
Orange 10I 6J..2
Oroville 3D 6J..3
Oxnard 6P 6J..2
Paradise 2G...4
Palo Alto 2G...30
Pasadena 6J..30
Paso Robles 4I 5
Petaluma 6J...5
Piedmont 2F...1
Placerville 4E..1
Pleasanton 3G..1
Pomona 6J...10
Port Costa 2F...1
Porterville 5F..2
Quincy 5E ...†5
4D 3
Randsburg 5I..3
Red Bluff 2D..3
Redding 3G...3
Redlands 7J..10

(POP. SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED TYPE



CALIFORNIA
Towns—Cont.

Town.	Key.	Pop.
Redwood City	2F	2
Reedley	5G	1
Richmond	2F	6
Riverside	8K	15
Rocklin	4F	1
Roseville	3F	2
Sacramento	3E	44
Saint Helena	2E	1
Salinas	3H	3
San Andreas	4F	1
San Anselmo	2F	1
San Bernardino	7I	12
Ventura	5J	2
San Diego	7K	39
San Fernando	1	1
San Francisco	2F	416
Sanger	6K	4G.2
San Jose	2G	28
San Leandro	1ID	3F.3
San Luis Obispo	3I	5
San Mateo	2G	4
San Rafael	2F	5
Santa Ana	6K	8
Santa Barbara	4J	11
Santa Clara	2G	4
Santa Cruz	2G	11
Santa Maria	4I	2
Santa Monica	5J	7
Santa Paula	5J	2
Santa Rosa	2E	7
Saratoga	2G	1
Sausalito	2F	2
Sawtelle	6J	2
Sebastopol	2F	1
Selma	5H	1
Sierra Madre	6J	1
Soldiers Home	6J	2
Sonora	4F	2
South Pasadena	6J	4
South San Francisco	2F	1
Stockton	3F	23
Susanville	4C	†6
Sutter Creek	4F	2
Truckee	4E	1
Tulare	5H	2
Turlock	3G	1
Ukiah	1D	2
Upland		2
Vacaville	2F	1
Vallejo	2F	11
Ventura	5J	
Visalia	5H	4
Vista Grande	2F	2
Watsonville	3G	4
Watts		1
Weaverville	2C	1
Whittier	5J	4
Willits	2E	1
Willow	2D	1
Woodland	3E	3
Yreka	2B	1
Yuba City	3E	1

NEVADA
Pop. 81,875.

COUNTIES

Churchill*	10E	2
Clark	22P	3
Douglas*	12B	1
Elko	5N	8
Esmeralda*	14E	9
Eureka*	12B	1
Humboldt	5G	6
Lander*	10J	1
Lincoln*	16R	3
Lyon*	11B	3
Nye	15J	7
Ormsby	11B	3
Storey	11B	3
Washoe	10B	17
White Pine	11P	7

TOWNS

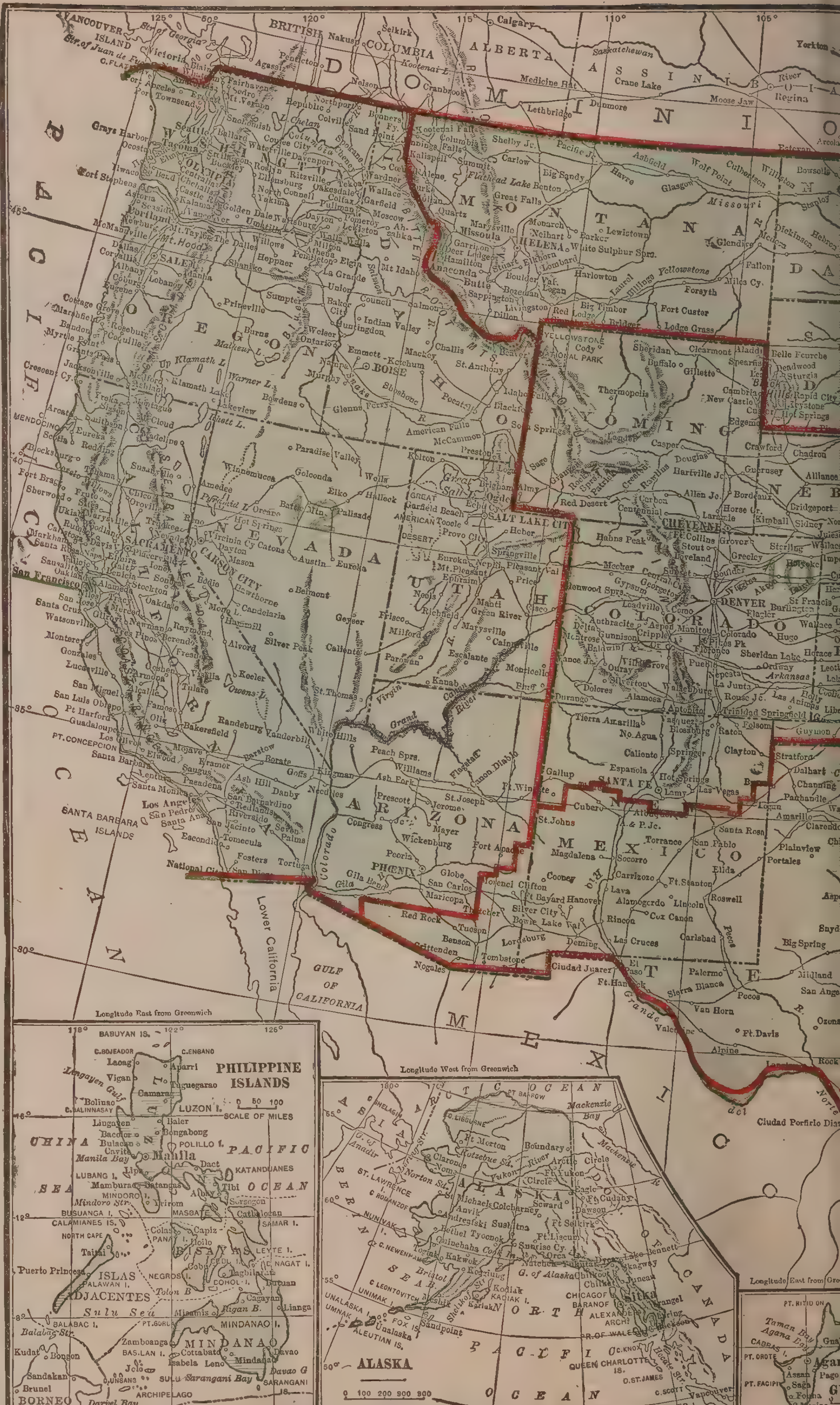
Austin	10J	†8
Carson City	11B	2
Columbia	16J	1
Dayton	11B	†1
Elko	5N	1
Ely	11P	2
Eureka	11B	†6
Genoa	12B	†04
Goldfield	16J	6
Hawthorne	14E	†4
Las Vegas	22P	1
Lovelocks	8E	1
Ludlow	14J	†1
Mina	10B	†2
Rhyolite	19K	2
Reno	10B	10
Stillwater	10E	†1
Sparks	10B	2
Tonopah	15J	1
Virginia City	11B	2
Winnemucca	5G	2

Towns below 1 Thousand Pop. in Hundreds

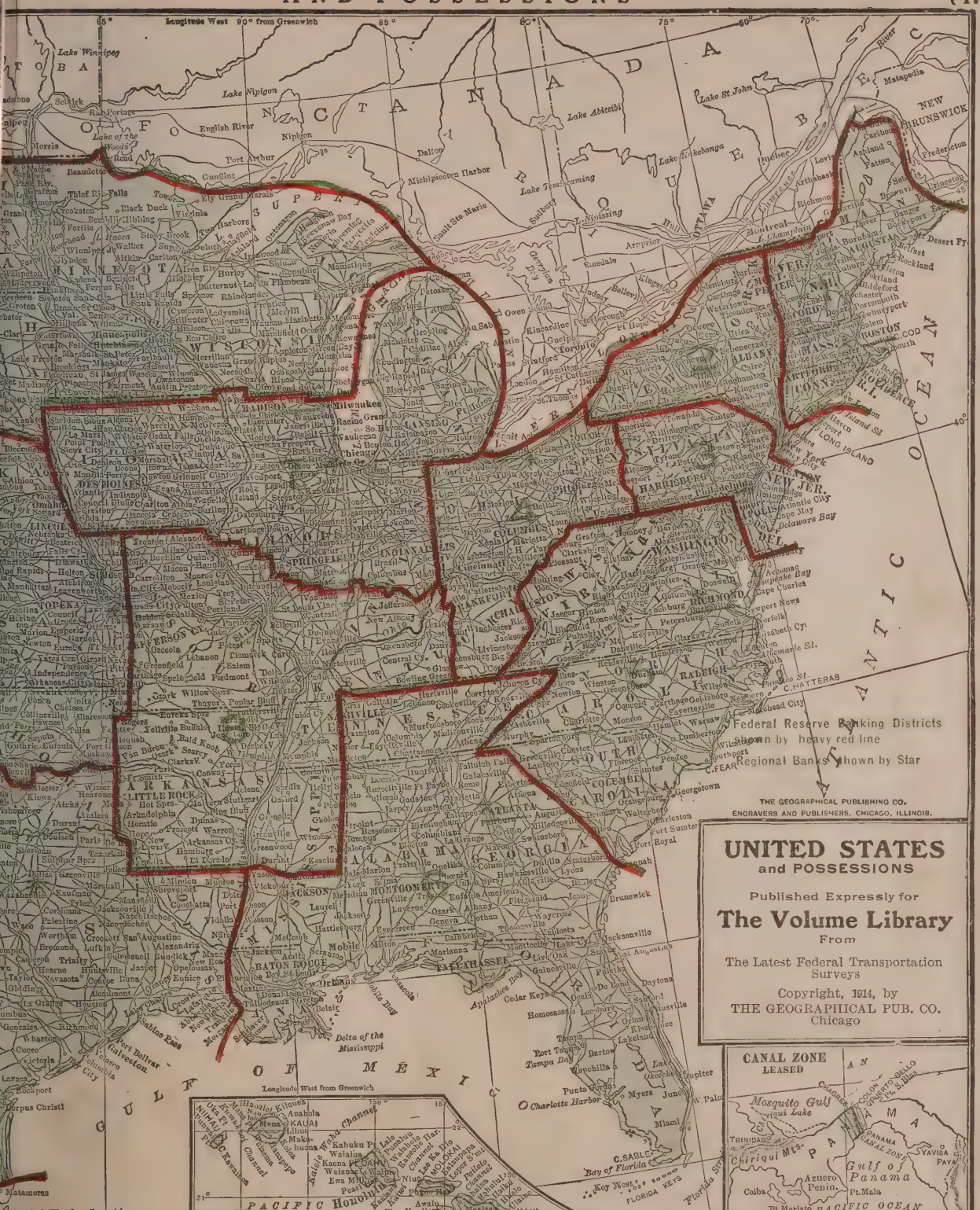
Town.	Key.	Pop.
Austin	10J	†8
Battle Mountain	6K	†3
Beatty	19K	†6
Belmont	13K	†1
Berlin	12H	†2
Bunkerville	20S	†3
Carlin	6M	†3
Cherry Creek	9Q	†1
Cortez	8K	†2
Dayton	11B	†1
Deeth	5O	†1
Delamar	17P	†7
Empire	11B	†3
Eureka	11B	†6
Fallon	10E	†7
Fay	16S	†4
Gardnerville	11B	1
Golconda	5Y	†2
Gold Hill	11B	†3
Hamilton	11O	†1
Hawthorne	14E	†4
Lund	12P	†1
Mazuma	17E	†4
Mina	14F	†3
Mountain City	2M	†1
Palmetto	17H	†4
Panaca	16R	†4
Paradise Valley	3H	†1
Pioche	16R	†3
Ruby Hill	10M	†1
Ruby Valley	7O	†1
Searchlight	24Q	†3
Silver City	11B	†3
Silverspeak	6H	†3
Sodaville	15F	†1
Tuscarora	4M	†6
Verdi	10A	†4
Wadsworth	10C	†5
Wells	4P	†3
White Rock	2M	1
Yerington	12C	1

. SHOWN IN HUNDREDS. *POP. OF COUNTY SEAT BELOW 1 THOUSAND. COUNTY SEATS IN HEAVY FACED TYPE

Cities of 25,000 and Over.

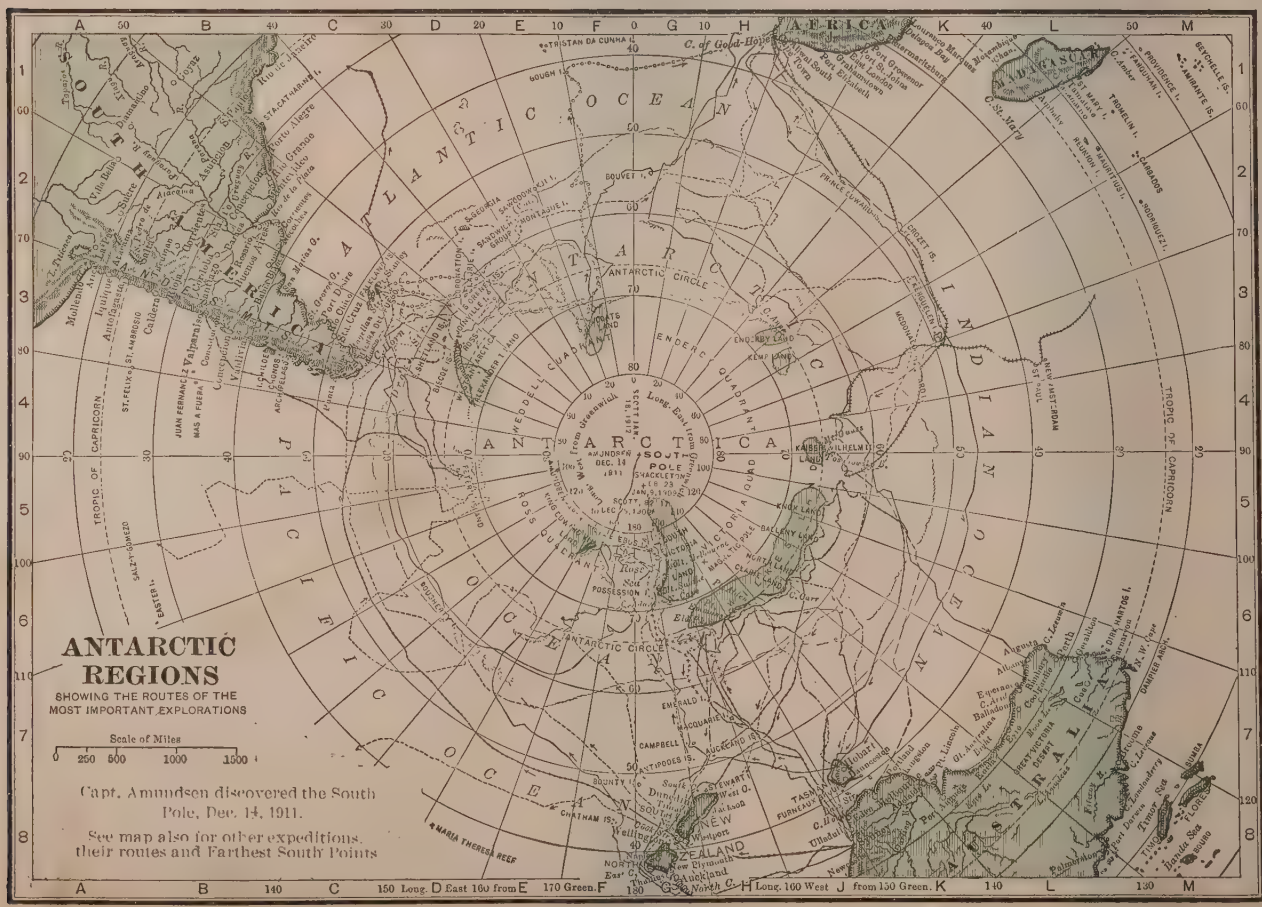


Elevation in ft.	City and State	1910 Census Pop.	1900 Census Pop.
54	New York..	4,766,883	3,437,202
580	Chicago ...	2,185,283	1,698,575
9	Philadelphia	1,549,008	1,293,697
455	St. Louis ..	687,029	575,238
125	Boston, M..	670,585	560,892
762	Cleveland, O.	560,663	381,768
123	Baltimore, M.	558,485	508,957
842	Pittsburg, Pa.	533,905	451,512
596	Detroit, Mich.	465,766	285,704
576	Buffalo, N.Y.	423,715	352,387
155	San Fran...	416,912	342,782
636	Milwaukee, W..	373,857	285,315
628	Cincinnati, O.	363,591	325,902
55	Newark, N.J..	347,469	246,070
5	NewOrleans.	339,075	287,104
91	Washington.	331,069	278,718
338	LosAngeles..	319,198	102,479
782	Minneapolis.	301,408	202,718
21	JerseyCity, N.	267,779	206,433
963	KansasCity.	248,381	163,752
19	Seattle, W	237,194	80,671
720	Indianapolis	233,650	169,164
11	Providence..	224,326	175,597
525	Louisville, K.	223,928	204,731
523	Rochester, N.	218,149	162,608
694	St.Paul, M..	214,744	163,065
5,279	Denver, Colo.	213,381	133,859
11	Portland, O.	207,214	90,426
772	Columbus, O.	181,511	125,560
628	Toledo, O..	168,497	131,822
1,032	Atlanta, Ga.	154,839	89,872
36	Oakland, Cal.	150,174	66,960
475	Worcester, M.	145,986	118,421
404	Syracuse, N..	137,249	108,374
107	NewHaven..	133,605	108,027
606	Birmingham	132,685	38,415
117	Memphis, T..	131,105	102,320
805	Scranton, Pa.	129,867	102,026
164	Richmond, V.	127,628	85,050
100	Paterson, N..	125,600	105,171
1,123	Omaha, Neb.	124,096	102,555
200	FallRiver, M.	119,295	104,863
790	Dayton, O...	116,577	85,333
610	GrandRapids	112,571	87,565
546	Nashville, T..	110,364	80,865
100	Lowell, Mass.	106,294	94,969
74	Cambridge..	104,839	91,886
1,891	Spokane, W.	104,402	36,848
15	Bridgeport, C.	102,054	70,996
18	Albany, N.Y.	100,253	94,151
38	Hartford, C..	98,915	79,850
60	Trenton, N.J.	96,815	73,307
88	NewBedford.	96,652	62,442
654	SanAntonio.	96,614	53,321
280	Reading, P..	96,071	78,961
31	Camden, N.J.	94,538	75,935
4,248	SaltLakeCity	92,777	53,531
436	Dallas, Texas	92,104	42,638
26	Lynn, Mass..	89,336	68,513
119	Springfield, M.	88,926	62,059
78	Wilmington.	87,411	76,508
861	DesMoines..	86,368	62,139
51	Lawrence, M.	85,892	62,559
110	Tacoma, W..	83,743	37,714
750	KansasCity.	82,331	51,418
10	Yonkers, N.Y.	79,803	47,931
863	Youngstown.	79,066	44,885
53	Houston, Tex.	78,800	44,633
602	Duluth, M...	78,466	52,969
813	St.Joseph, Mo.	77,403	102,979
13	Somerville, M.	77,236	61,643
35	Troy, N.Y...	76,813	60,651
407	Utica, N.Y..	74,419	56,383
40	Elizabeth, N.	73,409	52,130
670	FortWorth, T.	73,312	26,688
300	Waterbury, C.	73,141	45,859
246	Schenectady.	72,826	31,682
7	Hoboken, N.J.	70,324	59,364
246	Manchester.	70,063	56,987
378	Evansville, I.	69,647	59,007
940	Akron, O....	69,067	42,728
12	Norfolk, Va..	67,452	46,624
575	Wilkes-Barre	67,105	51,721
464	Peoria, Ill...	66,950	56,100
713	Erie, Pa.....	66,525	52,733
21	Savannah, Ga.	65,064	54,244
1,197	OklahomaCity	64,205	10,037
374	Harrisburg..	64,186	50,167
780	FortWayne..	63,933	45,115
26	Portland, Ore.	58,571	50,145
485	TerreHaute.	58,157	36,673
10	Charleston..	58,833	55,807
415	EastSt.Louis	58,547	29,655
954	Holyoke, Mass.	57,730	45,712
43	Jacksonville..	57,699	28,429
128	Brockton, M.	56,878	40,063
50	Bayonne, N.J.	55,545	32,722
1,169	Johnstown, P.	55,482	35,936
88	Passaic, N.J.	54,773	27,777
712	SouthBend, I.	53,684	35,999
513	Covington, K.	53,270	42,938
1,358	Wichita, Kan.	52,450	24,671
1,182	Altoona, Pa.	52,127	38,973
321	Allentown, P.	51,913	35,416
598	Springfield..	51,678	34,159
79	Pawtucket, R.	51,622	39,231
57	Mobile, Ala.	51,521	38,469
590	Saginaw, M..	50,510	42,345
1,070	Canton, O...	50,217	30,667
865	Binghamton.	48,443	39,647
1,135	SiouxCity..	47,828	33,111
413	Lancaster, P.	47,227	41,459
930	Springfield, O.	46,921	38,253
52	AtlanticCity.	46,150	27,838
299	LittleRock, A.	45,941	38,307
716	Rockford, Ill.	45,401	31,051
593	BayCity, M..	45,166	27,628
385	York, Pa....	44,750	33,708
30	Sacramento.	44,696	29,282
674	Chattanooga.	44,604	30,154
34	Malden, M...	44,404	33,664
4,690	Pueblo, Colo.	44,395	28,157
35	Haverhill, M.	44,115	37,175
1,189	Lincoln, N..	43,973	40,169
199	NewBritain.	43,916	25,998
10	Salem, Mass.	43,697	35,956
998	Topeka, Kan.	43,684	33,608
529	Davenport..	43,028	35,254
752	McKeesport.	42,694	34,227
637	Wheeling, W.	41,641	38,878
100	Augusta, Me.	41,040	39,441
311	Macon, Ga...	40,665	23,272
183	Berkeley, Cal.	40,434	13,214
628	Superior, Wis.	40,384	31,091
33	Newton, M..	39,806	33,587
42	SanDiego, C.	39,578	17,700
78	Kalamazoo..	39,437	24,404
3,762	ElPaso, Tex.	39,279	15,906
5,484	Butte, Mont.	39,165	30,470
726	Flint, Mich..	38,550	13,103
24	Chester, Pa..	38,537	33,988
698	Dubuque, Iowa	38,494	36,297
222	Montgomery.	38,136	30,346
162	Woonsocket..	38,125	28,204
633	Racine, Wis..	38,002	29,102
550	Fitchburg, M.	37,826	31,531
34	Tampa, Fla..	37,782	15,839
863	Elmira, N.Y.	37,176	35,672
6	Galveston, T.	36,981	37,789
360	Quincy, Ill..	36,587	36,252
933	Knoxville, T.	36,346	32,637
806	Newcastle, P.	36,280	28,339
	WestHoboken	35,403	23,094
605	Hamilton, O.	35,279	23,914
1,324	Springfield.	35,201	23,267
989	Lexington, K.	35,099	26,369
904	Roanoke, Va.	34,874	21,495
534	Joliet, Ill....	34,670	29,353
643	Auburn, N.Y.	34,668	30,345
173	EastOrange.	34,371	21,506
40	Taunton, M..	34,259	31,036
773	Charlotte, N.	34,014	18,091
12	Everett, Wash.	33,484	24,336
12	Portsmouth.	33,190	17,427
744	Oshkosh, Wis.	33,062	28,284
733	CedarRapids.	32,811	25,656
	Quincy, Mass.	32,642	23,899
11	Chelsea, Mass.	32,452	34,072
61	PerthAmboy.	32,121	17,699
1,038	Pittsfield, M.	32,121	21,766
1,009	Joplin, Mo..	32,073	
940	Jackson, M..	31,433	
150	Meriden, C..	32,066	
522	Williamsport.	31,860	
1328	Jamestown, N. Y.	31,297	
264	Amsterdam, N.	31,267	
828	Lansing, M.	31,229	
565	Hunington, W. Va....	31,161	
678	Decatur, Ill.	31,140	



ernon, N.	30,919	21,228	990	Council Bluffs, Ia.	29,292	25,802	704	Zanesville, O.	28,026	23,538	856	Waterloo, Ia.	26,693	12,580	781	Bloomington, I.	25,768	23,296
, O...	30,508	21,723	6072	Colo. Springs, Colo.	29,078	21,085	204	Shreveport, La.	28,015	16,013	...	Warwick, R. I.	26,629	21,316	79	Wilmington, N.	25,748	20,976
ara Falls, Y.....	30,445	19,457	180	Poughkeepsie, N. Y.....	27,936	24,029	424	Waco, Tex..	26,425	20,686	4307	Ogden, Utah	25,580	16,313
osse, Wis.	30,417	28,895	98	SanJose, Cal.	28,946	21,500	589	Sheboygan, W.	26,398	22,962	593	Clinton, Ia..	25,577	22,698
port, Ky.	30,309	28,301	610	Lorain, O.	28,883	16,028	83	Norristown, Pa.	27,875	22,265	190	Columbia, S.C.	26,319	21,108	955	Madison, Wis.	25,531	19,164
dena, Cal.	30,291	9,117	72	New Rochelle, N. Y.....	28,867	14,720	604	Danville, Ill.	27,871	16,354	1107	S. Omaha, N.	26,259	26,001	1624	Hazleton, Pa.	25,452	14,230
in, Tex.	29,860	22,258	34	Stamford, C.	28,836	18,839	106	Waltham, M.	27,834	23,481	185	Lewiston, Me.	26,247	23,761	822	Newark, O..	25,404	18,157
ra, Ill.	29,807	24,147	33	Norwich, Ct.	28,219	24,637	94	Newburgh, N.Y.	27,805	24,943	125	Nashua, N.H.	26,095	23,898	84	Chicopee, M.	25,401	19,167
ge, N. J.	29,630	24,141	325	Easton, Pa.	28,523	25,238	43	Brookline, M.	27,792	19,935	715	Elgin, Ill..	25,976	22,433	588	Muskogee, Ok.	25,278	4,254
hburg, Va.	29,494	18,891	486	Watertown, N.	26,730	21,696	1249	Shenandoah, P.	25,774	20,321	617	Green Bay, W.	25,236	18,684	223	Kingston, N.Y.	25,908	24,535	823	BattleCreek, M.	25,267	18,563

ARCTIC REGIONS
Scale of Miles
0 100 200 400 600
Commander Peary discovered the North Pole April 6, 1909.
See map also for other expeditions, their routes and Farthest North Points
PEARY NORTH POLE
APRIL 6, 1909
PEARY APRIL, 1905
PEARY APRIL, 1902
NANSEN 1895 86° 14'
ABRUZZI, 1900 86° 34'
NANSEN LEFT "FRAM" MARCH 14, 1895
JEANETTE SUNK JUNE 12, 1881
Merridian of Greenwich
ARCTIC CIRCLE
ARCTIC OCEAN
GREENLAND
BAFFIN BAY
BRITISH ISLES
ENGLAND
SCOTLAND
EUROPE
ASIA
AMERICA
PACIFIC OCEAN
ATLANTIC OCEAN


ANTARCTIC REGIONS
SHOWING THE ROUTES OF THE MOST IMPORTANT EXPLORATIONS
Scale of Miles
0 250 500 1000 1500
Capt. Amundsen discovered the South Pole, Dec. 14, 1911.
See map also for other expeditions, their routes and Farthest South Points
SOUTH POLE
AMUNDSEN DEC. 14 1911
SCOTT JAN. 18, 1912
SHACKLETON JAN. 9, 1909
ANTARCTIC CIRCLE
ANTARCTICA
ATLANTIC OCEAN
INDIAN OCEAN
PACIFIC OCEAN
AFRICA
MADAGASCAR
AUSTRALIA
NEW ZEALAND
TROPIC OF CAPRICORN

DOMINION OF CANADA
Capitals of Provinces & Territories thus, *
Land Surface, sq. m. 3,619,818
Water surface, sq. m. 125,756
Pop., 7,204,838

ALBERTA 4F
Area sq. m., 253,540
Pop., 374,663
CITIES

City	Key	Pop. Thous.
Calgary	4F	43
Edmonton*	4F	24
Medicine Hat	4F	5

BRITISH COLUMBIA 2F
Area sq. m., 312,630
Pop., 392,480
CITIES

City	Key	Pop. Thous.
Vancouver	3F	100
Victoria*	3F	31
New Westminster	3F	13
Nanaimo	3F	8
Nelson	3F	4
North Vancouver	3F	8
Prince Rupert	3F	4

MANITOBA 6F
Area sq. m., 73,732
Pop., 455,614
CITIES

City	Key	Pop. Thous.
Winnipeg*	6F	136
Brandon	6F	13
Portage la Prairie	6F	5
St. Boniface	6F	7

NEW BRUNSWICK 9G
Area sq. m., 27,985
Pop., 351,889
CITIES

City	Key	Pop. Thous.
St. John	9G	42
Moncton	9G	11
Fredericton*	9G	7
Chatham	9G	4
Westville	9G	4
Woodstock	9G	3
Campbellton	9G	3

NOVA SCOTIA 9G
Area sq. m., 21,428
Pop., 492,338
CITIES

City	Key	Pop. Thous.
Halifax*	9G	46
Sydney	9G	17
Glace Bay	9G	16
Amherst	9G	8
Sydney Mines	9G	7
Truro	9G	6
Yarmouth	9G	6
Spring Hill	9G	5
New Glasgow	9G	6
North Sydney	9G	5
Windsor	9G	3
Pictou	9G	3

ONTARIO 7F
Area sq. m., 260,862
Pop., 2,523,274
CITIES

City	Key	Pop. Thous.
Toronto*	7G	376
Ottawa	7G	87
Hamilton	7G	81
London	7G	46
Brantford	7G	23
Kingston	7G	18
Peterborough	7G	18
Windsor	7G	17
Fort William	7G	16
Berlin	7G	15
Guelph	7G	15
St. Thomas	7G	14
Owen Sound	7G	12
Stratford	7G	12
St. Catharines	7G	12
Port Arthur	7G	11
Chatham	7G	10
Galt	7G	10
Sault Ste. Marie	7G	10
Belleville	7G	9
Brockville	7G	9
Niagara Falls	7G	9
Woodstock	7G	9
Sarina	7G	9
Collingwood	7G	7
North Bay	7G	7
Oshawa	7G	7
Cornwall	7G	6
Kenora	7G	6
Lindsay	7G	6
Barrie	7G	6
Orillia	7G	6
Smith's Falls	7G	6
North Toronto	7G	5
Pembroke	7G	5
Cobourg	7G	5
Port Hope	7G	5
Cobalt	7G	5
Welland	7G	5
Sunberry	7G	4
Goderich	7G	4
Ingersoll	7G	4
Arnprior	7G	4
Hawkesbury	7G	4
Waterloo	7G	4
Paris	7G	4
Midland	7G	4
Brampton	7G	3
Simcoe	7G	3

PRINCE EDWARD ISLAND 10G
Area sq. m., 2,184
Pop., 93,728
CITIES

City	Key	Pop. Thous.
Charlottetown*	10G	10
Summerside	10G	2

QUEBEC 8F
Area sq. m., 351,873
Pop., 2,002,712
CITIES

City	Key	Pop. Thous.
Montreal	8G	470
Quebec*	8G	78
Maisonneuve	8G	18
Hull	8G	18
Sherbrooke	8G	15
Westmount	8G	14
Three Rivers	8G	13
Verdun	8G	11
Lachine	8G	10
Valleyfield	8G	9
St. Hyacinthe	8G	8
Sorel	8G	8
Thetford Mines	8G	7
Levis	8G	7
Joliette	8G	6
Iberville	8G	6
Granby	8G	5
Outremont	8G	5
Chicoutimi	8G	5
Shawinigan Falls	8G	4
Grand Mere	8G	4
St. Jerome	8G	3
St. Lambert	8G	3
Farnham	8G	3
Buckingham	8G	3
Coaticook	8G	3
Longueuil	8G	3

SASKATCHEWAN 5F
Area sq. m., 250,650
Pop., 492,432
CITIES

City	Key	Pop. Thous.
Regina*	5F	30
Moose Jaw	5F	13
Saskatoon	5F	12
Prince Albert	5F	6

NORTHWEST TERRITORIES 4C
Area sq. m., 1,921,685
Pop., 17,196

YUKON
Area sq. m., 207,076
Pop., 8,512
CITIES

City	Key	Pop. Thous.
Dawson*	1D	3

NEWFOUNDLAND & LABRADOR 10G
Area of Island, sq. m., 40,200
Pop., 236,551
CITIES

City	Key	Pop. Thous.
St. Johns*	10G	31
Harbor Grace	10G	3
Carbonear	10G	3
Bonavista	10G	3
Twillingate	10G	3

LABRADOR 10G
Area sq. m., about 7,000
Pop. about 4,000

CAPITAL OF DOMINION OF CANADA, OTTAWA.

NEW BRUNSWICK

Pop., 351,889
Area sq. m., 27,985.11

DISTRICTS

Dist.	Key	Pop. Thous.
Carleton 2B		21
Charlotte 3B		21
Gloucester 1D		32
Kent 2D		24
Kings & Albert 3D		30
Northumberland 1C		31
Restigouche 1B		15
St. John City & County 3C		53
Sunbury & Queens 3C		17
Victoria & Madawaska 1B		28
Westmoreland 2E		44
York 2C		31

CITIES

City	Key	Pop. Thous.
Fredericton 3C		7
Moncton 2E		11
St. John 3C		42

TOWNS

Town	Key	Pop. Thous.
Bathurst 1D		†9
Campbellton 1C		3
Chatham 1D		4
Dalhousie 1C		1
Edmundston 1A		1
Grand Falls 1B		1
Marysville 2C		1
Milltown 3B		1
Newcastle 1D		2
St. Stephen 3B		2
Sackville 3E		2
Shediac 2E		1
Sussex 3D		1
Woodstock 2B		3

VILLAGES

Vil.	Key	Pop. Thous.
Dorchester 3E		1

NOVA SCOTIA

Pop., 492,338
Area sq. m., 21,427.77

DISTRICTS

Dist.	Key	Pop. Thous.
Annapolis 4D		18
Antigonish 3H		11
Cape Breton N & Victoria 2I		29
Cape Breton S 3I		53
Colchester 3F		23
Cumberland 3E		40
Digby 4D		20
Guysborough 3H		17
Halifax City & County 4F		80
Hants 3F		19
Inverness 2H		25
Kings 4E		21
Lunenburg 4E		33
Pictou 3G		35
Richmond 3I		13
Shelburne & Queens 4D		24
Yarmouth 5D		23

CITIES

City	Key	Pop. Thous.
Halifax 4F		46
Sydney 2I		17

TOWNS

Town	Key	Pop. Thous.
Amherst 3E		8
Annapolis Royal 4D		1
Antigonish 3H		1
Bridgewater 4E		2
Canso 3H		1
Dartmouth 4F		5
Digby 4D		2
Dominion 2K		2
Glace Bay 2K		16
Inverness 2H		2
Kentville 3E		2
Liverpool 4E		2
Louisburg 3J		1
Lunenburg 4E		2
New Glasgow 3G		6
North Sydney 2I		5
Oxford 3F		1
Parrsboro 3E		2
Pictou 3G		3
Port Hood 2H		1
Shelburne 5D		1
Spring Hill 3E		5
Stellarton 3G		3
Sydney Mines 2I		7
Trenton 3G		1
Truro 3F		6
Wedgeport 5D		1
Westville 3G		4
Windsor 4E		3
Wolfville 3E		1
Yarmouth 5C		6

PRINCE EDWARD ISLAND

Pop., 93,728
Area sq. m., 2,184.36

DISTRICTS

Dist.	Key	Pop. Thous.
Kings 2C		22
Prince 2E		32
Queens 2F		33

CITIES

City	Key	Pop.
Charlottetown 2F		11

TOWNS

Town	Key	Pop.
Summerside 2F		2

VILLAGES

Vil.	Key	Pop.
Souris 2G		1

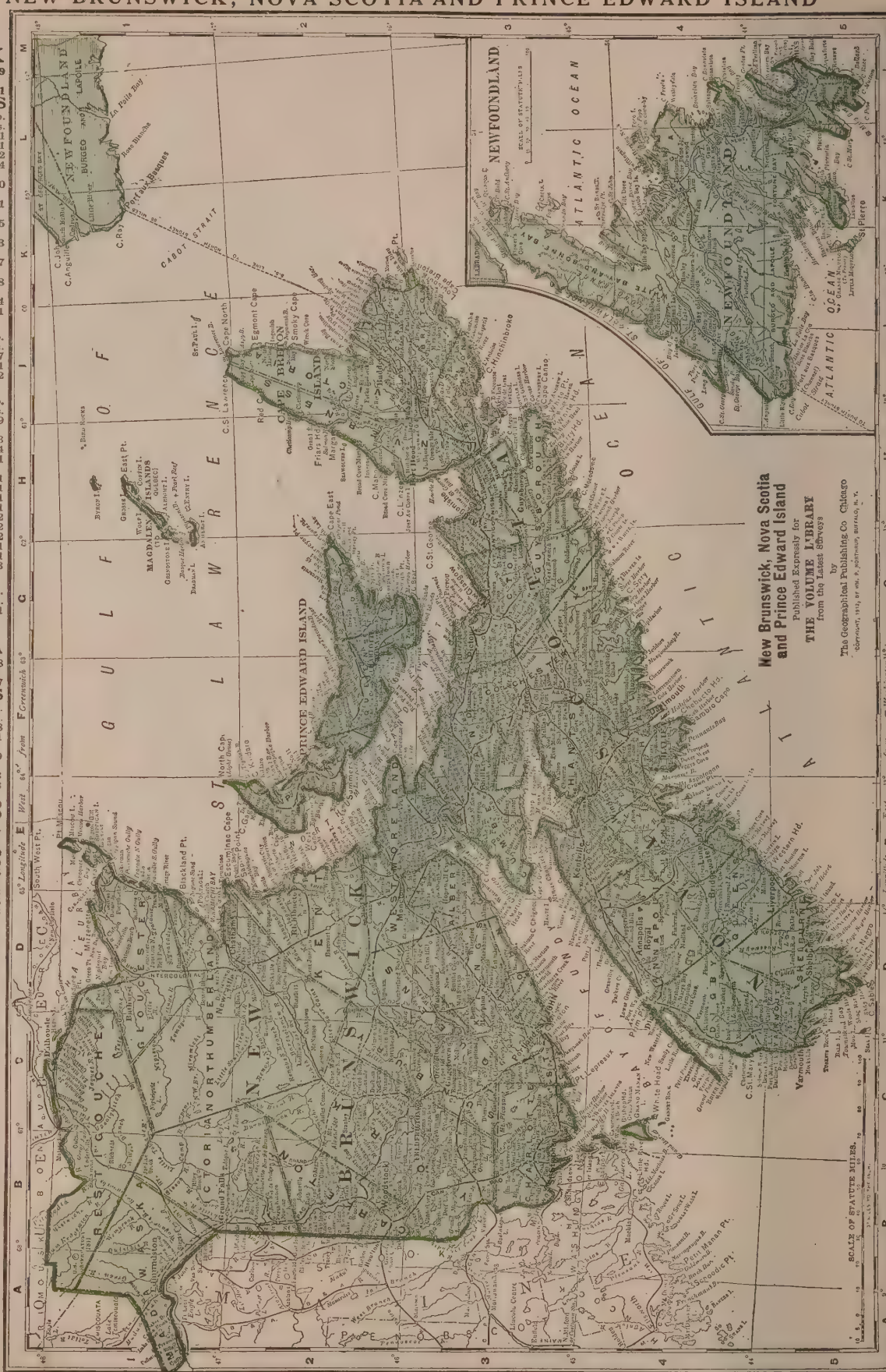
QUEBEC

Pop., 2,002,712
Area, sq. m., 351,873

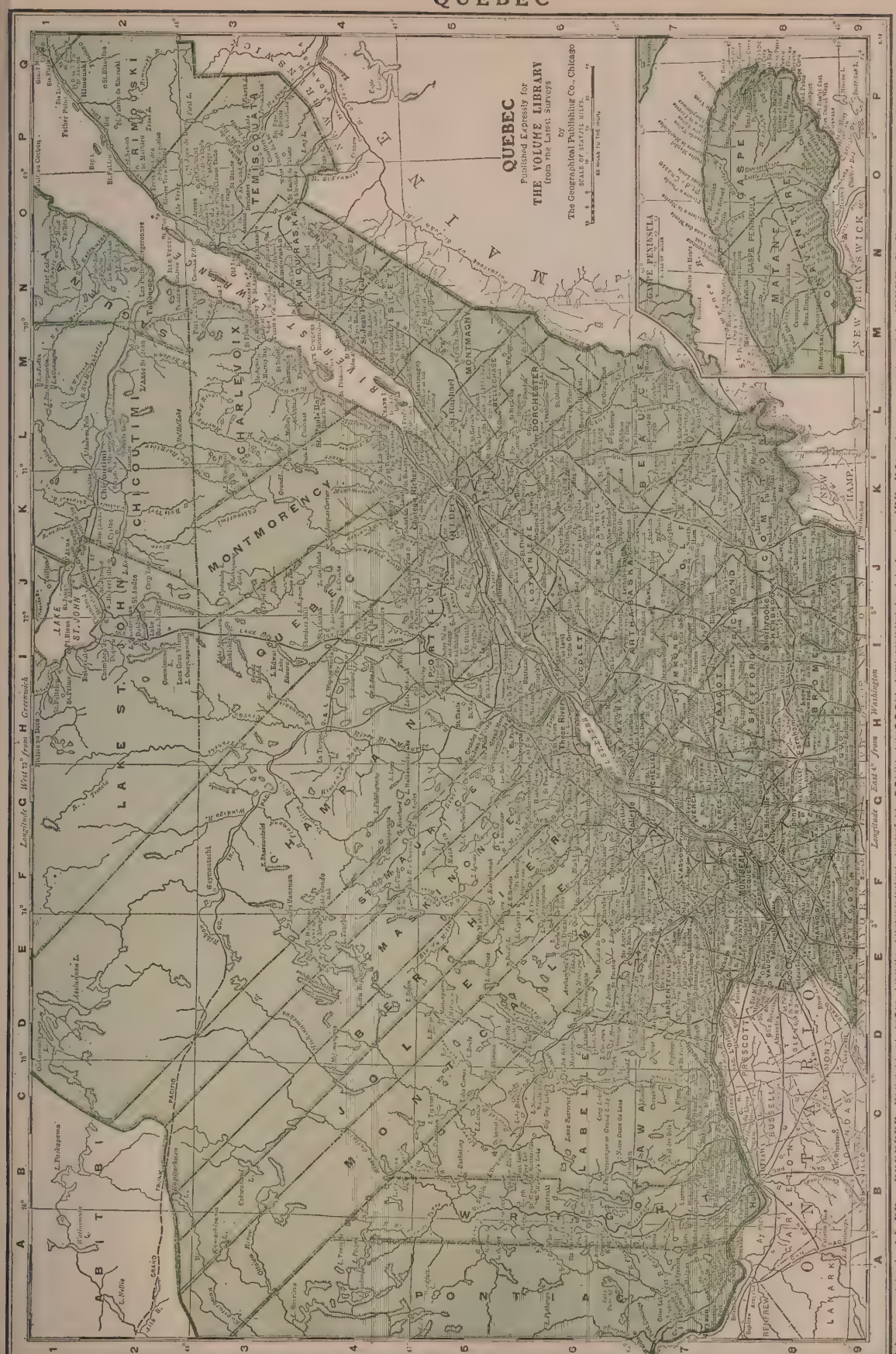
DISTRICTS

Dist.	Key	Pop. Thous.
Argenteuil 7D		16
Bagot 7H		18
Beauce 7L		28
Beauharnois 8E		21
Bellechasse 5M		21
Berthier 4D		19
Bonaventure 8M		28
Brome 8L		13
Chambly & Verchères 7G		28
Charlevoix 3H		22
Chateauguay 8F		13
Chicoutimi & Saguenay 2M		63
Compton 8L		29
Dorchester 6M		13
Drummond & Arthabaska 7I		41
Gaspe 8O		35
Hochelaga 8F		75
Huntingdon 9E		13
Iberville 6D		65
Jacques-Cartier 4N		23
Kamouraska 5L		20
Labelle 6C		40
Laprairie & Napierville 8F		19
L'Assomption 7F		15
Laval 7F		28
Levis 5K		28
L'Islet 5M		16
Lotbiniere 6J		22
Maisonneuve 7F		170
Maskinonge 5F		16
Megantic 6K		31
Missisquoi 8G		17
Montcalm 7H		13
Montmagny 5M		17
Montmorency 3K		13
Montreal-Ste. Anne 7F		21
Montreal-St. Antoine 7F		48
Montreal-St. Jacques 7F		44
Laurent 7F		55
Montreal-Ste. Marie 7F		54

Cont'd on Page 61.



†POPULATION SHOWN IN HUNDREDS. CAPITAL OF NEW BRUNSWICK, FREDERICTON; CAPITAL OF NOVA SCOTIA, HALIFAX; CAPITAL OF PR. EDW. IS., CHARLOTTETOWN.



Chambly Basin 7G.....19
Chambly Canton 7G.....18
Charlemagne 7F.....17
Chateauguay 6C.....15
Coaticook 8E.....15
Contrecoeur 7G 16
Coteau Station 8E.....15
Cowansville 9G 18
Danville 7J.....1
Deschaillons 6J 1
D'Israeli 7J.....16
Drummond 8F 16
Eastman 8L.....16
Fort Coulonge 5A.....18
Gaspe 8O.....16
Grande Baie 2M 1
Greenville 7D.....1
Huntingdon 2M 1
Iberville 8G.....1
Kamouraska 4N.....15
Knowlton 8L.....18
Labelle 6G.....18
Lac au Saumon 2P.....1
Lake Megantic 8L.....2
Lake Weedon 6C.....16
L'Annonciation 6C.....16
Lennoxville 8L 1
Lorette 5K.....1
Melbaie 3L.....1
Masuwaki 7G.....1
Mattawaska 7G 1
Missisquoi 7G 17
Masson 6C.....1
Monichello 6C 19
Mont Joli 2P.....2
Mont Laurier 6C.....17
Montmorency 5K.....1
Montreal South 7G.....17
Nanieville 8F 16
Nominingue 6C 15
Ormstown 8F.....17
Papineauville 6C.....1
Pierreville 6H.....1
Pointe aux Trembles 3L.....16
Pointe au Pic 3L.....16
Pointe Gatineau 5B.....1
Princeville 7L.....17
Providence 7G 18
Quyon 7A.....18
Robertsonville 8L.....16
Rock Island 9J 18
Roxton Falls 8H.....18
Ste. Agathe 7E 2
Ste. Anne 2M 17
Ste. Anne de Beaupre 3K 2
St. Cesaire 8G 19
St. Denis 7G 17
St. Ephrem 7L 15
St. Eustache 7E.....19
St. Felicien 2M 15
St. Gabriel de Brandon 4D 1
St. Gedeon 7L 1
St. Guillaume 6H 19
St. Jerome 2M 17
St. Jerome de Matane.....2

Cont'd on Page 52.

†POPULATION SHOWN IN HUNDREDS.

CAPITAL OF QUEBEC, QUEBEC.

QUEBEC DISTRICTS

(Continued from page 50)

Nicolet 6I.....30
Pontiac 5A.....29
Portneuf 5I.....30
Quebec Centre 5K.....21
Quebec East 5K.....47
Quebec W-O 5K.....9
Quebec County 5K.....25
Richelieu 7G...20
Richmond & Wolfe 7J....39
Rimouski 2P...51
Rouville 8G....13
St. Hyacinthe 7G.....22
St. Jean & Iberville 8G.....21
Shefford 8H....23
Sherbrooke 8I..23
Soulanges 8E...9
Stanstead 9J...20
Temiscouata 3P.....36
Terrebonne 7E.29
Trois-Rivieres & St. Maurice 4G.....36
Vaudreuil 8E..11
Wright 5B.....48
Yamaska 6H...19
Unorganized Parts.....2

CITIES

Cities	Key	Pop.
Hull	8B	18
Montreal	8F	470
Quebec	5K	78
St. Hyacinthe	7G	9
Sherbrooke	8J	16
Sorel	6G	8
Trois-Rivieres	6H	13
Westmount	8F	14

TOWNS

Towns	Key	Pop.
Action Vale	7H	1
Arthabaskaville	7J	1
Ascot	8J	†7
Aylmer	8B	3
Beauceville	6L	1
Beauharnois	8F	2
Bedford	8G	1
Berthier	4D	1
Black Lake	6K	2
Bordeaux	F7	†9
Bromonville	7J	1
Buckingham	6C	3
Chicoutimi	2M	5
Coaticook	9J	3
Cookshire	8L	†9
Dorval	8F	1
Drummondville	7J	1
Farnham	9G	3
Fraserville	3P	6
Granby	8H	4
Grand' Mere	4H	4
Iberville	8G	1
Joliette	6F	6
Lachine	F8	10
Lachute	7D	2
L'Assomption	7F	1
Laprairie	8F	2
La Tuque	4H	2
Laurentides	7F	1
Lauzon	5K	3
Levis	5K	7
Longueuil	7G	3
Louiseville	5F	1
Maisonneuve	7F	18
Magog	9J	3
Marieville	8G	1
Montmagny	5M	2
Montreal West	F8	†7
Nicolet	6I	2
Outremont	8F	4
Pointe-aux-Trembles	7F	1
Pointe Claire	8F	†7
Richmond	7J	2
Rigaud	8E	†8
Rimouski	2P	3
Roberval	2M	1
Ste. Anne de Bellevue	8F	1
St. Jean	8G	5
St. Jerome	7E	3
St. Lambert	7G	3
St. Laurent	8F	1
St. Ours	7G	†6
St. Tite	4H	1
Salaberry de Valleyfield	8E	9
Scottstown	8L	†9
Shawinigan Falls	4G	4
Terrebonne	7E	1
Thetford Mines	6K	7
Verdun	8F	11
Victoriaville	7J	3
Waterloo	8H	1
Windsor Mills	7J	2

VILLAGES

Vil.	Key	Pop.
Anqui	2P	1
Asbestos	7J	2
Baie de Shawinigan	4G	1
Baie St. Paul	3L	1
Bagotville	2M	1
Beebe Plain	9J	†8
Boleeil	7G	1
Bernierville	6K	†6
Bienville	5K	1
Boucherville	7G	1
Cacouna	3P	†5
Cartierville	8F	†9

ONTARIO.

QUEBEC VILLAGES

(Continued from page 51)

Berthier (en haut) St. Hyacinthe 8P ..16
St. Jerome 8P ..16
St. Joseph 7L ..1
St. Joseph 7G ..15
St. Joseph 7C ..1
St. Moise 2P ..16
St. Pie 7H ..16
St. Pierre aux Liens 8P ..2
St. Raymond 5L ..15
St. Remi 8P ..1
Ste. Rose 7F ..1
Ste. Scholastique 7L ..17
St. Simeon 3L ..15
Ste. Therese 7F ..2
St. Paul 7F de Paul 7F ..1
Sacre Coeur de Jesus 7L ..19
Sault au Recollet 7F ..1
Shawville 7A ..17
Stanstead Plain 7C ..1
Tadoussac 8L ..18
Sherbrooke 8L ..18
Thurso 6C ..16
Toulouse 2M ..18
Trois Pistoles 8L ..18
Upton 7H ..17
Varennes 7G ..18
Ville-Marie A5 ..18
Warwick 7L ..19
Waterville 8L ..1
Windsor Centre 7C ..18
Yamachiche 4C ..19
Yamaska 6H ..16

ONTARIO

Pop., 2,523,274
Area sq. m., 260,862

DISTRICTS

Dist.	Key	Pop. Thous.
Algoma E	3G	.44
Algoma W	O	.28
Bat. 6L		.18
Brantford 6J		.26
Bruce N 5H		.23
Bruce S 5H		.26
Carleton 4O		.28
Dufferin 5J		.17
Elgin W 7H		.26
Elgin E 7H		.17
Dundas 4O		.28
Essex N 7G		.29
Essex S 7G		.38
Frontenac 5N		.21
Glengarry 4P		.21
Grenville 5O		.17
Grey N 5J		.28
Grey S 5J		.49
Haldimand 7K		.21
Halton W 6K		.22
Hamilton W 6K		.39
Hastings E 5M		.24
Hastings W 6K		.37
Huron E 6H		.17
Huron S 6H		.19
Huron W 6H		.17
Kent E 7G		.23
Kent W 7G		.32
Kingston 5N		.20
Lambton E 7G		.22
Lambton W 7G		.29
Lanark N 4N		.14
Lanark S 4N		.19
Leeds 5N		.18
Lennox & Addington 5M		.20
Lincoln 6K		.35
London 6H		.46
Middlesex E 6H		.20
Middlesex W 6H		.13
Muskoka 4K		.16
Nipissing 4L		.74
Norfolk 7J		.27
Northumberland W 5M		.12
Ontario N 5K		.17
Ontario S 5K		.23
Oxford N 6J		.73
Oxford S 6J		.25
Peel 6K		.22
Perth N 6H		.30
Perth S 6H		.18
Peterborough E 5L		.15
Prescott 4P		.26
Prince Edward 6M		.17
Renfrew N 4M		.23
Renfrew S 4M		.27
Russell 4P		.39
Simcoe E 5K		.35
Simcoe S 5K		.24
Stormont 4P		.24
Thunder Bay & Rainy River 5P		.67
Toronto Centre 6K		.53
Toronto E 6K		.68
Toronto N 6K		.43
Toronto W 6K		.61
Victoria 5L		.26
Waterloo N 6J		.33
Waterloo S 6J		.28
Welland 6K		.42
Wellington N 6J		.22
Wellington S 6J		.32
Wentworth 6K		.34
York Centre 6K		.26
York N 6K		.22
York S 6K		.68

CITIES

City	Key	Pop. Thous.
Belleville 5M		.9
Brantford 6J		.23
Chatham 7G		.10
Fort William 0M		.16
Guelph 6J		.15
Hamilton 6F		.81
Kingston 5N		.18
London 6H		.46
Niagara Falls 7K		.9
Ottawa 4O		.87
Peterborough 5L		.18
Port Arthur		.11
St. Catherines 6K		.12
St. Thomas 7H		14
Stratford 6J		.12
Toronto 6K		.376
Windsor 7G		.17
Woodstock 6J		.9

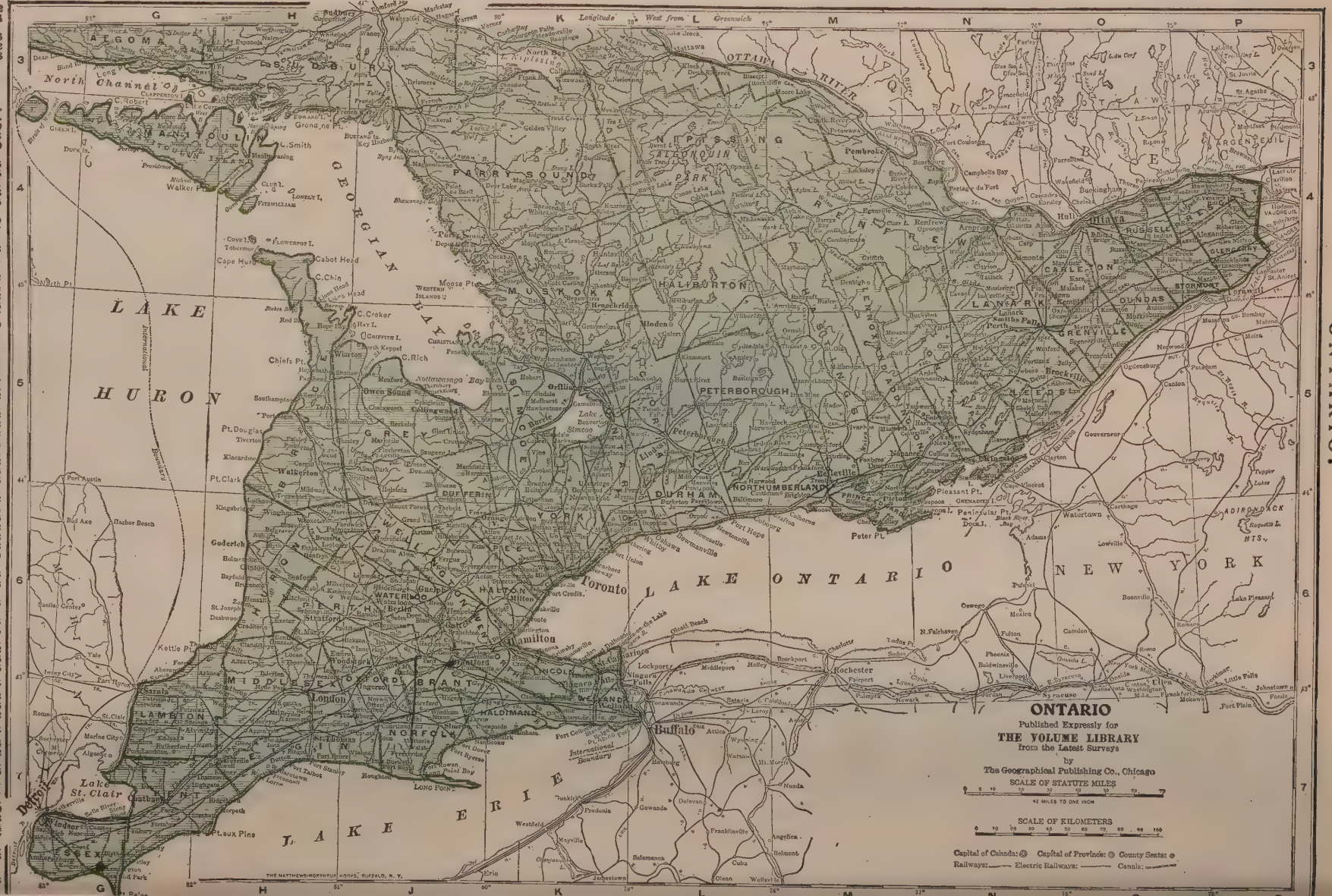
TOWNS

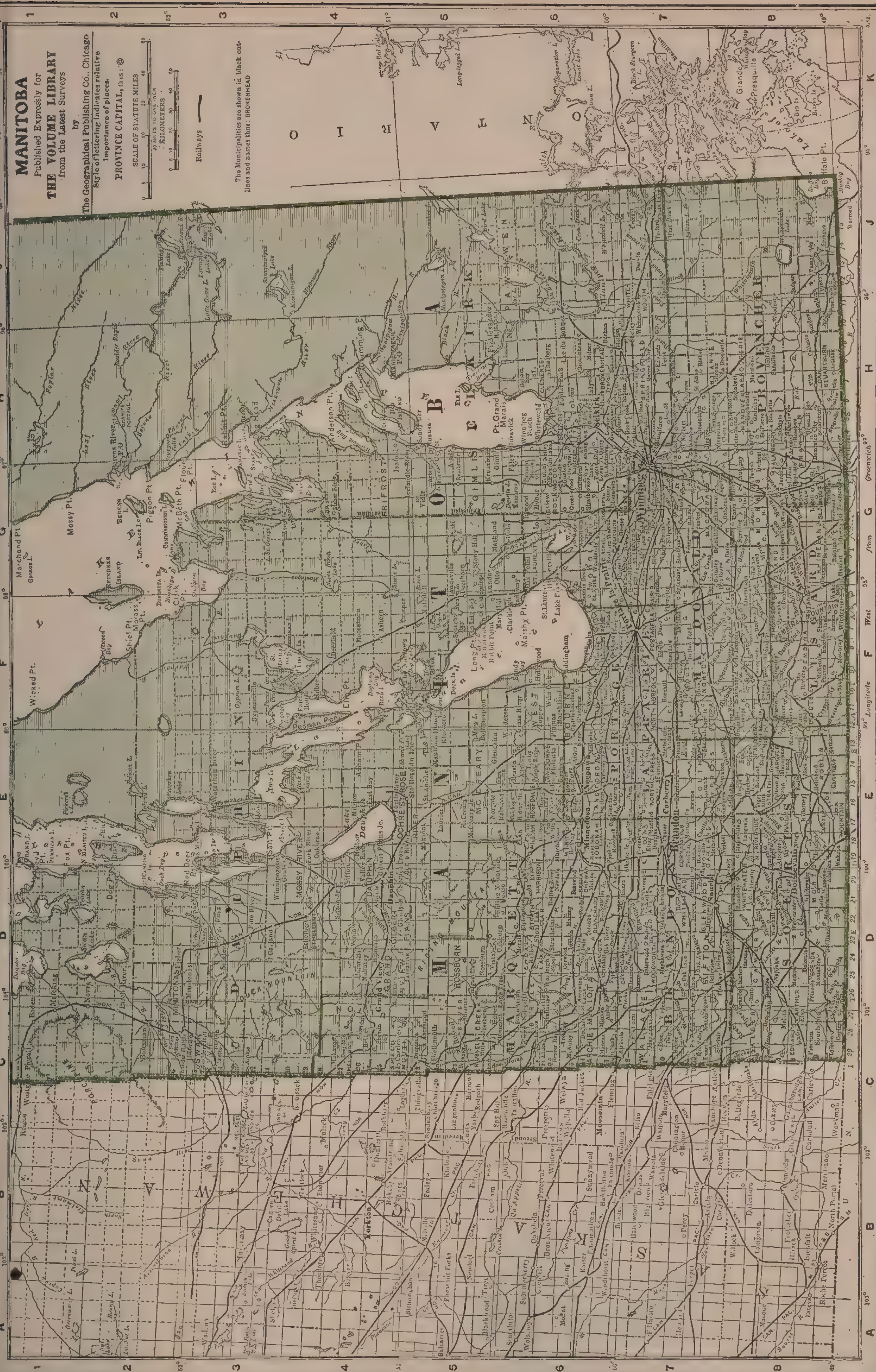
Town	Key	Pop. Thous.
Alexandria 4P		.2
Alliston 5K		.1
Almonte 4N		.2
Alvinson 7G		.†8
Amherstburg 7G		2
Arnprior 4N		.4
Aurora 6K		.1
Aylmer 7J		.2
Barrie 5K		.6
Berlin 6J		.15
Blenheim 7G		.1
Blind River 3G		.2
Bonfield 3K		.†4
Bothwell 7G		.†6
Bowmanville 6L		2
Bracebridge 4K		.2
Brampton 6K		.3
Brockville 5O		.9
Bruce Mines 3G		.†6
Cache Bay 3J		.†8
Campbellford 5M		.3
Carleton Place 4N		.3
Chelmsford		.†5
Chesley 5H		.1
Clinton 6H		.2
Cobalt 3K		.5
Cobourg 6L		.5
Cochrane 0M		.1
Collingwood 5J		.7
Copper Cliff		.3
Cornwall 4P		.6
Deseronto 5M		.2
Dresden 7G		.1
Dryden 0M		.†7
Dundas 6K		.4
Dunnville 7K		.2
Durham 5J		.1
Englehart 0M		.†6
Essex 7G		.1
Forest 6G		.1
Fort Frances		.1
Galt 6J		.10
Gananoque 5N		.3
Goderich 6H		.4
Gore Bay 4G		.†7
Gravenhurst 5K		1
Haileybury 4L		.3

Cont'd on page 53

CAPITAL OF ONTARIO, TORONTO.

POPULATION SHOWN IN HUNDREDS.





MANITOBA

Pop., 455,614
Area sq. m., 73,731.72

DISTRICTS

Dist.	Key	Pop. Thous.
Brandon	7D	39
Dauphin	3D	44
Lisgar	8F	23
Macdonald	7F	35
Marquette	5D	33
Portage la Prairie	7F	27
Provencher	8H	40
Selkirk	5H	53
Souris	8D	29
Winnepeg City	7G	128

CITIES

City	Key	Pop. Thous.
Brandon	7E	13
Portage la Prairie	7F	5
St. Boniface	7G	7
Winnepeg	7G	136

TOWNS

Town	Key	Pop. Thous.
Birtle	6D	†4
Boissevain	8D	†9
Carberry	7E	†8
Carman	8F	1
Dauphin	4D	2
Deloraine	8D	†8
Emerson	8G	1
Gladstone	6F	†7
Grand View	4D	†6
Hartney	8D	†6
Killarney	8E	1
Melita	8D	†6
Minnedosa	6E	1
Morden	8F	1
Morris	8G	†5
Neepawa	6E	1
Oak Lake	7D	†4
Rapid City	6D	†5
Rivers	6D	†9
Selkirk	6H	2
Souris	7D	1
Stonewall	6C	1
Swan River	2C	†5
Virden	7D	1

VILLAGES

Vil.	Key	Pop. Thous.
Alexander	7D	†3
Altona	8G	†5
Arden	6E	†2
Baldur	8E	†4
Beausejour	8H	†8
Belmont	8E	†2
Binscarth	5C	†1
Birme	6E	†1
Carrol	7D	†1
Cartwright	8E	†4
Clearwater	8E	†1
Crandall	6D	†1
Crystal City	8F	†6
Cypress River	7E	†3
Darlingford	8F	†1
Dominion City	8G	†2
Douglas	7E	†3
Edrans	6E	†1
Elgin	8D	†2
Elkhorn	7C	†5
Elm Creek	7G	†3
Ethelbert	4D	†1
Fannystelle	7G	†1
Fox Warren	6C	†1

Cont'd on page 56.

† POPULATION SHOWN IN HUNDREDS.

CAPITAL OF MANITOBA-WINNIPEG

ONTARIO TOWNS

(Continued from page 52)

Town	Key	Pop.
Hanover	5H	2
Harriston	6J	1
Hawkesbury	4P	4
Hespeler	6J	2
Huntsville	4K	2
Ingersoll	6H	4
Kearney	4K	†8
Keewatin		1
Kenora		6
Kincardine	5H	2
Kingsville	7G	1
Latchford	0M	†7
Leamington	7G	[illegible]
Lindsay	5L	[illegible]
Listowel	6J	2
Little Current	4H	1
Madoc	5M	1
Massey	3G	†8
Mattawa	3L	1
Meaford	5J	2
Midland	5K	4
Milton	6K	1
Mitchell	6H	1
Mount Forest	6J	1
Napanee	5N	2
New Liskeard		2
Newmakret	5K	2
Niagara	6K	1
North Bay	3K	7
North Toronto	6K	5
Oakville	6K	2
Orangeville	6K	2
Orillia	5K	6
Oshawa	6L	7
Owen Sound	5J	12
Palmerston	6J	1
Paris	6J	4
Parkhill	6H	1
Parry Sound	4J	3
Pembroke	4M	5
Penetanguishene	5K	3
Perth	5N	3
Petrolia	7G	3
Pictou	5M	3
Port Hope	6L	5
Powassan	3K	†6
Prescott	5O	2
Preston	6J	3
Rainy River	0M	1
Renfrew	4N	3
Ridgetown	7H	1
Rockland	4O	3
St. Mary's	6H	3
Sandwich	7G	2
Sarnia	7G	9
Sault Ste. Marie	0M	10
Seaforth	6H	1
Simcoe	7J	3
Smiths Falls	5N	6
Stayner	5J	1
Steelton	0M	3
Strathroy	7H	2
Sturgeon Falls	0M	2
Sudbury	0M	4
Thessalon	0M	1
Thornbury	5J	†7
Thorold	6K	2
Tilbury	7G	1
Tilsonburg	7J	2
Trenton	5M	3
Tweed	5M	1
Uxbridge	5K	1
Vankleek Hill	4P	1
Walkerton	5H	2
Walkerville	7G	3
Wallaceburg	7G	3
Waterloo	6J	4
Webbwood	3H	†6
Welland	7L	5
Whitby	6L	2
Wiarton	5H	2
Wingham	6H	2

VILLAGES

Vil.	Key	Pop.
Acton	6J	1
Ailsa Craig	6H	†5
Arkona	6H	†4
Arthur	6J	1
Athens	5O	†8
Ayr	6J	†8
Bancroft	4M	†6
Beamsville	6K	1
Beaverton	5K	1
Beeton	5K	†5
Belle River	7G	†5
Bloomfield	6M	†6
Blyth	6H	†7
Bobcaygeon	5L	1
Bolton	6K	†7
Bradford	5K	†9
Bridgeburg	7L	1
Brighton	5M	1
Brussels	6H	†9
Burks Falls	4K	†9
Burlington	6K	1
Caledonia	6K	†9
Cannington	5L	†9
Cardinal	5O	1
Casselman	4O	†9
Cayuga	7J	†7
Chatsworth	5J	†3
Chesterville	4O	†8
Chippewa	6K	†7
Clifford	6J	†5
Cobden	4N	†7
Colborne	6M	†9
Coldwater	5K	†6
Courtright	7G	†3
Creemore	5J	†6
Delhi	7J	†8
Depot Harbour	4J	†6
Drayton	6J	†7
Dundalk	5J	†6
Dutton	7H	†8
Eastview	4O	3
Eganville	4M	1
Elmira	6J	1
Elora	6J	1
Exeter	6H	1
Fenelon Falls	5L	1
Fergus	6J	1

Cont'd on page 54.

ONTARIO VILLAGES (Continued from page 53)

Finch 4O......†4
Fort Erie 7L....1
Garden Island 5N.........†1
Georgetown 6K..........1
Glencoe 7H....†8
Grand Valley 6J..........†7
Grimsby 6K.....1
Hagersville 7J...1
Haliburton 4L ..†4
Hastings 5M....†8
Havelock 5M....1
Hensall 6H....†7
Hepworth 5H..†3
Holland Landing 5K......†5
Iroquois 5O....†8
Jarvis 7J.......†5
Kemptville 4O..1
Killaloe 4M....†4
Lakefield 5L.....1
Lanark 4N.....†7
Lancaster 4P..†6
Lucknow 6H...†9
L'Orignal 4P....1
Lucan 6H......†7
Markdale 5J...†9
Markham 6K..†9
Marmora 5M..†8
Maxville 4P....†7
Merrickville 5O..........†9
Merriton 6K.....1
Millbrook 5L...†7
Milverton 6J....†8
Mimico 6K.......1
Morrisburg 5O..1
Neustadt 5H...†4
Newboro 5N....†4
Newburgh 5N .†4
Newbury 7H....†3
Newcastle 6L..†6
New Hamburg 6J...........1
Norwich 7J......1
Norwood 5M ..†8
Oil Springs 7G.†6
Omemee 5L....†5
Paisley 5H.....†8
Point Edward 7G..........†8
Port Carling 4K.........†3
Port Colborne 7K...........1
Port Dalhousie 6K...........1
Port Dover 7J ..1
Port Elgin 5H ..1
Port Perry 5L...1
Port Rowan 7J †7
Portsmouth 5N .1
Port Stanley 7H.........†8
Richmond 4O..†4
Richmond Hill 6K.........†6
Rodney 7H....†6
Shallow Lake 9H........†5
Shelburne 5J....1
Southampton 5H1
South River 4K.........†5
Springfield 7H .†4
Stirling 5M....†8
Stouffville 6K...1
Streetsville 6K.†5
Sundridge 4K..†4
Sutton 5K .....†7
Tara 5H.......†5
Tavistock 6J....†9
Teeswater 5H..†8
Thamesville 7H†8
Thedford 6H...†5
Tiverton 5H...†3
Tottenham 5K.†5
Victoria Harbour 5K......1
Vienna 7J......†3
Wardsville 7H .†2
Waterdown 6K †7
Waterford 7J ...1
Watford 7H.....1
Wellington 6M.†7
West Lorne 7H †7
Weston 6K......1
Westport 5N...†8
Winchester 4O..1
Woodbridge 7K.........†6
Woodville 5K..†3
Wroxeter 6H...†3
Wyoming 7G ..†5

SASKATCHEWAN

Pop., 492,432
Area sq. m., 51,700,000

DISTRICTS

Dist.	Key	Pop. Thous.
Assiniboia	11F	42
Battleford	7C	47
Humboldt	9E	52
Mackenzie	8F	40
Moosejaw	11D	87
Prince Albert	6E	36
Qu'Appelle	10F	35
Regina	11E	70
Saltcoats	10F	28
Saskatoon	9D	51

CITIES

City	Key	Po. Thous.
Moosejaw	10E	13
Prince Albert	7E	6
Regina	10E	30
Saskatoon	8D	12

TOWNS

Town Key Pop. Thous.
Alameda 11F..†2
Arcola 11F....†7
Balgonie 10E..†3
Battleford 8C...1
Broadview 10F †7
Canora 9F.....†4
Carlyle 11F....†3
Carnduff 10G..†4
Caron 10E.....†2
Craik 10E.....†4
Davidson 9E...†3
Estevan 10F....1
Fleming 10C...†2
Francis 10F....†2
Hanley 9D....†3
Humboldt 8E..†8
Indian Head 10F...........1
Kindersley 9C .†4
Langham 8D ..†3
Lanigan 9E....†3
Lemberg 10F ..†3
Lloydminster 7C..........†4
Lumsden 10E..†6
Maple Creek 10C.........†9
Melfort 8E....†5
Melville 10F....1
Milestone 11E .†4
Moosomin 10G..1
Nokomis 9E...†3
North Battleford 8C......2
Outlook 9D....†6
Oxbow 11F....†6
Qu'Appelle 10F †8
Rouleau 10E...†6
Rosthern 8D....1
Saltcoats 10F..†4
Scott 8C......†4
Sintaluta 10F..†3
Strassburg 9E..†8
Swift Current 10D 1
Vonda 8D.....†2
Wapella 10G...†4
Watrous 9E....†7
Watson 8E ....†2
Weyburn 11F.. 2
Whitewood 10F †4
Wilkie 8C.....†5
Wolseley 10F ..†9
Yellow Grass 11E..........†4
Yorkton 9F.....2

VILLAGES

Vil. Key Pop. Thous.
Aberdeen 8D ..†2
Abernethy 10F.†2
Allan 9D......†1
Alsask 9C......†1
Antler 11G.....†1
Asquith 8D....†1
Balcarres 10F..†3
Biggar 8D.....†3
Big River 7D..†5
Birch Hills 8E .†1
Bladworth 9D .†1
Bredenbury 10F.........†1
Brock 9C......†1
Broderick 9D..†1
Brownlee 10D .†1
Buchanan 8F ..†2
Bulyea 10E....†1
Carievale 11G..†1
Creelman 11F..†1
Cupar 10E.....†2
Delisle 9D.....†2
Drinkwater 10E..........†2
Dubuck 10F...†1
Duck Lake 8D.†3
Dundurn 9D...†2
Earl Grey 10E.†1
Elbow 9D......†2
Elfross 9E.....†1
Esterhazy 10F.†2
Forget 11F....†2
Fort Qu'Appelle 10F....†2
Gainsboro 11G.†2

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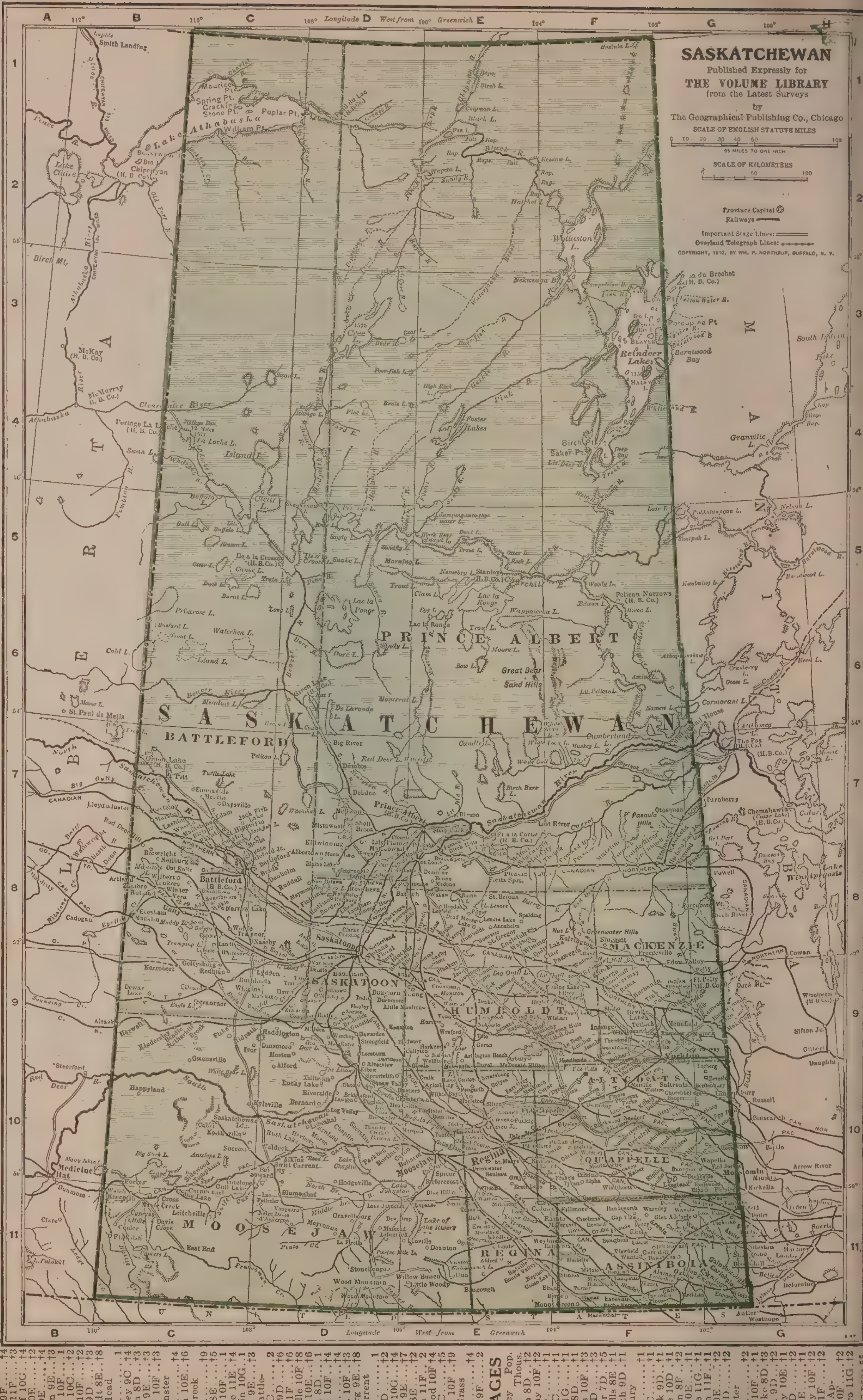
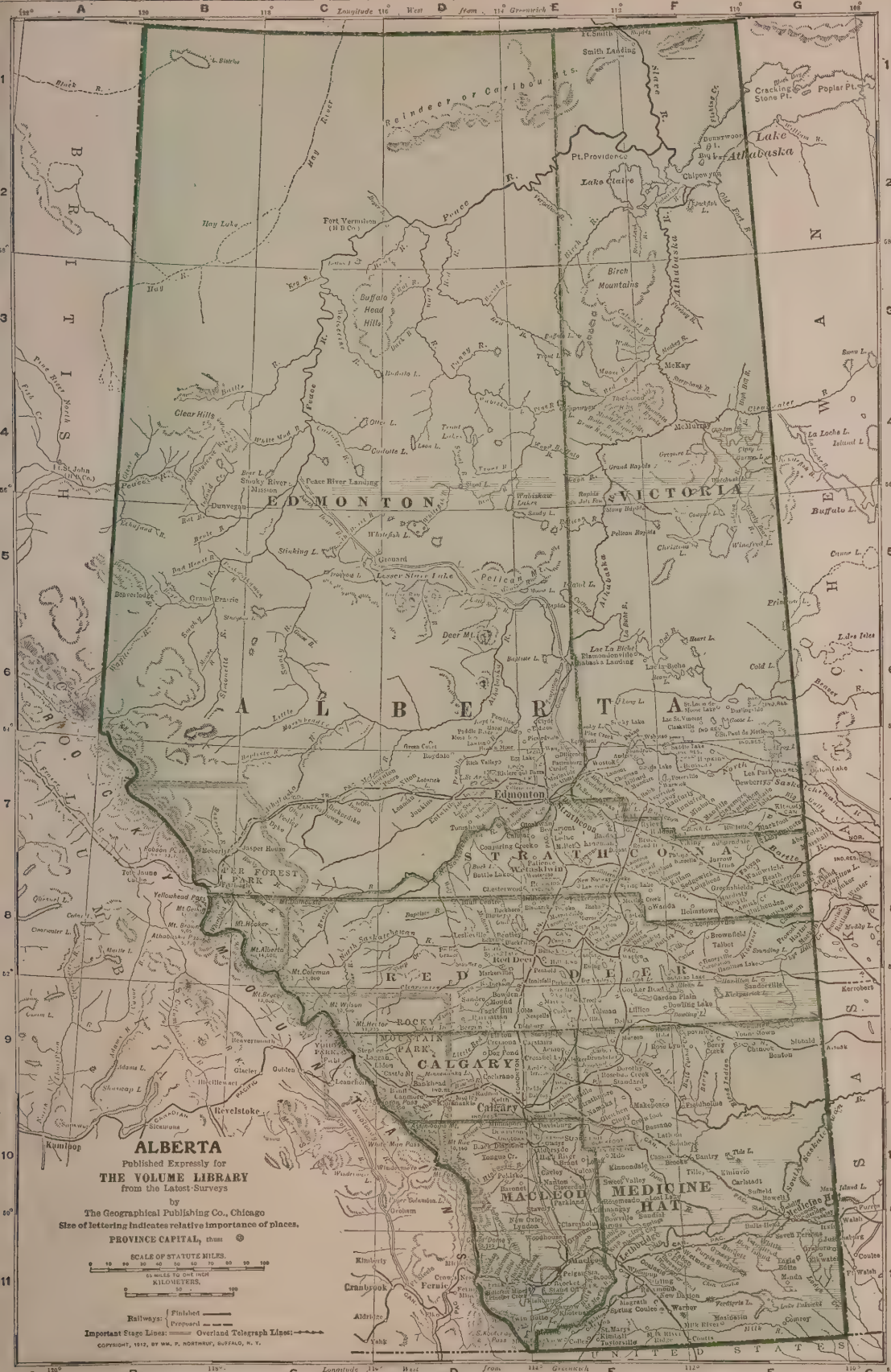


†POPULATION SHOWN IN HUNDREDS.

CAPITAL OF SASKATCHEWAN, REGINA.



SASKATCHEWAN VILLAGES (Continued from page 54)

Glenavon 10F..†1
Glen Ewen 11F †1
Govan 9E.....†3
Grayson 10F...†1
Grenfel 10F....†7
Griffin 11F....†1
Guernsey 9E...†1
Gull Lake 10C.†6
Hague 8D.....†3
Halbrite 11F...†2
Harris 9C.....†1
Hawarden 9D..†1
Herbert 10D...†5
Heward 11F...†1
Howell 8E.....†1
Hudson Bay Junction 7F .†2
Jasmin 9F.....†1
Kamsack 9G...†4
Kelliher 9F....†2
Kenaston 9D..†1
Kennedy 11F..†1
Kerr Robert 9C.....†3
Kinistino 8E...†1
Kipling 10F....†2
Kisbey 11F....†2
Kronau 10E...†1
Laird 8D.....†1
Landis 8C.....†1
Lang 11E.....†3
Langenburg 10G.....†2
Lashburn 7C...†2
Leross 9F.....†1
Leslie 9F.....†1
Lipton 10F....†2
Lockwood 9E..†1
Loreburn 9E...†1
Luseland 8C...†1
McTaggart 11E †1
Macklin 8C....†3
Macoun 11F...†2
Manor 11F....†2
Mayfield 11G..†2
Maymont 8D..†1
Midale 11F....†1
Montmartre 10F.....†2
Morse 10D.....†2
Mortlach 10D .†2
Neudorf 10F...†3
North Portal 11F.....†1
Ogema 11E....†1
Paynton 7C....†1
Pense 10E.....†2
Perdue 8D.....†1
Plenty 8C.....†1
Quill Lake 8E..†1
Radisson 8D...†3
Radville 11E...†2
Raymore 9E...†1
Redvers 11G...†2
Rocanville 10G †2
Roche Percee 11F.....†1
Rosetown 9D..†3
Sedley 10E....†2
Semans 9E.....†1
Sheho 9F.....†1
Shellbrook 10D †1
Southey 10E...†1
Springside 9F..†1
Star City 8E...†1
Stockholm 10F.†1
Stoughton 11F.†3
Sutherland 8D..†4
Tantallon 10G .†1
Theodore 9F...†1
Tisdale 8E.....†2
Togo 9G.....†1
Tugaske 10D ..†2
Tuxford 10E...†1
Tyvan 10F....†1
Unity 8C.....†1
Wadena 9F....†2
Waldron 10F ..†1
Warman 8D...†1
Wauchope 10G †1
Wawota 11F...†2
Welwyn 10F...†1
Windthorst 10F.....†2
Wilcox 10E....†2
Wynard 9E....†5
Zealandia 9D ..†2

ALBERTA

Pop., 374,663
Area sq. m., 255,285

DISTRICTS

Dist.	Key	Pop. Thous.
Calgary	10D	.60
Edmonton	5C	.57
Macleod	11D	.34
Medicine Hat	10F	.70
Red Deer	8E	.61
Strathcona	7E	.49
Victoria	4F	.41

CITIES

City	Key	Pop. Thous.
Calgary	10D	.43
Edmonton	7E	.24
Lethbridge	11E	.8
Medicine Hat	11F	5
Strathcona	7E	.5
Wetaskiwin	8E	.2

TOWNS

Town	Key	Pop. Thous.
Camrose	8E	.1
Cardston	11E	.1
Claresholm	11E	†8
Daysland	8E	†3
Didsbury	9D	..†7
Fort Saskatchewan	7E	.....†7
High River	10D	.1
Innisfail	9D	....†6
Lacombe	8D	...1
Ledue	7E	.....†5
Macleod	11E	...1
Magrath	11E	..†9
Nanton	10E	..†5
Okotoks	10D	..†5
Olds	9D	.....†9
Pincher Creek	11E	1

VILLAGES

Vil.	Key	Pop. Thous.
Acme	9E	...†1
Aetna	11E	...†1
Airdrie	9D	...†1
Alix	8E	...†2
Athabasca Landing	6E	...†2
Banff	9D	...†9
Bank Head	9D	..†5
Bassano	10E	..†5
Bashaw	10E	..†5
Basil	8E	...†2
Bellevue	11D	..†4
Bickerdike	7C	..†4
Blackfalds	8E	..†1
Blairmore	11D	..†1
Bowden	9D	..†1
Bowland	10F	..†3
Brusderheim	7E	...†4
Canmore	7D	...†7
Cardiff	7E	...†2
Carmangay	10E	...†2
Carstairs	9D	...†2
Cayley	10E	..†1
Coalrane	9D	..†3
Coleman	11D	..†1
Cowley	11E	..†1
Crossfield	9D	..†2
Diamond City	11E	...†5
Elbow Park	6D	..†4
Entwhistle	7D	..†1
Erskine	8E	...†4
Evarts	8D	...†25
Exshaw	9D	...†5
Ferintosh	8E	†70
Frank	11D	...†8
Gadsby	8E	...†5
Gleichen	11E	..†2
Grassy Lake	11F	...†2
Grouard	5D	...†3
Hardisty	8F	...†3
Hillcrest	11D	..†1
Holden	7E	...†1
Innisfree	7F	...†90
Islay	7F	...†90
Killam	8F	...†1
Lanount	7E	...†1
Langdon	10E	...†1
Lavoy	7D	...†1
Lille	11D	...†3
Loydminster	7E	...†2
Marwayne	7E	..†1
Morinville	7E	..†3
Mountain View	11E	...†89
Mundare	7E	..†1
Munson	9E	..†92
New Norway	8E	..†61
North Edmonton	7E	...†4
North Red Deer	8E	...†3
Olathon	8E	...†55
Passburg	11D	..†3
Penhold	8D	..†94
Provost	8F	...†3

Cont'd on page 56

POPULATION SHOWN IN HUNDREDS.

CAPITAL OF ALBERTA, EDMONTON.

ALBERTA VILLAGES (Continued from page 55)

Queenston 10E..†6
Redcliffe 10F..†2
Ryley 7E.....†1
Sedgewick 8F..†3
Spruce Grove 7E.....†6
Stafford 10A...†9
Staveley 10E..†2
Stettler 10E...†5
Strathmore 10E†5
Strome 8E.....†1
Trochu 9E.....†3
Viking 7F.....†1
Warner 11E...†3
West Edmonton 7D.....†1

BRITISH COLUMBIA

Pop., 392,480†
Area sq. m., 355,855

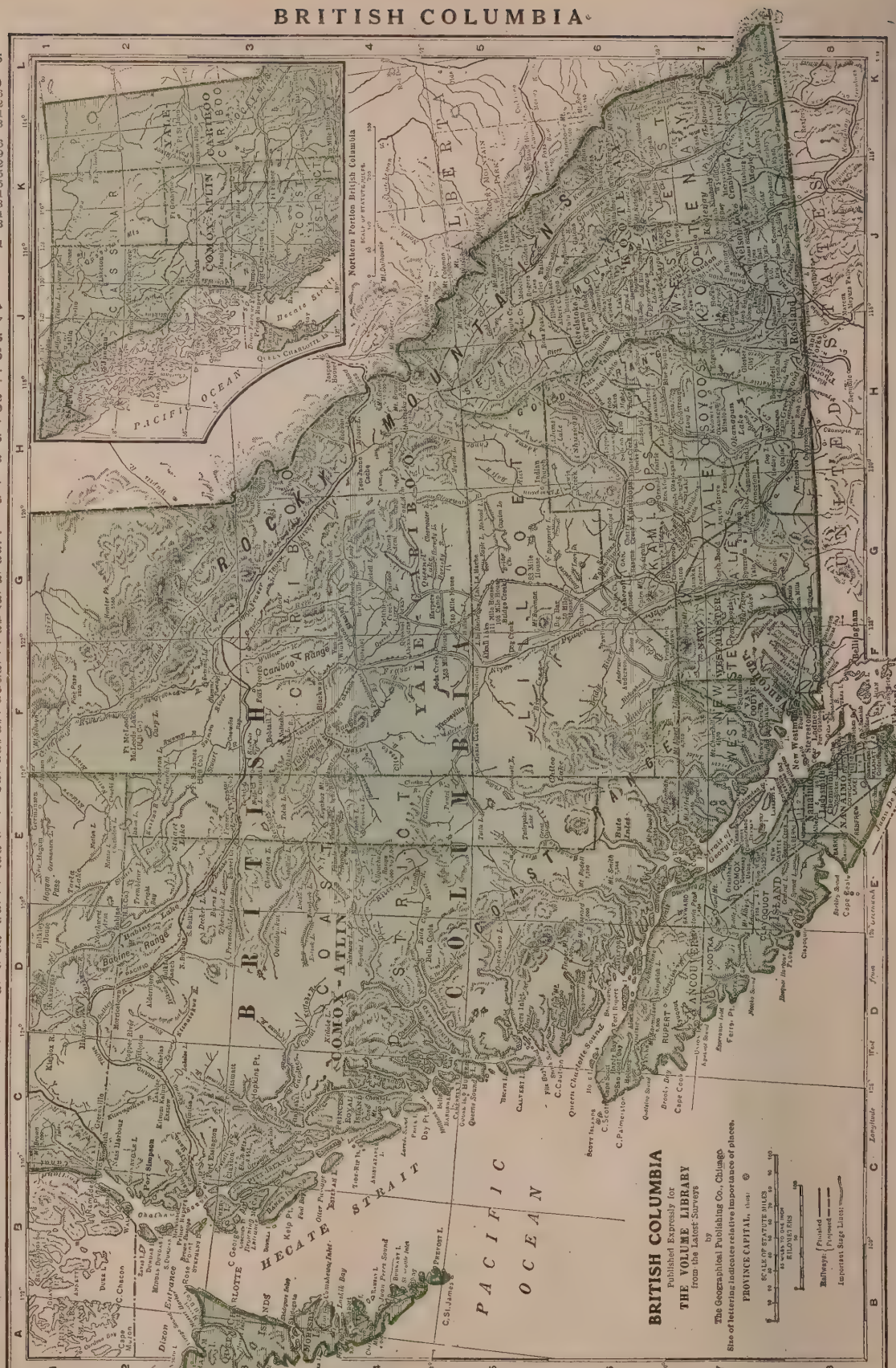
DISTRICTS

Dist.	Key	Pop. Thous.
Comox-Atlin	4D	42
Kootenay	6J	50
Nanaimo	8E	31
New Westminster	7F	55
Vancouver City	7F	123
Victoria City	8F	31
Yale & Cariboo	4F	56

CITIES

City	Key	Pop. Thous.
Abbotsford	8F	†3
Agassiz	7G	†2
Ainsworth	7J	†1
Alberni	8E	†8
Anaconda	7H	†1
Armstrong	6H	†8
Ashcroft	6G	†7
Atlin	1J	†4
Bella Coola	4D	†2
Chemainus	8F	1
Chilliwack	8G	1
Clayoquot	8D	†1
Clinton	6G	†2
Comox	7E	†5
Courtenay	7E	†6
Cranbrook	7K	3
Cumberland	7E	1
Duncan	6J	†4
Enderby	6H	†8
Esquimalt	8F	4
Extension	7F	†2
Fernie	7K	3
Field	5J	†1
Fort Steele	7K	†2
Golden	5J	†9
Grand Forks	8H	1
Grande Prairie	6H	†1
Greenwood	8H	†7
Hosmer	7K	†2
Kamloops	6H	3
Kaslo	7J	†7
Kelowna	7H	1
Kimberley	7J	†1
Ladner	8F	1
Ladysmith	8F	3
Langley	7F	†2
Langley Prairie	7F	†2
Lillooet	6G	†5
Lytton	6G	†1
Merritt	6G	†7
Michel	7K	1
Midway	8H	†2
Milne's Landing	8F	†1
Mission	8F	†1
Nakusk	6J	†3
Nanaimo	8F	8
Nelson	7J	4
New Alberni	8E	†8
New Denver	7J	†8
New Michel	7K	†6
New Westminster	8F	13
North Bend	7G	†1
North Vancouver	7F	8
One Hundred and Fifty Mile House	4G	†2
Penticton	7H	1
Phoenix	8H	†6
Port Essington	3C	†3
Port Moody	7F	†7
Port Simpson	2B	†2
Prince Rupert	2B	4
Princeton	7G	†3
Quesnel	4F	†3
Revelstoke	6H	3
Rossland	7J	2
Salmo	7J	†3
Salmon Arm	6H	†5
Sapperton	7F	†2
Sidney	8F	†5
Silverton	7J	†2
South Vancouver	7F	16
Steveston	8F	1
Stewart	3J	†8
Summerland	7H	†8
Trail	8J	1
Vancouver	7F	100
Vernon	6H	2
Victoria	7F	31
Ymir	7J	†3

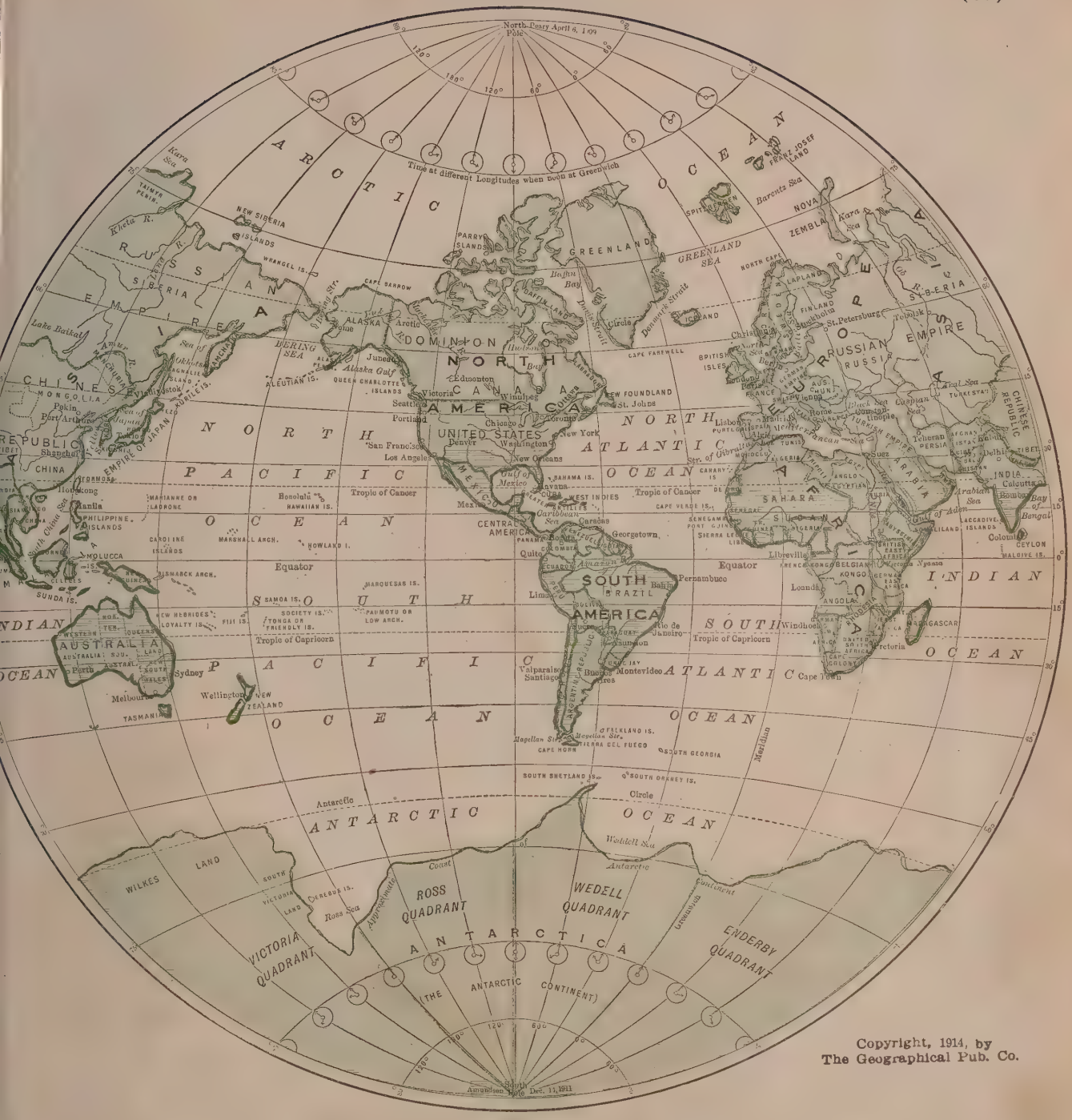
† POPULATION SHOWN IN HUNDREDS.



MANITOBA VILLAGES (Continued from page 53)

Franklin 6E...†1
Gilbert Plains 4D.....†5
Gimli 5G.....†4
Glenboro 7E.....†5
Gretna 8G.....†5
Griswold 7D.....†3
Grunthal 8H.....†1
Gunton 6G.....†1
Hamiota 6D.....†5
Holland 7F.....†3
Holmfield 8E.....†1
Kenton 6D.....†1
La Riviere 8F.....†2
Lander 8D.....†1
Lazare 6C.....†1
Lenore 7E.....†1
MacGregor 7F.....†1
Makinak 8E.....†1
Manitou 8F.....†6
Mather 8E.....†1
Medora 8D.....†1
Miami 8F.....†3
Minnia 6D.....†1
Minto 8E.....†1
Newdale 6D.....†3
Ninga 8E.....†2
Norwood 6G.....†1
Oak River 6D.....†2
Pierson 8C.....†1
Pilot Mound 8F.....†4
Pine River 3D.....†1
Pipestone 7D.....†2
Plumas 8E.....†2
Plum Coulee 8G.....†3
Rothwell 7F.....†1
Reston 7C.....†4
Roblin 4C.....†3
Roland 8G.....†4
Rosenfeld 8G.....†1
Rossburn 7C.....†3
St. Charles 7G.....†3
St. Jean Baptiste 8G.....†2
St. Laurent 6G.....†6
St. Norbert 7G.....†4
St. Pierre 8H.....†6
Shoal Lake 6D.....†5
Souris 7E.....†2
Somerset 8F.....†2
Tarnona 7H.....†2
Treherne 7F.....†5
Tyndall 6H.....†2
Waskada 8D.....†2
Wawanesa 7E.....†3
Westbourne 6F.....†2
White Mouth River 7.....†3
Winkler 8G.....†4
Winnipeg Beach 6H.....†2
Winnipegosis 3E.....†4

CAPITAL OF BRITISH COLUMBIA, VICTORIA



THE EARTH

Shape and Size of the Earth. The Earth is very nearly an oblate spheriod, e shorter axis coincides with its axis of rotation passing through the two poles. ts major axis measures 41,852,124 feet, or 7,926.5 statute miles; its minor 41,710,242 feet, or 7,899.6 statute miles; its circumference along the Equator ures 24,902 statute miles, or 21,600 geographical miles; its total area, 196,940,400 te square miles, and its volume, 259,880 million cubic miles.

Of this total area. 8.4 per cent (16,464,700 sq. m.) are within the Arctic and rctic regions; 51.6 per cent (104,244,654 sq. m.) within the two temperate ns; 40 per cent (78,231,046 sq. m.) within the Tropics.

The Land. The land covers 55,063,000 sq. m., on the assumption that 250,000 n. of land remain to be discovered within the Arctic Regions and that upposed Antarctic continent, or "Antarctica," has an extent of 2,500,000 n. within the Antarctic circle.

The Oceans. The oceans, including the inland seas connected with them cover 77,000 sq. m. or 72 per cent of the total surface of the earth. There are 2.59 n. of ocean to every sq. m. of land. This area is distributed over the different as follows: Arctic Ocean, including Hudson Bay, 5,750,000 sq. m.; Atlantic n 34,260,000 sq. m.; Indian Ocean, 28,560,000 sq. m.; Pacific Ocean, 67,575,000 n.; Antarctic Ocean, 5,732,000 sq. m.

Heights and Depths. The mean height of the land has been estimated at feet; the mean depth of the sea, 12,480 feet. The highest mountain (Mt. est) rises to a height of 29,000 feet; the greatest depth of the ocean as yet discovered (in the Pacific, between Guam and Midway) is 32,089 feet. If the whole of the solid crust of the earth were to be leveled, so as to form a spheroid, it would still be covered by an ocean of an uniform depth of 8,000 feet.

Area and Population of the great divisions of the earth are estimated as follows: Europe, 3,800,000 sq. m., pop. 417,046,000; Asia, 17,048,000 sq. m., pop. 900,703,000; Africa, 11,520,000 sq. m., pop. 131,100,000; Australasia, 3,455,000 sq. m., pop. 6,617,000; North America, 9,419,000 sq. m., pop. 114,135,000; South America, 6,882,000 sq. m., pop. 42,787,000; Graham's Land (30,000 sq. m.) and uninhabited islands in the Southern Oceans, in the Temperate Zones, 35,150 sq. m.; undiscovered Arctic Islands, 250,000 sq. m.; Antarctic, within the Antarctic circle, 2,500,000 sq. m.

Races. Europeans, 501,523,000; Asiatic Aryans, 261,088,000; Semites, 44,194,000; Hamites, 10,971,000; Mongolians, 533,515,000; Malays, 48,358,000; Dravidians (in India), 64,788,000; Negroes, 111,021,000; Australians and Polynesians, 1,702,000; Hottentots 420,000; American Indians, 15,000,000 (See Universal Gazetteer).

These estimates cannot claim to be systematic, for, with the exception of the Negroes in America and the Jews throughout the world, the division is by language rather than by race. The half-breeds in America, whose numbers can only be guessed at, have been classed with the inferior race. Had linguistic distinctions alone been rigidly adhered to, these half-breeds, as well as the Negroes in America, many Mongols in Asia, and others, would have to be classed as "Europeans."

NORTH AMERICA.

Area 8,559,000 Sq. Miles. Pop. 127,419,857.

COUNTRIES, ISLANDS ETC.

Name Key Pop. Thous.
Acklin Island 15M.....1
Alaska 7V.....64
Anguilla Island 16O.....3
Antigua 16O...35
Bahama Islands 15M.....55
Barbados 17P.171
Barbuda Island 16O (See Antigua)
Bermuda Islands 14O.....18
British Honduras 16Ka.....40
Canada 10K 7,192
Central America 17K.....5,000
Chipperton Island 18G
Costa Rica 17L.....379
Cuba 16M..2,220
Dominica 17O..28
Duncan Island 18G
Eleuthera Island 15M.....6
Greater Antilles 16M
Greenland 4P..11
Grenada 17O..66
Guadalupe Island 14F
Guadeloupe 16O.....182
Guatemala 17K.....1,992
Haiti 16M..2,029
Hawaiian Islands 16A.....191
Honduras 17K 553
Isle of Pines 16L
Jamaica 16L..831
Labrador 10O...4
Lesser Antilles 16O
Margarita 17O
Martinique 17O.....182
Mexico 16H 15,063
Newfoundland 11P.....237
Nicaragua 17L600
Panama 18L..419
Panama Canal Zone 20K....50
Porto Rico 16N.....1,118
Revillagigedo Islands 16E
St. Lucia 17O..48
St. Thomas Island 16O
San Salvador 15M.....5
San Salvador 17K.....1.070
Santo Domingo 16N.....610
United States 13J.....93.402
West Indies 16O
Yucatan 16K .337

TOWNS

Exclusive of U S

Town Key Pop. Thous.
Acapulco 16H...5
Agiavarik 8A ††30
Ahorca Lagarto 21F
Aucon 20P
Andreafski 8A.....††10
Annootok 3M
Anvik 7A.....†1
Arctic City 7C
Attemut 7B
Battleford 10O
Belize 16K
Bersimis 11M
Bethel 8A...††20
Bohis 21G.....†5
Border 6D
Brandon 11J...13
Calgary 11G...44
Cardenas 15M .28
Chagres 21C....1
Chihuahua 15H 39
Christianshaab 6P
Circle 7C.....†2
Colon 17L.....19
Corozal 20O...†6
Cristobal 20D...3
Culebra 21M....5
Dawson 7D
Durango 15H..34
Dyea 9D .....†2
East Main 11M
Eaton 7A
Edmonton 10G 24
Edmundston 11N
Egedesminde 7P
Emperador 20L 5
Etah 3M
Fredericton 12N 7
Frederkshaab 8P 17
Frijoles 21H...7
Gatun 21J.....3
Grand Bay 7J.....2
Guadelejara.....118
16H
Guatemala 17K90
Guaymas 15O...6
Halifax 12O...46
Hamilton 14O..82
Havana 16L..319
Hermosillo 14G 17
Hogan 8B...†72
Juneau 9D...††1
Kakwok 8B..††45
Kenai 8B...†2
Kingston 12M 18
Kingston 16M. 57
Kogguing 9A...†5
Kotlik 8A...†43
La Paz 11P...†4
La Paz 15C.....9
Leon 16H.....63
Matachin 21K..2
Matanzas 16L. 64
Medicine Hat
11H.....†74
Mexico 16H...†770
Mexico 20L...†70
Miraflores 20N †4
Monterey 15H. 81
Montreal 12M466
Monkey Hill
20D.....†6
Nassau 15M
New Westminster
11G.....13
Ottawa 20K...1
Ottawa 12M...86
Ottawa 18L...35
Peavy 6C.....†15
Pedro Miguel
20N.....1
Pike Fort 11M
Port Arthur
11K.....11
Port Simpson....2
Port Essington
10E.....3
Prince Albert
10H.....6
Progreso 16K
Rainbow 7B...78
Rapid City †2
7B
Regina 11H....30
Santiago de Cuba
16M.....53
Santo Domingo
16N
San Juan 16N
San Luis Potosi
16J..82
San Pablo 21J...1
Seldovia 9B...††1
Shaktolik 7B.††38
Sitka 9D.....†5
Skagway 9D...†8
St. Johns 12O..42
St. Paul Island
9A.....†1
St. Pierre 12P..1
Sushitna 8C...††1
Tabernilla 21H..2
Tampico 16J...11
Tanana 7C.....†1
Tehuantepec
16J.....19
Toronto 12M..376
Tuxedni 8B...††1
Unalaska 9A.....††1
Unga 9A.....††1
Valdez 8C.....†3
Vancouver
11F.....100
Vera Cruz 16J.29
Victoria 15H..32
Victoria 11E
White Horse 8E
Windermere 11L
Winnipeg 11J 135

‡ POPULATION SHOWN IN HUNDREDS. †† POPULATION SHOWN THUS—LESS THAN HUNDREDS.

SOUTH AMERICA

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from the Latest Surveys

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Area sq. m., 7,598,000

Pop., 49,080,907

Name	Key	Pop. Thous
Argentina	4F	7,171
Barbados	5A	....
Bolivia	4D	2,267
Brazil	6C	21,461
British Guiana	5B	296
Chatham Island	2B	....
Chile	3F	3,500
Curacao	4A	....
Colombia	3B	4,320
Dutch Guiana	5A	85
Ecuador	3B	1,500
Falkland Islands	5H	2
Fernando Noronha Island	7C	....
French Guiana	6B	49
Galapagos Islands	1B	....
Grenada	4A	....
Martinique	4A	....
Panama	3A	419
Paraguay	5F	752
Peru	3D	4,500
South Georgia	7I	....
Staten Island	4I	....
Tobago	4A	....
Tortuga Island	4A	....
Trinidad	5A	4
Uruguay	5F	1,112
Venezuela	4A	2,713
Wollaston Islands	4I	....

CITIES

Town	Key	Pop. Thous.
Abancay	3D	....
Alagoas	7C	....
Alcantara	6B	....
Ancud	3G	....
Antioquia	3A	....
Antofagasta	3E	32
Aracati	7C	....
Arauco	3F	....
Arequipa	4D	40
Arica	4D	....
Asuncion*	5F	84
Ayacucho	3C	14
Bahia	7C	230
Bahia Blanca	5F	50
Barcelona	4A	....
Barquisimeto	3A	....
Barranquilla	3A	40
Belem (Para)	6B	200
Bogota*	3B	150
Bucaramanga	3B	30
Buenaventura	3B	....
Buenos Aires*	5F	1,329
Cajamarca	3C	....
Caldera	3E	....
Callao	3C	31
Cameta	6B	....
Campos	7D	....
Caracas*	4A	....
Cartagena	3A	27
Castro	3G	....
Catamarca	4E	....
Caxias	7C	....
Cayenne*	6B	13
Ceara	7C	33
Chiclayo	3C	....
Cillan	3F	34
Ciudad Bolivar	4B	....
Cochabamba	4D	24
Colon	5F	19
Colonia	5F	....
Concepcion C	3F	55
Concepcion A	5F	15
Constitucion	3F	....
Copiapo	3E	....
Coquimbo	3E	....
Cordoba	4F	70
Corrientes	5E	23
Corrubo	5D	....
Cucuta	3A	10
Cuenca	3B	....
Cumana	4A	....
Cora	3A	....
Curico	3F	17
Curitiba	6E	....
Cuyaba	5D	....
Cuzco	3D	15
Desterro	6E	....
Diamantina	7D	....
Fortaleza	7B	....
Georgetown*	5A	53
Guanare	4A	....
Guayaquil	3B	80
Honda	3B	....
Huacho	3C	6
Huanchaca	4D	....
Iquique	4D	40
Iquitos	3C	12
Itajahy	6E	....
Jauja	3C	....
Jujuy	4E	....
Lima*	3C	140
Loja	3C	10
Maceio	7C	33
Maldonado	5F	8
Manaos	5B	50
Maracaibo	3A	50
Maranhao	6B	....
Mar del Plata	5F	....
Matto Grasso	4C	....
Mendoza	4F	42
Merida	3A	33
Montevideo*	5F	291
Moyobamba	3C	....
Natal	7C	....
Nictheroy	7D	35
Oruro	4D	20
Osborno	3F	....
Ouro Preto	6D	35
Para	6B	3A 35
Paraiba	7C	32
Paramaribo*	5B	35
Parana	5F	35
Paysandu	5F	....
Pasco	3C	....
Pelotas	6F	....
Pernambuco	7C	150
Pisagua	3D	....
Pisco	3D	....
Ponayan	3B	....
Porto Stanley	6E	100
Potosi	4D	23
Puerto de Corral	3G	....
Puerto Cabelle	4A	....
Pt. Io	3D	....
Punta Arenas	6H	....
Quito	3B	70
Riobamba	3B	18
Rio de Janeiro*	6D	1,000
Rio Grande do Sul	6F	176
Rosario	4F	23
Sabia	7C	....
San Bernardino	3F	....
San Felipe	3F	....
San Fernando	3F	....
San Juan	4F	15
San Luis	4F	13
San Nicolas	4F	....
Santa Cruz	4D	20
Santa Fe	5E	48
Santa Marta	3A	....
Santiago*	4F	332
Santos	6E	35
Sao Luiz Maranhao	6B	400
Sao Paulo	6E	400
Serena	3E	15
Sucre*	4D	23
Tacna	3D	....
Talca	3F	38
Talcahuano	3F	15
Taltal	3E	....
Taria	4E	17
Temuco	3F	16
Tocopilla	3C	....
Tucuman	4E	74
Tumbey	2C	....
Turija	3B	....
Valdivia	3F	....
Valencia	4A	....
Valparaiso	3F	162
Velez	3D	....
Villa Dolorosa (Bricell)	4D	....
Villa Pilar	5E	10
Villa Rica	5E	26
Vina del Mar	3F	26

†POPULATION SHOWN IN HUNDREDS. WHERE NO POPULATION IS SHOWN, NO CENSUS FIGURES WERE OBTAINABLE. *INDICATES CAPITALS.

EUROPE

Area sq. m., 3,796,000
Pop. 441,726,000

Ctry	Key	Pop Thous.
Aland Islands	3E	.
Andorra	2F	5
Austria-Hungary	3F	49,414
Balearic Islands	2G	325
Belgium	2F	7,516
Bornholm	2E	29
British Isles	1E	45,365
Bulgaria	3G	4,329
Channel Islands	1F	96
Corsica	2G	288
Crete	3H	310
Cyprus	4H	237
Dagoe	3E	10
Denmark	2E	2,775
Eastern Roumelia	3G	975
Elba	2G	21
England	1F	34,043
Faroe Islands	1D	15
France	2G	39,601
Germany	2F	64,903
Gibraltar	1H	24
Gotland	3E	54
Greece	3G	21,666
Hebrides	1E	115
Helgoland	2E	2
Iceland	1D	85
Ionian Islands	3G	229
Ireland	1F	4,381
Isle of Man	1F	52
Italy	2G	34,686
Iviza	2G	.
Jan Mayen	1B	.
Kolguey Island	5C	.
Liechtenstein	2F	9
Lofoden Islands	2C	20
Luxemburg	2F	259
Majorca	2G	204
Minorca	2G	39
Monaco	2G	19
Montenegro	3G	250
Netherlands	2F	5,945
Norway	2D	2,391
Nova Zembla	5C	.
Oland	3E	.
Orkney Islands	1E	25
Portugal	1G	5,016
Roumania	3G	5,956
Russia	4D	118,690
San Marino	2G	10
Sardinia	2G	852
Scilly Islands	2G	2
Scotland	1E	4,759
Servia	3G	2,911
Shetland Islands	1E	27
Sicily	2G	3,683
Spain	1G	19,588
Sweden	3D	5,521
Switzerland	2F	3,741
Turkey	4G	24,813
Wales	1F	2,032

ASIA

Are sq. mi. 15,085,000
Pop. 905,897,977

Ctry.	Key	Pop. Thous.
Aden	5J	46
Afghanistan	6H	5,900
Akmolinsk	6F	1,047
Amur Prov.	10F	217
Annam	10E	5,515
Andaman Isles	8J	26
Arabia	4H	1,050
Assuam	8I	232
Babuyan Islands	10I	.
Bahrien Is.	5H	90
Baluchistan	6H	414
Bashi Islands	10I	.
Batanes Islands	10I	.
Behring Island	11A	.
Bering Island	13E	.
Bhutan	7I	250
Blishnii	11B	.
Bohol Island	10J	243
Bokhara	6G	250
Bonin Islands	11I	.
Borneo	9J	1,433
British North Borneo	9J	200
Brunei	9J	21
Burma	8J	12,115
Cambodia	8J	1,193
Caroline Islands	11J	60
Cebu Island	10J	592
Celebes	10K	415
Ceylon	7J	3,592
China	8G	407,253
Chinese Empire	8F	433,553
Chusan Islands	10I	.
Coast Province	11F	.
Cochin China	8J	2,870
Cooper Island	13E	.
Cyprus	4H	274
Dekkan	7I	.
Dsungaria	7G	.
El Hasa	5I	.
El Hejas	4I	.
Fadeyev Island	11A	.
Ferghana	6H	2,034
Formosa	10I	3,392
French Indo-China	9I	16,315
Gilolo Island	10J	.
Guam	11J	12
Hadramaut	5I	13,374
Hainan	9I	.
Herald Island	14B	.
Hindustan	6I	.
Hondo	11H	.
Hong Kong		90
India	7I	244,269
Indo-China	9J	16,315
Iriutsk	8F	674
Japan	11G	51,591
Kamchatka	12E	35
Khiva	6H	800
Kiauchau	10H	168
Kiushu Island	11H	.
Komandorski Islands	13E	126
Konushiri Is.	13E	126
Korea	10H	13,123
Kotelnoi Island	11A	.
Kuria Muria Islands	5I	12
Kurile Islands	12G	.
Kwangchau	9I	.
Laccadive Islands	6J	.
Lebanon	10J	350
Luzon	10J	3,798
Macao	9I	64
Malay Peninsula	8J	1,035
Manchuria	6J	50
Marianne Islands	10F	16,000
Mashato Island	10J	.
Masirah Island	5I	.
Mindanao Island	10J	499
Mindoro Island	10J	2,000
Negros Is.	10J	460
Nepal	7I	5,000
New Siberia Is	11A	.
Nicobar Is	JA	26
Oman	5I	5,000
Onnekotan Is	12F	.
Palawan Is	10J	743
Pelow Islands	11J	3
Penang Island	8J	278
Persia	5H	9,500
Philippine Is	10J	8,276
Pollio Island	10J	.
Quelpart I.	10H	.
Rajputana	7H	13
Sakhalin	11F	222
Samar Is.	10J	222
Samarcand	6G	1,169
Sarawak		500
Sasilu Island	10J	.
Semipalatinsk	7F	842
Sfirechinsk	7F	1,188
Shikoki I.	11H	3,308
Siam	8I	88
Sikhim	8I	12
Sinusir Island	12G	.
Sokotra Island	5J	12
Straits Settlements	8J	714
Sulu Islands	10J	1,029
Sumatra	8J	1,858
Syr Daria	6G	1,858
Tantalam I.	8J	1,890
Tibet	8H	6,500
Tobolsk	6D	1,816
Tomsk	7E	3,171
Transcaspian Prov.	6H	646
Turgai	6F	612
Turkestan Eastern	7G	1,200
Turkestan Russian	6G	6,250
Turkey in Asia	5G	17,983
Ussk.	6F	776
Urup Is	12G	147
Weihaiwei	10H	.

†POPULATION SHOWN IN HUNDREDS. WHERE NO POPULATION IS SHOWN, NO CENSUS FIGURES WERE OBTAINABLE.

CITIES (Cont'd)

Town	Key	Pop. Thous.
Charlottenburg	2F	239
Rangoon	8I	234
Genoa	2G	234
Essen	2F	231
Christiania	2E	227
Damascus	4H	225
Stettin	2F	224
Konigsberg	3E	223
Trieste	3G	221
Salford	1F	220
Manila	10I	219
Bremen	2F	214
Valencia	1G	213
Leicester	1F	211
Benares	7I	209
Delhi	7I	208
Lille	2F	205
Florence	2G	205
Lahore	7I	202
Smyrna	4H	201
Tabriz	5G	200
Cawnpore	7H	197
Seoul	10H	196
Portsmouth		189
Agra	7I	188
Zurich	2F	186
Ahmadabad	7I	185
Mandalay	8I	183
Dortmund	2F	175
Kharkov	4F	173
Allahabad	7I	172
Nagasaki	10H	169
Halle	2F	169
Altona	2F	168
Bolton	1F	168
Oporto	1G	167
Strasburg	2F	167
Cardiff	1F	164
Kiel	2F	163
Manheim	2F	163
Elberfeld	2F	162
Vilna	3E	162
Ghent	2F	162
Amritsar	7H	162
Dundee	1E	160
Goteborg	3E	160
Jaipur	7I	160
Lemberg	3F	159
Dantzig	2F	159
Bangalore	7J	159
Colombo	7J	158
Howrah	7I	158
Barmen	2F	156
Poona	6I	153
Bologna	2G	152
Venice	2G	151
Toulouse	2G	149
Seville	1H	148
Soerabaya	9K	146
St. Etienne	2G	146
Bagdad	5H	145
Aachen	2F	144
Aberdeen	1E	143
Kazan	5E	143
Roubaix	2G	142
Gratz	3F	138
Oldham	1F	137
Saratov	5F	137
Posen	3F	136
Brunswick	2F	136
Yekaterinoslav	4F	135
Patna	7I	134
Croydon	1F	133
Nantes	1F	132
Bareilly	7I	131
Havre	1F	130
Malaga	1G	130
Basle	2F	129
Blackburn	1F	129
Nagpur	7I	127
Aleppo	4G	127
Kishinev	3F	125
Brighton	1F	123
Srinagar	7H	122
Liege	2F	122
Astrakhan	5G	121
Hiroshima	11H	121
Kassel	2F	120
Rostov	4F	119
Surat	6I	119
Beirut	4H	118
Bochum	6I	118
Geneva	2G	118
Meerut	7H	118
Rouen	2F	116
Karachi	6I	116
Batavia	9K	115
Dumbarton	2E	115
Amoy	6I	114
Derby	2F	114
Utrecht	2F	114
Preston	1F	112
Norwich	1F	111
Helsingfors	3E	111
Murcia	1H	111
Athens	3G	111
Halifax	2E	111
Karlsruhe	2F	111
Kanazawa	6I	110
Brunn	2F	109
Krakow	6I	109
Livorno	2G	108
Burnley	1F	106
Madura	6I	105
Middlesborough	1F	105
Baroda	6I	103
Hanoi	6I	103
Chefu	11G	100
Kure	3F	100
Cartagena	2H	99
Erfurt	2F	98
Leyton	1F	98
Algiers	2H	96
East Ham	2E	95
Augsburg	2F	94
Huddersfield	1F	94
Mulhausen	2F	94
Byelstok	4F	91
Lubeck	2F	91
Minsk	6F	91
Amiens	1F	90
Dacca	6I	90
Jabalpur	6I	90

Europe and Asia

Town	Key	Pop. Thous.
London	1F	7,252
Paris	2F	2,846
Tokio	11I	2,168
Berlin	2F	2,064
Vienna	3F	2,004
St. Petersburg	4E	1,907
Canton	9I	1,600
Peking	9G	1,600
Moscow	4E	1,539
Constantinople	3G	1,125
Osaka	11H	1,117
Shanghai	10H	1,000
Tientsin	9G	1,000
Calcutta	7I	994
Hamburg	2F	936
Bombay	6I	776
Liverpool	1F	760
Warsaw	3F	756
Glasgow	1E	735
Buda-Pesth	3F	732
Barcelona	2G	700
Brussels	2F	612
Manchester	1F	606
Bangkok	8I	600
Vienna	2F	596
Naples	2G	563
Leipzig	2F	585
Amsterdam	2F	557
Dresden	2F	546
Marseilles	2G	517
Birmingham	1F	522
Prague	2F	511
Cologne	2F	511
Madrid	1G	509
Milan	2G	491
Copenhagen	2E	476
Lyons	2G	472
Rome	2G	462
Odessa	4F	449
Haidarabad	7I	448
Leeds	1F	428
Frankfort-on-Main	2F	414
Sheffield	1F	409
Yokohama	11H	400
Kobe	11H	380
Rotterdam	2F	370
Dusseldorf	2F	356
Lisbon	1G	356
Lodz	3F	351
Belfast	1F	349
Kobe	11H	345
Stockholm	3E	337
Turin	2G	335
Nuremberg	2F	332
Kiev	4F	319
Edinburgh	1E	316
Palermo	2G	309
Singapore	8K	300
Antwerp	2F	291
Naples	11H	288
Hong Kong	9I	283
Bradford	1F	279
Bucharest	3G	276
Lucknow	7H	264
Riga	3E	256
Nottingham	1F	251
Hanover	2F	250
Stuttgart	2F	249
Chemnitz	2F	244
The Hague	2F	242
Magdeburg	2F	240
Hull	2F	240

† POPULATION SHOWN IN HUNDREDS. †† POPULATION SHOWN THUS—LESS THAN HUNDREDS.

AFRICA

AFRICA
Area sq. m., 11,545,000
Pop., 128,067,231

COUNTRIES, STATES, ISLANDS, ETC.

Name Key Pop. Thous.
Abyssinia 7E 8,000
Adrar 3C.....12
Algeria 3B..5,231
Angola 4G..4,119
Ascension Islands 2F...†4
Ashanti 3E...287
Bagirmi 5D.....
Barca 5B.....
Barotseland 6G ..
Basutoland 6H.....405
Bechuanaland 5H.....125
Benguela 5G.....
Bornu 5C.....
Canary Islands 1B.....419
Cape Colony 5I.....2,563
Comoro Islands 8G.....
Dahomey 3E .749
Damaraland 5H..
Darfur 5C.....
East Africa British 7E 4,038
East Africa German 7F.....10,032
East Africa Portuguese 7H.....3,120
Egypt 6C..11,139
Egyptian Sudan 6D.....
Erythrea 7D..277
Ferro 2C.....
Fezzan 5C.....
French Somali Coast 8D...180
French West Africa 3C.....
Gambia 1D...138
Gando 3D.....
Gazaland 7H ....
Gold Coast 3E.....1,504
Gomera 2C.....
Guinea French 2E.....1,498
Guinea, Portuguese 2E...820
Gurara 3D.....
Gurma 3D.....
Hogar 3C.....
Ivory Coast 2E.....890
Kaarta 2D.....
Kaffraria 6I.....
Kamerun 4E 2,203
Kanem 5D.....
Kawar 5D.....
Kbarga 6C.....
Kong 3E.....
Congo Belgian 6F.....
Congo French 5F.....5,000
Kordofan 6D ....
Lagos 3E.....
Lanzarote 2C.....
Liberia 2E..2,000
Loanda 4F.....
Lourenco Marquez 7H...
Madagascar 8G.....2,701
Madeira 1B.....
Malta 4B.....228
Mashonaland 7G.....497
Massina 3D.....
Matabeleland 6G.....246
Mayotta Island 7G.....96
Military Territories, French 4D.....
Morocco 2B..5,000
Mossamedes 5G..
Mozambique 7G.....
Namaqualand 5H.....
Natal 6H...1,191
Northern Nigeria 4D..9,269
Nossi Be Island 8G.....
Nubia 6C.....
Nyassaland, Protectorate 7G.....970
Orange Free State 6H...526
Palma 1C.....
Pemba Island 7F.....83
Princes Island 4E.....42
Rhodesia 6G 1,745
Rio de Oro 2C..12
Rio Muni 4E ....
Sainte Marie Island 9G .....
Saint Helena Island 2G.....3
Saint Thomas Island 3E....42
Semmur 2C.....
Senegal 2D...915
Sierra Leone 2E.....75
Sokoto 4D.....
Somali Coast British 8E..300
Somaliland, Italian 8E..400
Southern Nigeria 4E..7,858
Southwest Africa, German 5H.....
Swaziland 8E..99
Tafilet 2B.....120
Taganet 2D.....
Tanezruft 3C .....
Tasili 3C .....
Tenerife 1C.....
Tibesti 5C.....
Tidikelt 4C.....1,000
Togo 3E.....
Tongaland 7H 1,676
Tripoli 5B 1,000
Tuat 3C.....1,500
Tunis 4B .....
Uganda Protectorate 6E 2,840
United South Africa 5H 5,958
Wadai 5D.....
Zululand 7H.....
Protectorate 7D 114

CITIES

City Key Pop.
Abeshr 5D.....10
Abomey 3E.....20
Akassa 4E.....20
Alexandria 6B 332
Algiers 3B.....154
Ankober 7E.....19
Bagamoyo 7F.....77
Bengisar 4B.....19
Berber 7D.....14
Bloemfontein 6I 14
Bona 4B.....32
Bougie 3B.....17
Cairo 6B.....654
Cape Coast Castle 3E.....11
Cape Town 5I.....49
Cape Town 5I.....49
Cape Verde 1A.....149
Freetown 2E.....34
Gando 3D.....50
Gardaja 3B.....30
Ghizeh 6C.....11
Graaf Reinet 5I.....10
Grahamstown 6I.....13
Harar 8E.....50
Johannesburg 6H.....120
Kano 4D.....100
Khartum 6D.....25
Kimberly 6H.....13
King Williams Town 6I.....9
Kisumu 7E.....53
Kuka 4D.....100
Lagos 3E.....100
Lindi 8G.....354
Lourenco Marquez 6I.....10
Masvara 3B.....22
Maritzburg 6I.....13
Mecca 3B.....40
Mombasa 7F.....30
Morocco 2B.....50
Mossamedes 3B 22
Mozambique 7G 7
Nairoba 7E.....14
Pangani 7F.....66
Pemba 7F.....15
Port Elizabeth 6I.....18
Porto Novo 3E 50
Port Said 6B.....49
Pretoria 6H.....27
Rabat 2B.....17
Rustenburg.....21
Salisbury 1D.....24
Sofala 7H.....11
Sidi Bel Abbes 3B.....29
Tabora 6F.....600
Tanga 6F.....77
Taufa 6B.....54
Timbuktu 3D.....20
Tlemcen 3B.....30

Society Islands 11E.....1
Solomon Islands 6D.....150
South Australia 3G.....408
South Island 7H.....444
Stewart Island 7I.....13
Sumba or Sandalwood Island 2D.....
Sumbawa 1D.....
Tahiti 12E.....30
Tasmania 5H.191
Timor 2D....308
Tonga or Friendly Islands 9E...23
Tutuila 9E.....
Union Islands 9D.....1
Victoria 4G.1,315
Wake Island 7B.....
Wellesley Islands 4E.....
Wessel Islands 4E.....
Western Australia 2F...282

CITIES

Town Key Pop. Thous.
Adelaide 3G..192
Argao 2B.....35
Auckland 7H..102
Ballarat 4H....44
Barile 2B.....31
Batangas 2B...33
Bathhurst 5G..10
Bauan 2B.....39
Baybay 2B....32
Bendigo 4H...42
Boulder 1G....11
Brisbane 5F..143
Broken Hill 5G 30
Calbayog 2B...15
Carcar 2B.....31
Cebu 2B.....31
Charters Lowers 5F.....20
Christ Church 7H.....80
Dunedin 7H...64
Fremantle 1G..19
Geelong 4H...28
Goulburn 5G..10
Gympie 5F....14
Hobart 5H....27
Ili-ilo 2B.....19
Invercargill 7H 15
Ipswich 5F....15
Janiuay 2B....20
Laoag 2B.....34
Launceston 5H 20
Lipa 2B.....37
Maitland 5G...12
Manila 2B....234
Maryborough 5F.....12
Melbourne 4H 591
Miagao 2B....20
Napier 7H.....11
Newcastle 5G..55
Ormoc 2B.....16
Palmerston 7H.10
Parramatta 5G.13
Perth 1G.....54
Rockhampton 5F.....19
Samarang 1D..96
San Carlos 2B .27
Sibanga 2B....25
Sydney 5G ...621
Tabaco 2B.....21
Tinraru 7H....11
Toowoomba 5F 14
Townsville 5F..15
Wanganin 7H..14
Wellington 7H.70

POPULATION SHOWN IN HUNDREDS. WHERE NO POPULATION IS SHOWN, NO CENSUS FIGURES WERE OBTAINABLE.

OCEANIA

Area sq. m.: 4,215,000
Pop., 53,096,194

Name	Key Pop. Thous.
Admiralty Isl.	
Archipelago of the Recherche	2G....
Australia 3F	4455
Austral Islands 12F	
Avon Islands 6E	
Baker Island 9C	
Banks Island 3E	
Barburet Island 3E	
Bismarck Archipelago 5D	188
Borneo 1C	1,233
Buccaneer Archipelago 2C	
Caroline Islands 4B	58
Cato Island 6F	
Celebes 2D	852
Chatham Islands 9H	13
Christmas I. Cook or Hervey Islands 10E	6
Cumberland Isles 5F	
Curtis Island 5F	
Dampier Archipelago 1E	
D'Entrecasteaux Islands 5D	
Dorre Island 1F	
Ellice or Lagoon Islands 8D	
Fiji Islands 10C	
Friendly or Tonga Islands 8E	139
Furneaux Group 5H	
Gilbert Islands 8C	29
Great Barrier Island 8G	
Great Sandy Island 5F	
Groote Eylandt 3E	
Guam 4B	12
Hawaiian Islands 11A	191
Hervey or Cook Islands 10F	
Hinchinbrook Island 5E	
Howland Island 4H	
Hunter Islands 4H	
Investigator Group 3G	
Java 1D	30,097
Johnston Island 10B	
Kangaroo Island 3F	
King Island 4H	
Lacepede Islands 2E	
Lagoon or Ellice Islands 8D	2
Lombok 1D	
Louisiade Archipelago 6F	
Low Archipelago 13E	
Loyalty Islands 7E	
Maria Island 5H	
Mariana Islands 4A	
Marquesas Islands 9C	5
Marshall Islands 7B	15
Moluccas Islands 3D	407
New Caledonia 6F	55
New Guinea 4D	
New Hebrides 7E	271
New South Wales 5G	1648
New Zealand 8H	1071
Niue Island 7E	
Norfolk Island 8H	563
Northumberland Isles 5F	
Nuyts Archipelago 5G	
Palmerston Island 9C	
Pelew Islands 4C	
Philippine Islands 2B	8276
Phoenix Islands 9E	
Prince of Wales Island 7I	
Queensland 3H	605
Resolution Island 7I	
Samoa or Navigator Islands 9E	84

WEST INDIES

Islands, Republics, Cities, Towns.

Name Key	Pop Thous
Acklin I 2D	1
Andros Is. 1C	7
Anguilla I 3G	4
Annotte 3C	
Antigua I 3G	38
Aquin 3D	
Arecibo 3F	
Aux Cayes 3D	
Azua 3E	5
Bahama Is. 1D	55
Bahia Honda 2B	
Bainet 3D	
Barocoa 2D	
Barbados I 4H	171
Barbuda I 3G (included in Antigua)	
Basse Terre 3G	9
Basse Terre 3G	8
Batabano 2B	
Bayamo 2C	
Beata I 3E	
Bejucal 2B	
Bemini Is. 1C	
Beni 3E	
Blanquilla 5F	
Bridgetown 4H	16
Buen Ayre I 4E	
Caicos Is. 2E	
Caimanere 3D	
Camaguey 2C	66
Cape Haitien 3D	30
Cardenas 2B	28
Castries 4G	
Cat I 1D	
Cayman Brae I 3C	
Cayo Grande I 5F	
Charlotte Amalie 3F	
Charlottetown 4G	
Ciego de Avila 2C	
Cienfuegos 2B	70
Coamos 3F	
Cobre 2C	
Cocoskey I 2C	
Codrington 3G	
Crooked I 1C	1
Cuba I 2C	2220
Curacas I 4E	52
Dajabon 3E	
Danish W I	327
De Vieques. I 3F	
Dominica I 4G	33
Dry Tortuga I 1B	
El Can 3E	
Eleuthera I 1C	6
Exuma Is. 1C	3
Fort de France 4G	
Frederikstaed 3F	
Gibara 2C	
Gonaives 3D	13
Gonave I 3D	
Grand Cayman I 3B	
Grande Terre I 3G	
Great Abaca I 1C	4
Great Bahama Bank 2C	
Great Bahama I 1C	1
Greater Antilles 3D	
Great Inagua I 2D	1
Grenada I 4G	66
Grenadines I 4G	
Guadeloupe I 3G	190
Guanabacha 2B	
Guane 2A	
Guayama 3F	
Haiti I 3E	2703
Haiti Rep 3D	2029
Harbor I 1C	1
Havana 2B	319
Higuey 3E	
Hincha 3E	
Holguin 2C	
Isle of Pines 2B	
Jamaica I 3C	831
Jeremie 3D	
Jucaro 2C	
Jumentos Keys 2D	
Kingston 3C	57
Kingstown 4G	4
La Isabela 2C	
Las Tunas 2C	
La Vega 3E	
Leeward Is. 3G	
Les Coteaux 3D	
Lesser Antilles 4F	
Little Abaco I 1C	
Little Cayman I 3B	
Long I 2D	4
Long Key 2B	
Los Roques Is. 5F	
Manzanillo 3C	
Margarita I 5F	
Marie Galoute I 4G	
Mariguana I 2D	
Martinique I 4G	
Matanzas 2B	64
Mathewtown D	2
Mayaguana I 1C	†3
Mayaguez 3F	42
Miragoane 3D	
Mole St. Nicholas 3D	
Mona I 3F	
Monte Christi 3E	5
Montserrat I 3G	5
Moron 2C	
Nevis I 3G	12
Nassau 1C	
New Providence I 1C	13
Neyba 3E	
Nueva Gerona 2B	
Nuevitas 2C	
Oruba I 4E	
Philipsburg 3G	
Pinar de Rio 2B	
Pointe a Pitre 3G	14
Ponce 3F	63
Port Antonio 3C	7
Port au Prince 3D	100
Port de Paix 2D	10
Port of Spain 5G	60
Porto Rico I 3F	1118
Puerto Plata 3E	16
Quiabou 3E	
Quita Buena Bank 4B	
Remedios 2C	
Roseau 4G	
Rum Cay 2D	
Sabana 3E	
Sagua la Grande 2C	
St. Andrews I 4B	
St. Christopher I 3G	
St. Croix I 3F (See Danish W I)	
St. George 4G	
St. John 3G	9
St. Kitts I 3G	26
St. Lucia I 4G	48
St. Martin I 3G	
St. Pierre 4G	
St. Thomas I 3F (See Danish W I)	
St. Vincent I 4G	41
Sale Trou 3D	
Sanchez 3E	5
Sancti Spiritus 2C	
San Felipe Keys 2B	
San Juan 3F	48
San Luis 2D	
San Salvador I 1D	5
Santa Barbara de Samana 3E	
Santa Clara 2B	
Santiago 3E	12
Santiago de Cuba 3C	53
Santo Domingo 3E	18
Santo Domingo Rep 3E	673
Savanna la Mar 3C	3
Scarborough 5G	
Soco 3E	
Spanish Town 3C	7
Tiburon 3D	
Tobago I 5G	
Tortuga I 5F	
Trinidad 2B	
Trinidad I 5G	330
Tunas de Zaza 2C	
Vinales 2B	

†POPULATION SHOWN IN HUNDREDS. WHERE POPULATION IS NOT GIVEN, LATE FIGURES WERE NOT OBTAINABLE.

ographies in large type are those of the one hundred greatest men in history—so designated by a consensus of the highest authorities.

bbas I. (*ăb-băs'* or *ăb'băs*), **the Great,** shah or king of Persia, born in 1557. obtained the throne in 1586. He extended his rule beyond Persia proper, and at his death in 1628 his dominions stretched from the Tigris to the Indus. He is regarded by the Persians as their greatest sovereign.

bbe (*ab'e*), **Cleveland,** meteorologist, was born in New York in 1838. He was graduated from College of the City of New York in 1857; Ph.D., 1891; LL.D., University of Michigan, 1888; since 1891 meteorologist U. S. Weather Bureau. Now also editor *Monthly Weather Review*. Professor meteorology, Columbia University since 1886. Member National Academy of Sciences and many other scientific societies, domestic and foreign.

bbey, Edwin Austin, artist, was born in Philadelphia, Pa., in 1852, and began his art studies at the Philadelphia Academy of Fine Arts. He stands in the foremost rank of painters of historical and subject pictures. He has acquired great fame as an illustrator of Shakespeare, whose plays have also supplied him with the subjects for some of his most successful pictures. **Died, 1911.**

bbot, Ezra, American critic, was born in 1819. He contributed to periodicals, and also wrote several critical works, and in support of Unitarianism. Died, 1884.

bbott, Jacob, author, was born at Hallowell, Me., in 1803. and was graduated from Bowdoin College in 1820. He studied theology at Andover, Mass. In 1838 he settled in Farmington, Me., where he died in 1879. He wrote there most of his books, which number in all more than two hundred. Among them are the *Rollo Books*, *Lucy Books*, *Jonas Books*, *Franconia Stories*, *Harper's Story Books*, *Marco Paul Series*, *Gay Family Series*, and *Juno Books*.

bbott, John Stephens Cabot, a younger brother of Jacob Abbott, and author of many historical works, was born in Brunswick, Me., in 1805, and was graduated from Bowdoin College in 1825. He died in New Haven in 1877. Among his works are: *History of Napoleon Bonaparte; Napoleon at St. Helena; Life of Napoleon III.; History of the Civil War in America*, and *History of Frederick the Great*.

bbott, Lyman, clergyman, author, editor, was born in Roxbury, Mass., in 1835; graduated from the University of New York in 1853; studied and practiced law; ordained Congregational minister in 1860. Edited Literary Record of *Harper's Magazine;* associate editor *The Christian Union* with Henry Ward Beecher, whom he succeeded as pastor of Plymouth church, Brooklyn, in 1888; resigned in 1898. Editor of *The Outlook;* author: *Jesus of Nazareth; Old Testament Shadows of New Testament Truths; A Study in Human Nature; In Aid of Faith; Life of Christ; Evolution of Christianity; The Theology of an Evolutionist; Henry Ward Beecher; Christian Ministry; Personality of God*, and *Industrial Problems*.

bel (*a'bel*), **Niels Henrik,** noted Norwegian mathematician, was born at Findoe, Norway, in 1802, and died near Arenthal in 1829. His work on elliptic functions is particularly celebrated. His complete mathematical works were published in 1839.

bélard (*ab'ē-lärd*), **Peter,** scholastic philosopher and theologian, the boldest thinker of the twelfth century, was born at Pallet, near Nantes, in 1079, and died in the Abbey of St. Marcel in 1142. The doctrines advanced by Abélard in his controversy with St. Bernard have a decidedly rationalistic tendency; and he and his predecessor, Erigena, may be looked upon as the first avowed representatives of that school.

bercrombie (*ab'-ēr-krum-bi*), **James,** British general, was born in Scotland in 1706. He was commander-in-chief of the British forces in America in 1758. He died in 1781.

bercromby, Sir Ralph, British general, born in Scotland in 1734. He served with much ability in Holland and in the West Indies, and in 1800 was chosen to command the forces to be sent against the French in Egypt, where he was killed in 1801.

binger, Baron. See **Scarlett, James.**

bout (*ä-bōō'*), **Edmond Francois Valentin,** French novelist and miscellaneous writer, born in 1828, died in 1885. He was educated at the Lycée Charlemagne and the Ecole-Normale, Paris; was sent at government expense to the French school at Athens; on his return to Paris, devoted himself to literature. He was latterly a member of the Academy.

braham, the progenitor of the Israelitish nation. He was a native of Chaldea, but migrated with his wife, Sarah, and his nephew, Lot, to Canaan, where he lived a nomadic life and worshiped the one God, Jehovah, in the midst of the polytheistic Canaanites. He died about 1800 B. C. Of his two sons, Isaac was the ancestor of the Israelites; and the Arabs claim to be descended from Ishmael.

Abruzzi (*ä-brōōt'sē*), **Duke of the,** prince of royal house of Italy, was born at Madrid, Spain, in 1873; scientist, explorer, aëronaut, sportsman, litterateur; traveled round world as a youth; ascended Mount St. Elias, Alaska, 1896; his Arctic expedition of 1899 penetrated nearest to north pole up to that time. In 1909 he ascended some of the highest peaks of the Himalayas.

Acton, Lord. See **Dalberg Acton.**

Adams, Brooks, author, was born at Quincy, Mass., in 1848, son of the late Charles Francis Adams; graduated at Harvard in 1870; studied in Harvard law school one year; went as secretary to his father to Geneva, where the latter was arbitrator upon the Alabama claims under the treaty of Washington. Admitted to the bar; practiced law until 1881. Resumed law practice; lecturer at Boston University school of law.

Adams, Charles Francis, statesman and economist, son of John Quincy Adams, was born in 1807; nominated by the Free Soil party for the office of vice-president in 1848; elected member of Congress 1858-60 by the Republicans; minister to England 1861-68; and one of the arbitrators of the Alabama claims 1870. He was the Democratic candidate for governor of Massachusetts in 1876. He died in 1886.

Adams, Charles Francis Jr., historical writer, born in Boston, 1835; graduated at Harvard, 1856; admitted to the bar, 1858; served in union army through Civil war; brevetted brigadier-general, United States army, May, 1865. President Union Pacific railway, 1884-90; president Massachusetts Historical Society, 1895. Author: *Chapters on Erie and Other Essays; Railroads, Their Origin and Problems; Richard Henry Dana, a Biography* and other papers.

Adams, Charles Kendall, educator, historian, was born at Derby, Vt., in 1835, and educated at the University of Michigan. From 1892 to 1901 was president of the University of Wisconsin. He was the author, among other writings, of *Democracy and Monarchy in France; Manual of Historical Literature*, and of a monograph on *Christopher Columbus*. From 1892 to 1895 he acted as editor-in-chief of *Johnson's Universal Cyclopædia*. Died in 1902.

Adams, George Burton, educator and historian, was born at Fairfield, Vt., in 1851. He was educated at Beloit College, Yale, and the University of Leipzig. Professor of history at Yale since 1888. Editor: Duruy's *Middle Ages;* Bemont and Monod's *Medieval Europe*. Author: *Civilization During the Middle Ages; The Growth of the French Nation; European History, Vol. II.*, in Hunt and Poole's *Political History of England*.

Adams, Henry, historian; born in Boston in 1838; graduated at Harvard, 1858; private secretary to his father, who was American minister at London, 1861-68; assistant professor of history at Harvard, 1870-77; editor *North American Review*, 1875-76. Author: *Essays in Anglo-Saxon Law; Historical Essays; Life of Albert Gallatin*, etc.

Adams, Henry Carter, professor of political economy and finance at the University of Michigan since 1887; born in Davenport, Iowa, 1851; director division transportation, eleventh census; statistician interstate commerce commission since 1887; president American Economic association 1895-97. Author: *Outline of Lectures on Political Economy; State in Relation to Industrial Action*, etc.

Adams, John, second president of the United States, was born at Quincy, Mass., in 1735, was graduated at Harvard in 1755, and was admitted to the bar in 1761. He was one of the delegates to the Continental Congress at Philadelphia, 1774. He was commissioner to the court of France, 1778, and was sent on an embassy to England, 1779. He was elected vice-president of the United States in 1789, and succeeded Washington as president in 1797. Died, 1826.

Adams, John Quincy, sixth president of the United States and son of the above, was born in Quincy, Mass., in 1767. When his father was elected president, the younger Adams was sent on an embassy to Berlin, and traveled through Silesia. On his return to America he was engaged as professor of rhetoric at Harvard University, and chosen United States senator for Massachusetts. When Monroe was elected president he recalled Adams from Europe, and made him secretary of state. On the retirement of Monroe from office Adams gained the presidency after a hard contest against Jackson, in 1825, and on the expiration of his term of office retired to Quincy, near Boston, but in 1830 was chosen as representative of his district. He died at Washington during the session of Congress 1848.

Adams, Maude, actress, was born at Salt Lake City in 1872; her family name was Kiskadden, but she adopted her mother's maiden name, Adams. She appeared on the stage in child's parts; went to school; starred as Lady Babbie in *The Little Minister*, 1897-98; as Juliet, in *Romeo and Juliet*, 1900; in *L'Aiglon*, 1900-01; in *Quality Street*, 1902; in *The Little Minister*, and *Hop o' My Thumb*, 1905; *Peter Pan*, 1906-07; *Joan of Arc*, 1909, etc.

Adams, Samuel, one of the American revolutionary leaders, was born in Boston, Mass., 1722. Adams was a member of the first Congress, and signed the Declaration of Independence in 1776; took an active part in framing the constitution of Massachusetts, and was for several years president of the senate of that state. Died 1803.

Adams, William T. See **Oliver Optic.**

Addams, Jane, social reformer, head resident of Hull House, Chicago, was born at Cedarville, Ill., in 1860; graduated from Rockford College, 1881; 1889 opened, with Miss Ellen Gates Starr, social settlement of Hull House; has been inspector of streets and alleys in neighborhood of Hull House, and has been a frequent writer and lecturer on social and political reform. Author: *Democracy and Social Ethics*, and *Newer Ideals of Peace*.

Addison, Joseph, English essayist, was born at Milston, England, in 1672, graduated at Oxford, and held for some years a fellowship at the university. Here some of his early writings brought him into notice and secured him a pension of $1,500 a year. At the death of King William his pension was stopped, and having no means of his own his prospects were gloomy indeed, until a lucky chance put him on his feet again. The ministry desired a poem written in praise of Marlborough, who had just won the battle of Blenheim. Addison wrote the poem, *The Campaign*, and was rewarded with the office of excise commissioner. In 1710 he began to bring out his famous essays. These he contributed to the *Tattler*, next to the *Spectator*, and afterward to the *Guardian*, which he published in conjunction with his friend, Richard Steele. The most successful of these periodicals was the *Spectator*. It was a daily paper, but without any news. Addison died in 1719.

Ade (*ăd*), **George,** author and dramatist, was born at Kentland, Ind., 1866; graduated from Purdue University, 1887; in newspaper work in Lafayette, Ind., 1887-90; on *Chicago Record*, 1890-1900. Author: *Artie; Pink Marsh; Doc Horne; Fables in Slang;* Plays: *The Sultan of Sulu; Peggy From Paris; The County Chairman; The College Widow*, etc.

Adler, Cyrus, orientalist and archæologist, was born at Van Buren, Ark., 1863; graduated from University of Pennsylvania, 1883; Ph.D., Johns Hopkins, 1887; librarian Smithsonian institution, 1892-1905, assistant secretary of same since 1905; He has written many articles on Semitic philology, Assyriology, Oriental archæology, comparative religion, bibliography, American Jewish history, etc. Author: *Told in the Coffee House*.

Adler, Felix, educator, lecturer; born in Alsey, Germany, 1851. Studied under Hebrew rabbi; graduated at Columbia; studied at Berlin and Heidelberg; professor of Hebrew and Oriental literature at Cornell, 1874-76; established in 1876 New York Society for Ethical Culture, to which he gives regular Sunday discourses. Author: *Creed and Deed; The Moral Instruction of Children, etc.*

Adrian IV. (*ā'dri-an*), named Nicholas Breakspeare, the only English pope, was born about 1100. He was chosen abbot, then cardinal, and lastly pope in 1154. He was vigorous in maintaining his authority at Rome and throughout Europe. He died in Italy in 1159.

Ærenthal (*ā'ren-tăl*), **Alois Leopold Baptist, Baron von,** Austro-Hungarian Minister for foreign affairs, was born in 1854. He was educated at Prague and Bonn Universities, and as a boy learned both Czech and German. He entered the diplomatic service in 1877, and served in Paris and St. Petersburg; minister to Roumania in 1895, and ambassador to Russia in 1899. In October, 1906, he was appointed to succeed Count Goluchowski. **Died 1912.**

Æschines (*es'ki-nēz*), an Athenian orator, second only to Demosthenes, was born 389 B. C. He established a school of eloquence in Rhodes, and died at Samos, 314 B. C.

Æschylus (*es'ki-lus*), the first in time of the three great tragic poets of Greece, born at Eleusis, in Attica, B. C. 525, died in Sicily 456. Before he gained distinction as a dramatist he had highly distinguished himself at the battle of Marathon (490), as he afterwards did at Artemisium, Salamis, and Plataea. He first gained the prize for tragedy in B. C. 484. The Persians, the earliest of his extant pieces, formed part of a trilogy which gained the prize in B. C. 472. In B. C. 468 he was defeated by Sophocles, and then is said to have gone to the court of Hiero, king of Syracuse. Altogether he is reputed to have composed seventy tragedies and gained thirteen triumphs. Only seven of his tragedies are extant: *The Persians, Seven Against Thebes, Suppliants, Prometheus, Agamemnon, Choephori,* and *Eumenides*, the last three forming a trilogy on the story of Orestes.

Aeschylus may be called the creator of Greek tragedy, both from the splendor of his dramatic writings, and from the scenic improvements and accessories he introduced. Till his time only one actor had appeared on the stage at a time, and by bringing on a second he was really the founder of dramatic dialogue. His style was grand, daring, and full of energy, though sometimes erring in excessive splendor of diction and imagery, if not indeed harsh or turgid. His plays have little or no plot, and his characters are drawn by a few powerful strokes.

References.—Plumptre's *Life of Æschylus;* English poetical translations of his plays by Blackie, Plumptre, Swanwick and Browning.

Æsop (*ē'sop*), celebrated fabulist, said to have been born in Phrygia about 620 B. C. Attached himself to the court of Crœsus, King of Lydia. Sent by that monarch upon an embassy to Delphos, he so offended the inhabitants by the keenness of his sarcasms, that they hurled him from a rock into the sea. He died about 564 B. C.

Ætius (*ā-ē'shi-us*), Roman general, born about 396. in Moesia, in 433 became patrician, consul, and general-in-chief. His crowning victory was that at Chalons over Attila in 451; three years later the Emperor Valentinian III., jealous of his greatness, stabbed him to death with his own hand.

Agamemnon (*ag-ȧ-mem'non*), king of Mycenae and Argos, son of Atreus and Eriphyle, brother of Menelaus, and commander-in-chief of the Grecian army at the siege of Troy. Returning from Troy, Agamemnon was treacherously murdered by his wife, who, during his absence, had formed an attachment with Ægisthus, son of the noted Thyestes.

Agassiz (*ag'ȧ-sē*), **Alexander,** naturalist, born in Neufchatel, Switzerland, 1835; graduated at Harvard, 1855; Lawrence Scientific School, 1857; since 1885 engaged in zoölogical investigation. Appointed director Museum Comparative Zoölogy, Cambridge, 1902; appointed by Emperor William III. of Germany member Order of Merit, 1902; member of Academy of Science, Paris; president of National Academy of Science. Author: *Explorations of Lake Titicaca; List of the Echinoderms; Three Cruises of the Blake.* Died 1910.

Agassiz, Louis Johann Rudolph, eminent naturalist, was born in Switzerland in 1807, the son of a Swiss Protestant clergyman. He studied medicine and graduated at Munich, but devoted himself principally to ichthyology, and was employed to classify and arrange the collection brought from Brazil by Martius and Spix. In 1846, he came to America, where he was well received, and in 1848 accepted the chair of zoölogy and geology at Harvard College. In 1865 he visited Brazil, and on his return placed the large collection he had made in the museum of Cambridge. He wrote *Glaciers, Outlines of Comparative Physiology, An Essay on Classification,* and numerous other valuable works, and was to the last a disbeliever in the Darwinian theory of evolution. Died, 1873.

Agathocles (*ȧ-gath'ō-klēz*), tyrant of Syracuse, was born at Thermæ, Sicily, about 361 B. C. From 317 for four years he fought unsuccessfully with the Carthaginians in Africa. A favorite killed him with a poisoned toothpick in 289 B. C.

Agesilaus (*ȧ-jes-i-lā'us*), king of Sparta from 397 B. C., was one of the most brilliant soldiers of antiquity. He was born in 444 B. C., and died in Egypt in 360 B. C.

Agnew (*ag'nū*), **Daniel Hayes,** surgeon, was born in Pennsylvania in 1818. He established the Philadelphia school of operative surgery, and founded the present Pathological Museum of the Philadelphia Hospital. In 1870 appointed professor of operative surgery in the University of Pennsylvania, and in 1871 became professor of the principles and practice of surgery in the same institution, and professor of clinical surgery in the University Hospital. When President Garfield was shot he was called as the chief consulting surgeon. His writings are voluminous, but his best work is a large and exhaustive one on operative surgery. He died in 1892.

Agricola (*ȧ-grik'ō-lȧ*), **Cnaeius Julius,** a Roman of the imperial times, distinguished not less by his great abilities as a statesman and a soldier than by the beauty of his private character; born at Forum Julii (now Frejus, in Provence, France) 37 A. D. He was the first Roman general who effectually subdued Britain, and the only one who displayed as much genius and success in training the inhabitants to the amenities of civilization as in breaking their rude force in war; died, 93.

Agrippa (*ȧ-grip'ȧ*), **Marcus Vipsanius,** a Roman citizen who lived 63-12 B. C., and rose to an exalted position. Rome owed to him the restoration and construction of several aqueducts and of the Pantheon, besides other public works of ornament and utility.

Aguesseau (*ȧ'-ge'sō'*), **Henri Francois d',** a distinguished French jurist and statesman, born at Limoges in 1668; was in 1690 advocate-general at Paris, and at the age of thirty-two procureur-general of the parliament. In 1737 secured the chancellorship, which he held until 1750. He died in 1751.

Ainsworth (*ānz'wûrth*), **William Harrison,** English novelist, was born at Manchester, England, in 1805, and educated at the grammar school. He had contributed some articles to magazines prior to 1822, and his earliest success was *Rookwood,* with its vivid description of Dick Turpin's ride to York. By 1881 he had published no fewer than thirty-nine novels. Seven of them were illustrated by Cruikshank. He died at Reigate in 1882.

Airy (*âr'i*), **George Biddell,** English mathematician, astronomer, physicist, and engineer, was born at Alnwick, England, in 1801; was graduated at Trinity College, Cambridge, in 1823; soon after published his *Mathematical Tracts on the Lunar and Planetary Theories,* the *Figures of the Earth,* and the *Undulatory Theory of Optics.* As astronomer-royal at Greenwich he introduced the systematic observation of the magnetic elements, and carried on investigations in the Lunar Theory, the magnetism of iron ships, the density of the earth, the length of the seconds-pendulum, and in a great variety of other subjects. After his retirement from the direction of the Greenwich Observatory, in 1881, he was continuously engaged upon his Numerical Lunar Theory. He died in 1892.

Akbar (*ȧk'bēr*), celebrated Mogul emperor, was born at Amarkote in Sindh in 1542. He encouraged commerce, and had the land carefully measured so that the taxes should be fair. His people were of different races and religions, but he was just and tolerant to all. Measures like these gained for him the title of "Guardian of Mankind," and caused him to be held up as a model to Indian princes of later times. He died in 1605.

Aked, Charles Frederic, Baptist clergyman, was born at Nottingham, England, 1864; was educated at Midland Baptist College, and University College, in Nottingham. Fifth Avenue Baptist Church, New York, 1907 to 1912; made annual lecture and preaching trips to United States, 1893-1907. Author: *The Courage of the Coward, A Ministry of Reconciliation, Mercies New Every Morning.*

Akenside (*ā'ken-sīd*), **Mark,** an English poet, was born in 1721, died in 1770. He owes his position among the poets chiefly to his *Pleasure of the Imagination,* a poem which at once became famous.

Alarcon Y Mendoza (*ȧ-lär-kän' ē men-dō'thȧ*), **Don Juan Ruiz de,** one of the most distinguished dramatic poets of Spain, born in Mexico about the beginning of the seventeenth century. He went to Europe about 1622, and in 1628 published a volume containing eight comedies, and in 1634 another containing twelve. His *Tejador de Segovia,* (Weaver of Segovia), and *Las Paredse Oyen,* (Walls have Ears), are still performed on the Spanish stage. He died in 1639.

Alaric I. (*al'ȧ-rik*), king of the Visigoths, was born about the middle of the fourth century. In 396 he ravaged Greece, from which he was driven by the Roman general, Stilicho, but made a masterly retreat to Illyria. In 400 he invaded Italy, but was defeated by Stilicho at Pollentia in 403. Alaric made a second invasion of Italy, during which he besieged Rome thrice. The first time, 408, the city was saved by paying a heavy ransom; the second, 409, it capitulated. Alaric led a third siege, and the city was taken in 410, and sacked for six days, Alaric, however, doing everything in his power to restrain the violence of his followers. He quitted Rome with the intention of reducing Sicily and Africa, but died at Cosenza in 410.

Albani (*ȧl-bȧ'nē*), **Madame** (nee **Emma La Jeunesse**), vocalist, was born in 1851 at Chambly, Canada, and was trained in music by her father. At twelve she made her début at Albany, N. Y., whence she assumed the professional name of Albani. In 1878 she married Mr. Ernest Gye, eldest son of the director of the Royal Italian Opera, London, and has since resided in that city.

Alberoni (*ȧl-be-rō'nē*), **Giulio,** cardinal and statesman, was born at Firenzuola, near Piacenza, 1664. In 1714 he became prime-minister of Spain, and in 1717 was made a cardinal. To gratify the queen, he suddenly invaded Sardinia, in violation of the Peace of Utrecht—a step which made England, France, Austria, and Holland form, in 1719, the "Quadruple Alliance." Alberoni soon retired to Piacenza, where he died in 1752.

Albert, prince of Saxe-Coburg-Gotha and husband of the late Queen Victoria of England, was born near Coburg, Germany, in 1819. He married Victoria in 1840; soon after was made field-marshal in the British army, and in 1857 received the title of prince consort. He acquired great influence in public affairs as the prudent and trusted adviser of the queen, and became popular throughout England. He died in 1861.

Alberti (*ȧl-ber'tē*), **Leon Battista,** an Italian architect, and writer on art and poetry, was born at Florence, Italy, in 1404; died at Rome in 1472. He was much employed by Pope Nicholas V. He completed the Pitti Palace at Florence, and designed the church of St. Frances at Rimini. His chief book, *De Re Ædificatoria,* is highly valued.

Albertus Magnus (*ȧl-ber'tus māg'nus*), Count of Bollstadt, the *Doctor Universalis* of the schoolmen, was born at Lauingen, in Swabia, about 1193, studied at Padua, and, entering the newly founded Dominican order, taught in the schools of Hildesheim, Ratisbon, and Cologne. Of his works the most notable are the *Summa Theologiæ* and the *Summa de Creaturis.* Albertus excelled all his contemporaries in the wideness of his learning, and in legend appears as a magician.

Alboin (*al'boin*), king of the Lombards from about 561 to 573, died in Verona in the latter year. In 566 he destroyed the kingdom of the Gepidæ. In 568 he conquered Italy as far south as the Tiber, and established the kingdom of the Lombards, with Pavia as its capital.

Albuquerque (*ȧl-bōō-kär'kā*), **Affonso de,** an eminent Portuguese admiral, born in 1453, died in 1515. His career was extremely successful. He extended the Portuguese power over Malabar, Ceylon, the Sunda Islands, and the Peninsula of Malacca, and made the Portuguese name respected by all the nations and princes of India.

Alcæus (*al-sē'us*), of Mitylene, one of the greatest lyric poets of Greece, flourished about the end of the seventh or the beginning of the sixth century B. C. He was the inventor of the form of verse which after him is called the Alcaic, and which Horace, the happiest of his imitators, transplanted into the Latin language.

Alcibiades (*al-si-bī'ȧ-dēz*), Athenian general, was born at Athens 450 B. C. His handsome person, his distinguished parentage, and the high position of Pericles procured him a multitude of friends and admirers. Socrates was one of the former, and gained considerable influence over him. After a distinguished career in military life in Greece and Persia he was put to death 401 B. C.

Alcott (*ȧl'kut*), **Amos Bronson,** American philosopher, was born at Wolcott, Conn., in 1799; died in 1888. In 1834-37 he conducted a school in Boston. In 1842 he proceeded to found a new community, since called transcendentalists. The scheme failed, and Mr. Alcott thenceforward devoted himself to lecturing, or rather conversing, on a wide range of subjects, theoretical and practical. *His Concord Days* contains his personal reminiscences.

Alcott, Louisa May, daughter of Amos Bronson Alcott, a famous American authoress, was born in Germantown, Pa., in 1832. Her first volume was *Flower Fables,* published in 1855. During the Civil War she was a volunteer nurse in the South, and wrote *Hospital Sketches* in 1863. *Little Women* was published in 1868, and was followed at short intervals by *Little Men, Jo's Boys,* etc. She died in 1888 at Boston, Mass.

Alcuin (*al'kwin*), or **Flaccus Albinus,** the most distinguished scholar of the eighth century, the confidant and adviser of Charlemagne, was born at York about 735. At his death in 804 he left, besides numerous theological writings, a number of elementary works on philosophy, mathematics, rhetoric, and philology; also poems and a great number of letters.

Alden, Henry Mills, author and classical scholar editor *Harper's Magazine* since 1869, was born at Mount Tabor, near Danby, Vt., 1836; graduated from Williams College in 1857, Andover Theological Seminary in 1860. Managing editor *Harper's Weekly* 1863-69.

Alden, John, one of the pilgrims to Plymouth, Mass., was born in England in 1599, died at Duxbury, Mass., in 1687. He was one of the signers of the compact in the cabin of the *Mayflower.* Alden married Priscilla Mullens, to whom his first proposal was in behalf of Miles Standish, but who indicated her preference for Alden over the soldier. He was a magistrate for more than fifty years, and greatly assisted in the government of the infant colony.

Alderman, Edwin Anderson, educator, president of the University of Virginia since 1904, was born at Wilmington, N. C., in 1861; graduated from the University of North Carolina, 1882; D. C. L.; LL.D.; professor of English, State Normal College, 1892; professor pedagogy, University of North Carolina, 1892-96; president of same 1896-99; president Tulane University, 1899-1904. He is well known as a speaker and lecturer. Author:

Life of William Hooper, signer of the Declaration; School History of North Carolina.

Aldrich, Nelson Wilmarth, former United States senator, was born at Foster, R. I., in 1841; received an academic education; president of the Providence common council, 1871-73; member of the Rhode Island general assembly 1875-76, elected to the House of Representatives of the Forty-sixth Congress and reëlected to the Forty-seventh Congress; elected, 1881, to the United States Senate to succeed Ambrose E. Burnside, and was reëlected 1886, in 1892, 1898, and 1905. For many years he was Republican leader of the Senate, and was co-author of the Payne-Aldrich Tariff bill.

Aldrich, Thomas Bailey, poet and editor, was born in Portsmouth, N. H., 1836. While engaged in the office of a New York merchant he began to write verses, the success of which soon induced him to enter on a literary career. His first volume, miscellaneous poems, was published in 1855, and was called *The Bells*; afterward he published *Babie Bell*, several other volumes of poems, and *The Story of a Bad Boy*. He was on the editorial staff of the *Home Journal*, 1856-59, and *Every Saturday*. In 1881 he became editor of the *Atlantic Monthly*, but resigned in 1890. Died at Boston 1907.

Alembert (*à'lă N'bâr'*), **Jean le Rond d',** celebrated man of letters and mathematician, the natural son of Madame de Tencin and the poet Destouches; was born in Paris, France, in 1717. He was the friend of Voltaire, and acquired high esteem by his works, which fill eighteen volumes. The most important of these are his *Treatise on Dynamics*; *Theory of the Winds*; *Precession of the Equinoxes*, and *Essay on the Resistance of Fluids*. His treatises on dynamics and fluids at once established for him a reputation in science. Died 1783.

Alexander the Great, or **Alexander III.,** of Macedon, was born in 356 B. C., son of Philip. He was educated partly by Aristotle, and early gave proofs of skill and courage. A revolt of Thebes at the commencement of his reign was promptly quelled with great severity; then crossing the Hellespont, he marched against the Persians, whom he repeatedly defeated, conquering Phenicia and Egypt. After the final defeat of Darius at Gaugamela, and the capture of Babylon, Susa, and Persepolis, Alexander commenced the conquest of India, but after crossing the Indus and penetrating as far as the Ganges, he was compelled to return to Babylon, but paused at Susa to celebrate his marriage with the daughter of Darius. He died at Babylon, after a reign of about thirteen years; his body was embalmed and taken to Alexandria, which city had been founded by him and named in his honor. Died 323 B. C.

References.—Hogarth's *Philip and Alexander of Macedon;* Wheeler's *Alexander the Great;* M'Crindle's *The Invasion of India by Alexander the Great.* Dr. Budge has edited Syriac and Ethiopic *Lives* of Alexander.

Alexander I., emperor of Russia, 1801-25, was born at St. Petersburg in 1777. In 1793 he married Elizabeth, daughter of Karl Ludwig, crown prince of Baden, and, on the assassination of his father, Paul, in 1801, succeeded him on the throne. He encouraged education and science, and carried out many reforms. In 1805 he joined the coalition against Napoleon, and was present at the battle of Austerlitz. In 1808 he conquered Finland, and in 1806-12 waged a successful war against Turkey. He died at Taganrog 1825.

Alexander II., emperor of Russia, 1855-81, was born in 1818. In 1841 married the Princess Marie, daughter of the Grand-duke of Hesse. He succeeded to the throne in 1855, and a year later the Crimean war was terminated by the peace of Paris. The grand achievement of his reign, which was in great measure his own deed, was the emancipation of the serfs—twenty-three million souls—in 1861. He resisted strenuously all foreign interference with Polish affairs during the insurrection of 1863, which was suppressed with great severity. During his reign, the Russian empire was widely extended in the Caucasus and in Central Asia. By his establishment of schools and internal improvements he did more to build up Russia than any emperor since Peter the Great. He was assassinated at St. Petersburg in 1881.

Alexander III, emperor of Russia, 1881-94, was born in 1845. He showed vigor in government and ability in repressing the Nihilists. The harsh laws against the Jews and the severe famine of 1892 are among the later events of his reign. In 1866 he married Princess Dagmar of Denmark, sister of the queen-dowager Alexandra of Great Britain. His son, Nicholas II., succeeded him when he died at Livadia, Crimea, in 1894.

Alexander, Archibald, divine and educator, was born in Virginia in 1772. In 1796 he became president of Hampden Sidney College, resigning in 1801; in 1810 he received the degree of D.D., and was elected president of Union College in Georgia. In 1812 he was chosen first theological professor in Princeton theological seminary, holding the place until his death. His best known work is *Outlines of the Evidences of Christianity.* He died in 1851.

Alexander, George, actor, was born at Reading, England, in 1858, and made his professional debut at Nottingham in 1879. He has played in *Lady Windermere's Fan; The Second Mrs. Tanqueray; The Masqueraders; Princess of Zenda; As You Like It; Much Ado About Nothing; Rupert of Hentzau; A Debt of Honour; Paolo and Francesca; If I Were King; Old Heidelberg; His House in Order; The Thief, The Thunderbolt*, etc. He represents South St. Pancras in London county council.

Alexander Nevski (*nef'ske*), Russian hero and saint, was born at Vladimir in 1219, the son of the grand duke Jaroslav of Novgorod. He received the surname of Nevski on account of the splendid victory over the Swedes which he achieved in 1240 on the Neva, in the province where St. Petersburg now stands. At the death of his father, in 1247, he became grand duke of Vladimir, when Pope Innocent IV. made a diplomatic attempt to reunite the Greek and Roman churches, and with this view sent an embassy to Alexander which proved ineffectual. He died in 1263 at Kassimcow.

Alexander Severus, Roman emperor, 222-235, born about 208, was the cousin, adopted son, and successor to Heliogabalus. Although a pagan he reverenced the doctrines of Christianity. During a campaign against the Germans on the Rhine, to defend the frontiers of the empire from their incursions, an insurrection broke out among his troops, headed by Maximin, in which he was murdered, 235.

Alexeleff (*ă-leks-ā'yef*), **Eugenii Ivanovitch,** Russian admiral, was born in 1844. He was educated in the naval school of Russia; chief of eastern fleet during Japanese-Chinese war, 1897. In 1898 he was made vice-admiral, and commander of Kwangtung province. In 1900-01 he was chief of the Russian Pacific squadron, but his conduct of affairs during the Russo-Japanese war led to his recall to Russia, 1904.

Alexius I. Comnenus (*ă-lek'si-us kom-nē'nus*), one of the ablest Byzantine emperors, was born at Constantinople, 1048, was the nephew of the emperor Isaac Comnenus, and in 1081 was elevated by his soldiers to the throne. Died in 1118.

Alfieri (*ăl-fi-ā'rē*), **Vittorio, Count,** Italian dramatic poet, was born in Piedmont in 1749. He began at a mature age to learn Latin, and also to study the Tuscan dialect, for which purpose he went to Tuscany. On his journey thither he made the acquaintance of the countess of Albany, to whom he became deeply attached and to whom he was privately married. He left twenty-one tragedies and six comedies, besides various odes and sonnets. Died in Florence 1803.

Alfonso V., king of Aragon, Naples, and Sicily, was born in 1385. He received the surname of "the Magnanimous" because on his accession to the throne he destroyed a document containing the names of all the grandees who were hostile to him. He honorably distinguished himself by his patronage of letters; died at Naples in 1458.

Alfonso X., surnamed "the Astronomer," "the Philosopher," or "the Wise," king of Leon and Castile, was born 1226; succeeded his father, Ferdinand III., in 1252; died at Seville, 1284. He was the most learned prince of his time, and acquired lasting fame through the completion of the code of laws commenced by his father.

Alfonso XIII., king of Spain, is the son of the late King Alfonso XII. and Queen Maria Christina, a daughter of the late Karl Ferdinand, archduke of Austria. He was born after his father's death, in 1886, and his childhood was spent at Madrid and the Palace of Miramar, in San Sebastian. In Spain the sovereign comes of age at sixteen, and during the king's minority his mother reigned as queen regent. On May 17, 1902, the regency ceased, and Alfonso XIII. assumed his full powers. On May 31, 1906, he married Princess Ena of Battenberg.

Alfred the Great, the youngest son of Ethelwolf, king of the West Saxons, born 849. After the death of his brother, Alfred mounted the throne of England in 871, at a time when the kingdom was a prey to the invasion of the Danes, and to domestic dissensions. After several unfortunate actions with the Danes, Alfred concealed his misfortunes for a year under the dress of a peasant, till the success of one of his chiefs, Odun, earl of Devon, in defeating a body of Danes, drew him from his retirement. The Danes were completely defeated at Eddington, in 878. After the victory, Alfred behaved with great magnanimity to his foes, giving up the kingdom of the East Angles to those of the Danes who embraced Christianity. From that time, however, though the Danes occasionally repeated their depredations, the mind of Alfred was not shaken from its noble purpose of enlightening his subjects, and giving stability to their independence. He is said to have been engaged in 56 battles, by sea and land, although his valor as a warrior has excited less admiration than his wisdom as a legislator. He composed a body of statutes, instituted the trial by jury, and divided the kingdom into shires and tithings. He was so exact in his government that robbery was unheard of, and valuable goods might be left on the highway without danger. He founded, or, according to others, restored the University of Oxford, and filled the professional chairs with men of taste, genius, and erudition. He was himself a learned prince, and composed several works. To Alfred, also, England is indebted for the foundation of her naval establishments, and he was the first to send out ships to make the discovery of a northeast passage. In private life he was benevolent, pious, cheerful, and affable, and his deportment was both dignified and engaging. After a reign of over 28 years, he died, 901. He left by his queen, Elswitha, two sons and three daughters, and was succeeded by his second son, Edward, surnamed the Elder.

References.—The *Anglo-Saxon Chronicle* is the best authority on Alfred. There are *Lives* by Asser, Powell, Spelman, Bicknell, Reinhold Pauli and Thomas Hughes. See also Alfred's Laws in Thorpe's *Collection* and Turk's *Legal Code of Alfred the Great.*

Algardi (*ăl-gär'dē*), **Alessandro,** noted Italian sculptor, was born at Bologna, Italy, 1602. His chief work is a colossal relievo, in St. Peter's, of *Pope Leo Restraining Attila From Marching on Rome.* Died at Rome in 1654.

Alger (*ăl'jĕr*), **Russell Alexander,** soldier, capitalist; born in Ohio, 1836. Taught school two winters; admitted to bar 1859; began practice in Cleveland; removed to Michigan 1860; began lumbering in a small way; enlisted 1861, and served in civil war from captain to major-general of volunteers. In lumber business after war. Was governor of Michigan 1885 and 1886; candidate for president in republican national convention, 1888; secretary of war 1897-99, resigned; United States senator, 1902-7. Author: *The Spanish-American War.* Died 1907.

Alger, William Rounseville, Unitarian minister and author, was born in Massachusetts in 1822; graduated at Harvard College 1847; Unitarian pastor at Roxbury 1848-55; successor of Theodore Parker in Boston 1859-73; in New York 1876-79; at Denver, Colo., 1880; at Portland, Me., 1881. Author: *Introduction to the Poetry of the Orient, Friendships of Women*, and several books on ecclesiastical subjects. Died 1905.

Ali Pasha (*ă'lē pa-shä'*) was born at Tepelen, in Albania, in 1741. He acquired a high reputation as a soldier, and did such good service for the Turks in their Austro-Russian war of 1787 that he was named pasha of Trikala in Thessaly. Put to death, 1822.

Alison, Sir Archibald, lawyer and historian, was born at Kenley, England, 1792. He was admitted to the bar in 1814, occupied subsequently prominent legal positions, and was a writer on law, politics, and literature. His chief work, however, is *The History of Europe During the French Revolution*, which was exceedingly popular. He was created a baronet in 1852, and died near Glasgow, Scotland, 1867.

Allegri (*ăl-lā'grē*), **Gregorio,** musical composer, was born at Rome about 1584. He studied under Nanani, and was a friend of Palestrini. He composed motets and sacred pieces; and was retained in the choir of the Sistine chapel, Rome by Urban VIII., until his death 1652.

Allen, Alexander Viets Griswold, professor of church history, Episcopal theological school, Cambridge, Mass., since 1867, was born at Otis, Mass., 1841; graduated Kenyon 1862; Andover theological seminary 1865; D. D., Harvard 1886, Yale 1901. Ordained priest in Protestant Episcopal church 1865. Author: *Continuity of Christian Thought; Life of Jonathan Edwards; Religious Progress; Christian Institutions; Life and Letters of Phillips Brooks; Freedom in the Church.* Died 1909.

Allen, Charles Grant Blairfindie, author and naturalist, born at Kingston, Canada, in 1848, graduated from Merton College, Oxford, in 1871. After four years at Queen's college, Jamaica, as professor of logic and principal, 1873-77, he returned to England, and, adopting a literary career, published *Physiological Æsthetics, Color Sense, Evolutionist at Large, Darwin*, and several clever novels—*Babylon; In all Shades; The Woman Who Did; An African Millionaire*, etc. He also wrote several books on travel. Died 1899.

Allen, Ethan, soldier, was born at Litchfield, Conn., about 1737, and distinguished himself early in the Revolutionary war by the surprise and capture of Fort Ticonderoga in 1775. He next did good service in Montgomery's expedition to Canada, but was taken prisoner, and not exchanged until 1778. He was afterward a member of the Vermont legislature. He was author of a deistical work, *Reason the Only Oracle of Man.* Died 1789.

Allen, James Lane, author, born in Kentucky, 1849; graduate of Kentucky University;

taught in Kentucky University; later professor of Latin and higher English, Bethany, West Virginia College; since 1886, given entire attention to literature. Author: *Flute and Violin; The Blue Grass Region and Other Sketches of Kentucky; John Gray, The Kentucky Cardinal; Aftermath; A Summer in Arcady; The Choir Invisible; The Reign of Law, The Mettle of the Pasture*, etc.

Allen, Viola, actress, born in New Orleans, La., 1867; was educated in Boston and at Wykham Hall, Toronto, and boarding school in New York. Made debut, Madison Square theater, New York, in *Esmeralda*, at age of fifteen; after few months joined John McCullough company, playing Virginia, Desdemona, Cordelia, etc. Subsequently played leading classical, Shakespearean, and comedy rôles with Lawrence Barrett, Tommaso Salvini, Joseph Jefferson, and William J. Florence. Leading lady at Boston museum for a season; also at Empire theater in 1893, and four years following, creating and playing rôles in *Liberty Hall; Sowing the Wind; The Masqueraders; Under the Red Robe*, etc. Starred, 1898, as Gloria Quayle in *The Christian*, and in 1900 produced *In the Palace of the King*; and, in 1902, as Roma in *The Eternal City*. In 1903 began series of Shakespearean revivals, producing *Twelfth Night, A Winter's Tale, As You Like It*, and *The School for Scandal*.

Allibone (*al'i-bōn*), **Samuel Austin,** compiler of *A Critical Dictionary of English Literature and British and American Authors, Living and Deceased, from the Earliest Accounts to the Middle of the Nineteenth Century*, and other valuable works of reference, and also contributor to periodical literature. He was born at Philadelphia in 1816, and died in 1889.

Allison, William Boyd, lawyer, American legislator, was born in Ohio, 1829; educated at Western Reserve College and practiced law until 1857; emigrated to Iowa; served in the civil war; was sent to Congress while that struggle was going on, and remained as representative and senator from that time, save in 1872-73. His influence was marked and salutary on the legislation of his day. Died 1908.

Allston, Washington, American painter, was born in South Carolina, in 1779; graduated at Harvard in 1800, and went the next year to London to study art. In 1803 he went to Paris, and in 1805 to Rome, where he formed a close intimacy with Thorwalsden and Coleridge. Elected an A. R. A. in 1819, he had the year before returned finally to America, and fixed his residence at Cambridge, Mass., where he died in 1843.

Alma-Tadema (*äl'mä-tä'de-mä*), **Sir Laurence,** painter of classical subjects, born in Dronryp, Friesland, in 1836; studied at the Royal Academy of Antwerp, and was afterwards pupil and assistant of Baron Henry Leys. He settled in England in 1873, where his pictures found a ready welcome. He was elected A. R. A. in 1879. Died, 1912.

Almqvist (*älm'kvist*), **Karl Jonas Ludvig,** Swedish author, was born at Stockholm in 1793, and died at Bremen in 1866. His romances as a whole, are considered the best in the Swedish language. *The Book of the Thorn-Rose* is regarded as the best.

Alstroemer (*äl'strē-mĕr*), **Jonas,** Swedish industrial reformer, was born in 1685, and is noted for the great commercial improvements which he introduced into his native country So extensive and successful were the manufacturing and agricultural resources which he introduced, that the state enobled him, made him chancellor of commerce, and erected a statue to his honor on the Stockholm Exchange. Died 1761.

Alva, Fernando Alvarez de Toledo, duke of, Spanish governor of the Netherlands under Philip II. of Spain, was born in 1508. Alva was recalled in 1573, but he was soon given the command of Portugal, which he quickly conquered. Though his pride and cruelty were excessive, he was undoubtedly one of the greatest generals of his age. Died 1582.

Alvarado (*äl-vä-rä'dō*), **Alonzo,** one of the Spanish conquerors of Mexico and Peru under Pizarro, was born at Burgos about 1490; he was defeated and made prisoner by the Incan leader, Almagro. He afterward joined De Castro, and was lieutenant-general of the armed force which suppressed the rebellion of Gonzalo Pizarro in 1548. Died 1554.

Alvarado, Pedro d', Spanish cavalier, was born in Badajoz, 1485. He took part in the expedition and victories of Cortez, and was intrusted with the command of the city of Mexico, and afterward made governor of Guatemala and Honduras. He explored California, and was killed soon after his return in an expedition against Jalisco. Died 1541.

Alverstone, First Baron, Sir Richard Everard Webster, Lord Chief Justice of England since 1900, was born in 1842. He was graduated at Trinity College, Cambridge, and holds the degrees M.A., LL. D., D. C. L.; Q. C., 1878; Attorney-general, 1885-86, 1886-92, and 1895-1900; M. P. Isle of Wight, 1885-1900; Master of the Rolls, 1900. He was knighted in 1885, and created a baronet and baron in 1900.

Alzog (*äl'tsōk*), **Johann Baptist,** Roman Catholic historian, was born in Ohlan, Silesia, 1808. He was professor of church history in the University of Freiburg, and wrote a *Manual of General Church History*, which is known in many languages. He was also the author of an *Outline of Patrology*, and in 1869 was a member of the commission on dogma which prepared the work for the vatican council. Died at Freiburg, Baden, 1878.

Ambolse, George d', born in 1460, a French cardinal and minister of state. He was successively Bishop of Montauban, Archbishop of Narbonne and of Rouen, and after as prime minister under Louis XII., was made cardinal and appointed legate in France. He affected great reforms among the religious orders. Died 1810.

Ambrose (*am'brōz*), **St.,** a doctor in the Latin Church of the fourth century, was born at Treves, Gaul, 340. Consecrated archbishop of Milan, 374. Ambrose was repeatedly, in the discharge of his duty to the Church, brought into direct conflict with the highest secular authority. To him we owe the noble hymn, *Te Deum Laudamus*. No father of the Church has a wider fame. Died at Milan in 397.

Amerigo Vespucci (*ä-mä-rē'gō ves-pōōt'chē*). See **Vespucci.**

Ames (*āmz*), **Fisher,** American lawyer and politician, was born at Dedham, Mass., 1758. He was graduated from Harvard in 1774; began the practice of law in 1781; sat in the Massachusetts convention, and was afterward a member of Congress, and famed for his eloquence. He retired from public life with Washington, and devoted himself to literary pursuits; was elected president of Harvard College in 1804, which he declined. Died 1808.

Ames, James Barr, dean Harvard Law School since 1895; born at Boston, Mass., 1846; graduate of Harvard, 1868; Harvard Law School, 1872; LL. D., University of the City of New York, University of Wisconsin, 1898; Harvard, 1904. Instructor in history, 1872-73; associate professor of law, 1873-77, professor of law since 1877, Harvard. Compiled collections of cases on torts, pleading, bills and notes, partnership, trust suretyship, admiralty and equity jurisdiction; author of numerous articles in *Harvard Law Review* and other law reviews. Died, 1910.

Ames, Joseph Sweetman, physicist, professor of physics and director Physical Laboratory Johns Hopkins; was born at Manchester, Vt., 1864; graduated from Johns Hopkins in 1886; Ph.D., 1890. Author: *Theory of Physics; Manual of Experiments in Physics; Elements of Physics; Free Expansion of Gases.*

Amherst (*am'ĕrst*), **Jeffrey, Lord,** British general was born at Riverhead, England, 1717. As major-general he served on the continent and in America, where he succeeded Abercrombie as commander-in-chief. Here he was remarkably successful, and, after many victories, Montreal surrendered and Newfoundland was recovered from the French. He was raised to the peerage in 1776, and was appointed field marshal in 1796. Died 1797.

Ami, Henry M., assistant palæontologist, Geological Survey of Canada since 1882, was born at Belle Riviere, near Montreal, 1858; graduated from McGill University, B.A., 1882; M.A., 1885; D.Sc., Queen's, 1892; McGill, 1907; awarded the Bigsby Medal by Council of Geological Society of London, 1903; fellow of the Geological Societies of London, Switzerland, and America.

Amiel (*ä-myel'*), **Henri Frédéric,** scholar and poet, was born at Geneva, Switzerland, 1821, studied at Berlin, 1844-48, and, from 1849 until his death in 1881, was professor at the academy (university) of Geneva. He published some essays and poems; but his wide culture, critical power, and profound but melancholy speculation were first made known after his death by a selection from his *Journal Intime*.

Amontons (*ä'mōn'tōn'*), **Guillaume,** French physicist, was born in Paris, 1663. Illness in youth left him partially deaf, and he turned his attention to machinery. In France, Amontons is considered the inventor of the telegraph; and, almost at the same time with Halley in England, he found that the boiling point of water varies with the elevation. Died 1705.

Ampère (*ăn'pâr*), **Andre Marie,** a distinguished mathematician and naturalist, was born at Lyons in 1775. In 1805, after he had been engaged for some time as private mathematical tutor at Lyons, he was called to Paris, where he distinguished himself as an able teacher in the polytecnnic school, and wrote his essay on the *Mathematical Theory of Chances*. Died 1836.

Amurath (*ä-mōō-rät'*), or **Murad I.,** sultan of Turkey, was born about 1319. He succeeded his father, Orkhan, in 1360. He was the first to lead Turkish arms into Europe, and in 1361 took Adrianople. Urban V. preached a crusade against him, but the venture was disastrous to the Christians. He lost his life in the battle of Kossovo, 1389.

Amurath, or **Murad II.,** sultan of Turkey, was born about 1403. He succeeded Mohammed I. in 1422. He invaded Albania and the Peloponnesus, where George Castriot (*Scanderbeg*) defeated him; but retreated only to gain a great victory over his former adversary, Hunniades, at Kossovo, in 1448; in his reign poetry, jurisprudence, and theology began to flourish; died of apoplexy at Adrianople, 1451.

Anacreon (*ä-nak'rē-ŏn*), celebrated Greek lyric poet, was born at Teos in Ionia, about 563 B. C. He was patronized by Polycrates, the tyrant of Samos, and Hipparchus, the tyrant of Athens. He died at Abdera, about 478 B. C., suffocated by a grape-stone while in the act of drinking. His poems are chiefly devoted to the praises of love, pleasure, and wine.

Anastasius I. (*an-as-tā'shi-us*), emperor of the East, was born 430 at Dyrrachium, in Epirus, and proclaimed emperor at the age of sixty. He suppressed the cruel and degrading spectacles where men fought with wild beasts, abolished the sale of offices, built a wall on the west side of Constantinople to defend it from the incursions of the barbarians. Died 518.

Anaxagoras (*an-aks-ag'ō-räs*), Greek philosopher of the Ionian school, was born at Clazomenae about 500 B. C. He studied under Anaximenes, and, after traveling through all the known parts of the globe, in search of knowledge, established himself at Athens, where he opened the first school of philosophy. Pericles, Socrates, and Euripides were among his pupils. Died, 428 B.C.

Andersen, Hans Christian, novelist, poet, and writer of fairy tales, was born at Odense, in Funen, 1805. He completed his *Agnes and the Merman* in Switzerland; and one of his best works, *The Improvisatore*, a series of scenes depicted in a glowing style and full of poetic interest, was the fruit of a visit to Italy. In the end of 1840 he commenced a somewhat lengthened tour in Italy and the East, of which he gave an account in *A Poet's Bazar*, 1842. His works have all been translated into German and English. His *Dying Child* has been translated into the language of Greenland; and on his seventieth birthday he was presented with a book containing one of his tales in fifteen languages. He died in 1875.

Anderson, Mary. See **Navarro, Mary Anderson de**

Anderson, Melville Best, professor of literature at Stanford University since 1891, was born at Kalamazoo, Mich., 1851; studied at Cornell University, 1870-72; University of Göttingen, 1875-76, and at Paris, 1876-77; was consecutively professor at Butler University, Knox College, Purdue University, State University, Iowa, to 1891.

Anderson, Rasmus Bjorn, author, diplomat; born at Albion, Wisconsin, of Norwegian parentage, 1846; graduate of Luther College, Decorah, Iowa, 1866; University of Wisconsin, 1869; LL.D., 1888; professor of Scandinavian languages and literature, 1875-83; United States minister to Denmark, 1885-89. Editor and publisher of *America* since 1898. Author: *Norse Mythology; Viking Tales of the North; America Not Discovered by Columbus; The Younger Edda; First Chapter of Norwegian Immigration*, 1821-1840; also many translations of Norse books, and author of several works in Norwegian.

Andrassy (*on'drä-shē*), **Count Gyula,** Hungarian statesman, was born 1823, of an ancient and noble family. In 1867, when the right of self-government was conceded to Hungary, he was appointed premier of the new Hungarian ministry. He was member of the Presburg Diet in 1847-48; lord-lieutenant of the county of Zempton, and Hungarian ambassador to Constantinople. Died 1890.

Andre (*ăn'drā* or *an'drī*), **John,** British soldier, born in London, England, 1751; served in the war with America, and rose to the rank of major. He conducted the negotiations with Benedict Arnold for the betrayal of West Point, but being discovered in disguise, was arrested and put to death as a spy. His remains lie in Westminster Abbey, where a cenotaph was erected to his memory. Executed, 1780.

Andrews, Charles McLean, educator, historian, born at Wethersfield, Conn., 1863; graduated at Trinity College, Conn., 1884, A. M., 1890; Ph. D., Johns Hopkins, 1889; professor of history, Bryn Mawr College, 1889-1907, Johns Hopkins University, since 1907.

Andrews, Elisha Benjamin, educator, author; born at Hinsdale, N. H., 1844; served private to second lieutenant of Union army in civil war; graduate of Brown University, 1870; professor history and political economy, Brown University, 1882-88; professor political economy and finance, Cornell, 1888-89; president Brown University, 1889-98; superintendent schools, Chicago, 1898-1900; chancellor University of Nebraska, 1900-1909. Author: *Institutes of Constitutional History, English and American; Institutes of General History; Institutes of Economics*; etc.

Andros (*an'dros*), **Sir Edmund,** was born at London, England, in 1637; died, 1714. He was governor of the colony of New York for eight years, beginning in 1674. He was harsh and ruled without any regard to the wishes of the colonists.

Angelico (*ăn-jel'ē-kō*), **Fra,** the name by which we best know the great friar-painter, Guido di Pietri, whose monastic name was Giovanni. He was born in 1387 at Vecchio in Tuscany. His most important frescoes are those in the Florentine convent of San Marco (now a museum), at Orvieto, and in the Nicholas Chapel of the vatican. Of his easel pictures, the Louvre possesses a splendid example, *The Coronation of the Virgin*, and the London National Gallery a *Glory, or Christ*.

Angell (*ăn'jel*), **James Burrill,** educator, diplomat; born at Scituate, R. I., 1829; graduate of Brown University, 1849; professor modern languages and literature, Brown, 1853-60; editor *Providence Journal*, 1860-66; president of University of

Vermont, 1866-71; president University of Michigan, 1871-1909; member Anglo-American International Commission on Canadian Fisheries, 1887; chairman Canadian-American Commission on Deep Waterways from Lakes to Sea, 1896; appointed minister to Turkey, 1897, but resigned May, 1898. President, University of Michigan, 1898-1909. Author: *Progress in International Law, The Higher Education*, etc.

Angelo (*an'jē-lō*), **Michael de Buonarotti.** See Michelangelo.

Anglin (*an'glin*), **Margaret Mary** actress, was born at Ottawa, Canada, 1876; educated at Loretto Abbey, Toronto, and Convent of the Sacred Heart, Montreal. Made professional début in *Shenandoah*, New York, 1894; leading woman with E. H. Sothern, 1897-98, Richard Mansfield, 1898-99, and in Empire Theatre Stock Co.; starred in *Zira*, 1905-06; with Henry Miller, in *The Great Divide*, 1906-07.

Angoulême (*äṅ'gōō-lām'*), **Louis Antoine de Bourbon, duc di,** eldest son of Charles X. of France, was born at Versailles, France, 1775. In 1799 he married his cousin, Marie Therese, only daughter of Louis XVI., "the only man in the family," in the words of Napoleon. After the Restoration, he made a feeble effort, as lieutenant-general of France, to oppose Napoleon on his return from Elba. During the revolution of 1830 he accompanied his father into exile, and died at Gorz in 1844.

Anna Comnena (*kom-nē'nä*), a learned Byzantine princess, author of one of the most valuable works to be found in the collection of the Byzantine historians, was the daughter of the Emperor Alexander I. (Comnenus), born 1083. She framed a conspiracy against the life of her brother then ruling as Emperor in 1118. Her brother spared her life, but punished her by confiscation of her property, which, however, he soon after generously restored. Disappointed and ashamed, she withdrew from the court and sought enjoyment in literature. Died 1148.

Anne of Austria, daughter of Philip II. of Spain, was born at Madrid in 1601, and in 1615 became the wife of Louis XIII. of France. On the death of the king, in 1643, Anne became queen-regent, and evinced her discernment by choosing as her minister Cardinal Mazarin, by whose able management the young king, Louis XIV., came, on attaining his majority, into possession of a throne firmly established on the ruins of contending parties. She died in 1666.

Anne of Beaujeu, daughter of Louis XI., was born about 1462; married Peter Beaujeu, duke of Bourbon, and constable of France. She acted as regent of the kingdom during the minority of her brother, Charles VIII. Died in 1522.

Anne of Brittany, daughter and heiress of Duke Francis II., was born at Nantes, France, in 1476. In 1491 she ws united to Charles VIII., king of France, and governed the kingdom during the expedition of that prince to Italy. After his death she married Louis XII. in 1499, over whom she exercised great influence. She died at Blois in 1514.

Anne of Cleves, the fourth wife of Henry VIII., to whom she was married in 1540, was born at Cleves, Germany, 1515. She was the daughter of John, third duke of Cleves. The match was projected by Cromwell, and was partly the cause of that minister's ruin. Henry put her aside, settled on her a liberal annuity, with which she was well satisfied, and she spent the remainder of her days in England, where she died in 1557.

Anne, Queen of England, was the second daughter of King James II., by his first wife, Anne Hyde, and was born in London, England, in 1664. Anne ascended the throne on March 8, 1702. During her reign, which was made illustrious by the military triumphs of the duke of Marlborough, Sir George Rooke and Sir Cloudesley Shovel conquered the fortress of Gibraltar, a possession which Spain has never been able to regain; and the legislative union of Scotland with England was effected. The glorious galaxy of writers, in almost every branch of learning, who flourished in her time, has caused it to be considered the Augustan age of British literature. She died in 1714.

Annunzio (*än-nōōn'tsē-ō*), **Gabriele d'.** See **D'Annunzuo, Gabriele.**

Anselm of Canterbury, a scholastic philosopher, born at Piedmont, 1033, and died in 1109. Attracted by the reputation of Lafranc, he went in 1060 to study at the monastery of Bec, in Normandy. Three years later he became prior, and in 1078 abbot, of this monastery, the most famous school of the eleventh century. Lafranc, who in the meantime had gone to England and become archbishop of Canterbury, died in 1089, and in 1903 Anselm was appointed.

Anson, Sir William Reynell, English jurist, was born at Walberton, Sussex, 1843; M. P. for Oxford University since 1899; trustee of the National Portrait Gallery since 1904; chancellor of the diocese of Oxford since 1899; warden of All Souls' College, Oxford, since 1881. He was educated at Eton and Balliol College, Oxford, fellow of All Souls', 1867; vice-chancellor of the University of Oxford, 1898-99; parliamentary secretary to the board of education, 1902-05. Publications: *Principles of the English Law of Contract, Law and Custom of the Constitution.*

Anthony of Padua, St., born at Lisbon 1195, was at first an Augustinian monk, but in 1220 he entered the Franciscan order, and became one of the most active propagators. He was canonized by Gregory IX. in the following year. According to legend, he preached to the fishes when men refused to hear him; hence he is the patron of the lower animals, and is often represented as accompanied by a pig.

Anthony the Great, St., the founder of monastic institutions, was born 251 near Heraclea, in Upper Egypt. In 205, having sold all his property and given the proceeds to the poor, he withdrew into the desert whither a number of disciples were attracted by his reputation for sanctity; and thus was formed the first order of monks. Died 356.

Antigonus (*an-tig'ō-nus*), **Cyclops,** or "one-eyed," a distinguished general of Alexander the Great, on whose death he became governor of Phrygia, Lycia, and Pamphylia, and after defeating and slaying Eumenes, and waging other successful wars, assumed the title of king. His ambitious schemes united his rivals, and he was slain in battle of Ipsus. Died 301 B. C.

Antiochus (*an-ti'ō-kŭs*) **III.,** surnamed **the Great,** was born about 238 B. C.; succeeded his father, Seleucus Callinicus, as king of Syria in 223 B. C., and was the most distinguished of the Seleucidae. He became involved in war with the Romans, who had conquered Macedonia; but declined to invade Italy at the instigation of Hannibal, who had come to his court of refuge. Peace was granted him only on condition of his yielding all his dominions east of Mount Taurus, and paying a heavy tribute. To raise the money, he attacked a rich temple in Elymais, when the people rose against him, and killed him in 187 B. C.

Antiochus IV., surnamed **Epiphanes,** became king of Syria in 175 B. C. He fought against Egypt and conquered a great part of it. He twice took Jerusalem; and, endeavoring there to establish the worship of Greek gods, excited the Jews to a successful insurrection under Mattathias and his heroic sons, the Maccabees. Died, 164 B. C.

Antipater (*an-tip'ä-tẽr*). Of the many persons who bore this name in antiquity the most celebrated was one of the generals of King Philip of Macedon, born about 400 B. C. When Alexander led his troops into Asia he left Antipater, who, along with Parmenion, had endeavored to dissuade him from the expedition, as governor of Macedon. He died 319 B. C.

Antipater of Idumea, father of Herod the Great; took part in the disputes between Hyrcanus II. and Aristobulus II. He assisted in placing Hyrcanus on the throne of Judea 63 B. C., and contrived to get the power in his own hands. He was afterwards appointed Procurator of all Judea Died 43 B. C.

Antoinette (*äṅ-twä-net'*), **Marie.** See **Marie Antoinette, Josephe Jeanne.**

Antonelli (*äṅ-tō-nel'lē*), **Cardinal Giacomo,** Roman prelate and statesman, was born in Italy in 1806, and died at Rome in 1876. He was raised to the cardinalate in 1847, and was for a time secretary of foreign affairs for the papal states.

Antoninus (*an-tō-ni'us*), **Marcus Aurelius,** See **Marcus Aurelius Antoninus.**

Antoninus Pius (Titus Aurelius Fulvus), Roman emperor, was born 86 A. D. In 120 he was made consul; afterward was sent by Hadrian as proconsul into Asia, where the wisdom and gentleness of his rule won for him a higher reputation than had been enjoyed by any of his predecessors. In 138 he was adopted by the Emperor Hadrian, in consequence of merit alone, and came to the throne in the same year. He died at Lorium, Italy, in 161.

Antony, Mark, celebrated Roman general, was born at Rome in 83 B. C. He took part in Cæsar's great victory of Pharsalia, and with him was made consul in 44 B. C. After Cæsar was killed, Antony with Augustus and Lepidus, formed a government called the *triumvirate*, which defeated the republican army of Brutus and Cassius at Philippi. Some time after, Antony visited Greece and Asia and met Cleopatra. His love for her made him forget the provinces he was to govern. When at last he turned his attention to them, his rule was so despotic that Augustus sent a force against him and defeated him in the naval battle of Actium, during the progress of which he was deserted by the Egyptian fleet. He took his own life in 30 B. C.

Apelles (*ä-pel'lēz*), the most celebrated painter in ancient times, the son of Pythias, and probably born at Colophon, Asia Minor. He flourished in the latter part of the fourth century B. C., and he united the fine coloring of the Ionian, with the accurate drawing of the Sicyonic school.

Apollodorus (*ä-pol-ō-dō'rus*), a great architect of the second century, was born at Damascus. He worked at Rome for the Emperor Trajan, and built the Forum and Column which bear that monarch's name, but his greatest work was a huge bridge over the Danube at its confluence with the Alt. He was banished and put to death by Hadrian.

Apollonius (*ap-ol-lō'ni-us*), of Perga, in Asia Minor, called "The Great Geometer," lived in the second half of the third century, B. C. He is generally considered one of the founders of the mathematical sciences.

Apollonius, called the Rhodian (Apollonius Rhodius), was born n Alexandria 230 B. C. He presided over an academy at Rhodes, was an eminent rhetorician, and wrote a poem, in four books, on the expedition of the Argonauts, and other poems.

Apponyi (*op'po-nyi*), **Count Albert,** Royal Hungarian Minister of Public Education since 1906, was born 1846, son of Count George Apponyi, late Chief Justice of the kingdom of Hungary. He has written many articles on questions of Hungarian public law in Hungarian, French, German, English, and American magazines; visited United States, 1911.

Apponyi, Count George, Hungarian statesman, was born 1808. He was a member of the Presburg Diet of 1843, and chancellor of Hungary in 1847, when he opposed the revolutionary movements then breaking out, and which caused his retirement. In 1859 he was made a member of the imperial council in Vienna, and was instrumental in bringing about the reconciliation between Austria and Hungary. He is classed among the ablest of European statesmen. Died 1899.

Apuleius (*ap-ū-lē'yus*), a satirical writer of the second century, born at Numidia, Africa, studied at Carthage. He was so extremely popular that the senate of Carthage and other states erected statues in his honor.

Aquinas (*a-kwī'nas*), St. Thomas, celebrated scholastic divine, born about 1227, died in 1274, was descended from the counts of Aquino, in the Kingdom of the Two Sicilies. He was educated at the Benedictine monastery at Monte Casino, and at the University of Naples, where he studied for six years. About the age of seventeen he entered a convent of Dominicans, much against the wishes of his family.

He attended the lectures of Albertus Magnus at Cologne, in whose company he visited Paris in 1245 or 1246. Here he became involved in the dispute between the university and the Begging Friars as to the liberty of teaching, advocating the rights claimed by the latter with great energy. In 1257 he received the degree of doctor from the Sorbonne, Paris, and began to lecture on theology, rapidly acquiring the highest reputation. In 1263 he is found at the Chapter of the Dominicans in London. In 1268 he was in Italy, lecturing in Rome, Bologna, and elsewhere. In 1271 he was again in Paris lecturing to the students; in 1272 professor at Naples. In 1263 he had been offered the archbishopric of Naples by Clement IV., but refused the offer. He died on his way to Lyons to attend a general council for the purpose of uniting the Greek and Latin churches.

He was called, after the fashion of the times, the *angelic doctor*, and was canonized by John XXII. The most important of his numerous works, which were all written in Latin, is the *Summa Theologiae*, which, although only professing to treat of theology, is in reality a complete and systematic summary of the knowledge of the time. His disciples were known as *Thomists*.

References.—Vaughan's *Life of St. Thomas of Aquin;* Townsend's *Schoolmen of the Middle Ages;* and *Histories of Philosophy* by Erdmann and Ueberweg.

Arabi Ahmed (*ä-rä'bē*) ("Arabi Pasha"), leader of the military insurrection in Egypt in 1882, was born in Egypt about 1841. He proclaimed to his troops that he was inspired by the prophet to undertake a holy mission, the motto of which was, "Egypt for the Egyptians," and he thus became the leader of a great rebellion. After his defeat Arabi was banished to Ceylon, but was permitted to return in 1901.

Arago (*ar'ä-gō*), **Dominique,** celebrated French philosopher, was born at Estagel, France, 1786. In 1806 he was engaged with Biot in measuring an arc of meridian. His subsequent life was distinguished by an ardent and successful devotion to science. In 1818 appeared his *Recueil d' Observations géodésiques, astronomiques, et physiques.* He died in 1853.

Aratus (*a-rā'tus*) of Sicyon, Greek statesman, born at Sicyon, Greece, 271 B. C.; died 213 B. C. He liberated Sicyon from the tyrant Nicoles in 251. He is said to have been poisoned by Philip of Macedon.

Arbaces (*är-bā'sēz*), one of the generals of Sardanapalus, and the founder in 876 B. C. of the Median empire. The dynasty of Arbaces lasted until 559 B. C., when Cyrus overthrew it.

Arbuthnot (*är-buth'not* or *är'buth-not*), **John,** British physician and wit, the much-loved friend of Swift and Pope, was born at Arbuthnot, Scotland, 1675. He studied at Aberdeen and University College, Oxford, but took his M. D. degree at St. Andrews, 1696. In 1705 he was appointed physician to the queen, and her death in 1714 was a severe blow to his prosperity. In 1715, along with Pope, he assisted Gay in *Three Hours After Marriage*, a farce. Utterly careless of literary fame, Arbuthnot was the chief, if not the sole author of the brilliant *Memoirs of Martinus*

Scriblerus, first published in Pope's works. He wrote, also, the celebrated *History of John Bull*. Died 1735.

Arc, Joan of. See **Joan of Arc.**

Archimedes (*ăr-ki-mē'dēz*), the most celebrated mechanician of antiquity, was born in Syracuse, Sicily, about 287 B. C., and died 212 B. C. He is said to have visited Egypt in early life, and to have invented there several hydraulic machines, including the Archimedean screw, which he applied to drainage and irrigation. Vitruvius relates that he discovered the principle of specific gravity while pondering the means of detecting a supposed fraud in the debasement of a golden crown of King Hiero with silver, by observing that his body would displace its own bulk of water in a full bath tub, and ran home naked exclaiming, *Eureka, eureka*, "I have found it, I have found it." His purely mathematical works show that he far excelled all who preceded him.

Aretaeus (*ar-ē-tē'us*), a famous Greek physician of Cappadocia, flourished in the latter half of the first and in the beginning of the second century after Christ.

Argand (*ăr'gănˊ*, Eng. *ar'gand*), **Aime,** Swiss physician and chemist, was born in Geneva about the middle of the eighteenth century. He invented the "Argand lamp," which was brought out in England in 1782. Died in Switzerland in 1803.

Argyll (*ar-gīl'*), **Archibald Campbell, Earl of,** was the descendant of Sir Colin Campbell of Lochow or Loch Awe, who was knighted in 1286. Archibald was born in 1598, and in 1619, his father having turned Catholic and quitted Scotland, became the sole potentate of all the broad lands of his line. In 1640 he marched with 4,000 men through Badenoch, Athole, Mar, and Angus, enforcing subjection to the Scottish parliament. Charles, on his visit to Scotland in 1641, created him marquis. After the defeat of Worcester he defended himself for nearly a year in his castle of Inveraray against Cromwell's troops; but in 1652 he submitted to the protector. At the restoration he was committed to the Tower, from there taken by sea to Leith in 1661, and beheaded. A gorgeous monument was erected to him in 1895 in St. Giles's cathedral.

Argyll, George John Douglas, eighth duke of, was born in 1823, and died in 1900. He held important offices in the English government, and was a liberal in politics. His eldest son, the marquis of Lorne, married Princess Louise, daughter of the late Queen Victoria. This is the first instance of the marriage of a daughter of a reigning sovereign of England to a subject. The marquis succeeded to the dukedom on the death of his father.

Ariosto (*ă-rē-ōs'tō*), **Ludovico,** one of the greatest of Italian poets, born at Reggio 1474, died at Ferrara 1533. In 1503 he was introduced to the cardinal Hippolytus d'Este, who employed him in many negotiations. Here he produced his poem *Orlando Furioso*, which was published in Farrara in 1516.

Aristarchus (*ar-is-tär'kus*) **of Samos,** an Alexandrian astronomer, flourished 280-264 B. C. He seems to have anticipated Copernicus, maintaining that the earth moves round the sun. He wrote a treatise on the magnitude and distance of the sun and moon.

Aristides (*ar-is-tī'dēz*), surnamed "the just," was the son of Lysimachus. He was one of the ten leaders of the Athenians against the Persians at the battle of Marathon, 490 B. C. In 477 B. C. he introduced a change of the constitution by which all citizens, without distinction of rank, were admitted to political offices. Died 468 B. C.

Aristippus (*ar-is-tĭp'pus*), the founder of the Cyrenaic school of philosophy among the Greeks, was the son of Artiades, a wealthy gentleman of Cyrene, in Africa, and was born in that city about 425 B. C. He was a pupil of Socrates.

Aristophanes (*ar-is-tof'ă-nēz*), the most celebrated of the ancient Athenian writers of comedy, was contemporary with Socrates and Plato. He was born at Athens, probably about 448 B. C. He wrote, in all, fifty-four comedies, but only eleven have come down to us. *The Knights* and *The Clouds* are among his most admired pieces. Others are *The Wasps*, *The Birds*, and *The Frogs*. One of his finest plays, *The Clouds*, is a satire against Socrates. He died about 380 B. C.

Aristotle, (*ar'is-tot'l*) celebrated Greek philosopher, born in Stagira, Macedonia, in 384 B. C., and died at Chalcis, Euboea, in 322. At 17 years of age he went to Athens, where he resided for 20 years. Plato, his teacher, called him the "intellect of his school." About 343 Philip of Macedon made him the teacher of his son Alexander. His influence on both was for many years great and salutary. Alexander after the conquest of Persia presented him with 800 talents. During his marches he sent him plants and animals, and other things unknown in Greece, for scientific examination. Aristotle returned to Athens about 335 and taught in the Lyceum, a gymnasium near the city. His school is called the Peripatetic, because he taught while walking up and down, or in shady walks. His friendly relations with Alexander were interrupted, yet the Athenians suspected him of partisanship for Macedon, accused him of impiety, and forced him to flee to Chalcis. The most important of his writings bear the titles *Organon* or *Logic*, *Rhetoric*, *Poetics*, *Ethics*, *Politics*, *History of Animals*, *Physics*, *Metaphysics*, *Psychology*, and *Meteorology*. His writings on mathematics, economy, and history are lost, as well as his letters, and a work called *Politiai*, on constitutions. Many books bearing his name are spurious. No other philosopher has exerted so large an influence on so many centuries and nations.

References.—Zeller's *Aristotle and the Earlier Peripatetics;* The chief English works are Grote's *Aristotle*, dealing with the life of Aristotle, the *Organon*, *De Anima*, and *Metaphysics;* G. H. Lewes's *Aristotle; a Chapter from the History of Science*, dealing chiefly with the physics and biology; Sir Alexander Grant's edition of the *Nicomachean Ethics* and introduction to Newman's edition of the *Politics;* Butcher's *Aristotle's Theory of Poetry and Fine Art;* and Cope and Sandys' edition of the *Rhetoric*.

Arisugawa (*ä-rē-su-gä'wä*), **Prince Takehito,** member of Japanese supreme council of war, was born in 1862. He belongs to one of the four imperial families of Japan. Visited England when a naval cadet; was a midshipman for two years on H. M. S. *Iron Duke;* admiral superintendent of Yokosuka; represented Japan at diamond jubilee of Queen Victoria, of England, and again visited England in 1905.

Arius (*ā'ri-us* or *ă-rī'us*), founder of Arianism, was born in Libya about 256 A. D., was trained in Antioch, and became a presbyter in Alexandria. Here about 318 he maintained, against his bishop, that the Son was not co-equal or co-eternal with the Father, but only the first and highest of all finite beings, created out of nothing by an act of God's free-will. He defended his views before the council of Nicaea, 325, but they were condemned. Died at Constantinople, 336.

Arkwright, Sir Richard, noted English inventor, was born 1732, and died 1792. Till the age of 28 he was a barber and afterward a dealer in hair, and in a dye of his own invention. In 1768 he produced the model of his famous cotton-spinning frame, by which thread could be spun of any required fineness and strength and with immense velocity. Need and Strutt (the latter the inventor of the stocking frame) took an interest in it, and a machine driven by a horse was soon in operation. The first patent was granted in 1769. In 1775 Arkwright obtained a new patent, which after litigation was confirmed in 1785. He encountered bitter hostility, especially from the manufacturers, who at one time refused to buy his yarns, and tried to ruin him by mischievous legislation; but he was indomitable, showed remarkable capacity for management, and accumulated a fortune of $2,500,000. He acquired the rudiments of learning after he was 50 years old, and was knighted in 1786, on presenting an address to the king. In 1787 he was high sheriff of Derbyshire.

References.—Lewis' *Heroes of Science;* Coleridge's *Biographia Borelis;* and the *Triumphs of Steam*.

Arminius (*ăr-min'i-us*), a German chieftain, prince of the Cherusci, was born about 18 B. C., and died by assassination in 21 A. D. He became a Roman citizen and served as a soldier in the Roman army. The majority of his life was devoted to the cause of German independence. He defeated the Roman Varrus, twice routed Germanicus, and finally drove the legions beyond the Rhine, thereby winning the title "German Liberator."

Arminius, Jacob, teacher of the system of Arminianism, born 1560, at Oudewater, a small town in Holland. He was ordained at Amsterdam in 1588, and soon became distinguished as a preacher. In 1589 he consented to answer a book which attacked the doctrine of Calvinism, and while preparing to do so embraced the doctrine which he was trying to refute. He was one of the most learned men of his age, a preacher of great popular power and an author of ability. He died in 1609.

Armour, Philip D., merchant, capitalist, head for many years of the great firm of Armour & Company, pork packers and dealers in dressed meats and provisions, was born at Stockbridge, N. Y., 1832, and died at Chicago in 1901. His chief philanthropy was Armour Institute of Technology in Chicago, which was opened in 1893.

Armstrong, John, American soldier and writer, was born at Carlisle, Pa., 1758; died, 1843. He served in the revolutionary war, leaving the service with the rank of major. He wrote the *Newburgh Letters*, setting forth the hardships of the revolutionary soldiers in respect to pay. United States senator from New York, 1800-04; minister to France, 1804-10; brigadier-general in war of 1812; and secretary of war, 1813-14. He was charged with inefficiency in consequence of the capture of Washington, and resigned in September, 1814.

Armstrong, Sir William George, British Inventor was born in 1810 at Newcastle, England. In 1840 he produced much improved hydraulic engine, in 1842 an apparatus for producing electricity from steam, and 1845 the hydraulic crane. Armstrong offered to his government all his inventions. He was knighted in 1859, and in 1887 was created Baron Armstrong; in 1894 he purchased Bamborough castle, to convert it into a retreat for cultured poverty. Died, 1900.

Arnauld (*ăr'nō*), **Antoine,** known as "the great Arnauld," French philosopher and Jansenist theologian, was born at Paris in 1612. Entering the Sorbonne he became a pupil of Lescot, the confessor of Cardinal Richelieu, and afterwards bishop of Chartres. His published works number 100. He died at Brussels in 1694.

Arndt (*ärnt*), **Ernst Moritz,** German poet and patriot, was born in the then Swedish island of Rügen, 1769. He received an excellent education at Jena, but in 1805, after traveling over great part of Europe, he became professor of history at Griefswald. His *Geschichte der Leibeigenschaft in Pommern und Rügen* led to the abolition of serfdom; and in his *Geist der Zeit* he attacked Napoleon with such boldness that, after Jena, he had to take refuge in Stockholm. *Was ist das Deutschen Vaterland?* and others of his fiery songs did not a little to rouse the spirit of Germany. Vigorous in mind and body, beloved and revered by the whole German people as "Father Arndt" he died at Bonn in 1860.

Arne (*ärn*), **Thomas Augustine,** composer, was born in London in 1710, and educated at Eton. He wrote his first opera, *Rosamond*, which was performed with great success in 1733. Next followed his comic operetta, *Tom Thumb;* and afterward his *Comus*. *Rule Britannia*, originally given in *The Masque of Alfred*, is his, as well as two oratorios and two operas, *Eliza* and *Artaxerxes*. He died in London in 1778.

Arnold, Benedict, an American general and traitor was born in Connecticut, 1741. Joined Ethan Allen against Ticonderoga, and later succeeded Montgomery after the attack on Quebec, 1775, becoming a brigadier-general. Refused promotion by congress, and consented to remain in the army only at Washington's request. He secured command of West Point and entered into treasonable negotiations with Sir Henry Clinton for its betrayal. The capture of Major André exposed the plot, and Arnold fled at once. He became brigadier-general in the British army and commanded several minor attacks. He was pensioned by the English government, but despised and neglected by the English people, except the royal family. Died in London, 1801.

Arnold, Bion Joseph, electrical engineer, inventor was born at Casnovia, Mich., 1861; graduated from Hillsdale College, B. S., 1884. Chief designer, Iowa iron works, Dubuque, Iowa; since 1893 independent consulting engineer. Designer and builder intramural railway, World's Columbian Exposition; consulting engineer Wisconsin state railway commission, 1905-07; devised plan for electrically operating trains of New York Central railroad in and out of New York, and member electric traction commissioners engaged in carrying on the work; consulting engineer for city of Chicago to revise street railway system of city, 1902; chief engineer rebuilding Chicago traction system at cost of $40,000,000, 1907, and chairman of board of supervising engineers of the same.

Arnold, Sir Edwin, English author and journalist was born in 1832; educated at King's College, London, and at Oxford; was appointed second master at King Edward VI's. school at Birmingham; resigned this for position of principal of the Sanskrit College of Poona, British India. In 1861 he became connected with the *London Telegraph;* noted as the author of several books among them *Poets of Greece*, etc., and later his well-known poem, *The Light of Asia*. Died 190

Arnold, Matthew, English poet and critic, eldest son of Dr. Arnold of Rugby, was born in Middlesex, England, 1822; was educated at Winchester, Rugby, and Balliol College, Oxford. He was elected fellow of Oriel College in 1845, and 1851, after having been for some time private secretary to Lord Lansdowne, he was appointed lay inspector of schools under the committee of council on education. For ten years, 1857-67, he held the chair of poetry at Oxford. As a critic he holds a very high place. His later works were chiefly theological, being attempts to grapple with the supernatural aspects of Christianity from a rationalistic standpoint. Died 1888.

Arnold, Sarah Louise, educator, born at North Abington, Mass., 1859; graduated State Normal School, Bridgewater, Mass., 1878; A. M., Tufts, 1902; taught in Massachusetts, Pennsylvania, Vermont, and New Hampshire; dean Simmons College since 1902.

Arnold, Thomas, educator and historian, was born in 1795, in the Isle of Wight, and educated at Winchester, and Corpus Christi College, Oxford. In 1815 he became fellow of Oriel. After taking holy orders, he passed nine years at Laleham, near Staines, in literary occupations, and in preparing

young men for the universities. Appointed head master of Rugby school in 1828, he raised that institution beyond all precedent, both by the remarkable success of his pupils and by the introduction of new branches of study into the Rugby course. The best known of Dr. Arnold's works are his edition of *Thucydides*, and his sermons delivered in the chapel of Rugby school. Died 1842.

Arnold of Winkelried, a Swiss of Unterwalden, who, according to tradition, made a way for his comrades into the enemies' ranks at Sempach, in 1386, by grasping an armful of Austrian spearheads and plunging them into his own bosom.

Arrhenius (*ăr-rā'ni-us*), **Svante August,** Swedish chemist, was born in 1859. At nineteen he received the degree of doctor of philosophy from the University of Upsala. His most important contributions are in physical chemistry, more particularly in the theory of solutions, although his study of comets has added greatly to our knowledge of that subject. Received Nobel prize for chemistry, 1903.

Arrian (*ar'i-an*), or **Flavius Arrianus,** Greek historian, was born in Nicomedia, Bithynia, about 100 A. D. The emperor Hadrian made him a Roman citizen and governor of Cappadocia, in 136. When fifty years old he settled in his native city for the rest of his life.

Artaxerxes I. (*ăr-taks-ûrk'sēz*), king of Persia, surnamed Longimanus, the second son of Xerxes, escaped from the conspiracy of Artaban and others, and ascended the throne in 465 B. C. His long reign, extending to 425, was marked by a decline of power. Died 425 B. C.

Artaxerxes II., surnamed Mnemon, succeeded his father, Darius II., in 405 B. C. After gaining the victory over his brother, Cyrus, he became involved in a war with Sparta, which ended with the Antalcidean treaty of peace. Died 361 B. C.

Artaxerxes III., surnamed Ochus, was the son and successor of Artaxerxes II., and reigned in the true style of oriental despotism until 338 B. C. One of his most daring exploits took place in Egypt, where he caused the divine bull Apis to be slaughtered and cooked as ordinary beef. He was poisoned in 338 by his eunuch, Bagoas.

Artevelde (*ăr-te-vel'dē*), **Jacob Van,** popular Flemish leader of the fourteenth century, was a brewer in Ghent. His wealth, eloquence, and talents made him the most prominent man on the side of the citizens in their struggles against Count Louis of Flanders. His power was secure for ten years, but in 1335 he made a treaty with Edward III. of England, persuading him to assume the title of king of France. To strengthen this alliance, he tried to make Edward, the black prince, count of Flanders, when the people rose in rebellion and Artevelde was slain, 1345.

Arthur, Chester Alan, twenty-first president of the United States, son of a Baptist minister, was born in Franklin county, Vt., 1830; graduated from Union College in 1848; was admitted to the bar; appointed United States collector of the port of New York, 1871, served until 1878; was elected vice-president of the United States in 1880, and on the death of President Garfield, 1881, he became president. Died 1886.

Arthur, Julia, actress, was born in Hamilton, Ontario, 1869, of Irish and Welsh parentage; real name, Ida Lewis; first New York success at Union Square theater in *The Black Masque;* London début, 1895, in Henry Irving's company, playing rôles next to Miss Terry. Married, 1898, Benjamin P. Cheney, Jr.

Asbury (*as'bĕr-i*), **Francis,** the first bishop of the Methodist Episcopal church ordained in America, was born in 1745. In 1765 he was appointed general assistant by John Wesley. He brought new life into the work, and at the outbreak of the revolution, when many other ministers returned to England, he kept on in his labors. At the end of the war, it was decided to found an independent Methodist Episcopal church for America, and he was ordained in 1784 as bishop, by his colleagues who had already been ordained by Wesley in England. For more than thirty years he worked earnestly and successfully, and the wonderful progress of Methodism in America was largely due to his efforts and ability. He died in 1816.

Ascham (*as'kam*), **Roger,** English writer and classical scholar, was born in 1515 at Kirby Wiske, in Yorkshire. He wrote, in 1545, a treatise entitled *Toxophilus,* the pure English of which ranks it among the classical pieces of English literature. For this treatise, which was dedicated to Henry VIII., he was awarded a pension. In 1548 he became master of languages to the Lady Elizabeth, afterward queen, and was subsequently appointed Latin secretary. Died 1568.

Ashburton, Lord, Alexander Baring, English diplomat, was born in 1774, eldest son of the eminent merchant, Sir Francis Baring. Having been employed as special ambassador from England to the United States to settle the northeastern boundary question in August, 1842, he concluded the famous treaty called the Ashburton treaty, by which the frontier line was definitely settled. Died 1848.

Ashhurst, John, Jr., American surgeon, educator, and author, was born at Philadelphia, Pa., 1839; acting assistant surgeon of United States army, 1862-65; professor of clinical surgery in University of Pennsylvania, elected in 1877. His two principal works are *Injuries to the Spine,* and *Principles and Practice of Surgery.* Died 1900.

Ashmole, Elias, British antiquary, was born at Litchfield, England, 1617; held the appointment of Windsor herald, and published the *History of the Order of the Garter.* He left many works, and presented to the University of Oxford his valuable collection of coins, specimens, and manuscripts. Died, 1692.

Aspasia (*as-pā'shi-a*), a beautiful Athenian woman, said to have been a native of Miletus in Asia Minor. Socrates is said to have been one of her admirers. In order to marry her, Pericles repudiated his wife. An affront offered to Aspasia is said to have caused the Peloponnesian war.

Asquith (*as'kwith*), **Rt. Hon. Herbert Henry,** prime minister of England, was born in 1852, and entered the British parliament in 1886. He was educated at Balliol College, Oxford, and was admitted to the bar, Lincoln's Inn, 1876. D. C. L., Oxford; LL. D., Edinburgh and Glasgow. On the defeat of the Rosebury ministry in 1895, he resumed practice at the bar. He was one of the most effective speakers on the liberal side during 1903 on the education question and the war commission's report, and during 1903, 1904, and 1905, in opposition to Chamberlain's fiscal policy. Chancellor of the exchequer, 1905. He became prime minister 1908.

Astor, John Jacob, American merchant, founder of the American fur company, was born near Heidelberg, Germany, 1763. After spending some years in London he sailed to America in 1783, and soon invested his small capital in furs. By economy and industry he so increased his means that after six years he had acquired a fortune of $200,000. From this period, in spite of the war of 1812 and other temporary obstacles, his commercial connections extended over the entire globe, and his ships were found in every sea. He died in 1848, leaving property amounting to $20,000,000.

Astor, John Jacob, capitalist, great-grandson of John Jacob Astor, was born at Rhinebeck, N. Y., 1864; graduated at Harvard in 1888; traveled abroad, 1888-91; since then has been manager of the family estates; in 1897 he built the Astoria hotel, New York, adjoining the Waldorf hotel, which was built by William Waldorf Astor, his cousin, the two now forming one building under the name of Waldorf-Astoria hotel. Was colonel, staff of Governor Levi P. Morton, and, 1898, lieutenant-colonel of United States volunteers, in the Cuban war. Drowned at sea 1912.

Astor, William Waldorf, capitalist, author, was born in New York, 1848; son of John Jacob, second, and Charlotte Augusta (Gibbes) Astor; great-grandson of John Jacob, founder of the Astor fortune. Educated by private tutors, finishing in Europe; entered office of the Astor estate, 1871; succeeded his father, 1890, as head of the Astor family. Member of New York legislature, 1878-81; United States minister to Italy, 1882-85; removed to England, 1890; became owner *Pall Mall Gazette,* and *Pall Mall Magazine.*

Athanasius (*ath-a-nā'shi-us*), **Saint,** was born in Egypt about the year 296, entered the church at an early age, and was chosen bishop of Alexandria in 326. He is esteemed one of the most eminent among the ancient fathers of the church. He was a violent opponent of Arius; and his earnest advocacy of the Catholic faith, more particularly of the doctrine of the Trinity, subjected him to much persecution from the emperors Constantine and Julian, by both of whom he was several times exiled. Died in 373.

Athenagoras (*ath-ē-nag'ō-ras*), a Christian philosopher, born at Athens, who lived toward the close of the second century. His conversion to Christianity has been likened to that of St. Paul.

Atherton, Gertrude Franklin, novelist, was born at San Francisco, California, 1858, the daughter of Thomas L. Horn. She was educated at St. Mary's Hall, Benicia, California; Sayre Institute at Lexington, Kentucky; married George H. Bowen Atherton, deceased. Author: *The Doomswoman; Before the Gringo Came; A Whirl Asunder; Patience Sparhawk and Her Times,* etc.

Atticus (*at'ti-kus*) **Herodes, Tiberius Claudius,** a rich Athenian, born about 104 A. D. He was educated by the best masters, devoting special attention to oratory, in which he greatly excelled. His fame rests mainly upon immense expenditures for public purposes. Died 180 A. D.

Atticus, Titus Pomponius, born at Rome 109 B. C., was educated with Cicero and the younger Marius. In 85 B. C. he withdrew to Athens; and, after 65 B. C., when Sulla induced him to return to Rome, he still devoted himself chiefly to study and the pleasures of friendship. None of his own writings have been preserved, but we have 396 epistles addressed to him by Cicero. Died 32 B. C.

Attila (*at'i-lā*), king of the Huns, who lived in the fifth century. He styled himself "the scourge of God," and devastated Lombardy. The city of Venice was founded by those who fled before him. On his death, in 453, his body was buried in three coffins, made of gold, silver, and iron. The captives who dug his grave were put to death.

Atwood, George, British mathematician, was born, 1746; died in London, 1807. He was educated at Cambridge University, became tutor of Trinity College, Cambridge, and invented a machine to illustrate the relations of time, space, and velocity in the motion of a body falling under the action of gravity.

Auber (*ō'bar'*), **Daniel François Esprit,** French composer of operas, was born at Caen, in Normandy, 1782. His opera *Masaniello* is considered his best. Among his works are the well-known operas, *Fra Diavolo, Le Domino Noir, Manon Lescant,* etc. In 1842, after the death of Cherubini, he was appointed director of the conservatory of music, Paris. Died, 1871.

Aubigne (*ō-bēn'yā'*), **Jean Henri Merle d'.** See **Merle d'Aubigne.**

Audubon (*ô'doo-bon*), **John James,** celebrated American naturalist of French descent, was born near New Orleans, La., in 1780; from childhood devoted to natural history, but it was not until 1830 that the first of the four volumes of his great work, *The Birds of America,* appeared. This magnificent collection of plates, which was sold for $1,000 a copy, was quickly followed by explanatory letterpress under the title of *American Ornithological Biography.* Died in New York, 1851.

Auenbrugger von Auenbrug (*ou'en-broog-gĕr fŏn ou'en-brooк*), **Leopold,** Austrian physician, was born in 1722. He originated the method of examining the lungs by percussion of the chest, and published the results of his investigations in a treatise which marks an epoch in the history of medicine. He died, 1809.

Auerbach (*ou'ĕr-bäк*), **Berthold,** German author, was born at Nordstetten in 1812. Having abandoned the study of Jewish theology, he devoted his attention to literature. His first publications were *Judaism and Modern Literature,* and a translation of the works of Spinoza. By some his *Auf der Höhe,* "On the Heights," is regarded as his best novel. *Das Landhaus am Rhein,* is known by the English title, *The Castle on the Rhine.* Died at Cannes, France, 1882.

Auersperg (*ou'-ĕrs-perk*), **von, Anton Alexander,** famous Austrian statesman and poet, whose pen-name was "Anastasius Grün"; was born at Laibach, Austria, in 1806. He was a member of the Frankfort parliament of 1848, and later of the Austrian Reichsrath. Died at Gratz, 1876.

Augereau (*ō-zh-rō'*), **Pierre François Charles,** duke of Castiglione, marshal and peer of France; one of the most brilliant and intrepid of that band of general officers whom Napoleon gathered around himself; was born in 1757. His services were so conspicuous that in less than three years he was made general of a division. In 1797 he was appointed to the command of the army of the Rhine; but after a few months the directory made him commander of the tenth division at Perpignan. In 1800 he received the command of the army in Holland, and was active in several engagements. In 1804 he was made a marshal, and in the following year he commanded a division of the army which reduced the Vorarlberg. Died in La Houssaye, 1816.

Augustine (*ô'gus-tin*) **Aurelius Augustinus, St.** a renowned father of the Christian church, was born at Tagaste, in Africa, in 354, his mother Monica being a christian, his father Patricius a pagan. His parents sent him to Carthage to complete his education, but he disappointed their expectations by his neglect of serious study and his devotion to pleasure. A lost book of Cicero's, called Hortensius, led him to the study of philosophy; but dissatisfied with this he went over to the Manichaeans. He was one of their disciples for nine years, but left them, went to Rome, and thence to Milan, where he became a teacher of rhetoric.

St. Ambrose, the bishop of this city, converted him to the faith of his boyhood, and the reading of Paul's epistles wrought an entire change in his life and character. He retired into solitude, and prepared himself for baptism, which he received in his thirty-third year from the hands of Ambrose. Returning to Africa, he sold his estate and gave the proceeds to the poor, retaining only enough to support him. At the desire of the people of Hippo, Augustine became the assistant of the bishop of that town, preached with extraordinary success, and in 395 succeeded to the see. He entered into a warm controversy with Pelagius concerning the doctrines of free-will, grace, and predestination, and wrote treatises concerning them, but of his various works his *Confessions* is most secure of immortality. He died August 28, 430, while Hippo was besieged by the Vandals.

He was a man of great enthusiasm, self-devotion, zeal for truth, and powerful intellect, and though there have been fathers of the church more learned, none have wielded a more powerful influence. His writings are autobiographical, polemical, homiletic, exegetical. The greatest is the *City of God* (*De Civitate Dei*), a vindication of Christianity. His *Confessions* also gained wide fame.

References.—Schaff's *Nicene and Post-Nicene Fathers;* Milman's *Latin Christianity;* Mosley's

Augustinianism; Cunningham's *St. Austin;* Harnack's *Hist. of Dogma;* and *Monasticism and Confessions of Augustine;* Hatzfeld's *St. Augustine;* Rainy's *Catholic Church;* Schaff's *Life and Labors of St. Augustine;* Baillie's *St. Augustine;* Maccabe's *St. Augustine and His Age.* For an unfavorable estimate, see Allen's *Continuity of Christian Thought.*

Augustus, Caius Julius Cæsar Octavianus, Roman emperor, born 63 B. C., was the son of Caius Octavius and Accia, niece of Julius Cæsar, by whom he was adopted when but four years of age. He was in Epirus when Julius Cæsar was assassinated, but speedily returned to claim his inheritance. At the age of thirty-six he became emperor, with the title of Augustus. His reign was fortunate, good laws were framed in it, and the arts flourished under his protection. He died 14 A. D.

Aurelianus (*ô-rē-li-ān'us*), **Claudius** or **Lucius Domitius,** emperor of Rome, was born in Pannonia, 212 A. D., the son of a peasant; entered the Roman army, his exploits in which attracted the notice of the emperors Valerian and Claudius, and on the death of the latter in 270 he was proclaimed emperor. The emperor's severity made him feared even by his friends, who, as they deemed in pure self-defense, conspired against him and put him to death 275 A. D.

Aurungzebe (*ôr'ung-zeb'*), emperor of India, known as the Great Mogul, was born in 1618. As emperor, his career was brilliant. His sons disturbed his latter days by attempting to depose him. He died in 1707.

Austen, Jane, English novelist; born in 1775, at Steventon, Hants, England, of which parish her father was rector. Her principal productions are *Pride and Prejudice; Sense and Sensibility; Emma; Mansfield Park; Northanger Abbey;* and *Persuasion.* They are distinguished for originality, naturalness, and fidelity of delineation, qualities in which the literature of her time was most deficient. She died at Winchester in 1817.

Austin, Alfred, English poet, novelist, and journalist; born at Headingley, near Leeds, 1835; took his degree at the University of London, 1853; admitted to the bar, 1857; published *The Season, a Satire; The Human Tragedy: Interludes; Savonarola; English Lyrics,* and many other poems, plays, and political papers; made fifteenth poet laureate of England, 1896. Died 1913.

Austin, John, eminent English lawyer and legal writer, was born at Creeling Mill, Suffolk, England, 1790. He was professor of jurisprudence at the University of London from 1826 to 1832. He wrote *Province of Jurisprudence Determined* and *Lectures on Jurisprudence.* Died 1859.

Avebury (*ā'bēr-i*), **Lord.** See **Lubbock, Sir John.**

Averroës (*à-ver'ō-ēz*), originally Ibn Roshd, or, more fully, Mohammed-Ibn-Roshd, the most famous of Arabian philosophers, was born at Cordova, Spain, 1126. Died about 1198.

Avery, Elroy McKendree, author, historian, born at Erie, Monroe county, Mich., July 14, 1844; graduate of University of Michigan, Ph. B., 1871; served in civil war; mustered out at close as sergeant-major of 11th Michigan volunteer cavalry. Member of many historical and economic societies. Author: *Elementary Physics; Elements of Natural Philosophy; Physical Technics; History of the United States;* etc.

Avicenna (*av-ē-sen'à*), properly Ibn Sina or, more fully, Abu Ali Al-Hossein Ibn Abdallah Ibn Sina, a famous Arabian philosopher and physician, whose authority for many centuries passed for indisputable; born 980, at Charmatain, a village near Bokhara. Died 1037.

Avogadro (*à-vō-gà'drō*), **Amadeo,** Italian chemist and physicist, was born at Turin, Italy, 1776; died there, 1856. Professor of physics at Turin; formulated his celebrated law concerning the atomic theory in 1811.

Ayeshah (*ī'ē-shà* or *à'ē-shà*), the favorite wife of Mohammed, was born at Medina in 610 or 611 A. D. She was only nine years of age when she married the prophet. In his last illness Mohammed, by his request, was carried to her house and expired in her arms. After the prophet's death Ayeshah took active part in the plot which deprived Caliph Othman of his power and life, and headed a force to resist the accession of Ali. Died 678.

Baccio della Porta. See **Bartolommeo, Fra.**

Bach, Johann Sebastian, (*bāk*) in some respects the greatest musician that ever lived, son of Johann Ambrosius, was born 1685, and died July 30, 1750. He was treble singer in a choir at Luneburg until his voice changed, when he became a violinist of the court at Weimar. When twenty years old he was organist at Arnstadt, in 1708 became court organist at Weimar, and in 1714 concert master to the duke, with the additional duty of composing and conducting the vocal music of the ducalchapel. After a period of service as chapel master to the court at Kothen, the city authorities of Leipsic elected him in 1723 musical director of the Thomas School, where he labored for the remainder of his life. Bach published few works, but left a great number in manuscript. The Bach society at Leipzig was engaged from 1850 to 1900 in publishing a complete collection of his compositions, which embrace a great variety of church music, both vocal and instrumental and many other works for the organ, harpsichord, orchestra, and every solo instrument in use a century ago. As a virtuoso upon keyed instruments he had no rival.

References.—The most complete edition of his works is that issued at Leipzig by the Bach Society, in 59 folio volumes. See his *Life* by Miss Kay Shuttleworth, and the greatest work on the subject, *J. S. Bach,* by J. A. P. Spitta.

Bach, Karl Philipp Emanuel, German composer, second son of Johann Sebastian, was born at Weimar in 1714; died at Hamburg in 1788. He was probably the most highly gifted of the eleven brothers, and his influence on the development of certain musical forms gives him a prominent place in the history of the art. His most ambitious composition is the oratorio *Israel in the Wilderness.*

Bache (*bāch*), **Alexander Dallas,** physicist, great-grandson of Benjamin Franklin, was born at Philadelphia, 1806. He was president of Girard College 1836-42, where he established a meteorological and magnetic observatory. Died at Newport, R. I., 1867.

Bache, Franklin, physician and chemist, was born at Philadelphia, Pa., 1792; he published *System of Medicine* in 1819; was professor of chemistry in the Philadelphia College of Pharmacy, 1831; held same chair in Jefferson Medical College, Philadelphia, in 1841. Died 1864.

Bacheller, Irving, novelist, was born at Pierpont, N. Y., 1859; graduated from St. Lawrence University, 1882, actively connected with press of New York for years; until recently one of the editors of the *New York World,* Author of *Eben Holden; The Handmade Gentleman;* etc.

Backhuysen (*bāk'hoi-zen*), **Bakhuizen, Ludolf,** a famous marine painter of the Dutch school, was born at Emden in Hanover in 1631, and died at Amsterdam in 1708.

Bacon, Alice Mabel, author, educator, was born at New Haven, Conn., 1858; educated in private schools, and took the Harvard examinations in 1881; taught at Hampton Institute, 1883-88 founded Dixie hospital for training colored nurses, 1890. She has also been successful as a lecturer on Japanese history, character, and domestic life.

Bacon, Augustus Octavius, lawyer, United States senator from Georgia; born in Bryan county, Georgia, 1839; graduate of University of Georgia, 1859; in law practice in Macon, Georgia, 1866-1914; delegate national democratic convention, 1884; presidential elector, 1868. Elected to the United States senate, 1895; reelected, 1901 and 1913. He was for many years a trustee of the University of Georgia, and one of the regents of the Smithsonian Institution. Died 1914.

Bacon, Benjamin Wisner, biblical writer and critic; professor new testament criticism and exegesis in Yale University since 1896; was born at Litchfield, Conn., 1860; graduated from Yale, 1881; B. D., Yale, 1884. Director of the American School of Oriental Research in Jerusalem, Syria, 1905-06. Author: *The Genesis of Genesis; Triple Tradition of the Exodus; Introduction to Literature of the New Testament; The Sermon on the Mount.*

Bacon, Francis, Baron Verulam and Viscount St. Albans, English lawyer, statesman and philosopher, was born at York House, London, 1561. In 1576 he went to France with Sir Amyas Paulett, the English ambassador, and stayed there until his father's death in 1579 recalled him to England. Then he began to study law at Gray's Inn, and in 1584 started on a parliamentary career as member for Melcombe Regis, in Dorsetshire, and soon became distinguished in the House as an orator. The great blot in his career during the reign of Elizabeth was, according to Macaulay and others, his prosecution of his friend Essex, which they maintain was undertaken "voluntarily"; but for this there is no proof.

After the queen's death, in 1603, Bacon rapidly rose in fortune and favor. He was knighted in 1603, became solicitor-general in 1607, attorney-general in 1613, privy councillor in 1616, lord high chancellor and Baron Verulam in 1618, and Viscount St. Albans in 1620.

But his fall was as rapid as his rise. The Parliament of 1620 took up the question of the obnoxious patents consisting in alehouses and inns, and monopolies of gold and silver thread, in which both the king and Buckingham's family were interested. This led to their abolition, on the initiative of Bacon; and his enemies at once started a crusade against "the reformer of abuses." A committee was appointed to inquire into "the abuses of the courts of justice"; and though Bacon denied that he took "rewards to pervert justice," and maintained that he only "partook of the abuse of the times," he was condemned by his peers.

But the sentence on him was never carried into effect; his imprisonment lasted only four days; his huge fine of $200,000 was remitted; his pardon was passed under the great seal—delayed till 1623, because he refused to give up York House, the place of his birth, to Buckingham; a pension of $6,000 a year was granted to him; and he was summoned to resume his seat in the house of lords in 1624.

It was after he retired from political life that Bacon practically began his literary career as one of the world's great philosophers. To that time his only acknowledged works had been several editions of his *Essays*—rewritten and augmented on every occasion with infinite care—his *Advancement of Learning,* in 1605, and his *Novum Organum* in 1620. The last five years of his life were full of work. In March, 1622, he produced his *History of Henry VII.*; in November, 1622, his *Historia Ventorum*; in January, 1623, his *Historia Vitae et Mortis*; in October, 1623, his *magnum opus,* entitled *De Augmentis Scientiarum,* a Latin translation, with large additions, of *The Advancement of Learning*; in December, 1624, *his Apophthegms*; and in 1625 his *Translation of the Psalms.* His last work, *Sylva Sylvarum* (1627), was published posthumously along with the *New Atlantis.*

Bacon was great as a moralist, a historian, a writer on politics, and a rhetorician; but it is as the father of the inductive method in science, as the powerful exponent of the principle that facts must be observed and collected before theorizing, that he occupies the grand position he holds among the world's great. His moral character, however was not on a level with his intellectual, self-aggrandizement being the main aim of his life.

References.—The chief authority on his life and work is James Spedding, who edited *The Letters and Life of Bacon,* in 7 volumes, and his *Works,* also 7 volumes. His *Evenings with a Reviewer* is also worthy of perusal. See also Church's *Life of Bacon,* in the English "Men of Letters Series."

Bacon, Nathaniel, lawyer and member of Governor Berkeley's council in Virginia, leader of an alleged insurrection against the colonial government under pretense of resisting aggressions of the Indians, was born in England about 1642. Berkeley was forced to make many concessions to demands for better government; but he broke his promises, and a brief civil war followed, in which Jamestown was burned, 1676, and the governor took shelter in an English vessel. Died in Virginia, 1677.

Bacon, Roger, English scientist and publicist, was born about 1214. The most learned man of his day, he is reputed to have advocated the change since made in the calendar, to have invented gunpowder, and is known to have manufactured magnifying glasses. Died, 1294.

Baden-Powell (*bā'den-pō'el,* or *pou'el*), **Robert Stephenson Smyth,** British general and inspector-general of cavalry, was born 1857, and educated at Charterhouse, London. In 1876 he joined the 13th English hussars, and served as adjutant of that regiment in India, Afghanistan, and South Africa. In the Boer war he was given command of the 5th dragoon guards, and with a force of 1,200 men was besieged in Mafeking, which he held against the Boers from a few days following the outbreak of the war until May 18, 1900, the longest siege recorded in modern warfare; afterward organized the South African constabulary. He is the author of works on *Reconnoissance and Scouting, Vedette Duty, Cavalry Instruction, The Downfall of Prempeh, The Matabele Campaign,* and on *Pig-Sticking* or *Hog-Hunting.*

Baedeker (*bā'-dē-kēr*), **Karl,** German publisher at Coblentz, the originator of a series of admirable guide books, published since 1872 at Leipzig. Born 1301; died 1859.

Baer, George F., railway official, lawyer; born in Somerset county, Pa., 1842; educated at Franklin and Marshall College. Raised volunteer company in 1862; elected captain. Joined army of Potomac at second battle of Bull Run and took part in all engagements up to and including Chancellorsville, when he was detailed as adjutant-general second brigade; counsel for Philadelphia & Reading, 1870, and later a director. For years confidential legal adviser in Pennsylvania of J. Pierpont Morgan, elected, 1901, president of Philadelphia & Reading railway company, Philadelphia & Reading Coal and Iron company, and Central Railroad company, of New Jersey.

Baer, Karl Ernst von, Russian naturalist, founder of modern embryology, was born in Esthonia, Russia, 1792; died at Dorpat, 1876. He was educated in Germany and became a professor in the University at Königsberg, where, in 1828 he published *The Development of Animals,* a set of careful observations, and philosophical reflec-

tions that are most remarkable for clearness and thoroughness.

Baeyer (*bā'yĕr*), **Adolf,** German chemist, was born at Berlin, Prussia, 1835. In 1872 he became professor of chemistry at the University of Strassburg, and was Liebig's successor at Munich in 1875. He discovered cerulein, eosin, and indol, besides making other valuable contributions to the chemistry of dye-stuff.

Bagehot (*bag'ut* or *baj'ut*), **Walter,** English economist and journalist, was born at Langport, Somerset, 1826. From a school at Bristol he passed in 1842 to University College, London, where he took his M. A. degree in 1848; in 1852 he was admitted to the bar, but joined his father as a banker and shipowner at Langport. His works include *The English Constitution; Physics and Politics; Lombard Street; Literary Studies; Economic Studies,* and *Biographical Studies.*

Baggesen (*bäg'ge-sen*), **Jens,** Danish poet and author, was born at Korsör, in the island of Zealand, 1764, and died at Hamburg, 1826. His German works fill 5 volumes; his Danish 12 volumes. Chief among them are his *Comic Tales. Labyrinthen,* and *Parthenais.*

Bailey, Joseph Weldon, lawyer, United States senator, 1901-13; born in Copiah county, Miss., 1863; admitted to bar, 1883; presidential elector, 1884; removed to Texas, 1885, and began practice of law at Gainesville; presidential elector at large, 1888. He was chosen United States senator to succeed Hon. Horace Chilton in 1901; reëlected in 1907. He is considered one of the ablest lawyers and debaters in the senate.

Bailey, Liberty Hyde, scientist, director of College of Agriculture at Cornell since 1903; born in South Haven, Mich., 1858; graduated at Michigan Agricultural College, M. S., 1882; LL. D.; assistant to Asa Gray, Harvard, 1882-83; professor of horticulture and landscape gardening at Michigan Agricultural College, 1883-88; professor of horticulture, Cornell, 1888-1903. Author: *Survival of the Unlike; Evolution of our Native Fruits; Lessons with Plants; Botany, an Elementary Text for Schools; Principles of Fruit Growing,* etc.

Baillie (*bā'lĭ*), **Joanna,** Scotch poet and dramatist, was born 1762, in Bothwell manse. In 1784 she went to reside in London, and in 1806 took up her residence at Hampstead, where she remained until her death in 1851. Her greatest achievement is undoubtedly the nine *Plays on the Passions.* Her *Family Legend,* produced at Edinburgh under Scott's auspices in 1810, was a great success.

Bailey, Edward Hodges, English sculptor, and member of the Royal Academy, was born in Bristol, 1788; died in London, 1867. The statue of Nelson in Trafalgar square, London, and the bas-reliefs on the south side of the marble arch in Hyde Park are both the work of Bailey.

Bain, Alexander, Scottish writer on mental philosophy, was born at Aberdeen, Scotland, in 1818. In 1860 he became professor of logic in the University of Aberdeen, and lord rector there. His chief works are: *The Senses and the Intellect; The Emotions and the Will; Logic; Mind and Body;* and *Education as a Science.* Died 1903.

Bain, Robert Nisbet, assistant librarian British museum, since 1883, was born at London in 1854; was educated privately. In business in London until 1883. He has published numerous translations from the Russian, Ruthenian, Roumanian, Hungarian, Swedish, Danish, and Finnish, chiefly fairy tales and novels.

Bainbridge, William, American naval officer, was born at Princeton, N. J., 1774, and died at Philadelphia, 1833. He was actively engaged in the Mediterranean in successive command of the frigates *George Washington, Essex,* and *Philadelphia,* was once captured by the French, and had to surrender his ship in the Tripolitan war. In the war of 1812 he captured the British frigate, *Java,* for which congress voted him a gold medal. During the remaining months of the war he had charge of the Charlestown navy-yard.

Baird, Spenser Fullerton, American naturalist, was born at Reading, Pa., 1823. He was educated at Dickinson College, Carlisle, Pa., and was afterward professor of natural science in that institution. He wrote many papers on birds, reptiles, fishes, etc., and under his direction the national museum was begun in 1850. In connection with other editors, he published *The Birds of North America, The Mammals of North America,* and a *History of the Birds of North America,* in five volumes. He died 1887.

Bajazet I. (*baj-ä-zet'*), sultan of the Turks, was born in 1347. In 1389 he succeeded his father, Murad I., who fell in battle near Kossova, fighting against the Servians. In three years he conquered Bulgaria, a part of Servia, Macedonia, and Thessaly. From the rapidity with which these extraordinary conquests were effected he received the name of Ilderim, *i. e.,* lightning. Died 1403.

Baker, Alfred, scientist, educator, professor of mathematics at the University of Toronto since 1887; was born at Toronto; graduated from the University of Toronto, B. A., with gold medal in mathematics. Elected by graduates a member of senate of University of Toronto, 1887-1906; retired from queen's own rifles, 1883, with rank of captain; F. R. S. Canada; and of the American mathematical society; president of the Ontario educational association, 1895; president of section III. royal society of Canada, 1905. Author of articles relating to quaternions, geometry of position, and foundations of geometry in the proceedings of the royal society of Canada; also elementary treatises on synthetic and analytical geometry.

Baker, James H., educator, president of the University of Colorado since 1892; was born at Harmony, Maine, 1848; educated at Bates College, Lewiston, Maine. President national council of education, 1892; president national association of state universities, 1907. Author of *Elementary Psychology; Education and Life,* and *American Problems.*

Baker, Ray Stannard, author, was born at Lansing, Mich., 1870; graduated at Michigan Agricultural College, B. S., 1889; took partial law course and studies in literature at University of Michigan. Has traveled extensively. Member national geographical society. Contributor of many articles and stories to American and English magazines. Was associate editor of *McClure's Magazine,* now of *American Magazine.*

Baker, Sir Samuel White, British African explorer, was born at London, 1821. He explored the western arm of the Nile and discovered the Albert Nyanza lake; organized an extensive agricultural colony in Ceylon; He wrote *Eight Years' Wanderings in Ceylon; The Albert Nyanza; The Nile Tributaries; Ismailia,* etc. Died at Newton Abbot, England, 1893.

Balboa, de, Vasco Nuñez, Spanish conqueror, was born at Xeres-de-Caballeros in 1475. After leading rather a dissolute life in his youth, he took part in the great mercantile expedition of Rodrigo de Bastidas to the new world. An insurrection which took place obtained for Balboa the supreme command in Darien, but he was soon succeeded by Pedrarias Davila, by means of the intrigues of the Spanish court, and in a subordinate situation Balboa made several successful expeditions. On September 25th of 1513 he obtained the first sight of the Pacific Ocean from a mountain-top in the isthmus of Panama. He took possession of it in the name of his sovereign. He was executed in 1517 on the charge of a contemplated revolt.

Baldung (*bäl'-doong*), **Hans,** called also Hans Grün, German painter and wood-engraver, contemporary of Albrecht Durer, was born in Gmund, Swabia, 1476, died at Strassburg, 1545. His masterpiece, a painting of the crucifixion, is in the cathedral of Freiburg; his wood-engravings are numerous.

Baldwin I., first Latin emperor of Constantinople, was born at Valenciennes in 1171. After a life spent in crusading, he died in 1206.

Baldwin, James Mark, psychologist; born in Columbia, S. C., 1861; graduate of Princeton, 1884; A. M., 1887; Ph. D., 1889; Sc. D., Oxford University, England, 1900; professor psychology, Princeton, 1893-1903; professor philosophy and psycholoy, Johns Hopkins, since 1903. Author: *Social and Ethical Interpretations in Mental Development; Story of the Mind; Fragments in Philosophy and Science; Development and Evolution.* Editor-in-chief: *Dictionary of Philosophy and Psychology.*

Baldwin, Simeon Eben, jurist, governor, was born at New Haven, Conn., 1840; graduated from Yale, 1861; studied law at Yale and Harvard law schools LL. D., Harvard, 1891; admitted to bar, 1863. Member faculty, Yale law school since 1869, and now professor of constitutional and private international law; associate justice, 1893-1906, chief-justice 1906-1910, supreme court of errors, Connecticut; governor since 1910.

Balfe (*balf*), **Michael William,** British composer, born at Dublin, Ireland, 1808. After singing at Paris in the Italian opera under Rossini, Balfe returned to Italy and produced in 1840 several operas. In 1835 he went to England as a vocalist composer, and after five years of successful composition he produced two operas in Paris. Died 1870.

Balfour (*bal'foor*), **Arthur James,** British statesman and author, was born in Scotland in 1848; educated at Eton, and Trinity College, Cambridge; secretary for Scotland, with a seat in the cabinet, 1886-87; chief secretary for Ireland, 1887-91, and carried the crimes act through parliament; first lord of the treasury and leader of the house on the death of W. H. Smith, 1891, and again in 1895-1905. On the retirement of Lord Salisbury in 1902, he became prime minister and lord privy seal, retaining the office of first lord of the treasury. When Chamberlain made his fiscal proposals, 1903, Balfour, holding that the country was not ripe for the taxation of food, committed himself and the government only to a policy of retaliation. At the end of 1905 he and his cabinet resigned. Author of *A Defense of Philosophic Doubt; Essays and Addresses; The Foundations of Belief, Being Notes Introductory to the Study of Theology.*

Balfour, Francis Maitland, British biologist, born at Edinburgh, 1851; educated at Trinity College, Cambridge. Between 1879 and 1882 he brought together all that was known about the development stages of animals in his *Comparative Embryology,* a work of the greatest value to students of embryology. In 1882 he and his single guide were killed on the Alps by slipping, while attempting to climb one of the spurs of Mont Blanc.

Baliol (*bäl'yul* or *bal'yul*), **Edward,** son of John Baliol, went to Scotland in 1332, and tried to win the kingdom from King David II., the son of Robert Bruce. With the aid of Edward III. of England, he defeated the Scotch, and was crowned king September 24, 1332. But most of the people did not want him, and after a reign of only three months he fled to England and died there in 1363.

Baliol, John, king of Scotland, was born in 1259. Through his mother who was connected with the royal family, he became a competitor for the throne with Robert Bruce. The question was left to Edward I. of England to decide. He chose John Baliol, who swore obedience to him as his feudal lord. In consequence of his oath, he soon found he had no real power. In 1302 he was allowed to settle on his Norman estates, where he died in 1314.

Ball, Sir Robert Stawell, British scientist, Lowndean professor of astronomy and geometry, Cambridge, director of the Cambridge observatory after 1892, was born in Dublin, Ireland, 1840; graduated from Trinity College, Dublin. Hon. M. A., Cambridge, 1892; LL. D., Dublin. Royal astronomer of Ireland, 1874-92. Author: *A Treatise on the Theory of Screws;* works on astronomy. Died 1913.

Ballantine (*bal'lan-tīn*), **William,** British lawyer, was born in London, 1812; admitted to the bar in 1834, and soon obtained a large practice, chiefly in criminal cases. He wrote *Experiences of a Barrister's Life,* and *Old World and the New.* Died 1887.

Ballou (*bal-lōō'*), **Hosea,** American preacher and founder of the Universalists, was born in New Hampshire, 1771. He was self-educated; was expelled from his father's church on declaring his belief in the final salvation of all men. He started the *Universalist Magazine* in 1819, and in 1831, with his grandnephew, began the *Universalist Expositor,* a quarterly publication. Died 1852.

Balmaceda (*bäl'mä-sä'thä*), **José Manuel,** Chilean statesman, was born in 1840; president of the republic of Chili 1886-91. In the civil war between the congressional party and himself, he was defeated and committed suicide in 1891.

Baltimore (*bŏl'ti-mōr*), **George Calvert, first Lord,** born at Kipling, in Yorkshire, about 1580, entered parliament in 1609, was knighted in 1617, and in 1619 became secretary of state. As early as 1621 he had despatched colonists to a small settlement in Newfoundland, and in 1627 he visited the place. The severe winter induced him to sail southward in search of a more genial country; but his attempts to settle in Virginia led to disputes, and he returned home to obtain a fresh charter. He died in 1632, and the patent was granted in June of the same year to his son, Cecil, second Lord Baltimore.

Balzac (*bäl'zäk*), **Honore de,** a celebrated French novelist, was born at Tours in 1799, died 1850. Before completing his twenty-fourth year he had published a number of novels under various assumed names, but the success attending all was very indifferent; and it was not till 1829, by the publication of *Le Dernier Chouan,* a tale of La Vendée, and the first novel to which Balzac appended his name, that the attention of the public was diverted to the extraordinary genius of the author. A still greater popularity attended his *Physiologie de Mariage,* a work full of piquant and caustic observations on human nature. He wrote a large number of novels, all marked by a singular knowledge of human nature and distinct delineation of character, but apt to be marred by exaggeration.

Among his best-known works are: *Scenes de la Vie de Province; Scenes de la Vie Parisienne; Le Pere Goriot; Eugenie Grandet;* and *Le Medecin de Campagne.* The publication of this last, in 1835, led to a correspondence between Balzac and the Countess Eveline de Hanska, a Polish lady whom, after about fifteen years, he visited and married. A collected edition of his works under the title *La Comedie Humaine* began to appear in 1899. Numerous English translations have appeared, of which the best is the series by Miss Wormeley (1890-3), with a memoir of Balzac.

References.—Saintsbury's *French Novelists,* and Balzac's *Life,* written by his sister; Théophile Gauthier's *H. de Balzac;* Sainte-Beuce's *Contemporary Portraits;* Taine's *Essays;* and Saltus's *Balzac.*

Bancroft, George, American historian, was born in 1800, near Worcester, Mass.; graduated from Harvard College in 1817; proceeded in 1818 to Göttingen, where he studied history and philology Subsequently he traveled through Germany, and formed an acquaintance with Goethe and Schlosser. He soon became celebrated as a democratic politician, and was made collector of customs at Boston. When Polk was elected president, in 1845, he appointed Bancroft secretary of the navy. In the autumn of 1846 he was sent by Polk as ambassador to England, where he remained until 1849, carefully collecting materials for his *History of the United States.* He published the result of his labors in his *History of the Revolution in*

North America. He had already published his *History of the Colonization of the United States of North America.* The whole of these writings are included in the author's *History of America*, a work of solid excellence, the tenth and last volume of which appeared in 1874. Died 1891.

Bancroft, William Amos, president Boston elevated railway company since 1899, was born at Groton, Mass., 1855; graduated from Harvard, 1878; studied at Harvard law school, 1879-81; overseer, Harvard, 1893; Massachusetts volunteer militia since 1875; private to major-general; appointed brigadier-general United States volunteers during war with Spain.

Bandinelli (*bän'dē-nel'lē*, **Baccio,** Italian sculptor, was born 1488, at Florence, the son of a famous goldsmith. His talent, secured him many patrons, and Pope Clement VII. bestowed on him an estate. He died in 1560.

Banér (*bä-när'*), **Johan,** Swedish commander, of a distinguished family, born in 1595. He was so much addicted to literary studies that Gustavus Adolphus styled him his "learned general." He gained many victories; was revered for his humanity, and, having acquired a high reputation, died at Haldberstadt in 1641.

Bangs (*bangz*), **John Kendrick,** author, humorist, was born at Yonkers, N. Y., 1862; graduated from Columbia, 1883; studied law, 1883-84; associate editor *Life*, 1884-88; editor of *Literature*, 1898-99; *Harper's Weekly*, 1898-1900; *Metropolitan Magazine*, 1902-03; *Puck*, 1904-05. Vice-president Yonkers board of education, 1897; Author: *Roger Camerden; Katharine; The New Waggings of Old Tales; Three Weeks in Politics; The Idiot; A House Boat on the Styx; The Pursuit of the House Boat; Ghosts I Have Met; Cobwebs from a Library Corner; Mr. Munchausen; Olympian Nights;* also many stories contributed to syndicates and magazines.

Banks, Sir Joseph, English naturalist, born, according to some accounts, at Beversby abbey, in Lincolnshire; according to others, in London, in 1743; died 1820. In 1766 he made a voyage to Newfoundland and Labrador, collecting plants; and from 1768-71 he sailed with Cook around the world in the capacity of naturalist. He wrote a work on the diseases of plants.

Banks, Nathaniel Prentiss, speaker of the house of representatives, Mass., 1851; governor of Massachusetts, 1858-61; major-general of the United States volunteers, 1861-64; born at Waltham, Mass., 1816. Died 1894.

Banks, Thomas, the first eminent English sculptor, was born at Lambeth, England, 1735. The monuments of Sir Eyre Coote in Westminster abbey, and of Captains Burgess and Westcott in St. Paul's cathedral were among his last works. Died at London, 1805.

Barbarossa (*bär-bä-ros'ä*). See **Frederick I.**

Barbour (*bär'bẽr*), **John,** father of Scottish poetry and history, was born about 1316; paid several visits to England and France; and was archdeacon of Aberdeen from 1357, or earlier, until his death in 1395. His national epic, *The Brus*, was first printed at Edinburgh in 1571.

Barclay de Tolly (*bär'klä dẽ tō'lē*), **Prince Michael,** one of the most distinguished Russian generals, was born in Livonia, 1761. In the year 1806, at Pultusk, as major-general he commanded Benningsen's advance guard. He lost an arm at the battle of Eylau. Although hated by the Russian national party, because regarded as a German, he was appointed minister of war by the emperor Alexander in 1810—an office which he held until 1813. He died in 1818.

Barham (*bär'am*), **Richard Harris,** English poet and humorist, was born at Canterbury, 1788; died in London, 1845. The *Ingoldsby Legends* constitute his chief claim to fame, and were first contributed to *Bentley's Miscellany.*

Baring-Gould (*bā'ring gōōld'* or *bär'ing*), **Sabine,** English clergyman and writer, was born at Exeter, England, 1834; graduated from Clare College, Cambridge; M. A., 1860; vicar, Dalton, Yorkshire, 1866; rector of East Mersea, Essex, 1871; succeeded to rectory of Lew-Trenchard on death of his uncle, 1881. His works cover a wide range of subjects, mythical, legendary, imaginative, historical, religious, and descriptive.

Barker, George Frederick, physicist, professor of physics, University of Pennsylvania, 1872-1900, was born at Charlestown, Mass., 1835; graduated from Sheffield scientific school, Yale, 1858; M. D., Albany, 1863; LL. D., McGill University, Montreal, 1900. United States commissioner Paris electrical exhibition, 1881; received decoration commander legion of honor of France. Expert in poisons, criminal cases. Member National Academy of Sciences; president of the American association for the advancement of science, 1879; hon. member Royal Institution of Great Britain, 1899.

Barlow, Joel, American poet and politician, was born at Connecticut in 1755. He served as a military chaplain during the war of independence. In 1787 he published a poem called *The Vision of Columbus* which in 1805 appeared anew in an enlarged form as *The Columbiad.* He was appointed ambassador to France in 1811; died 1812 at Zarnawicz, near Cracow, when on his way to a conference with the emperor Napoleon at Wilna.

Barnabas (*bär'na-bas*), **Saint,** a disciple of Jesus, whose name was Joses or Joseph, but received from the apostles the surname of Barnabas. He accompanied St. Paul on a religious mission to Antioch, and afterward visited Cyprus with St. Mark.

Barnard (*bär'närd*), **Edward Emerson,** scientist, professor of astronomy, University of Chicago, and astronomer Yerkes observatory; born at Nashville, Tenn., 1857; graduate of Vanderbilt University, 1887; astronomer Lick observatory, California, 1887-95. His principal discoveries are the fifth satellite of Jupiter and sixteen comets.

Barnard, Frederick Augustus Porter, American mathematician, physicist, and educator, was born at Sheffield, Mass., 1809; graduated at Yale in 1828; professor, president, and chancellor, 1854-61, University of Mississippi. In 1864 was elected president of Columbia College, New York; resigned in 1888. Died 1889.

Barnard, George Grey, American sculptor; born at Bellefonte, Pa., 1863; educated at Chicago Art Institute, and at Paris. His statue, the *Two Natures*, is in the Metropolitan Museum, New York, and his *God Pan* in Central park.

Barnard, John Gross, military engineer, was born at Sheffield, Mass., 1815, died 1882. He graduated at West Point 1833; served for seventeen years on the gulf coast, then in the war with Mexico. In the civil war served at Bull Run, in the army of the Potomac, as chief engineer of the defenses of Washington, and on General Grant's staff until Lee's surrender; received the rank of major-general in the United States army.

Barnby, Sir Joseph, English composer and organist; born at York, England, 1838; chorister in Yorkminster; organist St. Andrew's, Wells street, London, 1863-71; precentor and director of musical instruction in Eton College, 1875. His *Rebekah*, a sacred idyll, and *The Lord is King*, both with orchestra; numerous highly interesting "services" and anthems, such as *King All Glorious*, for the church, as well as several secular choruses and songs, have rendered him famous both in England and America. Knighted 1892. Died 1896.

Barneveldt (*bär'nē-velt*), **John van Olden,** grand pensionary of Holland, was born in 1547. Chosen pensionary of Rotterdam in 1576. He was appointed grand pensionary of Holland, and, after a severe contest with the stadtholder Maurice of Nassau and his party, obtained from the Spaniards the recognition of the independence of Holland, and in 1609 concluded a truce for twelve years. Arrested in 1618, he was tried by a special commission, and condemned to death; this sentence, both illegal and unjust, being confirmed by the synod of Dort, the venerable and patriotic statesman was beheaded, 1619.

Barr, James (Angus Evan Abbot), Canadian author, was born at Wallacetown, Ontario, Canada, 1862; educated in the Canadian public schools. From sixteen to twenty-one devoted himself to newspaper work in America, since then a journalist in London. Author: *The Gods Give My Donkey Wings; The Witchery of the Serpent; Laughing Through a Wilderness.*

Barr, Robert, novelist, editor of the *Idler*, was born at Glasgow, Scotland, 1850. He was educated at the Normal school, Toronto, Canada; school teacher in Canada until 1876. Founded the *Idler* magazine with Jerome K. Jerome in 1892, from the co-editorship of which he retired in 1895. Author: *In a Steamer Chair; The Face and the Mask; The Unchanging East; The Tempestuous Petticoat; A Rock in the Baltic.*

Barras (*bä'rä'*), **Count Paul François Jean Nicolas,** French revolutionist, was born 1755, at Fos-Emphoux in Var. An original member of the Jacobin club, he represented Var in the national convention, voted for the king's execution, and had a share in the Girondists' downfall. On subsequent occasions he acted with decision against both royalists and Jacobins; and in 1795, being appointed dictator, he called his young friend Bonaparte to his aid, who assured his own future with the historical "whiff of grape-shot." The directory being appointed, Barras was nominated one of the five members. Once more dictator in 1797, he guided the state almost alone, until his covetousness and love of pleasure had rendered him so unpopular that Bonaparte, with Sieyes' help, overthrew him, 1799. In 1815 he returned, and purchased an estate near Paris with part of the great fortune acquired in the revolution. He died in 1829.

Barrett, John, diplomatist, was born at Grafton, Vt., 1866; graduated from Dartmouth College, 1889. Assistant editor of the *Statistician*, San Francisco; on editorial staff newspapers San Francisco, Tacoma, Seattle; associate editor of the *Telegram*, Portland, Ore., 1891-94; American minister to Siam, 1894-98, settling by arbitration claims involving $3,000,000. American plenipotentiary to the international conference American republics, Mexico, 1901-02. American minister to Argentina, 1903-04, to Panama, 1904-05, to Columbia, 1905-06; director international bureau of American republics since 1906.

Barrett, Lawrence, American actor, was born at Paterson, N. J., 1838; first appearance at Detroit, 1853; from 1864 until his death in 1891 continued as star actor and manager; from 1886 closely associated with Edwin Booth.

Barrett, Wilson, English actor and manager, was born in Essex, England, 1846; in 1879 became manager of the Court theater, London, and in 1881 of the Princess. *The Silver King; Claudian; Hamlet; Hoodman Blind*, and his own Christian melodrama, *The Sign of the Cross*, are among the best plays in which he acted. He died in 1904.

Barrie (*bar'i*), **James Matthew,** novelist, dramatist, was born at Kirriemuir, Scotland, 1860; educated at Edinburgh University, taking his M. A. degree in 1882. After a year and a half as a journalist in Nottingham, he settled in London, and became a regular contributor to the *St. James' Gazette, British Weekly, National Observer, Speaker*, etc. In *Auld Licht Idylls* he opened a new and rich vein, the humor and the pathos of his native village. *The Little Minister*, first novel, came out in *Good Words*, in 1891; it was dramatized in 1897; *Jane Annie* was written with Sir Conan Doyle. Other successful pieces have been *The Professor's Love Story*, his own setting of the *Little Minister; The Admirable Crichton; Little Mary; Peter Pan; Quality Street*, and *What Every Woman Knows.*

Barringer, Paul Brandon, educator, president Virginia Polytechnic Institute, was born at Concord, N. C., 1857; attended University of Virginia, M. D., 1877; University of New York, LL. D., 1878; honorary LL. D., Davidson College, N. C. In 1888 became professor of physiology and materia medica, and 1896-1903, chairman of faculty, University of Virginia.

Barrow, Isaac, English theologian, scholar, mathematician, was born at London, 1630; educated at Cambridge, M. A., 1652. He was ordained in the ministry in 1660, and chosen professor of Greek at Cambridge; professor of geometry, Gresham College, 1662. Published *Elements of Euclid, Treatise on the Pope's Supremacy, Lectures on Mathematics*, etc. Died in London, 1677.

Barrows, John Henry, educator, Presbyterian clergyman, president Oberlin College, Ohio, was born at Medina, Mich., 1847; graduated from Olivet College, Mich, 1867. During the World's Columbian Exposition he was chairman of the general committee on religious congresses. In 1896 he resigned his pastoral charge in Chicago and proceeded to India, to lecture on religious subjects, under the auspices of the Haskell endowment of the University of Chicago. On his return he became lecturer at the latter on comparative religions, and was also lecturer at the Union theological seminary, New York. In 1898 he became president of Oberlin College. Died 1902.

Barrows, Samuel June, legislator, author, clergyman, was born at New York, 1845; graduated from Harvard divinity school, 1875; D. D., Howard University, Washington, D. C., 1897. Editor *Christian Register*, 1881-97; member of congress, tenth district, Massachusetts, 1897-99. President of international prison congress, 1905. Author: *Shaybacks in Camp; Isles and Shrines of Greece;* etc.

Barry, Sir Charles, English architect, designed the two houses of parliament, the Manchester Athenæum, and the grammar school of King Edward VI., at Birmingham. In London he also designed the Travelers' club and the Reformed club, both in Pall Mall, and the college of surgeons, Lincoln's Inn Fields; born at Westminster 1795, died at Clapham 1860.

Barry, James, historical painter, was born at Cork, Ireland, 1741. A protégé of Burke, he studied in Italy, 1766-70, and in 1782 was appointed professor of painting to the Royal academy, from which his irritable temper brought about his expulsion, 1799.

"Barry Cornwall." See **Procter, Bryan Waller.**

Barrymore, Ethel, actress, born at Philadelphia, Pa., 1879; daughter of late Maurice and Georgiana (Drew) Barrymore. Made début in John Drew's company, 1896; played *Priscilla* in *Secret Service*, London; later appeared in leading rôles with Henry Irving.

Barthélemy Saint-Hilaire (*bär'tāl'mē' san'tē'lär'*), **Jules de,** French philosopher, and member of the institute, born at Paris, 1805. He was an intimate friend and confidential secretary of Thiers, ex-president of the third French republic. Died 1895.

Barthez (*bär-tā'*), **Paul Joseph,** French physician and physiologist; born at Montpellier, 1734; professor of medicine at Montpellier, 1759; consulting physician to the king, 1780. Died 1806.

Bartholdi (*bär-tōl'dē*), **Frédéric Auguste,** sculptor, was born at Colmar, Alsace, of Italian ancestry on his father's side, in 1834. His best-known work is the colossal bronze "Liberty Enlightening the World," which was unveiled on Bedloe's island, New York harbor, in 1886. Died 1904.

Bartholdt (*bär'tōlt*), **Richard,** congressman; editor *St. Louis Tribune;* born in Germany, 1855; came to United States in boyhood; classical education; learned printing trade; since then in journalism. Member congress, tenth Missouri district, since 1893.

Bartlett, Paul Wayland, American sculptor; born at New Haven, Conn., 1865; studied at Boston under Fremiet and in Paris under Cavalier. Has produced statues as well as many other works in the art collections of Philadelphia, Boston, Chicago, and Paris.

Bartolommeo (*bär'tō-lōm-me-ō*), **Fra** (properly Baccio della Porta), one of the most distinguished masters of the Florentine school of painting, was born near Florence in 1475. His subjects are mostly all religious, and by far the greater part of his pictures belong to the later years of his life. He was a warm adherent of Savonarola, after whose tragical end he in 1500 assumed the Dominican habit. Bartolommeo died at Florence in 1517.

Barton, Clara, philanthropist, founder and organizer of national Red Cross Society in the United States, president 1881-1904; born in Oxford, Mass., 1830; graduate of Clinton liberal institution, New York. During civil war did relief work on battlefields and organized search for missing men; laid out grounds for national cemetery, Andersonville, 1865; secured adoption of treaty of Geneva, 1882; first president American Red Cross; inaugurated American amendment of Red Cross, to provide for greater calamities of peace; distributed relief Johnstown flood, 1892; at request of president of United States carried relief to Cuba, 1898; did personal field work, Spanish-American war. Died 1912.

Bartsch (*bär sh*), **Karl Friedrich,** German philologist; born at Sprottau, Silesia, 1832; studied at Breslau, Berlin, Halle, Paris, and Oxford; professor of philology at Rostock, 1858-71, at Heidelberg, 1871-88. Died, 1888.

Barye (*ba-rē'*), **Antoine Louis,** French sculptor, born at Paris, in 1795. He was at first an engraver and metal-worker. His famous bronze of a lion struggling with a snake secured for him the cross of the legion of honor. He died at Paris in 1875.

Bascom, John, American educator, former president of the University of Wisconsin, was born at Genoa, N. Y., 1827; graduated in 1849 from Williams College, and six years later from Andover theological seminary; was for twenty years professor of rhetoric at Williams, and for thirteen years president of Wisconsin University. He retired from Wisconsin, 1887, and accepted the chair of political science at Williams from which he resigned, 1901. Author: *Political Economy; Æsthetics; Philosophy of Rhetoric; Principles of Psychology; Philosophy of Religion; Comparative Psychology.* Died, 1911.

Bashford, James Whitford, bishop of Methodist Episcopal church since 1904; was born at Fayette, Wis., 1849; graduate from University of Wisconsin, 1873, A. M., 1876; pastor M. E. churches in Boston, Auburndale, Mass.; Portland, Maine; Buffalo, N. Y., 1875-89; president Ohio Wesleyan University, 1889-1904.

Basil (*baz'il* or *bā'zil*), **Saint,** surnamed the Great, bishop of Cæsarea, where he was born about 329, is one of the most eminent of the Christian fathers. The attempts which St. Basil made to re-unite the two hostile churches of the East and West were unsuccessful. Died 379.

Baskerville, Charles, chemist; born in Noxubee county, Miss., 1870; graduated from University of Virginia, 1890; professor of chemistry, college of the city of New York since 1904. Author: *School Chemistry; Key to School Chemistry; Radium and Its Applications in Medicine.*

Baskerville, John, English printer and letter-founder, born 1706 in Worcestershire; began about 1750 to make experiments in letter-founding, and succeeded in making types which have scarcely yet been excelled. Died 1775.

Bassett, John Spencer, educator; born at Tarboro, N. C., 1867; graduated from Trinity College, N. C., 1888; Ph. D., Johns Hopkins, 1894; professor of history, Trinity College, N. C., 1893-1906, Smith College, Mass., since 1906. Author: *Constitutional Beginnings of North Carolina; Slavery in the State of North Carolina; The War of the Regulation.*

Bastable, C. F., economist, professor of political economy, Dublin University, since 1882; professor of jurisprudence and international law, Dublin University, since 1902; born at Charleville, County Cork, 1855; graduated from Trinity College, Dublin. George Rae lecturer, University College of North Wales, 1905. Author: *Theory of International Trade; Commerce of Nations; Public Finance;* contributor to *Encyclopædia Britannica; Harmsworth Encyclopædia.*

Bastian (*bäs'tē-än*), **Adolf,** German traveler and anthropologist, author of nearly sixty works, was born at Bremen, 1826. In 1866 he became professor of ethnology at Berlin and curator of the ethnological museum. Died, 1905.

Bastian (*bast'yan*), **Henry Charlton,** English physiologist, was born at Truro, Cornwall, 1837, and from a private school at Falmouth proceeded to University College, London, where he became professor of pathological anatomy, 1895, professor of the principles and practice of medicine. He is the champion of the doctrine of spontaneous generation. He has written *Evolution and the Origin of Life; The Brain as an Organ of Mind; Paralyses—Cerebral, Bulbar, and Spinal.*

Bates, Blanche, actress; born in Portland, Ore., 1873. First appearance on stage at Stockwell's theater, San Francisco, 1894; played leading parts in various comedies, 1896-98; appeared in Shakespearian rôles Augustin Daly's company, 1898; later starred in *The Great Ruby, Madame Butterfly,* and in *The Darling of the Gods.*

Bates, John Lewis, governor, lawyer; born at North Easton, Mass., 1859; graduated from Boston University, 1882, law department of same in 1885. Member Boston common council, 1891-92; lieutenant-governor of Massachusetts, 1900-1-2; governor of Massachusetts, 1903-4; director United States trust company. President board of trustees, Boston University.

Bates, Katharine Lee, author, educator; born Falmouth, Mass., 1859; graduated Wellesley College, 1880; 1885-88 instructor English literature; 1888-91 associate professor, and in 1891 professor in charge, Wellesley College.

Bauer (*bou'ĕr*), **Bruno,** German philosophical and historical writer, and biblical expositor of the Hegelian school, was born at Eisenberg, Germany, 1809, and died near Berlin, 1882. His writings embrace a number of critiques on the gospels and Pauline epistles; one on Strauss's *Life of Jesus.* On theological subjects Bauer has been called the "Voltaire of Germany."

Bauer, Louis Agricola, scientist, magnetician; born in Cincinnati, Ohio, 1865; graduated from University of Cincinnati; astronomer and magnetic computer, United States coast and geodetic survey, 1887-92; inspector magnetic work and chief terrestrial magnetism division, United States coast and geodetic survey, 1899-1906; director department terrestrial magnetism, Carnegie Institution since 1906; editor *Terrestrial Magnetism and Atmospheric Electricity.*

Baumgarten (*boum'gär-ten*), **Alexander Gottlieb,** the founder of the science of æsthetics, or the philosophy of the beautiful, was born at Berlin, 1714, studied at Halle under Wolf, and was appointed professor of philosophy at Frankfort on-the-Oder, where he died, 1762.

Baumgartner (*boum'gert-nĕr*), **Karl Heinrich,** German physiologist, was born in Baden, 1798, and died at Baden-Baden, 1886. From 1824 to 1862 he was professor of clinical medicine at Freiburg.

Baur (*bour*), **Ferdinand Christian von,** German theologian, born 1792, at Schmiden, near Stuttgart, was the founder of the Tübingen school of theology. In 1826 he was called to the chair of protestant theology at Tübingen, which he held until his death in 1860.

Bax, Ernest Belfort, barrister-at-law, Middle Temple; author; born at Leamington, England, 1854; was educated privately in London and Germany. In 1885 helped to start the socialist league in conjunction with the late William Morris, and for some time co-edited with him the weekly journal *Commonweal.* Author: *Jean-Paul Marat; Kant's Prolegomena; The Problem of Reality; Socialism, its Growth and Outcome; The Peasants' War in Germany; Essays in Socialism, New and Old; The Roots of Reality.*

Bayard (*bā'yär'*), **Pierre Du Terrail Chevalier De,** French knight, was born near Grenoble, in 1475. He served under Charles VIII., in an expedition against Naples, and in the wars against the English and Spaniards he distinguished himself by his bravery and nobleness of character. He was killed in a battle at the river Sesia, Italy, in 1524. He is known as "the knight without fear and without reproach."

Bayard, Thomas Francis, American statesman, was born at Wilmington Del., 1828. He was privately educated and began the practice of law in his native city in 1851; entered Cleveland's cabinet as secretary of state in the latter year. In 1893 was appointed ambassador to England, the first to hold that rank as a representative of the United States. Died 1898.

Bayle (*bel*), **Pierre,** French skeptic and critic, was born at Carlat, 1647. In 1675 was elected to the chair of philosophy at Sedan; in 1681 at Rotterdam. In 1684 he started *Nouvelles de la République des Lettres.* The revocation of the edict of Nantes led Bayle to write a strong defense of toleration. He died in 1706.

Bazaine (*bā'zen'*), **François Achille,** a marshal of France; born at Versailles 1811; distinguished himself in Algiers, the Crimea, and Mexico. Died at Madrid 1888.

Bazard (*bā'zär*), **Saint Amand,** French socialist, born at Paris, 1791; in 1820 founded an association of French Carbonari, and in 1825 attached himself to the school of Saint Simon. He died in 1832.

Beach, Rex Ellingwood, author, playwright; born at Atwood, Mich., 1877; educated at Rollins College, Winter Park, Fla., 1891-96, Chicago College of Law, 1896-97. Author: *Pardners; The Spoilers; The Silver Sword;* etc.

Beaconsfield, Earl of. See **Disraeli, Benjamin.**

Beale (*bēl*), **Joseph Henry, Jr.,** lawyer, educator; born in Dorchester, Mass., 1861; graduated from Harvard, 1882, A. M., LL. B., 1887; LL. D. Practices law, Boston, 1888-92; teacher of law, Harvard law school since 1890, assistant professor, 1892, professor of law from 1897. Author: *Cases on Criminal Law; Cases on Damages; Cases on Carriers; Innkeepers; Railroad Rate Regulation.*

Beatrice Portinari (*bē'ä-trēs pôr'tē-nä'rē*), Dante's poetical ideal, daughter of a Florentine noble, remarkably graceful and accomplished. Dante first saw her when she was but nine years old, and but seldom afterward; but in his vivid imagination she grew to be the personification of divine truth, and so appears in the *Divine Comedy.* In 1287 she married a citizen of Florence. Born in 1266; died 1290.

Beattie (*bē'ti*), **James,** Scottish poet and writer on philosophy, born at Laurencekirk, Scotland, 1735; died 1803. Professor of moral philosophy in Marischal College, Aberdeen, 1760-97. His fame now rests almost wholly on *The Minstrel,* a descriptive poem written in the Spenserian stanza.

Beatty, John W., director of fine arts, Carnegie Institute, Pittsburg, Pa., born at Pittsburg, 1851; student of Munich Academy of Fine Arts; A. M., Western University of Pennsylvania, 1900; member of many art societies.

Beaufort (*bū'fĕrt*), **Henry,** cardinal and bishop of Winchester, born about 1370; was half-brother to King Henry IV. He was educated in England and Germany, and in 1405 became bishop of Winchester. In 1431 he conducted the young king, Henry VI., to France, to be crowned in Paris as king of France and England. Died 1447.

Beaufort, Margaret, countess of Richmond and Derby, was born 1441, died 1509. She was the daughter of the duke of Somerset, wife of the earl of Richmond (half-brother of Henry VI.), and by him mother of Henry VII. of England.

Beauharnais (*bō'är'ne'*), **Eugène de,** viceroy of Italy during the reign of Napoleon I., and afterward duke of Leuchtenberg, and prince of Eichstadt, born 1781, the son of the vicomte Beauharnais. After his mother's marriage with Bonaparte, he accompanied him in his campaigns in Italy and in the expedition to Egypt; and in 1805, after the erection of the imperial throne, he was made a prince of France and viceroy of Italy. The victory of Lützen was decided by his conduct in that battle. Died 1824.

Beauharnais, Hortense Eugenie de, daughter of Josephine; born in 1783; was married against her will to Louis, youngest brother of Napoleon Bonaparte, from whom she separated in 1810. Her son by him was the late Napoleon III. Died 1837.

Beaumarchais (*bō'mär'she'*), **Pierre Augustin Caron de,** French dramtist and poet, was the son of a watchmaker named Caron, and was born at Paris, 1732; married a widow, Madame Franquet in 1757, and from a little property of hers took the aristocratic name of Beaumarchais. Meanwhile devoting himself to literature, he produced *Eugenie,* a drama in five acts; *Les Deux Amis, ou Le Negociant de Lyon; Le Barbier de Séville;* and *Le Mariage de Figaro.* He died in 1799.

Beaumont (*bō'mont*), **Francis,** English poet and dramatist, best known by his literary partnership with John Fletcher, was born at Grace Dieu, Leicestershire, in 1586; died 1616.

Beauregard (*bō'r ē-gärd*), **Pierre Gustave Toutant,** general of the army of the Confederate States during the civil war, was born near Orleans, La., 1818. At the secession of Louisiana he resigned his commission in the regular army; in 1861 he was appointed by the confederate government to the command at Charleston, S. C., where, on April 12-13th, he commenced the war by the bombardment of Fort Sumter; July 21st he won the battle of Bull Run; after the war he became a railroad president, and in 1878 adjutant general of Louisiana. Died 1893.

Bebel (*bā'bel*), **Ferdinand August,** German social democrat, was born at Cologne, 1840, and in 1860 removed to Leipzig, where in 1864 he established himself as a master turner. He was an effective speaker and writer. Died 1913.

Beccaria (*bek'kä-rē'ä*), **Cesare, Marchese, di,** Italian economist and jurist, was born at Milan, 1738. In 1764 he published anonymously his work on *Crimes and Punishments,* in which he argued against capital punishment and torture. He was among the first to advocate the beneficial influence of education in lessening crime. In 1768 he was appointed professor of political philosophy at Milan; in 1791 he was made a member of the board for the reform of the judicial code. He died 1793.

Becher (*bek'ĕr*), **Johann Joachim,** German chemist, was born at Spires in 1635, and lived successively at Mainz, Vienna, Munich, Würzburg, Haarlem, London, where he died in 1682. His *Physica Subterranea* was the first attempt made to bring physics and chemistry into close relation. Died 1682.

Beck, James M., lawyer, born at Philadelphia, Pa., 1861; graduate of Moravian college, Bethlehem, Pa., 1880. Was admitted to bar, 1884; United States attorney for eastern district of Pennsylvania, 1896-1900; assistant attorney-general of United States, 1900-1903. As master appointed by United States court sold, 1902, the *Philadelphia Record* for $3,000,000—highest price ever brought by an American newspaper at public sale. Entered law firm of Shearman & Sterling, New York, 1903, and removed to that city; also member law firm of Beck & Robinson, Philadelphia.

Becker, Wilhelm Adolf, German author and philologist, was born at Dresden in 1796, died 1846. In 1840 he traveled through Italy; in 1837 was appointed professor of archæology at the University of Leipzig. His lively fancy, aided by a thorough knowledge of the classic languages, enabled him to make a novel use of antiquity. In his *Charikles* he ventured to reproduce the social life of old Greece; and in his *Gallus* to give sketches of the Augustan age at Rome.

Becket, Thomas à, celebrated English prelate, was born at London in 1118, studied at Oxford, Paris, and Bologna, and on his return home entered the church. Henry II. made him high chancellor and preceptor to Prince Henry in 1155, admitted him to the closest intimacy and confidence, and in 1162 raised him to the archbishopric of Canterbury. Becket now entirely gave up his courtier habits, assumed a rigid austerity of manner, and became a stubborn champion of the exorbitant privileges of the clergy. A violent contest ensued between the sovereign and the prelate, and the latter was at length obliged to fly from the kingdom. In 1170, however, he was restored, and he instantly recommenced his resistance to the monarch. He was murdered in Canterbury cathedral 1170.

Beckford, William, an eccentric man of genius, was born at Fonthill, England, 1759. When he was about nine years of age his father died, and he inherited estates in Jamaica, and Fonthill, in Wiltshire. In 1784 he published *Vathek* in French. During all his life he was a hard-working student, but was of a most erratic disposition. Died 1844.

Becquer (*bā-kār'*) **Gustavo Adolfo,** Spanish poet and novelist, was born at Seville, 1836. His weird and fantastic tales are written after the manner of Poe and Heine, and have proved very popular. He left three volumes of poems and legends of which the best known is *Leyendas Espanolas*. Died at Madrid in 1870.

Becquerel (*bek'rel'*), **Antoine César,** French physicist, born at Loiret, France, 1788. While studying the physical properties of yellow amber he had occasion to make experiments on the liberation of electricity by pressure; the result of his inquiries was the overthrow of Volta's theory of contact, and the construction by him of the first constant pile. He is, besides, one of the creators of electrochemistry, and invented a method of electrotyping. Died 1878.

Beddoe, John, physician, anthropologist, born at Bewdley, England, 1826; was educated at Bridgnorth, University College, London, and Edinburgh University, graduating B. A., London, in 1851, and M. D., Edinburgh, in 1853. He served as a surgeon during the Crimean war, and afterward practiced at Clifton, 1857-91. He is the author of *Stature and Bulk of Man in the British Isles; The Races of Britain; Anthropological History of Europe; Color and Race*, etc.

Bede (*bēd*), or **Baeda** (*bē'dà*), surnamed "the venerable," English monk, scholar, and church historian, was born, 673, in the county of Durham, and died at Jarrow, at the monastery of St. Paul, in 735. He is said to have been the most learned Englishman of his day, and in the seclusion of his cell he wrote, besides his important *Ecclesiastical History of England*, which was translated from the Latin by King Alfred into Anglo-Saxon, a number of commentaries, homilies, hymns, and lives of the saints.

Bedford, John, Duke of, third son of Henry IV., was born 1389. In 1414 his brother, Henry V., created him duke of Bedford; and during the war with France he was appointed lieutenant of the kingdom. After Henry's death in 1422, Bedford became guardian of the kingdom, and regent also of France; and, Charles VI. dying two months afterward, he had his nephew proclaimed king of France and England as Henry VI. In the wars with the dauphin which followed, Bedford displayed great generalship and defeated the French at Verneuil in 1424. The appearance of Joan of Arc was followed by disaster to his arms; and in 1435 a treaty was negotiated at Rouen between Charles VII. and the duke of Burgundy, which ruined English interests in France. Bedford's death at Rouen was mainly occasioned by anxiety and vexation. Died 1435.

Beecher, Catherine Esther, eldest child of Lyman Beecher, was born at East Hampton, L. I., 1800. In 1822 she opened a school at Hartford, Conn., and ten years later a seminary for young women in Cincinnati, but was compelled to give it up on account of ill-health two years afterward. She made it the business of her life to improve and advance the intellectual, physical, and practical education of women. She organized societies and schools for training teachers and sending them to new states and territories. In pursuit of this object she published a series of books. Died 1878.

Beecher, Henry Ward, preacher, theologian, lecturer, orator, was born at Litchfield, Conn., 1813; graduated at Amherst college in 1834, studied theology under his father at Lane seminary, Cincinnati. After a pastorate of ten years in two churches in Indiana, he removed to Brooklyn and assumed charge of Plymouth church, "an organization of orthodox Congregational believers." He for many years drew one of the largest and most influential regular congregations in the United States, and his published sermons soon became a power in this and other countries. His reputation as a writer is second only to his celebrity as a preacher. For nearly twenty years he was editor of the New York *Independent*, and in 1870 he became editor of the *Christian Union*, also a religious weekly. His most important works are: *Lectures to Young Men, Industry and Idleness, Life Thoughts*, being selections from his extemporaneous sermons, revised by himself; *The Star Papers*, these last being composed of articles contributed to the New York *Independent*, and the *Life of Christ*. He also edited the *Plymouth Collection of Hymns*. Died at Brooklyn, N. Y., 1887.

Beecher, Lyman, preacher and theologian, was born at New Haven, Conn., 1775; graduated from Yale college, studied theology for a year, and began preaching at East Hampton, L. I., where he remained until 1810. He then went to Litchfield, Conn., where were born his two most famous children, Henry Ward and Harriet (Mrs. Stowe), though nearly all of his thirteen children are well known. He was one of the first pulpit orators of the time. After sixteen years he was called to Hanover Street church, Boston, and during his six years of hard work there engaged in a theological discussion with Dr. Channing. He spent twenty years at the head of Lane theological seminary, Cincinnati. Died at Brooklyn, N. Y., 1863.

Beers (*bērz*), **Henry Augustin,** author, professor of English literature at Yale since 1880, was born at Buffalo, N. Y., 1847; graduated from Yale, 1869. Author: *A Century of American Literature; Odds and Ends* (verse); *Nathaniel Parker Willis; The Thankless Muse* (verse); *From Chaucer to Tennyson; Initial Studies in American Letters; A Suburban Pastoral and Other Tales; The Ways of Yale; A History of English Romanticism in the Eighteenth Century; A History of English Romanticism in the Nineteenth Century; Points at Issue*; contributor to leading magazines.

Beethoven, van (*vān bā'tō-ven*), **Ludwig,** one of the greatest musical composers of modern times, was born at Bonn in 1770. His genius was very early displayed, and his musical education was begun by his father, and continued by the court organist who introduced him to the works of Sebastian Bach and Handel. He soon attempted composition, and showed wonderful facility in improvisation. About 1790, he settled at Vienna, where Mozart quickly recognized his marvelous powers. When about 40 years of age, he was attacked with deafness which became total, and lasted through life. He became, gradually, the victim of morbid irritability, and hopeless melancholy, ending in confirmed hypochondria, and, finally, dropsy and delirium. He continued to compose, however, long after he had ceased to hear himself play, and received homage and honors from all parts of Europe. Died, unmarried, at Vienna, in 1827. The works of Beethoven are very numerous, and in every variety of style—orchestral, chamber-music, pianoforte, and vocal music. Among the most celebrated are the opera of *Fidelio;* the oratorio of the *Mount of Olives;* the cantata *Adelaide; Sinfonia Eroica* (heroic symphony); *Sinfonia Pastorale*—(Pastoral symphony); *Concerto in C Minor; Sonata Pathétique;* and the *Sonata with Funeral March*. Vast power, intense passion, and infinite tenderness are manifested in all his compositions, which abound no less in sweetest melodies than in grand and complicated harmonies. A statue of Beethoven, by Hülmel, was erected at Bonn in 1845.

Begas (*bā'gàs*), **Karl,** German painter, born at Hernsberg, near Aix-la-Chapelle, 1794; became a pupil of Gros at Paris in 1813; studied afterward at Rome, and was a member of the academy and court painter at Berlin from 1825 until his death in 1854. His pictures are partly biblical, partly romantic, and partly genre pieces. Of the first may be mentioned his *Baptism of Christ*, in the style of the old Florentines, which was placed in the garrison church at Potsdam, and his fine fresco of Christ and the four evangelists surrounded by a choir of angels in the church of Cracow. Specimens of the other classes are the *Loreley, Girls Under the Oak Tree, The Vine Dressers*, etc. He is chiefly memorable as a master of light and shade.

Begas, Reinhold, German sculptor, was born in Berlin, 1831; son of Karl Begas. Educated under Rauch and Wichmann, 1846–51; studied in Italy, 1856-58. Principal works: statue of Borussia for hall of glory; Neptune fountain on Schlossplatz; statue of Alexander von Humboldt; statue of Schiller for Gendarmen market, all in Berlin; sarcophagus of Emperor Frederick III. in Friedenskirche, Potsdam, and sarcophagus of Empress Frederick; national monument to Emperor William; statue of Bismarck before the Reichstag Gebäude; several statues in the Siegesalle, Berlin.

Behaim (*bā'hīm*), **or Behem** (*bā'hem*), **Martin,** German navigator and geographer, was born at Nuremberg about 1459, died about 1506; probably a pupil of Regiomontanus; visited Portugal about 1480, and in 1484 was made geographer of an expedition for the exploration of western Africa; knighted by John II. of Portugal. In 1492 he made a terrestrial globe, a gift to his native city, where it is still preserved.

Bekker (*bek'ĕr*), **Immanuel,** German scholar and philologist, was born at Berlin, 1785; died there, 1871. He became professor of philology at Berlin, and edited critical editions of Plato, the Attic orators, Aristotle, Thucydides, Aristophanes, Herodotus, Livy, Tacitus, and other classic writers. His chief independent work was *Anecdota Graeca*.

Belasco (*bē-las'kō*), **David,** dramatic author, was born at San Francisco, 1862; educated at Lincoln college, California. Author (plays): *Zaza; The Heart of Maryland; The Wife; The Charity Ball; Lord Chumley; May Blossom; Men and Women; La Belle Russe; The Girl I Left Behind Me; Valerie; Hearts of Oak; The Darling of the Gods; Du Barry; Sweet Kitty Belairs; Adrea.* Manager of Mrs. Leslie Carter, Davis Warfield, Blanche Bates, and Frances Starr.

Belisarius (*bel'i-sā'ri-us*), the great general of Justinian, was born in Illyria about 505. After commanding an expedition against the king of Persia about 530, he suppressed an insurrection at Constantinople, conquered Gelimer, king of the Vandals, and put an end to their dominion in Africa. In 535 he was sent to Italy to carry on war with the Goths, and took Rome in 536. He was afterward sent against the Persians and Huns, and in 563 was charged with conspiracy against Justinian, but was acquitted. That he was deprived of sight and reduced to beggary appears to be a fable of late invention. Died 565.

Bell, Alexander Graham, scientist, inventor, born in Edinburgh, Scotland, 1847; educated at Edinburgh and in London University; LL. D., Ph. D.; invented telephone, for which patent was granted February 14, 1876; invented the graphophone, 1883. Regent Smithsonian Institution. Officer French legion of honor. Member national academy of sciences and other scientific organizations. Author of many scientific and educational monographs.

Bell, Sir Charles, British physician and anatomist, famous for his discoveries in the nervous system, was born at Edinburgh, Scotland, 1774. In 1807 he distinguished between the sensory and motor nerves in the brain. In 1812 he was appointed surgeon to the Middlesex hospital, which his clinical lectures raised to the highest repute. To study gunshot wounds, he went to Haslar hospital after Corunna in 1809, and after Waterloo took charge of a hospital at Brussels. Knighted in 1831, and professor of surgery at University of Edinburgh from 1836; he died in 1842.

Bell, Henry, who introduced steam navigation into Europe, was born at Torphichen, Linlithgowshire, 1767. In 1812 he launched the *Comet* on the Clyde, the first steam vessel on European waters. The engine, at first of three horsepower, was afterward increased to six. He died at Helensburg 1830.

Bell, James Franklin, army officer, was born at Shelbyville, Ky., 1856; graduated from United States military academy, 1878; served on plains in 7th United States cavalry, 1878-94; organized 36th infantry United States volunteers in Philippine Islands, 1899; appointed brigadier general of United States army, 1901; returned to United States in 1903; commandant of infantry and cavalry school, signal school and staff college to April, 1906; major-general, 1907.

Bell, John, English sculptor, born in 1811, first exhibited in 1832, and has produced numerous admirable works in monumental, religious, and imaginative art. His last great work was the group *The United States Directing the Progress of America*, for the base of the Prince Consort memorial, in London. Died 1895.

Bell, John, American politician, was born near Nashville, Tenn., 1797; was admitted to the bar, 1816; member of congress from Tennessee, 1827-41; nominated by the constitutional union party for president, 1860, and received the electoral vote of Tennessee, Kentucky, and Virginia. Died, 1869.

Bell, Robert, chief geologist geological survey of Canada; acting director, 1901-06; was born at Toronto, Ontario, 1841; was educated at McGill and Edinburgh Universities; D. Sc., McGill; LL. Queen's; F. R. S., 1897. Joined geological survey of Canada, 1857; has made very extensive topographical and geological surveys in nearly all parts of the Dominion since 1857; has been Canadian correspondent of the Royal Scottish Geographical Society ever since its foundation, and a member of many scientific societies; was a royal commissioner on the mineral resources of Ontario, 1888-89; professor of chemistry and natural science in Queen's University, Kingston, 1863-67.

Bellamy (*bel'àmi*), **Edward,** American novelist and economist, born at Chicopee Falls, Mass., 1850. He was educated in Germany; admitted to the bar; was on the staff of the New York *Evening Post* in 1871-72; and on his return from the Sandwich Islands in 1877 founded the Springfield *News*. Author of *Looking Backward*, etc. Died 1898.

Bellarmine (*bel'lär-min* or *mēn*), **Robert,** celebrated Roman Catholic theologian; was born at Monte Pulciano, in Tuscany, 1542. He entered the order of Jesuits in 1560, and in his twenty-seventh year, when he went to Louvain as professor of theology, began that long controversy with

heretics which formed the main business of his life. In 1599 he was made a cardinal against his own inclination. Died 1624.

Bellew (*bel'ū*), **Harold Kyrle-Money,** English actor; was born in Calcutta, 1857; made stage début at Theater Royal, Brighton; became leading man and star in London; came to United States as leading man in Wallack's theater, New York, October, 1885. Headed exploration expedition in northern Queensland, 1900-02, returning to stage at head of own company in United States, October, 1902. Died, 1911.

Bellini (*bel-lē'nē*), **Gentile,** Venetian painter, was born about 1427, died 1507. He was employed, with his brother, Giovanni, to decorate the great council-chamber of the Venetian senate-house.

Bellini, Giovanni, Venetian painter, brother to Gentile Bellini, and with him the founder of the Venetian school of painting, was born 1426; died 1516. His best works are altar pieces. Among his more famous pictures are his *Infant Jesus; Holy Virgin,* and *Christ and the Woman of Samaria.*

Bellini, Vincenzo, Italian composer of operas, was born at Castania, in Sicily, in 1802. He was sent to the conservatoire of Naples, where he studied composition. He visited Paris and London, and died near Paris in 1835. Among his best works are *Norma, I Puritani,* and *La Sonnambula.*

Bellmann (*bel'mān*), **Karl Mikael,** Swedish poet, was born at Stockholm, 1740; became court-secretary in 1775, and died in 1795. His later and more brilliant pieces are chiefly bacchanalian, idyllic, or humorous songs, for which he also furnished original melodies. A monument was erected to his memory at Stockholm in 1829.

Belloc (*be-lok'*), **Hilaire, Joseph Peter,** English writer and politician, was born in 1870; graduated from Balliol College, Oxford, 1895. Author: *Verses and Sonnets; The Bad Child's Book of Beasts; More Beasts for Worse Children,* etc.

Bellows, Henry Whitney, Unitarian divine and writer, was born at Walpole, N. H., 1814; graduate of Harvard and of Cambridge divinity school; in 1838 became pastor of All Souls church, New York; was instrumental in establishing the *Christian Enquirer* in 1846. He did excellent service as presiding officer of the sanitary commission during the war of the rebellion. Died 1882.

Bell-Smith, Frederic Marlett, artist; president of the Ontario society of artist; born at London, 1846; studied drawing at South Kensington, London; went to Canada, 1867; charter member society of Canadian artists, 1867; director Toronto art school, 1889-91; lecturer and writer on art subjects.

Belmont August, banker was born at New York, 1853; son of prominent banker of the same name, now deceased; graduate of Harvard, 1874, and at once entered the bank; now head of August Belmont & Company; American representatives of European banking firm of Rothschilds.

Belmont, August, American politician and financier was born at Alzey, Germany, 1816; representative of the Rothschilds in the United States; art collector and turfman; United States minister to the Netherlands, 1854-58.

Belmont, Perry, lawyer; was born at New York, 1851; graduated from Harvard in 1872; studied civil law, University of Berlin; LL. D., Columbia Law School, 1876; practiced law until 1881; member of congress, 1880-87; chairman committee on foreign affairs, 1885-87; United States minister to Spain, 1887-88. Inspector general with rank of major 1st division 2d army corps, United States volunteers, 1898.

Belshazzar (*bel-shaz'ar*), the last king of Babylon of the Chaldæan dynasty, began to reign about 554 B. C. The hand-writing on the walls of his palace, its interpretation by Daniel, the taking of Babylon by Cyrus the Great, and Belshazzar's death in 538 B. C. are familiar to all Bible readers.

Bem (*bem*), **Joseph,** Polish general, born in Galicia in 1795; served in the French campaign against Russia, 1812; took part in the Polish insurrection of 1830; joined the Hungarian army in 1848, defeated the Austrians in several battles, and after the defeat of Temesvar took refuge in Turkey, became a Mohammedan, and was made a pasha. Died 1850.

Bembo (*bem'bō*), **Pietro,** Italian scholar, was born at Venice, 1470, and died at Rome, 1547, having in 1513 been made secretary to Leo X., and in 1539 a cardinal by Paul III., who afterward appointed him to the dioceses of Gubbio and Bergamo.

Bemis, Edward Webster, educator, economist, was born at Springfield, Mass., 1860; graduated from Amherst, 1880; A. M., 1884; Ph. D., Johns Hopkins, 1885; professor of history and political economy, Vanderbilt University, 1887-92; associate professor political economy, University of Chicago, 1892-95; now superintendent water works, New York.

Bendemann (*ben'dē-mān*), **Eduard,** German painter of the Düsseldorf school, was born at Berlin in 1811. From 1859 until 1867 he was director of the Düsseldorf Academy. He died in 1889.

Benedek (*bā'ne-dek*), **Ludwig von,** Austrian general born at Odenburg, in Hungary, 1804. After having served with great distinction he obtained in 1866 the command of the Austrian army against Prussia, and lost the decisive battle of Sadowa on July 3d. Died 1881.

Benedict, Saint, one of the originators of monastic institutions in the West, was born at Nursia, in Italy, 480. Early in life he retired into a desert and spent three years in a cavern. Being discovered, his sanctity drew to him such numbers of people that he founded twelve convents. In 529 he went to Monte Cassino, built a monastery on the site of the temple of Apollo, gave rise to the Benedictine order, and died in 543.

Benedict XIII., Pope, son of the duke of Gravina, a Neapolitan nobleman, was born in 1649, and was raised to the papal chair in 1724. He was pious, virtuous, and liberal. A fruitless appempt which he made to reconcile the Roman, Greek, Lutheran, and Calvinist churches, bears testimony to his tolerant spirit. He died in 1730.

Benedict XIV., Prospero Lambertini, the most worthy to be remembered of all the pontiffs so named, was born at Bologna in 1675; began his pontificate with several wise and popular reforms; revived the Academy of Bologna; executed several public works in Rome; caused the best English and French books to be translated into Italian, and in various ways gave encouragement to literature and science. Died 1758.

Benedict XV., Pope, was elected to the Holy See, September 3, 1914, as Cardinal Giacoma della Chiesa. He is of noble blood, and was born November 21, 1854, at Pegli, Italy, a son of the Marchese della Chiesa; ordained a priest 1878; was secretary of the nunciature in Spain, 1883–1887; secretary to Cardinal Rampolla, 1887–1901; substitute secretary of state at the Vatican, Rome, 1901; adviser to the Holy Office and Archbishop of Bologna, 1907; and made Cardinal, 1914. He is described as a man of pronounced spiritual character, a firm opponent of modernism, quiet and reserved in manner, but the possessor of a very active mind. His first public utterance was an exhortation for the peace of the world.

Benedict, Sir Julius, German composer, was born at Stuttgart, Wurtemberg, 1804, died at London, 1885. His operas include *The Gipsy's Warning; The Bride of Venice; The Crusaders; The Lily of Killarney.*

Bennett, James Gordon, American journalist; was born in Scotland in 1795 and died in 1872. In 1819 emigrated to America, and became a journalist in New York. In 1835 he issued the first number of *The Herald,* a journal which, through his great ability and enterprise, soon commanded world-wide attention. The first speech ever reported in full by the telegraph was sent to *The Herald.*

Bennett, James Gordon, journalist, capitalist, proprietor of *New York Herald;* was born in New York, 1841, son of journalist of same name inherited *The Herald* and a large fortune in 1872; inaugurated publication in England of storm warnings transmitted from the United States; sent Henry M. Stanley to Africa to find Livingstone, 1874-77; is a prominent yachtsman.

Benson, Edward White, English prelate and primate of all England, 1882-96, was born in 1829 and died in Flintshire, Wales, 1896; graduated at Trinity College, Cambridge; taught for a while at Rugby; in 1877 was consecrated bishop of Truro. In 1882, on the recommendation of Gladstone, the crown appointed him successor to Dr. Tait in the archbishopric of Canterbury. He held this high office in the church until his death.

Bentham, Jeremy, English writer on ethics and jurisprudence; born at London in 1748; admitted to the bar in 1772. In all his ethical and political writings the doctrine of utility is the leading and pervading principle; and his favorite vehicle for its expression is the phrase *the greatest happiness of the greatest number.* He died in 1832.

Bentley, Richard, English classical scholar; born at Oulton, in Yorkshire, 1662. In 1676 entered St. John's College, Cambridge. In 1690 he published his dissertation upon the epistles of Phalaris, which may be said to have commenced a new era in scholarship. In 1700 he was appointed master of Trinity College, Cambridge. Died 1742.

Benton, Thomas Hart, American statesman, born in North Carolina in 1782, commenced legal practice at Nashville, Tenn., in 1811, and settled at St. Louis, Mo., in 1815; was elected United States senator in 1820, when he became a prominent supporter of General Jackson. He held a seat in congress for a period of thirty years, during which he voted for the annexation of Texas, and against the doctrines of nullification and state rights. Died 1858.

Béranger (*bā'rān'zhā*), **Pierre Jean de,** French lyric poet, born in Paris, 1780, was of humble parentage, and became apprenticed to a printer. In 1815 he began to bring out a collection of national and other songs. His poems contributed in no small degree to the revolution of 1830. In 1833 a fifth series of his lyrics appeared, and in 1848 he was elected to the assembly, but declined to serve. Died in 1857.

Beresford (*ber'es-fērd*), **Lord Charles William de la Poer,** British admiral, was born in Ireland, 1846; educated at Bayford school, Rev. Mr. Foster's, Stubbington, Fareham, Hants. Entered *Britannia* as cadet, 1859; rear-admiral, 1897; naval A. D. C. to the queen, 1896-97; M. P. Waterford, 1874-80; commanded *Condor,* bombardment Alexandria, 1882; in command of naval brigade at battles of Abu Klea, Abu Kru, and Metemmeh; a lord commissioner of the admiralty, 1886; visited China on a special mission, at request of associated chambers of commerce of Great Britain, 1898-99; rear-admiral, Mediterranean, 1900-02; commanded channel squadron, 1903-05; admiral, 1906. Author: *Life of Nelson and His Times.*

Bergman (*ber'mān*), **Torbern Olof,** Swedish chemist and naturalist, was born at Katharinberg, Sweden, 1735; studied at Upsala, and in 1761 was appointed adjunct in mathematics and natural philosophy; professor of chemistry, 1766. Died 1784.

Bériot (*bā'rē-ō*), **Charles Auguste de,** Belgian composer and violinist, born in Louvain, 1802. In 1836 he became the husband of the famous singer, Malibran. In 1842 he was made professor in the Brussels conservatoire, but resigned ten years after in consequence of failing eyesight. Died 1872.

Berkeley, George, British divine and philosopher, and bishop of Cloyne, was born in Ireland in 1685. On his return from a visit to America he was raised to the episcopate. In philosophy he is an idealist, and his doctrines are the natural reaction against the prevalent materialism of his age. Died 1753.

Berkeley, Sir William, governor of the colony of Virginia, was born at London, England, 1610. He was appointed governor of Virginia in 1641 but resigned in 1651, upon the accession of Cromwell. He was the author of *A Discourse and View of Virginia,* and a drama called *The Lost Lady.* Died 1677.

Berlichingen (*ber'lix-ing-en*), **Gotz** or **Gottfried von,** German knight, was born in 1480. He took part in the war of the peasants against the nobles, and was sentenced by Maximilian I. to pay a heavy fine. Goethe made his achievements the subject of one of his dramas. He died in 1562.

Berlioz (*ber'lē-ōs'*), **Hector,** French composer, was born at La Cote St. Andre, 1803, and died in 1869. His best productions are the symphonies *Harold* and *Romeo and Juliet.*

Bernadotte, Jean Baptiste. See **Charles XIV.**

Bernard (*ber'nār'*), **Claude,** French physiologist, born near Villefranche, 1813; studied medicine at Paris, and in 1841 became assistant at the Collége de France to Magnedie, with whom he worked until his own appointment in 1854 to the chair of general physiology, and whom he succeeded in 1855 as professor of experimental physiology. He was elected to the academy in 1869, and died at Paris, 1878. His *Lecons de Physiologie Experimentale* is still a standard work.

Bernard (*bĕr'nārd* or *bĕr-nāed'*), **Saint,** of Clairvaux, was born of a noble family at Fountaines, near Dijon, in Burgundy, 1091; in 1113 entered the Cistercian monastery of Citeaux, and in 1115 became the first abbot of the newly-founded monastery of Clairvaux, in Champagne, where he died, 1153. He was canonized in 1174. His studious, ascetic life and stirring eloquence made him the oracle of Christendom. He was one of the greatest of the Latin hymn writers, many modern hymns being based on his *Jesu Dulcis Memoria.*

Bernardin de St. Pierre (*bār'nār'dan' dē san' pyār'*), **Jacques Henri,** French writer, the admired author of *Paul and Virginia, Studies of Nature,* etc., was born at Havre in 1737. He was an engineer in Russia and France, 1767-1771, settling in Paris the latter year. He then became professor of morals at the normal school and a member of the institute. Died 1814.

Bernhardt, Rosine Sarah, famous French tragic actress, widow of M. Jocques d'Amala, was born at Paris in 1844. Her parents were Jews, but she was educated in Grandchamp convent at Versailles. She made her first appearance on the stage in 1862, at the Théatre Francais. In 1867 her playing the part Marie de Neuberg in Victor Hugo's *Ruy Blas* made her famous. She now directs a theater of her own in Paris.

Bernini (*ber-nē'nē*), **Giovanni Lorenzo,** known as the Cavaliere Bernini, was born in Naples in 1598. He was eminent as a painter, an architect, and a sculptor; and his merit entitled him to the rewards which he had the good fortune to receive from Louis XIV. He died in 1680.

Bernoulli (*ber-nōō'yē*), **Daniel,** Swiss mathematician and physicist, was born at Groningen in 1700, died at Basel in 1782. He was the son of John, and like his father devoted himself to medicine as well as to mathematics. At Basel he occupied in succession the chairs of anatomy and botany, and of experimental and speculative philosophy. He published various works between 1730 and 1756.

Bernoulli, James B., was born at Basel in 1654, where he also died, 1705. He devoted his life to the study of mathematics of which he became professor in the University of Basel. Among his triumphs are to be recorded his solution of Leibnitz's problem of the isochronous curve, and investigation of the properties of isoperimetrical figures.

Bernoulli, John B., brother of the preceding, was born at Basel, 1667. He and James were the first two foreigners honored by the Academy of Sciences at Paris. In 1694 he became a doctor of medicine, and soon after professor of mathe-

matics at Groningen. His forte was pure mathematics, in which he had no superior in Europe in his day. He died in 1748.

Berosus (*ber-ō'sus*), an eminent Babylonian historian, was born in the fourth century B. C.; was a priest in the temple of Belus and wrote, in Greek, upon history and astronomy.

Bert (*bâr*), **Paul,** French physiologist and republican anti-religious statesman, was born at Auxerre, 1833, and died at Tongking, 1886. He was minister of public instruction in Gambetta's cabinet, 1881-82.

Berthelot (*ber't'-lō'*), **Pierre Eugene Marcellin,** French chemist, was born at Paris, 1827, and in 1860 became professor of organic chemistry in the Ecole de Pharmacie; in 1865 in the Collége de France; in 1889 perpetual secretary of the Academie des Sciences. He did very important work in synthetic chemistry, and wrote a history of alchemy. He died in 1907.

Berthier (*ber'ty'ā*), **Louis Alexandre,** prince of Neuchatel and Wagram, and marshal of the French empire, was born at Versailles, 1753. He entered the army in 1770, and fought with LaFayette in the American revolutionary war. Berthier was Napoleon's proxy in the marriage of Maria Louisa, at Vienna, 1810. In the campaigns of 1812, 1813, and 1814 he was constantly by the emperor's side, and acted both as chief of staff and as quartermaster-general. Died 1815.

Bertillon (*ber't'ē'yŏn'*), **Alphonse,** French anthropologist, head of indentification department in the prefecture of police of the Seine; born at Paris, 1853; founded his system of mensuration, known as the *Bertillon System,* in 1880. Author: *Ethnographie Moderne, les Races Sauvages; L'Anthropometrie Judiciarie a Paris ēn* 1889. Died 1914.

Berwick, James Fitzjames, Duke of, was born in 1670, at Moulins, France, and served with distinction in Hungary, Ireland, and Flanders. In four subsequent campaigns he successfully defended dauphine against the attempts of the duke of Savoy. His last service in the succession war was the reduction of Barcelona. Died, 1734.

Berzelius (*bĕr-zē'li-us*), **Johan Jakob,** Swedish chemist, was born at Westerlosa, in East Gothland, Sweden, 1779; died, 1848. He was a baron and senator of the kingdom. He was the author of what is known as the dualistic (or binary) theory of the chemical constitution of compounds, and devised the form of symbolic notation now employed. His reputation was world-wide, and his accurate investigations exerted very great influence on the development of scientific chemistry.

Besant (*bez'ant* or *bes'ant*), **Annie,** president British theosophical society; author and lecturer on religious, philosophical, and scientific subjects; was born in London in 1847. Founded in 1898 the Central Hindu College at Benares; 1904, the Central Hindu Girls' School, Benares; 1917, the University of India. Author: *Re-incarnation; The Wisdom of the Upanishats,* etc.

Besant (*bē-sant'*), **Sir Walter,** English novelist, was born at Portsmouth, England, 1836. He studied at King's College, London, and at Christ's College, Cambridge. His first work, *Studies in French Poetry,* appeared in 1868. Sir Walter wrote *All Sorts and Conditions of Men; All in a Garden Fair; Dorothy Foster; Children of Gibeon; Armorel of Lyonesse; The Ivory Gate; Beyond the Dreams of Avarice; The Master Craftsman,* etc. Knighted in 1895, he died in 1901.

Bessel (*bes'el*), **Friedrich Wilhelm,** German astronomer, was born at Minden, Prussia, 1784, died at Königsberg, 1846. He attracted the attention of Olbers by his computation of the orbit of the comet of 1607 from observation which had just been discovered; appointed director of the new observatory at Königsberg, where the rest of his active life was passed. His investigations into the length of the seconds-pendulum and that of standards of length were of the highest importance.

Bessemer (*bes'ē-mĕr*), **Sir Henry,** English engineer and inventor, born at Charlton, England, in 1813; of his many inventions the chief is the process named after him, of converting pig-iron into steel at once by blowing a blast of air through the iron while in fusion until everything extraneous is expelled, and only a definite quantity of carbon is left in combination. He was knighted in 1879, and died in 1898.

Bessey, Charles Edwin, scientist, professor of botany in the University of Nebraska since 1884; born on a farm in Milton, Ohio, 1845; graduate of Michigan Agricultural College, 1869; Ph. D., LL. D.; acting chancellor of University of Nebraska 1888-91 and 1899-1900. botanical editor of *American Naturalist,* 1880-97 and of *Science* since 1897. Author: *The Essentials of Botany; Botany for High Schools nd Colleges,* etc.

Bethmann-Hollweg (*bāt'man hol'vāk*), **Dr. Theobald von,** statesman, philosopher, imperial chancellor of the German empire, was born at Hohenfinnow, near Berlin, Prussia, in 1856; of Jewish lineage; educated at the University of Bonn; elected to the Reichstag in 1890; named imperial chancellor in succession to Prince von Bülow, 1909.

Beust (*boist*), **Friederick Ferdinand, Count,** German statesman, was born at Dresden in 1809. He devoted himself to politics and was employed by his government in different services in Berlin, Paris, and London. He completely reorganized the Austrian empire, and the present constitution was his work. He was Austrian ambassador at London, 1871-78. He died in 1886.

Beveridge, Albert Jeremiah, lawyer, writer, United States senator from Indiana, 1889-1911. Born in 1862; graduated from De Pauw University, Indiana, 1885; read law in office of Senator McDonald, became managing clerk; admitted to bar and was associated with McDonald & Butler until he began practice for himself; elected to the United States senate, 1899, and 1905.

Beza (*bē'zā*), **Théodore,** Genevese reformer, was born at Vezelay, Burgundy, 1519, and studied Greek and law at Orleans. In 1549-59 was Greek professor at Lausanne. In 1559 he was appointed a theological professor and president of the College at Geneva; on Calvin's death the care of the Genevese church fell upon his shoulders. In 1574 he was sent by Conde on a mission to the court of the palatinate. He died in 1605.

Bichat (*bē'shā'*), **Marie François Xavier,** celebrated French physician and anatomist, was born at Thoirette (Jura), 1771. He devoted himself to anatomy, physiology, and surgery; and established with several of his friends *La Societe Medicale d' Emulation,* through the medium of which he gave to the world many highly original and important memoirs, notably those on the tissues of the human body. He was nominated physician of the Hotel-Dieu in 1799, and died in 1802, his premature death being hastened in great part by his incessant labors. His three great works are the *Traite des Membranes,* the *Recherches Physiologiques sur la Vie et la Mort,* and the *Traite d'Anatomie Generale.*

Biddle, A. J. Drexel, author, explorer, and lecturer born at Philadelphia, Pa., 1874. He was educated at Heidelberg, Germany. Revived Philadelphia *Sunday Graphic* in 1895 and became its editor; head of publishing house of Drexel Biddle, in New York, Philadelphia, and San Francisco, 1895-1904. Author: *A Dual Rôle; All Around Athletics; The Flowers of Life; The Madeira Islands; The Land of the Wine.*

Biddle, John, the founder of English Unitarianism, born in 1615, at Wotton-under-Edge, in Gloucestershire. Twice during the commonwealth, he suffered for his creed, and even the protector himself, in order to save his life, was compelled to banish him to one of the Sicily isles. Died in jail, 1662.

Biddle, Nicholas, American commander, was born at Philadelphia, Pa., 1750, and took a conspicuous part in the revolutionary war. During the action of his ship, the *Randolph,* with the British ship, *Yarmouth,* in 1778, the former was blown up and he was killed.

Biela (*bē'lā*), **Wilhelm von,** German astronomer and military officer, was born near Stolberg, Germany, 1782. He is chiefly noted for his discovery, in 1826, of the comet named for him.

Bierce, Ambrose, author, journalist; born in Ohio in 1842; served as line officer during civil war; brevetted major for distinguished services; went to California, 1866; went to London, 1872, contributing to *Fun* fables, purporting to be translations from Zambri, the Parsee, afterward published as *Cobwebs from an Empty Skull.* Author of numerous sketches, essays and studies.

Bierstadt (*bēr'stăt*), **Albert,** landscape painter; born near Düsseldorf, Germany, 1830. Came in infancy to New Bedford, Mass., and married; studied four years in Europe, 1853-57; made repeated visits to the West and to Europe; specialty is pictures of scenes in Rocky Mountains, Sierras, and Switzerland. Died 1902.

Bigelow, John, author and diplomat, was born at Malden, N. Y., 1817; graduated from Union College, 1835; LL. D., Union and Racine College, 1886; College of City of New York, 1889; admitted to bar; one of the editors *New York Evening Post,* 1849-61; consul at Paris, France, 1861-64; secretary of state, New York, 1875-77. Author: *France and Hereditary Monarchy; Writings and Speeches of Samuel J. Tilden;* etc. Died 1911.

Bigelow, Melville Madison, lawyer, author, dean Boston University law school; born at Eaton Rapids, Mich., 1846; graduated from University of Michigan, A. B., 1866, LL. B., Ph. D., LL. D., Northwestern University, 1896. Author: *The Law of Estoppel; Leading Cases in the Law of Torts; The Law of Bills, Notes and Cheques; The Law of Wills.*

Bigelow, Poultney, author, journalist; born in New York, 1855; graduated from Yale, 1879; Columbia law school, 1882; admitted to New York bar, 1882; was correspondent for *London Times* during Spanish-American war. Author: *The German Emperor and his Neighbors; Paddles and Politics Down the Danube; White Man's Africa; Children of the Nations.*

Billings, John Shaw, surgeon, librarian; was born in Switzerland county, Indiana, 1839; graduated from Miami University, 1857; M. D., LL. D.; D. C. L., Oxford, 1889; served in army as assistant surgeon and surgeon, reaching rank of lieutenant-colonel and deputy surgeon; later medical inspector army of Potomac; professor of hygiene, University of Pennsylvania, 1893-96; since 1896 director New York public library, Astor, Lenox and Tilden foundations; chairman board Carnegie Institution, Washington. Author: *Principles of Ventilation and Heating; National Medical Dictionary;* and many other works. Died 1913.

"Billings, Josh." See **Shaw, Henry W.**

Binet (*bē'ne'*), **Alfred,** French psychologist; born at Nice, France, 1857. He is one of the editors of *L'Année Psychologique,* and director of the psychological laboratory at the Sorbonne, Paris. His works include many themes in physiological psychology.

Binns, Charles Fergus, educator and writer on ceramics, was born at Worcester, Eng., 1857; graduated King's Scholar, 1870; studied analytical chemistry, Birmingham, England, and decorative art, Worcester, 1872-5. Entered royal porcelain works, Worcester, England, 1872; superintendent successively chemical laboratory, department of painting, London depot of sales, department of clay working and pottery; principal technical school of science and art, Trenton, N. J., 1897-1900; director New York state college of clay working and ceramics since 1900. President American Ceramic society, 1901. Author: *Ceramic Technology; The Story of the Potter; The Potter's Craft,* etc.

Biot (*bē'ō'* or *b'yō'*), **Jean Baptiste,** French astronomer, opitician, and natural philosopher, was born at Paris, 1774. He is especially celebrated for his researches in the circular polarization of light. Died 1862.

Birrell (*bĕr'el*), **Rt. Hon. Augustine,** chief secretary to the lord lieutenant of Ireland since 1907; M. P. North Bristol since 1906; was born near Liverpool. 1850; graduated at Cambridge, 1872; LL. D., St. Andrews; barrister, 1875; bencher Inner Temple, 1903; editor of *Boswell's Life of Johnson; Collected Essays; Miscellanies; William Hazlitt; In the Name of the Bodleian,* etc.

Bishop, Sir Henry Rowley, English composer, was born at London, 1786; early devoted himself to the composition of dramatic music, and in 1809 produced his *Circassian Bride,* which was a great success. In 1840 his last dramatic piece, *The Fortunate Isles,* was produced at Covent Garden in honor of the queen's wedding; in 1842 he was knighted; and in 1848 became professor of music at Oxford. Died, 1855.

Bismarck-Schonhausen (*bis'märk-shen'hou-zen*), **Otto Eduard Leopold, Prince,** born of a noble family, at Schonhausen, April 1, 1815; studied at Gottingen, Berlin, and Greifswald; entered the army and became lieutenant in the Landwehr. After a brief interval devoted to his estates and to the office of inspector of dikes, he became in 1846 a member of the provincial diet of Saxony, and in 1847 of the Prussian diet.

In 1851 he was appointed representative of Prussia in the diet of the German federation at Frankfort, where with brief interruptions he remained till 1859, exhibiting the highest ability in his efforts to checkmate Austria and place Prussia at the head of the German states. From 1859-62 he was ambassador at St. Petersburg, and in the latter year, after an embassy to Paris of five months' duration, became first minister of the Prussian crown.

The lower house persistently refusing to pass the bill for the reorganization of the army, Bismarck at once dissolved it (October, 1862), closing it for four successive sessions until the work of reorganization was complete. When popular feeling had reached its most strained point the Schleswig-Holstein question acted as a diversion, and Bismarck—by the skillful manner in which he added the duchies to Prussian territory, checkmated Austria, and excluded her from the new German confederation, in which Prussia held the first place—became the most popular man in Germany.

As chancellor and president of the federal council he secured the neutralization of Luxembourg in place of its cession by Holland to France; and though in 1868 he withdrew for a few months into private life, he resumed office before the close of the year. A struggle between Germany and France appearing to be sooner or later inevitable, Bismarck, having made full preparations, brought matters to a head on the question of the Hohenzollern candidature for the Spanish throne. Having carried the war to a successful issue, he became chancellor and prince of the new German empire. Subsequently, in 1872, he alienated the Roman Catholic party by promoting adverse legal measures and expelling the Jesuits. He then resigned his presidency for a year, though still continuing to advise the emperor. Towards the close of 1873 he returned to power retaining his position until, in March, 1890, he disagreed with the emperor and tendered his resignation. In 1878 he presided at the Berlin Congress, in 1880 at the Berlin Conference, and in 1884 at the Congo Conference. His life was twice attempted—at Berlin in 1866, and at Kissingen in 1874. He died July 31, 1898.

References.—*A Historical Biography*, by C. Lowe; *Our Chancellor*, by Dr. M. Busch; *A Political Biography*, by L. Bamberger; *Bismarck's Love Letters*, and *Letters to his Wife and Others*, both of which have been translated; *Bismarck's Table Talk*, edited by C. Lowe; *Political Life, Labors, and Speeches*, by E. Hahn; *Bismarck: the Man and the Statesman*, translation under the supervision of A. J. Butler; Sybel's *The Founding of the German Empire*; and Munroe-Smith's *Bismarck and German Unity*.

Bispham (*bis'pam*), **David S.**, operatic baritone, was born at Philadelphia, Pa., 1857; educated at Haverford College, Pa.; made début as the Duc de Longueville in *The Basoche*, given by the the royal English opera, 1891; since then with the royal opera, Covent Garden, and Metropolitan opera company, New York, singing principal rôles in German, French, and Italian.

Bispham, George Tucker, lawyer, author: born at Philadelphia, 1838; graduate of University of Pennsylvania, 1858; law department, same, 1862; admitted to bar, 1861; later admitted to bar of United States supreme court. Author: *Principles of Equity*, and other books on law. Died 1906.

Bissell, George Edwin, sculptor; born at New Preston, Conn., 1839; educated at Northville, Conn., academy; acting assistant paymaster, United States navy, 1863-65. In marble business with father and brother at Poughkeepsie, New York, 1866; began career as sculptor there; studied art, Paris, Rome, and Florence, 1875-76; had studio in Paris at different times, for about six years, between 1884-96.

Bitter, Karl Theodore Francis, sculptor, was born at Vienna, Austria, 1867; educated in gymnasium there; came to United States, 1889; won prize in competition for Astor memorial gates, Trinity church, New York. Director of sculpture at the Pan-American exposition, Buffalo, 1901; gold medal Pan-American exposition, 1901.

Bizet (*bē'ze*), **Georges**, French composer, was born at Paris, 1838, died in 1875; studied at the conservatoire under Halevy, and in Italy. His best-works are *Les Pecheurs de Perles*, *La Jolie Fille de Perth*, *L'Artésienne Djamileh*, the overture *Patrie*, and *Carmen*.

Björnson (*byĕrn'sun*), **Björnstjerne**, Norwegian poet, novelist, dramatist, was born in Osterdalen in 1832. In early life an historical drama of his, called *Valborg*, was accepted by the royal theater, but its author withdrew the piece. In 1856 the international students' reunion at Upsala stimulated him again to an effort to produce a national poetry, free from foreign influences. He began with *Synnöve Solbakken*, a story of peasant life, which was followed by *Arne* and many other pieces. *Marie Stuart* and *Sigurd Slembe* are both well-known plays, and he has written, besides his dramas, a series of folk plays, an epic, and much beautiful lyric poetry. Died 1910.

Black, Frank Swett, lawyer, ex-governor of New York; was born in Limington, Maine, 1853; graduated at Dartmouth, 1875; LL. D., 1898; admitted to bar, 1879; member of congress, 1895-97, governor of New York, 1897-99; a practicing lawyer until 1912. Died 1913.

Black, John Charles, lawyer, was born at Lexington, Miss., 1839; educated in common schools, Danville, Ill., and at Wabash College, Crawfordsville, Ind.; M. A.; LL. D.; private to colonel and brevet brigadier-general United States volunteers; commissioner pensions, United States, 1885-89; member of congress, 1893-95; United States attorney, 1895-99; commander-in-chief, G. A. R. 1903-04. President of United States civil service commission since 1904.

Black, Joseph, eminent British chemist, was born in 1728 at Bordeaux, France. Between 1759 and 1763 he evolved the theory of *latent heat* on which his scientific fame chiefly rests, and made other important discoveries. Died 1799.

Blackie, John Stuart, Scotch philosopher, was born at Glasgow in 1809; studied to be a lawyer, but devoted himself largely to literary pursuits; was a zealous educational reformer; took an active interest in everything affecting the welfare and honor of Scotland; spoke much and wrote much in his day on manifold subjects. He died in 1895.

Blackmar, Frank Wilson, economist, sociologist, was born at West Springfield, Pa., 1854; graduated University of the Pacific, 1881; graduate student and fellow, Johns Hopkins, 1886-9; Ph. D., 1889. Professor history and sociology, 1889-99, sociology and economics since 1899, dean of graduate school since 1896, University of Kansas. Author: *Federal and State Aid to Higher Education in the United States; Spanish Colonization; Spanish Institutions in the Southwest; The Study of History and Sociology; The Story of Human Progress; Economics; The Elements of Sociology; Economics for High Schools*, etc.

Blackmore, Richard Doddridge, British novelist, was born at Longworth, Berkshire, and educated at Exeter College, Oxford. He graduated in 1847, afterward studied law, was admitted to the bar at the Middle Temple in 1852, and practiced for a time as a conveyancer. *Poems by Melanter* was the first of several volumes of verse; his first distinct success was *Lorna Doone, a Romance of Exmoor*, which reached many editions. He died in 1900.

Blackstone, Sir William, celebrated English jurist, was born at London, in 1723. He was a judge a member of parliament, and author of the well-known *Commentaries on the Laws of England*. Subsequently, having married, he vacated his fellowship and was appointed principal of New-Inn hall. That office, with his Vinerian professorship, he resigned in 1766. In 1770 he became one of the judges of the common pleas. Died 1780.

Blaine, James Gillespie, American statesman, was born at Brownsville, Pa., 1830. At seventeen he entered Washington College, Pa. In 1854 he went to Maine to engage in journalism. In 1862, he was elected to congress and remained there eighteen years. He was balloted on for the presidency at the convention of 1876, and received 351 votes out of a total of 754. He was then appointed United States senator to fill an unexpired term, and four years later was again a candidate for the presidency. President Garfield appointed him secretary of state, which office he held until after the death of the president. In 1889 he again became secretary of state, in the cabinet of President Harrison. He died in 1893.

Blake, Robert, English admiral, who, more than any other, contributed to render England mistress of the sea, was born at Bridgewater, in Somersetshire, 1599. In 1649, in conjunction with two other officers of equal rank, he was appointed "general of the sea." In 1652 he was made sole admiral of the fleet for nine months, and during this year he fought and won four engagements with Dutch fleets under Tromp, Ruyter, and DeWitt. In 1654 Blake was appointed by Cromwell to command an English fleet in The Mediterranean. In 1657 he defeated the Spaniards at Santa Cruz. Died 1657.

Blake, William, English artist and poet, was born at London, 1757. After studying art for some years, he began to paint in water colors and to engrave illustrations for magazines. At the same time he wrote poetry which showed great power and beauty. *Poetical Sketches*, *Songs of Experience*, and *Songs of Innocence*, are among his best works. He died at London in 1827.

Blanc (*blăn*), **Jean Joseph Louis**, French historian and socialist writer, was born at Madrid, 1813, started as a journalist. Member of the chamber of deputies in 1871. Blanc wrote an elaborate and well-written history of the French revolution. Died at Cannes, 1882.

Blanche of Castile, queen of Louis VIII., of France, and daughter of Alphonso IX., king of Castile, was born about 1186. After carrying on the government during the absence of her son, Louis IX., in the holy land, she died in 1252.

Blanchet (*blăn'shā'*), **Hon. Jean**, jurist, puisne-judge of the court of king's bench, the highest court of the province of Quebec, since 1891; was born in 1843; LL. D.; admitted to the bar, 1863; made a Q. C. by the provincial government, 1876; elected batonnier general of the province, 1891; elected M. P. for the county of Beance, in the Quebec assembly, 1881, 1882, 1886, 1890; was one of the commissioners selected in 1887 to revise the statute law of the province.

Blanqui (*blăn'kē'*), **Louis Auguste**, French socialist, was born at Puget-Theniers, France, 1805, and made himself conspicuous by his passionate advocacy of the most extreme political opinions. He died in 1881, having spent thirty-seven years of his life in prison.

Blashfield, Edwin Howland, artist. Born in New York, 1848; educated in Boston latin school; studied at Paris, 1867, under Léon Bonnat, also, receiving advice from Gérome and Chapu; exhibited at Paris salon, yearly, 1874-79, 1881, 1891, 1892; also several years at Royal Academy, London; returned to United States in 1881; has exhibited genre pictures, portraits, and decorations.

Blauvelt (*blō'velt'*), **Lillian Evans**, prima donna soprano; was born at Brooklyn, N. Y., 1873; educated in public schools; studied under M. Jacques Bouhy in New York and Paris. Sang in concerts in France and Belgium, later in Moscow, with philharmonic society; made début in opera at Théatre de la Monnaie, Brussels, in *Mirelle*; received decoration of order of St. Cecilia at Rome, 1901 (only woman ever so honored).

Blavatsky (*blä-văts'ki*), **Madame Helena Petrovna** Russia theosophist, was born in Russia in 1831. She was of noble descent. She visited Thibet, where she claims she received the theosophical doctrines connected with her name. From 1873 to 1879 she was a resident of New York, became a naturalized American citizen, and founded the theosophical society. She died 1891.

Blennerhassett (*blen'ĕr-has'et*), **Harman**, noted for his connection with Aaron Burr's conspiracy, was born in England about 1764; of Irish descent. When Burr was arrested and brought to trial, Blennerhassett was also arrested, but on the acquittal of Burr he was released. He died on the island of Guernsey in 1831.

Bliss, Cornelius Newton, merchant, politician, was born at Fall River, Mass., 1833. Was member Pan-American conference; was president protective tariff league; chairman New York republican state committee, 1887-88; declined to be a candidate for governor of New York, 1885 and 1891; secretary of the interior, in cabinet of President McKinley, 1897-99. Died, 1911.

Blok (*blōk*), **Petrus Johannes**, Dutch historian; was born at Helder, Holland, 1855; studied at Leyden and became professor at Gröningen in 1884; later occupied a similar chair at Leyden; was instructor of Queen Wilhelmina in history.

Bloomfield, Maurice, philologist, professor Sanskrit and comparative philology Johns Hopkins; was born at Bielitz, Austria, 1855; S. C.; A. M.; Ph. D.; LL. D., Princeton, 1896. Edited for first time from original Sanskrit MSS. the *Sutra of Kaucika*; translated the *Atharva-Veda* in the sacred books of the East (edited by Max Müller); author of *The Atharva-Veda* and the *Gopatha-Brahmana*; edited with Professor Richard Garbe, of the University of Tübingen, the *Kashmirian Paippalada-Veda*, 1901.

Bloomfield, Robert, English pastoral poet, was born in 1766, at Honington, Suffolk, where his father was a poor tailor. His chief works are *The Farmer's Boy* (composed in a London garret), *Rural Tales*, and *Wild Flowers*. Died, 1823.

Blossom, Henry Martyn, Jr., author, dramatist, was born at St. Louis., Mo., 1866; educated at Stoddard school, St. Louis; afterward engaged in insurance business. Author: *The Documents in Evidence; Checkers; The Yankee Consul*, etc.

Blouet (*blōō'ē'*), **Paul**, better known as "Max O'Rell," French author, writer, and lecturer, was born at Brittany, France, in 1848; was educated in Paris; was French master at St. Paul's school, 1876-84, and since 1887 has lectured and acted in the United Kingdom, United States, and colonies. He is the author of *John Bull and His Island; A Frenchman in America*.

Blowitz (*blō'vits*), **Henri Georges Adolphe Opper de**, journalist, was born of Jewish ancestry at Blowitz, in Bohemia, 1825; during 1849-60 was a German teacher in various French schools. He was made officer of the legion of honor in 1878. Died 1903.

Blücher (*blü'ĸĕr*), **Gebhard Lebrecht von**, Prussian field marshal and prince of Wahlstadt, was born at Rostock, Germany, 1742; first entered the Swedish, but soon passed to the Prussian army. He went through the Polish campaign of 1772. In the Waterloo campaign he commanded the Prussian army in Belgium, and was severely defeated by Napoleon at Ligny. However, by out-manœuvring Grouchy, he was able to arrive at Waterloo in time to decide the victory for the allies and pursue the routed French army. He then retired from active service and died 1819.

Blumenbach (*blōō'men-bäk*), **Johann Friedrich**, German naturalist and ethnologist, was born at Gotha in 1752; became professor at Göttingen, an office he filled for nearly sixty years. His works gave a great impulse to scientific research in all directions; the chief were *Institutiones Physiologicae; Manual of Natural History; Manual of Comparative Anatomy and Physiology*. Died 1840.

Blumenthal (*blōō'men-tăl*), **Leonhardt, Count von**, Prussian general, was born in 1810, died in 1900. He was chief of the general staff of the Prussian army in 1849; was chief of staff in the Franco-Prussian war; and became general field-marshal in 1888.

Bluntschli (*blōōntsh'lē*), **Johann Kaspar**, jurist, economist, was born at Zürich in 1808; in 1833 became professor in its newly-founded university. In 1848 he went to Munich as professor of civil and international law; in 1861 removed to Heidelberg. He died at Karlsruhe in 1881.

Blythe, Samuel George, writer, journalist; was born at Geneseo, N. Y., 1868; educated at Geneseo state normal school; managing-editor of *Buffalo Express*, 1893-96; editor-in-chief of *Buffalo Enquirer* and *Courier*, 1897-98; chief Washington correspondent New York *World*, 1900-07; chairman standing committee of Washington correspondents, 1906-07. On staff of *Saturday Evening Post* since 1907.

Boabdil (*bō'äb-dēl'*), properly Abu-Abdallah, the last Moorish king of Granada, dethroned his father, Abu-el-Hasan in 1481, and two years later was defeated and taken prisoner by the Castilians near Lucena. The spot from which he looked his last on Granada, after giving up to Ferdinand the keys of the city, still bears the name of *el ultimo sospiro del Moro*, "the last sigh of the Moor." He died in 1536.

Bobadilla (*bō-vä-dēl'yä*), **Francisco**, was sent in 1500 by Ferdinand and Isabella to investigate the work of Columbus in Hispaniola. He put Columbus in chains and sent him to Spain. Bobadilla was drowned on the return voyage in 1502.

Boccaccio (*bōk-kä'chō*), **Giovanni**, Italian raconteur, the author of the *Decameron* was born probably in Paris in 1313. He styled himself *Da Certaldo*, from the Italian village from which his family sprang. In 1350 he formed an intimate friendship with Petrarch. It is said that he was the first Italian who ever procured from Greece a copy of the *Iliad* and the *Odyssey*. While in Naples, about 1334, he fell passionately in love with a young woman, called by him Fiammetta, who was generally supposed to be a daughter of King Robert. To gratify her he wrote *Il Filocopo*, a prose-romance, and afterward, *La Teseide*, the first attempt at romantic epic poetry, of which Boccaccio may be considered the inventor. He composed his famous *Decamerone* in Naples, to please Joanna, the daughter and successor of King Robert. Petrarch's death deeply affected him, and he died the year after, 1375.

Böcklin (*bûk'lēn*), **Arnold,** Swiss painter of romantic subjects, was born at Basel, Switzerland, 1827. His principal pictures are the *Sea Idyl; A Nymph and Fauns,* and several landscapes. He is seen at his best at Munich. Died at Fiesole, Italy, 1901.

Bode (*bō'dē*), **Johann Elert,** German astronomer, was born Hamburg, 1747; at the age of eighteen he calculated an eclipse of the sun. In 1776 he commenced the *Astronomical Year Book,* which is still continued. But his fame rests chiefly on the *Uranographia,* published in 1801, in which he gives observations on 17,240 stars, or 12,000 more than can be found in any previous charts. He died at Berlin in 1826.

Bodenstedt (*bō'den-shtet*), **Friedrich Martin von,** German poet, author, journalist, was born at Peine, Hanover, 1819, and died at Wiesbaden, 1892, having lived at Moscow, traveled in the Crimea, Turkey, Greece, and Asia Minor, edited the *Weser Zeitung,* filled the chairs of Slav languages and Old English at Munich, and been director of the Meiningen court theater.

Bodin (*bō'dan'*), **Jean,** French publicist and economist, was born at Angers in 1530, and died of the plague at Laon, 1596. According to Bodin's greatest work, *Les Six Livres de la République,* property and the family form the basis of society, and a limited monarchy is the best possible form of government.

Bodley, Sir Thomas, the restorer of the library originally established at Oxford by Humphrey, duke of Gloucester, now called the Bodleian library, was born in 1545. On the accession of Elizabeth he completed his studies at Oxford, took the degree of M. A., and was afterward elected a proctor, devoting himself to the extension of the library. Died 1613.

Boehm (*bēm*), **Sir Joseph Edgar,** Hungarian-English sculptor, was born at Vienna, 1834; educated 1848-51 in England, and finally settled there in 1862. In 1867 he executed a colossal statue of the queen; of his seated statue of Thomas Carlyle, enthusiastically praised by Ruskin, a replica was erected at Chelsea. Boehm became an A. R. A. in 1878, sculptor-in-ordinary to the queen in 1881, an R. A. in 1882, and a baronet in 1889. Died 1890.

Boehme, Jakob, German theosophist and mystic, was born of poor parents at Altseidenberg near Görlitz, in upper Lusatia, in 1575, and in boyhood herded cattle. About 1612 he published *Aurora,* containing revelations and meditations upon God, man, and nature, and showing a remarkable knowledge of scripture and of the writings of alchemists. He died at Görlitz in 1624.

Boehm von Bawerk (*bēm fōn bä'verk*), **Eugen,** Austrian political economist, was born at Brünn, Austria, 1851. He was educated at the Universities at Vienna, Heidelberg, Leipzig, and Jena. In 1884 was appointed professor at Innspruck.

Boerhaave, (Dutch, *bōōr'hä-ve*), (Eng., *bōr'hāv*), **Hermann,** the most celebrated physician of the eighteenth century, was born near Leyden, Holland, 1668. In 1689 he was made doctor of philosophy, and in 1690 began the study of medicine, reading carefully Hippocrates among the ancients, and Sydenham among the moderns. Peter the Great of Russia visited him at Leyden, and it is even said that a Chinese mandarin sent him a letter, addressed "Herr Boerhave, Celebrated Physician, Europe." His fame rests principally on his *Institutiones Medicae,* and *Aphorismi de Cognoscendis et Curandis Morbis.* Died at Leyden, 1738.

Boethius (*bō-ē'thi-us*), **Anicius Manlius Torquatus Severinus,** Roman philosopher, born about 475, was profoundly learned, and filled the highest offices under the government of Theodoric the Goth. Falsely accused of a treasonable correspondence with the court of Constantinople, he was executed in 524, after a long and rigorous imprisonment. His *Consolations of Philosophy,* written in prison, abounds in the loftiest sentiments clothed in fascinating language.

Boileau-Despréaux (*bwä'lō'dā'prā'ō'*), **Nicholas** French poet and critic, was born at Paris in 1636. He was a friend of Molière, LaFontaine, and Racine, and was pensioned by the king. He did much as a critic to purify and refine the French language, and has had a great influence on French literature. He was a member of the French Academy. He died at Paris in 1711.

Boito (*bō'ē-tō*), **Arrigo,** Italian composer and poet, was born in 1842 at Padua, and studied at the Milan conservatory. His first important work is the Wagnerian opera *Mefistofele,* which, at first an acknowledged failure, has since steadily grown in popularity. He writes his own libretti, and has published several songs, lyrical dramas, and novels.

Bok, Edward William, editor of *The Ladies' Home Journal* since 1888; vice-president of the Curtis publishing company; born in Helder, Holland, 1863; came to the United States at the age of six; educated in Brooklyn public schools, and received the degree LL. D. from Pope Pius, 1907.

Boker (*bō'kĕr*), **George Henry,** American poet and dramatist, was born at Philadelphia in 1823, and died there in 1890. He wrote several plays, which were successful on the stage, among them *Calaynos,* a tragedy, and *Francesca da Rimini.* In 1882 published a volume of verse, *The Book of the Dead.*

Boleyn (*bōōl'in*), **Anne,** queen of England and daughter of Sir Thomas Boleyn, subsequently earl of Wiltshire and Ormond; was born about 1507 and was brought up at the French court. She became maid of honor to Queen Catharine of England. King Henry VIII. was attracted by her beauty, had his marriage with Catharine declared void, and was married privately to Anne. She soon lost his favor, and on a charge of unfaithfulness was tried, condemned, and beheaded, 1536. She was the mother of Queen Elizabeth.

Bolingbroke (*bol'in-brook*), **Henry St. John Viscount,** English statesman, was born in 1678. Having studied at Oxford, he entered parliament in 1701, and in 1704 became secretary for war. He afterward became secretary of state for foreign affairs, and negotiated the treaty of Utrecht. On the accession of George I. he fled the country, and became secretary of state to the first pretender. He was attainted and his estate seized; but in 1723 he was permitted to return. His estates were restored, but he was not allowed to sit in parliament. He again withdrew to France in 1735, but returned to England on the death of his father, and died in 1751.

Bolivar (*bol'i-vär*), **Simon,** South American statesman, founder and first president of the republic of Columbia, known as "the liberator of South America." Born in Venezuela, 1783, he was educated in Madrid. When the revolt against the Spanish yoke broke out in Venezuela, he joined it, In 1822 Bolivar went to help the Peruvians in their struggle for liberty, and was given the chief command. After a long campaign he won the great battle of Ayacucho. Upper Peru was constituted a separate republic with the title of Bolivia. Died 1830.

Bonaparte, Charles Joseph, lawyer, ex-secretary of the navy, and ex-attorney general, United States, was born in Baltimore, 1851; graduate of Harvard in 1871; Harvard law school in 1874; chairman council of national civil service reform league; president of national municipal league; overseer, Harvard, 1891-1903; awarded Lætare medal by University of Notre Dame, 1903; was secretary of the navy, 1905-06; attorney general of United States, 1906-09.

Bonaparte, Charles Lucien Jules Laurent, prince of Canino and Musignano, Lucien's eldest son by his second marriage, was born at Paris in 1803. He acquired a considerable reputation as a naturalist, and especially as a writer on ornithology. Died 1857.

Bonaparte, Jérome, youngest brother of Napoleon I., was born at Ajaccio in 1784. He served as naval lieutenant in the expedition to Hayti. He was employed by Napoleon in the liberation of Genoese prisoners who had been captured by the dey of Algiers. In the war with Prussia he commanded, in concert with General Vandamme, the 10th corps in Silesia, and in 1807 was made king of Westphalia. He was appointed governor of the Invalides in 1848, and in 1850 was made a French marshal. In 1852 provision was made by the French chambers, in default of issue of Napoleon III., by which the right of succession was confirmed to Jérome and his heirs. Died 1860.

Bonaparte, Joseph, eldest brother of Napoleon I., was born at Corte, in Corsica, 1768, and was educated at Autun. In 1800, having proved his ability in several offices of state, he was chosen by the first consul as plenipotentiary to conclude a treaty of friendship with the United States. After the coronation of Napoleon, Joseph was made commander-in-chief of the army of Naples; in 1805, ruler of the Two Sicilies; and in 1806, king of Naples. In 1808 he was summarily transferred by his brother to the throne of Spain, and Murat took his place as king of Naples. After the battle of Waterloo he accompanied Napoleon to Rochfort, whence they intended to sail separately for the United States. He died in Florence in 1844.

Bonaparte, Josephine (wife of Napoleon I.). See **Josephine.**

Bonaparte, Louis, brother of Napoleon I., was born in 1778. After rising from honor to honor he was nominally made king of Holland, being little more than a governor subordinate to his brother. After the restoration of the house of Orange, Louis considered himself free from all responsibility, and returned to Paris, 1814. On the escape of his son, Louis Napoleon, from the prison of Ham, Louis was removed as an invalid to Livorno. Died 1846.

Bonaparte, Lucien, brother of Napoleon, and prince of Canino, was born in 1775; received his education in the College of Autun. Shortly before the 18th Brumaire he was elected president of the council of five hundred, and was the hero of that day. His opposition to Napoleon's progress toward monarchy involved the brothers in many quarrels. In 1810 he sailed for America, but fell into the hands of the English, was taken to England, and after a debate in parliament was declared a prisoner, but treated with distinction. After his brother's downfall he returned to Rome. Died 1840.

Bonaparte, Napoleon. See **Napoleon I.**

Bonaparte Napoleon Eugene Louis Jean Joseph, son of Napoleon III. and of the empress Eugenie, born in 1856; was educated under his father's care at Paris and Versailles. On the abdication of Napoleon III., and on the declaration of a republic in France, the youth and his mother, the empress Eugenie, took refuge at Chiselhurst, England. When the Zulu war in South Africa commenced, the young man volunteered his services to the British government and was killed in 1879.

Bonaparte, Napoleon Joseph Charles Paul, nicknamed Plon-Plon, son of Jerome Bonaparte and Sophia Dorthea, was born in 1822; married, 1859, Princess Clothilde of Sardinia. By virtue of the decree of the French senate, 1852, Napoleon Joseph became in 1879, on the death of Prince Napoleon, son of the emperor, the representative of the Bonapartist claim to the French throne. Died 1891.

Bonar (*bon'ar*), **Horatius,** hymn-writer, was born at Edinburgh in 1808; from the high school passed to the university, and became minister at Kelso Free Church, 1837-66, and then at Edinburgh. He edited the *Christian Treasury* and other magazines, and published some forty religious works, but is best known as the author of *Hymns of Faith and Hope.* He died in 1889.

Bonar, James, author, economist, was born at Collace, Perthshire, Scotland, 1852; educated at Glasgow University; Leipzig and Tübingen; Balliol College, Oxford. Lecturer in east London, 1877-80. Author: Beck's *Biblical Psychology; Parson Malthus; Malthus and His Work; Ricardo's Letters to Malthus.*

Bonaventura (*bō'nä-ven-tōō'rä*), **Saint,** cardinal, surnamed the "seraphic doctor," his real name John Fidenza, was born in Tuscany in 1221; entered Franciscan order; was a mystic in theology; ascribed knowledge of the truth to union with God, such as existed between man and his maker prior to the fall.

Bond, Rt. Hon. Sir Robert, premier and colonial secretary of Newfoundland since 1900, was born in 1857; was educated for the bar but entered politics before being admitted; entered the legislature, 1882; appointed a delegate to British government by the government of Newfoundland on the French treaties question, 1890; appointed chairman of the deputation sent by the government to the "Ottawa conference," 1895; special delegate to conference on French treaties in Downing street, 1901; assisted in drafting regulations for carrying out Anglo-French convention, 1904; honorary LL. D., Edinburgh.

Bonet-Maury (*bō'nā' mō'rē'*), **Amy-Gaston,** theologian, author, educator, vice-dean of protestant school of divinity of Paris; was born 1842; educated Lycee Henry IV., Paris; Schools of Divinity Geneva and Strassburg; he served as protestant minister at Beauvais, where he erected the first church, and at St. Denis; lecturer in church history at protestant school of divinity of Paris, 1879. French delegate at congress of health and education, London, 1884; the parliament of religions, Chicago, 1893; the congress of religious sciences at Stockholm, 1897; corresponding member of the Institut de France, 1908.

Bonheur (*bō'nĕr'*), **Marie Rosalie** (more commonly called Rosa), French artist, was born in Bordeaux in 1822. Her first master was her own father. In 1841 she contributed for the first time two small pictures to the French exhibition, *Two Rabbits,* and *Goats and Sheep.* In 1853 her famous *Horse Fair* was the principal attraction of the Paris exhibition. From 1849 she directed the gratuitous school of design for young girls. During the siege of Paris, 1870-71, her studio and residence at Fontainebleau were spared and respected by special order of the crown prince of Prussia. Died 1899.

Boniface (*bon'i-fās*), **Saint,** was born at Crediton, in Devonshire, 680. He was one of the most noted saints of the Roman Catholic church, generally styled "the apostle of Germany." For many years he engaged with much success in preaching and establishing churches in Germany, but was finally killed in 755 by a mob of armed pagans at Dokkum, in West Friesland. He was appointed archbishop of Mainz by Pope Gregory II.

Boniface VIII., previously Benedetto Gaetano, was born about 1228, and elected pope in 1294. He failed in his attempts to assert a feudal superiority over Sicily, and to exercise his papal authority in the disputes between France and England, and died 1303.

Bonnat (*bō'nä'*), **Léon Joseph Florentin,** French painter, was born at Bayonne, 1833, and studied at Madrid, in Paris, and in Italy. He became famous for religious pictures, and latterly is best known as a great portrait painter.

Bonner, Edmund, English prelate, bishop of London, was born about 1500. The reputation he gained at Oxford by his knowledge of the canon law recommended him to the notice of Wolsey, who promoted him to several offices in the church. In 1540 he was made bishop of London. After the accession of Elizabeth he refused to take the oath of supremacy. He was accordingly deposed from his bishopric and shut up in the Marshalsea, where he died in 1569.

Bonnet (*bō'ne'*), **Charles,** French naturalist and philosopher, was born at Geneva, 1720. He published several works on psychology. His *Considérations sur les Corps Organisés* is devoted to an examination of the theories of generation. He was for some years a member of the council of his native city. Died 1793.

Bonnivard, de (*dē bō'nē'vär'*), **François,** French historian and hero of Byron's *Prisoner of Chillon;* was born near Geneva, 1496; educated at Turin, and became prior of St. Victor, near Geneva, 1510, at the age of fourteen years. Having fallen into the hands of robbers who delivered him into the power of the duke of Savoy, he was imprisoned in 1530 in the castle of Chillon. The Genevese aided by the Bernese effected his liberation in 1536. He died about 1570.

Boone, Daniel, American hunter and pioneer, was born in Bucks county, Penn., 1735. The boy had but little education, but he knew the woods and Indian life. When thirty-four years old he went with five others into the wilds of Kentucky. He built a fort on the Kentucky river which he named Boonesborough. The Indians attacked the fort several times, but were driven off. He continued to live there until 1792, then went to Missouri, where he died in 1820.

Booth, Ballington, general-in-chief and president Volunteers of America, was born at Brighouse, England, 1859; son of Rev. William and Catherine Ballington. Commander Salvation Army, Australia, 1885-87; United States, 1887-96; founded, 1896, the Volunteers of America. Ordained presbyter, Chicago, 1896. Writer, public speaker, philanthropist.

Booth, Edwin Thomas, American actor, son of Junius Brutus Booth, was born in Baltimore, Md., 1833, appeared first on the stage in 1849, in *Richard III.* He speedily rose in his profession, visited England and the continent of Europe in 1861, 1881, and 1883, and met with enthusiastic receptions. He opened Booth's theater in New York, 1869, and did more than any other individual to keep the tone of dramatic art up to a moral and literary standard. Died, 1893.

Booth, Junius Brutus, actor, was born in England in 1796; first appeared on the stage in 1813, in the *Honeymoon,* and within four years became famous in London as *Richard III.* His American career was a triumph. He died in 1852.

Booth, Maud Ballington (née Charlesworth), wife of Ballington Booth, general-in-chief, Volunteers of America. Author: *After Prison—What? The Curse of Septic Soul Treatment; Twilight Fairy Tales.*

Booth-Tucker, Frederic St. George de Lautour, commander of Salvation Army in the United States; was born at Monghyr, Bengal, India, 1853; inaugurated Salvation Army work in India, 1882; had charge there until 1891; secretary for international work, Salvation Army, London, 1891-96; since March, 1896, in charge of United States; married in 1888 Emma Moss, daughter of General William Booth, of Salvation Army. Adopted name of Booth-Tucker. Author: *The Life of Catherine Booth; Life of General William Booth; In Darkest India and the Way Out.*

Booth, William, general and commander-in-chief of Salvation Army; was born in Nottingham, England, 1829; became a minister of the Methodist New Connection in 1852; in 1865 organized the Christian mission in the densely populated east end of London. Out of this grew the Salvation Army, whose ramifications spread throughout the world. He is the author of *Orders and Regulations for Officers and Soldiers; Letters to my Soldiers.* Publications: newspapers entitled *War Cry, Young Soldier, Social Gazette,* etc. Died, 1912.

Bopp (*bop*) **Franz,** celebrated German philologist and Sanskrit scholar, was born at Mainz, 1791; was professor of oriental literature and general philology at Berlin. He was in 1842 made a knight of the newly erected French *Ordre du Merite,* and in 1857 foreign associate of the French institute. Died, 1867.

Borah, William Edgar, lawyer, United States senator, was born in 1865, in Wayne county, Ill.; educated at the Southern Illinois academy, and at the Kansas State University, Lawrence; was admitted to practice law in 1890 at Lyons, Kan., and devoted his entire time since then exclusively to practice of the law, until elected to the United States senate in 1907.

Borden, Sir Frederick William, Canadian minister of militia and defense since 1896; M. P.; was born in 1847; King's College, Windsor, Nova Scotia, B. A.; Harvard, M. D.; appointed assistant surgeon 68th battalion King's county militia, 1869; now surgeon lieutenant-colonel and hon. colonel of Canadian army medical corps; first elected to house of commons, 1874; since then has represented same riding continuously.

Borden, Robert Laird, lawyer, premier, was born at Grand Pré, Nova Scotia, 1854; educated at Acacia Villa Academy, Horton. Began the study of law, 1874; admitted to bar, 1878; Q. C., 1891; president of Nova Scotia barristers' society, 1893-1904; hon. D. C. L., LL. D., 1905; member for the city and county of Halifax, 1896-1900; in 1901, upon the resignation of Sir Charles Tupper, elected leader of conservative party in the Dominion house of commons; premier, 1911.

Borden, William Cline, surgeon, educator; was born at Watertown, N. Y., 1858; graduated medical department Columbian University, Washington, 1883; appointed assistant surgeon U. S. A., 1883; major and brigade surgeon, 1898; during Spanish-American war commanded United States army general hospital, Key West, Fla; dean medical department, George Washington University. Author: *Use of the Röntgen Ray by the Medical Department of the United States in the War with Spain.*

Borghese (*bōr-gā'sā*), **Marie Pauline,** princess, originally Bonaparte, sister of Napoleon, was born in 1780, at Ajaccio. With Napoleon, who loved her tenderly, she had many disputes and as many reconciliations. Before the battle of Waterloo she placed all her diamonds, which were of great value, at his disposal; and they were in his carriage, which was taken in that battle, and exhibited in London. She died at Florence in 1825.

Borgia (*bôr'jä*), **Cæsare,** Italian master of statecraft of great but evil fame, was born in 1476, the fourth son of Pope Alexander VI., by Rosa Vanozza. He compassed the death of his brother, Giovanni, who was the duke of Candia, in order to gain complete ascendency in the papal government; and in 1498, having been sent as nuncio to Louis XII. of France, he was created duke of Valentinois and married the daughter of Jean d'Albret, king of Navarre. He was sent in 1504 a prisoner to Spain by Pope Julius II., but escaped and joined the king of Navarre's army against Castile. In this campaign he was killed in 1507.

Borgia, Lucrezia, sister of the preceding, and like him the possessor of an infamous reputation, was born in 1480. Her father compelled her twice to marriage and divorce before she became the wife of the duke of Bisceglia. After her third husband had been murdered by Cæsare Borgia, she married Alfonso of Este, and passed her life in the court of Ferrara, cultivating literature and art. Died, 1523.

Borglum, John Gutzon de la Mothe ("Gutzon, Borglum"), sculptor, painter, born in Idaho, 1867; studied art in San Francisco; went to Paris, 1890. Exhibited as painter and sculptor in Paris salon; settled in New York since 1902. Exhibited in London and Paris, 1896-1901.

Borglum, Solon Hannibal, sculptor, was born at Ogden, Utah, 1868; pupil in Cincinnati art school and under Louis Rebisso and Fremiet, Paris; honorable mention, Paris salon, 1899; silver medal, Exposition Universelle, Paris, 1900; silver medal, Buffalo exposition, 1901; gold medal, St. Louis exposition, 1904; member national sculpture society.

Borromeo (*bōr'rō-me'ō*), **Carlo, Count,** cardinal and archbishop of the Roman Catholic church, who exercised great influence during the pontificate of Pope Pius IV., was born at the castle of Arona, on the Lago Maggiore, northern Italy, 1538. Many supposed miracles at his tomb led to his being canonized thirty years after his death. Several memoirs of him have been published. Died, 1584.

Borrow, George, English author and traveler, was born in Norfolk in 1803. He made the gypsies one of the principal subjects of his study. His first important work was *The Zincali, or An Account of the Gypsies in Spain.* Died, 1881.

Bosanquet (*bō'sȧN'kā'*), **Bernard,** educator, formerly fellow of University College, Oxford; M. A.; LL. D.; born at Alnwick, England, 1848; Balliol College, Oxford, 1871-81; professor of moral philosophy, St. Andrews, 1903-08. Author: *Logic, or Morphology of Knowledge; History of Æsthetics; Philosophical Theory of the State,* etc.

Boscawen (*bos'kä-wen*), **Edward,** the admiral "Old Dreadnought," was born in Cornwall, England, 1711, the son of Viscount Falmouth. In 1755 he intercepted the French fleet off Newfoundland, capturing two 64-gun ships and 1,500 men. Boscawen crowned a long and victorious career by his signal victory over the French Toulon fleet in Lagos Bay, 1759. He received the thanks of parliament, a pension of 3,000 pounds a year, a seat in the privy council, and the command of the marines. He died at his Surrey seat, Hatchlands Park. 1761.

Bossuet (*bō'sü'e'*), **Jacques Bénigne,** a distinguished orator and prelate of the Roman Catholic church, was born in Dijon, France, 1627. He was the author of several controversial works, all in defense of the Roman Catholic doctrines; but his fame rests chiefly on his *Sermons.* Died, 1704.

Boswell, James, the biographer of Johnson, was born in Edinburgh, 1740. He fell in with Johnson on a visit to London in 1763, and conceived for him the most devoted regard; made a tour with him to the Hebrides in 1773, the *Journal* of which he afterward published; settled in London, and was called to the English bar; succeeded, in 1782, to his father's estate, Auchinleck, in Ayrshire, with an income of 1,600 pounds a year. Boswell's *Life* appeared five years after Johnson's death. He died in 1795.

Bosworth, Joseph, Anglo-Saxon scholar, was born at Derbyshire in 1789, and died at Oxford in 1876, having been professor of Anglo-Saxon there from 1858. His chief works were *Elements of Anglo-Saxon Grammar* and *An Anglo-Saxon Dictionary.*

Botha (*bō'tä*), **Rt. Hon. Louis,** Boer soldier, statesman, born in 1863 at Greytown in Natal, was a member of the Transvaal Volksraad, succeeded Joubert as commander-in-chief of the Boer forces during the war, and in 1907 became prime minister of the Transvaal colony under the new constitution.

Botta (*bōt'tä*), **Carlo Giuseppe Guglielmo,** Italian historian, was born in 1766; studied medicine, and was imprisoned in 1792 as a revolutionary. He wrote *The History of Italy between* 1789 *and* 1814, and a *History of the American War of Independence.* Died, 1837.

Botta, Paul Emile, French archæologist and traveler, son of preceding, was born in 1802. In 1830 he went to Egypt, where he entered into the service of Mehemet Ali as a physician. From Alexandria he was sent as consular agent to Mosul, where he commenced a series of discoveries which form an epoch in archæological science. He returned to France in 1868, and died at Achères in 1870.

Botticelli (*bot'tē-chel'lē*), **Alessandro,** Italian painter, was born in 1437. In response to the invitation of Pope Sixtus IV., he went to Rome and executed some paintings for the chapel of the vatican. On returning to Florence he became a devoted follower of Savonarola. Died, 1515.

Bougainville (*bōō'gan'vēl'*), **Louis Antoine de,** French navigator, was born in Paris, 1729. In 1754 he went as secretary of the French embassy to London. He took a voyage round the world with a frigate and a St. Malo transport, the first which the French ever accomplished, which he described in his *Voyage autour du monde.* Died, 1814.

Boughton (*bô'tun*), **George Henry,** artist, was born in England, 1834, and brought to the United States when three years old. He studied in New York, Paris, and London, and was a member of the National Academy of New York, and an associate of the Royal Academy after 1879. Died, 1905.

Bouguereau (*bōō'gē-rō'*), **William Adolphe,** French painter, was born at La Rochelle in 1825. In 1850 he gained the prix de Rome, and went to Italy to study. From that time his reputation was made. He painted some portraits, but his subjects are chiefly ideal, idyllic, and religious. He was made a member of the institute in 1876. Died, 1905.

Bouillon (*bōō'yȯN'*), **Godfrey de,** duke of lower Lorraine; was born about 1061. He gained distinction in the armies of the emperor Heinrich IV., and was the great leader of the first crusade, and was unanimously proclaimed king of Jerusalem on its capture in 1099, but declined the title. He died in 1100, and was buried on Mount Calvary. His virtues are extolled in Tasso's *Jerusalem Delivered.*

Boulanger (*bōō'lȧN'zhā'*), **George Ernest Jean Marie,** French general and politician, was born in 1837; made colonel during the siege of Paris, general of brigade in 1880, and minister of war in 1886. A threat of prosecution drove him into exile, and he committed suicide at Brussels. Died, 1891.

Bouiger (*bōl'jer*), **Demetrius Charles,** British historian and writer, was born in London 1853; educated at Kensington grammar school and private tuition. Has contributed to all the leading journals on questions connected with the Indian empire, China, Egypt, and Turkey since 1876; has also closely studied military questions, especially those connected with the French frontiers and the position of Belgium.

Boulton (*bōl'tun*), **Matthew,** English mechanician, born in 1728 at Birmingham. He founded the famous Soho iron and steel plant near Birmingham. Died, 1809.

Bourbaki (*bōōr'bä'kē'*), **Charles Denis Sauter,** French general, born at Pau, 1816, fought in the Crimea and Italy. In 1870 he commanded the imperial guard at Metz; and under Gambetta organized the army of the North, and commanded the army of the Loire. He retired in 1881 and died in 1897.

Bourbon (*bōōr'bȯN'*), **Charles,** French general known as "the constable de Bourbon," was born 1490; for his bravery at the battle of Marignano in 1515 he was made constable of France. With George of Frundsberg he led the mixed army of Spanish and German mercenaries that stormed and plundered Rome in 1527. Bourbon was struck down in the fierce struggle—by a bullet, said to have been fired by Benvenuto Cellini.

Bourdaloue (*bōōr'dä'lōō'*), **Louis,** great French preacher, was born at Bourges, 1632, where, after being educated by the Jesuits for the church, he lectured in the academy for some time on humanity, theological ethics, etc. His sermons, based chiefly on the texts of Isaiah, St. Paul, and St. Augustine, were marked by profound moral earnestness and great logical power. His later years were spent in the preaching and practice of charity. He died at Paris in 1704.

Bourdon (*bōōr'dȯN'*), **Sèbastien,** French painter; born at Montpellier 1616, died 1671; studied in Paris and Rome. In 1652-53 he was court painter in Sweden.

Bourget (*bōōr'zhe'*), **Paul,** French poet, critic, and novelist, member of the French academy, was born at Amiens, 1852. He has written many eminently realistic and analytical books, chiefly studies of the scientific and pessimistic tendencies of the age. Among them are the following: *Cosmopolis; Pastels of Men; Impressions of America.*

Bourinot (*bōō'ri-nō'*), **Sir John George,** Canadian author and parliamentarian, was born at Sydney, Nova Scotia, in 1837; educated at Trinity Col-

lege, Toronto; established the Halifax *Reporter*, and in 1880 became clerk of the Dominion house of commons. Among his works are *How Canada is Governed; Constitutional History of Canada; Parliamentary Practice and Procedure.* Died 1902.

Bourne, Jonathan, Jr., lawyer, United States senator, was born at New Bedford, Mass., 1855; entered Harvard College in 1873 and remained until the end of his junior year. He became largely interested in the mining interests of the Northwest; is president of a number of Oregon corporations and of the Bourne cotton mills at Fall River, Mass.

Boutell, Henry Sherman, lawyer, was born at Boston, Mass., 1856; moved with parents to Chicago in 1863; graduated from Northwestern University, 1874, and from Harvard University, 1876; admitted to the bar in Illinois, 1879, and to the supreme court of the United States, 1886; is member of the board of trustees of Northwestern University, and in 1904 received the degree of LL. D. Served in Congress 1898-1911.

Boutwell, George Sewall, legislator, political reformer, was born at Brookline, Mass., 1818; was self-instructed after a common school course. He began the study of law at eighteen, but never practiced. He was governor of Massachusetts 1852-53; member of congress 1863-69; secretary of the treasury 1869-73; and United States senator from Massachusetts 1873-77. Died at Groton, Mass., 1905.

Bowditch (*bou'dich*), **Charles Pickering,** trustee, archæological student; born at Boston, Mass., 1842; graduated at Harvard in 1863. Served in civil war 1863-64; member of many archæological, historical, and other learned societies.

Bowditch, Henry Pickering, physiologist; born at Boston, 1840; graduated from Harvard, 1861; Harvard Medical School, 1868; D. Sc., 1898; LL. D.; studied physiology in France and Germany, 1868-71; assistant professor, 1871-76, and 1876-1906, professor physiology at Harvard Medical school. Died, 1911.

Bowditch, Nathaniel, American astronomer, was born in 1773 at Salem, Mass. He showed at a very early age a great inclination for mathematics, in which he attained great proficiency, without ever attending a university. His work, *The New American Practical Navigator*, was received with great favor. He was later chosen professor of mathematics and astronomy in Harvard College. He died in 1838.

Bowell (*bou'el*), **Hon. Sir Mackenzie,** Canadian statesman; premier of Canadian parliament 1894-95; was born at Rickinghall, Suffolk, 1823; removed to Canada, 1833. Entered Canadian parliament, 1867; minister of customs, 1878-91; minister of militia and defense, 1891; of trade and commerce, 1892-94; president of privy council, 1895-96; elected to the senate, 1892.

Bowen, Francis, writer of political economy and philosophy, was born in Massachusetts in 1811; graduate of Harvard and instructor there in political economy and intellectual philosophy. In 1843 he became editor of the *North American Review*. In 1854 he succeeded Dr. Walker in the Alford professorship of natural religion, moral philosophy, and civil polity. Died, 1890.

Bowles (*bōlz*), **Samuel,** journalist, for more than thirty years editor of the *Springfield Republican*, was born at Springfield, Mass., 1826; died, 1878. He traveled widely over the United States and was always warmly interested in political affairs, though never holding office. He was an accomplished and fascinating conversationalist, cosmopolitan in taste, and liberal in opinion.

Bowne (*boun*), **Borden Parker,** educator, writer on philosophy; was born at Leonardville, N. J., 1847; A. B., 1871, A. M., 1876; LL. D., Ohio Wesleyan, 1881; assistant professor of modern languages, College of the City of New York, 1875-76, Author: *The Philosophy of Herbert Spencer; Studies in Theism; Metaphysics; Introduction to Psychological Theory; The Christian Life; The Atonement.* Died 1910.

Boyle, Robert, physicist, was born at Lismore castle, Ireland, 1626. Settling at Oxford in 1654, he experimented in pneumatics, and improved the air-pump. As a director of the East India company he worked for the propagation of Christianity in the East. He discovered "Mariotte's law" seven years before Mariotte. Died, 1691.

Bozzaris (*bōt'sä-rēs*) (often, *bō-zar'is*), **Marcos,** Greek patriot who distinguished himself in the early part of the struggle for Greek independence, was born at Suli, in the mountains of Epirus, toward the close of the eighteenth century. He died in battle while successfully leading a body of 1200 men against the Turco-Albanian army, 4,000 strong, in 1823.

Bracton, Henry de, British ecclesiastic and jurist, was a "justice itinerant," in 1264 became archdeacon of Barnstaple and chancellor of Exeter Cathedral, and died in 1268. His *De Legibus et Consuetudinibus Angliae* was the earliest attempt at a systematic treatment of the body of English law.

Braddock, Edward, British major-general, was born in 1695; commander against the French in America in 1755; with a force of 2,000 British regulars and provincials, he moved forward to invest Fort du Quesne, now Pittsburg, Pa.; his troops fell into an ambuscade of Indians, while they were attacked in the front by the French, and half of them slain, among the mortally wounded being Braddock.

Bradford, William, one of the pilgrims, and second governor of Plymouth colony, was born in England in 1590, died at Plymouth, Mass., 1657. He sailed from Leyden, Holland, in the *Mayflower*. One of his first acts, as the successor of Governor Carver, was to confirm the treaty with Massasoit, just in time to suppress a dangerous Indian conspiracy. He was governor, with some brief interruptions, for thirty-one years, but declined to serve further. He was the author of a *History of Plymouth Colony* from 1602 to 1647.

Bradlaugh (*brad'lô*), **Charles,** English politician, was born in London in 1833; in 1853 he entered a solicitor's office. His lectures in the hall of science, London, on social, political, and religious questions, were very popular. In 1872 he published his *Impeachment of the House of Brunswick*. In 1880 he was returned to parliament for Northampton, but refusing to take the oath, he was not allowed to take his seat until after the general election of 1885. Died, 1891.

Bradley, James, distinguished astronomer, was born in Gloucester, England, in 1693; in 1727 he published his theory of the aberration of the fixed stars, containing the important discovery of the aberration of light. His next discovery was that the inclination of the earth's axis to the ecliptic is not constant. Latterly he became astronomer-royal at Greenwich, and laid the foundations of modern astronomy. He died in 1762.

Bradley, William O'Connell, legislator, United States senator, was born in Garrard Co., Ky., 1847; admitted to the bar, 1865; first republican governor of Kentucky, 1895; elected to United States senate, 1908. Died, 1914.

Brady, Cyrus Townsend, Protestant Episcopal clergyman, author; born at Allegheny, Pa., 1861; graduate of United States naval academy, 1883. Was rector of Protestant Episcopal churches in Missouri and Colorado and archdeacon of Kansas until 1895, and archdeacon of Pennsylvania until 1899; rector of St. Paul's church, Overbrook, Philadelphia, 1899-1902. Author: *For Love of Country; For the Freedom of the Sea; Under Tops'ls and Tents; In the Wasp's Nest; The Two Captains;* etc.

Bragg, Braxton, American general, born in Warren county, N. C., 1817, served with distinction under General Taylor in the Mexican war, and retired to private life in 1859. He became a brigadier-general in the confederate army in 1861, and succeeded General Beauregard in command of the army in Mississippi, with the rank of general, May, 1862. Died, 1876.

Brahe (*brä;* Dan. *brā'e*). **Tycho,** Danish astronomer, was born at Knudstborp, 1546; studied at Copenhagen. The great merit of Brahe as an astronomer lies in the rare industry and assiduity with which he observed and recorded the position of stars and planets, and it was partly due to these observations that Kepler was led to the conception of his three famous laws. Died 1601.

Brahms (*bräms*), **Johannes,** German musical composer, was born at Hamburg, 1833. Schumann early expressed the highest opinion of Brahms' genius, but for many years he was not appreciated in Germany. In 1861 he went to Vienna, where he acquired a high reputation, and held several important musical posts. Died, 1897.

Bramante (*brä-män'tä*), the assumed name of Donato Lazzari, celebrated Italian architect, born near Urbino in 1444. He was employed at Rome by Popes Alexander VI. and Julius II., for the latter of whom he planned, and partly executed, the buildings connecting the Belvedere and the Vatican, and subsequently designed the great church of St. Peter's, completed by Michael-angelo. Died, 1514.

Brande (*brand*), **William Thomas,** English chemist, born at London, 1788, died in 1866, having become an F. R. S. in 1809, professor of chemistry to the Apothecaries' company in 1812, Davy's successor at the Royal Institution in 1813, and head of the coinage department of the mint in 1854.

Brandes (*brän'des*), **George,** literary critic, was born of Jewish parentage, 1842, in Copenhagen, where he graduated at the university in 1864. His *Danish Poets* appeared in 1877; and the same year he left Denmark, and settled in Berlin, where he wrote lives of Lasalle, Tegner, and Beaconsfield. Among his works are *French Romanticism; Impressions of Poland and Russia; Shakespeare* (translation); *Main Currents of Nineteenth-century Literature*, etc.

Brandl, Alois, professor of English philology in the University of Berlin since 1895; born at Innsbruck, Tyrol, 1855; educated at Innsbruck; Ph. D.; LL. D.; extraordinary professor in the German University of Prague, 1884-88; ordinary professor in the University of Göttingen, 1888-92; of Strassburg, 1892-95; member of Berlin akademie, 1904. Author of *Middle English Literature, Shakespeare, Schlegel-Tieck's Skakespeare*, etc.

Brant, Joseph, Indian chief of the Mohawk nation, was born in Ohio about 1742; held a commission in the British service, and fought against the American colonists in the revolution. He died in 1807.

Brassey, Thomas, English engineer and railroad contractor, was born in 1805 at Brerton, Cheshire, England; died in 1870. After building part of the Grand Junction and the London and Southampton railroads, he contracted, 1840, in partnership with another, to build the railroad from Paris to Rouen. In partnership with Betts and Peto he undertook the Grand Trunk of Canada, 1,100 miles in length, including the great bridge at Montreal.

Brassey, Thomas, Lord, English political economist and authority on seamanship, was born at Stafford in 1836, son of Thomas Brassey, the great contractor; educated at Rugby and at Oxford; was civil lord of the admiralty 1880-84; secretary to the admiralty 1884-85; governor of Victoria, Australia, 1895-1900. He is known as an enthusiastic yachtsman, interested in the British seamen, a writer on the British navy, and in 1893-95 was president of the institute of naval architects.

Bray, Frank Chapin, editor, born at Salineville, Ohio, 1866; graduated at Wesleyan University, Conn., 1890; apprenticed to printer's trade, 1878; editor: *Topics of the Day* department of the *Literary Digest*, New York, 1894-99; editor *The Chautauquan* 1899; since June, 1902, editor-in-chief; 1906, editor-manager *Chautauqua Press* and other publications.

Brazza (*brät'sä*), **Pierre Savorgnan de,** explorer, was born of Italian descent at Rio de Janeiro in 1852. In 1878 the French government gave him 100,000 francs for exploring the country north of the Congo, where he secured vast grants of land for France, and founded several stations; by 1886 he had established twenty-six stations. He continued to explore until 1897, being in 1888-97 governor of French Congo. He died in 1905.

Breckinridge, John Cabell, American politician, was born in Kentucky in 1821; entered congress in 1851, and in 1856 was elected vice-president under Buchanan. He became United States senator in 1861, was given a command in the confederate army, and rose to the rank of major-general. Died, 1875.

Bremer (*brē'mẽr*), **Frederika,** Swedish novelist, was born in Finland in 1801, but was brought up near Stockholm, Sweden. Her first important novel, *The Neighbors*, gave her a wide fame. She has been called the "Jane Austen" of Sweden. Among her best books are *The Diary, The President's Daughter*, and *Brothers and Sisters*. Died, 1865.

Brent, Charles Henry, Protestant Episcopal bishop of the Phillipines, was born at Newcastle, Ontario, 1862; graduated from University Trinity College, Toronto, 1884, A. M., 1889, D. D., 1901; associate rector St. Stephen's, Boston, 1891-1901. On editorial staff *The Churchman*, 1879-1900; William Belden Noble lecturer, Harvard, 1907. Author: *With God in the World; With God in Prayer*.

Breton (*brē'tôn'*), **Jules Adolphe,** French painter, distinguished as the artist of rural life, was born in 1827, died 1906. His reputation greatly increased after the extraordinary sale of one of his pictures, *The First Communion*.

Breton de los Herreros (*brä-tōn' dā lōs er-rā'rōs*), **Don Manuel,** the most popular of modern Spanish poets, born 1796 at Quel, in the province of Logrono. In 1824 a comedy entitled *A la Vejez Viruelas*, was staged with great success. Henceforward he furnished theatrical managers with over 150 pieces, most of which have been highly popular. Died, 1873.

Brett, George Platt, publisher; president and director of the Macmillan company, New York; director of the Macmillan company of Canada, ltd.; born at London in 1858; member of New York chamber of commerce, American institute of archæology and president of the Macmillan company.

Brewer, David Josiah, jurist, associate justice of the United States supreme court, was born at Smyrna, Asia Minor, 1837; was graduated from Yale College in 1856 and from the Albany Law School in 1858; in 1861 was appointed United States commissioner; during 1863 and 1864 was judge of the probate and criminal courts of Leavenworth county; in 1870 was elected a justice of the supreme court of Kansas, and reëlected in 1876 and 1882; in 1884 was appointed judge of the supreme court of the United States in 1889; president of the Venezuelan boundary commission, appointed by President Cleveland; president international congress of lawyers and jurists, St. Louis, 1904. Author: *The Pew to the Pulpit; The Twentieth Century from Another View Point; American Citizenship; The United States a Christian Nation.* Died, 1910.

Brewer, William Henry, scientist, professor of agriculture, Sheffield Scientific School, Yale, 1864-1903; born at Poughkeepsie, N. Y., 1828; graduated at Yale Scientific School, 1852; first assistant on geological survey of California, 1860-64; president Arctic club of America; United States forestry commission, 1896; scientific survey of the Philippine Islands, 1903, etc. Died 1910.

Brewster, Sir David, British natural philosopher, born at Jedburgh, Scotland, 1781. He was educated for the church of Scotland, but undertook the editorship of the *Edinburgh Encyclopædia*. In 1819 the royal society awarded him the Rumford gold and silver medals for his discoveries on the polarization of light; in 1832 he was knighted, and had a pension conferred upon him; in

1849 he was elected one of the eight foreign associates of the French institute, the highest scientific distinction in Europe. In 1859 he was chosen vice-chancellor of Edinburgh University. Died, 1868.

Brian Boroihme (*brī'an bō-roim'*), or **Briam Boru** (*bō-rōō'*), king of Ireland, was born 926; ascended the throne in 978. Some time afterward he became supreme ruler of Ireland. He defeated the Danes in upward of twenty pitched battles. In the battle of Clontarf, 1014, in which he was killed, he gained a signal victory over a united army of revolted natives and Danes.

Bridgewater, Duke of (Francis Egerton), styled the "father of British inland navigation," was born in 1736, died in 1803. In 1758-60 he obtained acts of parliament for making a navigable canal from Worsley to Salford, Lancashire. He was also a liberal promoter of the grand trunk navigation; and the impulse he thus gave to the internal navigation of England led to the extension of the canal system throughout the kingdom.

Bridgman, Frederick Arthur, artist; was born at Tuskegee, Ala., 1847; apprentice in engraving department American bank note company, New York, 1864-65; knight legion of honor, 1878; officer order of St. Michael of Bavaria. Author: *Winters in Algeria; Anarchy in Art; The Idol and the Ideal.*

Briggs, Charles Augustus, clergyman, theologian was born in New York in 1841; studied in University of Virginia, 1857-60; Union theological seminary, 1861-63. Editor *Presbyterian Review*, 1880-90; was tried for heresy and acquitted by presbytery of New York, 1892, but suspended by general assembly, 1893; ordained priest by Protestant Episcopal bishop of New York, 1899. Author: *Biblical Study; American Presbyterianism; Messianic Prophecy; Whither, etc.* Died 1913.

Briggs, Le Baron Russell, educator; was born at Salem, Mass., 1855; graduated from Harvard, 1875; A. M., 1882; hon. LL. D., Harvard, 1900; Western Reserve, 1906; assistant professor English, 1885-90, professor English since 1890, dean of college, 1891-1902, dean faculty of arts and sciences since 1902, Boylston professor rhetoric and oratory since 1904, Harvard; president Radcliffe College since 1903. Has edited and annotated a number of English classics.

Bright, John, eminent orator and radical statesman, was born of Quaker parentage, 1811; entered parliament for Durham, being afterward returned from Manchester, and losing that seat through his opposition to the Crimean war. He joined Gladstone's government which disestablished the Irish church, but opposed his home rule policy in 1886. Died, 1889.

Bright, Richard, English physician, was born 1789, died 1858; educated at Edinburgh; practiced with great success in London. His specialty was morbid anatomy and the connection between morbid symptoms and alterations of structure of the internal organs. His publications on this topic were made in 1836-40.

Brinton, Daniel Garrison, American ethnologist, was born at Thornbury, Pa., 1837, and died at Atlantic City, N. J., 1899. He graduated from Yale in 1858, and from Jefferson Medical College in 1861. In 1865 he settled in Philadelphia. There he undertook for a time the professorship of ethnology in the academy of natural sciences, and in 1886 was professor of American linguistics in the University of Pennsylvania.

Brisbane, Arthur, editor and writer on present day topics; was born at Buffalo, N. Y., 1864; educated American public schools, and five years in France and Germany. Began newspaper work in 1883; seven years on New York *World* as managing editor of different editions; since 1897 editor New York *Evening Journal*.

Bristol, Frank Milton, Methodist Episcopal bishop; was born in Orleans county, N. Y.; graduated Northwestern University, Ph. B., 1877; A. M.; D. D.; five times member general conference Methodist Episcopal church, and in 1908 elected bishop. Author: *Providential Epochs*; *The Ministry of Art*, etc.

Bristow, Joseph Little, journalist, United States senator, was born in Wolfe county, Ky., 1861; graduated from Baker University, Kansas, 1886; private secretary to Governor Morrill (Kansas), 1895-97; fourth assistant postmaster-general, 1897-1905; had charge of investigation of Cuban postal frauds and reorganization of Cuban postal service, 1900. Appointed by the president special Panama railroad commissioner, 1905; elected United States senator for the term 1909-15.

Brock, Sir Isaac, British officer, was born in Guernsey in 1769. In the war of 1812, when an American army, under General Hull, invaded Canada, the Americans surrendered without striking a blow. He was killed in the battle of Queenstown, Canada, 1812.

Brockhaus (*brok'-hous*), **Friedrich Arnold,** founder of the famous publishing firm of Brockhaus in Leipzig, and original publisher of the *Conversations-Lexikon*, was born at Dortmund in 1772; from 1811 to 1817 he carried on business in Altenburg, and finally moved to Leipzig, where he died, 1823.

Brodeur, Hon. Louis Philippe, Canadian statesman, minister of marine and fisheries in the Dominion government since 1906; was born at Beloeil, in the province of Quebec, 1862; educated at the college of St. Hyacinth; LL. D.; K. C., 1899; deputy-speaker of the house of commons, 1896-1900; speaker, 1900-04; minister of inland revenue, 1904-06; member of the imperial conference; one of the ministers who negotiated the Franco-Canadian treaty of 1907.

Bronte (*bron'te*), **Charlotte,** English authoress, was born at Thornton, 1816, died 1855. After some experience as a governess she engaged with her sisters in the writing of novels, and in 1846 published with them a small volume of poems. In 1847 she published the well-known story, *Jane Eyre*. Her second story, *Shirley*, was published in 1849, and her third and last, *Villette*, in 1853. In 1854 she married Rev. Mr. Nicholls, but soon after her marriage died of consumption.

Brooke, Stopford Augustus, British Unitarian preacher and man of letters, was born near Dublin, 1832; educated at Trinity College and received degrees M. A. and LL. D. In 1872 appointed chaplain in ordinary to the queen. Has published *Life and Letters of Frederick W. Robertson; Theology in the English Poets; History of English Literature; Study of Tennyson*; etc.

Brooks, Phillips, preacher and orator, was born at Boston, Mass., 1835; graduate of Harvard, 1855; 1870-91 rector of Trinity church, Boston; from 1891 to 1893, bishop of Massachusetts. His freedom from the ordinary sectarian trammels, his liberal views of doctrine, with his profound convictions as to vital Christian truths, and his deeply spiritual, yet intensely practical preaching gave him great popular power. He died in 1893.

Brougham (*brōō'am* or *brōōm*), **Henry Peter,** Lord Brougham and Vaux, British jurist, philosopher, and statesman, was born at Edinburgh, 1779. In 1808 he joined the English bar, and speedily acquired high reputation as an advocate. In 1810 he entered parliament, where he became a chief of the liberal party. In 1830 he became the acknowledged champion of parliamentary reform, was called to the house of peers, and appointed lord high chancellor of England, which office he resigned in 1834. He devoted the remainder of his life almost exclusively to science and literature at his chateau at Cannes, France. Died, 1868.

Brown, Calvin Smith, university professor, was born in Tennessee, 1866; graduated at Vanderbilt, 1888; D. Sc., 1892; studied at the Universities of Paris and Leipzig, 1894-5; Ph. D., University of Colorado 1899; traveled in Spain, Italy, Greece, 1903-4. Professor of English, comparative literature, modern languages, Vanderbilt University, University of Colorado, and University of Missouri 1889-1905; professor Romance language, 1905-9, acting professor German language and literature 1908, professor since 1909, University of Mississippi. Editor: Tennyson's *Enoch Arden* and the two *Locksley Hall* poems; *The Later English Drama*, etc.

Brown, Charles Brockden, early American novelist, was born at Philadelphia, Pa., 1771, and died there in 1810. His two best known stories are *Wieland, or the Transformation*, and *Arthur Mervyn*.

Brown, Elmer Ellsworth, educator, president of New York University since 1911; was born at Kiantone, Chautauqua county, N. Y., 1861; graduated from the Illinois State Normal University, 1881; University of Michigan, 1889; Ph. D.; associate professor, University of California, 1892-93; professor same, 1893-1906; United States commissioner of education 1906-1911.

Brown, Francis, educator, was born in 1849; Davenport professor of Hebrew and the cognate languages, Union theological seminary, New York, since 1890; president of the faculty, Union theological seminary, since 1908. Author of *Assyriology: Its Use and Abuse*; also many articles and reviews.

Brown, Henry Billings, jurist, associate justice of the United States supreme court, 1891-1906; born at South Lee, Mass., 1836; graduate of Yale, 1856; LL. D., Yale, 1891; United States judge for eastern district of Michigan, 1875-90; resigned from United States supreme court bench, 1906. Died 1913.

Brown, Henry Kirke, American sculptor and painter of great versatility; author of the colossal statue of General Washington in Union square, New York; *The Angel of the Resurrection*, in Greenwood cemetery, Brooklyn. He was born in 1814, died 1886.

Brown, John, leader of the Harper's Ferry insurrection, 1859, designed to incite the slaves of the southern states to rebellion; was born at Torrington, Conn., in 1800. In 1854 he went to Kansas. After the slavery agitation in that state was settled by a general vote, he traveled through the southern and eastern states, declaiming against slavery, and endeavoring to organize an armed attack upon it. In 1859, at the head of seventeen white men and five blacks, he commenced active hostilities by a descent upon Harper's Ferry. Instead of retreating to the mountains with arms and hostages, as his original design had been, Brown lingered in the town until evening, by which time 1,500 militiamen had arrived. He was captured, tried for treason, and executed in 1859.

Brown, Norris, lawyer, United States senator, was born in 1863, at Maquoketa, Iowa; graduated from Iowa State University, 1883, and two years later received the degree of M. A.; admitted to practice law in Iowa, 1883; moved to Kearney, Neb., 1888; attorney-general, 1904-06; was elected to the United States senate for the term 1907-13.

Browne, Charles Farrar, American humorist and satirist, known by the pseudonym of "Artemus Ward," was born at Waterford, Maine, 1834. He traveled over America lecturing, carrying with him a whimsical panorama as affording texts for his numerous jokes, which he took with him to London, and exhibited. He died in England in 1867.

Browne, Sir Thomas, English physician and author was born at London in 1605. During the civil wars and the protectorate he remained in learned seclusion, indifferent to either party. He was knighted in 1671, and died on his birthday in 1682. His chief works are *Religio Medici*; and *Pseudodoxia Epidemica*.

Browning, Elizabeth Barrett, English poetess, was born at London in 1806, died at Florence, Italy, 1861. In 1846 she married Robert Browning. In 1850 Mrs. Browning published her collected works, together with several new poems. *Aurora Leigh*, her longest production, was published in 1856. *Poems Before the Congress* appeared in 1860.

Browning, Oscar, English historian and critic, was born at London, 1837; educated at Eton, and King's College, Cambridge; master at Eton, 1860-75; college and university work at Cambridge since 1876.

Browning, Robert, British poet, born at Camberwell, May 7, 1812; died Dec. 12, 1889. After completing his education at University College, London, he went to Italy, where he made diligent study of its mediæval history and the life of the people. In 1846 he married Elizabeth Barrett, and resided chiefly in Italy, making occasional visits to England.

His first poem, *Pauline*, was published in 1833; followed by *Paracelsus* in 1835; *Strafford, a Tragedy* (1837), produced at Covent Garden, Macready and Helen Faucit playing the chief parts. *Sordello* appeared in 1840, followed by the series called *Bells and Pomegranates*, including the three plays *Pippa Passes, King Victor and King Charles*, and *Colombe's Birthday*; four tragedies: *The Return of the Druses, A Blot on the Scutcheon, Luria*, and *A Soul's Tragedy*; and a number of dramatic lyrics, among them the well-known *Pied Piper Of Hamelin*, and *How they Brought the Good News from Ghent to Aix* (1841-46). Between 1846 and 1868 appeared *Men and Women; Christmas Eve and Easter Day; Dramatis Personae*, and some shorter poems. *The Ring and the Book* (1869), his longest poem, was followed by *Balaustion's Adventure*; and *Prince Hohenstiel-Schwangau* (1871); *Fifine at the Fair* (1872); *Red Cotton Nightcap Country* (1873); *Aristophanes' Apology; Inn Album* (1875); *Dramatic Idylls; People of Importance in their Day* (1887); and *Asolando* (1889). He received the degree of D. C. L. from Oxford in 1882.

A Browning Society for the study of his works was formed in 1881, under whose auspices several of his dramas have been performed. His poems are often difficult to understand from the quick transitions of thought, and they are not infrequently rugged and harsh in expression, yet they are among the chief poetic utterances of last century.

References.—*Life of Robert Browning*, by William Sharp; *Life and Letters*, by Mrs. Sutherland Orr; *Robert Browning*, by Edmund Gosse; Molineux's *Browning Phrase-Book*.

Brown-Sèquard (*sā'kär'*), **Edouard,** physiologist, was born at Port Louis, Mauritius, 1818. In 1864 he became professor of physiology at Harvard; in 1873 became a medical practitioner in New York, and in 1878 succeeded Claude Bernard as professor of experimental medicine at the College de France. He published lectures on *Physiology and Pathology of the Nervous System*. He died in Paris in 1894.

Bruce, Robert, king of Scotland, born 1274, did homage for a time to Edward, but joined the national party; stabbed Comyn in a quarrel at Dumfries, 1306, and was that same year crowned king at Scone. In 1328, fourteen years after the great victory of Bannockburn, the independence of Scotland was acknowledged as well as Bruce's right to the crown. He died in 1329, in the thirty-third year of his reign.

Bruce-Joy, Albert, British sculptor, was born in Dublin, 1842; was educated at King's College, London; South Kensington and Royal academy schools of art. Pupil of Foley; studied in Rome three years; twice visited America.

Brugsch (*brookish*), **Heinrich Karl,** German Egyptologist, Prussian consul to Cairo, was born in 1827. He organized the first Egyptian University, was an eminent authority on Egyptian archæology, and wrote many works covering many phases of that subject. Died, 1894.

Brummel, George Bryan, "Beau Brummel," was born at London in 1778; in his day the prince of dandies, was patronized by the prince of Wales

afterward George IV.; quarreled with the prince; fled from his creditors to Calais, where, reduced to destitution, he lived some years. He settled at length in Caen, where he died insane in 1840.

Brunelleschi (*brōō'nel-les'kē*), **Filippo,** Italian architect, was born at Florence in 1377, is reckoned the first who established on a sound basis the theory of perspective. Brunelleschi's dome in the cathedral at Florence measured diametrically, is the largest in the world, and served as a model to Michaelangelo for that of St. Peter's.

Brunhilde (*brün'hēld'*) (Brunehaut), daughter of the Visigothic king, Athanagild; married King Sigebert of Austrasia in 561, and was afterward regent for her two grandsons, Theodebert II., king of Austrasia, and Theodoric II., king of Burgundy. Died, 613.

Bruno (*brōō'nō*), **Giordano,** a restless speculative thinker, was born at Nola, near Naples, in 1548, was trained a Dominican, but doubting the dogmas, fled to Geneva, whence Calvinist suspicion of his scepticism drove him to Paris, where he lectured; in 1592 in Venice he was arrested by the officers of the inquistion and conveyed to Rome in 1593. There, in 1600, he was burned as an obstinate heretic.

Bruno, Saint, founder of the Carthusian order, was born at Cologne about 1040; became rector of the cathedral school at Rheims, but, oppressed by the wickedness of his time, withdrew in 1084 to the wild mountain of Chartreuse, near Grenoble. Here with six friends he founded the austere Carthusians. In 1094 he established a second Carthusian monastery at Della Torre in Calabria, where he died, 1101.

Brush, George Jarvis, mineralogist; born in Brooklyn, 1831; private school education; studied chemistry and mineralogy at New Haven; LL. D., Harvard, 1886; professor metallurgy, 1855-64, Yale (now Sheffield) scientific school; professor mineralogy same since 1864; director Sheffield scientific school, 1872-98. Died 1912.

Brutus, Lucius Junius, figures in the history of early Rome as the hero who overturned the monarchial, and established the republican form of government. That his character as a stern old Roman hero might be complete, the legend adds that he sacrificed to the new republic his own sons, detected in a conspiracy to restore the monarchy. He fell in mortal combat against the Tarquins about 507.

Brutus, Marcus Junius, was born in 85 B. C., and died 42 B. C. He joined Pompey in his war against Cæsar; but after Pompey's defeat he was kindly treated by Cæsar, and made governor of Cisalpine Gaul. In 44 B. C., in his eagerness to preserve the liberty of the republic against Cæsar's apparent purpose of being made emperor, he was persuaded by Caius Cassius to join a conspiracy, and helped in his assassination, although Cæsar had given him many honors and promised him others. Soon after, he and Cassius were defeated at Philippi by Antony and Octavius. Feeling that their cause was lost, Brutus at once flung himself upon his sword and died.

Bryan, William Jennings, editor, orator, and publicist; born in Salem, Ill., 1860; graduate of Illinois College, Jacksonville, 1881; Union College of Law, Chicago, 1883; member of congress, 1891-95; delegate to national democratic convention, 1896; wrote the "Silver plank" in its platform, made a notable speech, and was nominated for president of United States; received 176 electoral votes against 271 for William McKinley. Nominated for president in 1900 by democratic, populist, and silver republican conventions; he made an active canvass, but was again defeated by William McKinley; after the election he established a weekly political magazine, *The Commoner*. He was again nominated for President in 1908, and was defeated by W. H. Taft. Appointed Secretary of State by President Wilson, 1913.

Bryan, William Lowe, educator; born near Bloomington, Ind., 1860; graduated from Indiana University, 1884; Ph. D.; LL. D.; vice-president 1893-1902, president since 1902, Indiana University. President American psychological association, 1903. Author; *Plato the Teacher*, edited with notes and introduction; *The Republic of Plato, with Studies for Teachers;* and many contributions on psychological subjects in current periodicals.

Bryant, William Cullen, poet and journalist, born at Cummington, Hampshire county, Mass., 1794; at eighteen he composed his *Thanatopsis*. He established *The New York Review*, to which he contributed many of his best poems. In 1826 he became principal editor of *The Evening Post*. The first collected edition of his poems appeared in 1832. In 1842 he published *The Fountain, and Other Poems*. In 1858 appeared a new edition of his poetical works, and in 1869 a metrical translation of the *Iliad*, followed in 1871 by that of the *Odyssey*. He afterward collaborated in writing the *History of the United States*. Died, 1878.

Bryce (*brīe*), **Rt. Hon. James,** British historian, diplomat, statesman, was born at Belfast, Ireland, in 1838; educated at Glasgow University and Trinity College, Oxford; D. C. L., LL. D., F. R. S.; He was admitted to Lincoln's Inn, 1867; became regius professor of civil law at Oxford University, 1870-93; under-secretary for foreign affairs for five months in 1886; chancellor of the duchy of Lancaster, 1892-94; president of the board of trade, 1894-95; chief secretary for Ireland, 1905-07. He was appointed ambassador to the United States, 1906. He has taken a deep interest in the condition of the eastern Christians and their emancipation from Turkish misrule. He strongly opposed the war in South Africa, and the education act of 1902. Author of *The Holy Roman Empire; The American Commonwealth;* etc.

Buchanan (*bu-kan'an* or *bū-kan'an*), **James,** fifteenth president of the United States, was born in Pennsylvania, 1791; admitted to the bar, 1812; member of congress, 1821-31; minister to Russia, 1832-34; United States senator, 1834-35; secretary of state, 1845-49; minister to England, 1853-56; president, 1857-61. He spent the remainder of his life at his home in Lancaster, Pa. He died in 1868.

Buchanan, Robert, British poet and critic, was born in England, 1841; educated at Glasgow University. In 1860 he published *Undertones*, a volume of verses; in 1865 *Idylls* and *London Poems*. Died 1901.

Buck, Dudley, organist, composer; born Hartford, Conn., 1839; studied at Trinity College, then Leipzig conservatory of music, and at Dresden and Paris; was organist Holy Trinity church, Brooklyn, and director and organist Apollo club, twenty-five years; retired, 1903. Among his compositions are the *Centennial Cantata; Golden Legend; Voyage of Columbus*, and *Light of Asia*. Died, 1909.

Buckingham (*buk'ing-am*), **George Villiers, Duke of,** the favorite of James I. and Charles I. of England, born at Brookesley, Leicestershire, 1592. On the accession of Charles I., in 1625, Buckingham maintained his ascendency at court, but after the ill-fated expedition against Cadiz he became odious to the nation. He was assassinated by a discontented officer named Felton, 1628.

Buckle, Henry Thomas, English historian, was born at Lee, Kent, 1821, the son of a London shipowner. In 1840 he found himself master of 1,500 pounds a year; by 1850 he knew eighteen foreign languages, and had amassed a library of 22,000 volumes, chosen mostly to help him in a *magnum opus*, of which all that was ever published was but a fragment, *An Introduction to the History of Civilization in England*; in 1862, after six months' wandering in Egypt and Palestine, he died of typhoid fever at Damascus.

Buckley, James Monroe, clergyman, editor *New York Christian Advocate* since 1880; born in Rahway, N. J., 1836; educated at Wesleyan University; M. A., D. D.; LL. D.; pastor in vicinity of New York until 1880.

Budde (*bōōd'de*), **Karl,** theologian, professor of old testament theology, University of Marburg; born Bensberg, near Cologne, 1850; educated at Bensberg at Essen gymnasium in the Universities of Bonn, Berlin, Utrecht; passed the two examinations for church service at Coblenz in 1871 and 1874; professor extraordinarius in 1879 at Bonn; was promoted 1889 to the professorship at Strassburg; accepted a call to Marburg in 1900.

Buddha (*bood'ha*), ("the Wise" or the "Enlightened"), the sacred name of the founder of Buddhism, an Indian sage who appears to have lived in the 5th century B. C. His personal name was Siddhartha, and his family name Gautama; and he is often called also Sakyamuni (from *Sakya*, the name of his tribe, and *muni*, a Sanskrit word meaning a sage). His father was king of Kapilavastu, a few days' journey north of Benares.

Siddhartha, filled with a deep compassion for the human race, left his father's court, and lived for years in solitude till he had penetrated the mysteries of life, and become the Buddha. He then began to teach his new faith, in opposition to the prevailing Brahmanism, commencing at Benares. Among his earliest converts were the monarchs of Magadha and Kosala, in whose kingdoms he chiefly passed the latter portion of his life, respected, honored, and protected. Buddha did not leave his doctrines in writing; he declared them orally, and they were carefully treasured up by his disciples, and written down after his death. The determination of the canon of the Buddhist scriptures as we now possess them was the work of three successive councils, and was finished two centuries at least before Christ.

References.—Rhys Davids's *Buddhism;* Lillie's *Buddha and Buddhism*.

Budge, Ernest A. Wallis, English archæologist, keeper of Egyptian and Assyrian antiquities, British museum, was born in Cornwall, 1857; educated at Christ's College, Cambridge. Has conducted excavations at Aswan in Egypt, at Gebel Barkal, on the island of Meroe, and at Semna and other sites in the Sudan, and at Nineveh and Der in Mesopotamia.

Buffon (*bü'fôn'*), **Georges Louis Leclerc, Count de,** French naturalist, was born 1707, died 1788. He was educated for the law; but, after traveling for a time, devoted himself to science. In 1739 he was elected a member of the academy of sciences, and appointed director of the royal garden. He was one of the pioneers of the modern doctrine of evolution.

Bulfinch, Charles, American architect, was born in Boston, Mass., 1763. His chief works are the Massachusetts state house, at Boston; McLean hospital, Somerville; Massachusetts general hospital, Boston; and the west porticos of the capitol at Washington. He died 1844.

Bull, Ole Bornemann, famous violinist; born in Bergen, in Norway, 1810; he secured great triumphs both throughout Europe and in America by his wonderful playing. He afterward settled down at Cambridge, Mass., and had also a summer residence in Norway, where he died in 1880.

Buller (*bool'lēr*), **Sir Redvers,** British general, was born in England in 1839, and as an officer of the 60th rifles saw much service in the China expedition of 1860. In the Boer war, 1899-1901, he had chief command of the first army corps sent from England to South Africa. He was successively adjutant-general, lieutenant-general, and commander-in-chief of the British forces. Retired, 1901; died, 1908.

Bülow (*bü'lō*), **Prince Bernhard von,** German statesman, chancellor of the empire 1900-09, was born at Klein-Flottbeck in 1849. At the conclusion of the Russo-Turkish war he was appointed one of the secretaries of the Berlin congress, and after more diplomatic service in Paris and St. Petersburg, he was appointed minister to Roumania, 1888, and ambassador to Italy, 1893. In 1899 he concluded the treaty with Spain, whereby the Caroline, Marianne, and Pelew islands were ceded to Germany, and upon this achievement he was created Count Bülow. In 1900, on the resignation of Prince Hohenlohe he succeeded him as chancellor of the German empire, prime minister and minister of foreign affairs of Prussia, and, on June 6, 1905, he was raised to the dignity of prince. He resigned the chancellorship in 1909, and was succeeded by Dr. Bethmann-Hollweg.

Bülow, Friedrich Wilhelm, Baron von, Prussian general, was born at Falkenberg, 1755, died at Königsberg, 1816. His victories over Oudinot and Ney at Grossbeeren and Dennewitz saved Berlin; he acted a conspicuous part in the battle of Leipzig, and, by taking possession of Montmartre finished the campaign of 1814. In 1815 he joined Blücher by forced marches, and headed the column that first came to Wellington's aid at Waterloo.

Bulwer (*bool'wēr*), **Edward George Earle Lytton.** See **Lytton, Lord.**

Bulwer, Sir Henry Lytton Earle, famous English diplomatist and author, an elder brother of Lord Lytton, usually known as Sir Henry Bulwer was born 1804. In 1843 he was made minister plenipotentiary to the court of Madrid, and concluded the peace between Spain and Morocco in the following year. In 1849 he came to Washington, where he evinced equal art in concluding the Clayton-Bulwer treaty; died 1872. Among his works were *An Autumn in Greece*; *France, Social Literary, and Political; Life of Byron* and *Historical Characters*.

Bunsen (*boon'sen*), **Baron, Christian Karl Josias,** German statesman and scholar, born 1791 at Korbach, in the principality of Waldeck, died at Bonn, 1860. He is known in literature by his *Constitution of the Church of the Future; Christianity and Mankind; God in History*, and many other works.

Bunsen Robert Wilhelm, German chemist, was born at Göttingen, 1811. He was the first to produce magnesium in large quantities, and in 1860 invented the magnesium light. His greatest discovery was that of spectrum analysis, made in conjunction with Kirchhoff. Bunsen will always be remembered by physicists and chemists from their constant use of the photo-meter and gas-burner, which are such useful adjuncts to laboratory apparatus, and which bear the "Bunsen burner" name. Died, 1899.

Bunyan, John, English writer, was born at Elstow, near Bedford, in 1628. After a short service in the Parliamentary army, he married at the age of nineteen. His marriage was followed by his conversion, or religious "awakening." In 1655 he became a member of the Baptist congregation at Bedford, and, subsequently, its pastor. After the restoration, he was convicted under the act against conventicles, 1660, and thrown into Bedford jail, where he remained for upward of eleven years, supporting his family by making tagged laces, and writing *The Pilgrim's Progress*; he was released from prison, 1672, becoming again pastor of the Bedford congregation. This position he held till his death, which took place, 1688. Of Bunyan's other works, the chief are his *Grace Abounding to the Chief of Sinners*, an autobiography, and the *Holy War*.

Burbank, Luther, naturalist, horticulturist; born in Lancaster, Mass., 1849. Moved to Santa Rosa, Cal., 1875; conducts Burbank's experiment farms. Special lecturer on evolution at Leland Stanford Jr. University.

Burdette (*bûr-det'*), **Robert Jones,** American journalist, humorist, and lecturer, was born in Pennsylvania in 1844. Served with the 47th Illinois volunteers as a private, in the civil war. His humorous sketches won him an audience far and wide. He began to lecture in 1876, and was

licensed a minister of the Baptist church, 1887; held a pastorate at Los Angeles until 1909, when he was incapacitated by an accident. He is the author of *Hawkeyetems; Chimes from a Jester's Bells; Smiles Yoked with Sighs;* etc.

Burdick, Francis Marion, lawyer, educator, Dwight professor law, Columbia University, since 1891; born at De Ruyter, N. Y., 1845; graduated from Hamilton College, 1869; LL. D.; professor law and history, Hamilton College, 1882-87; professor law, Cornell University School of Law, 1887-91. Mayor of Utica, 1882-83. Author: *The Essentials of Business Law; Cases on Torts; Cases on Sales; Law of Sales;* etc.

Burgess, Frank Gelett, writer, illustrator; born Boston, 1866; graduated at Massachusetts Institute of Technology, B. S., 1887. Draughtsman with Southern Pacific railway, 1887-90; instructor topographical drawing, University of California, 1891-94; designer, 1894-95; writer for various magazines in New York, 1897-98; removed to London, 1898, to San Francisco, 1900, to Boston, 1904; associate editor *Ridgeways*, 1906. Author *Vivette; The Lively City Ligg; Goops and How to Be Them; A Gage of Youth; Burgess Nonsense Book.*

Burgess, John William, educator; born in Connersville, Tenn., 1844; attended Cumberland University, Lebanon, Tenn.; graduate of Amherst, 1867. Admitted to bar, Springfield, Mass., 1869; professor political science and constitutional law since 1876, dean faculty of political science since 1890, Columbia University; Roosevelt professor of American history and institutions, University of Berlin, 1906-07. Author: *Political Science and Comparative Constitutional Law; The Middle Period; The Civil War and the Constitution; Reconstruction and the Constitution.*

Burgoyne (*bûr-goin'*), **John,** British general, was born 1722; entered early into the army; and in 1762 displayed much talent and enterprise in command of a party of the British troops in Portugal. In the American war, he led the army which was to penetrate from Canada into the revolting provinces. At first, he was successful; but was ultimately compelled to surrender at Saratoga, 1777. He died in 1792.

Burke, Edmund, British statesman and orator, was born at Dublin, about 1729; graduated at Trinity College, Dublin. Going to London, he attracted attention by his essays on the *Sublime and Beautiful,* and devoted himself to literature. In 1766 entering parliament, his speeches on American affairs created a great sensation in the house of commons. Returned for Malton, he produced in 1780 his great plan of economical reform; and in 1782 he became paymaster under Lord Rockingham's government. He again took office in the duke of Portland's coalition ministry, when he made his famous speech on the India bill. In the impeachment of Warren Hastings, Burke played a leading part, his opening speech extending over four days. In 1794 he retired from parliamentary life, though he continued to produce his pamphlets on political affairs. His other chief works are *A Vindication of Natural Society; Reflections on the Revolution in France;* and some *Letters.* Died at Beaconsfield, England, 1797.

Burleigh (*bēr'li*), **William Cecil, Lord.** See **Cecil, William, Lord Burleigh.**

Burleson, Albert Sydney, lawyer, postmaster-general, was born 1863, at San Marcos, Texas; was educated at agricultural and mechanical College of Texas; admitted to the bar in 1884; appointed by the governor of Texas attorney of the twenty-sixth judicial district in 1891; elected to said office 1892-96; elected to the fifty-sixth, fifty-seventh, fifty-eighth, fifty-ninth, sixtieth, sixty-first and sixty-second congresses.

Burlingame, Anson, American diplomatist; born in Chenango county, N. Y., 1820. He was elected member of congress in 1854-56-58. In 1861 he was sent as minister to China, and in 1868 he visited this country at the head of a Chinese embassy, and concluded a liberal treaty between the United States and China, which was promptly ratified by the Chinese government; died, 1870.

Burne-Jones, Sir Edward, English painter, was born of Welsh ancestry at Birmingham, England, 1833. He was educated at Exeter College, Oxford, where William Morris, the poet, was his friend. About 1870 he began to be known as an oil-painter, and his works henceforth are inspired by the earlier art of the Italian renaissance, and show more of grace and less of emphasis than his former paintings. Among his pictures are *The Days of Creation; The Beguiling of Merlin; The Mirror of Venus.* He furnished striking designs for stained glass at Christ Church, Oxford. He became D. C. L. 1881, A. R. A. 1885 (resigned 1893), and a baronet 1894. He died, 1898.

Burnett (*bûr-net'*), **Frances Hodgson,** author, playwright; born (Frances Eliza Hodgson), Manchester, England, 1849; began writing for magazines, 1867; married Dr. L. M. Burnett, 1873; settled in Washington, 1875. Author (novels): *That Lass o' Lowrie's; Dolly, a Love Story; Kathleen; Surly Tim and Other Stories; A Little Princess.* Plays: *Little Lord Fauntleroy; Phyllis; The Snowman's Daughter; Esmeralda; The First Gentleman of Europe; Nixie; A Lady of Quality; The Shuttle;* etc.

Burnham, Daniel Hudson, architect; born Henderson, N. Y., 1846; removed to Chicago, 1856; educated there and in Massachusetts; A. M., Sc. D. Architect Field's retail store and many other buildings in Chicago and elsewhere, including the Mills building, San Francisco; Ellicott Square, Buffalo; Society for Savings, and First, Third, and Fourth National Banks, Cleveland; chief architect and director of works, World's Columbian Exposition, 1890-93; chairman commissions for beautifying Washington and Cleveland, Ohio. Died, 1912.

Burns, Rt. Hon. John, labor leader, president of the British local government board since 1905; born London, 1858; since 1892 has represented Battersea in the house of commons; member of the British cabinet, 1905. He has published many pamphlets, articles, and speeches.

Burns, Robert, Scottish poet, was born at Alloway, near Ayr, Scotland, 1759; died at Dumfries, 1796. He was the son of a small farmer, and was brought up amidst indigence and adversity. He received, however, the advantages of a common school education, though his chief advances in general knowledge he owed to the books he read, among which were *The Spectator,* the works of Pope, and the poems of Allan Ramsay. When sixteen years of age he fell in love, and his feelings, as he tells us, at once burst into song. His first volume of poetry was issued in 1786, from Kilmarnock, and at once became popular. The success of this volume, which was speedily republished in Edinburgh, induced him to take the farm of Ellisland, near Dumfries, where he married his "bonny Jean;" he removed to Dumfries in 1791 and, having been appointed to a position as exciseman, which had been obtained for him by a friend and an admirer of his genius, he subsisted entirely upon his income from that office, which yielded only about $350 a year. In 1792 he wrote about a hundred songs, as accompaniments to the melodies of Scotland; intemperance gradually gained upon him, while want threatened him; and, in his thirty-seventh year, he sank into an untimely grave.

Burnside, Ambrose Everett, American general, born at Liberty, Indiana, 1824; graduated at West Point in 1847. He commanded a brigade at Bull Run, and in February 1862, captured Roanoke island. He commanded the Army of the Potomac, Nov. 1862-Feb. 1863, and was defeated at Fredericksburg, 1862. In 1863 he successfully held Knoxville, and in 1864 led a corps under Grant through the battles of the Wilderness and Cold Harbor. Resigning in April, 1865, he was elected governor of Rhode Island (1866-68), and United States senator in 1875 and 1881. He died at Bristol, R. I., 1881.

Burr, Aaron, American statesman, was born 1756, died 1836; he was a lieutenant-colonel in the revolutionary war; attorney-general of New York 1789; United States senator 1791-97; mortally wounded Alexander Hamilton in a duel 1804; vice-president of the United States 1801-05; tried on a charge of treason, 1807, but acquitted.

Burr, George Lincoln, educator, librarian; born Oramel, N. Y., 1857; graduated from Cornell, 1881; student Leipzig, Paris and Zürich; LL. D.; Litt. D. Librarian the President White library since 1878; member Cornell faculty since 1888. Writer on history of superstition and persecution.

Burr, William Hubert, engineer, professor civil engineering, Columbia University since 1893; born Watertown, Conn., 1851; graduated Rensselaer Polytechnic Institute, C. E., 1872; professor engineering, Harvard, 1892-93. Consulting engineer to department of public works, 1893-95, of parks, 1895-97, of docks, 1895-97, and now department of bridges, and aqueduct commissioners, New York. Appointed, 1899, by President McKinley, member isthmian canal commission. Appointed, 1904, by President Roosevelt, member isthmian canal commission; consulting engineer to board of water supply, New York. Awarded first place in national competition, 1900, for proposed memorial bridge across Potomac at Washington.

Burritt, Elihu, "the learned blacksmith," was born at New Britain, Conn., 1810. He worked as a blacksmith in his native place and at Worcester, Mass., but devoted all his leisure to mathematics and languages—Latin, Greek, Hebrew, Arabic, and most of the modern European languages. He took a prominent part in advocating an ocean penny-postage. For many years he lived in England, in 1865-70 as United States consul at Birmingham. He died at New Britain, Conn., 1879.

Burroughs (*bûr'ōz*), **John,** essayist, naturalist; born Roxbury, N. Y., 1837; received an academic education, and taught school about eight years; treasury clerk, 1864-73; national bank examiner, 1873-74; since 1874 has lived on a farm, devoting his time to literature and fruit culture. Author: *Notes on Walt Whitman as Poet and Person; Locusts and Wild Honey; Fresh Fields; Riverby; The Light of Day; Squirrels and other Fur Bearers; Far and Near; Ways of Nature.*

Burton, Ernest de Witt, theologian, critic; professor of new testament interpretation, University of Chicago, since 1902; born Granville, Ohio, 1856; University of Leipzig, 1887; associate editor of the *Biblical World,* 1892-1906; editor-in-chief since 1906; editor (with others) of the *American Journal of Theology* since 1897. Author: *Constructive Studies in the Life of Christ* (with S. Mathews); *A Short Introduction to the Gospels;* etc.

Burton, Sir Richard Francis, English traveler, was born 1821, at Barham House, Hertfordshire, and educated in France and England. After visiting Somaliland and service in the Crimea, he in 1856 set out with Speke on the journey which led to the discovery of Lake Tanganyika, 1858, and afterward traveled in America. He was subsequently consul at Santos in Brazil, at Damascus, and at Trieste. In 1876-78 he visited Midian, and in 1882 Guinea; and he was knighted in 1886. He died at Trieste, 1890.

Burton, Theodore Elijah, U. S. Senator, lawyer; born in Jefferson, Ohio, 1851; graduate of Oberlin College, 1872; admitted to bar, 1875; since then in practice at Cleveland; member congress, 1889-91, and 1895-1909; United States senator, 1909-15. Author: *Financial Crises and Periods of Industrial and Commercial Depression,* and *Life of John Sherman.*

Bury (*ber'i*), **John B.,** British historian; regius professor of modern history, Cambridge University since 1902; was born 1861; graduate Trinity College, Dublin; M. A., Litt. D.; LL. D.; professor of modern history in Dublin University, 1893-1902; regius professor of Greek, 1898. Author: *History of the Later Roman Empire from Arcadius to Irene; Student's History of the Roman Empire from Augustus to Marcus Aurelius;* etc.

Bushnell, Horace, theologian, was born at Litchfield, Conn., 1802; graduated, Yale, 1827, and was for some time literary editor New York *Journal of Commerce;* ordained to the Congregational ministry 1833; preached at Hartford, 1833-59. His works include *God in Christ, Christian Theology, Vicarious Sacrifice,* etc. Died at Hartford, 1876.

Butler, Benjamin Franklin, American politician, and general, was born in New Hampshire, 1818, studied law and settled in Massachusetts, where he became recognized as the leading democrat of New England. He promptly entered the service at the outbreak of the civil war, and had command of the departments of the gulf and of the south Atlantic, acquiring no military fame but great notoriety for his arbitrary civil regulations; governor of Massachusetts, 1882. Died, 1893.

Butler, Joseph, eminent English divine, was born 1692 at Wantage, in Berkshire; died 1752. In 1718 he was appointed preacher at the Rolls chapel, were he preached those remarkable sermons which he published in 1726. His great work, the *Analogy,* of which the germs were contained in his three sermons, was published in 1736.

Butler, Nicholas Murray, educator; born Elizabeth, N. J., 1862; graduated, Columbia, 1882, Ph. D. 1884; student at Berlin and Paris, 1884-85; LL. D.; Litt. D.; dean faculty of philosophy, 1890, professor philosophy and education, and president since 1902. Editor of the *Educational Review;* the *Great Educators Series;* the *Teachers' Professional Library,* etc.

Butler, Samuel, English satirist, was born at Strensham, England, 1612. The experiences of this time furnished him with the material for his famous work, *Hudibras,* the first part of which appeared in 1663, and achieved the widest popularity. Died, 1680.

Byron, Lord, George Gordon, English poet, was born in London, 1788. In his eleventh year he succeeded his grand-uncle, William, Lord Byron, and took possession of Newstead abbey, the ancient seat of the family, situated a few miles distant from Nottingham. In 1805 he removed to Trinity College, Cambridge, and two years thereafter his first volume of verse, entitled *Hours of Idleness,* was printed at Newark. The volume was fiercely assailed by Lord Brougham in the *Edinburgh Review,* and his sarcasms stung Byron into writing *English Bards and Scotch Reviewers;* in 1812 he published the first two cantos of *Childe Harold,* with immense success. Six months' stay at Geneva produced the third canto of *Childe Harold* and *The Prisoner of Chillon. Manfred* and *The Lament of Tasso* were written in 1817. The next year he was at Venice, and finished *Childe Harold* there. During the next three years he produced the first five cantos of *Don Juan,* and a number of dramas of various merit. In 1822 he removed to Pisa, and worked there at *Don Juan,* which poem, with the exception of *The Vision of Judgment,* occupied his pen almost up to the close of his life. In the summer of 1823 he sailed for Greece, to aid the struggle for independence with his influence and money. He arrived at Missolonghi on the 4th of January, 1824. On the 9th of April he was overtaken by a shower while on horseback, and fever and rheumatism followed. After twenty-four hours' insensibility, he expired on the evening of the 10th of April, 1824. His body was conveyed to England; and, denied a resting-place in Westminster abbey, was interred in Hucknall-Torkard churchyard near Nottingham.

Bystrom (*boo'strēm*), **Johan Niklas,** a Swedish sculptor, born at Filipstad, in the province of Wermeland, 1873, worked three years under Sergell of Stockholm, applying himself chiefly to the study of the antique, and gained the academy's prize in 1809. He proceeded to Rome the following year, whence he soon sent home his *Drunken and Reposing Bacchante.* He returned to Stock-

holm in 1815, and exhibited his colossal statue of the prince-royal. He died at Rome, 1848.

Cabanis (*kä'bä'nēs'*), **Pierre Jean Georges,** physician and philosophical writer, born at Cosnac, France, 1757. He furnished Mirabeau with material for his speeches on public education; and Mirabeau died in his arms. He died near Meulan, 1808. His chief work is his once-famous *Rapports du Physique et du Moral de l' Homme.*

Cabet (*kä'bā'*), **Etienne,** French communist, was born at Dijon, 1788, and died at St. Louis, Mo., 1856, having gone out to Texas in 1848 to found an "Icarian community," so named after his *Voyage en Icarie,* a "philosophical and social romance," describing a communistic Utopia.

Cable, George Washington, author, was born in New Orleans, 1844; educated in public schools; M. A., Litt. D., Yale, Bowdoin; served fourth Mississippi cavalry, Confederate States army, 1863-65; since 1879 devoted to literature. Author: *Old Creole Days; The Grandissimes; Madame Delphine; The Creoles of Louisiana; Dr. Sevier; The Silent South;* etc.

Cabot (*kab'ut*), **George,** American shipmaster, afterward merchant, was born 1751, died 1823. He was a member of the Massachusetts state constitutional convention, and of that which ratified the federal constitution; U. S. senator 1790-96.

Cabot, John, born 1450(?); **Cabot, Sebastian,** born 1744, two Venetians, father and son, were both celebrated navigators and discoverers. John probably died 1498; Sebastian died 1557.

Cædmon (*kad'mun*), the father of English song, was the first Anglo-Saxon who composed in his own language of whom there are many remains. The date of his birth is unknown, but his death occurred about 680 A. D. He was originally a cowherd, attached to the monastery of Whitby, and according to a legend was commanded in a dream to sing "the beginning of created things."

Cæsalpinus (*ses'al-pī'nus*), **Andreas,** Italian physiologist; born at Arezzo 1519; was professor of medicine and botany at Pisa, physician to Pope Clement VIII., and published several medical works. He developed several new ideas on the circulation of the blood which are now well recognized. Died, 1603.

Caesar, Caius Julius, a great Roman general, statesman, and historian, was born B. C. 100, died B. C. 44. He was the son of the praetor Caius Julius Caesar, and of Aurelia, a daughter of Aurelius Cotta. At the age of sixteen he lost his father, and shortly after he married Cornelia, the daughter of Lucius Cinna, the friend of Marius. This connection gave great offence to Sulla, the dictator, who proscribed him for refusing to put away his wife. His friends obtained his pardon with difficulty, and Caesar withdrew from Rome, and went to Asia, serving his first campaign under M. Minucius Thermus, the praetor in Asia.

On the death of Sulla, Caesar returned to Rome, where he distinguished himself as an orator. He afterwards visited Rhodes, when he was taken by pirates, and compelled to pay fifty talents for his release. To revenge himself, he fitted out some vessels at Miletus, overtook the pirates, made the greater number of them prisoners, and had them crucified before Pergamus. He now returned to Rome, where his eloquence and liberality made him very popular. He was pontifex maximus in 63 B. C., praetor in 62 B. C., and governor of Spain in 61 B. C. On his return to Rome, having united with Pompey and Crassus in the memorable "first triumvirate," he became consul, and then obtained the government of Gaul with the command of four legions.

His military career was rapid and brilliant. He compelled the Helvetii, who had invaded Gaul, to retreat to their native country, subdued Ariovistus, who at the head of a German tribe had attempted to settle in the country of the Aedui, and conquered the Belgae. In nine years he reduced all Gaul, crossed the Rhine twice (B. C. 55 and 53), and twice passed over to Britain, defeated the gallant natives of this island in several battles, and compelled them to give him hostages. The senate had continued his rule in Gaul for another period of five years, while Pompey was to have the command of Spain, and Crassus that of Syria, Egypt, and Macedonia for five years.

The death of Crassus in his campaign against the Parthians dissolved the triumvirate; and about the same time the friendship between Caesar and Pompey cooled. The senate, influenced by Pompey, ordered that Caesar should resign his offices and command within a certain time, or be proclaimed an enemy to the state, and appointed Pompey general of the army of the Republic. Upon this Caesar urged his soldiers to defend the honor of their leader, passed the Rubicon (49 B. C.), and made himself master of Italy without striking a blow, Pompey retiring into Greece. Caesar then levied an army with the treasures of the state, and hastened into Spain, which he reduced to submission without coming to a pitched battle with Pompey's generals. He next conquered Massilia (now Marseilles), and returned to Rome, where he was appointed dictator. He then followed Pompey into Greece, and defeated him at Pharsalia, from which Pompey escaped only to be assassinated in Egypt.

In Rome the senate and the people strove eagerly to gain the favor of the victor. They appointed him consul for five years, dictator for a year, and tribune of the people for life. When his dictatorship had expired he caused himself to be chosen consul again, and without changing the ancient forms of government ruled with almost unlimited power. In 46 B. C. he crossed to Africa, defeated the Pompeians, Scipio and Cato, at Thapsus, and returning to Rome he was received with the most striking marks of honor. The term of his dictatorship was prolonged to ten years, the office of censor conferred on him alone; his person was declared inviolable, and his statue placed beside that of Jupiter in the capitol.

He soon after was honored with four several triumphs, made perpetual dictator, and received the title of *imperator* with full powers of sovereignty. In February, 44, he declined the diadem which Antony publicly offered him, and next morning his statues were decked with diadems. His glory, however, was short-lived, for a conspiracy was set on foot by his enemy Cassius, and joined by many of his own friends, including M. Brutus; and, notwithstanding dark hints had been given to him of his danger, he attended a meeting of the senate on 15th (ides) March, 44 B. C., and fell beneath the daggers of the conspirators.

Caesar was undoubtedly the foremost man of his time, being great as a statesman, a general, an orator, a historian, and an architect and engineer, and his assassination was brought about more by jealousy and envy than by real patriotism.

References.—Mommsen's *History of Rome;* S. J. Delorme's *Caesar and his Contemporaries;* Napoleon III.'s Froude's, and Fowler's *Lives* of Caesar; Baring-Gould's *Tragedy of the Caesars;* and Holmes's *Caesar's Conquest of Gaul.*

Cagliari (*käl'yä-rē*), **Paolo Veronese,** an Italian painter of great eminence, was born at Verona in 1532. The church of San Sebastiano, in Venice, contains many of his productions, which are reckoned the most important of his earlier period—*i. e.,* the period before he visited Rome, when he first became acquainted with the masterpieces of Raphael and Michelangelo. He died in 1588. The most celebrated of his productions are the *Marriage Feast at Cana of Galilee,* and the *Presentation of the Family of Darius to Alexander.*

Caine, Thomas Henry Hall, British novelist and dramatist; born in 1853, of Manx and Cumberland parentage; was educated at schools in Isle of Man and Liverpool; became a journalist, and was for six years an editorial writer on Liverpool *Mercury.* His first novel was the *Shadow of a Crime;* his success came with *The Deemster; The Manxman; The Christian; The Eternal City.* Published in 1908 *My Story,* an autobiographical narrative of the earlier years of his literary life. He is justice of the peace in the Isle of Man, where, in 1901, he was returned by a large majority to the house of keys for Ramsey.

Caird (*kārd*), **Edward,** Scottish philosopher, was born at Greenock, Scotland, 1835; educated at Glasgow University; Balliol College, Oxford; LL. D.; D. C. L.; fellow and tutor of Merton College, Oxford, 1864-66; professor of moral philosophy, Glasgow University, 1866-93; master of Balliol College, Oxford, 1893-1907. Author: *Philosophy of Kant; Hegel,* in Blackwood's series; *Critical Philosophy of Emmanuel Kant.*

Caird, John, Scottish preacher, born at Greenock, in 1820; studied at Glasgow, and became minister (1845). He received the degree of D. D. in 1860, was appointed professor of divinity in 1862, and was principal of Glasgow University, 1873-98. He published a volume of *Sermons; Spinoza;* etc. He died 1898.

Cairnes (*kārnz*), **John Elliot,** British economist, was born at Castle Bellingham, Ireland, 1823 studied at Trinity College, Dublin, where he graduated B. A. in 1848. An accident in the hunting-field in 1860 led to a breakdown in health; and, having resigned his chair in 1872, he died at Blackheath, 1875. Cairnes may be regarded as a disciple of Mill, though differing from him on many points.

Caius Gracchus (*kā'yus grak'us*). See **Gracchus.**

Cajetan (*kaj'e-tan*), **Cardinal,** properly Jacopo Thomas de Vio, born at Gaeta, Italy, 1469; in 1508 became general of the Dominicans, in 1517 cardinal, in 1519 bishop of Gaeta, and in 1523 legate to Hungary. He died at Rome, 1534.

Calderón (*kōl'dĕr-on*) **de la Barca, Pedro,** Spanish dramatist, and one of the greatest of all time, was born at Madrid in 1600, and was educated at the University of Salamanca. He entered the army and served several campaigns in Italy and in Flanders, gaining a knowledge of men and things which he afterward made use of in his plays. He became a priest and royal chaplain, and died in 1681, still working at his literary labors. In later life he wrote many religious plays.

Calderon, Ignacio, diplomat; was born at La Paz, Bolivia, 1848; graduate University of La Paz; secretary of Bolivian legation at Rome, 1868-70. Traveled through United States, and for a time acted as consul-general of Bolivia at New York; returned to Bolivia, 1886, to manage affairs of large importing and exporting company; minister from Bolivia to United States since March, 1904.

Calderwood (*kōl'dĕr-wōōd*), **Henry,** British philosopher and educator, was born at Peebles in 1830; from 1856 to 1868 was minister of Greyfriars, Glasgow, and then became professor of moral philosophy at Edinburgh. He died in Edinburgh, 1897.

Calhoun (*kal-hōōn'*), **John Caldwell,** American statesman of Irish Presbyterian descent, was born in Abbeville county, South Carolina, 1782; graduated at Yale, 1804, and became a successful lawyer. He was elected to congress, 1811. In 1817 he entered Monroe's cabinet as secretary of war, and did good work in reorganizing the war department. In 1829 he declared that a state can nullify unconstitutional laws. On the passing by South Carolina in 1832 of the nullification ordinance he resigned the vice-presidency, and entered the United States senate, becoming a leader of the states-rights movement, and a champion of the interests of the slave-holding states. He died at Washington, 1850. Henry Clay, Daniel Webster, and Calhoun were "the great triumvirate" of American political orators.

Caligula (*kä-lig'ū-lä*), **Caius Cæsar Augustus Germanicus,** Roman emperor, 37-41 A. D., the youngest son of Germanicus (nephew of Tiberius) by Agrippina, was born 12 A. D., at Antium. On the death of Tiberius, 37 A. D., who, it was suspected, had received foul play at his hands, it was found that he had been appointed coheir along with the grandson of Tiberius, but the senate and the people allowed Caligula supreme and sole authority; he was a spendthrift and barbarously cruel. Died, 41 A. D.

Callicrates, a Greek architect, who lived at Athens in the eighty-fourth Olympiad, was, in conjunction with Ictinus, the artist who constructed the famous Parthenon, the sculptures and decorations of which were the work of Phidias.

Callimachus (*ka-lim'ä-kus*), a native of Corinth, flourished about the year B. C. 540, and was celebrated as an architect, sculptor, and painter. To him is ascribed the invention of the Corinthian order.

Calvé (*käl'vā'*), **Emma de Roquer,** soprano operasinger; was born in France in 1866. In 1882 she made her début at Brussels in Gounod's *Faust,* and since then her career has been one long triumph. Her chief successes have been in the rôles of *Santuzza,* in *Cavalleria Rusticana,* in *L'Amico Fritz,* and in *Carmen.*

Calvert, George, Lord Baltimore. See **Baltimore, George Calvert.**

Calvin, John, reformer and Protestant theological writer, born at Noyon, in Picardy, 1509, died at Geneva 1564. His father, Gerard Calvin or Cauvin, *procureur-fiscal* and diocesan secretary, dedicated him early to the church, and he was presented with a benefice at the age of twelve. The income derived from this nominal office enabled him to proceed to Paris and enter on a course of regular study. He soon became dissatisfied with the teaching of the Roman Catholic Church; in consequence he gave up his cure, and took to the study of the law in Orleans.

In 1532 he returned to Paris a decided convert to the reformed faith, and was soon compelled to fly, when, after various wanderings, he found a protector in Margaret of Navarre. In 1534 he returned to Paris; but, finding that the persecution against those who were inclined to the doctrines of the reformers was still raging, he retired to Basel in the autumn of the same year. At Basel he published his great work, *The Institutes of the Christian Religion,* 1536.

Having gone to Italy, after a short stay at Ferrara he went to Geneva, where reform had just been established. In 1538, in company with Farel, he was expelled from Geneva

in consequence of the reign of extreme strictness they had introduced, when he went first to Berne and then to Strasburg. Here he married a widow, Idelette de Burie, and had one son, who died early.

In 1541 his friends in Geneva succeeded in effecting his recall, when he laid before the council the draft of his ordinances respecting church discipline, which were immediately accepted and published. His college of pastors and doctors and his consistorial court of discipline formed a theocracy, with himself at the head of it, which aimed virtually at the management of all municipal matters and the control of the social and individual life of the people. Michael Servetus, passing through Geneva in 1553, was arrested, and through Calvin's instrumentality was burned alive because he had attacked the mystery of the Trinity in a book which was neither written nor printed at Geneva. This has been regarded as the great blot on Calvin's career, though approved of by many others of the reformers. His energy and industry were enormous: he preached almost daily, delivered theological lectures three times a week, attended all deliberations of the consistory, all sittings of the association of ministers, and was the soul of all the councils.

Up to 1561 the Lutherans and the Calvinists were as one, but in that year the latter expressly rejected the tenth article of the Confession of Augsburg, besides some others, and hence arose the name of *Calvinists*. Calvin retained his personal influence to the last; but a year or two before his death his health had broken down. As a theologian Calvin was equal to any of his contemporaries in profound knowledge, acuteness of mind, and in the art of making good a point in question. As an author he merits great praise. His Latin works are written with much method, dignity, and correctness. He was also a jurist and an able politician.

References.—*Henry's Life and Times of Calvin;* and other *Lives* by Bolsec, Masson, Fischer, Doumergue, John Scott, T. H. Dyer, and Bungener. See also Schaff's *History of the Christian Church.*

Cambacérès (*kăn'ba'sā'res'*), **Jean Jacques,** duke of Parma, French statesman and jurist, was born in Montpelier in 1753. He was brought up to the legal profession, and became president of the French convention in 1792. He was afterward president of the committee of public safety, and of the council of five hundred. When Napoleon Bonaparte was named first, Cambacérès was made second consul. He left France when the Bourbons were a second time restored, but was permitted to return. Died, 1824.

Cambyses (*kăm'bī'sēz*), second king of the Medes and Persians, succeeded his father, Cyrus, in 529 B. C. He put his brother Smerdis to death, and in 527 or 525 invaded and conquered Egypt. Died, 522.

Cameron (*kăm'ĕr-un*), **Simon,** American politician; born Lancaster county, Pa., 1799; learned printing and became editor of a democratic paper at Harrisburg, Pa.; elected United States senator 1845, and again 1856; secretary of war under Lincoln, 1861-62; again United States senator 1866-77 when he resigned, and was succeeded by his son. Died, 1889.

Camillus (*kă-mĭl'us*), **Marcus Furius,** a famous patrician of early Rome; took Veii, a rival town, after a ten years' siege; was five times elected dictator, and gained a succession of victories over rival Italian tribes; died in 365 B. C., lamented by the whole nation, and remembered for generations after as one of the noblest heroic figures in Roman history.

Camoëns (*kăm'ō-ens*), **Luiz de,** the epic poet of Portugal, born 1524 at Lisbon, and studied the ancient classics at Coimbra; he was banished, 1556, to Macao, where he lived several years, and was engaged in writing his principal *Os Lusiadas* till recalled. He dedicated *The Lusiad* to the young king, Sebastian, who granted him a small pension (about $20); died in poverty and obscurity in the hospital at Lisbon, 1597.

Campbell, Alexander, American theologian, was born at Shane's castle, Ireland, 1788. Attended Glasgow University; came to the United States, and served as pastor of a Presbyterian church in Washington county, Pa.; later became a Baptist. His followers are also known as "Christians," "Church of Christ," and "Campbellites." He died 1866.

Campbell, Archibald. See **Argyll.**

Campbell, Hon. Archibald, Canadian capitalist, was born at Ridgetown, Ontario, 1846; educated at high school and collegiate institution of the county; elected member of parliament for West York, 1901 and 1904; chairman of the railway and transportation committee; elected to Dominion senate, 1907.

Campbell, Sir Colin, Lord Clyde, British general, was born in Glasgow, 1792. In 1808 he entered the army as an ensign. He distinguished himself greatly in the wars in the Peninsula, the United States, China, India, and the Crimean war. He reached the summit of his fame in 1857, when, as commander of the forces in India, he finally crushed the Sepoy mutiny and saved the English empire in India. He returned from India to England in 1860, and died 1863.

Campbell, Mrs. Patrick (Beatrice Stella Tanner), actress; born, Forest House, Kensington Gardens; married Patrick Campbell (killed in South Africa, 1900), 1884. Joined dramatic club "Anomalies," West Norwood, 1886-87; toured with Green's company, 1888; Ben Greet's company, 1890-91; played engagements at the Adelphi; St. James'; Haymarket; Garrick; Lyceum, and other London theaters.

Campbell, Thomas, a distinguished British poet, born in Glasgow, 1777. He wrote *The Pleasures of Hope.* The poem was published in 1799, and went through four editions in a twelvemonth. He died at Boulogne in 1844, and was buried in Westminster abbey.

Campbell-Bannerman, Rt. Hon. Sir Henry, late prime minister of Great Britian, was born in 1836. Educated at Glasgow University and Trinity College, Cambridge, B. A., 1858; M. A., 1861; secretary admiralty, 1882-84; secretary for war, 1886 and 1892-95; chosen leader of the liberal opposition in succession to Sir William Harcourt, February, 1899. On the resignation of the Balfour administration in December, 1905, he was summoned by the king and formed a liberal cabinet, himself becoming first lord of the treasury and prime minister; the general election which followed gave him a tremendous majority. Died in office, 1908.

Canisius (*kă-nē'sē-us*), **Petrus,** Dutch Jesuit missionary and scholar, was born at Nimeguen, Netherlands, 1521. He was the first provincial of the Jesuits in Germany, distinguished himself at the council of Trent, 1546, and was appointed court preacher to Ferdinand I. He wrote *Summa Doctrinae Christianae.* Died, 1597.

Canning, George, British statesman and orator, born in London, 1770. In 1796 he was appointed an under-secretary of state. In 1801 Pitt resigned office, and Canning joined the opposition against the Addington ministry. When the Portland ministry was formed, in 1807, Canning was appointed minister of foreign affairs. He arranged the relations of Brazil and Portugal; drew the French cabinet into agreement with the British respecting Spanish-American affairs; was the first to recognize the free states of Spanish America; contended earnestly for Catholic emancipation, and prepared the way for the repeal of the corn-laws. Died, 1827.

Cannon, Joseph G., lawyer, **ex-speaker the United** States house of representatives; born in Guilford, N. C., 1836; admitted to Illinois bar; state's attorney, Vermilion county, Ill., 1861-68; member of congress, 1873-91, and again in 1893-1903, twelth Illinois district, and in 1903-13, eighteenth district; chairman of committee on appropriations, 55th, 56th, and 57th congresses; speaker of 58th, 59th, 60th, and 61st congresses.

Canova (*kă-nō'vă*), **Antonio,** Italian sculptor, was born, 1757, at the Venetian village of Possagno, and studied at Venice and Rome. His *Theseus,* 1782, was greeted as well worthy to vie with classic art, and he was regarded as the founder of a new school. In 1802 he was appointed by Pius VII. curator of works of art, and was called to Paris to model a colossal statue of Napoleon. Created marquis of Ischia, he died in Venice, 1822.

Canovas del Castillo (*kă'nō-vās del kăs-tēl'yō*), **Antonio,** Spanish conservative statesman and historian, born at Malaga, 1826, became a member of the cortes in 1854, and was premier 1875-81, 1884-85, 1890-92, and from 1895 till the 8th of August, 1897, when, at the bath of Santa Aguida, Vittoria, he was shot by an anarchist in the presence of his wife.

Canrobert (*kăn'rō-bâr'*), **François Certain,** marshal of France, born 1809. After many years of effective service in the East, in the Crimea, and in Italy, when war was declared by France against Prussia, in 1870, he was one of the generals in command at Wœrth, where the French were defeated; senator 1876. Died, 1895.

Canterbury, Archbishop of. See **Davidson, Rev. Randall Thomas.**

Cantu (*kăn-tōō'*), **Cesare,** modern Italian author, was born, 1805, at Brescia, in northern Italy, and was educated at Sondrio, where he was appointed professor of *belles-lettres.* His great work is the *Storia Universale* (35 vols., 1837-1842). Died, 1895.

Canute (*kă-nūt'*), or **Cnut** (*k'nōōt*), a king of England who succeeded to the rulership of the Danes in the north of England on the death of his father, Swein or Sweyn, was born 995. The sudden decease or assassination of Edmund made Canute sole ruler in 1017, and he continued to reign until his death in 1035.

Capet (*kā'pet*), **Hugh.** See **Hugh Capet.**

Capo D'Istria (*kä'pō dēs'trē-ä*), **John, Count of,** a Greek, who gained distinction as a diplomat, was born at Corfu in 1776; in 1813, in consideration of his meritorious labors, the emperor Alexander made him minister for foreign affairs. In 1827 he was made president of the new Greek government, where he fell by the hand of an assassin in 1831.

Caprivi (*kä-prē'vē*), **Count Georg Leo von,** German general, statesman, and chancellor, was born in 1831, and died in 1899. In 1883 he was given command of the 30th division of the imperial army at Metz; was subsequently given command of the 10th or Hanoverian army corps, the finest in the German army. In 1890 Emperor William made him chancellor. In 1894 he resigned office, and retired.

Caracalla (*kar'ä-kal'ä*) (properly Marcus Aurelius Antoninus Bassianus), Roman emperor, the son of the emperor Septimius Severus; born at Lyons, 188 A. D. After his father's death, 211 A. D., he ascended the throne as co-regent with his brother, Publius Septimius Antoninus Geta, whom he afterward caused to be murdered. In his famous constitution he bestowed Roman citizenship on all his free subjects not citizens—but simply in order to levy a greater amount of taxes on releases and heritages, which were paid only by citizens. He was assassinated, at the instigation of Macrinus, prefect of the prætorians, by one of his veterans named Martialis, 217 A. D.

Caracci (*kä-rä'chē*), or **Carracci, Agostino,** Italian painter, was born in Bologna in 1558, became a disciple of his cousin Ludovico. He dabbled in poetry and literature, and was a really great engraver on copper. His brother's jealousy is said to have driven him from Rome (where they did the frescoes in the Farnese palace) to Parma, where he died, 1602.

Caracci, Annibale, was born in Bologna in 1560, died, 1609; rapidly became a great painter under his cousin, and soon outstripped both him and his brother. The influence of Correggio and of Raphael largely molded his style. He was buried close to Raphael in the Pantheon.

Caracci, Ludovico, Italian painter, the son of a butcher, was born at Bologna in 1555, died, 1619 studied at Venice and Parma, and, with his two cousins, established in Bologna an "eclectic" school of painting.

Cardan (*kär'dan*), **Jerome,** Italian mathematician, naturalist, physician, and philosopher, was born at Pavia, 1501; graduated in medicine at Padua; and was professor of mathematics at Milan. He subsequently practiced medicine and gradually gained a high reputation. He died in Rome, 1576, a few weeks after finishing his candid autobiography, *De Propria Vita.*

Cardigan (*kär'di-gan*), **James Thomas Brudenell, Earl of,** was born 1797; died 1868; sat in the house of commons from 1818 to 1837, when he succeeded his father as seventh earl. He entered the army in 1824. From 1836 to 1847 he commanded the 11th hussars, on which he spent $50,000 a year, and which he made the crack regiment in the service. He commanded a cavalry brigade under Lord Lucan in the Crimea, and led the "Six Hundred" at Balaclava. He was inspector-general of cavalry 1855-60.

Carducci (*kär-dōōt'chē*), **Giosue,** Italian poet, was born, a physician's son, at Valdicastello, in the province of Pisa, in 1836, and died in 1907. In 1860 he became professor of Italian literature at Bologna, in 1876 was returned to the Italian parliament as a republican, and in 1890 was nominated a senator.

Carew, Mrs. James. See **Terry, Ellen.**

Carey (*kā'ri*). **Henry Charles,** political economist, was born at Philadelphia, 1793. In 1836 he published an essay on the *Rate of Wages,* which was expanded into the *Principles of Political Economy.* In 1838 he published *The Credit System of France, Great Britain, and the United States;* and in 1848 *The Past, the Present, and the Future.* He was originally a free-trader, but was later recognized as the head of a new school of political economy. Died, 1879.

Carey, James F., socialist leader; born Haverhill, Mass., 1867; learned shoemaking trade; joined international boot and shoemakers' union; one of three leaders in unemployed agitation on Boston common, 1894; president Haverhill common council; member Massachusetts house of representatives; elected 1898, 1899, 1900, 1901, 1902, last four elections over combination of democratic and republican parties.

Carhart, Henry Smith, scientist, professor physics, University of Michigan, since 1886; born at Coeymans, N. Y., 1844; graduated from Wesleyan University, 1869; LL.D. Professor of physics and chemistry, Northwestern University, 1872-86; vice-president of St. Louis international electrical congress, and one of official delegates for the United States, 1904; accompanied the British association for the advancement of science to South Africa as a guest, 1905. Author: *Primary Batteries; Elements of Physics; University Physics; Electrical Measurements.*

Carle, Richard, actor, playwright; born at Somerville, Mass., 1871; received a high school education, Somerville, Mass. Began stage career, Bijou theater, New York, 1891; played in *The Spring Chicken, Mayor of Tokio,* etc.

Carleton (*kärl'tun*), **Will,** author, lecturer; born at Hudson, Mich., 1845; graduated at Hillsdale College, B. S., 1869; A. M.; Litt. D.; became known as a poet, and has lectured and given author's readings through the United States, Great Britain, and continental Europe. Author: *Farm*

Ballads; Rhymes of Our Planet; Songs of Two Centuries, etc. Died 1912.

Carlisle (*kär-lil'*), **John Griffin,** lawyer; born in Campbell county, Kentucky, 1835; common school education; admitted to Kentucky bar, 1858; lieutenant-governor of Kentucky, 1871-75; member of congress, 1877-89 (speaker, 1883-89); United States senator from Kentucky, 1890-93; secretary of treasury of United States, 1893-97; vice-president of anti-imperialist league. Died 1910.

Carlyle, Thomas, English essayist, biographer, and historian, and one of the most remarkable writers of his age, was born in Scotland, 1795. He was educated at Edinburgh University, and commenced his literary career in 1823, by contributions of able essays to the *Edinburgh Encyclopedia* and the *Edinburgh Review*. Next followed his translations of Goethe's *Wilhelm Meister*, a work which showed a bent of reading destined to influence materially his future career. Succeeding these appeared his *Life of Schiller*. Between 1830 and 1833, Carlyle wrote his *Sartor Resartus*, and in 1837 he published *The French Revolution*, a history abounding in vivid and graphic descriptions. *Chartism*, and 5 volumes o this *Essays*, appeared in 1839, and in the next year he delivered a series of lectures on *Hero-Worship*, which were afterwards published in a collected form. His *Past and Present* was given to the world in 1843, and in 1850 the *Latter-Day Pamphlets*, essays suggested by the revolutionary convulsions of 1848. Carlyle's *Life of John Sterling* has been described as "one of the finest biographies ever written." In 1845 appeared his great work entitled *Oliver Cromwell's Letters and Speeches, with Elucidations*, which gave him a place among historians. In 1860-4 Carlyle brought out his *Life of Frederick the Great*. In 1865 he was elected Lord Rector of Edinburgh University.

Carlyle's leading characteristic is a rugged earnestness of expression, and a range of thought widened and deepened by his profound acquaintance with the writings of great German thinkers. He died at London, February, 5, 1881.

References.—Froude's *Thomas Carlyle: a History of the First Forty Years of his Life*, and his *Thomas Carlyle: a History of his Life in London;* also *Carlyle's Reminiscences*, edited by Froude and by Professor Norton. Of other books dealing with Carlyle's life, we may mention Conway's *Thomas Carlyle;* Shepherd's *Memoirs of the Life and Writings of Thomas Carlyle*, and *The Bibliography of Carlyle;* Wyllie's *Thomas Carlyle, the Man and his Books;* Masson's *Carlyle Personally and in his Works;* Larkin's *Carlyle and the Open Secret of his Life;* and *Lives* by R. Garnett, Hood, Nicoll, and Wilson's *Froude and Carlyle*.

Carman (*kär'man*), **William Bliss,** journalist, poet, was born at Fredericton, New Brunswick, Canada, 1861. Graduate of University of New Brunswick, B. A., 1881. Author: *Low Tide on Grand Pré; Songs from Vagabondia* (with Richard Hovey); *More Songs from Vagabondia* (with Richard Hovey); *By the Aurelian Wall; Last Songs from Vagabondia; Christmas Eve at St. Kavin's; Pipes of Pan;* etc.

Carnarvon (*kär-när'vun*), **Earl of** (Henry Howard Molyneux Herbert), was born in London, Eng., 1831; was appointed governor of Carnarvon castle in 1854. He was the author of the British North America act, passed by both houses of parliament in 1867, whereby the Dominion of Canada was formed.

Carnegie (*kär-neg'i*), **Andrew,** capitalist, manufacturer, philanthropist, author; born in Dunfermline, Fifeshire, Scotland, 1837; came with family to United States, 1848, settling in Pittsburg; learned telegraphy, entered employ of Pennsylvania railroad, and became telegraph operator, advancing by promotions until he became superintendent of Pittsburg division of Pennsylvania system; joined Woodruff, inventor of the sleeping car, in organizing Woodruff sleeping car company, gaining through it nucleus of his fortune; during Civil war served as superintendent of military railways and government telegraph lines in the east. After the war he developed iron works of various kinds and established, at Pittsburg, Keystone bridge works and Union iron works. Introduced into this country Bessemer process of making steel, 1868; interests were consolidated, 1899, in the Carnegie steel company, which, in 1901, was merged in the United States steel corporation, when he retired from business; married, 1887, Louise Whitfield, of New York. Has given libraries to many towns and cities in the United States and Great Britain, and large sums in other benefactions; total benefactions exceeding $75,000,000, including over $40,000,000 for nearly 1,500 municipal library buildings, and $10,000,000 for college professors' pension fund in United States, Canada, and Newfoundland. Lord rector of St. Andrew's University, 1903; LL. D., 1905.

Carnot (*kär'nō'*), **Lazare Nicolas Marguerite,** was born in 1753 at Nolay, Burgundy, France. In 1791 he became a member of the legislative assembly, and in the convention voted for the death of Louis XVI. In 1797, having opposed the extreme measures of Barras, his colleague in the directory, Carnot, as a suspected royalist, was sentenced to deportation. He escaped into Germany, where he wrote his defense, which conduced to the overthrow of his colleagues in 1799. On his return to Paris, he was made minister of war, 1800; died, 1823.

Carnot, Nicholas Leonard Sadi, son of Nicolas, founder of thermo-dynamics, was born at Paris, 1796, died 1832; in his *Reflexions sur la Puissance du Feu*, he enunicates the principle of reversibility, considered the most important contribution to physical science since the time of Newton.

Carnot, Marie François Sadi, French statesman, was born at Limoges, France, 1837. He was elected a member of the assembly in 1871, was twice a cabinet officer, and upon the resignation of President Grévy was chosen president of the French republic, 1887. He was assassinated by an anarchist, 1894.

Carpaccio (*kär-pät'chō*), **Vittore,** an early Venetian painter, was born in Istria, about 1450, and was influenced by the Vivarini and Gentile Bellini. In 1510 he executed for San Giobbe his masterpiece, the *Presentation in the Temple*, now in the Accademia. Died about 1522.

Carpeaux (*kär'pō'*), **Jean Baptiste,** sculptor, was born at Valenciennes, 1827, in 1854 obtained the *Prix de Rome*, and died near Paris, 1875.

Carpenter, Frank George, journalist, traveler, author; born in Mansfield, Ohio, 1855; graduate of Wooster University, 1877. Began newspaper work as legislative correspondent for Cleveland *Leader*, at Columbus, 1879; newspaper tour to Mexico, 1891; to Russia, Germany, and England, 1892; to China, Japan, and Korea, 1894; spent 1900 in Philippines, China, Java, Australia, and New Zealand. Author: *Carpenter's Geographical Readers—Asia, North America, South America. Europe, Australia, Our Colonies and Other Islands of the Seas, Africa;* etc.

Carpenter, J. Estlin, theological writer, principal of Manchester College, Oxford; born 1844; second son of Wm. B. Carpenter, C. B., M. D., F. R. S., etc.; educated at University College school, London; University and Manchester New Colleges. M. A.; Litt. D.; D. D.; lecturer in Manchester College, London, and Oxford, 1875-1906; joint-editor with Professor Rhys Davids of the *Digha Nikaya*, and the *Sumangala Vilasini*; joint-author (with Rev. P. H. Wicksteed) of *Studies in Theology;* and other works.

Carpenter, William Benjamin, one of the most distinguished physiologists and writers on physiology of modern times; was born at Exeter, 1813, died at London, 1885. Graduate of Edinburgh University; M. D., LL. D., F. R. S. He took a chief part in the government expeditions which were sent out in 1868-69-70 for deep sea exploration in the north Atlantic.

Carpenter, Rt. Rev. William Boyd, bishop of Ripon, born at Liverpool, 1841; educated at Royal Institution school, Liverpool; St. Catharine's College, Cambridge; D. D., D. C. L.; vicar of St. James', Holloway, 1870-79; vicar of Christ church, Lancaster Gate, 1879-84; canon of Windsor, 1882-84; hon. chaplain to the queen, 1879-83; chaplain-in-ordinary, 1883-84. Author: *Commentary on Revelation; Thoughts on Prayer; Lectures on Preaching; Christian Reunion; Introduction to Study of the Bible; Witness to the Influence of Christ.*

Carrere, John Merven, architect; born of American parents in Rio de Janeiro, Brazil, 1858; educated in Switzerland; graduate of Ecole des Beaux Arts, Paris, 1882; partner with Thomas Hastings in firm Carrere & Hastings, since 1884. The firm were architects of the Ponce de Leon and Alcazar hotels, St. Augustine, Fla., the New York public library, academy of design, and many other noted buildings. Died 1911.

Carroll, Charles, of Carrollton, American patriot, born at Annapolis, Md., 1737. He was elected a member of congress, 1776, and was among the first signers of the declaration of independence. He outlived all the other signers of the declaration of independence, and died when ninety-five years old, 1832.

Carroll, Lewis, the pseudonym of Rev. Charles Lutwidge Dodgson, English humorist and author, born about 1833; graduate of Christ Church, Oxford, 1854; took orders in the church, 1861; lecturer at Oxford, 1855-81; wrote *Alice in Wonderland; Through the Looking-glass.* Died, 1898.

Carson, Christopher, popularly known as Kit Carson, an American frontiersman, born in Kentucky in 1809. During the Civil war he rendered important services in the territories, and was brevetted brigadier-general. Died in Colorado, 1868.

Carson, Rt. Hon. Sir Edward Henry, British lawyer, statesman; M. P. for Dublin University since 1892; Q. C., English bar, 1894; was born 1854; educated at Portarlington school; Trinity College, Dublin, M. A., LL. D. Solicitor-general for Ireland, 1892; solicitor-general of Great Britain, 1900-06.

Carson, Hampton Lawrence, lawyer, author; born at Philadelphia, 1852; graduate of University of Pennsylvania, 1871, A. M., LL. B., LL. D.; admitted to bar, 1874. Professor of law, University of Pennsylvania; attorney-general, Pennsylvania, 1903.

Carson, Howard Adams, civil engineer; born at Westfield, Mass., 1842; B. S.; A. M., Harvard; principal superintendent of construction of Boston main drainage, 1878; chief engineer of Boston transit commission, since 1894, building the Boston subway, etc.

Carter, James Coolidge, an American lawyer of note, was born at Lancaster, Mass., in 1827, and was graduated from Harvard, 1850. President Harrison appointed him one of the counsel to represent the United States before the Behring sea tribunal which met at Paris in 1893. He died, 1905.

Cartier (*kär'tyā*), **Sir George Etienne,** Canadian statesman, born at St. Antoine, Canada, in 1814. In 1857 he became leader of the lower Canada section of the government, and in 1858, premier; and he held a cabinet office for several years afterward. Died at London, 1873.

Cartier, Jacques, French explorer, was born 1494. Employed by Francis I. to make explorations on the North American coast, in three successive expeditions, 1534-50; he completed the discovery and colonization of Canada. Died about 1557.

Cartwright, Edmund, inventor of the power-loom, was born at Marnham, England, 1743. A visit in 1784 to Arkwright's cotton-spinning mills resulted in his power-loom. Cartwright also took out patents for combing wool and various other inventions; he even joined Robert Fulton in his efforts toward steam navigation. He died at Hastings, in 1823.

Cartwright, Rt. Hon. Sir Richard John, Canadian statesman; minister of trade and commerce for Canada and member of parliament for South Oxford since 1896; born Kingston, Ontario, 1835; elected to parliament, 1863; finance minister, 1873-78; chief financial critic, and one of the leaders of the opposition in parliament 1879-96; Acting-premier and leader in the house of commons 1897; proposed a joint commission, and represented Canada on the Anglo-American joint high commission when it sat at Quebec in the summer of 1898, and Washington in the winter of 1898-99; Acting-premier during Sir Wilfrid Laurier's absence at colonial conference 1907.

Carus (*kā'rōōs*), **Paul,** philosophical writer, editor of *The Open Court* and *The Monist;* born at Illsenburg, Germany, 1852; graduate of University of Tübingen, Ph. D., 1876. Author: *The Ethical Problem; Fundamental Problems; The Soul of Man; Primer of Philosophy*, etc.

Caruso (*kä-rōō'zō*), **Signor,** great Italian tenor, was born at Naples; he made a first appearance in opera in his native city. His success was immediate, and he now sings at all the greatest opera houses in the world.

Carver, John, the first governor of Plymouth colony, was born in England about 1575. He was one of the Pilgrims who came over in the *Mayflower*, and was chosen governor soon after landing. He assisted in settling his people in their new homes, but died within four months, April, 1621.

Cary, Alice, American poet and prose writer, born 1820; commenced writing at eighteen. In connection with her sister Phoebe, born 1824, she published her first volume in 1850, and from that time till her death continued to pour forth stories, poems, etc. Died 1871.

Cary, Henry Francis, translator of Dante, was born at Gibraltar 1772. He was educated at Rugby, Sutton, Coldfield, and Birmingham, in 1790 entered Christ Church, Oxford, and in 1796 took holy orders. In 1805 he published a translation of the *Inferno*, in 1814 of the whole *Divina Commedia*. Assistant librarian in the British museum 1826-37. He died in 1844, and was buried in Westminster abbey beside Samuel Johnson.

Cary, Phoebe, American poet, sister of Alice Cary, born near Cincinnati 1824. She wrote about a third of the *Poems of Alice and Phoebe Cary*, and other poems. Her death quickly followed that of her sister in 1871.

Casabianca (*kä'zä-byäng'kä*), **Louis,** French naval officer, born in Bastia about 1755; in 1798 was captain of the flagship *L'Orient* in the expedition to Egypt. He was mortally wounded at the battle of the Nile, August 1, 1798.

Casaubon (*kä-sō'bun*, Fr. *kä'zō-bōn'*), **Isaac,** scholar and critic, born 1559 at Geneva, where, in 1582, he was appointed professor of the Greek language. Subsequently he held professorships at Montpelier 1596, and at Paris 1598. King James appointed him prebendary of Canterbury and Westminster. Died in London 1614.

Casimir-Perier (*kä'zē'mēr'-pā'ryā'*), **Jean Paul Pierre,** French statesman, was born at Paris 1847; served with distinction at the siege of Paris 1871; entered the legislative chamber 1874, and served both as vice president and president of that body; became premier of France 1893, and president in 1894; resigned 1895. Died 1907.

Cass, Lewis, American statesman, born at Exeter, New Hampshire, 1782, admitted to the Ohio bar

in 1802, rose to be general in the war of 1812. In 1831-36 he was secretary of war, and in 1836-42 minister at Paris. United States senate 1845-57, and was secretary of state in 1857-60. He died at Detroit 1866.

Cassini (*kăs-sē'nē*), **Giovanni Domenico,** Italian astronomer and savant, born at Perinaldo, near Nice, 1625, died 1712. In 1650 he was appointed to the astronomical chair in the University of Bologna. His first work related to the comet of 1652.

Cassini, Jacques, son of the preceding, born at Paris 1677. In 1694 he was elected a member of the academy of sciences. On the death of his father he succeeded to the charge of the observatory at Paris, and died 1756. As an observer Cassini was eminently successful.

Cassius (*kash'i-us*), or in full, **Caius Cassius Longinus,** Roman general and politician, was quæstor to Crassus in the Parthian war, 54 B. C. After Pharsalia he was taken prisoner and pardoned by Cæsar. In 44 B. C. as prætor he attached to himself the aristocrats who resented Cæsar's supremacy, and won over Brutus; and in the same year Cæsar was murdered. Cassius fled to the East, united his forces with those of Brutus, and at Philippi, being routed, compelled his freedman Pindarus to kill him, 42 B. C.

Casson, Herbert Newton, editor, socialistic writer, born at Ontario, Canada, 1869; graduate of Victoria College; in 1893 went to Boston and with Morrison I. Swift organized the unemployed, and at head of 10,000 men marched to statehouse demanding relief. Founded first labor church in America, at Lynn, Mass., 1894; on staff of *Munsey's Magazine* 1905-06. Author: *The Red Light; Crime of Credulity;* many socialist tracts, etc.

Castelar (*kăs'tā-lär'*), **Emilio,** Spanish orator, statesman, and writer, was born at Cadiz 1832; was for some years professor of history and philosophy in the University at Madrid. Castelar became dictator, but, when Alphonso XII. became king, he fled across the frontier. He returned to Spain in 1876, and devoted himself more to literature than to political and social questions. He died in 1899.

Castlereagh (*kăs'l-rā', kăs''l-rā*), **Robert Stewart, Lord,** British statesman, eldest son of the marquis of Londonderry; was born in 1769; president of the board of control in 1802; and secretary of war in 1805. During Lord Liverpool's administration, Lord Castlereagh again became a member of the government as foreign secretary, and concluded the treaty of Paris in 1814. He remained in office the remainder of his life, which was closed by suicide in 1822.

Catharine I., empress of Russia; born about 1685; was the outcast infant of a Livonian peasant-girl, and became nurse in the family of the Protestant minister of Marienburg. In 1701 she married a Swedish dragoon, who soon afterward went with his regiment to Riga, and never returned. After the capture of Marienburg by the Russians, Catharine became the mistress first to General Bauer, with whom she lived at Moscow, secondly Prince Menschikoff, and, finally, of Peter the Great, who married her privately near Warsaw in 1711, and publicly the next year at St. Petersburg. She then embraced the Greek religion, and took the name of Catharine. On the death of Peter in 1725, she was proclaimed czarina. Her death was the result of intemperance. Died 1727.

Catharine II., empress of Russia; born in 1729. As empress she seized the Crimea, and took part in the dismemberment of Poland. She promoted the welfare of Russia by encouraging literature and commerce, but her reign was sullied by disgraceful amours. Died 1796.

Catharine, Saint, of Siena, is a saint belonging to the fourteenth century, born about 1347. She was said to have been favored with extraordinary revelations, and the wounds of Christ were believed to have been impressed upon her body. Died, 1380.

Catharine of Aragon, queen of England wife of Henry VIII.; born in 1485; daughter of Ferdinand of Aragon and Isabella of Castile. She was beautiful and virtuous, yet the king in 1527 sought a divorce on the ground that the marriage was uncanonical. After much temporizing on the part of the pope, the marriage was in 1533 pronounced invalid by Cranmer, archbishop of Canterbury, and his sentence was ratified by act of parliament. Died 1536.

Catharine de Medici (*dā mā'dē-chē*), born in 1519; great granddaughter of Lorenzo the Magnificent, niece of Pope Clement VII., and queen to Henry II. of France, acted as regent during the minority of her second son, Charles IX. She instigated the massacre of St. Bartholomew. Died 1589.

Catharine Parr, born in 1512; daughter of Sir Thomas Parr; was the sixth and last wife of Henry VIII. She survived Henry, and in 1547 married Lord Seymour of Sudeley, who was accused of hastening her death by poisoning. Died 1548.

Catiline (*kat'i-lĭn*), **Lucius Sergius,** Roman politician, born about the year 108 B. C., died 62 B. C. In the year 68 B. C. he was elected prætor; in 67 B. C. governor of Africa; and in 66 B. C. he desired to stand for the consulship, but was disqualified on account of the accusations brought against him of maladministration in his province. His political conspiracies were frustrated by Cicero, and he fled from Rome and took refuge with Manlius, who was in command of the army in Etruria. In 62 B. C. the army of the senate encountered that of Catiline near Pistoia, and after a desperate battle he was defeated and slain.

Catlin, George, ethnologist, was born at Wilkesbarre, Pa., 1796; studied law, but soon turned to drawing and painting. During 1832-40 he was studying the Indians of the far west; traveled, 1852-57, in South and Central America; and again lived in Europe until 1871. He died at Jersey City, 1872. His works include *Manners of the North American Indians, The North American Portfolio,* and *Last Rambles in the Rocky Mountains.*

Cato, Marcus Porcius, surnamed Censorius and Sapiens, afterward known as Cato Priscus, or Cato Major—to distinguish him from Cato of Utica—born at Tusculum in 234 B. C. In 184 B. C. he was elected censor, and discharged so rigorously the duties of his office that the epithet *Censorius,* formerly applied to all persons in the same station, was made his permanent surname. He repaired the water courses, paved the reservoirs, cleansed the drains, raised the rents paid by the publicans for the farming of the taxes. In the year 175 B. C. he was sent to Carthage to negotiate on the differences between the Carthaginians and the Numidian king, Masinissa; but having been offended by the Carthaginians he returned to Rome, where, ever afterward, he described Carthage as the most formidable rival of the empire, and concluded all his addresses in the senate house with the well-known words: "*Ceterum censeo, Carthaginem esse delendam.* (For the rest, I vote that Carthage must be destroyed.") Cato died 149 B. C.

Cato, Marcus Porcius, named Cato the "younger," or Cato Uticensis, born 95 B. C. From Macedonia, where he was military tribune in 67 B. C. He quitted the questorship at the appointed time amid general applause. In 63 B. C. he was elected tribune, and also delivered his famous speech on the Catiline conspiracy, in which he denounced Cæsar as an accomplice of that political desperado, and determined the sentence of the senate. Died 46 B. C.

Catt, Carrie Chapman, suffragist, president international woman suffrage alliance; born Ripon, Wis.; educated at State Industrial College of Iowa. State lecturer and organizer Iowa woman suffrage association, 1890-92; since then in service of national American woman suffrage association and international alliance.

Cattell (*ka-tel'*), **James McKeen,** educator, psychologist, professor of psychology, Columbia, since 1891; born Easton, Pa., 1860; graduate of Lafayette College, 1880, A. M., Ph. D.; professor psychology, University of Pennsylvania, 1888-91. Member of many scientific societies. Editor of *Science, The Popular Science Monthly,* and *Library of Philosophy, Psychology.*

Catullus (*kā-tul'us*), **Caius Valerius,** celebrated Roman lyric and elegiac poet, is supposed to have been born at Verona, Italy, B. C. 87, and to have died about B. C. 54; in the civic strife of the time he sided with the senate, and opposed to the length of directing against him a coarse lampoon.

Cauchy (*kō'shē'*), **Augustin Louis,** French mathematician, the founder with Bolzano of the theory of functions, was born in Paris, 1789. He was professor of astronomy at Paris, 1848-52, but refused the oath of allegiance to Napoleon III. A reissue of his works, in twenty-six volumes, was commenced by the French academy in 1882. Died, 1857.

Cavendish (*kav'en-dish*), **Henry,** English chemist and physicist, was born at Nice, France, 1731, died 1810. His most important work included the discovery of the composition of water, the composition of nitric acid, and the determination of the mean density of the earth.

Cavour (*kä'vōōr'*), **Count Camilla Benso di,** distinguished Italian statesman of the nineteenth century; was born at Turin, 1810. He was educated for a military career, but his liberal tendencies being likely to prove an insuperable barrier to his promotion, retired during the stirring events of 1830-31, and devoted himself to agriculture, in which he introduced great improvements. In conjunction with Count Cesare Balbo, he in 1847 established a political daily journal, in which he advocated the interests of the middle classes. On his suggestion the king was petitioned for a constitution, which was granted in February, 1848. As a member of the chamber of deputies, during the stormy period which succeeded Charles Albert's declaration of war against Austria, Cavour strenuously opposed the ultrademocrats. In the Marquis d'Azeglio's ministry, formed soon after the fatal battle of Novara, Cavour was successively minister of agriculture and commerce, minister of marine, and minister of finance; and in 1852 he was appointed to succeed d'Azeglio as premier. From this time until his resignation in 1859, in consequence of the conclusion of the peace of Villafranca, Cavour was the originator as well as the director of the Sardinian policy. The dispatches, which Cavour penned in reply to those of Austria prior to the outbreak of the Italian war, are masterpieces of astute diplomacy. In 1860 he was again called upon to preside over the Sardinian government, the duties of foreign minister likewise devolving upon him, and temporarily those of the minister of the interior also. He continued to direct the Sardinian policy until his death, 1861.

Caxton, William, the founder of English printing, was born in 1422. During a residence in Flanders he acquired the new typographic art, and on his return set up a press in the almonry, Westminster, where he brought out the first printed book seen in England, the *History of Troy.* Died, 1491.

Cayley (*kā'li*), **Arthur,** English mathematician, was born at Richmond, Surrey, 1821. He was educated at King's College, London, and Trinity College, Cambridge. He was admitted to the bar at Lincoln's Inn in 1849, and established a practice as a conveyancer. He was president of the royal astronomical society, 1872-73, and of the British association in 1883. His chief book is an *Elementary Treatise on Elliptic Functions;* a ten volume edition of his *Mathematical Papers* was begun in 1889. He died at Cambridge, 1895.

Cecil (*ses'il* or *sis'il*), **William,** Lord Burleigh, English statesman, was born at Bourne, Lincolnshire, 1520. Entering Gray's Inn at the age of twenty-one he devoted himself to the study of law. In 1547 Henry VIII. appointed him master of requests, and in the following year his talents procured for him the office of secretary of state. Elizabeth created him Baron Burleigh in 1571, and conferred on him the order of the Garter, when he was also made lord high treasurer. Died 1598.

Cecilia (*sē-sil'i-ä*), **Saint,** a Roman lady of high descent, of the second or third century, who suffered martyrdom for her faith. From her skill in singing she is chosen the patroness of musicians, and especially of sacred music.

Cellini (*chel-lē'nē*), **Benvenuto,** Italian gold worker, sculptor, founder, and medailleur, was born at Florence in 1500, and first displayed skill as a chaser and gold-worker. At an early period he went to Rome, where he was employed by many distinguished patrons of art. He accompanied Cardinal Ferrara to France, and entered the service of Francis I. He executed several fine works in metal and marble—among them the celebrated bronze group of "Perseus with the Head of Medusa," now in the market-place in Florence. Died in 1570 or 1572.

Celsius (*sel'si-us*), **Anders,** Swedish astronomer, the constructor in 1742 of the centigrade thermometer, was born at Upsala, 1701. He was the grandson of Magnus Celsius, astronomer and decipherer of the Helsing runes, and nephew of Olof Celsius, professor of theology. He became in 1730 professor of astronomy at Upsala, where in 1740 a splendid observatory was erected for him. Died, 1744.

Celsus (*sel'sus*), an Epicurean philosopher, but tinged with Platonism, lived in the second century after Christ, and wrote, after 150 A. D., the *Logos Alethes.* He reproached Christians with their party divisions and ever-varying opinions and charged them with having willfully altered their sacred writings.

Cenci (*chen'chē*), **Beatrice,** a noble Roman lady, whose tragic fate has served as the theme of one of Shelley's best tragedies, lived in the sixteenth century. The fine portrait of Beatrice, by Guido Reni, in the Barberini gallery, Rome, is well known. Died, 1599.

Cervantes Saavedra, Miguel de (Sp. *thāir-vän'tace sä-äva'thra*), Spanish author, was born at Alcala de Henares, 1547, died, 1616. In 1571 he joined the armament commanded by Don John of Austria against the Turks. In the battle of Lepanto (1571) he received a wound, which deprived him of the use of his left hand and arm; but he remained in active service till 1575, when, on his way from Italy to Spain, he was captured by Algerine corsairs. In 1580 his relatives and friends purchased his freedom. He returned to Madrid in his 34th year, when his literary career properly began.

He produced here his pastoral romance, *Galatea,* and several plays for the stage. From 1598 to 1603 all trace of him is lost, but he is supposed to have spent the interval in La Mancha, where he is said to have begun *Don Quixote* in prison. The first part was published at Madrid in 1605. In this work Cervantes hit the vulnerable point of his age, and gave the finishing stroke to the mummeries of knight-errantry. After his return to Madrid, while the publication of the first part of *Don Quixote* and its unprecedented success drew upon him the hostilities of those who resented the satire of his novel, he published his *Novelas ejemplares,* most of which had been written earlier. In 1614 he published the *Viaje al Parnaso.*

The second part of *Don Quixote* appeared in the beginning of 1615, and was received with the same enthusiasm which had greeted the first part. He had been living in great poverty, which the sale of this work relieved. But his health began to fail, and he had a

presentiment of his death, indicated in the preface of his *Perseles y Sigismunda*, a serious romance which he prepared for the press at the beginning of 1616, though it was not published until 1617 by his widow. On April 19 he dictated to his wife a letter addressed to his friend Lemos, to whom he dedicated the work. Four days afterward he died, on the same day with Shakespeare.

References.—The best Spanish biography of Cervantes is that by Fernandez de Navarrete. See also his *Life* by Roscoe, Kelly, and Watt.

Cesnola (*chās-nō'lä*), **Count Luigi Palma de,** archaeologist, was born near Turin, 1832. He served with the Sardinian contingent in the Crimean war, went to New York in 1860, and fought in the civil war. Appointed American consul at Cyprus in 1865, he commenced a series of excavations; his splendid collection of statues, lamps, vases, inscriptions, etc., was purchased by the Metropolitan museum, New York, in 1873, of which he became director in 1879. He wrote *Cyprus, its ancient Cities, Tombs, and Temples.* Died, 1904.

Chaffee (*chaf'ē*), **Adna Romanza,** American general; born in Orwell, Ohio, 1842; educated in public schools. Entered army, 1861, and served throughout the civil war; commanded brigade, Santiago campaign, 1898; promoted major-general, United States volunteers, 1898. Honorably discharged as major-general, 1899. Appointed brigadier-general of the United States volunteers, 1900. Assigned to the command of United States forces for the relief of United States legation, Pekin, 1900; arrived at Pekin, China, August 14, 1900; promoted to major-general of the United States army, 1901. Detailed to general staff corps, 1903, and assigned to duty as assistant to chief of staff, Washington; promoted to lieutenant-general of United States army, 1904, and chief of staff until his retirement in 1906.

Chalmers (*chä'mẽrz, chô'mẽrz*), **Thomas,** Scottish divine, was born in Fife, 1780; educated at St. Andrews, and ordained to preach at nineteen. He was subsequently professor of moral philosophy at St. Andrews, 1823, and of theology at Edinburgh, 1828. Died, 1847.

Chamberlain (*chām'bẽr-lin*), **George Earle,** lawyer, United States senator; born near Natchez, Miss., 1854; graduate of Washington and Lee University, B. A., LL. B., 1876. Attorney-general Oregon, 1891. Elected governor of Oregon for terms, 1903-07, 1907-11; elected United States senator for the term 1909-15.

Chamberlain, Rt. Hon. Joseph, British statesman, was born in London, 1836; educated in private school and University college, London; LL. D., D. C. L. On the death of his father he retired from the firm, in order to devote all his energies to public life. In 1876 he entered parliament and took his seat with the radicals; president of board of trade, with cabinet rank, 1880-85; president of local government board in 1885, until his divergence of views on the Irish policy of Gladstone caused his resignation, 1886; In 1895 took office under Lord Salisbury as colonial secretary. The negotiations with the Transvaal, which ended in war, occupied him fully during 1899, and his South African policy was one of the main controversial features of the general election of 1900 and during 1901. In 1902 he visited South Africa, and on his return received an address from the lord mayor and corporation of London, 1903. In 1903 he launched, at Birmingham, his scheme for the revision of the fiscal policy of the country and the adoption of a policy of preferential tariffs. His seventieth birthday and completion of thirty years' service as member of parliament for Birmingham were celebrated 1906. Died 1914.

Chamberlin, Thomas Chrowder, geologist; born Mattoon, Ill., 1843; graduate of Beloit college, 1866; Ph. D., LL. D., Beloit, Sc. D.; Professor natural science, state normal school, Whitewater, Wis., 1869-73; head department of geology and director Walker museum, university of Chicago, since 1892. Assistant state geologist, Wisconsin, 1873-76, chief geologist, Wisconsin, 1876-82; United States geologist in charge of glacial division since 1882; consulting geologist, Wisconsin geological survey. Author: *Geology of Wisconsin*; *General Treatise on Geology* (with R. D. Salisbury).

Chambers, Robert, Scottish publisher, was born in Peebles, 1802, began business as bookseller in Edinburgh in 1818 and gave his leisure to literary composition. In 1844 he published anonymously the *Vestiges of Creation*, which prepared the way for Darwin's *Origin of Species*. He received the degree of LL. D. from St. Andrews in 1863. The labor of preparing the *Book of Days* broke his health, and he died at St. Andrews, 1871.

Chambers, Robert William, author, artist; born in Brooklyn, 1856; educated at Julian's academy, Paris, 1886-93. First exhibited in salon, 1889; illustrations for *Life, Truth, Voque*, etc. Author *In the Quarter*; *The King in Yellow*; *The Red Republic*; *A King and a Few Dukes*; *The Maker of Moons*; *With the Band.*

Chambers, William, Scottish publisher, was born at Peebles in 1800. In 1814 he was apprenticed to a bookseller in Edinburgh, and 1819 started business for himself, to book-selling afterward adding printing; in 1832 he started *Chambers' Edinburgh Journal*, and soon thereafter he united with Robert in founding the business of W. & R. Chambers, the best known of whose many publications are, besides the *Journal* and a numerous series of educational works, a *Miscellany*, *Papers for the People*, the *Cyclopædia of English Literature* (2 vols.), and *Chambers' Encyclopaedia* (10 vols). He died in 1883, having shortly before received the offer of a baronetcy. He was made LL. D. of Edinburgh in 1872.

Chamisso (*shä-mē'sō*; French, *shä'mē'sō'*), **Adelbert von,** German lyric poet, born in 1781 at the castle of Boncourt, in Champagne, France. As early as 1804-06, he, together with Varnhagen von Ense, published a *Musen Almanach.* In 1813 he wrote his original and amusing fiction called *Pleer Sschlemihl.* Died, 1838.

Champlain (*sham'plān'*; French, *shan'plăn'*), **Samuel de,** a French naval officer and explorer, of the seventeenth century. During the reign of Henry IV., of France, he visited many parts of America; discovered Lake Champlain, and formed the first French establishments at Quebec and Montreal. He was made governor of Quebec, from which he was driven by the English, in 1631. When peace was restored, he was reinstated. Died in 1635.

Champney, James Wells, an American painter and illustrator, born in Boston, Mass., 1843; studied at Paris, Antwerp, and Rome. He was especially distinguished as an illustrator and genre painter; elected an A. N. A. in 1882. Died, 1903.

Champollion (*shăn'pōl'yōn'*), **Jean François,** Egyptologist and discoverer, was born at Figeac, France, 1790; died in Paris, 1832. He was professor of history in the Lyceum of Grenoble, and afterward professor of Egyptian antiquities in the college of France, Paris.

Channing, Edward, historian; born in Dorchester, Mass., 1856; graduate of Harvard, 1878; Ph. D., 1880; instructor, 1883; now professor of history at Harvard. Author: *The United States*, 1756-1865; *A Student's History of the United States*; *Town and County Government.*

Channing, William Ellery, founder of American Unitarianism, was born in Newport, R. I., 1780 graduated from Harvard in 1798; ordained minister of the Federal Street church in Boston in 1803. In 1819, he preached a sermon at the ordination of the Rev. Jared Sparks, in which he advocated the Unitarian doctrine with so much zeal and ability, that he was termed the "apostle of Unitarianism." In 1821 he received the title of D. D. from Harvard university, on account of the high talent he had exhibited in his tractate on the *Evidences of Christianity*, his *Address on War*, and his *Sermons.* In 1822 he visited Europe, and made the acquaintance of several great authors, notably Wordsworth and Coleridge. Coleridge said of him: "He has the love and the wisdom of love." He wrote a variety of essays and treatises, all characterized by vigor, eloquence, pure taste, and a lofty tone of moral earnestness. He died in 1842 at Bennington, Vt.

Chantrey (*chan'tri*), **Sir Francis,** English sculptor, was born in 1781, died in 1841. His works include numerous busts of distinguished men of his time, including Wellington, Watt, and Canning.

Chapman, Frank Michler, ornithologist; born in Englewood, N. J., 1864; academic education. Associate curator ornithology and mammalogy, American museum natural history since 1887. President Linnæan society New York, 1908: curator of onithology since 1908.

Chapman, George, English poet, born 1559, died 1634. He published a translation of the *Iliad* in English ballad measure, and afterward translated the *Odyssey*, the Homeric hymns, and portions of Ovid, Terence, Musaeus, and Petrarch, and wrote many plays.

Charcot (*shär'kō'*), **Jean Martin,** pathologist, was born at Paris, 1825, studied medicine at Paris, where he became a professor, doctor at the Salpetriere hospital, and a member of the institute. He contributed much to our knowledge of chronic and nervous diseases, and made hypnotism a scientific study. Died, 1893.

Charlemagne, or Charles the Great, emperor of the West and king of France, was born 742, and died, in Aix-la-Chapelle, 814. He was the second son of Pepin the Short, and the Frankish kingdom reverted to him and his brother Carloman on his father's demise in 768. Carloman died three years later, and Charles secured the undivided sovereignty, Master of Gaul and western Germany, he now entered upon a wide career of conquest.

Incensed at the Lombard king Desiderius, and urged by Pope Adrian I., he crossed the Alps in 773, reduced Pavia, and secured the iron crown of Lombardy. Desiderius was exiled to the monastery of Corbie. A rebellion was put down, and Charlemagne appointed his second son, Pepin, to rule the country (776). The most terrific of his wars, that against the Saxons, had begun in 772, and with some intervals raged till 804. Invasions were repeated, new risings crushed, the greatest severities, as the slaughter of 4,000 prisoners at one time, were adopted, and Christianity was forced upon the people. Wittikind, the heroic leader of the Saxons, was finally compelled to surrender in 785, and was baptized, but it was only after fresh struggles that the nation was completely subdued.

In 778 Charlemagne crossed the Pyrenees to make war upon the Moors. The country as far as the Ebro was taken, but on his return his rear guard was destroyed by the Basques at Roncesvalles, the famous Roland being among the slain. The design of Duke Thassilo of Bavaria to unite the enemies of Charlemagne against him failed, and that country was placed under Frankish governors. War was waged against the Slavic tribes on the Baltic, and the subjection of the Avars was completed in 796. The territories of Charlemagne now extended from the Ebro to the Eider and Volturno, and from the Atlantic to the Oder and Thesis, and his aim of restoring the western Roman empire was achieved. On Christmas, 800, he was crowned at Rome by Pope Leo III., and henceforth styled himself emperor of the West, impressing Christian and Mussulman princes with his power.

He sought to establish a regular administration in his motley empire. Projected laws were submitted to great national assemblies, and the edicts known as capitularies evince his wisdom. The whole dominion was divided into counties, governed by earls, who were placed under imperial delegates. He increased the power of the clergy, but kept them under his control. He encouraged trade and industry, and established a uniform currency. Illustrious men, whose leading spirit seems to have been Alcuin, were invited from all countries to diffuse learning in his empire. Charlemagne himself was a diligent scholar and a patron of art. His favorite residence was Aix-la-Chapelle. His habits were active, frugal, and temperate. The only son who survived him was his successor, Louis le Débonnaire. The great emperor and his twelve legendary peers became the heroes of chivalric romance.

References.—His *Life* by Eginhard, Eng. trans. by Glaister; *Charles the Great*, by Mombert; Mullinger's *The Schools of Charles the Great*; Wells's *The Age of Charlemagne*; and Davis's *Charlemagne* in Heroes of the Nation series.

Charles I., king of England, second son of James I., was born in 1600, proclaimed king on the death of his father in 1625, and married to Henrietta Maria of France, daughter of Henry IV., in the May following. His reign is chiefly celebrated for the great civil war between the king and the parliament which began in 1641, and ended in the capture of the monarch, who was brought to trial in January, 1648, before a high court of justice, as a traitor to the country. Sentences of death being passed upon him, he was, on January 30, 1649, beheaded on a scaffold erected in the street near the windows of the banqueting house at Whitehall.

Charles II., king of England, son of Charles I., born in St. James palace, London, in 1630; was at The Hague, in Holland, when his father was beheaded. He assumed the royal title, and was proclaimed king by the Scots; landed in Scotland, and was crowned at Scone. Marching into England, he was defeated by Cromwell at Worcester, September 3, 1651, and fled to France. By the policy of General Monk, after Cromwell's death, he was restored to his crown and kingdom in 1660, an event known as the restoration. Died, 1665.

Charles V., surnamed "the wise," king of France 1364-80, was the son of King John II., and was born 1337. His father being made prisoner by the English at the battle of Poitiers, on September 19, 1356, he assumed the regency. His father died April 8, 1364, and Charles ascended the throne. Died, 1380.

Charles VI., "the mad," or the "beloved," born 1368, died October 21, 1422. He succeeded his father Charles V. in 1380, and France was under the oppressive rule of his uncles until he dismissed them in 1388. He reigned wisely till 1392, when his weak mind became deranged. Henry V. of England invaded the distracted land and won a great victory at Agincourt in 1415. Charles died, leaving most of France in English hands. His son by Isabella of Bavaria, Charles VII., succeeded him.

Charles VII., "the victorious," born 1403, died 1461. He was the fifth son of Charles VI. and Isabella, and became by the death of his brothers heir apparent in 1416. On the death of Charles VI. in 1422 Henry VI. of England was proclaimed king of France at St. Denis, and his authority was generally recognized. By 1453 the English had lost all but Calais. Charles' last years were embittered by his son Louis XI., who succeeded him.

Charles IX., king of France, second son of Henry II. and Catharine de' Medici, born 1550, died 1574. He succeeded his brother Francis II. in 1560, under the regency of his mother. Intervals of war and peace ensued. The battles of Jarnac and Moncontour were fought in 1569, after which an apparent reconciliation was effected, succeeded in 1572 by the massacre of St. Bartholomew. He manifested deep remorse, and died after terrible sufferings.

Charles X., king of France, the grandson of Louis XV., was born, 1757. He received the title Comte d'Artois, and in 1773 married Maria Theresa of Savoy. After the fall of the Bastille, in 1789, he headed the first emigration of nobles and took the lead in the attempts made to restore the monarchy. Under Louis XVIII., Artois headed the royalist party, and by the death of that monarch became king, under the title of Charles X. Charles was driven from the capital, and Louis Philippe declared king. Charles lived the remainder of his life in exile. He died at Görz, Austria, 1836.

Charles V. emperor of Germany, was born at Ghent, 1500, son of Philip, archduke of Austria, and of Johanna, daughter of Ferdinand and Isabella of Spain. He became in 1516, ruler of Spain, the Netherlands, Sicily, Naples, and the New World; and on the death of his grandfather, in 1519, added Austria to his dominions. His grandfather, Maximilian, had endeavored to secure for him also the succession to the imperial throne; but the electors were by no means anxious further to aggrandize his power, and at first rather favored the claims of the rival candidate, Francis I. of France. By dexterous policy, however, the honor was secured for the young Charles, who was crowned at Aix-la-Chapelle in 1520; and thus began that rivalry between Charles and Francis which is one of the determining factors of European history.

The war was waged in all quarters, but in Italy alone was it decisive; and the French were driven from the duchy of Milan in 1521, and out of Italy altogether in 1522. The discomfiture of the French king was increased by the treachery of the Constable of Bourbon, who openly joined the side of Charles. Francis again invaded Italy and occupied Milan; but he was defeated and made captive at Pavia (Feb., 1525), and forced to sign the treaty of Madrid (1526), by which he resigned all his pretensions, and agreed to coöperate with Charles in suppressing heresy. But the terms were too humiliating, and war again broke out. Threatened by the Turks on his eastern frontier, and annoyed by the spread of heresy in Germany, Charles agreed to the peace of Cambrai (1529), which, however, left him master of Italy.

Hitherto Spain had been the residence and headquarters of Charles, but Germany now demanded his presence. The Diet of Worms in 1521 had settled nothing, save to show Charles as a faithful supporter of the papacy. He had issued an edict against Luther; but the only result was to organize German national sentiment against the emperor. Social and political disturbances, however, such as the Anabaptist movement and the Peasants' War, strengthened the hands of Charles, and at the Diet of Augsburg (1530) he renewed the Edict of Worms, and was met by the formation of the Schmalkaldic league of Protestant princes.

A threatened invasion by the Turks prevented Charles from taking immediate action, and, to secure the coöperation of the Protestants against the Turks, he was forced to make concessions (1532). But his policy was not changed; and although he was year after year diverted from his purpose—first by renewed war with Francis, which did not end till a joint invasion of France by Henry VIII. of England and Charles forced Francis to sign a most unfavorable peace at Crespy (1544), and again by campaigns undertaken against the pirates of Tunis (1536) and Algiers (1541)—he never quite lost sight of it. The death of his rival, Francis I., in 1547, at last left him free; and the chief interest of the remaining years of his reign lies in his German dominions.

The two chief objects of his policy did not always harmonize, and his ultimate failure to secure either of them was, in part at least, due to this conflict between them. He wished to secure the reversion of the imperial throne for his son Philip; but in this he was disappointed, through the instance of his brother, Ferdinand of Austria, who claimed the empire for himself. The other object was to stamp out heresy, and restore Germany unbroken to the papacy.

Charles at first easily broke the power of the Protestant princes, and also made prisoners of their leaders; but the harsh manner in which an unsatisfactory compromise called the Augsburg Interim (1548) was enforced created discontent, and Charles found himself faced by the formidable opposition headed by Maurice of Saxony. At one time Charles almost fell into the hands of Maurice, and was driven a wanderer from Germany. He was forced to agree to the treaty of Passau (1552), and to the peace of Augsburg in 1555, which acknowledged the existing conditions, and established Protestantism over a great part of Germany.

The peace of Augsburg was the culmination of his reign. In 1556, disappointed in his ambitions and broken in health, he abdicated in favor of his son Philip, and retired to the monastery of San Yuste, near Plasencia, in Spain, where he died, 1558.

References.—Robertson's *Life of Charles V.*; Stirling-Maxwell's *Cloister Life of Charles V.*; Vehes's *Court of Austria.*

Charles X. king of Sweden, the son of the count Palatine, was born at Nyköping, 1622. He took part in the Thirty Years' war, and on the abdication of his cousin, Queen Christina, 1654, succeeded to the throne of a kingdom impoverished by her extravagance. In 1659 he was driven from an attack on Copenhagen by help of the Brandenburgers and the Dutch; and he died suddenly at Gothenburg, 1660.

Charles XII., king of Sweden, son of Charles XI., and a warlike prince, was born 1682. He ascended the throne at the age of fifteen. He had to cope with Denmark, Russia, and Poland combined against him; he foiled the Danes at Copenhagen, the Russians at Narva, and Augustus II. of Poland at Riga. Charles XII. was the last of the Swedish kings. Born in 1682, and died in 1718.

Charles the Bold, duke of Burgundy, son of Philip the Good, born 1433, died 1477. He fought at Gavre in his father's ranks in 1452, engaged in the "war of the public weal" in France, forcing Louis XI. to yield to the demands of the confederates, and after humbling Liege in 1466 and destroying Dinant, he succeeded Philip, in June, 1467, duke of Burgundy. In 1472 Gelderland, his fifth duchy, was acquired. In 1476 he invaded Switzerland, but his forces were overwhelmed at Granson and at Morat, and he lost Lorraine. He attempted to recover it, and besieged Nancy. Here on January 5, 1477, Rene, duke of Lorraine, vanquished his army, Charles falling in the fight.

Charles Martel, duke of Austrasia, was born about A. D. 689; died 741. He was the natural son of Pepin d'Heristal, and succeeded his father in the dukedom in 715. As mayor of the palace he possessed the whole regal power, which he administered with great success, and gained many victories, the principal of which was over the Saracens in 732. It was in consequence of this victory that he was called *Martel*, or "the hammer." On the death of Thierry in 737, he omitted to declare a successor to the throne and continued to administer affairs with the title of duke of the Franks. At his death he divided his dominions between his sons Carloman and Pepin. The latter became the first king of France of the Carlovingian race, which name was taken from the founder, Charles Martel.

Charlevoix (*shär'lē-vwä'*), **Pierre François Zavier de,** a noted French traveler and historian, born at St. Quentin, 1682. He became a member of the society of Jesuits when only sixteen years old. In 1720 he visited Canada, went up the St. Lawrence river and through the great lakes, and reaching the Mississippi through the Illinois river, sailed down to New Orleans, went from there to Santo Domingo, and thence to France, which he reached after an absence of two years.

Charlton, John, English artist, was born at Bamborough Northumberland, 1849; studied at Newcastle school of arts and South Kensington; exhibited at royal academy 1870, and regularly since that time.

Charron (*shä'rōN'*), **Pierre,** philospher and theologian, born at Paris, 1541. After being admitted to the bar he took orders, and became a leader of the modern Catholics. He was a friend of Montaigne, from whose essays he borrowed freely. Died, 1603.

Chase, Salmon Portland, American jurist and statesman, was born in New Hampshire in 1808. He was sent to the house of representatives and to the United States senate from Ohio, and was elected governor of that state. Appointed secretary of the treasury by President Lincoln, at the outbreak of the civil war, he conducted the finances with rare skill and success. Appointed chief-justice of the supreme court in 1864, he held this office at his death in 1873.

Chase, Susan Frances, educator, was born in Buffalo, N. Y., and graduated from the University of Wisconsin. For graduate work in literature and pedagogy she received the degrees M. A. and Ph. D.; was teacher of grade schools a number of years; later appointed to the Buffalo normal school; now head of department of educational psychology and methods in literature, and institute lecturer. Author: *The Children's Shelf in the Home Library; Books for Our Older Boys and Girls; Literature for the Adolescent; Pencil Jottings in the Schoolroom*, etc.

Chase, William Merritt, American artist; was born at Franklin, Ind., 1849; early studied under B. F. Hayes in Indianapolis, J. O. Eaton, New York, A. Wagner and Piloty, Munich. Established studio in New York.

Chateaubriand (*shä'tō'brē'äN'*), **Vicomte de, François Auguste,** French author, was born 1768 at St. Malo, in Bretagne. He traveled in America 1791-92, and while still here learned of the flight and arrest of Louis XVI. He immediately returned to France, but found himself unable to stem the revolutionary tide, and so retired to England. In 1806 he commenced his pilgrimage to the holy land, visited Greece, Palestine, Alexandria, and Carthage, and returned through Spain to France in 1807. He was created a peer of France 1815, was ambassador at London in 1822, and minister of foreign affairs 1823-24. Died at Paris, 1848.

Chatfield-Taylor, Hobart Chatfield, author, was born at Chicago, 1865; graduate Cornell, 1886. Editor: *America*, 1888-90; consul of Spain at Chicago, 1892-94; chevalier of the legion of honor and officer de l'Instruction Publique, France; chevalier of the order of Isabella, the Catholic, Spain; chevalier of the order of St. James, Portugal, etc. Author: *With Edge Tools*; *An American Peeress*; *Two Women and a Fool*, etc.

Chatham, William Pitt, first earl of. See **Pitt, William.**

Chatrian, Alexandre. See **Erckmann-Chatrian.**

Chaucer (*chô'sĕr*), **Geoffrey** the "father of English poetry," was born about 1340. At one period he seems to have turned his attention to law, and to have become a member of the Inner Temple. In 1359 he served under Edward III. in his French campaign, and was made prisoner. The date of his return from captivity and of his subsequent marriage cannot now be ascertained. After his marriage he began to mix in public affairs. He was sent on an embassy to Genoa in 1372, and on his return was appointed comptroller of the customs for wools, and in the same year the king granted him a pitcher of wine daily for life. In 1377 he proceeded to Flanders in the retinue of Sir Thomas Percy, afterward earl of Worcester; and for several years thereafter he was employed in embassies and other business connected with the public service. He died at London in 1400, and was buried in Westminster abbey. His poems include *The Romaunt of the Rose*; *The Canterbury Tales*; *The Book of the Duchess*; *The House of Fame*, and *The Legend of Good Women.*

Cheops (*kē'ops*), or **Khufu,** a king of Egypt of the fourth dynasty. He built the great pyramid. He changed that government into a despotic tyranny which had previously been a limited monarchy, and died after reigning fifty-six years, hated by his people. According to Lepsius he lived about 2800-2700 B. C.

Cherbullez (*shär'bü'lyā'*), **Victor,** French novelist and critic, was born at Geneva, 1829, and studied there, at Paris, Bonn, and Berlin, first mathematics, then philology and philosophy; after which he lived in Geneva as a teacher, until his call to Paris in 1864 to join the staff of the *Revue des Deux Mondes.* In 1882 he became a member of the French academy.

Cherubini (*kā'rōō-bē'nē*), **Maria Luigi Carlo Zenobi Salvatore,** Italian composer, was born at Florence in 1760. He was naturalized in France, and settled in Paris, the scene of his greatest triumphs, where he composed operas, of which the chief were *Iphigenia in Aulis*, and *Les deux Journees*, or *The Water Carrier*, his masterpiece. Died, 1842.

Chesterfield, Philip Dormer Stanhope, Earl of, English politician, writer, and a man of fashion, was born in 1694, and educated at Cambridge. He was distinguished at the court of George II., and was sent as ambassador extraordinary to Holland in 1728. He was made a knight of the Garter in 1730. In 1745 he was appointed lord-lieutenant of Ireland, and afterward became secretary of state. He is now mere known by his *Advice to His Son* than by his public services. Died, 1773.

Chesterton, Gilbert Keith, English journalist and author; born at Campden Hill, Kensington, 1874; educated at St. Paul's school. Attended classes at Slade school; began reviewing art books for the *Bookman*, and then for the *Speaker*; since then has contributed to *Daily News*, *Literature*, *Pall Mall Magazine*, *Echo*, *World*, *Clarion*, etc.

Chevalier (*shē-vä'lyā'*), **Michel,** French economist, was born at Limoges, 1806, and trained as an engineer. He was sent by Thiers to inquire into water and railway communication in the United States; was made a councillor of state in 1838; and in 1840 professor of political economy in the Collège de France. As a freetrader he aided Cobden in carrying into effect in 1860 the commercial treaty between France and England, becoming

a senator and grand officer of the legion of honor. He died at Montpelier, 1879.

Chevreul (*shē-vrûl'*), **Michel Eugene,** French chemist, born at Angers, 1786, studied chemistry at the Collège de France in Paris. In 1826 he entered the academy of sciences, and in 1830 became director of the museum of natural history. Died in 1889, his hundredth birthday having been celebrated three years before with great enthusiasm.

Cheyne (*chā'nē*), **Thomas Kelly,** biblical scholar, joint-editor of the *Encyclopædia Biblica*, and author of *Critica Biblica*, was born in London, 1841. Educated at Merchant Taylors school and Worcester college, Oxford, he became fellow of Balliol college in 1869; D. D. Litt. D. A member of the Old Testament Revision company, he has contributed much to magazines and reviews. His chief books are *The Prophecies of Isaiah; Exposition of Jeremiah and Lamentations; The Book of Psalms*, etc.

Cheyney, Edward Potts, educator, author; born at Wallingford, Pa., 1861; graduate of University of Pennsylvania, 1883; professor European history, University of Pennsylvania. Author: *Social Changes in England in the Sixteenth Century; Social and Industrial History of England.*

Childs, George William, publisher and philanthropist, was born in Baltimore, 1829, became clerk in a book store in Philadelphia, and by 1850 was head of a publishing firm. Proprietor from 1864 of the Philadelphia *Public Ledger*. He died, 1894.

Chittenden (*chit'en-den*), **Russell Henry,** scientist, chemist, director Sheffield school, Yale, since 1898; born at New Haven, Conn., 1856; graduate Yale, Ph. B., Ph. D., LL. D., Sc. D. Professor physiological chemistry, Yale, since 1882. Member national academy sciences since 1890; president American physiological society, 1895-1904. Author: *Digestive Proteolysis; Studies in Physiological Chemistry*, 4 vols.; *Physiological Economy in Nutrition; The Nutrition of Man.*

Chitty (*chit'ti*), **Joseph,** English lawyer and legal writer; born 1776, died at London, 1841. His chief works are, *Treatise on the Parties to Actions and to Pleadings* and *Synopsis of Practice in the King's Bench and Common Pleas.*

Choate (*chōt*), **Joseph Hodges,** lawyer, diplomat, ambassador of United States to England, 1899-1905; born in Salem, Mass., 1832; graduate of Harvard and Harvard law school, 1852; LL. D., D. C. L.; one of the committee of seventy which broke up the Tweed ring, 1871; governor of New York hospital since 1877 (chairman of committee of elections). Author of *Addresses on Abraham Lincoln, Admiral Farragut*, etc. Elected bencher of the Inner Temple, England, 1905.

Choate, Rufus, American lawyer, statesman, and orator, was born at Essex, Mass., in 1790. After graduating at Dartmouth college, he entered upon the study of law at Cambridge and in Washington. He was elected to the senate in 1841. After the death of Daniel Webster, Choate became the recognized leader of the Massachusetts bar. His foresight led him to anticipate the civil war, and to do more than was by some considered wise to conciliate the south. Died at Halifax, Nova Scotia, 1859.

Choiseul (*shwä-zûl'*), **Stephen Francis, Duke of,** French statesman and diplomat, was born in 1719. He became prime minister of France, through the influence of Madame de Pompadour. In 1761 he negotiated the secret treaty with the king of Spain, known as the "family compact." In 1770 he was dismissed from office, and exiled to one of his estates. He died in 1785.

Chopin (*shō-pan'*), **Frédéric François,** Polish pianist and composer, was born, 1809. His waltzes, mazurkas, and other compositions are peculiar in melody, rhythm, and harmony, and have a great charm. He was one of the first pianists. He spent most of his life in Paris, where he died, 1849.

Chosroes (*kos'rō-ēz*), or **Khosru I.,** king of Persia from A. D. 531 to 579. His reign was marked by great victories in war and wise conduct in peace. He enlarged his kingdom, and made his subjects love him by ruling justly and kindly. He lived to be eighty years old, and the forty-eight years of his reign have been called the golden age of Persia.

Chosroes II., king of Persia, grandson of Chosroes I., came to the throne in 591. He also was a great conqueror, but cared more for his own glory than for the good of the people. At last his subjects, led by his own son, rebelled against him, and put him to death, 628, after he had been king for thirty-seven years.

Christian II., king of Denmark and Norway, was born 1481, died 1559. In 1513 he succeeded his father John. He proceeded to subdue Sweden, where he expected aid from the treason of Gustavus Trolle. He was at first unsuccessful, but made a formidable invasion in 1520. Stockholm and Calmar held out, but both were soon reduced. Christian was crowned, and a fearful series of executions ensued. Sweden found a deliverer in Gustavus Vasa, while the Danes rose against Christian and gave their throne to Frederick, duke of Holstein. He attempted to recover his throne, and in 1531 was acknowledged king in Norway. He was soon forced to surrender to the Danes, and was imprisoned for the rest of his life.

Christian IV., king of Denmark and Norway, and duke of Schleswig-Holstein, born in Zealand 1577, and elected successor to the throne in 1580. He assumed the scepter in 1593. From 1610 he carried on a successful war, known as the Kalmarian war, against Charles IX. of Sweden, and his successor, Gustavus Adolphus, which ended in an advantageous peace in 1613. Died, 1648.

Christian IX., king of Denmark, 1863-1906, was born near Schleswig 1818, died at Copenhagen 1906. In 1864 he prosecuted a war against Austria, Prussia, and other German states, over the ownership of Schleswig and Holstein, which terminated against him. He was the father of Frederick VIII., Queen Alexandra of England, George I., king of Greece, and Dagmar, dowager empress of Russia.

Christie, James Elder, British artist; born Guardbridge, Fifeshire, 1847; educated at Paisley school of art, South Kensington art school, and at the Royal academy. Went to London, 1874; gold medal at South Kensington, 1875; gold medal at Royal academy, 1877, for historical painting. Chief pictures: *Tam o'Shanter; A Rose Among Thorns; Pied Piper of Hamelin; The May Queen;* etc.

Christina (*kris-tē'nä*), **Queen of Sweden,** born in 1626; succeeded her father, Gustavus Adolphus, in 1632. After her coronation in 1650, she fell under the influence of favorites, and ceased to interest herself in state affairs. She resigned the crown to her cousin, Charles Gustavus, in 1654, was baptized by the pope, and lived for some time at Paris. She died at Rome in 1689.

Christy, Howard Chandler, illustrator, writer; born in Morgan county, Ohio, 1873; educated at Duncan's Falls, Ohio; went East in 1893; since then on New York illustrated periodicals; went to Cuba with second United States regulars and "rough riders"; saw the fighting before Santiago; his letters and illustrations published in *Scribner's Magazine; Harper's Magazine; Collier's Weekly*, and by R. H. Russell, publisher.

Chrysostom (*kris'os-tum* or *kris-os'tum*), **St. John,** one of the Greek fathers, born about 347; in 397, was made bishop of Constantinople. He was renowned for his eloquence and almsgiving. He was soon afterward deposed and conveyed to the Taurus mountains, whence he was ordered to proceed to Pityus, on the Euxine, but died on the journey at Comana in 407.

Chrystal, George, mathematician; professor of mathematics, Edinburgh University, since 1879; dean of the faculty of arts; was born in Aberdeenshire, 1851; educated at University of Aberdeen and Cambridge; M. A., LL. D.; professor of mathematics, St. Andrews. Author: *Treatise on Algebra; Introduction to Algebra.*

Church, Alfred John, English clergyman and writer, was born 1829; educated at King's college, London; Lincoln college, Oxford; professor of Latin in University college, London, 1880-88; rector of Ashley, Tetbury, Gloucestershire, 1892-97. Author: *Stories from Homer, Vergil, Greek Tragedians, Livy, Herodotus*, etc.

Church, Frederick Edwin, American landscape painter, was born at Hartford, Conn., 1826. He first painted scenes from the Catskill mountains. He then traveled in South America, and painted. His *Tropical Scenery* and *View of Niagara Falls From the Canadian Shore* are among his best works. Died at New York, 1900.

Church, Richard William, English clergyman and writer, dean of St. Paul's, was born at Lisbon, 1815. He graduated from Wadham College, Oxford, in 1836, in 1838 was elected a fellow of Oriel, and in 1871 dean of St. Paul's. He died, 1890. Among his works, besides several volumes of sermons were *Essays and Reviews; Life of St. Anselm; The Beginning of the Middle Ages; Dante, an Essay; Spenser; Bacon*, etc.

Churchill, John. See **Marlborough, Duke of.**

Churchill, Winston, American novelist and writer; born at St. Louis, Mo., 1871; graduated, 1894, from the United States naval academy. An editor of the *Army and Navy Journal* of New York, 1894; managing editor of *Cosmopolitan Magazine*, 1895. Author: *The Celebrity; Richard Carvel; The Crisis; The Crossing; Coniston; Mr. Crewes' Career.*

Churchill, Rt. Hon. Winston Leonard Spencer, British statesman, author; was born, 1874; educated at Harrow and Sandhurst. Entered army, 1895, and served with Spanish forces in Cuba, and in South Africa, 1899-1900; member of parliament for Oldham, 1900-1906; for Manchester, 1906-1908. Author: *The Story of the Malakand Field Force; The River War; Savrola; London to Ladysmith via Pretoria; Ian Hamilton's March; Lord Randolph Churchill; My African Journey.*

Cibber (*sib'ẽr*), **Colley,** actor, manager, and dramatist, was born in London, 1671. He was educated at Grantham, and in 1690 joined the Theatre Royal in Drury Lane, where he remained, with short intervals, during his whole theatrical career of forty-three years. In 1696 his first comedy, *Love's Last Shift*, was produced, the author playing Sir Novelty Fashion; it established his fame both as dramatist and actor. Poet laureate from 1730. He died suddenly, 1757.

Cicero, Marcus Tullius, Roman orator and statesman, was born in Arpinum in 106 B. C.; studied rhetoric under Milo and others; commenced pleading at the age of twenty-six, and offending Sulla by his successful defense of Roscius Amerinus, retired to Athens, where he studied under Antiochus; went as quaestor to Sicily in 76, and on his return impeached Verres, a former governor; was aedile in 69, praetor in 66, and, in 64, was elected consul in opposition to Catiline. His vigor in putting down the conspiracy of the latter gained for him the title of "father of his country." The measures passed by his enemy, the tribune Clodius, obliged him to withdraw to Greece. After about sixteen months, he was recalled by the senate, and, in 52, went as governor to Cilicia. He sided with the senate and afterward with Pompey against Caesar, but submitted to the latter after Pharsalia, and retiring to his Tusculan villa, wrote his *De Natura Deorum*, and other philosophical works. His defense of Caesar's murderers and the "philippic" orations directed against Marcus Antonius led to his proscription on the formation of the second triumvirate. He was murdered by Antonius' emissaries in 43 B. C.

Cid Campeador (*thēth käm-pā-ä-thōr'*), **Ruy,** or Rodrigo Dias de Bivar, hero of Spanish fiction, aided Sancho of Castile against his brother, Alfonso, king of Aragon, but on the death of Sancho acknowledged Alfonso as king of Castile. He lost the favor of Alfonso, and retired from his court, but obtained some aid from him in capturing the city of Valencia from the Moors, which he ruled till his death.

Cimabue (*chē-mä-b ōō'ä*), **Giovanni,** Italian artist, one of the restorers of the art of painting in Italy, which had fallen into neglect during the barbarism of the dark ages; born at Florence in 1240, died about 1300. The exhibition of his table of *The Virgin* for the Rucellai chapel in Santa Maria Novella was the occasion of a public festival. Except the *Madonna*, little of his work remains.

Cimon (*sī'mon*), Athenian commander, was the son of Miltiades, the conqueror at Marathon. With his patron Aristides, he was placed over the Athenian contingent to the allied fleet, which, under Pausanias, continued the war against Persia, 477 B. C. His greatest exploit was his encounter with a Persian fleet at the river Eurymedon, 466, when he destroyed or captured 300 out of 350 ships, and defeated the land forces on the same day. He likewise drove the Persians from Thrace, Caria, and Lycia; and expended much of the money which he had obtained by the recovery of his patrimony in Thrace upon the improvement of Athens. At Athens he was opposed by the democracy, headed by Pericles, who procured his ostracism. He was recalled in 454, and was instrumental in obtaining a five years' armistice with Sparta. He died in 449 B. C. at the siege of a Cyprian town.

Cincinnatus (*sin-si-nā'tus*), **Lucius Quinctius,** a Roman consul regarded by the later Romans as the model of antique virtue, born about 530 B. C. About 460 B. C. he was chosen consul, and two years later was made dictator. When the messengers from Rome arrived to tell him of his new dignity they found him plowing on his small farm. After a dictatorship of sixteen days he returned to his country life. He was again, when eighty years old, made dictator; died about 430 B. C.

Cinna, Lucius Cornelius, Roman patrician who supported Marius; Sulla, after driving Marius from Rome, and before setting out against Mithridates, allowed Cinna to be elected consul on his swearing not to disturb the existing constitution. No sooner, however, had he entered on office, 87 B. C., than he impeached Sulla, and agitated for Marius' recall. Cinna and Marius next declared themselves consuls after a cruel massacre of the Roman citizens. Marius died a few days later; and Cinna in 84 B. C. prepared to meet Sulla, but was slain by his own disaffected troops at Brundisium. During his fourth consulate his daughter Cornelia was married to Julius Cæsar.

Clapp, Moses Edwin, lawyer, United States senator, was born in Delphi, Ind., 1851; his parents removed to Hudson, Wis., in 1857; after obtaining a common school education, graduated from the Wisconsin law school in 1873; in 1878 was elected county attorney of St. Croix county, Wisconsin; in 1881 moved to Fergus Falls, Minn., and resided there until 1891; was elected attorney-general of Minnesota in 1887, 1889, and 1891, and removed to St. Paul and made that his permanent home in 1891; was elected to the United States senate in 1901 and 1911.

Clarendon (*klar'en-don*), **Edward Hyde, Earl of,** English historian and statesman, was born, 1608, at Dinton, England. He sat in the short Parliament and in the long Parliament on the popular side, but during the civil war became a devoted royalist; was from 1641 one of the chief advisers of the king; on the failure of the royal cause, took refuge first in Jersey, and then in Holland with the prince of Wales; contributed to the restoration; came back with Charles, and became lord chancellor; fell into disfavor, and quitted England in 1667. He wrote, among other works, a *History of the Great Rebellion*, dignifiedly written, though

often carelessly, but full of graphic touches and characterizations, especially of contemporaries. Died at Rome, 1674.

Clark, Alvan, American optician, engraver, and manufacturer of telescopes, was born at Ashfield, Mass., 1808, and died at Cambridge, Mass., 1887. Early in life he was a portrait painter; but in 1845 he turned his attention to the making of achromatic lenses and the manufacture of telescopes. Associated with his sons, he constructed object-glasses for universities, for the naval observatory at Washington, Lick observatory in California, the imperial observatory at Pulkowa, Russia.

Clark, Sir Andrew, British physician, was born at Wolfhill, near Coupar-Angus, Scotland, 1826; educated at Aberdeen and Edinburgh. In 1854 he settled in London, where he acquired a high reputation for his skill in the treatment of diseases affecting the respiratory, renal, and digestive organs. Among his patients were George Eliot and Gladstone. Created a baronet in 1883, he died 1893. He published several medical works.

Clark, Champ, congressman, lawyer; born in Anderson county, Kentucky, 1850; educated in common schools, Kentucky University, Bethany College, and Cincinnati law school; president Marshall College, West Virginia, 1873-74; admitted to the bar 1875; city attorney of Louisiana, Mo., and later of Bowling Green, Mo.; prosecuting attorney of Pike county; presidential elector; member Congress, ninth Missouri district, 1893-95, and again continuously since 1897; chairman Democratic national convention, St. Louis, 1904. In 1911 he was elected by his party speaker of the United States House of Representatives.

Clark, Charles Edgar, naval officer; born Bradford, Vt., 1843; appointed to United States naval academy from Vermont, 1860, graduated 1863; LL. D., University of Pennsylvania, 1905; commander battleship *Oregon* during the cruise from San Francisco to Key West, and in the battle of Santiago, July 3, 1898. He was promoted rear admiral, 1902; retired, 1905.

Clark, Clarence Don, lawyer, United States senator, was born at Sandy Creek, Oswego county, N. Y., 1851; educated at Iowa State University; admitted to the bar in 1874; practiced law in Iowa until 1881; moved to Evanston, Wyo., where he has since resided; was prosecuting attorney for Uinta county four years; upon the admission of Wyoming as a state was elected to the fifty-first and fifty-second Congresses; was defeated for reëlection to the fifty-third Congress by a fusion of Democrats and Populists; was elected to the United States Senate, 1895-1917.

Clark, Edwin Charles, English lawyer, regius professor of civil law, Cambridge, was born 1835; graduated at Trinity College, Cambridge, and was formerly scholar and fellow of Trinity; now professorial fellow at St. John's; LL. D., F. S. A. Practiced for a short time as a conveyancer in London. Author: *Early Roman Law; Regal Period; Analysis of Criminal Liability; Practical Jurisprudence; A Comment on Austin; Cambridge Legal Studies; History of Roman Private Law.*

Clark, Francis Edward, founder united society of Christian Endeavor; born of New England parentage, Aylmer, P. Q., 1851; graduate of Dartmouth College, 1873; studied theology three years at Andover; became pastor Williston church, Portland, Me., which from a small mission he built up to a large Congregational church; founded, February, 1881, the society of Christian Endeavor, which was extended throughout the world; pastor Phillips church, South Boston, 1883-87; since then has devoted his time to the Christian Endeavor work as president of united society of Christian Endeavor, president of World's Christian Endeavor Union, and editor of *The Christian Endeavor World.*

Clark, John Bates, educator, born at Providence, R. I., 1847; graduate of Amherst College, 1872; special studies, economics and history, University of Heidelberg, University of Zürich; Ph. D., LL. D. Amherst. Was professor of political economy, Carleton College, Smith College, Amherst College; lecturer, Johns Hopkins; professor of political economy, Columbia, since 1895. Author: *The Philosophy of Wealth; The Distribution of Wealth; The Control of Trusts; The Problem of Monopoly;* and *Essentials of Economic Theory.*

Clark, Lindley D., editor United States bureau of labor, was born near Carthage, Ind., 1862; graduated from Earlham college, 1886; LL. B., LL. M., Columbian University. Author of *Legal Status of Organized Labor in the United States; Law of the Employment of Labor in the United States;* Summary of Labor Legislation, 1905-10; and has edited and compiled many reports and bulletins relating to labor

Clark, Sir James, British physician born at Cullen, Banffshire, 1788; took his M. A. at Aberdeen; studied medicine at Edinburgh and London; was a naval surgeon 1809-15; practiced eight years at Rome, and in 1826 settled in London. In 1837 Clark, who had been physician to the duchess of Kent, was appointed physician in ordinary to Queen Victoria, and in 1838 was created a baronet. He wrote on climate, consumption, etc. He died 1870.

Clark, Sir William Mortimer, lieutenant-governor of Ontario since 1903; chairman, Knox College, Toronto, since 1880; born at Aberdeen, Scotland, 1836. He was educated at Marischal College, Aberdeen; admitted to bar of Ontario, 1869; Q. C., 1890; LL. D., Toronto, 1902; president of Toronto mortgage company, etc.

Clark, Thomas Arkle, university dean, was born at Minonk, Ill., 1862; graduated at the University of Illinois, 1890; graduate student, University of Chicago, 1894, Harvard 1898-9. Instructor of English and Latin, University of Illinois Academy, 1891-3, instructor English, 1893-5, assistant professor rhetoric, 1895-9, professor rhetoric, 1899, acting dean, college literature and arts, 1900-1, dean undergraduates, 1901, dean of men since 1909, University of Illinois. Author: *English Composition in State Course of Study; English Composition in the Grades; Great American Authors; Great English Authors;* etc.

Clark, or **Clarke, William,** American explorer; born in Virginia 1770, died at St. Louis, Mo., 1838. In 1804-06, in company with Lewis, he started on an exploring expedition from St. Louis to the mouth of the Columbia river; governor of Missouri territory 1813-21; superintendent of Indian affairs 1821 till his death.

Clark, William Andrews, capitalist, ex-United States senator; born near Connellsville, Pa., 1839; studied law at Mt. Pleasant, Ia., University; taught school, Missouri, 1859-60; went to Colorado, 1862; to Montana, 1863; since then merchant-banker, mine-owner, manufacturer, having large interests. President United Verde Copper Company of Arizona. President constitutional conventions, 1884 and 1889; commissioner from Montana to New Orleans Exposition 1884; Democrat candidate for delegate in Congress, 1888 (defeated); nominated by Democrats for United States senator, 1890, and claimed election, but was denied seat; elected by legislature for term 1901-07, United States senate.

Clark, William Robinson, educator, religious writer; professor of philosophy, Trinity college, Toronto, since 1882; born at Inverurie, Scotland, 1829. Ordained priest, 1858; curate of St. Matthias, Birmingham, 1857; LL. D., Hobart College, 1888; D. C. L., 1891; F. R. S., 1891; Slocum lecturer in the University of Michigan, 1899; president of the royal society of Canada, 1900; D. D., Queen's University, Canada, 1902. Author: *The Redeemer; The Comforter; The Four Temperaments; Witnesses to Christ.*

Clarke, Adam, British Wesleyan divine and author, was born near Portrush, Ireland, 1762. From 1782 he preached in places as widely different as the Channel islands and Shetland, but after 1805 lived mostly in London. He died, 1832.

Clarke, Charles Cowden, English writer and critic, was born in 1787, at Enfield, Middlesex. He early imbibed a passion for the theater, and made frequent visits to London, where he formed the friendship of Leigh Hunt, Shelley, Hazlitt, Charles and Mary Lamb. On his father's death in 1820, he became a bookseller in London. In 1834 Clarke entered on that twenty years' course of public lectures on Shakespeare and other dramatists and poets which brought him so much celebrity and profit. In 1856 he went to live at Nice, but removed in 1861 to Genoa, where he died, 1877.

Clarke, Frank Wigglesworth, chemist; born at Boston, 1847; graduate of Lawrence scientific school, Harvard, 1867; D. Sc.; LL. D.; chief chemist of United States geological survey and honorary curator of minerals in United States national museum, since 1883. Member of numerous scientific bodies; chairman international committee on atomic weights; chevalier de la legion d'honneur. Author: *Weights, Measures and Money of All Nations; Elements of Chemistry;* etc.

Clarke, James Freeman, American theologian and writer, was born at Hanover, N. H., 1810; graduated at Harvard, 1829; Cambridge divinity school, 1833; lecturer on ethnic religions, 1876-77. He wrote: *The Ten Great Religions,* his greatest work; *Orthodoxy; Steps of Belief;* etc. Died at Jamaica Plain, Mass., 1888.

Clarke, James P., lawyer, United States senator, was born in Yazoo City, Miss., 1854; studied law at the University of Virginia, graduating in 1878; began the practice of his profession at Helena, Ark., in 1879; was elected attorney-general of Arkansas in 1892, but declined a renomination, and was elected governor in 1894. At the close of his service as governor he moved to Little Rock and resumed the practice of law. Was elected United States senator 1903 and 1909.

Clarke, Samuel, English philosopher and theologian, was born at Norwich, 1675, and educated at Cambridge. He was for some time chaplain to the bishop of Norwich, a promoter of science; he afterward became chaplain to Queen Anne, and in 1709 rector of St. James. He died 1729.

Claude (*klōd*) **of Lorraine,** or Claud Gelee, French landscape painter, born at Chamagne, in Lorraine, A. D. 1600; died in Rome, 1682. At the age of twelve, being left an orphan, he found a home with an elder brother, who was a carver in wood at Freiburg, and there showed some signs of genius. He made a tour in Italy, France, and Germany; in 1627, he returned to Rome, where he speedily made himself famous..

Claudianus (*klō-di-ā'nus*), **Claudius,** the last of the great Latin poets, came from Alexandria to Rome in 395 A. D., and obtained patrician dignity by favor of Stilicho, whose fall, 408, he seems not to have long survived. We have two epic poems by him, *Raptus Proserpinae* and the fragmentary *Gigantomachia,* besides panegyrics on Honorius and Stilicho, *Ediyttia, Epigrammata,* etc.

Claudius (*klō'di-us*), **Marcus Aurelius Claudius Gothicus,** Roman emperor, born in Illyria in A. D. 214. He was of a poor family, but won fame as a soldier, and when the emperor Gallienus was murdered the soldiers made him emperor. He died in 270 from a pestilence.

Claudius, Tiberius Drusus Nero Germanicus, Roman emperor, born at Lugdunum (Lyons), 10 B. C. When Caligula was killed (A. D. 41), he was made emperor by the soldiers. This was the first time that an emperor was chosen by the army. The conquest of Britain was begun by him, and it would probably have been a Roman province had not Claudius been recalled to Rome; from his conquests in Germany he took the title of Germanicus. He was poisoned by his wife Agrippina, who wanted the empire for her son Nero, in A. D. 54.

Clausius (*klō'si-us*). **Rudolf Julius Emanuel,** German physicist, was born at Köslin, Pomerania, 1822. He was educated at Berlin, and held professorships of physics at Zürich, Würzburg, and Bonn. He discovered the principle of virial in mathematical physics and published a number of books on physical subjects. Died at Bonn 1888.

Claxton, Kate (Mrs. Charles A. Stevenson), actress; born New York, 1850; first professional engagement with Miss Lotta, Chicago, 1870. Created part of Louise in *The Two Orphans.* First starring tour, 1876; married 1878 Charles A. Stevenson.

Claxton, Philander Priestley, educator, U. S. commissioner of education, was born in Bedford county, Tenn., in 1862; graduated from University of Tennessee, 1882; later studied at Johns Hopkins University, and in Germany; Litt. D., Bates College, 1906. Has been a teacher in public, normal and collegiate institutions. Editor: *North Carolina Journal of Education,* 1897-1901, and *Atlantic Educational Journal,* 1901-3. U. S. commissioner of education since 1911.

Clay, Henry, American statesman, born 1777 in Virginia; was admitted to the bar 1797, and began his career at Lexington, Ky. In 1806 was elected to congress, and again in 1809 was chosen senator. In 1811 he was sent to the house of representatives, where he was immediately elected speaker. Clay is best known as the author of the famous Missouri compromise, and of the compromise of 1850, known as Clay's "omnibus" measure. In 1824 he was an unsuccessful candidate for president, but was made secretary of state by J. Q. Adams the successful candidate. He was then returned to the United States senate, in which he played a leading part for many years ensuing, especially in the tariff compromise of 1833. Clay was again a candidate for president before the first whig national convention in 1839, but Harrison was nominated and elected. He had in 1842 bidden farewell to the senate, but was persuaded to return to it after 1844, and bore a leading part in effecting the slavery compromise of 1850. He returned to Washington from Kentucky for the last time near the close of 1851, and was soon prostrated by disease, under which he gradually sank; he was a gallant party chief, an eloquent orator and a skillful legislator. Died, 1852.

Clayton, John Middleton, American statesman and diplomat, born in Delaware, 1796; graduated from Yale, 1815, and became a noted lawyer. He was United States senator 1829-37, 1845-49, and 1851-56. During 1849-50 he was secretary of state under President Taylor and negotiated with the British government the historic Clayton-Bulwer treaty. Died, 1856.

Clémenceau (*klā'mäN'sō*), **George Benjamin Eugene,** prime minister and minister of interior, France, 1906-09, was born Chateau de l'Aubraie, Feole, Vendee, 1841. Educated at Nantes, and settled in Paris, 1860; resided in United States 1865-69; founded *La Justice,* 1888-1900; *Le Bloc* 1900-02; *L'Aurore,* 1903-07. Resigned as premier 1909, and was succeeded by M. Briand. Author: *De la Generation des Elements Anatomiques; Le Voile du Bonheur;* etc.

Clemens, Samuel Langhorne ("Mark Twain"), author, lecturer; born at Florida, Mo., 1835; educated at common schools, Hannibal, Mo.; M. A., L. H. D., LL. D., Litt. D., Oxford; apprenticed to printer at twelve; became, 1861, private secretary to his brother when latter was appointed territorial secretary, Nevada. City editor of *Virginia City* (Nev.) *Enterprise,* 1862; founded, 1884, publishing house of C. L. Webster & Co., failure of which involved him in heavy losses; has since paid its debts by proceeds of lectures and books. Author: *The Innocents Abroad; Roughing It; Adventures of Tom Sawyer; A Tramp Abroad; Life on the Mississippi; The Adventures of Huckleberry Finn; A Yankee at the Court of King Arthur; Puddinhead Wilson; Tom Sawyer Abroad; Christian Science; Autobiography of Mark Twain;* etc. Died, 1910.

Clement XIV., Giovanni Vincenzo Antonio Ganganelli, born, 1705, at St. Arcangelo, near Rimini, died 1774. At the age of eighteen he entered the order of Minorites, and studied philosophy and theology, which he then successfully taught. On the death of Clement XIII. he succeeded to the papal chair, 1769. Clement XIV. was remarkable

for liberality of mind, address as a statesman, sound learning, and mildness of character.

Cleomenes III. (*klē-om'ē-nēz*), king of Sparta, reigned 236-220 B. C. He reëstablished the institutions of Lycurgus, and made a new distribution of the lands, relinquishing his own property. Died in Egypt.

Cleopatra (*klē'ō-pā'trā*), queen of Egypt; born in 69 B. C.; celebrated for her beauty, was the daughter of Ptolemy Auletes, by whose will she was left joint sovereign with her brother Ptolemy, 51 B. C.; in 41 she captivated Mark Antony, who rejected Octavia for her sake. A quarrel with Octavius ensued; the fleet of Antony and Cleopatra was defeated at Actium, and they fled together to Egypt, where they both ended their lives by committing suicide in the year 30 B. C.

Cleveland, Frances Folsom, born at Buffalo, N. Y., 1864; daughter of Oscar and Emma C. (Harmon) Folsom. Graduated from Wells college, Aurora, Cayuga county, N. Y., 1885; married President Cleveland, in the White House, June 2, 1886.

Cleveland, Stephen Grover, president of the United States, 1885-89, and 1893-97, was born in Caldwell, Essex county, N. J., 1837 academic education; LL. D., Princeton, 1897. Went to Buffalo, 1855 and was admitted to bar, 1859; sheriff Erie county, 1870-73; in 1881 was elected mayor of Buffalo; in 1884 was elected president of United States as democrat, over James G. Blaine, republican, by majority of thirty-seven electoral votes; in 1888 again democratic nominee, but defeated by Benjamin Harrison; returned to law practice, locating in New York; in 1892 again elected president as democrat, defeating President Harrison. He took up his residence, after his second retirement from the White House, at Princeton, N. J., where he died, 1908.

Clews, Henry, banker; born in Staffordshire, England; intended for the ministry, but left school at fifteen to enter mercantile life in New York, whither his father had taken him for a visit; at outbreak of the civil war invited by secretary of treasury to become agent to sell government bonds. Many years treasurer American geographical society; connected with many city institutions and financial corporations. Author: *Twenty-eight Years in Wall Street; The Wall Street Point of View*, etc.

Clifford, William Kingdon, English mathematician and philosopher, was born in 1845; was educated at Cambridge; appointed professor of applied mathematics at University College, London, in 1871. Died, 1879.

Clifford, Mrs. W. K. (Lucy Lane), daughter of late John Lane; married 1875, W. K. Clifford, F. R. S. Author: *Mrs. Keith's Crime; Love Letters of a Worldly Woman; Mere Stories; A Woman Alone; Woodside Farm; The Getting Well of Dorothy;* etc.

Clinton, De Witt, American statesman, was born at Little Britain, N. Y., 1769. He graduated at Columbia College, and after studying law entered the lower house of the New York legislature, in 1797. He was chosen United States senator in 1802. He was elected governor of New York four times. His greatest service to the state was in urging the construction of the Erie canal. He died at Albany, N. Y., 1828.

Clinton, George, American commander and statesman, born in 1739. He served in early life under General Amherst against the French, and afterward studied the law. During the struggle for independence he sat in the colonial congress, and was made a brigadier-general. Died, 1812.

Clinton, Sir Henry, an English general, was born about 1738; entered the British army 1751, and succeeded Sir William Howe as commander-in-chief in America. After his return to England he was appointed governor of Limerick, and subsequently of Gibraltar, where he died in 1795.

Clive (*klīv*), **Kitty,** British actress, was born in London in 1711. She came out at Drury Lane about 1728, and continued to play chiefly at that theater till 1769, when she quitted the stage, and retired to Twickenham. She died at Little Strawberry Hill, 1785.

Clive, Robert, Lord, English statesman and soldier, was born at Styche, near Market Drayton, in Shropshire, 1725; died in London, 1774. He went to India in 1744 as a writer under the East India company, but three years later relinquished the civil for the military service, in which he greatly distinguished himself. Scarcely had he arrived when the nabob of Bengal captured Calcutta, destroyed the British factories near that city, and threw 146 of his prisoners into the memorable "black hole of Calcutta." The victory of Plassy, 1757, was Clive's retaliation for these wrongs. His last years were embittered by the attacks of his enemies, and by charges of malversation and abuse of power; but the house of commons rejected a motion against him, and declared that "he had rendered great and meritorious services to his country."

Clodd (*klod*), **Edward,** English scientist and writer, secretary, London joint-stock bank, limited since 1872; born in Margate, 1840. Educated at Aldeburgh grammar school. Entered commercial life, 1855; clerk in London joint-stock bank, limited, 1862.

Clodius (*klō'di-us*), **Publius** a famous Roman tribune who committed sacrilege and was tried for the offense, but acquitted through bribery. He persecuted Cicero, who had become his enemy by testifying against him, and was killed in an encounter with Milo, 52 B. C.

Clough (*kluf*), **Arthur Hugh,** English poet, was born at Liverpool, 1819. In 1837 he entered Balliol College, Oxford; in 1842 he was elected a fellow of Oriel. In 1898 he published the *Bothie of Toberna-Vuolich*, a "long vacation pastoral" in hexameter verse. He traveled in France and Italy, part of the time with Emerson, and was appointed on his return in 1849, warden of University Hall, London. Died at Florence, Italy, 1861.

Clovis I. (*klō'vis*), son of Childeric I., was born about 465, and is regarded as the real founder of the French monarchy. He succeeded Childeric in 481. Having conquered Alaric, king of the Visigoths, in 507, he gained most of the south provinces, but was himself overthrown near Arles, by Theodoric, in 509. Died, 511.

Cobb, Henry Ives, architect; born at Brookline, Mass., 1859; educated at private and public schools and at Massachusetts Institute of Technology; graduated from Harvard, 1880; in 1881 removed to Chicago; established practice, and was architect for Chicago opera house, Newberry library, University of Chicago, church of the Atonement; special architect for United States government, 1893-1903.

Cobbe (*kob*), **Frances Power,** British author, was born at Newbridge near Dublin, 1822, and went to school at Brighton. A strong theist, a supporter of women's rights, and a prominent anti-vivisectionist, she published more than thirty works. Died, 1904.

Cobbett (*kob'et*), **William,** British politician and miscellaneous writer, born at Farnham, Sussex, 1762; started the *Weekly Register;* at first tory, then radical; published a libel against the government, for which he was imprisoned; on his release issued his *Register* at a low price, to the immense increase of its circulation. His writings were numerous, and include his *Grammar, Cottage Economy,* and *Advice to Young Men.* Died, 1835.

Coburn, Foster Dwight, secretary of Kansas department of agriculture, was born in Jefferson county, Wis., 1846; served in the Civil war in the 135th and later in the 62d Illinois Infantry; removed to Kansas 1867 and became a farmer and stockman; secretary of Kansas department agriculture, 1882 and since 1894. Was editor of the *Kansas City Live Stock Indicator* nearly six years; has been a regent of the state agricultural college three times and president and vice president of its board of regents; chief of department of live stock, St. Louis exposition, 1904. Appointed United States senator from Kansas, June 4, 1906, but declined. Author: *Swine Husbandry; Alfalfa; The Book of Alfalfa; Swine in America;* and about thirty volumes on agriculture published by state of Kansas.

Cochrane (*kok'ran*), **Thomas** (tenth earl of Dundonald). See **Dundonald.**

Cockburn (*kō'burn*), **Sir Alexander,** British jurist, was born in 1802; in 1822 entered Trinity Hall, Cambridge; in 1829 was admitted to the bar, and soon became distinguished as a pleader before parliamentary committees; in 1851 attorney-general, in 1856 chief justice of the common pleas, in 1858 a baronet, and in 1859 lord chief justice. He died, 1880.

Cockburn, Sir George, 1772-1853; English naval officer whose operations against Martinique secured that island to Great Britain. His last noteworthy sea employment was to convey Napoleon to St. Helena.

Cockran, William Bourke, lawyer, orator; born in Ireland, 1854; educated in Ireland and France; came to the United States, 1871; member of congress, 1887-89, and 1891-95, as democrat. Was again elected to congress, February 23, 1904, at a special election to fill a vacancy caused by the resignation of George B. McClellan; reëlected, 1904 and 1906.

Coghlan, Rose, actress; born at Peterboro, England, 1853; went to London and traveled through the provinces in burlesque and comedy; leading lady with Wallack, 1880-89. Has starred since then in various companies in the United States and England.

Cohan, George M., comedian, playright; born at Providence, R. I., 1878; in vaudeville, in *The Four Cohans;* starred in *Little Johnny Jones,* 1904-06; *George Washington, Jr.,* 1906-07. Author: (plays) *The Wise Guy; The Governor's Son; Forty-five Minutes from Broadway; Popularity; The Talk of New York;* etc.

Cohen, Solomon Solis, physician; born in Philadelphia, 1857; graduate of Philadelphia Central high school, 1872, A. M., 1877; lecturer on clinical medicine, Jefferson medical college, 1888-1902; professor of clinical medicine, Jefferson medical college, since 1902. Author: *Therapeutics of Tuberculosis, Essentials of Diagnosis.*

Coke (*kōōk* or *kōk*), **Sir Edward,** English jurist and law writer, was born 1552; educated at Norwich grammar school and Cambridge; admitted to the bar in 1578; became solicitor-general in 1592, and attorney-general in 1594. He showed much harshness in his prosecution of Essex, Raleigh, and others; but his loyalty gained him the chief-justiceship of the common pleas, in 1606. The remainder of his life was spent in compiling his *Commentaries upon Littleton.* Died, 1634.

Colbert (*kōl'bâr'*), **Jean Baptiste,** a distinguished French statesman, minister of finance in the reign of Louis XIV.; was born at Rheims, France, 1619. To him the kingdom was indebted for the enlargement of its navy, for the acquisition of many of its foreign possessions, and for a large number of internal improvements. The gardens of the Tuilleries, the Hotel des Invalides and the facade of the Louvre were all the work of Colbert. Died 1683.

Colby, Frank Moore, editor and educator, born at Washington, 1865; graduated from Columbia, 1888, M. A., 1889; lecturer of history, Columbia, 1891-95; instructor of history and economics at Barnard College, 1891-95; professor of economics, New York University, 1895-1900; resigned to become editorial writer *Commercial Advertiser,* 1900-02. American editor *Nelson's Encyclopædia,* 1905-06.

Cole, Thomas, artist, was born at Bolton, England, 1801, and came to America in 1819, where he became one of the known landscape painters. In 1830 two of his pictures appeared in the Royal Academy, and he afterward made sketching tours through England, France, and Italy; but all his best landscapes were American. Died at Catskill, N. Y., 1848.

Cole, Timothy, wood engraver, was born at London, England, 1852, and came to the United States 1857; entered employment of *Scribner's Magazine* 1875. Received diploma, Chicago exposition 1893; first-class gold medal, Paris exposition, 1900; grand prix, St. Louis exposition, 1904. Honorary member society of sculptors, painters, and engravers, London.

Colebrooke (*kōl'brōōk* or *kōōl'brōōk*), **Henry Thomas,** British orientalist, was born in London 1765. He was a director of the Bengal Asiatic society, and made translations from the Sanskrit works on Hindu law, algebra, arithmetic and mensuration, which were important contributions to the history of mathematics. Died 1837.

Colenso (*kō-len'sō*), **John William,** English divine, was born 1814. In 1846 he was appointed rector of Forncett St. Mary, in the county of Norfolk, England, and 1854 first bishop of Natal, South Africa. Died 1883.

Coler, Bird Sim, politician, financier, ex-comptroller of New York, born at Champaign, Ill., 1867; educated at polytechnic institute and Andover academy. Entered his father's banking house as clerk and later became partner of the firm of W. N. Coler & Co. Democratic candidate for governor of New York, 1902. Author: *Municipal Government as illustrated by the Charter; Municipal Government and Tunnels and Bridges,* etc.

Coleridge (*kōl'rij*), **Hartley,** eldest son of Samuel Taylor Coleridge, born at Clevedon, near Bristol, 1796. In 1815 he was entered a scholar of Merton College, Oxford. He afterward attempted a private school at Ambleside, but failed. Near this little town he resided till he died, 1849.

Coleridge, Samuel Taylor, British poet, essayist and dramatist, was born at Bristol in 1772. He was sent to Christ's hospital, and subsequently studied at Cambridge, where, in 1792, he obtained the prize for the best Greek ode. His *Sibylline Leaves* and *Biographia Literaria* found many admirers, and several of his poems have been given very high praise, particularly the *Ancient Mariner.* Among his other works are: *Remorse, a Tragedy; Christabec, Aids to Reflection,* etc. Died, 1834.

Colfax (*kōl'faks*), **Schuyler,** American statesman, vice-president of the United States, was born in New York, 1823. Elected to Congress by the newly formed republican party, in 1854, he remained a member until 1869 and was three times speaker. He died 1885.

Coligny (*kō'lēn'-yē'* or *kōlēn'yē*), **Gaspard de Chatillon, Sire de,** French admiral and general of eminence, born at Chatillon-sur-Loing, 1517. Introduced at court, he served under Francis I. in Italy. Killed in the massacre of St. Bartholomew.

Collier (*kol'yēr*), **Jeremy,** English clergyman and controversialist, was born at Stow cum Quy, Cambridgeshire, 1650. In 1697 he published his *Short View of the Immortality of the English Stage* which fell like a thunderbolt among the wits. Consecrated bishop in 1713. Died, 1726.

Collier, Peter Fenelon, publisher, was born at Carlow, Ireland, 1849; educated at Mt. St. Mary's college, Cincinnati. Founder and publisher of *Collier's Weekly* and head of P. F. Collier & Son, publishers. Died, 1909.

Collingwood, Cuthbert, Lord, English admiral, was born at Newcastle-upon-Tyne, 1750. He entered the navy at eleven, and from 1778 his career was closely connected with that of Nelson, whom he followed up the ladder of promotion step by step. A peerage was his reward. He died at sea 1810, and was buried beside Nelson, in St. Paul's.

Collins, William, English artist, was born in Great Tichfield, street, London, 1787. He was elected R. A. in 1820. In 1836 he visited Italy, and remained there nearly two years, studying the great masters, and sketching monks and peasants and groups of bronzed children. Died at London 1847.

Collins, William Wilkie, English novelist, was born in London, 1824. He was educated at a private school. From 1848 he made literature his profession. His first novel was printed in 1850. Died 1889.

ollyer (*kol'yĕr*), **Robert,** Unitarian clergyman; born Keighly, Yorkshire, England, 1823; learned the blacksmith trade, which he followed after coming to the United States, 1850. Was Methodist local preacher, but became a Unitarian in 1859; became Unitarian missionary in Chicago; founded and was pastor Unity Church there 1860-89; subsequently pastor of the Church of the Messiah, New York. Died, 1912.

olonna (*kō-lōn'nä*), **Victoria,** the most celebrated poetess of Italy, was born in the year 1490. When four years old she was betrothed to a boy of the same age, Fernando d'Avalos, son of the Marchese de Pescara. At seventeen they were married. After her husband's death in the battle of Pavia, 1525, she found her chief consolation in solitude and in the cultivation of her poetical genius. Died in Rome, 1547.

olquhoun (*kō-hōōn'*), **Archibald Ross,** journalist, descriptive writer, born off cape of Good Hope, 1848, of Scotch parentage. Explored from Canton to Chamo to trace best route for connecting Burmah and China by railway, 1881-82; London correspondent Franco-Chinese war and whole far East, 1883-84; has traveled extensively, and been London *Times* correspondent in various parts of the world.

olt, Samuel, American inventor, born in Hartford, Conn., 1814. He early conceived the idea of revolving fire-arms, and in 1835, took out a patent for the weapon since known the world over as "Colt's revolver." In 1848 he established a company for the working out of his patent, and built at Hartford one of the most extensive armories in the world. Died, 1862.

olumbus, Christopher, the discoverer of the New World called America, was born in the neighborhood of Genoa, 1446, and went to sea at the age of fourteen. The Mediterranean was the chief scene of his early activity. The turning-point of his life came in 1470, when he was wrecked during a sea-fight with some Venetian galleys off the coast of Portugal. He settled at Lisbon, and during the next few years made many voyages to Madeira and the Azores, and in 1477 one to Iceland.

Gradually there grew up in his mind the conviction that it was possible to reach India by sailing westward. This idea seems to have taken shape as early as 1474. After making a vain appeal to the senate of his native state, Genoa, he turned to the king of Portugal, but without result; then to Henry VII. of England, and to the dukes of Medina Sidonia and Medina Celi, who advised him to appeal to Isabella of Castile. But it was not till after seven years of heart-breaking delays that Columbus's proposals were accepted by the Spanish monarchs.

On August 3, 1492, he set sail with one small ship, the *Santa Maria*, and two caravels, the *Pinta* and the *Nina*, the whole expedition including only 120 men. His real voyage of discovery began when he sailed westward from the Canary Islands on September 6. His men were not inspired by his hope, and throughout the voyage he had to plead with and cajole them to proceed—a variation of the magnetic needle having reduced them almost to a state of terror. On October 12 land was sighted—an island in the Bahamas, probably what is now known as Watling I., but named by Columbus San Salvador. He discovered Cuba and Haiti (which he called Hispaniola), and set sail for Europe in the two caravels, his ship having been wrecked. After a stormy voyage, in which the two caravels were separated, he cast anchor at Palos, March 15, 1493.

He set out again on September 25 with a much larger squadron, and reached Dominica, an island of the West Indies, on November 3. He returned from his second voyage in 1496, and set out on his third, which resulted in the discovery of the mainland of South America (1498), and from which he returned in irons by the authority of a newly-appointed royal governor. But the king and queen speedily restored Columbus to favor.

In 1502 he set out on his last voyage (1502-04), during which he explored the south shore of the Gulf of Mexico. After his return to Spain, he died at Valladolid May 20, 1506. There he was buried, but his bones were removed first to Seville, then to Santo Domingo, in Hispaniola, and, although this is disputed by Santo Domingo, to the cathedral in Havana (1796), and again, after the Spanish-American war of 1898-9, back to Seville.

References.—*Lives of Columbus* by Irving, Phelps, and Winsor's *Narrative and Critical Hist. of America.* The great critical study of Columbus' life and family is by Harrisse. The standard English edition of his *Letters* is Major's translation. See also the *Letters* ed. by Ford. Among the best of the shorter biographies are those of Markham and Adams.

Columella, Lucius Junius Moderatus, the most learned of Roman writers on practical agriculture, born at Cadiz in Spain, and flourished in the earlier part of the first century of the Christian era.

Combe (*kōōm* or *kōm*), **George,** British phrenologist and moral philosopher, born in Edinburg, 1788. Investigation convinced him that phrenology was based on fact. The result was his *Essays on Phrenology*, 1819. Died, 1858.

Comenius (*kō-mā'nē-oos* or *kō-mē'ni-us*), or **Komenski, John Amos,** educational reformer, was born in 1592, in Moravia. He studied at Herborn and then at Heidelberg, became rector of the Moravian school of Prerau, 1614-16. Settling at Lissa in Poland, 1628, he here worked out his new theory of education, wrote his *Didactica Magna*, and was chosen bishop of the Moravian brethren in 1632. Finally, he settled in Amsterdam, and died at Naarden, 1671.

Commons, John Rogers, educator, economist; born in Drake county, Ohio, 1862; graduated from Oberlin, 1888, A. M., 1890; student Johns Hopkins, 1888-90. Professor of political economy, University of Wisconsin since 1904. Author: *The Distribution of Wealth*; *Social Reform and the Church*, etc.

Comnena, Anna. See **Anna Comnena.**

Comstock (*kum'stok*), **Anthony,** moral reformer, secretary and special agent of New York society for suppression of vice since 1872; born in New Canaan, Conn., 1844. His brother Samuel having been killed at Gettysburg, he volunteered to fill his place in regiment, enlisting in the 17th Connecticut volunteer infantry, December, 1863; mustered out, July, 1865. Appointed, March 3, 1873, and since then, post-office inspector of New York.

Comstock, John Henry, scientist, professor of entomology Cornell since 1881; born at Janesville, Wis., 1849; graduated, B. S., Cornell, 1874; has ever since been instructor and professor there, except 1879-81, when he was United States entomologist at Washington.

Comte (*kôNt*), **Auguste,** French philosopher, founder of the "positive philosophy," born at Montpelier, France, 1798. He studied at Paris, and attracted the attention of his companions by the boldness and novelty of his speculations. In 1832 was appointed professor of mathematics at the Ecolé Polytechnique, which situation he was forced to resign in 1852, on account of differences with his colleagues. Died, 1857.

Conant (*kō'nant*), **Charles Arthur,** author, banker born at Winchester, Mass., 1861; Washington correspondent of *New York Journal of Commerce*, 1889-1901; special commissioner of war department in Philippines, 1901; member of commission on international exchanges of United States, 1903; Treasurer of Morton trust company, 1902-06. Author: *A History of Modern Banks of Issue*; *The United States in the Orient*, etc.

Conaty (*kon'ä-ti*), **Rt. Rev. Thomas James,** Roman Catholic prelate, bishop of Los Angeles; born in Ireland, 1847; educated at Montreal college, 1863-67; Montreal theological school, 1872; ordained priest, 1872; J. C. D., D. D., selected by American Catholic bishops, trustees of university, to succeed Bishop Keane as rector Catholic university, Washington, 1896, and appointed to position by Pope Leo XIII., who also conferred upon him, 1897, the title of domestic prelate and nominated him titular bishop of Samos, 1901; appointed to see of Monterey and Los Angeles, Calif., 1903.

Condè (*koN'-dā'*), **Prince de, Louis I. de Bourbon,** younger brother of Antony of Bourbon, king of Navarre, was born 1530. During the wars between Henry II. and Spain, he distinguished himself at the siege of Metz, the battle of St. Quentin, and the capture of Calais from the English. In the second Huguenot war, 1567-69, Condè had coins struck with the inscription: "Louis XIII., first Christian king of France"; but at Jarnac, 1569, he was defeated, taken prisoner, and shot.

Condè, Prince de, Louis II. of Bourbon, commonly termed "the great Condè," was born 1621. By the death of his father, 1646, he became head of his family, and, next to the duke of Orleans, the highest personage in the state. The war having been renewed by Spain, 1673, he again commanded the French in the Netherlands, and soon after retired to Chantilly, where he enjoyed the society of such men as Molière, Boileau, and La Bruyère. Died, 1686.

Condillac (*koN'dē-yäk*), **Etienne Bonnot de Mably de,** French philosopher, the founder of sensationalism, was born of a noble family at Grenoble, 1715. He was chosen a member of the French academy of sciences in 1768. He died on his estate of Flux, near Beaugency, in 1780. He based all knowledge on the senses.

Condorcet (*koN'dor'sē'*), **Jean Marie Antoine Nicholas Caritat, Marquis de,** French philosopher and mathematician, was born in 1743. He first gained celebrity by his successful labors as a mathematician. His treatise on integral calculus written when he was but twenty-two years of age, was eminently successful. He was outlawed in 1793, and shortly after was taken prisoner, when he poisoned himself, in 1794.

Confucius, the Latinized name of the Chinese philosopher Kung-fu-tse (Reverend Master Kung), was born (according to the best Chinese authorities) in 551 B. C., in the kingdom of Loo, now part of the province of Shatung, died 479. He set himself up as a teacher at the age of 30. His fame soon spread, and in order to propagate his doctrines he visited neighboring countries, preaching and teaching, and returning about 506. He left a grandson, Tse-tse, and in A. D. 1671 there were 11,000 male descendants bearing the name of the philosopher most of them of the 74th generation. These descendants constitute a distinct class in Chinese society.

No founder of any religion can boast of success greater than that of Confucius; but he was not the originator of a religious creed. While striving to introduce a ritual more minute than that of Moses, he rejected divine revelation, and erected a structure of moral philosophy founded upon the wants and tendencies of human nature. The books containing his doctrines, partly written by himself, partly by his disciples, bear almost the same relation to the Chinese world as the Bible does to the Christian. Confucius also collected the poems, folk-lore, annals, songs, and rites then in vogue in various parts of the empire. Editing and pruning these, he produced what are still known as the "classics"—*i. e.*, the *Book of History* (or Tradition), the *Book of Odes*, the *Book of Changes* (or Oracles), the *Book of Rites*, and so on.

References.—*Life and Labors of Confucius*, by E. H. Parker. Various works of Confucius are translated into English by Legge in *Sacred Books of the East;* compare also his *Chinese Classics.*

Congreve (*kong'grēv*), **William,** English dramatist, was born near Leeds, 1670. His first piece, written at the age of seventeen, was a romance entitled *Incognito, or Love and Duty Reconciled.* In 1693 he wrote his first comedy, *The Old Bachelor.* This brought him not only great reputation, but also the substantial benefit of a commissionership in the hackney-coach office. Died, 1729.

Conkling, (*kongk'ling*), **Roscoe,** American politician was born at Albany, N. Y., 1829. In 1846 he removed to Utica, N. Y., where he became district attorney, and was mayor in 1858. In the latter year he was elected to congress, and in 1879 became a member of the United States senate. In 1881 he resigned his seat in the senate owing to Garfield's assumption of the control over appointments in his native state. Died at New York, 1888.

Conn, Herbert William, biologist, was born at Fitchburg, Mass., 1859; graduated from Boston University, 1881; Ph. D., Johns Hopkins, 1884; instructor biology, 1884-6, assistant professor, 1886-8, professor since 1889, Wesleyan University. Director Cold Spring Harbor biology laboratory, 1889-97; bacteriologist, Storrs experiment station, since 1890; director laboratory of Conneticut state board of health since 1905; lecturer, Trinity College, 1887-9. Specialist on the bacteriology of dairy products. Author: *Evolution of To-Day; The Living World; The Story of Germ Life; The Story of the Living Machine; The Method of Evolution; Agricultural Bacteriology Bacteria; in Milk and Its Products; An Elementary Physiology and Hygiene for Use in Schools;* and over one-hundred scientific memoirs.

"Connor, Ralph." See **Gordon, Charles W.**

Conrad I. (*kon'rad*), was chosen king of Germany in 911, and was the first of the elected rulers of Germany. His short reign was spent in putting down his nobles, who were always rebelling against him. Conrad died, 918.

Conrad II., king of Germany and Roman emperor, was the son of Henry, duke of Franconia, and succeeded Henry II., the last of the Saxon emperors, in 1024. Conrad died at Utrecht, 1039, and was succeeded by his son Henry III.

Conrad III., the first Hohenstaufen king of the Germans, was born 1093, son of Frederick of Swabia. While under twenty, he had bravely supported Henry V., who in return granted him the duchy of Franconia. He unsuccessfully contested the crown of Italy with the emperor Lothair of Saxony. When St. Bernard of Clairvaux preached a crusade, Conrad set out for Palestine with a large army, 1147. An attempt by the duke of Bavaria to regain his dukedom was defeated by the nephew of Conrad, whose health had broken during the crusade, and who died at Bamberg, 1152.

Conscience (*kôn'syäns'*), **Hendrik,** Flemish novelist, was born at Antwerp, 1812, and died at Brussels, 1883. His *Phantazy*, a fine collection of

tales, and his most popular romance, *De Leeuw van Vlaenderen*, early made his name known.

Considèrant (*kôn'sē'dā'rän'*), **Victor-Prosper,** French socialist, was born at Salins, France, 1808; he entered the army, which, however, he soon left to promulgate Fourier's doctrines. On the death of his master, Considerant became head of his school, and edited the *Phalange*. In 1849 he was accused of high treason, and fled from France. In Texas he founded a community, *La Réunion*, which flourished for a time. He returned to France in 1869, and died 1893.

Constable (*kun'stä-b'l*), **John,** landscape painter, born in East Bergholt, Suffolk, England, 1776, died suddenly 1837. The national gallery has his best pictures, *The Cornfield*, *The Valley Farm*, and *The Haywain*.

Constans (*kon'-stanz*), **Flavius Julius,** emperor of Rome, was born about A. D. 320. He was the youngest son of Constantine the Great, on whose death, 337, he received as his share of the empire, Western Illyricum, Italy, and Africa. He was a weak and cruel ruler, and at last Magnentius, his general in Gaul, sent some conspirators to kill him A. D. 350.

Constant de Rebecque (*kôn'stän' dē rē-bek'*), **Henry Benjamin,** author and politician, was born at Lausanne, Switzerland, 1767. Educated at Oxford, Erlangen, and Edinburgh, he in 1795 settled in Paris as a publicist and after the second restoration of the Bourbons wrote and spoke in favor of constitutional freedom. He died 1830.

Constantine I. (*kon'stan-tīn*), called the Great; born in 272, at Moesia. On the death of his father at York, where he accompanied him, Constantine was proclaimed emperor by the troops; he was acknowledged emperor by the senate in 312, and thereafter an edict was issued named of Milan, granting toleration to the Christians. He had still to extend his empire over the East, and having done so by the removal of Licinius, he transferred the seat of his empire to Byzantium, which was thereafter called Constantinople, i. e., Constantine's city. Constantine was baptized in 337 as a Christian, after having three years before proclaimed Christianity the state religion. Died 337.

Constantine XIII., Palaeologus, the last emperor of the East, born in 1394. The Turkish sultan, Mohammed II., determined to take Constantinople and laid siege to it with a great army, 1453. Constantine, who had only about 9,000 soldiers, resisted bravely for nearly two months, but at last the Turks battered down part of the walls and the emperor and his little band of nobles were all slain.

Constantius I., called Chlorus, a Roman emperor, father of Constantine the Great, born about A. D. 250 He died at York, England, 306.

Constantius II., a Roman emperor, second son of Constantine the Great, born 317. His cousin Julian won so many victories that the army proclaimed him emperor, and Constantius marched against him, but died on the way, 361. He was succeeded by Julian.

Conway, Sir William Martin, English traveler, art critic, and geographer, born at Rochester, England, 1856; was educated at Trinity College, Cambridge. University extension lecturer, 1882-85; professor of art, University College, Liverpool, 1885-88; president of the Alpine club, 1902-04. Author: *Woodcutters of the Netherlands in the fifteenth century*; *Early Flemish Artists*; *Literary Remains of Albrecht Dürer*; *No Man's Land* (history of Spitsbergen); etc.

Conwell, Russell Herman, lecturer, educator, Baptist clergyman; born at Worthington, Mass.,1842; captain of infantry 1862-65, in Union army; promoted to lieutenant-colonel, 1865; foreign correspondent *New York Tribune* and *Boston Traveler*, 1868-70, now president of Temple College.

Cook, Albert Stanburrough, educator; born at Montville N. J. 1853; graduated at Rutgers college, 1872; M. S., M. A., L. H. D., LL. D., associate in English, Johns Hopkins, 1879-81; professor of English, university of California, 1882-89; professor of English language and literature, Yale, since 1889. Co-editor of *Journal of English and Germanic Philology*, 1897-1905.

Cook, Captain James, a celebrated English navigator, best known through his *Voyages Round the World*; born in Marton, in North Riding, Yorkshire, 1728. After his death, at Hawaii, one of the Sandwich islands, 1779, many honors were paid to his memory, both in his own and in foreign countries.

Cooke, Josiah Parsons, American chemist, was born at Boston, Mass., 1827, and was professor of chemistry at Harvard from 1850. His chief works are *Elements of Chemical Physics*, *Principles of Chemical Philosophy*, *The New Chemistry*, *etc.* Died at Newport, R. I., 1894.

Cooke, Sir William Fothergill, British electrician, born at Ealing, England, 1806; was educated at Durham and Edinburgh. In 1867 Cooke received the Albert gold medal; Cooke was knighted in 1869. He died 1879.

Cooley, Thomas McIntyre, American jurist, was born at Attica, N. Y.,1624, was admitted to the bar 1846, and became professor of law at the university of Michigan, 1859; was associate justice Michigan supreme court 1864-68, and chief-justice 1868-85. He died 1898.

Coolidge, Archibald Cary, instructor in history, Harvard, 1893-99, professor since 1904, born at Boston, 1866; graduated from Harvard university, 1887 With Taft party to Philippine islands, 1905-06; Harvard lecturer at the Sorbonne and other French universities, 1906-07. Has contributed to *American Historical Review*, the New York *Nation*, etc.

Coolidge, Thomas Jefferson, manufacturer, diplomat; born at Boston, 1831; educated at Harvard; LL. D., Harvard, 1902. Embarked in business in firm of Gardner & Coolidge, East India merchants; largely interested in cotton mills; formerly president of Atchison, Topeka and Santa Fe railroad; United States minister to France, 1892-93.

Cooper, Anthony Ashley. See **Shaftesbury.**

Cooper, James Fenimore, famous American novelist, was born in Burlington, N. J., 1789. After six years' experience of naval life, he retired from the sea in 1810, and took up his residence at Cooperstown, Otsego county, N. Y. In 1821 appeared his first work, *Precaution*. In quick succession followed *The Spy*, a tale which at once secured for him a place in the first rank of novelists; his sea stories, his famous "Leather Stocking series" of Indian life and adventure. After passing some years in Europe, died at Cooperstown, in 1851.

Cooper, John Montgomery, priest, educator, was born in Rockville, Md., 1881. He studied at the American College, Rome, Italy, 1899-1905; Ph. D., St. Thomas' Academy; S. T. D., Propaganda, Rome. He was ordained Roman Catholic priest, and has been instructor in Christian religion, Catholic University of America, Washington, D. C., since 1909.

Cooper, Peter, American inventor, manufacturer, and philanthropist, was born in New York, 1791. His first invention was an improvement in a machine for shearing cloth. In 1830 he erected iron works in Canton, near Baltimore, and here constructed after his own designs the first locomotive engine ever made in this country. But the work of his life was the founding of an institution for instruction of the industrial classes—the Cooper Union, New York, whose corner stone he laid in 1854. In 1876 the independent party nominated him for president of the United States, and he received nearly 100,000 votes. Died, 1883.

Cooper, Sir Astley Paston, a celebrated English surgeon, was born in Brooke, Norfolk, 1768; studied under Henry Cline, surgeon to St. Thomas' hospital, London, and was appointed demonstrator of anatomy there, 1789. In 1822 he was elected one of the court of examiners of the college of surgeons, and in 1827, president. He was a D. C. L. of Oxford, and an LL. D. of Edinburgh. He died 1841.

Cope (*kōp*), **Edward Drinker,** American naturalist, born in Philadelphia, 1840. He early achieved success as an investigator in herpetology, and in 1864 was appointed professor of natural science in Haverford college, but resigned because of poor health, 1867. He died at Philadelphia, 1897.

Copernicus or **Koppernik, Nicholas,** astronomer, born at Thorn, then in Poland, 1473, his family being supposed to have come originally from Westphalia. Having studied medicine and theology at Cracow, and law at Bologna, he was made a canon of Frauenburg in 1497. In 1500 he went to Rome, where he taught mathematics and astronomy. He studied medicine at Padua, and in 1505 finally left Italy for Prussia to carry out the work of his life.

Doubting that the motions of the heavenly bodies could be so confused and so complicated as the Ptolemaic system made them, he was induced to consider the simpler hypothesis that the sun was the centre round which earth and the other planets revolve. Besides this fundamental truth Copernicus anticipated many other of the principal facts of astronomical science, such as the motion of the earth round its axis, the immense distance of the stars which made their apparent position the same from any part of the earth's orbit, etc. His general theory also enabled him to explain for the first time many of the important phenomena of nature, such as the variations of the seasons and the precession of the equinoxes.

The great work in which Copernicus explained his theory, *De Orbium coelestium Revolutionibus* (On the Revolutions of the Celestial orbs), was completed in 1530, and published at Nuremberg in 1543. He died at Frauenburg, 1543.

References.—*Life and Works of Copernicus*, by Leopold Prowe; *Popular History of Astronomy*, by A. M. Clarke; and *Lives* of the astronomer by Gassendi, Von Hipler, and Polkowski.

Copley (*kop'li*), **John Singleton,** American painter, was born at Boston, Mass., 1737. Washington sat to him in 1755, and later, in London, he painted George III. and his queen. Here, also he became the friend of such men as West and Reynolds. He died at London, 1815.

Coppée (*kō'pā'*), **François,** French poet, was born in Paris, 1842. For three years a war-office clerk, he early gave himself to poetry, and with *Le Reliquaire* and *Les Intimites*, gained the front rank of the "Parnassiens." Dramatic critic for some years to *La Patrie*, Coppée entered the academy in 1884.

Coquelin (*kōk'lan'*), **Benoit Constant,** French actor, born at Boulogne, 1841, was admitted to the conservatory in 1859, and having gained the second prize for comedy, made his début at the Theatre Francais, 1860. For a quarter of a century he played here with unbroken success, both in classical pieces and in rôles created by himself, in the broader aspects of comedy standing without a rival. Died 1909.

Corbin, John, novelist, dramatic critic, born at Chicago, 1870 graduated at Harvard, 1892, A. M., 1893; Balliol college, Oxford, 1894-95 dramatic critic, *New York Times*, 1902; dramatic critic, *New York Sun*, 1905-07; literary manager New theater, New York, 1908. Author: *An American at Oxford*; *A New Portrait of Shakespeare*.

Corday d'Armans (*kōr'de'dar'män'*, or *mōn'*), **Charlotte, Marie,** French heroine, was born in 1768, at St. Saturnin, Normandy, of a noble Norman family; sympathized with the ideas of the French revolution; visited Paris in July, 1793, with the purpose of assassinating Marat and Robespierre; she interviewed the former while in his bath, and stabbed him with a knife; was immediately apprehended and executed four days afterward.

Correlli (*kō-rel'i*), **Marie,** English novelist; of mingled Italian and Scotch parentage and connections; sent to France and educated in a convent Her first book, *A Romance of Two Worlds*, was an instant success, and from that time she has devoted herself entirely to literature. She persuaded Edward Morris, of Chicago, to purchase Harvard House, Stratford-on-Avon and to present it to Harvard University, to which it now belongs.

Corey, William Ellis, capitalist, steel manufacturer was born in Pennsylvania, 1866. At sixteen entered chemical laboratory of Edgar Thomson steel works invented Carnegie reforged armor. Succeeded Charles M. Schwab, and has been president of Carnegie steel company, National steel company, and American steel hoop company; president of United States steel corporation until 1911

Corneille (*kōr'nāl'*), **Pierre,** creator of French tragedy, born 1606, at Rouen. He studied for the legal profession, but a love adventure, in which he became the rival of a friend, first prompted him to write verses. In 1635 appeared his *Médée* a declamatory drama, written in imitation of Seneca. Cardinal Richelieu, who aspired to be patron of the stage, wished to number Corneille among his retainers; but Corneille was so audacious as to alter the plan of a comedy, and thus lost the cardinal's favor. He now returned to his native place, where M. Chalon, suggested that he should turn his attention to tragedy. The result was *The Cid*, 1636, which was received with enthusiastic applause. He died 1684.

Cornelia (*kor-nē'li-à*), the daughter of Scipio Africanus, was the wife of Tiberius Sempronius Gracchus, who was consul, 177 B. C.

Cornelius, von (*fōn kōr-nā'lē-oos*), **Peter,** German painter, was born at Düsselldorf 1787, and studied under Langer in the academy of his native town His chief works are frescoes in the Glyptothek and Ludwigskirche, in Münich. Died, 1867.

Cornell, Ezra, American philanthropist, was born 1807, at Westchester Landing, N. Y., died 1874 at Ithaca, N. Y. He began life as a mechanic and miller at Ithaca, N. Y. In 1865 he founded Cornell University at Ithaca, with an endowment of $500,000 to which he subsequently added nearly $400,000. He also established the Cornell library at Ithaca, at a cost of $100,000.

Corning, James Leonard, physician; born at Stamford, Conn., 1855; educated at Heidelberg and Würzburg, M. D., LL. D. Specially distinguished as neurologist; discoverer of spinal anæsthesia, 1885; Member of many medical and scientific societies. Author: *Carotid Compression*; *Brain Rest*; *Brain Exhaustion*; *Local Anæsthesia*, etc.

Cornwall, Barry, See **Proctor.**

Cornwallis, Charles, Marquis, English statesman and general, was born 1738. He entered the British army 1756; entered the house of commons 1760, and the house of lords 1763. In 1780 he defeated General Gates at Camden, won the battle of Guilford court house, 1781, and surrendered to Washington at Yorktown, October 19, 1781. Appointed, in 1805, governor-general of India, second time. He died 1805 at Ghazipur, in the province of Benares, while on his way to assume the command of the troops.

Corot (*kō'rō'*), **Jean Baptiste Camille,** French painter, pupil of Michallon and Bertin, and founder of the impressionist school; was born in Paris, 1796. As a landscape painter he ranks among the first in the world. He died at Paris 1875.

Correggio (*kōr-red'jō*), **Antonio Allegri,** celebrated Italian painter, called Correggio from the place of his birth, a small town near Modena, now called Reggio; was born 1493. He was the founder, or rather his imitators for him, of what is called by some the Lombard, by others the Parma school of painting. Died, 1534.

Corson, Hiram, professor of English literature, Cornell, 1870-1903, professor emeritus after 1903; born at Philadelphia, 1828; LL. D., Litt. D. Author and editor of many books on English language, literature, and criticism, including: *Hand-book of Anglo Saxon and Early English; The Claims of Literary Culture; An Introduction to the Works of John Milton:* etc. Died, 1911.

Cortelyou, George Bruce, public official, financier, was born in the city of New York, 1862; law schools of the Georgetown and Columbian (George Washington) Universities LL. D. In 1895, was appointed stenographer to President Cleveland; 1896, executive clerk; 1898, assistant secretary to President McKinley; 1900, secretary to the president, and 1901, reappointed by President Roosevelt; was appointed secretary of the newly established department of commerce and labor, 1903. He entered the new cabinet, 1905, as postmaster-general, and 1907 was appointed secretary of the treasury. In 1909 he became president of the New York gas company.

Cortes, or **Cortez** (*kôr'tez*), **Fernando,** a Spanish adventurer; born in Medellin in Estremadura in 1485; he went early in the sixteenth century with Valasquez, to Cuba, and subsequently obtained the command of the expedition sent against Mexico. He advanced to Mexico, where he was at first received with friendly demonstrations; but on his seizing Montezuma, the Mexican king, whom he subsequently put to death by fire, a struggle ensued, in which many thousands of lives were lost. He eventually succeeded in putting down all opposition, and in overrunning Mexico. He was rewarded with the title of marquis, and a grant of land; but subsequently, on his return to Spain, he found himself very much neglected. He died near Seville, in 1547.

Corvinus, Matthias. See **Matthias Corvinus.**

Corwin, Thomas, lawyer and orator, was born in Bourbon county, Kentucky, 1794; removed to Ohio in early youth; was admitted to the bar 1818; was elected a member of congress in 1830, in 1840 governor of Ohio; elected to the senate of the United States in 1845, and appointed secretary of the treasury by President Fillmore in 1850. Died in Washington, D. C., 1865.

Coues (*kouz*), **Elliott,** American ornithologist, was born at Portsmouth, N. H., 1842, and graduated at Columbian University, 1861; M. D., Columbian. His chief works are: *Key to North American Birds Field Ornithology, Dictionary of North American Birds,* etc. Died 1899.

Coulanges (*kōō'tänzh'*), **Fustel de.** See **Fustel de Coulanges.**

Coulter (*kōl'tĕr*), **John Merle,** botanist, head professor of botany, University of Chicago, since 1896; born at Ningpo, China, 1851; graduated at Hanover College, Indiana, 1870; Ph. D., University of Indiana; president of Lake Forest University, 1893-96. Author: *Manual of Rocky Mountain Botany; Manual of Texan Botany; Morphology of Angiosperms;* etc.

Courbet (*kōōr'be'*), **Gustave,** French painter, was born at Ornans, Franche-Comte, 1819. In 1839 he was sent by his father to study law in Paris, but the bent of his nature was toward art. In 1841 he took to landscape work, painting in the forest of Fontainebleau. In 1844 he began to exhibit at the salon; and his works created a great sensation in 1850; he retired to Tour-de-Pelitz, near Vevay, in Switzerland, where he died 1877.

Cousin (*kōō'zan'*), **Victor,** French philosopher, was born in Paris, 1792; died at Cannes, 1867. After a literary career extending over many years, he was made, in 1830, under the ministry of M. Guizot, a member of the council of public instruction in France. He published a translation of *Plato,* in thirteen volumes, and a *Course of the History of Philosophy,* in five volumes, which was his largest original work. His last years were spent in retirement in the Sorbonne.

Couture (*kōō'tür'*), **Thomas,** French painter, pupil of Delaroche, was born in 1815. His chief work is *Les Romains de la Decadence.* Died near Paris, 1879.

Coverdale, (*kuv'ĕr-dāl*), **Miles,** translator of the English Bible, was born in Yorkshire, 1488; died in London, 1569. He was a monk of Norwich, but early devoted himself to the work of the reformation. The *Psalms* of Coverdale and Tyndale's translation are still used in the services of the church of England.

Cowley, Abraham, in his own day considered the greatest of English poets, was born in London, 1618. From Westminster school he proceeded in 1637 to Trinity College, Cambridge, and while here wrote, among many other pieces, a large portion of his epic, the *Davideis,* its hero King David. On Cromwell's death he went to Paris, and returned to England at the restoration. He died at Chertsey, 1667, and was buried in Westminster abbey.

Cowper, William, English poet, was born, 1731, died 1800. He was admitted to the bar in 1754, but did not practice. He passed many years at Olney, Buckinghamshire, in the society of Mrs. Unwin, Lady Austen, and the Rev. John Newton, engaged in religious exercises and charities. Lady Austen turned his attention to poetry, and after contributing sixty-eight pieces to the *Olney Hymns,* he published in 1782 his first volume. The ballad of *John Gilpin* gave him a wide renown. In 1799 he revised his *Homer,* and wrote his last poem, *The Castaway.*

Cox, David, noted landscape painter, was born at Deritend, a suburb of Birmingham, England, 1783. He studied in London with John Varley. From 1827 till 1841 London was his headquarters, but in 1841 settled at Harborne, near Birmingham, where he died, 1859.

Cox, Sir George William, English writer, mythologist, was born 1827, educated at Rugby school and Trinity College, Oxford. In 1877 he succeeded to his uncle's baronetcy. Among his works are *Tales of Ancient Greece; Aryan Mythology; History of Greece;* etc. Died 1902.

Cox, Kenyon, painter; born in Warren, Ohio, 1856; studied in Cincinnati and Philadelphia; in Paris under Carolus Duran and Gerome, 1877-82; returned to New York. Has contributed to leading magazines on art subjects. Author: *Mixed Beasts, Old Masters and New.*

Cox, Palmer, artist; born in Granby, Quebec, Canada, 1840; graduate of Granby Academy; lived in San Francisco, 1863-75. His specialty is original humorous pictures illustrating his own books. Author: *The Brownies at Home; The Brownies Around the World.*

Cox, Samuel Sullivan, American politician and diplomat, was born in Ohio in 1824, and died in New York, 1889. Graduate of Brown University; 1856-62 represented an Ohio district in congress. In 1866 he moved to New York, and was returned to congress almost continuously from 1868, except while he was minister to Turkey, 1885-86. The present arrangements for taking the national census were largely of his conception, and the life-saving service, which is one of the most efficient branches of the government service, is almost entirely his creation.

Coxe (*koks*), **Arthur Cleveland,** American Episcopal bishop, was born at Mendham, N. J., 1818; and died 1896. He graduated at the University of New York in 1838, and became well known as a churchman and a writer. He became the rector of Grace church in New York city in 1859, and bishop of western New York in 1865.

Crabbe (*krab*), **George,** English poet, born 1754, died 1832. He was a surgeon, but abandoned his profession for literary adventure, and went to London in 1780. He was ordained a priest in 1782, and became chaplain to the duke of Rutland at Belvoir castle. In 1783 he published *The Village,* and in 1807 *The Parish Register,* his best works.

Craddock, Charles Egbert. See **Murfree, Mary Noailles.**

Craigie (*krāg'i*), **Mrs. Pearl Mary Theresa.** See **Hobbes, John Oliver.**

Craik (*krāk*), **Mrs. Dinah Maria.** See **Mulock.**

Craik, George Lillie, Scottish writer and educator, born at Kennoway, Fife, 1798; studied for the church at St. Andrews, but settled in London in 1826. In 1849 he became professor of history and English literature in Queen's College, Belfast. Died at Belfast, 1866.

Cranach (*krä'näk*), **Lucas,** German painter, was born near Bamberg, Germany, 1472. In 1520 he bought an apothecary's business at Wittenberg, where he was also a book-seller and paper-maker, became councilor and chamberlain, and was twice chosen burgomaster of the town. He was an intimate friend of Luther, whose picture he several times painted. Cranach died at Weimar, 1553.

Cranch (*kränch*), **Christopher Pearse,** American painter, was born at Alexandria, Va., 1813; studied in France and Italy in 1846-63; returned to New York and became a member of the national Academy in 1864. Died 1892.

Crane, Walter, English painter, decorator, designer, book-illustrator, writer, lecturer, socialist, born at Liverpool, 1845. Apprenticed to W. J. Linton; first illustrated book, *The New Forest,* 1863; principal of the Royal College of Art, South Kensington, 1898-99; awarded Albert gold medal, society of arts, 1904. Publications: *Baby's Opera; Baby's Bouquet; Mrs. Mundi; Pan-Pipes;* illustrations to Shakespeare's *Tempest, Two Gentlemen of Verona, Merry Wives of Windsor; Decorative Illustration of Books;* Spencer's *Faerie Queen;* etc.

Crane, William H., actor; born at Leicester, Mass., 1845 début Utica, N. Y., 1863; appeared with Stuart Robson, Park theater, New York, in *Our Boarding House,* 1877, followed by numerous successes, including the two Dromios in Shakespeare's *Comedy of Errors,* ending with *The Henrietta.*

Crane, Winthrop Murray, manufacturer, United States senator, was born at Dalton, Mass., 1853; A. M., Williams, 1897. Lieutenant-governor of Massachusetts, 1897-99; governor of Massachusetts 1900-02; United States senator from Massachusetts, appointed by governor, 1904; elected, 1905, to fill term expiring 1907, and reëlected that year for the term 1907-13.

Cranmer, Thomas, archbishop of Canterbury, was born 1489, and educated at Cambridge University. He obtained the favor of Henry VIII. by furthering his divorce from Catharine of Aragon, and was appointed primate in 1533. He favored the reformed doctrines during the reign of Henry VIII., and in that of Edward VI. Protestantism was thoroughly established, and the *Book of Common Prayer* compiled, 1549, under his guidance. He was committed to the Tower on the accession of Mary, condemned at Oxford for heresy in 1554, and, after two years' imprisonment, burned there, openly rejecting the recantation of Protestantism which he had been induced to sign. Died, 1556.

Crassus (*kras'us*), **Lucius Licinius,** Roman orator and statesman, was born 140 B. C. He was consul in 95, and censor in 92 B. C. Died 91 B. C.

Crassus, Marcus Licinius, Roman general and statesman, was born about 105 B. C. Plutarch estimates the wealth of Crassus at more than 7,000 talents, and Pliny states that the lands of Crassus were worth 8,000 talents. About 60 B. C. Cæsar, Pompey, and Crassus became members of the first triumvirate. Killed 53 B. C.

Crawford, Francis Marion, American novelist, was born at Bagni di Lucca, Italy, 1854. From 1881 to 1883 he was in America, and subsequently resided at Sorrento, Italy. He published over forty novels, including *Mr. Isaacs; An American Politician; Zoroaster; Sarinesca; With the Immortals; The Rulers of the South* (hist.); *Marietta, a Maid of Venice; Cecilia, a Story of Modern Rome; The Heart of Rome; A Lady of Rome;* and the play, *Fransesca da Rimini,* produced by Sarah Bernhardt in Paris, 1902. Died 1909.

Crawford, Thomas, American sculptor, was born in New York in 1814. His principal works are the bronze statue of Beethoven, executed for the Boston music hall the colossal equestrian statue of Washington at the capitol, Richmond, and the marble and bronze statuary for the capitol, Washington. Died in London in 1857.

Crawford, William Harris, American statesman, born in Virginia, 1772. In 1783 he settled in Columbia county, Georgia, was admitted to the bar 1798, and began his practice in Lexington. He was elected to the state senate in 1802, and to the United States senate to fill a vacancy in 1807, reëlected for a full term 1811, and was chosen president of the senate pro tem. 1812. He received the nomination for president, 1824, and in the election had forty-one electoral votes. He died in 1834.

Creasy (*krē'si*), **Sir Edward Shepherd,** English historian, born at Bexley, Kent, in 1812; from Eton passed to King's College, Cambridge, and in 1834 was elected a fellow; in 1840 was appointed professor of history at London University, in 1860 chief-justice of Ceylon, and knighted; died at Hampton Wick, 1878. He was author of *The Fifteen Decisive Battles of the World, Invasions of England, History of the Ottoman Turks,* etc.

Creel, Enrique C., Mexican diplomatist and statesman, was born at Chihuahua, Mexico, 1854; member of Mexican national congress, 1898-1904; speaker of house, 1892; governor of state of Chihuahua, 1903-06; ambassador extraordinary and minister plenipotentiary of Mexico to United States, 1906-09.

Creelman, James, author, journalist; associate editor of *Pearson's Magazine,* was born at Montreal, 1859. Editorial writer and correspondent *New York Herald,* 1877-89; was aide on General Lawton's staff, Philippines, captured Spanish flag, and was shot after he received surrender of Spanish commandant at El Caney, 1898. Author: *On the Great Highway, Eagle Blood,* etc.

Creighton (*krī'tun*), **James Edwin,** educator, professor of logic and metaphysics, Cornell, since 1895, was born at Pictou, Nova Scotia, 1861; Ph. D., Cornell, 1892; LL. D., Queen's University. Editor of *Philosophical Review;* American editor of *Kant Studien.* Author: *An Introductory Logic.*

Creighton, Mandell, English historian, born at Carlisle, 1843; graduated at Merton College, Oxford, and was elected a fellow in 1866. He became vicar of Embleton, Northumberland, in 1875, first professor of ecclesiastical history at Cambridge in 1884, bishop of Peterborough in 1891, and of London, 1896. Died 1901.

Crillon (*krē'yôn'*), **Louis des Balbes de Berton de,** French soldier, surnamed "le brave," was born at Murs in Provence, 1541. Wounded at Lepanto, 1571, he was yet sent to carry the news of the victory to the pope and the French king. He abhorred the massacre of St. Bartholomew, but took part in the siege of La Rochelle in 1573. When the peace with Savoy was concluded, Crillon retired to Avignon, and ended his days in the exercise of piety and penance. Died 1615.

Crispi (*krēs'pē*), **Francesco,** Italian statesman, was born at Ribera in Sicily, 1819; was admitted to the bar at Palermo, but, joining the revolutionary movement of 1848, had to flee to France; in 1894 became premier of Italy. In 1895 strenuous efforts were made to discredit him by connecting him with a series of bank scandals; in 1896 the Abyssinian disaster of Adowa compelled his resignation. Died 1901.

Critias (*krish'i-as*), a pupil of Socrates, but a hearer rather than a doer of his word. He had a high reputation as an orator, and also wrote poetry.

Crittenden (*krit''n-den*), **John Jordan,** American statesman, born in Kentucky in 1786. After having studied and engaged in the practice of the law, he, in 1816, became a member of the Kentucky house of representatives, and was elected to the United States senate in 1817, 1835, and 1855. In 1841 he became attorney-general in President Harrison's administration; and in

1848 was elected governor of Kentucky. He opposed the secession movement in 1860-61. Died, 1863.

Crocker, Francis Bacon, electrician, physicist, professor of electrical engineering, Columbia, since 1889; born at New York, 1861; graduated at Columbia, M. E., 1882; Ph. D., 1895. President American Institute of Electrical Engineers, 1897-98.

Crockett, David, American pioneer and politician, was born in Tennessee, 1786. He was chiefly noted for his adventures and eccentric habits, and was a member of congress from 1827 to 1831, and from 1833 to 1835. He joined the Texans in their revolt against Mexico, was taken prisoner at Ft. Alamo in 1836, and was killed in that celebrated massacre.

Crockett, Samuel Rutherford, British novelist; born in Duchrae, Galloway, 1860. Educated at Edinburgh, Heidelberg, and New College, Oxford. Entered Free church of Scotland, 1886; minister of Penicuik for some years, then became a writer and journalist.

Croesus (*krē'sus*), last of the kings of Lydia, in the sixth century B. C.; celebrated for his wealth, so that his name became a synonym for a man overwhelmed by the favors of fortune.

Crofts, Ernest, British painter, keeper of the Royal Academy; born in Yorkshire, 1847; educated at Rugby and Berlin. Studied art at London and Dusseldorf. Pupil of A. B. Clay and Professor Hunten. Died, 1911.

Cromer (*krō'mĕr*), **Evelyn Baring, first Earl,** British statesman and diplomat, was born at Cromerhall, Norfolk, 1841. Educated at ordnance school, Carshalton; Royal Military Academy, Woolwich. Hon. D. C. L., Oxford; LL. D., Cambridge; financial member of council of governor general of India, 1880; financial assistant at conference in London on Egyptian finance, 1884; agent and consul-general in Egypt, 1883-1907. Author: *The War Game*, and other military works; *Modern Egypt* (2 volumes); etc.

Crompton, Samuel, inventor of the spinning-mule; born near Bolton, England, 1753; for five years he worked at his project, and at last sold it for 60 pounds. It revolutionized the manufacture of British muslin, and brought wealth to all save the inventor, who died in comparative poverty, 1827.

Cromwell, Oliver, the great Protector, born at Huntington, in 1599, of Welsh descent—one of his ancestors, called Williams, having adopted the surname of his patron, Thomas Cromwell, whose agent he was in the suppression of the monasteries. Early experiencing a 'saving change,' he emerged from his period of gloom and anxiety a stern and convinced Puritan and Calvinist, and a determined foe of Laud's absolutist pretensions in church and state. He sat as a member for Huntingdon in the Parliament of 1628. When the Scottish revolt compelled Charles to summon the Short Parliament (1640), Cromwell sat for Cambridge; and again in the Long Parliament as an active supporter of the popular and Puritan cause. He was never a parliamentarian in the ordinary sense of the word.

When the English Civil War began, his opportunity came. He fought at Edgehill (1642), and there perceived the weakness of the parliamentary levies against the spirit and dash of the royalist cavaliers. He saw that a counter-motive was required to meet the gallant traditions inspiring the king's soldiers, and this he found in the stern godliness of the English yeoman. He organized his famous cavalry regiments from this class, and at Marston Moor (1644) demonstrated the superiority of his troops, and stood forth as the greatest English military leader of the time—a fact which he showed again at Newbury (1644), Naseby (1645), Preston (1648), Dunbar (1650), Worcester (1651)—though the Scots general Leslie excelled him in strategy.

Cromwell attached himself early to the extreme and independent party in the army and the state, and was their representative in their struggles with the Presbyterian Parliament, which, after Naseby, wished to disband the army. It is probable that Cromwell was moulded by circumstances rather than that he was himself the moulder of them. The execution of the king shocked all the moderate men; and after Cromwell's return from a ruthless expedition against the royalists in Ireland, he was summoned to Scotland, where Charles II. had been declared king by the whole nation. The 'crowning mercy' at Worcester (1651) followed his victory over the Scots at Dunbar, and the three kingdoms were at his feet.

His first troubles were with Parliament. The 'Rump,' the remnant of the Long Parliament, being recalcitrant and determined to prolong its own existence, Cromwell summarily dissolved it. In Sept. 1656 he called a new parliament, which undertook the revival of the constitution and offered Cromwell the title of king. On his refusal he was again installed as Lord-protector, but with his powers now legally defined. Early in the following year, however, he peremptorily dissolved the house, which had rejected the authority of the second chamber. Abroad his influence still increased reaching its full height after the victory of Dunkirk in June, 1658.

But his masterly administration was not effected without severe strain, and upon the death of his favorite daughter, Elizabeth Claypole, in the beginning of August, 1658, his health began to fail him. Towards the end of the month he was confined to his room from a tertian fever, and on Sept. 3, 1658, died at Whitehall, in the sixtieth year of his age. He was buried in King Henry VII.'s Chapel, in Westminster Abbey, but after the Restoration his body was taken up and hanged at Tyburn, the head being fixed on a pole at Westminster Abbey, and the remains buried under the gallows.

Great as a general, Cromwell was still greater as a civil ruler. He lived in a simple and retired way, like a private man, and was abstemious, temperate, indefatigably industrious, and exact in his official duties. He possessed extraordinary penetration and knowledge of human nature; and devised the boldest plans with a quickness equaled only by the decision with which he executed them. No obstacle deterred him; and he was never at a loss for expedients. Cool and reserved, he patiently waited for the favorable moment, and never failed to make use of it. In his religious views he was a tolerant Calvinist.

References.—Carlyle's *Cromwell's Letters and Speeches;* Harrison's *Cromwell;* Morley's *Cromwell;* Gardiner's *History of the Great Civil War;* and *History of the Commonwealth and Protectorate;* *Cromwell's Army*, and Roosevelt's *Oliver Cromwell.*

Cromwell, Richard, born in 1626, was the third son of Oliver, but by the deaths of two elder brothers, Robert and Oliver, became his father's heir. When the protector had been empowered to nominate his successor, an effort was made to train Richard to the work of government, but in vain. Scarcely had he entered on the protectorship when the forces of anarchy, both parliamentary and military, broke loose; finding himself unable to restrain them, and deep in debt, he abdicated in 1659.

Cromwell, Thomas, earl of Essex, English statesman, born about 1485. He was in the service of Wolsey for several years before the cardinal's ruin in 1529, and remained his steady friend in adversity. His fidelity to his patron and his talents commended him to Henry VIII., who appointed him his secretary and spokesman in the house of commons. This made him the leader of the English reformation. He was created earl of Essex, received valuable estates from the spoils of the monasteries, and was the king's most powerful subject. But he had enemies on all sides, and, having lost the king's favor by his promotion of the marriage with Anne of Cleves, with whom Henry was disgusted, he was beheaded in 1540.

Cromwell, William Nelson, lawyer; now senior of law firm of Sullivan & Cromwell; officer, director, or counsel of more than twenty of the largest corporations in the United States, including United States steel corporation. He perfected the details of the transfer of Panama canal to United States government.

Cronje (*krōn'ye*), **Pietrus Arnoldus,** Boer general, was born, 1835, of Huguenot descent; commanded the western army of the South African republics; frustrated the Jameson raid at Krugersdorp, 1895. Surrendered at Paardeberg to Field Marshal Lord Roberts, 1900; member of the executive council of the Transvaal republic; chief native commissioner. Died, 1911.

Crookes (*krooks*), **Sir William,** British chemist and physicist; proprietor and editor of *Chemical News;* president of the British association for the advancement of science, 1898; editor of *Quarterly Journal of Science;* born in 1832. Discoverer of thallium, a new element, 1861 radiant matter, 1879; radiant matter spectroscopy, 1881; new elements in gadolinite, etc., 1886; genesis of elements, 1887.

Crosby (*kroz'bi*), **Fanny** (Mrs. Frances Jane Van Alstyne), blind writer of popular hymns; born at Southeast, N. Y., 1820. Wrote words to many songs for George F. Root, the composer. Her first hymn was written for William B. Bradbury.

Crosby, Howard, American clergyman and scholar, was born at New York, 1826; graduate of the University of New York, 1844; professor of Greek there, 1851-59, and at Rutgers College, New Jersey, 1859-63; chancellor of the University of New York, 1870-81. In 1877 he was the leading organizer of the society for the prevention of crime, and its first president. Died 1891.

Crothers (*kruth'ĕrz*), **Samuel McChord,** Unitarian clergyman, author, was born at Oswego, Ill., 1857; graduated at Princeton, 1874; studied theology at Union Theological Seminary; D. D.; Litt. D.; since 1894 at First Parish, Unitarian church, Cambridge, Mass.; preacher to Harvard University. Author: *The Gentle Reader; The Understanding Heart; The Pardoner's Wallet; The Endless Life.*

Crozier, William, army officer, was born at Carrollton, Ohio, 1855; graduated from United States Military Academy, 1876. Began his service in the United States army as an artillery officer, 1876; brigadier-general and chief of ordnance of United States army since 1901. With General Buffington invented the Buffington-Crozier disappearing gun carriage; invented the wire gun.

Cruikshank (*krook'shangk*), **George,** English artist, was born in London, 1792. His father and elder brother were both caricaturists. Like Hogarth, he was a moralist as well as an artist, and as a total abstainer he consecrated his art at length to dramatize the fearful downward career of the drunkard. He died 1878.

Crumpacker, Edgar Dean, lawyer, congressman; was born in Laporte county, Indiana; was admitted to the bar in 1876, and has been in the practice of law at Valparaiso, Ind., since; member of the lower house of congress, 10th Indiana district, since 1897.

Cruttwell, Charles Thomas, English clergyman and scholar, rector of Ewelme, Oxfordshire, canon of Peterborough cathedral; born in London, 1847; graduate of St. John's College, Oxford. Ordained to the ministry, 1875; dean of Gartree, diocese of Peterborough, 1892-1901; preacher to the University of Oxford, 1896-98 and 1903-05; proctor in convocation for the clergy of Peterborough diocese, 1900-06.

Cujas (*kū'zhas'*), **Jacques,** eminent French jurist, born in 1520, studied under Arnaud Ferrier at the University of Toulouse became professor of the Roman law at Bourges and Valence. Among his numerous works are *Commentaries on Justinian's Institutes*, and on the *Pandects and Decretals.* Cujas has been styled by Hallam the greatest of all civil lawyers. Died at Bourges, 1590.

Culberson, Charles A., lawyer, United States senator, was born in Dadeville, Ala., 1855; studied law under his father and at the University of Virginia in 1876-77; elected attorney-general of Texas in 1890 and 1892; elected governor of Texas in 1894 and 1896; chosen United States senator, 1899, 1905 and 1911.

Cullom, Shelby Moore, lawyer, United States senator, born in Kentucky in 1829, studied law, 1853, was admitted to the bar, and began to practice law at Springfield, Ill.; was governor of Illinois in 1877-83; elected United States senator in 1883; and reëlected in 1888, 1894, 1899, 1905. He retired 1911. Died 1914.

Cummins, Albert Baird, lawyer, United States senator, was born near Carmichaels, Pa., 1850; LL. D.; studied law in office of McClellan & Hodges, Chicago. Admitted to Illinois bar, 1874; member of Iowa legislature, 1888; governor of Iowa, 1902-04, 1904-06, 1906-08; elected 1908 to United States senate to serve out term of Hon. W. B. Allison, deceased; reëlected 1909 for the term 1909-15.

Cunard (*kū-närd'*), **Sir Samuel,** civil engineer, founder of the Cunard steamship line, was born at Halifax, Nova Scotia, 1787; succeeded early as a merchant and shipowner, and removed to England in 1838; joined with George Burns, Glasgow, and David M'Iver, Liverpool, in founding, 1839, the Royal Mail steam packet company, and obtained a contract for the mail service between Liverpool and Halifax, Boston, and Quebec. The first passage, 1840, was the *Britannia's* in fourteen days eight hours. Iron steamers were introduced in 1855, and paddle-wheels gave way entirely to the screw after 1862. Since then the Cunard line has been known as one of the leaders in transatlantic travel. Died 1865.

Cunningham, Daniel John, British physician, scientist, professor of anatomy in the University of Edinburgh since 1903, and dean of the medical faculty; born at Crieff, Scotland, 1850. M. D., D. Sc., D. C. L., LL. D., F. R. S.; has been examiner on anatomy in the Universities of Edinburgh, London, Cambridge, Oxford, and Victoria. Author: *Manual of Practical Anatomy; The Microcephalic Brain; The Anatomy of Hernia.*

Cunningham, William, English clergyman, educator, archdeacon of Ely, was born at Edinburgh, 1849; lecturer on economic history, Harvard University, 1899; chaplain of Trinity College, 1880-91; Hulsean lecturer, 1885; vicar of Great St. Mary's, Cambridge, 1887-1908. Author: *Growth of English Industry and Commerce* (2 vols.); *Outlines of English Industrial History; Cure of Souls;* etc.

Curie (*kûr'ē'*), **Madame,** née Marie Sklodowska, Polish chemist and physicist, was born at Warsaw, Russia, 1867; educated at Warsaw, and at the Sorbonne, Paris; Sc. D., Paris; she discovered the element polonium, and with her husband, Pierre Curie, the element radium.

Curie, Pierre, French chemist, was born in Paris, 1859. Educated at the Sorbonne, he became professor of physics and chemistry at Paris, 1895, and at the Sorbonne, 1900. In conjunction with his wife he discovered the element radium; member of the French Academy of Sciences, 1905. He was killed by an accident 1906.

Curran (*kur'an*), **John Philpot,** Irish legal and parliamentary orator, was born in County Cork, Ireland, 1750. He was educated at Trinity College, Dublin, and in 1773 went to London, and entered the Middle Temple. In 1782 he obtained a seat in the Irish parliament as member for Kilbeggan. Died 1817.

Curtin, Jeremiah, American author, ethnologist, and linguist, was born at Milwaukee, Wis., 1840; graduated from Harvard, 1863; was secretary of legation at St. Petersburg, 1864-70; connected with the United States bureau of ethnology, 1883-91. Died 1906.

Curtis, Benjamin Robbins, American jurist, born in Massachusetts, 1809; graduated at Harvard. On the impeachment of Andrew Johnson, he appeared as one of the counsel for the defendant. Died at Newport, R. I., 1874.

Curtis, Charles, lawyer, United States senator, was born at Topeka, Kan., 1860; member of congress from Kansas, 1893-1907; elected to the United States senate from Kansas, 1907.

Curtis, Cyrus H. K., publisher, was born in 1850, and was educated in the public schools of New England. He is now the head of the Curtis publishing company, publishers of the *Ladies' Home Journal* and the *Saturday Evening Post.*

Curtis, George Ticknor, American lawyer and writer, was born in Massachusetts, 1812, graduated at Harvard, and began law practice in Boston, afterward removing to New York. He was several times in the Massachusetts legislature, and was for a time United States commissioner. Among his many books are *Rights and Duties of Merchant Seamen; Treatise on the Law of Copyright.*

Curtis, George William, American journalist, author, publicist, was born at Providence, R. I., 1824. He commenced the *Editor's Easy Chair* papers in *Harper's Monthly* in 1853, and became editor of *Harper's Weekly* on its establishment in 1857. He died at New York, 1892. He wrote *Lotus-Eating; Potiphar Papers; Prue and I; Trumps;* etc.

Curtis, William Eleroy, journalist, born in Akron, Ohio, 1850; graduate of Western Reserve College, 1871; *Chicago Record-Herald,* since 1901; commissioner of Columbian exposition to Madrid, and special envoy to the queen regent of Spain and Pope Leo XIII., 1892. Author: *The Life of Zachariah Chandler; Egypt, Burma, and the British East Indies;* etc. Died, 1911.

Curtius (*koor'tsē-oos*). **Ernst,** German historian and archæologist, was born 1814, at Lübeck; studied at Bonn, Göttingen, and Berlin. From 1853 a member of the academy of sciences, he was one of its permanent secretaries 1871-93. He died 1896.

Curtius, Georg, one of the greatest Greek scholars, was born at Lübeck, Germany, 1820, and studied at Bonn and Berlin. After teaching at Dresden and Berlin, he became in 1849 extraordinary, in 1851 ordinary, professor of classical philology at Prague, at Kiel in 1854, at Leipzig in 1862. He died 1885.

Curzon (*kûr'zon*) **of Kedleston, first Baron, George Nathanial,** English statesman, author, was born in Kedleston, 1859; graduate of Balliol college, Oxford; D. C. L., LL. D. Member of parliament, Lancashire, 1886-98; viceroy and governor-general of India, 1899-1905; lord warden of the Cinque ports, 1904-05. Author: *Russia in Central Asia; Persia and the Persian Question.*

Cushing (*kōōsh'ing*), **Caleb,** American lawyer and diplomatist, was born in 1843. He was a member of Congress, 1835-43; negotiated the first treaty of the United States with China; in 1872 he was one of the counsel for the settlement of the "Alabama claims," before the Geneva tribunal; and 1874-77 was minister to Spain. Died 1879.

Cushing, Frank Hamilton, American ethnologist, was born at Northeast, Pa., 1857. He entered the national museum at Washington, and in 1875 began making collections of Indian relics for the department of ethnology. Author: *Zuni Fetiches,* etc. Died at Washington, 1900.

Cushman (*kōōsh'man*), **Charlotte Saunders,** American actress, was born and died at Boston Mass., 1816-1876.

Custer (*kus'tĕr*), **George Armstrong,** American soldier, born in Ohio in 1839, graduated at West Point in 1861, and served with distinction through the Civil war. As a cavalry commander in the west, he several times defeated the hostile Indians; but on the 15th of May, 1876, he attacked 9,000 Sioux on the Little Big Horn, in Montana, and he and his 1,100 men were all destroyed.

Cuvier, Georges Chretien Leopold Dagobert Baron, (*koo've-ai*), one of the greatest naturalists the world has produced, was born at Montbeliard, France, 1769. After finishing his education at Stuttgart, young Cuvier accepted the situation of tutor in a Protestant family in Normandy. The Abbe Texier, whom the troubles of the time had driven into exile from the capital, introduced him by letter to Jussieu and Geoffrey. Several memoirs, written about this time, and transmitted to the latter, established his reputation, and procured his admission to two or three of the learned societies in Paris.

In 1800 he was appointed successor to Daubenton as professor of natural history at the college of France, and in 1802 he succeeded Mertrud in the chair of comparative anatomy at the Garden of Plants. From that time he devoted himself steadily to the studies which have immortalized his name. His *Lecons d'Anatomie Comparee,* and the *Regne Animal,* in which the whole animal kingdom is arranged according to the organization of the beings of which it consists, have raised him to the pinnacle of scientific fame, and established him as perhaps the first naturalist in the world after Linnaeus. His numerous works upon these subjects show a master mind in the study of zoology; and extending the principles laid down in his comparative anatomy to the study of paleontology, he has been enabled to render immense service to geology.

Starting from the law that there is a correlation of forms in organized beings,—that all the parts of each individual have mutual relations with each other, tending to produce one end, that of the existence of the being—that each living being has in its nature its own proper functions, and ought therefore to have forms appropriated for that function and that consequently the analogous parts of all animals have received modifications of form which enable them to be recognized—he was able to ascertain from the inspection of a single fossil bone, not only the family to which it ought to belong, but the genus to which it must be referred. Even the very species of animal was thus to be made out, and the restoration of its external form as it might have lived and died, became in his hands an object of certainty and precision. His *Regné Animal* has been frequently translated, and forms the basis of all arrangements followed at the present time. Cuvier filled many offices of great importance in the state; particularly those connected with educational institutions. Napoleon treated him with much consideration; Louis XVIII. and Charles X. advanced him to honor; and Louis Philippe raised him to the rank of a peer of the realm. He died 1832.

References.—Lee's *Memoirs of Baron Cuvier;* Carus's *History of zoology;* Thomson's *Science of Life;* Day's *Naturalists;* Duncan's *Heroes of Science.*

Cyrus the Great, founder of the Persian monarchy, commonly called Cyrus the Elder, was born about 590 B. C. Putting himself at the head of his Persian troops, Cyrus advanced into Media and overthrew the forces of Astyages, 559 B. C. After consolidating his dominions, which was a work of some time, Cyrus proceeded to conquer the surrounding nations. The kingdom of Lydia first yielded, 546 B. C., and its king, the famous Crœsus, fell into his hands. Ultimately, the whole of Asia Minor was subdued. But the crowning triumph of Cyrus was his capture of the city of Babylon, the metropolis of Assyria, 538 B. C., whose king was Labynetus, the Belshazzar of Daniel. He was defeated and slain, 529 B. C.

Cyrus the Younger was born in 424 B. C., son of Darius, and governor of the western provinces of Asia Minor. After unsuccessfully plotting against his elder brother, Artaxerxes, he raised a large army, including about 12,000 Greek soldiers, with which he marched against him, but was defeated and slain at Cunaxa. Xenophon then conducted the retreat of the 10,000 surviving Greeks. Died 401 B. C.

Dabney, Charles William, educator, president of University of Cincinnati since 1904, was born in Hampden-Sidney, Va., 1855; graduated from Hampden-Sidney College, 1873; Ph. D., LL. D.; was first to discover the phosphate deposits in tin ore in western North Carolina, took prominent part in establishing an industrial school at Raleigh, president of University of Tennessee, 1887-1904; assistant secretary agriculture, United States, 1893-97; member of many scientific and educational societies.

Da Costa (*dä kos'tä*), **John Chalmers,** American surgeon, was born in Philadelphia, Pa., 1863; graduated from University of Pennsylvania, scientific department, 1882; assistant surgeon, Jefferson hospital, 1887; demonstrator of surgery, Jefferson medical college, 1891; clinical professor of surgery, same, 1898; professor of surgery, 1900. Surgeon to Philadelphia hospital since 1895, to St. Joseph's hospital since 1896. Author: *A Manual of Modern Surgery.* Edited English edition of Zuckerkandl's *Operative Surgery,* and Gray's *Anatomy.* Died, 1910.

Daendels (*dän'dels*), **Herman Willem,** Dutch general, was born in 1762, died in 1818. He became colonel of a corps of volunteers in the French army in 1793, and afterward brigadier-general. After the fall of Napoleon he was intrusted with the organization of the East African colonies.

Daguerre (*dä-gär'*), **Louis Jacques Mande,** French inventor, was born in 1789. He discovered the daguerreotype process of photography. He was also celebrated as a dioramic painter; was named by the French government as an officer of legion of honor. Died, 1851.

Dahlgren (*dal'gren*), **John Adolf,** American admiral, was born in Philadelphia, Pa., 1809. He became a midshipman, 1826, and a lieutenant, 1837. Ten years afterward he began to experiment in the casting of heavy cannon for naval warfare, and finally devised the Dahlgren gun. He died in Washington, when in command of the navy yard, 1870.

Dahlmann, (*däl'män*), **Friedrich Christoph,** German historian, was born at Wismar, 1785; studied at Copenhagen and Halle, and in 1813 became a professor of history at Kiel, and in 1829 of political science at Göttingen, where he published his invaluable *Quellenkunde der deutschen Geschichte.* In 1842 he became professor of history at Bonn, and in the movement of 1848 headed the constitutional liberals. Died 1860.

Dahn (*dän*), **Julius Sophus Felix,** German publicist historian, poet, was born at Hamburg, 1834, the son of the actor, Friedrich Dahn. He studied at Munich and Berlin, and in 1872 became professor of German jurisprudence at Königsberg, and in 1888 at Breslau.

Daingerfield, Elliott, artist, was born at Harper's Ferry, Va., 1859; studied drawing and painting in New York with private teacher and at art student's league. First exhibited at National academy of design, 1880; studied in Europe, 1897; commissioned to paint the Lady chapel of the church of St. Mary the Virgin, New York, 1902.

Dalberg-Acton (*dăl'berɴ-ak'tun*), **Sir John Emerich Edward,** first Baron Acton, English historian, was born at Naples, Italy, 1834. In 1895 he was made professor of modern history at Cambridge University, and as a liberal Catholic exerted a profound influence. He died 1902.

D'Albert (*dăl'bar'*), **Eugene Francis Charles,** pianist and composer; born in Glasgow, 1864; studied first in London, afterward under Franz Liszt in Weimar. Visited the United States several times, and was court pianist in Weimar.

Dale, Alan, pseudonym of Alfred J. Cohen, dramatic critic, author, was born in Birmingham, England, 1861; educated at King Edward's school there, and Oxford University. Came to United States, and engaged in journalism in New York; dramatic critic of New York *Evening World,* 1887-95; dramatic critic of New York *Journal* since 1895.

D'Alembert. See **Alembert.**

Dalhousie (*dal-hou'zi*), **James Andrew Broun Ramsay, Marquis of,** British statesman, was born at Midlothian, Scotland, 1812. He distinguished himself in parliement, holding with credit many important posts, and in 1847 proceeded to India as the youngest governor-general ever appointed to that country. He died in 1860.

Dall (*dal*), **Caroline Healey,** author, was born in Boston, Mass., 1822; daughter of Mark and Caroline (Foster) Healey; educated by private tutors; LL. D., Alfred University, 1877; vice-principal of Miss English's school, Georgetown, D. C., 1842-44; married, 1844, Rev. C. H. A. Dall.

Dallas (*dal'läs*), **Alexander James,** American statesman, was born in the island of Jamaica in 1759; died in 1817. Be was secretary of the treasury and acting secretary of war, and superintended the reduction of the army after peace had been declared.

Dallas, George Mifflin, American statesman and diplomatist, was born at Philadelphia, Pa., 1792. During 1831-33 he represented Pennsylvania in the United States senate; and minister to England, 1856-61. He died in 1864.

Dalton (*dôl'tun*), **John,** British chemist and physicist, was born near Cockermouth in 1766. He was famous for his experiments on the elastic force of steam. Died 1844.

D'Alviella (*dăl-vē-el'la*), **Count Goblet,** member and secretary of the Belgian senate; professor at the University of Brussels; was born in Brussels, 1846; educated at Brussels and Paris. Late rector of Brussels university; long time director of the *Revue de Belgique.*

Dalzell (*dal-zel'*), **John,** congressman, lawyer; born in New York, 1845; removed to Pittsburgh, 1847; graduate of Yale, 1865; admitted to bar, 1867; member of congress, 1887-1913.

Damien de Veuster (*dä'myäɴ' de vē' stûr'*) **Joseph,** Roman Catholic missionary, was born near Louvain, Belgium, 1840. He long worked single handed for the lepers of Hawaii, but was ultimately joined by other priests. For twelve years he

escaped the contagion; but in 1885 the malady appeared in him, yet he continued his labors until his death in 1889.

Damrosch (*dăm'rosh*), **Walter Johannes,** composer and musical director, was born in Breslau, Prussia, 1862; received his musical education under his father and Rischbieter, Urspruch, and Hans von Bülow; came to United States with his father, 1871. Succeeded his father as conductor of the New York symphony society, 1885; founded the Damrosch opera company, 1894; elected conductor of New York philharmonic society, 1902. He wrote *The Scarlet Letter*, opera in three acts; *Cyrano*, opera in four acts; songs, etc.

Dana (*dā'na*), **Charles Anderson,** American journalist, was born at Hinsdale, N. H., 1819. From 1848 to 1862 he was managing editor of the New York *Tribune*, and from 1863 to the close of the civil war was assistant secretary of war. In 1867 he founded the New York *Sun*, and began the successful management of that paper on democratic lines. He died on Long Island, 1897.

Dana, Edward Salisbury, mineralogist, educator, was born in New Haven, Conn., 1849; graduated from Yale, 1870; Ph. D., 1876; professor of physics, Yale, since 1890; trustee of Peabody museum since 1885; editor *American Journal of Science* since 1875. Author: *Text-book of Mineralogy; Text-book of Elementary Mechanics; Dana's System of Mineralogy; Minerals and How to Study Them*, etc.

Dana, Francis, American jurist and diplomat, was born in Massachusetts, 1743; graduated at Harvard, and admitted to the bar in 1767; was a member of the congress of 1777, which formulated the articles of confederation; judge of Massachusetts supreme court, 1785; chief justice, 1791-1806.

Dana, James Dwight, scientist, geologist, educator, was born at Utica, N. Y., 1813; graduated at Yale, 1833; professor of natural history and geology at Yale College, 1845-95. Died at New Haven, Conn., 1895.

Dana, John Cotton, librarian, was born at Woodstock, Vt., 1856, and graduated from Dartmouth, 1878; studied law, Woodstock, Vt., 1878-80; land surveyor, Colorado, 1881-81; admitted to New York bar, 1883; President of American library association, 1896.

Dana, Richard Henry Jr., lawyer and author, son of Richard Henry Dana, was born at Cambridge, Mass., 1815. He entered Harvard college in 1832, but suspended his studies on account of the weakness of his eyes in 1834. He then shipped as a common sailor on a voyage to California, of which he wrote a narrative entitled *Two Years Before the Mast*. He was one of the founders of the free soil party in 1848. Died in Rome, Italy, 1882.

Dandolo (*dăn'dō-lō*), **Enrico,** doge of Venice, was born about 1105 or 1108 A. D. When the emperor Alexius, who had been raised to the throne by the exertions of Dandolo, was murdered by his own subjects, Dandolo laid seige to Constantinople, and took it by storm, 1204. He died in 1205 in Constantinople, and was buried in the church of St. Sophia.

Dane (*dān*), **Nathan,** American lawyer, was born in Massachusetts in 1752. He served in the continental congress, 1785-88; framed the ordinance for the Northwest territory, in which he prohibited slavery, and was United States senator, 1794-98. Died at Beverly, Mass., 1835.

Daniel, John Warwick, lawyer, United States senator was born in Lynchburg, Va., 1842; educated at Lynchburg College and Dr. Gessner Harrison's university school; LL. D., studied law, University of Virginia, 1865-66, admitted to bar, 1866. Member of Virginia house of delegates, 1869-72; of state senate, 1875-81; member of congress, 1885-87; United States senator 1887-1910. Died, 1910.

Daniels, Josephus, secretary of navy, journalist, was born in Washington, D. C., May 18, 1862. After an academic education at Wilson Collegiate Institute, N. C., he edited the Wilson (N. C.) *Advance*, studied law and was admitted to the bar, 1885. In the same year he became editor of the Raleigh *State Chronicle;* was state printer for North Carolina, 1887-93; chief clerk, department ot the interior, 1893-95; and editor of the Raleigh *News and Observer*, since 1894. President Wilson appointed him secretary of navy, 1913. On May 2, 1888 he married Addie W. Bagley, of North Carolina.

Dannecker (*dăn'ek-ĕr*), **Johann Heinrich von,** German sculptor, was born near Stuttgart, 1758, and educated by the duke of Würtemberg, who had become his patron; became professor of sculpture in the academy at Stuttgart; his earlier subjects were from the Greek mythology, and his later Christian. Died 1841.

D'Annunzio (*dän-nōō'dzē-ō*), **Gabriele,** Italian poet, novelist, and dramatist; born in Pescara, 1864; educated at College of Prato in Tuscany, and University of Rome; studied law in Pisa, but in 1885 took up literature. Author: *The Child of Pleasure; The Virgins of the Rocks; The Triumph of Death; The Dead City; The Flame of Life*, etc.

Dante, Alighieri, foremost among Italian poets, and one of the greatest that the world has ever produced, was born at Florence in 1265. He was educated at the Universities of Bologna and Padua, and at a later period, while in Paris, applied himself to the study of theology. He fought in the victorious battle of Campaldino against the Aretines 1289, and took an active part in storming the fortress of Caprona 1290.

Having been twice entrusted with an embassy, he was chosen one of the *priori*, or chief-magistrates of Florence, in 1300, when the struggle between the Guelphs and the Ghibellines was at its height. Dante espoused the cause of the Ghibellines or Imperialists, who, being the weakest numerically, were overcome in the struggle by the Guelphs or adherents of the Pope. All the Guelphic leaders were banished and their property confiscated. Dante shared their fate and left his native city, never to return. For many years he was doomed to bear the sorrows and hardships of an exile. In 1304 he left Verona, and went to Paris.

When the Emperor Henry VII. invaded Italy, Dante returned to Verona, and employed his powerful pen to further the imperial cause. It was probably at this time 1310 that he wrote the work *De Monarchia*. The fruitless siege of Florence, and the sudden death of the Emperor 1313 demolished his last hope, and he spent the remaining years of his life under the kind protection of Guido Novello da Volenta, in the city of Ravenna, where he died 1321. Many cities of Northern and central Italy claim the honor of having harbored Dante within their walls. His remains were buried in a chapel of the *Frati Minori*, in Ravenna. They were, however, subsequently removed, and in 1865 were discovered in the Braccioforte Sepulchral Chapel of the same city. In 1830 only, a marble cenotaph was consecrated to his memory in the church of Santa Croce at Florence.

When about 9 years old, Dante beheld, for the first time, Beatrice Portinari, then 8 years of age, and the love then enkindled in the heart of the tender boy remained forever the inspiration of his life. How pure and chaste this passion was, may be seen from the poet's first work, *Vita Nuova*, which consists of a collection of poems referring to his early love; each of these poems is accompanied by a history of its origin, and accurate analysis. Beatrice was married to the cavaliere Simone de Bardi, but died at an early age. A few years after her death, Dante married the daughter of an old and noble family, by whom he had six or seven children.

In his work *De Monarchia* he advocated the supremacy of the emperor in temporal, and that of the Pope in spiritual affairs. He wrote several other works in Latin, besides many canzones, sonnets, and lyrics in Italian; most of the latter were collected in his *Convito*. But his greatest work is the *Divine Comedy*. The best English translations of the complete poem are those of Cary, and of Longfellow.

References.—Symonds's *Introduction to the Study of Dante;* Rossetti's *A Shadow of Dante;* Gardner's *Dante Primer;* Butler's *Dante, his Times and his Works;* Federn's *Dante and His Times;* Toynbee's *Dictionary of Proper Names and Notable Matters in the Works of Dante;* Fay's *Concordance* for the *Comedia*.

Danton (*dăN'tōN'*), **Georges Jacques,** French revolutionist, was born at Arcis-sur-Aube, France, 1759. As a member of the national convention, he used all his influence to hasten the execution of the king; and subsequently, as the president of the committee of public safety, he united with the other revolutionary leaders to establish that fatal tribunal under whose authority so many sanguinary judicial murders were committed. He quarreled, however, with Robespierre, and by that very tribunal which he himself had established, he was condemned and guillotined in 1794.

D'Arblay (*dăr'blā'*), **Frances Burney,** English novelist; born at Lynn Regis, England, 1752. From the age of eighteen to twenty-six she worked at *Evelina*, which appeared anonymously in 1788, and won her fame. In 1793 she married General D'Arblay, a French refugee. Her later works are *Camille, The Wanderer*, and the *Memoirs* of her father. Died at Bath, England, 1840.

Darius (*dā-ri'us*), king of Persia, was born in 558 B. C., son of Hystaspes; dethroned Smerdis the usurper, and became king of Persia in 521, in succession to Cambyses. He captured Babylon after a siege of twenty months, conquered Thrace, and defeated the Scythians. He died in 486 B. C.

Darius III., Codomannus, the last ruler of the Persian empire, 336-330 B. C. At the battle of Arbela, 331, the Persian army, said to have consisted of more than 1,000,000 men, was completely routed. Darius fled to Ecbatana, where he collected a new force. Alexander pursued him thither, but before he came up with him Darius was assassinated by Bessus, satrap of Bactria, 330 B. C.

Darley (*dăr'li*), **Felix O. C.,** American artist, was born at Philadelphia, Pa., 1822. Though a painter of merit, he is especially known for his work as an illustrator. Some of the finest figures and scenes on the government bonds and legal tender notes were designed by him. Died 1888.

Darling, Grace, born, 1815; died, 1842. With the assistance of her father, who was keeper of the Longstone lighthouse on one of the Farne islands, she rescued nine of the survivors of the wreck of the Forfarshire steamer, September 7, 1838.

Darnley (*dărn'li*), **Lord, Henry Stuart,** husband of Mary, queen of Scots, the eldest son of the earl of Lennox by Lady Margaret Douglass, was born in England, 1545, where also he was educated. He is interesting chiefly on account of the position which he occupied with respect to his wife, and his tragic end in 1567. He was father of James I. of England.

Darrow, Clarence S., lawyer and socialist, was born in Kinsman, Ohio, 1857; studied law, and was admitted to bar, 1875. Elected to Illinois legislature, 1902. Active in political campaigns as independent democrat. Counsel in Debs strike case and large number of labor injunction and labor conspiracy cases on side of labor.

Darwin, Charles Robert, English naturalist, was born at Shrewsbury in 1809, died at Down, near Beckenham in Kent 1882. He was educated at the Universities of Edinburgh and Cambridge.

He early devoted himself to the study of natural history, and, in 1831, was appointed naturalist to the surveying voyage of H.M.S. *Beagle*. The vessel sailed in 1831, and did not return till 1836, after having circumnavigated the globe. Mr. Darwin came home with rich stores of knowledge, part of which he soon gave to the public in various works. In 1839 he married his cousin Emma Wedgwood, and henceforth spent the life of a quiet country gentleman, engrossed in scientific pursuits—experimenting, observing, recording, reflecting, and generalizing.

In 1839 he published his *Journal of Researches during a Voyage round the World;* in 1844 *Structure and Distribution of Coral Reefs;* in 1844 *Geological Observations on Volcanic Islands, etc.;* in 1846 *Geological Observations in South America;* in 1851 and 1854 his *Monograph of the Cirrihipedia*, and soon after the *Fossil Lepadridae and Balaenidae of Great Britain*. In 1859 his name attained its great celebrity by the publication of *The Origin of Species by Means of Natural Selection*. This work, scouted and derided though it was at first in certain quarters, may be said to have worked nothing less than a revolution in biological science. In it for the first time was given a full exposition of the theory of evolution as applied to plants and animals, the origin of species being explained on the hypothesis of natural selection.

The rest of his works are largely based on the material he had accumulated for the elaboration of this great theory. The principal are a treatise on the *Fertilization of Orchids* (1862); *Domesticated Animals and Cultivated Plants; Descent of Man and Variation in Relation to Sex* (1871); *The Expression of the Emotions in Man and Animals* (1872); *Movements and Habits of Climbing Plants* (1875); *Insectivorous Plants* (1875); *Cross and Self Fertilisation* (1876); *The Power of Movement in Plants* (1880); *The Formation of Vegetable Mould* (1881); the last containing a vast amount of information in regard to the common earth-worm. Mr. Darwin was buried in Westminster Abbey.

References.—Wallace's *Darwinism;* critical espositions by T. H. Huxley, Asa Gray, J. G. Romanes, St. G. Mivart and E. D. Cope; and *Life and Letters of Charles Darwin*, by Francis Darwin.

Darwin, Erasmus, English poet and physician; born in Eltham near Newark, England, 1731. He studied at Cambridge, obtained a degree in medicine at Edinburg, in 1755, and settled at Lichfield as a physician. He died in 1802.

D'Aubigne, Jean-Henri Merle. See **Merle d'Aubigne.**

Daubigny (*dō'bēn'yē'*), **Charles François.** French landscape painter, was born in Paris, 1817. He was made chevalier of the legion of honor, 1857. Died 1878.

Daudet (*dō'de*), **Alphonse,** French novelist, was born at Nimes, France, 1840; obtained appointment as private secretary in the office of the Duc de Morny. Alphonse's poem *Les Amoureuses*, published in 1858, was followed by the theatrical pieces (written partly in collaboration), *La Derniere Idole*; *L'Œillet Blanc*; *Lise Tavernier*. In the journals appeared some of his best work, *Robert Helmont*; *Contes du Lundi*, and the charming extravaganza of *Tartarin de Tarascon*, carried further in *Tartarin sur les Alpes*. He died in 1897.

Daun (*doun*), **Leopold Joseph, Graf von,** Austrian general, was born at Vienna, 1705; served against the Turks and through the war of the Austrian succession, and in 1754 was made a field-marshal. In 1758 he gained another victory at Hochkirch, and came near to annihilating the Prussian army. In 1759 at Maxen he forced Fink to surrender with 11,000 men. After this, however, he gained no important successes. Died 1766.

Davenport, Homer Calvin, cartoonist, was born in Silverton, Ore., 1867. In 1892 was employed on San Francisco *Examiner*, and taken to New York by W. R. Hearst, 1895, and placed on New York *Journal*; originated the $-mark suit of clothes and the giant figure of the trusts in 1899. Died 1912.

David, king of Israel, was the son of Jesse, of the tribe of Judah; was born in Bethlehem, and flourished in the eleventh century B. C. War having broken out between the Israelites and the Philistines, he fought and vanquished the giant Goliath. Saul gave him the command of a body of men, but having conceived a great hatred of him, David was exposed to imminent danger, and compelled to seek a refuge among the Philistines. After the death of Saul, he was recognized as king of Israel. Many acts of weakness were committed by him, but he obtained forgiveness from Jehovah by exemplary penitence. He is the reputed author of many of the psalms.

David, Félicien, French composer, was born at Cadenet, France, 1810. He became an ardent disciple of St. Simon and of Enfantin. In 1835 he returned to Paris, and published his *Mélodies Orientales* for the pianoforte. They were unsuccessful; and David remained in obscurity until his *Désert* made him known. In 1862 he was made an officer of the legion of honor, and in 1869 librarian to the Paris conservatory. Died 1876.

David, Jacques Louis, founder of the modern French school of painting, was born at Paris, 1748; studied at Paris and Rome, and during the revolution was artistic superintendent of national fêtes and solemnities. In 1804 Napoleon appointed him his first painter, and gave him a number of commissions, and among his most celebrated works are several historic portraits of the emperor, such as *Napoleon Crossing the Alps*. As one of the judges of Louis XVI. he was banished in 1816 from France, and died at Brussels, 1825.

David, Pierre Jean, French sculptor, known as David d'Angers, was born at Angers, France, 1789. A statue of Condé established his reputation; and in 1826 he was elected to the institute and appointed a professor in the school of the fine arts. In 1835-37 he executed the pediment of the Pantheon in Paris. Among his other works are busts of Washington and Lafayette in the capitol at Washington. He died in Paris, 1856.

Davids, T. W. Rhys, English orientalist, professor of comparative religion, Manchester, since 1904, was born at Colchester, 1843. He was educated at Brighton school and Breslau University; LL. D., Ph. D. Author: *Buddhism; Buddhist Birth Stories; Early Buddhism*, etc.

Davidson, Most Rev. Randall Thomas, archbishop of Canterbury since 1903, was born at Edinburgh, 1848; graduated at Trinity college, Oxford; D. D., LL. D., D. C. L. Curate of Dartford, Kent, 1874-77; sub-almoner to Queen Victoria, 1882; one of the six preachers of Canterbury cathedral, 1880-83; clerk of the closet to Queen Victoria, 1891-1901; to his majesty the king, 1901-03; bishop of Rochester, 1891-95; bishop of Winchester, 1895-1903. Author: *Life of Archbishop Tait, Charges, Sermons*, etc.

Davidson, Samuel, biblical critic, was born near Ballymena, Ireland, 1807, and educated at the Royal College, Belfast; was professor Belfast, resigned in 1857. His works included *Sacred Hermeneutics; Treatise on Biblical Criticism*. He died 1898.

Davis, Henry Gassaway, capitalist, was born in Baltimore, Md., 1823; projected and carried on to success the West Virginia Central & Pittsburg railway, which was sold to the Wabash, 1902. State senator, 1867-69; United States senator, 1871-83, declining reëlection; was candidate of democratic party for vice-president, 1904.

Davis, Henry Winter, American lawyer, legislator, and orator, was born at Annapolis, Md., 1817. He was elected member of congress by the voters of Baltimore in 1855 and 1857. He strenuously advocated the emancipation of the slaves and the extension to them of the rights of suffrage. Died 1865.

Davis, Jefferson, American statesman and soldier, born in Kentucky, 1808; was graduated from West Point, 1828. At the commencement of the Mexican war he left congress, engaged actively in the contest, and soon acquired distinction. When Pierce was elected president in 1853, Davis was appointed secretary of war. When Buchanan became president, he left the cabinet, but was returned to the senate by the legislature of Mississippi, which position he retained until the secession of his state. In February, 1861, Davis was chosen president of the Confederate States, and reëlected for six years in 1862. After the fall of Richmond, in 1865, he was captured when endeavoring to escape, and was imprisoned in Fortress Monroe for two years. He was released on bail in 1867, and finally set at liberty by the general amnesty of 1868. Published *The Rise and Fall of the Confederate Government*, 1881. Died at New Orleans, 1889.

Davis, Jefferson, lawyer, United States senator, was born in Little River county, Arkansas, 1862; graduated from the law department of Vanderbilt University, 1884; admitted to bar the same year. Governor of Arkansas in 1901, 1903 and 1905. Was elected to the United States senate, 1907, for term 1907-1913. Died 1913.

Davis, John, English navigator, was born at Sandridge, near Dartmouth, about 1550, and undertook in 1585-87 three Arctic voyages in search of a northwest passage. In his last voyage as pilot of an English ship he was killed by Japanese pirates in the strait of Malacca, 1605.

Davis, Richard Harding, novelist, journalist, was born in Philadelphia, Pa., 1864. He graduated from Lehigh University, subsequently studied at at Johns Hopkins. He served as war correspondent for the *London Times* and *New York Herald*. Author: *Soldiers of Fortune; Our English Cousins; Van Bibber and Others; The Rulers of the Mediterranean; Dr. Jameson's Raiders; Exiles; With Both Armies in South Africa; Ranson's Folly; Captain Macklin*. Plays: *Taming of Helen; The Dictator*, etc.

Davis, William Morris, geographer, geologist, professor of geology, Harvard University since 1899; was born in Philadelphia, Pa., 1850; graduated from Lawrence scientific school, Harvard; 1869, M. E., Sc. D., Ph. D.; acting dean of Harvard graduate school of arts and sciences, 1906-07; member of Pumpelly's Carnegie institution expedition to Turkestan, 1903; visited South Africa, 1905. Author: *Elementary Meteorology; Physical Geography*.

Davison, Alvin, educator, biologist, was born in Ohio, and educated at the National Normal University, and Princeton University; M. A., Ph. D., Princeton; instructor in biology, Lafayette College, 1896; associate professor, 1897; and professor, since 1898. Author: *Mammalian Anatomy; Practical Zoölogy; The Human Body and Health; Health Lessons*, etc. Fellow of the American association for the advancement of science, and other scientific associations.

Davitt (*dav'it*), **Michael,** Irish journalist and political leader, was born at Straid, Ireland, in 1846. A strong home ruler, but socialistic on the question of land nationalization; after the split in the party he opposed Parnell, and was elected to parliament in 1892 as an anti-Parnellite, but unseated on the ground of intimidation. He died in 1906.

Davout (*dā'vōō'*), **Louis Nicolas,** French marshal, was born in 1770, at Annoux, France; was educated with Bonaparte at the military school of Brienne. A marshal of the empire, 1804, he acted a brilliant part at Austerlitz, 1805, and Auerstädt, and was made duke of Auerstädt, 1808. At Eckmühl and at Wagram he checked the Austrian attack, and in 1811 was created prince of Eckmühl; after Waterloo he received the command of the remnant of the French army under the walls of Paris. In 1819 he was made a peer of France. He died in 1823.

Davy, Sir Humphry, noted English chemist, was born at Penzance, in Cornwall, 1778. In 1803 he became a fellow, and in 1807 secretary of the Royal society. In 1815 he invented the miner's safety lamp. He was knighted in 1812, made a baronet and elected a president of the royal society in 1820. His chief works are *Elements of Chemical Philosophy*, and *Elements of Agricultural Chemistry*. He died at Geneva in 1829, of paralysis.

Dawson, George Mercer, Canadian geologist, was born at Pictou, Nova Scotia, 1849. He was educated at McGill University, Montreal, and at the Royal school of mines, London. In 1891 he was appointed one of the Bering sea commissioners. In 1893 he became president of the Royal society of Canada, and was made a companion of the order of St. Michael and St. George. Died at Ottawa, 1901.

Dawson, Sir John William, Canadian geologist and naturalist, was born at Pictou, Nova Scotia, 1820; studied at Edinburgh; and from 1855 to 1893 was principal of McGill University; was knighted in 1884; and in 1886 was president of the British association. He died in 1899. He was not only a distinguished scientist but one of the most noted American educators.

Dawson, Samuel Edward, president of Royal Society of Canada, 1907, king's printer for Dominion of Canada and deputy minister of department of public printing and stationery, Ottawa, was born at Halifax, Nova Scotia, 1833.

Day, James Roscoe, clergyman, educator; chancellor of Syracuse University; was born at Whitneyville, Maine, 1845; graduated at Bowdoin College, 1874, S. T. D.; D. D.; LL. D.; D. C. L. Elected bishop of Methodist Episcopal church, 1904, but resigned.

Day, Mrs. S. A. See **Gardener, Helen Hamilton.**

Day, William Rufus, jurist; born in Ravenna, Ohio, 1849; graduate of University of Michigan, 1870; judge of court of common pleas, 1886-90; appointed assistant secretary of state, by President McKinley, 1897; succeeded John Sherman as secretary of state, 1898, but in September, 1898, was succeeded by John Hay, becoming chairman of United States peace commissioners at Paris at close of war with Spain; associate justice of United States supreme court since 1903.

Deák (*dā'āk*), **Franz,** Hungarian statesman, who did more than anyone else to establish in 1866 the Austro-Hungarian empire, was born at Kehida in Szalad district, 1803; entered the national diet in 1832, played the part of a moderate in the revolution of 1848, and died at Budapest, 1876.

Deakin (*dē'kin*), **Hon. Alfred,** Australian statesman, prime minister of commonwealth of Australia since 1905; born in Melbourne, Australia, 1856; graduated from Melbourne University; member of federal council, 1889-95-97-99; of national Australian convention, 1891; Australian delegate from Victoria to London to secure passing of the commonwealth bill, 1900; first attorney-general of the commonwealth of Australia, 1901-03; prime minister of the commonwealth of Australia, 1903-04, and a second time, 1905.

Deane, Silas, American statesman and diplomat, was born in Connecticut, 1737; graduated from Yale, and was a member of the first continental congress. In 1776 he was sent to Paris as political and financial agent of the colonies. Benjamin Franklin and Arthur Lee joined him afterward, and he was on the committee which negotiated the treaty with France. Died in poverty, 1789.

De Armond, David Albaugh, lawyer, jurist, congressman, was born in Blair county, Pennsylvania, 1844. Member of congress, sixth Missouri district, 1891-1909. Died 1909.

Debs (*debz*), **Eugene Victor,** socialist, was born in Terre Haute, Ind., 1855; and became locomotive fireman on Terre Haute & Indianapolis railroad; grand secretary and treasurer of brotherhood of locomotive firemen, 1880-93; president of American railway union, 1893-97. As president of American railway union he won a large strike on the Great Northern railway; while managing the still larger strike of western roads in 1894 he was charged with conspiracy, but acquitted; then he was charged with violation of an injunction and sent to jail for six months for contempt of court. Candidate of Socialist party for president of United States, 1904 and 1912.

Decamps (*dē-kăn'*), **Alexandre Gabriel,** French painter, was born at Paris in 1803. In 1824 he was in Switzerland, in 1827-28 in Italy and the Levant. He was made a chevalier of the legion of honor in 1839, and in 1851 an officer. He died at Fontainebleau from a hunting accident, 1860.

De Candolle (*dē kăn'dōl'*), **Augustin Pyrame,** Swiss botanist, was born at Geneva, 1778; studied there and in Paris; in 1816 he retired to Geneva, where a professorship of botany was founded for him. He died in 1841.

Decatur (*dē-kā'tur*), **Stephen,** United States naval officer, was born at Sinepuxent, Md., 1779, and entered the navy in 1798. In 1804 he led a small party which burned, in the harbor of Tripoli, the American frigate *Philadelphia* after its capture by the Tripolitans. Having taken command of the frigate *United States*, he captured the British frigate *Macedonian*, 1812. In 1815 he captured two Algerine vessels of war, and compelled the dey of Algiers to sue for peace. He was killed in a duel by Commodore James Barron, 1820.

Deffand (*de'făn'*), **Marie de Vichy-Chamrond, Marquise du,** Parisian literary leader, was born at the Chateau de Chamrond, France, 1697. In 1718 she married the Marquis du Deffand, and for a number of years she led a life of gallantry and became a conspicuous figure in Paris literary society. Died in Paris, 1780.

De Foe (*dē fō'*), **Daniel,** English novelist and political writer, was born in London, 1661. He began his career as author in 1682, by publishing a pamphlet which contained strictures upon the clergy of that day. In 1701 he published his famous satirical poem, *The True-born Englishman*, which was written in vindication of King William, and in answer to a poem in which he had been attacked, called *The Foreigners*. In 1719 appeared the famous *Robinson Crusoe*, the most popular of all his works. De Foe, in rapid succession, produced his other notable works of fiction, *Moll Flanders; Journal of the Plague; Colonel Jack; Adventures of Roxana*, and the *Memoirs of a Cavalier*. He died in 1731.

Defregger (*dā'freg-ĕr*), **Franz von,** Austrian genre painter, was born at Stronach, Tyrol, 1835. In 1878 he was made professor of painting at the Munich Academy. The subjects of almost all his pictures are drawn from the Tyrolese peasant-life.

De Garmo (*dē gär'mō*), **Charles,** educator, professor of science and art of education, Cornell, since 1898, was born in Wisconsin, 1849; Ph. D., Halle; professor of psychology, University of Illinois, 1890-91; president of Swarthmore College, Pennsylvania, 1891-98. Author: *Essentials of Method; Herbart and Herbartians*; etc.

De Kalb (*dē kalb'*), **John, Baron,** general in the American revolution, was born about 1721. in

Alsace, France; he accompanied Lafayette to America in 1777. He was then appointed a major-general by congress, served in the field in New Jersey and Maryland, and was second in command to General Gates. He was killed in the battle of Camden, 1780.

De Koven (*dē kō'ven*), **Henry Louis Reginald,** American composer, was born in Middletown, Conn., 1861; graduated at Oxford, 1880. Has served as musical critic on various New York publications. His operas are: *The Begum; Don Quixote; Robin Hood; The Mandarin; The Highwayman; Student King; The Snowman;* etc. He has written also a large number of songs and various music for piano and orchestra.

Delacroix (*dē-lá'krwá'*), **Ferdinand Victor Eugene,** French painter, chief of the romantic school, was born near Paris, 1799. At the age of eighteen he entered the *atelier* of Pierre Guérin. In 1822 his first work, *Dante and Virgil,* attracted much attention. In 1857 he was chosen by the institute to fill the place of Paul Delaroche. He died in 1863.

Delambre (*dē-lāx'br'*), **Jean Baptiste Joseph,** eminent French astronomer, was born at Amiens, 1749, and studied first under Delisle, and afterward under Lalande. After the discovery of the planet Uranus in 1781, he computed tables of its motion. In 1802 he was appointed inspector-general of education, and in 1803 perpetual secretary of the mathematical section of the institute. In 1807 he obtained the chair at the Collège de France rendered vacant by the death of Lalande, his master and friend. He died at Paris, 1822.

Deland (*dē'land'*), **Margaretta Wade,** *née* Campbell, American writer, was born at Allegheny, Pa., 1857; educated at private schools, and married, 1880, Lorin F. Deland, Boston. Author: *John Ward, Preacher; The Old Garden and Other Verses; Dr. Lavendar's People; The Common Way; The Awakening of Helena Richie;* etc.

De la Ramée (*dē là rá'mā'*), **Louise** (better known by her pen name "Ouida"), English novelist of French extraction, was born at Bury St. Edmunds, England, in 1840. Her first novel, *Granville de Vigne,* appeared in book form in 1863, and was followed by numerous others dealing with many phases of European society. Among her stories are: *Under Two Flags; Held in Bondage; Chandos; Two Little Wooden Shoes; Wanda; Tricotrin,* and *Santa Barbara.* She died in Italy, 1908.

Delaroche (*dē-lá'rōsh'*), **Paul,** French historical painter, was born at Paris in 1797, died in 1856. He studied under Watelet and Gros. Many of his subjects are drawn from English and French history, and they are usually of a somber character.

Delcassé (*del'ka'sā'*), **Theophile,** French statesman, was born in Pamiers, France, 1852, educated in Paris, and began his career as a journalist. He was elected to the chamber of deputies in 1889, for Foix. He has always been a consistent advocate of colonial expansion; foreign minister when M. Waldeck-Rousseau succeeded M. Dupuy, and when M. Combes, in 1902, succeeded M. Waldeck-Rousseau; visited England with the president in 1903, and with Lord Lansdowne prepared the Anglo-French agreement, signed in 1904. The difficulty with Germany about Morocco caused his retirement in 1905.

Delille (*dē-lēl'*), **Jacques,** French poet, was born in Auvergne, France, 1738. He was educated at the College de Lisieux in Paris, and obtained a professorship in Amiens. The revolution compelled Delille to leave France, and he traveled in Switzerland and Germany, and then in London occupied eighteen months in translating *Paradise Lost.* Blind in his old age, he died in 1813.

De Martens. See **Martens, Frederic de.**

De' Medici, Catharine. See **Catharine de Medici.**

De Mille (*dē mil'*), **James,** Canadian novelist, was born at St. John, New Brunswick, in 1837. He was professor of history and rhetoric in Dalhousie College for a number of years. Died at Halifax, Nova Scotia, 1880.

Democritus (*de-mok'ri-tus*), Greek philosopher, was born at Abdera, in Thrace, about 470 or 460 B. C. Only a few fragments of his numerous physical, mathematical, ethical, and musical works are extant. Died about 357 or 360 B. C.

Demosthenes, famous ancient Greek orator, was the son of a sword-cutler at Athens, where he was born in 382 (according to some in 385) B. C. His father left him a considerable fortune, of which his guardians attempted to defraud him. Demosthenes, at the age of seventeen years, conducted a suit against them himself, and gained his cause. He then set himself to study eloquence, and though his lungs were weak, his articulation defective, and his gestures awkward, by perseverance he at length surpassed all other orators in power and grace.

He thundered against Philip of Macedon in his orations known as the *Philippics,* and endeavored to instill into his fellow-citizens the hatred which animated his own bosom. He labored to get all the Greeks to combine against the encroachments of Philip, but their want of patriotism and Macedonian gold frustrated his efforts. He was present at the battle of Chaeroneia (380 B. C.), in which the Athenians and Boeotians were defeated by Philip, and Greek liberty crushed.

On the accession of Alexander in 336 Demosthenes tried to stir up a general rising against the Macedonians, but Alexander at once adopted measures of extreme severity, and Athens sued for mercy. It was with difficulty that Demosthenes escaped being delivered up to the conqueror. In 324 he was imprisoned on a false charge of having received a bribe from one of Alexander's generals, but managed to escape into exile. On the death of Alexander next year he was recalled, but the defeat of the Greeks by Antipater caused him to seek refuge in the temple of Poseidon, in the island of Calauria, on the coast of Greece, where he poisoned himself to escape from the emissaries of Antipater (322 B. C.).

The character of Demosthenes is by most modern scholars considered almost spotless. His fame as an orator is equal to that of Homer as a poet. Cicero pronounces him to be the most perfect of all orators. He carried Greek prose to a degree of perfection which it never before had reached. Everything in his speechss is natural, vigorous, concise, symmetrical. We have under his name sixty-one orations, some of which are not genuine. The great opponent—and indeed enemy—of Demosthenes as an orator was Aeschines.

References.—Plutarch's *Life of Demosthenes* Jebb's *Attic Orators;* Schaefer's *Demosthenes and his Time;* Blass's *Demosthenes;* and Butcher's *Demosthenes.*

Deneen, Charles Samuel, lawyer, public official, was born in Edwardsville, Ill., 1863; graduated from McKendree College, 1882; studied law, and was admitted to the Illinois bar. Elected to Illinois house of representatives, 1892; served one term as attorney for sanitary district of Chicago, 1895-96; state's attorney of Cook county, Ill., 1896-1904; governor of Illinois, 1904-13.

Depew, Chauncey Mitchell, lawyer, United States senator, was born in Peekskill, N. Y., 1834; was graduated at Yale College in 1856; studied law, and was admitted to the bar in 1858; LL. D., Yale, 1887. He was made attorney and director of the consolidated Hudson River and New York Central railroads in 1869; general counsel of the whole Vanderbilt system in 1875; was elected to the United States senate, 1899, and reëlected, 1905. He has an international reputation as an orator.

De Quincey, Thomas, English essayist, born in Manchester, England, in 1785. In 1803 he entered Worcester College, Oxford, which he left without a degree, and soon after became acquainted with Coleridge and Wordsworth, took a cottage at Grasmere, and became a member of the famous "lake school." He had acquired the habit of taking opium by using it to cure an attack of neuralgia, and so greatly did it grow upon him that he was known to take as many as 12,000 drops, equal to ten wineglasses, in a day. He was engaged in preparing fourteen volumes of his works for the press within a few days of his death. Died 1859.

De Reszke (*dā resh'ke*), **Edouard,** Polish singer, born in Warsaw, Poland, 1856; studied under Ciaffei and Coletti, at Milan and Naples, where he developed a splendid bass voice; made his début, Theatre des Italiens, Paris, as the king in *Aida,* 1876. Has since then appeared in grand opera in Europe and United States, taking basso rôles.

De Reszke, Jean, Polish tenor, brother of Edouard, was born in Warsaw, Poland, 1853; studied music under Ciaffei, Cotogni, and Sbriglia; début as baritone singer in *La Favorita,* Venice, 1874; tenor début, Madrid, 1879. He made his début in Paris, 1885, and has appeared in leading rôles in grand opera in Europe and United States.

Derby, Edward George Geoffrey Smith-Stanley, fourteenth Earl of, British statesman, was born in 1799. He entered parliament in 1821, and in 1827-28 was under-secretary for the colonies. In 1844 he was called to the house of lords as Baron Stanley of Bickerstaffe. On the death of his father, in 1851, he succeeded to the earldom and the vast estates in England and Ireland. He declined the premiership in 1845 and in 1851, but accepted it in 1852, and resigned it the same year. He became prime minister a third time in 1866, and resigned in 1868. Died 1869.

De Ruyter. See **Ruyter.**

Derzhaven (*dyer-zhä'vēn*), **Gabriel,** a Russian lyric poet and statesman, was born at Kasan, 1743. He rose from the ranks as a common soldier to high offices in the state under the empress Catharine II., and was made minister of justice by Alexander I. In 1803 he retired to private life, and gave himself up to poetry. Died 1816.

Descartes (*dā-kärt*), **Rene,** great French philosopher and mathematician, was born, 1596, at La Haye, in Touraine. He was educated at the Jesuit College of La Fleche, where he showed great talent. He entered the military profession and served in Holland and in Bavaria. In 1621 he left the army, and after a variety of travels finally settled in Holland, and devoted himself to philosophical inquiries.

Descartes, seeing the errors and inconsistencies in which other philosophers had involved themselves, determined to build up a system anew for himself, divesting himself first of all the beliefs he had acquired by education or otherwise, and resolving to accept as true only what could stand the test of reason. Proceeding in this way he wrote *Meditationes de Prima Philosophia* in which he first enunciated that he could not doubt or divest himself of belief in himself as a thinking being, and this ultimate certainty he expressed in the celebrated phrase *Cogito, ergo sum* "I think, therefore I am."

Here, then, he believed he had found the test of truth. Starting from this point Descartes found the same kind of certainty in such propositions as these; that the thinking being or soul differs from the body (whose existence consists in space and extension) by its simplicity and immateriality and by the freedom that pertains to it; that every perception of the soul is not distinct; that it is so far an imperfect finite being; that this imperfection of its own leads it to the idea of an absolutely perfect being; and from this last idea he deduces all further knowledge of the truth.

Descartes also contributed greatly to the advancement of mathematics and physics. The higher departments of geometry were greatly extended by him. His system of the universe attracted great attention in his time, though long since exploded. It rested on the hypothesis of celestial *vortices,* immense currents of ethereal matter, by which he accounted for the motion of the planets (*Principia Philosophiae,* 1644). His works effected a great revolution in the principles and methods of philosophizing. In 1647 the French court granted him a pension of 3000 livres, and two years later, on the invitation of Christina of Sweden, he went to Stockholm, where he died, 1650.

References.—Fisher's *Descartes and his School;* Mahaffy's *Descartes;* Smith's *Studies in the Cartesian Philosophy;* Descartes' *Discourse on Method* and the *Meditations* are translated by Veitch.

Desmoulins (*dā'mōō'lax'*), **Benedict Camille,** French revolutionist, was born at Guise, France, in 1760; studied with the notorious Robespierre, and was a man of great talent. He was a deputy to the convention in 1792, but his companions sent him to the scaffold in 1794.

De Soto (*dē sō'tō*), **Hernando,** Spanish explorer, born about 1500, followed the path of Cortez and Pizarro, under the latter of whom he served in Peru. About 1536 he was made governor of Cuba; he conducted an expedition from Florida, which resulted in the discovery of the Mississippi. Died of fever in Louisiana about 1542.

Dessalines (*dā'sá'lēn'*), **Jean Jacques,** Haytien ruler, was born in Africa about 1758, and was originally a slave to a free black in St. Domingo. He became second in command to Toussaint l'Ouverture, and, after the imprisonment of that chief, he displayed so much talent and courage that in 1804 he was chosen emperor of Hayti, under the title of Jacques I. He fell the victim of a conspiracy in 1806.

De Stäel, Mme. See **Stäel.**

D'Estaing. See **Estaing.**

Detaille (*dē-tá'y'*), **Edouard Jean Baptiste,** French painter, was born in Paris in 1848. His pictures are chiefly of soldiers and battle-scenes, and have gained him much fame. He is a member of the French Institute, member of the Academie des Beaux Arts, etc. Died, 1913.

De Tocqueville. See **Tocqueville.**

De Vere (*dē vēr'*), **Aubrey Thomas,** Irish poet and political writer, was born in 1814. He first published, in 1842, *The Waldenses.* In 1872 he produced the *Legends of St. Patrick;* in 1879, *Legends of the Saxon Saints,* and in 1882, *The Foray of Queen Meave, and Other Legends of Ireland's Heroic Age.* He died in 1902.

De Vigny. See **Vigny.**

Devine (*dē-vīn'*), **Edward Thomas,** sociologist, educator, was born in Union, Iowa, 1877; graduated Cornell College, Iowa, 1887; Ph. D.; LL. D. General secretary of charity organization society,

New York, since 1896; Schiff professor of social economy, Columbia University, since 1905. Author: *Economics; The Practice of Charity; The Principles of Relief; Efficiency and Relief.*

e Vinne (*dē vin'ē*), **Theodore Low,** printer, and writer, was born at Stamford, Conn., 1828; learned printer's trade. He has been a leader in the improvement of typography, and received an honorary M. A., from both Columbia and Yale Universities.

ewar (*dū'ĕr*), **Sir James,** British scientist, Fullerian professor of chemistry, Royal Institution, London; was born in Kincardine, Scotland, 1842; D. Sc., Oxford. With Sir Frederick Abel he invented cordite. He was the first to liquefy and solidify hydrogen. Received French Academy's Lavoisier gold medal, in 1894. Knighted, 1904.

e Wet (*dē vet'*), **Christian Rudolf,** Boer general, was born in 1853. He had acquired fame as a hunter before he became conspicuous in the Transvaal war of 1880-81; and in the Boer war of 1899-1902 he was of all the Boer commanders the most audacious, swift in movement, and fertile in expedients.

e Wette (*dē vet'ē*), **Wilhelm Martin Leberecht,** German biblical critic, born at Ulla, near Weimar, 1780. He studied from 1799 at Jena, and became pro essor at Heidelberg in 1807, in 1810 at Berlin, and in 1822 at Basel, Switzerland, where he died, 1849. His reputation rests on his *Introduction to the Old Testament.*

ewey, George, admiral in United States navy; born in Montpelier, Vt., 1837; appointed to naval academy, September 23, 1854; graduated in 1858, as passed midshipman; LL.D., 1898; in Farragut's squadron which forced the passage of Fort St. Philip and Fort Jackson, April, 1862. Was afterward on several vessels in North Atlantic blockading squadron, then in European squadron, and later on various duties and at different stations, being promoted to commander, 1872; captain, 1884; commodore, 1896. In January, 1898, assumed command of Asiatic squadron. On May 1, 1898, in Manila bay, destroyed the Spanish Asiatic squadron under Admiral Montojo, destroying eleven and capturing all other vessels and all the land batteries, without the loss of a man on the American side. Immediately upon receipt of official news of victory he was promoted to rear admiral, and thanked by resolution of congress; promoted to admiral, 1899.

ewey, John, educator, professor of philosophy, Columbia University, since 1904; was born at Burlington, Vt., 1859; graduated, University of Vermont, 1879; Ph.D., Johns Hopkins, 1884. Was professor of University of Minnesota, 1888-89; University of Michigan, 1889-94; and professor of philosophy and director of school of education, University of Chicago, 1894-1904. Author: *Psychology Leibnitz; Critical Theory of Ethics; Ethics;* etc.

ewey, Melvil, librarian, was born in Adams Center, N. Y., 1851; graduated, Amherst, 1874; LL.D., 1902. Acting librarian Amherst, 1873-76; chief librarian and professor of library economy, Columbia College, 1883-88. Founder and director, New York state library school, 1887-1906; state director of libraries, New York, 1904-06. Author: *Library School Rules; Decimal Classification and Relative Index.*

e Witt (*dē vit'*), **Jan,** Dutch statesman, was born at Dort, 1625, son of Jacob De Witt, a vehement opponent of William II., prince of Orange. In 1654, on the conclusion of the war with England, a secret article was inserted in the treaty drawn up between De Witt and Cromwell, in virtue of which the house of Orange was to be deprived of all state offices. The Orange party carried their point in the elevation of William to the dignity of stadtholder. Subsequently his brother, Cornelius, accused of conspiracy against the life of the stadtholder, was imprisoned and tortured. De Witt went to see him on his release. As they were coming out of prison they were attacked and murdered, 1672.

e Young, Michael Harry, journalist, was born in St. Louis, Mo., 1848; removed to California with parents when five years old; with brother Charles he established, 1865, *The Dramatic Chronicle,* later changing it to the *San Francisco Chronicle,* projector and director-general of California mid-winter exposition, 1893-94; member of executive committee for relief and red cross funds.

laz (*dē'ăs*), or **Dias, Bartolomeu,** Portuguese navigator, flourished in the fifteenth century. Driven by a violent storm, he sailed round the southern extremity of Africa, the cape of Good Hope, without immediately realizing the fact, and discovered Algoa bay. Was lost in a storm, May, 1500.

laz, Porfirio, Mexican statesman, president of Mexico, was born at Oaxaca in 1830. He studied law, and was an officer in the war between Mexico and the United States. In 1876 he rebelled and overthrew the president, Lerdo de Tejado, and was himself made president in the same year. He was elected again in 1884, 1888, 1892, 1896, 1900, 1904, and 1908. Mexico has greatly prospered under his administration, and his career has given him a high place among the world's statesmen. Forced to resign by Madero 1911.

laz de la Peña (*dē'ăz' dē lä pen'yä*), **Narcisse Virgile,** French painter, was born at Bordeaux of Spanish parentage, 1807. Left dependent, he was educated by a Protestant pastor at Bellevue, near Paris. In 1831 he began to exhibit in the salon. He died at Mentone, 1876.

Dicey (*dī'si*), **Albert Venn,** British lawyer and writer, Vinerian professor of English law at Oxford since 1882, was born in 1835; graduated from Balliol College, Oxford; M.A., hon. D.C.L., Oxford; hon. LL.D., Cambridge, Glasgow, and Edinburgh; studied law and was made a barrister of the Inner Temple, 1863.

Dickens, Charles, English novelist and humorist, was born at Landport, England, 1812. After a literary apprenticeship on *The True Sun,* he attached himself to the staff of the *London Chronicle.* After a visit to the United States he published, in 1842, his *American Notes for General Circulation* but a much more admirable result of his visit was *Martin Chuzzlewit.* This was certainly the greatest of his humorous works since the *Pickwick Papers; Bleak House; Hard Times; Little Dorrit; The Tale of Two Cities; Great Expectations; Our Mutual Friend,* and other novels equally celebrated succeeded one another with almost periodical punctuality, and an audience larger than any English author ever had awaited each. In 1850 he commenced a weekly periodical entitled *Household Words,* afterward merged in *All the Year Round.* In 1867 he again visited the United States, gave numerous readings, and met with a brilliant reception. He was until the last engaged in writing a new novel, *The Mystery of Edwin Drood,* which was left unfinished at his death in 1870.

Dickinson, Don M., lawyer, was born at Port Ontario, N. Y., 1846, removed to Michigan in 1848. Graduated from the law department of the University of Michigan in 1866, and since 1867 has been a practicing lawyer in the West, New York, and Washington. He was postmaster-general of the United States, 1887-89. Member of many legal, municipal, financial, historical, and other associations.

Dickinson, Jacob McGavock, lawyer, secretary of war, was born in Columbus, Miss., in 1851; graduated from the University of Nashville and studied law at Columbia College, New York, in Paris, and at the University of Leipzig; LL.D., Columbia University of New York and University of Illinois; was assistant attorney-general of the United States, 1895-97. He was secretary of war 1909-11.

Dicksee, Francis Bernard, English painter and royal academician, was born in London in 1853. He was educated at Rev. G. Henslow's school, London. First exhibited at academy, 1876.

Diderot (*dēd'rō*), **Denis,** celebrated French encyclopedist and philosophical writer, was born at Langres, France, 1713. His great work was the *Encyclopedie,* begun in 1749, of which he and D'Alembert were the joint editors. He died in 1784.

Dielman (*dēl'man*), **Frederick,** American artist, was born in Hanover, Germany, 1847, and came to United States in childhood; graduated at Calvert College. He has been president of the National Academy of Design since 1899; member of art commission, New York, 1901-03; etc. Since 1903 he has been professor of descriptive geometry and drawing in the College of the City of New York.

Dilke (*dilk*), **Rt. Hon. Sir Charles Wentworth,** English statesman and writer, was born at Chelsea, near London, 1843. He was graduated at Cambridge, studied law and is a barrister of the Middle Temple. Was under-secretary of state for foreign affairs, 1880-82; chairman of royal commission for housing of the working-class, 1884-85; chairman of select committee on income tax, 1906.

Dill, James Brooks, lawyer, jurist, was born at Spencerport, N. Y., 1854; graduated at Yale, 1876; New York University Law School, 1878; admitted to bar, 1878; for many years a noted corporation lawyer; since 1905 judge of court of errors and appeals, New Jersey. Died, 1911.

Dillmann (*dil'män*), **Christian Friedrich August,** German orientalist and theologian, was born in Würtemberg, 1823. He studied at Tübingen. In 1854 he accepted a call to Kiel, where he became professor of oriental languages in 1860, but was transferred in 1864 to the chair of old testament exegesis at Giessen, which in 1869 he resigned to become Hengstenberg's successor at Berlin. Died in 1894.

Dillon, John, Irish politician and leader, was born in New York in 1851, and was educated at the Catholic University of Dublin. In parliament he distinguished himself by the violence of his language. From 1883 to 1885 he was absent from political life on account of ill-health; but in the latter year he was elected for East Mayo, and has since represented that constituency in parliament.

Dinwiddie (*din-wid'i* or *din'wid-i*), **Robert,** governor of Virginia from 1752 to 1758, was born in Scotland about 1690. His rule as governor was not successful, his ill-temper and avarice making him very disagreeable to his subjects. He was the first to suggest to the British board of trade the taxing of the colonies. He discerned Washington's military ability, and made him adjutant-general of one of the four military districts of Virginia. He died in England in 1770.

Diocletian (*dī'ō-klē'shan*), **Valerius Diocletianus,** Roman emperor, was born in Dalmatia in 245, and reigned from 284 to 305. After the death of Numerianus, he was chosen to succeed him by the troops at Chalcedon. In the year 305, Diocletian, being worn out by work, resigned his position as emperor and went to Salona, in Dalmatia, where he died eight years later. His reign has become memorable for the persecution of the Christians.

Diogenes (*dī-oj'ē-nēz*), philosopher of the school of cynics, was born in Asia Minor about 412 B. C. Becoming a citizen of Athens, he made himself notorious by his abnegation of all social laws and customs, lived upon alms, and took up his abode in a tub. Died at Corinth, 323 B. C.

Dionysius (*dī'ō-nish'i-us*), **the Elder,** tyrant of Syracuse, in Sicily, was born about 430 B. C. Not content with his military renown, he wrote poems and tragedies, and at one time gained a prize at Athens for the tragedy *The Ransom of Hector.* He died at Syracuse in 367 B. C.

Dionysius of Halicarnassus, critic, historian, and rhetorician, was born about 66 B. C., went to Rome in 29 B. C., and died there about 7 B. C. His Greek *Archæologia,* a history of Rome down to 264 B. C., is a mine of information about the constitution, religion, history, laws, and private life of the Romans.

Disraeli (*diz-rā'li* or *diz-rē'li*), **Benjamin,** earl of Beaconsfield, eminent statesman and novelist, was born in London in 1804. He entered the house of commons in 1837, and remained a member until his elevation to the house of lords in 1876. In 1852, and again in 1858 and 1866, he was chancellor of the exchequer under the earl of Derby, and carried the reform act of 1867. In 1868, on the retirement of Lord Derby, he became premier, but resigned the same year. In 1874 he was again in office, which he held until defeated by Gladstone in 1880. Lord Beaconsfield's career as an author was even longer than his political career. His first novel, *Vivian Grey,* appeared in 1826, when he was little more than twenty-one years of age; his last, *Endymion,* appeared in 1880, only a few months before his death. He died at London in 1881.

Dix, John Adams, American statesman and general, was born at Boscawen, N. H., 1798; entered the army in 1812, and rose to the rank of adjutant-general in 1830. From 1833 he was successively secretary of state, United States senator, and secretary of the treasury. He became minister to France, 1866-69, and became governor of New York in 1872. He died in 1879.

Dix, Morgan, Protestant Episcopal clergyman, was born in New York in 1827; graduated from Columbia, 1848; B. D., General theological seminary, 1852; S. T. D., D.C.L., D.D. Author: *Sermons, Doctrinal and Practical; Lectures on the Authority of the Church; Good Friday Addresses;* etc.

Dixon, Joseph M., lawyer, United States senator, was born at Snow Camp, N. C., 1867; graduated from Guilford College, North Carolina, 1889; was admitted to the bar in 1892; member of the fifty-eighth and fifty-ninth congresses, and elected to the United States senate to succeed Hon. W. A. Clark for the term 1907-13.

Dixon, Thomas, Jr., lecturer and author, was born in Shelby, N. C., 1864; graduated at Wake Forest College, N. C., 1883; Greensboro, N. C., Law School, 1886; admitted to bar, 1886; member of North Carolina legislature, 1881-86; resigned to enter Baptist ministry, 1886; pastor at Raleigh, N. C., 1887; Boston, 1888-89; New York, 1889-99.

Doane (*dōn*), **Rt. Rev. William Croswell,** Protestant Episcopal clergyman, bishop of Albany, was born at Boston, Mass., 1832; graduated at Burlington College, N. J., 1850; D.D., LL.D., D.C.L.; established the sisterhood of the Holy Child Jesus. Author: *Mosaics of the Harmony of the Collects, Epistles, and Gospels; two volumes of Addresses* to the graduates of St. Agnes' school. Died 1913.

Dobson, Henry Austin, English poet and man of letters, was born in 1840; educated at Coventry and Strassburg, and early turned his attention to literature. He contributed largely to the *Biographies of Great Artists.* Author: *Thomas Bewick and His Pupils; Four Frenchwomen; Eighteenth Century Vignettes; A Paladin of Philanthropy; Sidewalk Studies;* etc.

Dodge, Grenville Mellon, soldier, railway official, was born at Danvers, Mass., 1831; graduated C.E., Norwich University, Vermont, 1851; LL.D., 1892. Was engineer on Illinois Central and Rock Island roads; brigadier-general of volunteers, 1862, and major-general of volunteers, 1864, resigning in 1866; chief engineer of Texas and Pacific railway, 1871-81. Member of congress, second Iowa district, 1867-69. Succeeded General Sherman as president of society of army of Tennessee; commander-in-chief of military order of loyal legion, 1907-08.

Dodge, Mary Abigail, American writer, was born in Massachusetts, 1830; wrote several books of merit, and contributed largely to the periodical press under the *nom de plume* of "Gail Hamilton." Died 1896.

Dohme, Alfred Robert Louis, manufacturing chemist, was born in Baltimore, Md., 1867; graduated from Johns Hopkins University, 1886; Ph.D., 1889. Elected lecturer of pharmacy at Johns Hopkins University, medical department, 1901. In business as manufacturing chemist

since 1891; member of numerous chemical and other scientific societies.

Dolci (*dōl'chē*), or **Dolce, Carlo, or Carlino,** Florentine painter, was born in 1616, died in 1686. He devoted himself chiefly to sacred subjects, and excelled in small pictures.

Dole, Charles Fletcher, Unitarian clergyman, was born at Brewer, Me., 1845; graduated from Harvard, 1868, A. M., D. D.; since 1876 minister of First Congregational (Unitarian) church, Jamaica Plain, Boston. Author: *The Citizen and the Neighbor; Jesus and the Men About Him; The Smoke and the Flame; From Agnosticism to Theism; The Spirit of Democracy.*

Dole, Nathan Haskell, American author, was born at Chelsea, Mass., 1852; graduated from Harvard, 1874; became literary and musical editor of Philadelphia *Press;* literary adviser of T. Y. Crowell & Co. Author: *Young Folk's History of Russia; Famous Composers* (2 volumes); *Not Angels Quite; Six Italian Essays;* etc.

Dole, Sanford Ballard, statesman and jurist, was born in Hawaiian islands, 1844; educated at Oahu College, Hawaii and Williams College, Mass.; studied law in Boston; became president of Hawaii by provision of constitution of 1894 that he should hold that office until 1901; was strong advocate of annexation of Hawaii to United States, and in 1898 visited the United States in that behalf. He was appointed governor of the territory in 1900, after its annexation to the United States; resigned the governorship in 1903, and has since been United States district judge of the territory.

Dollinger (*dōl'ing-ẽr*), **Johann Joseph Ignaz,** eminent German theologian, was born at Bamberg in 1799. In 1826 he was appointed professor of ecclesiastical history and canon law at the University of Munich. He was very prominent in the struggle which took place in the Roman Catholic church over the dogma of the infallibility of the pope. Died at Munich, 1890.

Dolliver, Jonathan Prentiss, lawyer, orator, United States senator, was born near Kingwood, Preston county, W. Va., 1858; graduated from West Virginia University,1875; LL. D. Admitted to bar, 1878; established practice at Ft. Dodge, Iowa. Member of congress from the tenth Iowa district, 1889-1901; appointed United States senator to succeed late Hon. J. H. Gear; elected in 1902, and reëlected in 1907. Died 1910.

Dollond (*dol'und*), **John,** English optician, was born in London in 1706. He was originally a silk weaver of Spitalfields, London, but studied science, and with his son established a manufactory of optical instruments. Died 1761.

Domenichino (*dō-mā'nē-kē'nō*), or **Domenico Zampieri,** Italian painter of the Bolognese school, was born in Bologna in 1581 and died at Naples in 1641.

Dominic (*dom'i-nik*), founder of the order of monks called Dominicans, was born in Castile, Spain, 1170. He studied at the University of Palencia, and in 1194 became canon of the cathedral at Osma. In 1204 he went to Languedoc, France, and preached with much vehemence against the Albigenses. As a result of this crusade against heresy he founded the order of the Dominicans, which was confirmed by papal order in 1216. He died in Bologna in 1221.

Donaldson, Henry Herbert, neurologist; graduated from Yale, 1879; Sheffield scientific school; fellow of Johns Hopkins, 1881-83; Ph.D., 1885; D.Sc; professor and head of department of neurology, University of Chicago, 1892-1906; professor of neurology, Wistar Institution of Anatomy, Philadelphia, since 1906.

Donatello (*don'ā-tel'lō*), properly **Donaro di Betto di Bardi,** one of the revivers of sculpture in Italy, was born in Florence in 1386. The "St. Peter" and "St. Mark" in the church of St. Michael in Florence were his first great works. Died in Florence, 1466.

Donizetti (*dō'nē-dzet'tē*), **Gaetano,** celebrated Italian composer, was born at Bergamo, Lombardy, 1797, and studied at Bologna. He devoted himself chiefly to dramatic music and produced over sixty operas; among the number *Lusia di Lammermoor.* He died in 1848.

"Dooley, Mr." See **Dunne, Finley Peter.**

Dora d'Istria (*dō'rā dēs'trē-ā*). See **Ghika, Helene.**

Doré (*dō'rā'*), **Paul Gustave,** French painter and book illustrator, was born in Strassburg in 1833, and educated at a Parisian lycée. He became known by his illustrations of *Rabelais* and *Don Quixote,* and for some years was a constant contributor to the *Journal pour Rire.* He afterward devoted himself to the production of large pictures on religious subjects. Died 1883.

Doria (*dō'rē-ā*), **Andrea,** Genoese naval commander and admiral, who distinguished himself in the service of several states, but chiefly in that of the Genoese republic, was born in 1468. Died 1560.

Dorion (*dō'rē'ôN'*), **Sir Antoine Aime,** Canadian statesman and jurist, was born in the province of Quebec in 1818. He was educated at Nicolet College, early studied law and in 1842 was admitted to the bar; member of the Dominion parliament, 1862-67. From 1867 he served on the judiciary of the province of Quebec, first as associate and latterly as chief-justice. He was a member of the British privy council, and was knighted in 1877. Died at Montreal, 1891.

Dorr, Thomas Wilson, American politician, was born in Providence, R. I., 1805; graduated from Harvard, 1823. He died in 1854.

Dostoveysky (*dās'tā-yef'skē*), **Feodor Mikhailovitch,** Russian novelist, was born at Moscow in 1821. His masterpiece, *Crime and Punishment,* is one of the most powerful realistic works of modern fiction. He died in 1881.

Douglas, Stephen Arnold, American statesman, styled the "little giant," was born at Brandon, Vermont, 1813. In 1833 he went West and settled in Jacksonville, Ill., where he entered on the practice of law. He soon after was elected to the legislature, and in 1840 became secretary of state for Illinois. He was judge of the Illinois supreme court from 1841 to 1843. Douglas was elected to the senate in 1847, and it was as a member of the senate that he introduced, in 1854, the Kansas-Nebraska bill. In 1858 he was a candidate for the United States senate, and held a series of joint debates with Abraham Lincoln, his opponent. In 1860 the democratic party split into two divisions, one of which nominated Douglas for president, and the other John C. Breckenridge. He died in 1861.

Douglas, William Lewis, manufacturer, ex-governor of Massachusetts, was born in Plymouth, Mass., 1845; at age of seven he went to work for an uncle, who set him to pegging shoes; worked in cotton mill at Plymouth at fifteen, and later in factory at Chiltonville, Mass.; afterward went to Hopkinton and South Braintree, Mass., where he learned bootmaking; at Brockton, 1876, began with small shop, from which he has built up a business with combined capacity of over 15,000 pairs of shoes daily, and owns seventy-five retail shoe stores in large cities selling the "Douglas" shoe. Member of Massachusetts house of representatives, 1883-84, and of Massachusetts senate, 1886-87; elected governor of Massachusetts, 1904.

Douglass, Frederick, American orator, a mulatto slave, was born at Tuckahoe, near Easton, Maryland, in 1817. In 1838 he escaped from a Baltimore shipyard to the Northern states, and changed his name from Lloyd or Bailey to Douglass. In 1847 he started *Frederick Douglass's Paper,* a weekly abolition newspaper, at Rochester, New York. United States marshal for the District of Columbia 1876-81; recorder of deeds there, 1881-86; and United States minister to Hayti, 1889-91. He died at his home near Washington, 1895.

Dow, or **Dou, Gerard,** Dutch painter, was born at Leyden in 1613. He studied under Rembrandt, 1628-31, and at first mainly occupied himself with portraiture, but soon turned to genre. He died in 1675.

Dow, Neal, temperance reformer, was born in Portland, Me., 1804, of Quaker parentage. In 1851, while a member of the state legislature, he secured the passage of what is called the "Maine law," which, under severe penalties, prohibited the sale of intoxicating liquors. He was twice chosen mayor of Portland, and during the civil war served as brigadier-general of volunteers, holding at different times three separate commands. Died, 1897.

Dowden (*dou'den*), **Edward,** British critic and editor, professor of English literature, University of Dublin, since 1867, was born in Cork, 1843; graduate of Dublin University; M.A., LL.D., D.C.L., Litt.D. Clark lecturer in English literature, Trinity College, Cambridge, 1893-96. He has written: *Shakespeare: His Mind and Art; Studies in Literature; Life of Shelley; A History of French Literature; Puritan and Anglican;* Wordsworth's *Poetical Works,* etc.

Doyle, Sir A. Conan, Scottish novelist and physician, was born in Edinburgh, 1859, educated at Stonyhurst and in Germany. From 1882 until 1890 he practiced medicine at Southsea, writing all the while various short stories, some of which have been since published. After *A Study in Scarlet, Micah Clarke,* and *The Sign of Four* came *The White Company,* which led to the final abandonment of medicine for literature. *The Adventures of Sherlock Holmes* and *The Memoirs of Sherlock Holmes* formed a brilliant series of detective stories. He volunteered for service in the Transvaal war, and, in 1900, gave his medical services for some months in the hospitals there, and afterward published a history of the war, entitled *The Great Boer War.* Knighted in 1902.

Draco (*drā'kō*), archon of Athens and celebrated lawgiver, lived in the last half of the seventh century. He first gave stability to the state by committing the laws to writing and establishing the ephetae, or court of appeal, 621 B. C. Draco is said to have justified the severity of his code by maintaining that the smallest crime deserved death, and he knew no severer punishment for greater.

Drake, Sir Francis, eminent English navigator, was born of obscure parentage in 1540, at Tavistock, England, and first served at sea under Sir John Hawkins, his relative. With five small vessels he sailed in 1577 to attack the Spaniards in the South seas. In this expedition he ravaged the Spanish settlements, coasted the North American shore as far as latitude forty-eight degrees north, and took possession of the country under the name of New Albion. Elizabeth dined on board his ship at Deptford, and knighted him in 1580. In 1585 he successfully attacked the Spaniards in the West Indies; in 1587 he destroyed many ships at Cadiz; and in 1588 as vice admiral he participated in the destruction of the armada. He died at Nombre de Dios in 1596.

Drake, Joseph Rodman, American poet, was born in New York in 1795; graduated from Columbia College, 1815, and became an intimate friend of Fitz-Greene Halleck. He died in New York in 1820.

Drake, Samuel Gardner, American antiquarian and writer, was born in Pittsfield, N. H., 1798. He opened an antiquarian book-store in Boston in 1828, and wrote and published various works including *Indian Biography, History and Antiquity of Boston.* Died, 1875.

Draper, Andrew Sloan, educator, commissioner of education, state of New York, 1904-13; was born in Westford, N. Y., 1848. Member of board of education, Albany, N. Y., 1878-80, 1890-92; member of state normal college board, 1882-86; judge of United States court of Alabama claims, 1885-86; superintendent of instruction, Cleveland, Ohio, 1892-94; president of University of Illinois, 1894-1904. Died 1913.

Draper, Eben Sumner, manufacturer, governor of Massachusetts, was born in Hopedale, Mass., 1858. He became an active officer in the operations of the Draper company. Chairman of republican state committee, 1892. Director of Boston and Albany railroad, National Shawmut bank. Member of corporation of Massachusetts Institute of technology, Home Market club, etc. In 1898, through Massachusetts volunteer aid association, raised $200,000 for hospital ship *Bay State* for Spanish-American war. In 1907 he became lieutenant-governor of Massachusetts, and in 1909, governor.

Draper, John William, American chemist, physiologist, and author, was born in England, 1811. He took his degree of M.D. at the University of Pennsylvania in 1836. From 1850 to 1873 he was also president of the New York Medical College. He was a noted investigator in spectrum analysis and in photography. He died in 1882.

Drew, John, actor, was born in Philadelphia, Pa., 1853. First appearance, 1873, Arch Street theater, Philadelphia, as Plumper in *Cool as a Cucumber;* starred, 1892, playing Dr. Paul Blondet in *The Masked Ball,* and Frederick Ossian in *The Butterflies* with Maude Adams; has since starred in *The Bauble Shop, Rosemary, The Squire of Dames, The Tyranny of Tears,* etc.

Dreyfus (*drā'fus'*), **Alfred,** French army officer, was born about 1859 at Mulhausen in Alsace, the son of a rich Jewish manufacturer; was taken in 1874 to Paris. He was an artillery captain, attached to the general army staff, when in 1893-94, for delivering to a foreign government documents connected with the national defense, he was court-martialed, degraded, and transported to Devil's island, French Guiana. The efforts of his wife and friends to prove him an innocent victim of malice, injustice, and forgery plunged France into a chaos of militarism and anti-Semitism and he was not reinstated until July, 1906.

Dreyse (*drī'zē*), **Johann Nikolaus von,** German inventor, was born at Sömmerda near Erfurt, Prussia, 1787. He founded ironworks in Sömmerda, and from 1824 manufactured percussion caps. In 1827 he invented a muzzle-loading, and in 1836 a breech-loading needle gun—adopted in the Prussian army in 1841. He was ennobled in 1864, and died in 1867.

Driver, Samuel Rolles, biblical scholar, regius professor of Hebrew, and canon of Christ Church, Oxford, since 1883, was born in Southampton, England, 1846. He was educated at Winchester College, and New College, Oxford; Litt.D., D.D.; member of Old Testament Revision company, 1876-84; examining chaplain to bishop of Southwell, 1884-1904. Author: *A Treatise on the Use of the Tenses in Hebrew; Isaiah; His Life and Times.*

Droysen (*droi'zen*), **Johann Gustav,** German historian, was born at Treptow, Prussia, 1808, and became lecturer on history in the University of Berlin in 1833. He published, *History of Alexander the Great, History of Hellenism.* Died 1884.

Drummond, Hon. Sir George Alexander, Canadian legislator and financier, was born in 1829. He became a member of the upper house of the Dominion parliament in 1888, and is now chairman of the banking and commerce standing committee of the senate.

Drummond, Sir George Gordon, British soldier, was born in 1772, died in 1854. He entered the British army as ensign, 1789; planned and effected the capture of Fort Niagara, and planned the successful attack on Black Rock and Buffalo; led a combined military and naval force against Oswego and destroyed the American works and stores, 1814; was in command of the British forces at the battle of Lundy's Lane, July 25. In 1815 he was appointed governor-general of Canada, resigned and returned to England.

Drummond, Henry, Scottish clergyman and author, was born in Stirling, Scotland, 1851; educated at Edinburgh and Tübingen. He wrote *The Greatest Thing in the World,* intended to expound and commend the first principles of the Christian faith. His last work except one, published posthumously,

entitled *The Ideal Life*, was *The Ascent of Man*, in which he places an altruistic element in the process of evolution. Died, 1897.

Drummond, James, British biblical scholar, principal of Manchester College, Oxford, 1885-1906, was born in Dublin, 1835. He was educated at Trinity College, Dublin, and Manchester New College, London; LL. D., Litt. D., M. A., D. D., professor of theology in Manchester New College, London, 1869; succeeded Dr. Martineau as principal, 1885; removed with the college to Oxford, 1889; retired, 1906. Autho : *Spiritual Religion; Sermons on Christian Faith and Life; The Jewish Messiah; Introduction to the Study of Theology; Via; Veritas, Vita*, etc.

Drusus (*drōō'sus*), **Nero Claudius,** commonly called Drusus Senior, stepson of the emperor Augustus, and younger brother of the emperor Tiberius, was born in 38 B C. In 13 B. C. he was sent into Gaul, then in revolt, and, after crushing the rebels there, pushed across the Rhine in pursuit of their German allies. From this time he made the business of his life to establish the Roman supremacy in Germany, partly by conquest, and partly by the execution of great military works. A fall from his horse cut short his brilliant career in 9 B. C.

Dryden, John, English poet, was born in Northamptonshire, 1631. After graduating at Cambridge, he entered upon a literary career, and succeeded Sir William Davenant as poet laureate in 1670. His essay on *Dramatic Poesy*, according to Dr. Johnson, created the school of English criticism. Dryden, by his dramas and political satires—especially his *Absalom and Achitophel*—occupies a high place among English poets. He made numerous translations from the classics—especially Vergil, Juvenal, and Ovid—and his dramatic work almost equals his verse. Died, 1700.

Du Barry (*dü bà'rē'*), **Marie Jeanne Gomard de Vaubernier, Comtesse,** favorite of Louis XV., was born in 1746, at Vaucouleurs, the daughter of a dressmaker. Her influence reigned supreme until the death of Louis in 1774, when she was dismissed from court. She was tried before the revolutionary tribunal for having wasted the treasures of the state and worn mourning for the late king, and was guillotined, 1793.

Du Bois-Reymond (*dü bwä'rā'mōn'*), **Emil,** German physiologist, was born in Berlin in 1818. His name is chiefly identified with animal electricity, the subject of his chief work, which has given him a commanding place among modern scientists. Two volumes of his collected memoirs and addresses appeared in 1885-87. Died, 1896.

Du Bose, William Porcher, Protestant Episcopal clergyman, was born in South Carolina, 1836. He was educated at the military academy of South Carolina and the University of Virginia; S. T. D., D. C. L., D. D. While a student for the ministry he entered the military service of the confederacy, 1861; became chaplain and professor, University of the South, 1871; after continuous service in this university for over thirty-six years, he resigned active duties in the summer of 1908.

Du Chaillu (*dü shà'yü'*), **Paul Belloni,** American traveler, was born in Louisiana, 1835. In 1855 he sailed to West Africa, where he spent four years. His *Explorations in Equatorial Africa* gave important contributions to geographical, ethnological, and zoölogical science, but was received at first with much distrust. Died, 1903.

Dudevant (*düd'vänʼ*), **Aurore.** See **Sand, George.**

Dufferin (*duf'ēr-in*), **Frederick Temple Hamilton Blackwood, Marquis of,** British statesman, was born in Florence, Italy, 1826. He graduated from Christ Church, Oxford, and in 1841 succeeded to his father's title. In 1860 he became British commissioner in Syria, and served as under-secretary of state for India from 1864 until 1866, and later, for a short time, was under-secretary of war. From 1868 until 1872 he was chancellor of the duchy of Lancaster; governor-general of Canada, 1872-79; ambassador to Russia, 1879-81; governor-general of India, 1884-88; ambassador to Italy, 1888-91; and ambassador to France, 1891-96. He was made an earl in 1871. Died, 1902.

Du Guesclin (*dü ge'klanʼ*), **Bertrand.** See **Guesclin.**

Dumas (*dü'mà'*), **Alexandre, the Elder,** French novelist and dramatist, was born in Villers-Cotterets, 1802, son of General Dumas, a Creole. His romances are numerous, but he reached the climax of his fame in *Monte Cristo*, in 1844, and the *Three Musketeers* the year after. Latterly he lived at Dieppe, broken in health and impaired in intellect, ministered to by his son and daughter. Died, 1870.

Dumas, Alexandre, the Younger, was born in 1824. He was a son of the preceding, and, like him, a novelist and dramatist. He accompanied his father on a voyage to the Mediterranean in 1846, and in 1848 produced the work which made his reputation *La Dame aux Camélias*. Subsequently his work was chiefly dramatic, and includes such plays as *Le Demi-Monde, La Princesse Georges, Monsieur Alphonse*, and *Denise*. In 1874 he was admitted to the French Academy. Died, 1895.

Dumas, Jean Baptiste distinguished French chemist, was born at Alais, in the department of Gard, 1800. In 1821 he was appointed tutor in the polytechnic school, at Paris, and then professor of chemistry in the Ecole de Medicine. His researches in organic chemistry, on atomic weights, sulphuric ether, and the law of "substitutions" attracted the attention of all Europe. In 1848 he was a member of the legislative assembly; and in 1849-51 held the portfolio of agriculture and commerce. Died, 1884.

Du Maurier (*dü mō'ryā'*), **George Louis Palmella Busson** artist and draughtsman, was born in Paris in 1834; educated in London, Belgium, and the Netherlands. For many years a valuable art contributor to *Punch*. In 1891 he published a novel, *Peter Ibbetson*, followed by *Trilby* in 1894. Died, 1896.

Dumouriez (*dü'mōō'ryā'*), **Charles Francois,** French general, was born at Cambria, 1739; entered the army in 1757, and served in Germany during the Seven Years' war. In 1792 he overthrew the Austrians under the duke of Sachsen-Teschen and Clairfait at Jemappes; but at Neerwinden he sustained a severe defeat from the Austrians under Coburg, with whom he entered into a plot to restore the monarchy. Reports of his meditated treason, however, reached the government at Paris, and an order of arrest was issued against him. This he succeeded in evading, and escaped across the border. He died an exile at Turville Park, near Henley-upon-Thames, 1823.

Duncker (*dōōng'kēr*), **Maximilian Wolfgang,** German historical writer, was born at Berlin 1811. He became professor of history at Halle in 1842; sat in the national assembly, 1848, and as a liberal in the Prussian chamber, 1849-52; was called to a Tübingen chair in 1857, and thence recalled in 1859 to Berlin to fill a post in the ministry of state. Died, 1886.

Dundonald (*dun-don'ald*), **Thomas Cochrane, tenth Earl of,** English seaman, was born in 1775. Entering the navy when a boy, he early distinguished himself by the destruction of the French fleet in Basque roads by fireships, 1809. In 1823, having offered his services to Brazil in her war against Portugal, he swept the Portuguese fleet from Brazilian waters. In 1827 he commanded the Greek navy in the war of independence. He died in 1860.

Dunglison (*dung'gli-sun*), **Robley,** medical professor and author, was born in England in 1798. Was professor of materia medica and therapeutics in the University of Maryland, 1833-36, and of the institutes of medicine in Jefferson Medical College, Philadelphia, 1836-68. He translated and edited a number of foreign medical works, published about twenty original volumes. Died, 1869.

Dunne (*dun*), **Finley Peter,** journalist, author, was born in Chicago, 1867; educated in Chicago public schools; entered newspaper life as reporter, on editorial staff of Chicago *Evening Post* and *Times-Herald*, 1892-97; editor of Chicago *Journal*, 1897-1900. Author: *Mr. Dooley in Peace and in War; Mr. Dooley in the Hearts of His Countrymen; Mr. Dooley's Philosophy; Mr. Dooley's Opinions; Observations by Mr. Dooley*; etc.

Dunning, William Archibald, historian, educator, professor of history, Columbia University, since 1891, was born in Plainfield, N. J.; graduated from Columbia, Ph. D., LL. D.; was managing editor of *Political Science Quarterly*, 1894-1903.

Dunois (*dü'nwà'*), **Jean, Count of Dunois and Longueville,** was born in Paris, 1402, the natural son of Louis, duke of Orleans, brother of Charles VI. His first great achievement was the defeat of the English at Montargis, 1427. In 1429 Dunois and the maid of Orleans won the battle of Patay. Shortly after Joan's tragical death, Dunois took Chartres, the key of Paris, forced Bedford to raise the siege of Lagny, chased the enemy from Paris, and soon deprived them of all their conquests except Norandy and Guienne. He died in 1468. No French hero is more popular than Dunois.

Duns Scotus (*dunz skō'tus*), **John,** famous Franciscan monk and divine, was born about 1265. He appears to have been educated at Oxford, where in 1301 he became professor of theology. Duns Scotus, as one of the most eminent of the Franciscans, was a chief opponent of the teachings of the Dominicans, the two parties representing at that time two different schools of theology.

Dunstan (*dun'stan*), **Saint,** English prelate, was born in 925, died in 988. Under several kings he wielded great influence. He was made archbishop of Canterbury in 959 by Edgar, whom he absolutely ruled. On Edgar's death he raised Edward to the throne, but on the accession of Ethelred his power was broken.

Du Pont, Henry Algernon, United States senator, soldier, was born near Wilmington, Del., 1838; graduated at West Point, 1861, at head of class, and served throughout the civil war, in which he gained the rank of colonel. Elected United States senator, 1906, for the term 1906-11.

Dupont, Samuel Francis, American rear-admiral, was born at Bergen Point, N. J., 1803. In the summer of 1861 he was given command of the Atlantic blockading squadron. He also commanded the expedition which captured Port Royal harbor in the same year. He resigned his command in 1863, and died at Philadelphia in 1865.

Dupré (*dü'prā*), **Jules,** celebrated French painter, was born in 1812. He excels as a landscape painter, and his work is noted for its refined poetic taste as well as for its bold and vigorous drawing. He died in 1889.

Duquesne (*dü'kān'*), **Abraham, Marquis,** French naval officer, was born at Dieppe, France, 1610, and first distinguished himself in 1637-43 in the war with Spain. He defeated De Ruyter and Van Tromp several times in 1672-73, and the united fleets of Spain and Holland off Sicily in 1676. Died, 1688.

Durer (*dü'rēr*), **Albrecht,** German artist, was born at Nüremberg in 1471. He was apprenticed to a painter in this native town, and some years later began designing on wood and engraving on copper. In 1505 he proceeded to Venice, and after his return painted his *Adam and Eve*, and *Assumption of the Virgin*, one of his finest works. He died at Nüremberg in 1528. Besides being the founder of the German school of art, Dürer ranks even higher as an engraver on metal and designer of woodcuts.

Duse (*dōō'zā*), **Elenora,** Italian actress, was born in Vigevano, 1861. She appeared about 1880 on the Italian, chiefly the Roman stage, as leading lady in the plays of Dumas and Sardou, but afterward played parts of greater depth. Her latest successes are D'Annunzio's *Gioconda* and *Francesca da Rimini*.

Dvorak (*dvôr'zhäk*), **Antonin,** composer, was born at Muhlhausen, Bohemia, 1841. Brahms introduced his compositions to Vienna; but the work which won for him the ear of all Europe was his *Stabat Mater*, which was first performed in London in 1883. In 1892-95 he was director of the conservatory at New York, where he wrote an American symphony. He subsequently lived at Prague, where he died in 1904.

Dwight, Theodore William, jurist, professor, and editor, was born in 1822 at Catskill, N. Y.; graduated at Hamilton College, 1840, and studied at Yale Law School. In 1858 he was chosen professor of municipal law in Columbia College. In 1874 he was appointed by Governor Dix, of New York, a judge of the commission of appeals. Died, 1892.

Dwight, Timothy, educator, theologian, was born at Northampton, Mass., 1752; graduated from Yale College. He was minister of Greenfield Hill, Conn., 1783, where he also successfully conducted an academy. In 1795 he was elected president of Yale College, which position he held until his death. Died, 1817.

Dwight, Timothy, educator, theologian, was born at Norwich, Conn., 1828; grandson of the above; graduated from Yale, 1849; D. D., LL. D.; studied theology at Yale, 1859-53; tutor at Yale, 1851-55; president of Yale University, 1886-99 . Member of American committee for revision of English version of the Bible. Author: *Thoughts of and for the Inner Life, Memoirs of Yale Life and Men.*

Eadie (*ē'dı̄*), **John,** British clergyman and writer, was born at Alva, Scotland, 1810; studied at Glasgow, and in 1835 became minister of a Glasgow United Presbyterian congregation; from 1843 he also lectured on exegesis in the college of his church. Died at Glasgow, 1876.

Eads (*ēdz*), **James Buchanan,** American engineer, was born at Lawrenceburg, Ind., 1830. He constructed the steel bridge over the Mississippi river at St. Louis, completed in 1874; partly carried out a plan of deepening the Mississippi by means of jetties. Died, 1887.

Eames (*āmz*), **Emma,** American prima donna soprano, was born at Shanghai, China, of American parentage, 1867. Made her début at the Paris grand opera, 1889; Covent Garden, London, in rôle of Marguerite in *Faust*, 1891. She resides chiefly at Torre de Campiglioni Vallombrosa, Italy.

Earle, George H., Jr., banker, lawyer, manufacturer, was born in Philadelphia, Pa., 1856; graduated from Harvard, 1879, A. M., 1904; was admitted to the bar, 1879. He is president of the Finance Company of Pennsylvania at Philadelphia; is active in a number of other financial institutions.

Earle, John, English scholar, was born at Elston, South Devon, 1824; was educated at Magdalen hall, Oxford, and became professor of Anglo-Saxon at Oxford, 1849-54, and again permanently from 1876. Among his books are: *The Philology of the English Tongue; Anglo-Saxon Literature*, etc. Died at Oxford, 1903.

Early, Jubal Anderson, soldier and lawyer, was born in Virginia, 1816; was graduated at the United States Military Academy, 1837. At the opening of the civil war he was appointed a colonel in the confederate army; was promoted brigadier-general, 1863; commanded a division at Fredericksburg and Gettysburg; was defeated by Sheridan near Winchester and at Fisher's Hill, Va., 1864, and was completely routed by General Custer at Waynesborough, 1865, after which he was relieved of his command. He subsequently practiced law in Richmond. Died, 1894.

East, Alfred, English landscape painter and etcher, was born at Kettering, 1849. He received his art education at the government school art, Glasgow, afterward at Ecole des Beaux Arts; has exhibited at the Royal academy since 1882 and, became an associate in 1880; is now president of the Royal Society of British artists.

Eastlake, Sir Charles Lock, English painter, was born at Plymouth, 1793. From 1809 he studied under Haydon, in the Royal academy schools,

and in Paris. When the *Bellerophon* put into Plymouth, Eastlake took a number of rapid sketches from a shore-boat, and produced two full-length portraits of Napoleon. He died at Pisa, 1865.

Eastman, George, inventor, was born in Waterville, N. Y., 1854; was educated in Rochester and New York, and first became an amateur photographer; began to manufacture dry plates on small scale, 1880; inventor of the kodak, and entered extensively into its manufacture; now treasurer and general manager of Eastman Kodak company.

Eaton, Arthur Wentworth Hamilton, Protestant Episcopal clergyman, was born in Kentville, Nova Scotia; graduated from Harvard, 1880; D. C. L. Ordained deacon, 1884, priest, 1885, in New York; priest in charge of parish, Chestnut Hill, Mass., 1885-86. Author: *The Heart of the Creeds; Historical Religion in the Light of Modern Thought; Acadian Legends and Lyrics.*

Eaton, Wyatt, American artist, was born at Phillipsburg, Canada, 1849. He studied in New York, and in Paris with Gérome. After spending some years in study, sketching and traveling in France and England, he opened a studio in New York; was one of the founders and the first secretary of the society of American artists. Died at Newport, R. I., 1896.

Ebers (*ā'b ĕrs*), **Georg Moritz,** German novelist and Egyptologist, was born at Berlin, 1837; studied jurisprudence at Göttingen, and oriental languages and archæology at Berlin. In 1870 he was made professor of Egyptology at Leipzig. He died at Tutzing Bavaria, 1898.

Ebner-Eschenbach (*āb'nĕr-esh'en-bäк*), **Marie, Baroness von,** Austrian novelist and poet, was born in Moravia, 1830. Since 1848 she has lived principally in Vienna. Her fame rests on her prose fiction. She is the foremost German woman writer of the day.

Eck (*ek*), **Johann Maier von,** German monk and theologian, was born at Eck, in Swabia, 1486. He was the son of a peasant, but raised himself by his abilities to the professorship of theology in the University of Ingoldstadt. He took a prominent part in opposition to Luther in the diet at Augsburg, 1530, and in the conferences of Worms and Ratisbon, 1540 and 1541. Died 1543.

Eckermann (*ek'ĕr-män*), **Johann Peter,** German writer and literary executor of Goethe, was born in Winsen, Germany, 1792. The publication of his *Beitrage zur Poesie* in 1823 led to his removal to Weimar, where he assisted Goethe in preparing the final edition of his works. Died, 1854.

Eddy, Mary Baker Glover, religious leader, founder of Christian Science, was born in Bow, N. H., 1822. She received a public school education, and was connected with the Congregational church until 1866, when she formulated what are known as the principles of Christian Science. In 1867 she began to teach them, and in 1879 founded the church of Christ in Boston, Mass. In 1883 started the *Christian Science Journal.* She is the author of *Science and Health, With Key to the Scriptures,* the Christian Science textbook; *Manual of the Mother Church,* and other works on related subjects. In 1908 Mrs. Eddy gave $1,000,000 for the establishment of a Christian Science institution for the promotion of the welfare of mankind. In 1907 she was decorated by the French government as an officier d'academie. Died 1910, Boston.

Edeson, Robert, actor, was born at Baltimore, Md., 1868. He was educated in the public schools at Brooklyn, N. Y., and made his first appearance on the stage in *Fascination* at the Park theater, New York, 1887. Later he appeared in *A Night Off; The Dark Secret; Incog.,* and *Under the Red Robe.* He has also starred in *The Climbers; Soldiers of Fortune; Strongheart,* and *Classmates.*

Edgeworth, Maria. English novelist, was born in Oxfordshire, 1767. She began to write fiction early in the nineteenth century, though she had previously taken an interest in educational topics. Her chief books treat mainly of the virtues and vices of humanity with a high moral aim. Died, in Ireland, 1849.

Edison, Thomas Alva, celebrated American inventor and electrican, was born at Milan, Ohio, 1847; invented many telegraphic appliances, including automatic repeater, quadruplex telegraph, etc. Established workshop at Newark, N. J., removing to Menlo Park, N. J., 1876, and later to West Orange, N. J. Was made chevalier, officer, and afterward commander of legion of honor, by French government; was given the honorary degree of Ph. D. by Union University, 1878, and has been variously honored by numerous scientific, educational, and other bodies.

Edmund, or **Eadmund,** king of the English, known as Ironside, was born about 981. He was the son of Ethelred "the unready," and was chosen king by the Londoners on his father's death, 1016. By a compromise with Canute, the latter retained Mercia and Northumbria, Edmund all the South and the headship, the survivor to succeed to the whole. A few weeks afterward Edmund died, 1016.

Edmunds, George Franklin, American lawyer and statesman, was born at Richmond, Vt., 1828; removed to Burlington, 1851; was a member of the state legislature 1854-60; took his seat in the United States senate as a republican from Vermont, 1866. He was returned 1869, 1875, 1881, and 1887, and succeeded Vice-president Arthur as president *pro tem.* of the senate after the death of President Garfield, 1881. Declined the appointment of associate justice of the United States supreme court, 1882; elected president *pro tem.* of the senate, 1883, and was author of the act prescribing the manner in which electoral votes for president shall be counted, 1886. He resigned the senatorship in 1891, and has since practiced law in Philadelphia.

Edward, or **Eadward,** "the confessor," king of the English, was born about 1004, son of Ethelred "the unready" was brought up at the Norman court, and after his accession, on the death of Hardicanute, in 1042, showed a preference for Norman customs and ideas. Edward codified the customary law of the Anglo-Saxons, which thus became known as the "laws of King Edward." Died, 1066.

Edward I., king of England, was born in 1239, succeeded his father, Henry III., in 1272. Imbued with high notions of feudal sovereignty, he sought to establish his supremacy throughout the island of Britain. A man of strictly legal, but somewhat narrow mind, he secured order and good government by the statutes of Winchester and Westminster and other enactments, and carried on Simon de Montfort's work of molding the English parliament, 1295, though, at the same time, somewhat inclined to strain the royal prerogative. His personal character was extremely high. Died 1307.

Edward II., king of England from 1307 to 1327, son of Edward I., was born at Carnarvon, 1284. In 1301 he was created prince of Wales, being the first heir apparent to the English throne who bore that title. His reign was a succession of disputes with the nobles and with Charles IV. of France. Finally his queen and the nobles revolted against him successfully in 1327, and Edward was murdered in Berkeley castle, having been deposed by parliament several months previous. He was succeeded by his son, who had already been named as Edward III. by parliament.

Edward III., king of England, eldest son of Edward II. and Isabella of France, was born in 1312. He was proclaimed king, 1327, during his father's captivity, and soon after marched with more than 40,000 men against the invading Scots, but concluded an inglorious campaign by a treaty in which the entire independence of Scotland was recognized.. In 1346 Edward gained over Philip the decisive battle of Crécy, which was followed by the siege and surrender of Calais and a truce which lasted until 1355. The war was renewed in France under his son Edward the Black Prince, who, in 1356, gained the memorable victory of Poitiers, in which he took King John of France prisoner. Edward was succeeded by his grandson Richard II. Died, 1377.

Edward IV., king of England, was born in Rouen in 1441 or 1442. He was the son of Richard, duke of York, led a force into London during the war of the Roses, 1461, and was proclaimed king by parliament while Henry VI. was still alive. In 1474 Edward formed an alliance with the duke of Burgundy, and made preparations for a war in support of his claim to the throne of France. He passed over to Calais, but the expedition proved fruitless through the dereliction of his ally Charles the Bold of Burgundy, with whom the kingdom was to have been divided. During the latter part of his life Edward was sunk in indolence and pleasure. He left five daughters, of whom Elizabeth was afterward married to Henry VII., and two sons, the ill-fated princes, Edward and Richard. Died, 1483.

Edward VI., king of England, son of Henry VIII. by his third wife, Jane Seymour, was born in 1537. He succeeded to the throne at his father's death in 1547, his uncle, the earl of Hertford, being chosen protector and created duke of Somerset. Henry's famous six articles were repealed, and a new book of common prayer was issued. His reign was marked by the restoration of many of the grammar schools suppressed by Henry VIII.

Edward VII., king of the united kingdom of Great Britain and Ireland, and of all the British dominions beyond the seas, emperor of India, eldest son of Queen Victoria, was born at Buckingham Palace, 1841. He studied at Edinburgh, and subsequently at Oxford and Cambridge. As prince of Wales he bore his full name, Albert Edward. In 1860 he visited the United States and Canada; and in 1863 married the princes Alexandrea. He made a visit to India in 1875-76. He has constantly manifested a lively interest in exhibitions, charitable institutions, the housing of the poor, and agriculture. He assisted in promoting the Royal College of Music; and the Imperial Institute was due to his suggestion. On January 22, 1901, he succeeded his mother as Edward VII. By visits to continental capitals the king has done much to allay international animosities and promote peace and goodwill, especially as between Britain and France. Died, 1910, and was succeeded by his son George V.

Edward, the Black Prince, eldest son of Edward III., was born in 1330, and was created earl of Chester, 1333, duke of Cornwall, 1337, and prince of Wales, 1343. In 1346, though only a boy, he fought at Crécy, and is said to have won from his black armor his popular title—In 1361 he married his cousin, Joan, the "fair maid of Kent," who bore him two sons, Edward and the future Richard II.; in 1362 his father created him prince of Aquitaine, and next year he departed to take possession of his principality. In 1367 he espoused the cause of Pedro the Cruel, and at Navarrete won his third great victory, taking Du Guesclin prisoner. He died, 1376.

Edwards, Amelia Blandford, British novelist and Egyptologist, was born in London, 1831. She also published a volume of *Ballads,* and, besides books of holiday travel in Belgium and the Dolomites, *A Thousand Miles up the Nile,* in 1877. She died at Weston-super-Mare, 1892.

Edwards, Jonathan, celebrated American divine and metaphysician, was born at Windsor, Conn., 1703. He was graduated from Yale in 1720, and toward the close of 1723 was appointed tutor in Yale College. In 1726 he accepted an invitation to become colleague to his maternal grandfather, Mr. Stoddard, in a church at Northampton, Mass., and was ordained in 1727. Here he labored with intense zeal for more than twenty-three years, at the end of which period he was dismissed by his congregation. Edwards was a powerful and impressive preacher, somber, and even gloomy in his religious opinions and sentiments, but earnest, unaffected, and nobly conscientious. After his dismissal in 1750 he became a missionary among the Indians of Massachusetts. While residing at Stockbridge, in that state, he composed his famous treatise on the *Freedom of the Will* and *Original Sin.* In 1757 he was chosen president of Princeton College, New Jersey, but died in 1758.

Edwards, Julian, American composer, was born in Manchester, England, 1855. He studied music under Sir Herbert Oakeley, Edinburgh, and Sir George Macfarran, London; composed several operettas played in British provinces, and became conductor of the Royal English opera company. He came to the United States in 1888.

Egan (*ē'gan*), **Maurice Francis,** educator, author, diplomat, was born in Philadelphia, Pa., 1852; graduated at La Salle College; entered Georgetown College, 1875; LL. D., Georgetown, 1879; J. U. D., Ottawa University, 1891; was on the editorial staff of McGee's *Illustrated Weekly, Catholic Review,* and *Freeman's Journal;* professor of English literature, University of Notre Dame, Ind., 1888-95; and at Catholic University of America, 1895-1907. In 1907 appointed, United States minister to Denmark.

Eggleston (*eg'lz-tun*), **Edward,** American author, was born at Vevay, Ind., 1837. He became a Methodist preacher in 1856, and subsequently edited for various periods the New York *Independent, Hearth and Home,* etc. In 1879 he retired from the ministry, and devoted himself entirely to literature. Among his best known books are *The Hoosier Schoolmaster; The Graysons;* and *History of United States.* Died, 1902.

Egmont (*eg'môn'*; Eng., *eg'mont*), **Lamoral, Count of,** Dutch general, descended from the duke of Guilders, was born in 1522. As commander of the Spanish cavalry of Charles V., he defeated the French, 1557-58, but incurring the enmity of Philip II., through his lenient treatment of the Flemish protestants, he was put to death, 1568.

Eichelberger (*ĭк'el-bĕrк'ĕr*), **William Snyder,** astronomer, was born in Baltimore, Md., 1865; graduated from Johns Hopkins, 1886; Ph. D., 1891. Professor of mathematics, United States navy, since 1900; head of division of meridian instruments, United States naval observatory, since 1902. Member of numerous scientific societies, and a frequent contributor to government publications.

Eichhorn (*ĭк'hôrn*), **Johann Gottfried,** German scholar, was born at Dörinzimmern, Germany, 1752, and studied at Göttingen. His scholarship was almost universal, and he left numerous treatises on a multitude of subjects, both ancient and modern, classical and oriental, but he is chiefly known in this country as a biblical critic, and a chief of what is called the rational school. His chief works are a *Universal Library of Biblical Literature.*

Eiffel (*ē'fel'*), **Gustave,** French engineer was born at Dijon, 1832, and early gained a reputation for bridge construction; in the huge framework erected for Bartholdi's statue of Liberty may be seen the germ of the iron Eiffel tower, 984 feet high, erected in 1887-89, on the Champ-de-Mars in Paris.

Einhard (*īn'härt*), or **Eginhard** (*ā'gin-härt*), Frankish scholar and biographer of Charlemagne, was born at Maingau in East Franconia, about 770. For years Einhard was lay abbot of various monasteries, but ultimately retired to Mühlheim. Here he died about 840. His *Vita Caroli Magni* is the great biographical work of the middle ages.

Eldon, John Scott, Lord, celebrated lawyer and jurist, was born at Newcastle, of humble parentage, 1751. He was educated at Oxford for the church, but got into difficulties through a runaway marriage. He was noted for the shrewd equity of his judgments and his delay in delivering them. Died in London in 1838.

Eleanor of Aquitaine, queen of France and of England, was born about 1122, and died in 1204. She was so called because she was a daughter of

the duke of Aquitaine. She first married Louis VII. of France, who divorced her in 1152, and she then married Henry II. of England. It was through her that the English kings claimed the duchy of Aquitaine.

Elgin (*el'gin*) **and Kincardine** (*kin-kär'din*), **James Bruce, Earl of,** was born in London, 1811, and succeeded his father, the seventh earl, who in 1812 brought from Athens the Elgin marbles, and himself was first Baron Elgin in the United Kingdom peerage. He died, 1863.

Elijah, greatest of the prophets of Israel, was born at Tishbe, in Gilead, on the borders of the desert. He comes upon the scene at the same time as Ahab, in the ninth century B. C. After the death of Ahab he rebuked the idolatries of his son Ahaziah in a solemn fashion and also denounced the evil doings of his successor. The closing scene of his life on earth is vividly narrated. A chariot of fire and horses of fire appeared after Elisha and he had crossed the Jordan, and "Elijah went up by a whirlwind into heaven."

Eliot, Charles William, educator, ex-president of Harvard University, was born in 1834, and graduated from Harvard in 1853. He taught mathematics and chemistry at Harvard, and in 1865, he was chosen professor of analytical chemistry in the Massachusetts Institute of technology. In 1869 Dr. Eliot succeeded Dr. Thomas Hill as president of Harvard College, and continued at its head until 1909. During his administration many notable changes in the government of the college occurred, its scope was broadened and there was a great increase in the number of its professors and students, while its wealth by gifts and benefactions was greatly increased, so that now it more than successfully competes with the great European Universities. Eliot was given the degree of LL. D. by Williams and Princeton Colleges in 1869, by Yale in 1870, and by Johns Hopkins in 1902. He is also an officer of the legion of honor of France, and member of many scientific and literary bodies; he published *American Contributions to Civilization; Educational Reform; Charles Eliot; Landscape Architect; More Money for the Public Schools; John Gilley; The Happy Life;* and *Four American Leaders.*

Eliot, George, is the *nom de plume* of Mary Ann Evans, a distinguished English novelist, born at Arbury, in Warwickshire, 1819. She began her literary career by a translation of Strauss' *Life of Jesus,* and became, in 1851, a contributor to the *Westminster Review.* During this time she formed the acquaintance of George Henry Lewes, with whom she lived as his wife, though unmarried. Her first work was *Scenes from Clerical Life,* contributed to *Blackwood's* in 1856. The stories proved a signal success, and were followed by a series of seven novels, beginning in 1858 with *Adam Bede,* which attained an immense success, and at once secured for the writer almost undisputed rank with the most eminent novelists of the day. This was followed in 1859 by *The Mill on the Floss,* and in 1861 by *Silas Marner, the Weaver of Raveloe.* In 1861 the *Scenes of Clerical Life* were republished from *Blackwood's Magazine.* In 1863 *Romola* appeared; *Felix Holt* was published in 1866, and *Middlemarch* in 1872; *Daniel Deronda* and *Impressions of Theophrastus Such* appeared later. These, with two volumes of poems, make up her works. Lewes died in 1878, and two years after she formally married an old friend, John Cross, and after a few months of wedded life died of inflammation of the heart.

Eliot, John, the "Indian apostle," was born probably at Widford, Herts, England, in 1604; graduated from Jesus College, Cambridge, in 1622, and after taking orders quitted England for conscience' sake, and landed at Boston in 1631. In England a corporation was founded in 1649 for propagating the gospel among the Indians of New England. In 1674 the number of "praying Indians" was estimated at 3600, but the decay of the "praying towns" was rapid after King Philip's war in 1675. Eliot died at Roxbury in 1690. His greatest work was the translation of the Bible into the Indian tongue.

Eliot, Samuel Atkins, clergyman, was born at Cambridge, Mass., 1862; graduated from Harvard, 1884; D. D., Bowdoin, 1900. Entered Unitarian ministry, 1889; minister Unity Church, Denver, Colo., 1889-93, Church of the Savior, Brooklyn, N. Y., 1893-8; secretary 1898-1900, president, since 1900, of the American Unitarian Association.

Elizabeth, queen of England from 1558 to 1603, was born at Greenwich in 1533. She was the daughter of Henry VIII, and Anne Boleyn. She was in her twenty-fifth year when she obtained the crown. Her first act was to release the imprisoned Protestants, and to reëstablish Protestantism. Very early in her reign she was troubled by the pretensions of the friends of Mary, queen of Scots, who was now the next heir to the throne. As Mary was a most zealous Catholic, the counsellors of Elizabeth were anxious that she should marry in order to secure the Protestant succession; but while she negotiated and coquetted with one person after another, she yet finally refused to marry, though it is believed that she would have accepted her favorite, the earl of Leicester, for a husband, if she had not been prevented by her other counsellors, and especially by Cecil, Lord Burleigh, the greatest of them all. Twelve years after her accession, in 1570, Elizabeth was excommunicated by Pope Pius V. Sixteen years later, in 1586, the Babington conspiracy was formed, the object of which was to reëstablish the papacy, and to set Mary, queen of Scots, on the throne of England, but which led only to the loss of her life by Mary, after she had been imprisoned in England for nineteen years. Two years after this conspiracy, in 1588, Elizabeth had to contend with a more formidable enemy in Philip II. of Spain, who avowed his resolution to annihilate Protestantism, but whose threatened invasion of the country was prevented by the defeat and destruction of the armada. But the firmness and sagacity of Elizabeth's advisers, and especially of Burleigh, protected her against these dangers; and at the close of her reign, which lasted for forty-five years, England was stronger and greater than it had ever been before. Elizabeth was great mainly through her counsellors, among whom were some of the most eminent statesmen that England has produced. She died 1603, and was buried in Westminster abbey.

Elizabeth Petrovna (*pā-trôv'nȧ*), empress of Russia, was born in 1709, and died in 1762. She was a daughter of Peter the Great, and became empress through the deposition of Ivan in 1741. During her reign, in which throughout she was guided by favorites, a war with Sweden was brought to a successful conclusion by the peace of Abo.

Elkins, Stephen Benton, United States senator, was born in Perry county, Ohio, 1841. He went to Missouri in childhood; graduated from University of Missouri, 1860, served in the Union army, and was admitted to the bar in 1864. Delegate in congress from New Mexico, 1873-77. He then removed to West Virginia, and became largely interested in coal mining and railroads. Was secretary of war, 1891-93, and 1894-1911 United States senator from West Virginia. Died, 1911.

Elliot, Daniel Giraud, naturalist, curator of zoölogy, Field Columbian museum, was born in New York, 1835. Led expedition into interior of East Africa in interest of Field Columbian museum, 1896, and into the recesses of the Olympic mountains, 1898, being first naturalist to penetrate that little-known range. Sc.D., Columbia, 1906. Author: *Monograph of the Pittidae, or Ant-Thrushes; The Grouse,* etc. Contributor of many papers to scientific publications in America and Europe.

Elliott, Maxine, actress, was born in Rockland, Me., 1873, daughter of Thomas Dermot. Made début with E. S. Willard in small parts, 1890, soon after played leading parts in Rose Coglan's company; was under Augustin Daly's management playing leading rôles two seasons; starred in *Her Own Way,* 1903-04; *Her Great Match,* 1905-06.

Ellsworth, Oliver, American statesman and jurist, was born in Windsor, Conn., 1745. He became prominent in state affairs and in the continental congress, and was a member of the federal convention of 1787, which prepared the constitution of the United States. He led the federalist party in the senate, and was an earnest advocate of Jay's treaty with England in 1794. From 1796 to 1799 he was chief-justice of the United States supreme court, and in 1800 negotiated, with Patrick Henry and Governor Davie, a treaty with France. Died, 1807.

Elphinstone (*el'fin-stun*), **Mountstuart,** English statesman and historian, was born in 1779, educated at Edinburgh and Kensington, and entered the Bengal civil service in 1795. In 1803 he served with distinction on Wellesley's staff, and was appointed resident at Nagpur. He returned to England in 1829, and, declining the governor-generalship of India, lived in comparative retirement until his death at Hookwood, in Limpsfield parish, Surrey, 1859.

Elphinstone, William, Scottish prelate and statesman, was born in 1431. He took his M.A. at Glasgow in 1452, was ordained priest. He was engaged in embassies, and for four months before the death of James III., in 1488, was chancellor. It was chiefly through his influence that the first printing press—that of Chepman and Myllar—was established in Scotland. The University of Aberdeen (King's College) was founded by him in 1500. He died at Edinburgh in 1514.

Ely, Richard Theodore, educator, author, was born in Ripley, N. Y., 1854. He was graduated from Columbia, 1876; Ph.D., Heidelberg University, 1879; LL.D., Hobart College, 1892; president, 1899-1901, American economic association. Member of Baltimore tax commission, 1885-86; Maryland tax commission 1886-88; founder, 1904, and since director of American bureau of industrial research.

Emanuel I. (*e-man'ū-el*), king of Portugal, called "the great," or "the fortunate," was born in 1469, and became king in 1495. His reign is known as the golden age of Portugal. It was he who made Portugal the first naval power of the world, as well as its great commercial center. He died at Lisbon, 1521.

Emanuel, Filibert, duke of Savoy, son of Charles III., was born in 1528; was commander-in-chief of the imperial troops in Italy against the French. He applied himself to the administrative and military organization of his country, and is considered the founder of the Sardinian monarchy. Died, 1580.

Emerson, Ralph Waldo, celebrated American poet and essayist, was born in Boston, 1803 and graduated at Harvard College, 1821. Having turned his attention to theology, he was ordained minister of the Second Unitarian Church of Boston; but soon after formed peculiar views with regard to forms of worship, abandoned his profession, and, retiring to the quiet village of Concord, devoted himself to his favorite study—the nature of man, and his relation to the universe.

In 1838, Emerson published *Literary Ethics, an Oration;* and in 1839, *Nature, an Essay.* In 1841, he published *The Method of Nature, Man the Reformer,* several lectures, and the first series of his *Essays,* the second series of which appeared in 1844. In 1846, he published a volume of poems. In 1848, he traveled in England, where he delivered lectures on *The Mind and Manners of the 19th Century,* and in 1849 delivered the series entitled *Representative Men.* In 1852, in connection with Mr. W. H. Channing, he published the *Memoir of Margaret Fuller, Marchioness d' Ossoli.* Emerson, in 1856, published a work entitled *English Traits,* and in 1860, *The Conduct of Life.* He delivered, at Concord, an oration on the death of President Lincoln in 1865, and received the degree of LL.D. from Harvard University in 1866. He also contributed largely to periodicals. Some of his works were translated into French, and excited marked admiration among the Parisian transcendentalists. He is by common consent one of the most eminent modern philosophers of the Pantheistic school, and one of the most remarkable personifications of American literary genius. He died 1882.

References.—Cabot's *Memoir; Emerson at Home and Abroad,* by Moncure D. Conway; *Ralph Waldo Emerson: Biographical Sketch,* by A. Ireland; *Emerson,* by O. W. Holmes; *Emerson in Concord,* by E. W. Emerson, his son; and *Emerson,* by Richard Garnett. See also Stedman's *Poets of America;* Arnold's *Discourses in America,* and Richardson's *American Literature.*

Emerton, Ephraim, educator, historian, professor of ecclesiastical history, Harvard since 1882, was born in Salem, Mass., 1851. He was graduated from Harvard in 1871; Ph.D., Leipzig, 1876. Member of Massachusetts historical society, American Academy of arts and sciences. Author: *Introduction to the Study of the Middle Ages; Synopsis of the History of Continental Europe; Mediaeval Europe,* 814-1300.

Emin Pasha (*ā'mēn pȧ-shȧ'*), or **Bey,** proper name Edward Schnitzer, was born at Oppeln, Silesia, in 1840. He studied medicine and in 1864 went to Turkey, where he became a well-known physician. In 1876 he joined the Egyptian service and proceeded as chief physician to the equatorial province, of which he was made governor in 1878 by "Chinese" Gordon. Here on the sudden uprising of the Mahdi, his rescue reached him in May, 1888. He was killed, however, in 1892 by Arabs near Nyangwe.

Emmett, Robert, Irish enthusiast and revolutionist, was born at Dublin in 1778, the son of a Dublin doctor. He was expelled from Dublin University in 1798. His impulsive patriotism in 1803 led him to make an unsuccessful attack on Dublin castle, but he escaped into Wicklow. He was subsequently captured and executed.

Encke (*eng'kē*), **Johann Franz,** German astronomer, was born at Hamburg in 1791. In 1825, chiefly at the instigation of Bessel, he was called to Berlin as director of the observatory. In 1819 he showed that the comet discovered by Pons in 1818 revolved round the sun in the remarkably short time of 3.3 years. He was an indefatigable computer and did great service by developing and putting into convenient shape for use the new method of least squares discovered by Gauss. Died, 1865.

Endicott (*en'di-kot*), or **Endecott, John,** Puritan governor of Massachusetts, was born at Dorchester, England, about 1588. He landed as manager of a plantation near Salem in 1628; headed a sanguinary expedition against the Indians in 1636; was deputy-governor in 1641-44, 1650, and 1654, and governor six times from 1644 to 1665. He died at Boston, 1665.

Endlicher (*ent'lik-ẽr*), **Stephan Ladislaus,** Hungarian botanist and linguist, was born in Presburg in 1804. In 1836 he was appointed keeper of the court cabinet of natural history, Vienna, and in 1840 professor of botany and director of the botanic garden of the university. He was a chief founder of the Vienna Academy and of the *Annalen des Wiener Museums.* Died, 1849.

Ennius (*en'i-us*), **Quintus,** Roman poet, the father of Roman literature, was born in 239 B.C. Cato "the elder" took him to Rome, where he taught Greek and Latin, and gained the friendship of the noblest Romans of his day. He died in Rome, 169 B. C.

Eotvos (*ût'vûsh*) **József,** distinguished Hungarian author, was born at Buda, 1813. In 1867 he was appointed minister of religion and education, and in that capacity engaged actively in the work of reform. Died at Pesth, 1871.

Epaminondas (*ē-pam'i-non'das*), greatest of Theban generals and statesmen, was born about 418 B. C., and led a retired life until his fortieth year. After the stratagem by which his fellow citizens expelled the Spartans in 379, he joined the patriots; and, when sent to Sparta in 371 to negotiate peace, displayed as much firmness as eloquence. In 368 war was renewed, and Epaminondas made a somewhat unsuccessful invasion into the Peloponnesus. To atone for this he advanced with 33,000 men into Arcadia, and near Mantinea broke the Spartan phalanx, but was mortally wounded. Died, 362 B. C.

Epée, de la' (*dē lā'pā'*), **Charles Michel Abbe,** one of the founders of the system of instruction for the deaf and dumb, was born at Versailles, France, 1712. At his own expense he founded an institution for the deaf and dumb, and labored with unwearied zeal for its prosperity. Died, 1789.

Epictetus (*ep'ik-tē'tus*), celebrated stoic philosopher, who flourished in the first century, was born at Hierapolis, in Phrygia. Having obtained his freedom, he retired to a hut and gave himself up wholly to the study of philosophy. Being banished from Rome, with the other philosophers, by Domitian, he setled at Nicopolis, in Epirus.

Epicurus (*ep'i-kū'rus*), Greek philosopher, was born about 342 B. C. He taught at Colophon, Mitylene, and Lampsacus. He returned to Athens about 306, and remained there until his death. He was founder of the Epicurean school, who hold that the *summum bonum* consists in pleasure—chiefly mental pleasure. Died, 270 B. C.

Epinay, d' (*dā' pē'ne'*), **Madame,** French writer, was born about 1725. In 1745 she formed a close intimacy with Rousseau. An unfortunate jealousy, however, which Rousseau conceived for Grimm, another friend of Madame d'Epinay, was followed by an open rupture with his benefactress. Died, 1783.

Erasistratus (*er-a-sis'tra-tus*), one of the most famous physicians and anatomists of ancient times, flourished in the third century B. C. He founded a school of medicine, wrote several works on anatomy, practical medicine, and pharmacy.

Erasmus (*ē-raz'mus*), **Desiderius,** one of the greatest scholars of the renaissance, was born in Rotterdam about 1467; on his parents' death he entered a monastery, which he left to become a teacher at Paris, and at the invitation of his pupil, Lord Mountjoy, came to England. He settled at Oxford. In 1506 he visited Italy, staying at Bologna and Rome, where he was warmly received, but returned to England, and was made Margaret professor of divinity and professor of Greek at Cambridge. He returned to the continent, and after a journey to the low countries, settled at Basel, where he published his edition of the new testament. Erasmus was in favor of moderate reform in the church. Died, 1536.

Eratosthenes (*er'ā-tos'thē-nēz*), eminent Greek writer, called, the philologist, was born at Cyrene about 276 B. C. By Ptolemy Euergetes he was called to Alexandria to superintend his great library. Here he died of voluntary starvation, at the age of eighty. As an astronomer he holds an eminent rank among ancient astronomers. A letter to Ptolemy, king of Egypt, on the duplication of the cube, is the only complete writing of his that we possess.

Erckmann-Chatrian (*erk'mān-shā'trē'āɴ'*) (Emile Erckmann and Alexandre Chatrian), two French men of letters, the first of whom was born at Phalsbourg, 1822; the second in the village of Soldatenthal, 1826. The two friends employed their pens in the same works, which they signed with the two names united in one; and it was only about 1863 that the authors informed their readers that the numerous works of fiction, which had obtained a widespread popularity, and were supposed by the general public to be the work of a single writer, were the fruits of their friendly collaboration. Erckmann died in 1899; Chatrian, 1890.

Eric (*er'ik*) **the Red,** Norwegian navigator, was born about 950. In 982 he located on the island of Iceland, and in 983 sailed from Bredifiord to reach some western shore said to have been visited by one of his countrymen in former times. Some of the ships were lost in a storm, and others were driven home; but he succeeded in reaching the Greenland coast. About twelve years later his son Lief is said to have discovered the continent of North America.

Ericsson (*er'ik-sun*), **John,** Swedish-American engineer, was born in Lanzbanshyttan, Sweden, 1803. At the age of twelve he became cadet of engineers, and at seventeen entered the Swedish army. He produced in succession an instrument for sea-sounding, a hydrostatic weighing machine and a tubular steam boiler, besides other important devices. In 1853 the ship *Ericsson*, of 2,000 tons, was propelled by his motor. In 1839 he came to the United States, where, in 1841, he designed for the government the screw-propelled war ship *Princeton*. In 1861 he built for the United States government, in 100 days, the iron-clad *Monitor*, which, on March 9, 1862, in Hampton roads, defeated the confederate iron-clad ram *Merrimac*. Died, 1889.

Erigena (*ē-rij'ē-nā*), **Joannes Scotus,** famous philosopher and scholar of the middle ages, was born probably in Ireland during the ninth century, and died about 897. In the controversies of his time regarding predestination and transubstantiation he took part. His philosophic opinions were those of a neo-Platonist rather than a scholastic. His chief work was *De Divisione Naturaē*.

Ernesti (*er-nes'tē*), **Johann August,** German biblical critic, was born at Tennstedt in Thüringia, 1707. He became professor of ancient literature at Leipzig in 1742, of rhetoric in 1756, and of theology in 1759. Ernesti was the chief founder of a correct exegesis of scripture by the laws of grammar and history. In his *Anti-Muratorius* he argues that a thorough investigation of the history of doctrines is the best polemic against Roman Catholicism. Died, 1781.

Erskine (*ûr'skin*), **Ebenezer,** founder of the secession church in Scotland, was born at Chirnside, Berwickshire, 1680. The popular preacher of Portmoak in Kinross-shire from 1703, on the rise of the Marrow controversy he took a prominent part on the evangelical side. He died in 1754.

Erskine, Thomas, Lord, British jurist and orator, was born in Edinburgh, 1750. He purchased a commission in the first royals, and was stationed at Minorca, where he employed his leisure time in the study of English literature. An accidental interview which he had with Lord Mansfield influenced him to prosecute the study of law. He was admitted a student of Lincoln's Inn, 1775. After his first speech the attorneys actually flocked round him with their retainers. In 1786 he was made attorney-general to the prince of Wales. He was regarded as the defender of popular liberties and constitutional rights. Died, 1823.

Espartero (*es'pär-tā'rō*), **Baldomero,** Spanish general and statesman, was born at Granatula, Spain, 1792. He was destined for the priesthood, but in 1808, on the French invasion of Spain, joined a volunteer battalion. As captain-general of the Basque provinces, in 1836, he twice defeated the Carlists and drove Don Carlos into France; for this he was created duke of Vittoria; in 1856 he was supplanted by O'Donnell. Died, 1879.

Espy (*es'pi*), **James Pollard,** meteorologist, was born in Pennsylvania in 1785. His *Philosophy of Storms*, published in 1841, was commended by the Academie des Sciences. Appointed in 1842 to the Washington observatory, Espy laid the basis of the weather bureau. He died in 1860.

Esquirol (*es'kwē'rōl'*), **Jean Etienne Dominique,** French physician, was born at Toulouse, 1772. He served in the military lazaretto at Narbonne, 1794, and was appointed physician to the Salpetriere at Paris, 1811. In 1825 he became first physician to the *Maison des Alienes*, while managing his private asylum at Charenton. Died, 1840.

Essex (*es'eks*), **Robert Devereux, Earl of,** was born in 1567. His first service was in the Netherlands. At court he became a favorite of Queen Elizabeth, and was put in command of the forces sent to help Henry IV. against the league in 1591. To him was largely due the capture of Cadiz in 1596. After failing as lord-lieutenant of Ireland, he formed a wild scheme to get rid of Elizabeth's councilors, who were opposed to him. He entered London at the head of 300 men, expecting the people to rise in his favor, but was disappointed and forced to surrender. He was tried for treason, condemned, and beheaded in 1601.

Estaing (*es'taɴ'*), **Charles Hector, Count d',** French admiral, was born in 1729. After serving in the army in India, under the Marquis de Bussy, he entered the navy and led an expedition to Sumatra, capturing several English forts. He was then placed in command of a squadron sent to aid the United States against England. He was guillotined during the revolution. Died, 1794.

Esterházy (*es'tēr-hä'zē*), **Nicholas de,** Hungarian patron of arts and sciences, was born in 1765. He founded the splendid collection of pictures at Vienna. When Napoleon, in 1809, entertained the notion of weakening Austria by the separation of Hungary, he made overtures to Prince Esterhazy respecting the crown of Hungary, which, however, were declined. Haydn composed most of his works at the court of Prince Nicholas. Died, 1833.

Esterházy, Prince Paul Anton, Austrian diplomat, was born in 1786. After the peace of Vienna he went as ambassador to the court of Westphalia. In March, 1848, he became minister of foreign affairs; but when the struggle between Austria and Hungary broke out he exhibited more prudence than heroism by retiring from public life altogether. He died in 1866.

Esther, the Persian name of Hadassah, daughter of Abihail, a Benjamite. She was an orphan, and brought up by her cousin Mordecai, an officer in the household of the Persian monarch, Ahasuerus. When the misconduct of Vashti had cost her her "royal estate," all "the fair virgins" of the kingdom were gathered together, that Ahasuerus might choose a successor. He selected Hadassah, who received the name of Esther on account of her loveliness.

Ethelbert (*eth'el-bĕrt*), first Christian king of Kent, England, was born about 552. He was converted by his wife, Bertha, of France, and by St. Augustine. He gave the English the first written code of laws. Reigned from 560 to 616.

Eucken (*oik'en*), **Rudolf Christoph,** German philosopher, was born at Aurich, Prussia, in 1846. He was educated at the University of Göttingen and at Berlin; Ph. D., Göttingen; D. D., Giessen, 1903, Glasgow, 1910. He was professor of Basel, Switzerland, 1871-4, and since 1874 at the University at Jena. In 1908 he received the Nobel Prize for literature. His best known works in English translations are *Life's Basis and Ideal*, and *The Truth of Religion*. Exchange professor at Harvard University, 1912-13.

Euclid (*u'klid*), eminent geometrician, is said by Pappus and Proclus to have been a native of Alexandria, in which city he taught mathematics, during the reign af Ptolemy Lagus, about 300 B. C. His most famous work is the *Elements of Geometry*, in thirteen books, six of which are still in use.

Eugene, François, usually called Prince Eugene of Savoy, celebrated Austrian general, was born in Paris, 1663. He was a son of Eugene Maurice, count of Soissons, but his application for a commission in the army of France having been refused, in consequence of a difference between Louis XIV. and Eugene's mother, he left France for Vienna, and offered his services to the emperor of Austria, in whose court and army he spent the whole of his remaining life. Died in Vienna, 1736.

Eugénie-Marie de Montijo (*ū'zhā'nē mā'rē' de mōn-tē'hō*), ex-empress of the French, was born in Spain, 1826. Her mother, the Comtesse Teba, took her to Paris, where she attracted great attention at the balls given at the Tuileries by Louis Napoleon, who proposed to the charming young Spaniard, whom he married in 1853. She forced on the war with Germany, which she spoke of as "my war," and in many ways her influence was bad for France. She was appointed regent when Napoleon III. went to fight the Germans, and was in Paris when the revolution broke out after Sedan. In 1870 she escaped from the Tuileries and sought refuge in England where she now resides.

Euler (*oi'lĕr*), **Leonard,** distinguished mathematician, was born at Basel, Switzerland, 1707, and at the time of his death in 1783 was director of the mathematical department of the Academy of St. Petersburg, having been previously professor of mathematics in the Academy of Sciences in Berlin.

Euripides (*ū-rip'i-dēz*), the latest of the three Greek tragedians, was born at Salamis, 480 B. C., on the very day of the great victory gained by the Greeks over the Persians. In 441 B. C. he gained the first prize for tragedy, and continued to write for the Athenian stage until 408 B. C., when he accepted an invitation to the court of Archelaus, king of Macedonia. Among his works are the *Alcestis*, *Hecuba*, and *Medea*.

Eusebius (*ū-se'bi-us*) **of Cæsarea,** father of ecclesiastical history, was born in Palestine about 264, and died about 340. In 313 he succeeded Agapius as bishop of Cæsarea, and took a prominent part in the council of Nice.

Eustachio (*ā'oōs-tā'kyō*), or **Eustachius, Bartolommeo,** Italian anatomist, was born in 1510. He was professor of medicine in the Collegio della Sapienza at Rome. Died, 1574.

Evans, Mary Ann or **Marian.** See **Eliot, George.**

Evans, Robley Dunglison, American admiral, was born in Floyd county, Va., 1846. He was appointed to the United States navy for Utah, and graduated from the United States naval academy in 1863; rear-admiral 1901. In war with Spain, commander of *Iowa* in Sampson's fleet off Santiago, taking active part in battle with Cervera's fleet, July 3, 1898; was president of board of inspection and survey; commander-in-chief at Asiatic station, October, 1902, and in command of the Asiatic expedition, 1908. Died 1912.

Evans, Very Rev. Thomas Frye Lewis, prelate, dean of Montreal since 1902, was born at St. John's rectory, Simcoe, Ontario, 1845. He was educated at Upper Canada College, and Trinity University, Toronto.

Evarts, William Maxwell, American lawyer and statesman, was born at Boston, Mass., 1818, and died at New York city, 1901. He graduated at Yale, and was admitted to the New York bar in 1841, where he built up a notable practice—He was Unired States counsel before the Alabama tribunal in 1872, and senior counsel for Henry Ward Beecher in 1875. In 1877-81 he was secretary of state, and United States senator from New York for the term 1885-91.

Evelyn, John, English author, was born at Wotton, in Surrey, 1620. He took part in political affairs during the reigns of Charles I., Charles II., and James II. He is now chiefly remembered for his *Diary*, which he kept during the greater part of his life, and which forms one of the most valuable collections of historical materials for the latter half of the seventeenth century. Died, 1706.

Everett, Charles Carroll, Unitarian theologian, was born at Brunswick, Me., 1829. He graduated at Bowdoin College, 1850, and continued his studies at the University of Berlin; dean of the Harvard Divinity School after 1878. Died, 1900.

Everett, Edward, American author, orator, and statesman, was born at Dorchester, Mass., 1794

He was graduated from Harvard, 1811. He became professor of Greek at Harvard in 1815; became editor of the *North American Review*, and was a member of congress from 1824 to 1834; governor of Massachusetts from 1835 to 1839; and from 1840 to 1845, minister-plenipotentiary to England. He became secretary of state in 1852, and was elected to the United States senate in 1853. He was made D. C. L. by Oxford, and LL.D., by Cambridge and Dublin Universities. Died, 1865.

Evjen, John Olaf, theologian, was born at Ishpeming, Mich., 1874; graduated from Augsburg seminary, Minneapolis, 1895; graduated theological department, same, 1898; of Leipzig, 1899-1903, Ph. D., 1903; ordained Lutheran ministry, 1903; pastor, Muskegon and Grand Rapids, Mich., 1903; acting professor church history, United Church theological seminary, St. Paul, 1903-5; professor biblical history, Pennsylvania College, Gettysburg, 1905-9; professor theology, Augsburg seminary, since 1909. Author: *Scandinavia and the Book of Concord*; contributor to *Schaff-Herzog Encyclopedia*.

Ewald (*ā'vält*), **Georg Heinrich August von,** German orientalist and theologian, was born at Göttingen, 1803. He was dismissed with six others in 1837 for remonstrating against the unconstitutional proceedings of the king of Hanover and was professor at Tübingen from 1838 to 1848, when he was reinstated at Göttingen. Died, 1875.

Ewell (*ū'el*), **Richard Stoddard,** American soldier, was born in the District of Columbia in 1817. He graduated at West Point in 1840, and served in the Mexican war. In April, 1865, he surrendered to General Sheridan at Sailor's Creek, Va. Died, 1872.

Ewing (*ū'ing*), **Thomas,** American politician, was born in Ohio county, Va., 1789. He was admitted to the Ohio bar in 1816, and from 1831 to 1837 was United States senator from Ohio; in March, 1849, became the first secretary of the interior, which office he held until September 12, 1850. Died, 1871.

Eyck (*īk*), **Hubert,** and **Jan van,** two illustrious painters of the old Flemish school. Their birthplace was Mass-Eyck, and they chiefly resided at Bruges and Ghent, and became the founders of the Flemish school of painting. Hubert died in 1426, and Jan in 1440.

Ezekiel, one of the four great Hebrew prophets, was the son of Buzi, and one of the sacerdotal race. He was carried to Babylon as a captive by Nebuchadnezzar, 598 B. C. Favored by the Lord with the gift of prophecy, he soothed, comforted, and admonished his countrymen, until at length he was stoned to death by order of the Babylonian authorities.

Ezekiel, Moses, American sculptor, was born at Richmond, Va., 1844; visited Berlin, Germany, 1869, where he studied at Royal academy of art; admitted into society of artists, Berlin. He executed the marble group representing religious liberty, for the Centennial exhibition, now in Fairmount park, Philadelphia; monument to Jessie Seligmann for orphan asylum, New York. After 1886 his work became chiefly ideal.

Ezra, the scribe, was living in Babylon during the reign of Artaxerxes Longimanus, who commissioned him to lead a band of his fellow countrymen from Babylon to Jerusalem in 458 B. C., there to reörganize the returned Jews. The book which bears his name was anciently and justly regarded as forming one book with *Nehemiah;* and in their present shape *Ezra* and *Nehemiah* are simply the continuation of *Chronicles*.

Faber (*fā'bēr*), **Frederick William,** English hymn-writer, was born at Calverley in Yorkshire, 1814; graduated from Balliol College, Oxford, and in 1834 was elected a scholar of University College, in 1837 a fellow. He founded a community of converts at Birmingham—"the Wilfridians"— he himself being Brother Wilfrid, from his *Life of St. Wilfrid*. He died in 1863. Faber wrote many theological works; but his fame will rest upon his hymns *The Pilgrims of the Night; The Land beyond the Sea*, etc.

Fabius (*fā'bi-us*), **Maximus Quintus,** Roman general, was born about 275 B. C. He was surnamed Cunctator because, having in 217 been appointed dictator for the second time and intrusted with the defense of Italy against the victorious Hannibal, he pursued a course of cautious and patient generalship, never risking a general engagement with his opponent, but cutting off his supplies, and gradually wearing him out, and meeting with signal success. Died, 203 B. C.

Fabricius (*fā-brish'i-us*), or **Fabrizio** (*fā-brēt'syō*), **Girolamo,** celebrated anatomist and surgeon, was born in 1537, and died in 1619. He graduated from the University of Padua, where, in addition to the usual instruction in the classics, he studied anatomy and surgery under the celebrated Fallopius. On the death of the latter in 1562, Fabricius was appointed to fill the vacant professorship. His chief work was his *Opera Chirurgica*.

Faed (*fād*), **John,** Scottish painter, was born in 1819. In 1841 he settled in Edinburgh, where his talents won him a high reputation Died, 1902.

Faed, Thomas, brother of the preceding, and also an artist, was born in 1826. In 1849 he executed a work, entitled *Scott and His Friends at Abbotsford*. He was made an R. A. in 1864. Died, 1900.

Fahrenheit (*fä'ren-hīt*), **Gabriel Daniel,** physicist, improver of the thermometer, was born at Dantzic, Germany, 1686. In 1720 he first conceived the idea of using quicksilver instead of spirits of wine in the construction of thermometers, by means of which the accuracy of the instrument was very much improved. Died, 1736.

Faidherbe (*fe-derb'*), **Louis Léon César,** French general, was born at Lille, France, 1818, and entered the French army in 1842. His earliest service was in Algeria. During the Franco-Prussian war he was in command of the army of the North and fought several battles. He was the author of a number of works on military and archæological subjects. Died, 1889.

Fairbairn (*fär'bärn*), **Andrew Martin,** Scottish theologian and principal of Mansfield College, Oxford, was born near Edinburgh, Scotland, 1838. In 1886 he was elected principal, on its foundation, of Mansfield College, Oxford, where his labors as a metaphysician and theologian have made him famous. His books embrace: *Studies in the Philosophy of Religion and History; Studies in the Life of Christ; The City of God*.

Fairbairn, Sir William, Scottish engineer, was born at Kelso, Scotland, 1789. He was the first to use iron instead of wood in the shafting of cotton mills. Fairbairn built the tubular bridge across the Menai strait, and more than a thousand other bridges. He also devised improvements for steam boilers and other steam machinery. In 1869 he was made a baronet. He died at Moor Park, Surrey, England, 1874.

Fairbanks, Arthur, educator, author, was born in Hanover, N. H., 1864; graduated from Dartmouth College, 1886; Yale Divinity School, 1887-88; professor of Greek and Greek archæology, University of Michigan, 1906-07; director of Boston museum of fine arts since 1907. Editor of *The Classical Journal*.

Fairbanks, Charles Warren, lawyer, ex-vice-president of the United States, was born on a farm near Unionville Center, Union county, Ohio, 1852; graduated from Ohio Wesleyan University, 1872; admitted to Ohio bar, 1874, and established practice at Indianapolis. Elected United States senator from Indiana, 1897, and reëlected in 1903; vice-president of the United States 1904-08.

Fairfax, Thomas, Lord, an English general, was born in Yorkshire, 1612. After serving with distinction in Holland, Lord Fairfax was declared general-in-chief of the parliament army at the opening of the civil war in 1642, and again in 1645. In 1659 Lord Fairfax used all his influence with the army to promote the restoration of Charles II. Died, 1671.

Falconio (*fäl-kō'ni-ō*), **Diomede,** R. C. cardinal and former apostolic delegate to the United States, was born in Pesocostanzo, in the Abruzzi, Italy. He entered the Franciscan order, 1860; became citizen of United States, 1868; returned to Italy, 1883, and elected provincial of Franciscans in the Abruzzi; procurator-general Franciscan order and visitor-general in various provinces of the order, 1889-92. Consecrated, 1892, bishop of Lacedonia, and was raised in 1895 to be archbishop of Acerenza and Matera: apostolic delegate to United States 1902-11; cardinal, 1911.

Falk (*fälk*), **Adalbert,** Prussian statesman, was born at Metschkau in Silesia, 1827, and as minister of public worship and education, in 1872, was instrumental in carrying the "May laws" against the hierarchical supremacy of the church of Rome. He died in 1900.

Faillères (*fäl'yär'*), **Clément Armand,** French statesman, president of the French republic since 1906, was born near Agen, South France, 1841 Settled at Nérac as a barrister, and became mayor; has been minister of the interior, of justice, and of education, and prime minister, and was eight times reëlected president of the senate. He was elected president of France in 1906, in succession to M. Loubet. He is a lover of books, and has written verse both in French and in the Languedocien dialect.

Fallopius (*fäl-lō'pi-us*), **Gabriel,** Italian anatomist, physician, and naturalist of celebrity, was born at Modena in 1523. At Pisa he was for three years professor of anatomy, and afterward went to Padua to fill the chair of anatomy and surgery. He died there in 1562. He acquired great fame by being the first to describe the anatomical structure of the fœtus.

Faneuil (*fan''l* or *fan'yel*), **Peter,** founder of Faneuil hall, Boston, Mass., was born in New Rochelle, N. Y., 1700. He was a rich merchant in Boston, and gave to the city a building for a market and town-hall. So many important patriotic meetings were held in Faneuil hall during the revolution that it has been called the "cradle of American liberty."

Faraday (*far'ä-dā*), **Michael,** distinguished English chemist and natural philosopher, was born in 1791 near London; in 1833 became professor of chemistry in the Royal Institution, London, where his lectures attracted the admiration of both Europe and America. Besides two sets on chemical subjects, we have his *Lectures on the Physical Forces*. But the great work of his life is the series of *Experimental Researches in Electricity*, published in the *Philosophical Transactions*. Died, 1867.

Farel (*fä'rel'*), **Guillaume,** Swiss reformer, was born in Dauphiné, in 1489, and studied at Paris. A convert to Protestantism, he, in 1524, sustained at Basel many Protestant theses. In 1557, together with Beza, Farel was sent to the Protestant princes of Germany to implore their aid for the Waldenses. In 1560 he was in Dauphiné preaching against Catholicism; and in 1561 was thrown into prison. He died at Neuchatel, 1565.

Farley, John Murphy, R. C. cardinal, was born in County Armagh, Ireland, 1842; was educated at St. John's College, Fordham, and St. Joseph's Seminary, Troy, N. Y., and at the American College, Rome; ordained priest at Rome, 1870. He was assistant rector of St. Peter's, New Brighton, Staten Island, 1870-2; secretary to Archbishop McCloskey, 1872-84; private chamberlain to Pope Leo XIII, 1884; domestic prelate of Pope Leo XIII, 1892; prothonotary apostolic, 1895; auxiliary bishop of New York, 1895; on death of Archbishop Corrigan, May 5, 1902, was appointed administrator of New York; fourth Archbishop of New York, 1902-1911. He was raised to the cardinalate, 1911.

Farlow, Alfred, writer, was born at Orange, Ill., and graduated from the Mass. Metaphysical College, 1888; Christian Science teacher and lecturer, since 1888; located Christian Science Institution at Topeka, 1889, removed to Kansas City, 1894; pastor and reader Christian Science Church; member committee on publication Christian Science Church, Boston, since 1898. Contributor to newspapers and magazines on Christian Science subjects.

Farnese (*fär-nā'sā*), **Alessandro.** See **Paul III., Pope.**

Farragut (*far'ä-gut*), **David Glasgoe,** American admiral, was born near Knoxville, Tenn., 1801. At the age of twenty-five he was made lieutenant, and appointed to the Norfolk navy-yard. In 1862 he was appointed to the command of a naval expedition to act against the confederates in the gulf of Mexico. On April 24th, after a heavy cannonade, his squadron passed the forts at the mouth of the Mississippi, and on the 28th he received the surrender of New Orleans. Ascending the Mississippi he took Natchez. Raised to the rank of vice-admiral in March, 1863, he once more passed up the Mississippi, successfully ran past the confederate batteries of Fort Hudson, and aided General Grant in the combined attack on Vicksburg, which resulted in its capitulation July 4th. In August, 1864, after a furious engagement between his fleet and the confederate forts and vessels at Mobile, in which the monitor *Tecumseh* was sunk by a torpedo, with the loss of all on board, he succeeded in capturing the forts, which led to the fall of the city. In 1866 he attained the rank of admiral. He died in 1870.

Farrar (*far'är*), **Frederick William,** English clergyman and author, was born in Bombay, India, 1831; educated at London and Cambridge. In 1876 he became canon of Westminster, in 1883 archdeacon, and in 1895 dean of Canterbury. He ranks among the most eloquent of English pulpit orators, and published many works on educational, theological, and other subjects. Chief of these are: *Seekers After God; Witness of History to Christ; The Silence and Voices of God;* and the *Life of Christ*. Died, 1903.

Farrar, Geraldine, grand opera singer, was born at Melrose, Mass., 1882, daughter of Sydney and Henrietta (Barnes) Farrar; graduated at Melrose, Mass., public school, and received her musical education at Paris and Berlin. Made début, Royal opera house, Berlin; with Metropolitan opera from 1906, and has appeared frequently both in Europe and United States in concert.

Fassett (*fas'et*), **Jacob Sloat,** lawyer, capitalist, member of congress. Born in Elmira, N. Y., 1853; graduated from Rochester University, 1875; secretary of republican national committee, 1888-92. Member of congress, thirty-third New York district, 1905-1911.

Faunce (*fôns*), **William Herbert Perry,** educator, president of Brown University since 1899, was born at Worcester, Mass., 1859. He was graduated from Brown University, 1880; pastor of Fifth Avenue Baptist church, New York city, 1889-99; lecturer in University of Chicago, 1896-97; Lyman Beecher lecturer, Yale University, 1907-08.

Faure (*fōr*), **François Félix,** president of France, was born in Paris, 1841. He served as a volunteer in the Franco-German war, in 1881 became deputy for Havre, and after holding posts in several administrations, in January, 1895, succeeded Casimir-Perier as president. He died of apoplexy in 1899.

Favart (*fä-vär'*), **Charles Simon,** French dramatist, was born at Paris, 1710. After spending some time in Flanders in the army under Marshal Saxe, Favart returned to Paris and continued to write operas. His most celebrated pieces are *Le Coq du Village; Bastien et Bastienne; Ninette à la Cour*. Died, 1792.

Favre (*fä-vr'*), **Jules Claude Gabriel,** French statesman and orator, was born at Lyons, 1809, studied for the bar, and was engaged in the July revolution of 1830; he became one of the leaders of the republicans against Napoleon III. In September, 1870, after the fall of the empire, he was appointed minister of foreign affairs, and in 1871 settled the terms for the capitulation of the

capital. He resigned office in July, 1871, resumed practice at the bar, and died in 1880.

Fawcett (*fô'set*), **Henry,** English statesman, was born at Salisbury in 1833. He graduated at Cambridge in 1856, and commenced to read for the bar. In September, 1858, when they were shooting, shots from his father's gun entered both Fawcett's eyes, totally blinding him. His *Manual of Political Economy* led to his election to the chair of political economy at Cambridge in 1863, a post which he held until his death. Other writings are *The Economic Position of the British Labourer and Protection and Free Trade.* He was elected to parliament in 1865, and again in 1868. He strongly opposed, in 1873, Gladstone's Irish University bill. In 1874 he lost his seat for Brighton, but was elected for Hackney. Gladstone offered him the postmaster-generalship, which he accepted. Here he carried several reforms—the introduction of the parcel post, postal orders, and sixpenny telegrams. He died in 1884.

Fawcett, Millicent Garrett, wife of the preceding from 1867, was born at Aldeburgh, Suffolk, 1847. She has taken a keen interest in the higher education of women and the extension of the franchise to women, and received the degree of LL. D. from St. Andrews University.

Fechner (*feк'nĕr*), **Gustav Theodor,** physicist and psychophysicist, was born at Gross-Särchen, in lower Lusatia, 1801; devoted himself to psychology; laid the foundations of the science of psychophysics in his *Elements of Psychophysics.* Died, 1887.

Felix (*fē'liks*), **Antonius,** or **Claudius,** Roman governor of Judea at the time of the apostle Paul. He was an energetic ruler, clearing the country of the robber bands that abounded, and holding the seditious Jews in check.

Fénelon (*fā'ne'lôn'*), **François de Salignac de La Mothe,** eminent French preacher and author, archbishop of Cambray from 1695 to the time of his death, was born 1651, and died at Cambray, 1715. Before his elevation to the archbishopric, he was tutor to the grandsons of Louis XIV., for whom he composed several works, among them his best-known work, *Telemachus.*

Fenn, William Wallace, theologian, Bussey professor of theology at Harvard University since 1901, was born in Boston, Mass., 1862; graduated from Harvard, 1884; A. M., 1887; Harvard D. D., 1908. Entered the Unitarian ministry, 1887; Shaw lecturer biblical literature, Meadville theological school, 1892-1901, 1905-07; preacher to Harvard, 1896-98, 1902-05; dean of Harvard divinity school since 1906.

Ferdinand I., emperor of Germany, son of Philip I. of Spain and younger brother of Charles V. of Germany, was born in 1503. In 1531 Ferdinand was elected king of the Romans, and in 1556 he succeeded Charles V. as emperor. He was tolerant to the Protestants, whom he tried to reconcile with Rome. Died, 1564.

Ferdinand II., emperor of Germany and king of Hungary and Bohemia, was born in 1578. After the overthrow of Frederick in 1620, Ferdinand abolished the charter of Bohemia, oppressed the Prostestants, and prosecuted the war under Tilly, Wallenstein, and others. Died, 1637.

Ferdinand I., the Great, king of Castile and Leon, was the second son of Sancho III., king of Navarre and Castile, and succeeded to the latter kingdom in 1035. He was one of the most powerful monarchs of his age. In 1056 he assumed the title of emperor of Spain. Died, 1065.

Ferdinand IV., king of Naples and afterward king of the Two Sicilies as Ferdinand I., was born in 1751. In 1812 he granted his Sicilian subjects a constitution, in 1815 was restored to his former throne, and in 1816 united Sicily and Naples into a single state. His despotism provoked the revolution of 1820, which was suppressed by Austrian intervention. Died, 1825.

Ferdinand II., king of the Two Sicilies, grandson of the preceding, was born in 1810. He succeeded his father Francis I. in 1830, and at first introduced reforms and liberal measures, but soon adopted the principles of absolutism. His harsh treatment of political prisoners led in 1857 to a diplomatic rupture with Sardinia, France, and England. Died, 1859.

Ferdinand V. of Castile, III. of Naples, and **II. of Aragon and Sicily,** surnamed the Catholic, son of John II., was born in 1452, and succeeded his father on the throne of Aragon and Sicily in 1466. In 1469 he was married to Isabella, sister of Henry IV. of Castile, and in 1479 became, through her, king of Castile. Ferdinand died in 1516, Isabella having died twelve years before him.

Ferguson (*fĕr'gu-sun*), **John,** senior physician, Toronto Western hospital, editor of *The Canada Lancet,* was born at Glasgow, Scotland, 1854. He was graduated from the University of Toronto, and later studied at Edinburgh and London; has been in medical practice for twenty-five years. Besides editing *The Canada Lancet,* he has published numerous articles and addresses.

Fergusson, James, Scottish historian of architecture, was born at Ayr, Scotland, 1808. After ten years as an indigo planter in Bengal, he explored nearly every corner of India, studying the rock-temples, which were illustrated in his earliest works. His *History of Architecture* appeared first as a handbook in 1855. He died in 1886.

Ferrari (*fer-rä'rē*), **Giuseppe,** Italian philosopher, was born in Milan, 1812; studied law at Pavia, but afterward devoted himself to literature. He died at Rome in 1876.

Ferreira (*fer-re'ē-rä*), **Antonio,** Portuguese poet, was born at Lisbon in 1528. He is considered the reformer of the national poetry of Portugal, and as the Portuguese Horace. He obtained an important situation at court, and his *Inez de Castro* gave him great celebrity. He died in 1569.

Ferrero (*fer-rā'rō*), **Guglielmo,** Italian historian, was born in 1872. He lectured at Milan on militarism, and in the Collège de France, Paris, on Roman history, and while there received the cross of the legion of honor. Author: *Symbols, The Greatness and Decline of Rome.*

Ferry, Jules François Camille, distinguished French statesman, was born at Saint Dié, in the Vosges, 1832. Admitted to the Paris bar in 1854, he speedily plunged into the politics of the time, and offered uncompromising opposition to the party of Louis Napoleon; as prime minister in 1880 and again in 1883-85 he inaugurated a spirited colonial policy, which involved France in war in Madagascar, and brought about his own downfall. He was elected to the senate in 1890, and became its president one month before his death. Died, 1893.

Fesch (*fesh*), **Joseph,** cardinal archbishop of Lyons, was born in Ajaccio, 1763. He took holy orders, but became commissary to the revolutionary army of the Alps in Italy. In 1804 he was French ambassador to Rome, and two years later he was appointed associate and successor of Dalberg, prince primate of the confederation of the Rhine; at the approach of the Austrians in 1814, he fled to Rome, where he died in 1839.

Fessenden (*fes'en-den*), **William Pitt,** American statesman, was born in New Hampshire in 1806. He graduated at Bowdoin College in 1823, and was admitted to the bar in 1827. United States senator, 1854-64; secretary of the treasury, 1864-65; and again United States senator, 1865-69. He ranked among the first lawyers of his time, and made a notable reputation before the United States supreme court. Died, 1869.

Fetter, Frank Albert, educator, economist, was born in Peru, Ind., 1863; graduated at Indiana University, 1891; Ph. M., Cornell, 1892; Ph. D.; LL. D.; professor of political economy and finance, Cornell, since 1901. Author: *Relations between Rent and Interest; The Principles of Economics.*

Feuerbach (*foi'ĕr-bäк*), **Ludwig Andreas,** German philosopher, was born at Landshut, 1804, and studied at Heidelberg. The leading principle of his philosophy, a naturalistic development of Hegelianism, is that there is no God distinct from nature and man. Died, 1872.

Feuerbach, Paul Johann Anselm von, jurist, father of the preceding, was born at Jena, 1775, where he studied law. He had made a brilliant reputation by his *Kritik des natürlichen Rechts,* and his *Anti-Hobbes.* In 1808-11 he published a great collection of criminal cases. Appointed a judge at Bamberg, 1814, and at Anspach, 1817. He died at Frankfort, 1833.

Feuillet (*fû'ye'*), **Octave,** French novelist, was born at Saint-Lo, in La Manche, 1821. He started his literary career as one of Dumas' assistants, but made his first independent success in the *Revue des Deux Mondes* by a series of tales and romances begun in 1848. In 1862 he was elected a member of the academy, and later became librarian to Louis Napoleon. Died, 1890.

Fichte (*fiк'tē*), **Johann Gottlieb,** German philosopher, was born at Rammeau, in upper Lusatia, 1762. In 1794 he was appointed to the chair of philosophy at Jena, where he commenced to expound with extraordinary zeal his system of transcendental idealism. In 1805 he obtained the chair of philosophy at Erlangen, with the privilege of residing at Berlin in the winter. Here he delivered his celebrated lectures *On the Nature of the Scholar.* In 1810 the University was opened with a host of brilliant names, Fichte, Wolff, Müller, Humboldt, De Wette, Schleiermacher, Neander, Klaproth, and Savigny. By the votes of his colleagues Fichte was unanimously elected rector. He died in 1814.

Fick, August, German philologist, was born near Minden, 1833, studied at Göttingen, and became professor there in 1876, and at Breslau in 1887. He retired in 1891.

Field, Cyrus West, founder of the Atlantic cable company, was born at Stockbridge, Mass., 1819. Devoting himself entirely to the work of uniting the old and new worlds, he crossed the ocean nearly thirty times in its prosecution; and on the laying of the first cable, 1858, was received by his countrymen with enthusiastic plaudits. He continued his exertions, and on the success of the cable of 1865 received a gold medal at Liverpool and a vote of thanks from the American congress. Died, 1892.

Field, David Dudley, American jurist, was born at Haddam, Conn., 1805, entered Williams College, 1821, studied law, and was admitted to the bar in 1828. He settled in New York, and soon made his way into the front rank of his profession. In 1867 he brought before the British association for social science a proposition to frame an international code. This led to the preparation by him of what was really a complete work on international law, though entitled *Draft Outlines of an International Code.* Died, 1894.

Field, Eugene, American poet and journalist, was born at St. Louis, Mo., 1850. He moved to New England, but was educated later in Missouri. He entered journalism at the age of twenty-three, ten years later becoming editor of the *Sharps and Flats* column of the *Chicago Daily News.* Among his works are: *Culture's Garden; Little Book of Western Verse; With Trumpet and Drum,* etc. He died in 1895.

Field, Marshall, merchant, philanthropist, was born at Conway, Mass., 1835. He was junior partner, 1860-65, then senior partner in house, which became, 1865, Field, Palmer, & Leiter. Potter Palmer retired, 1867, and Levi Z. Leiter, 1881, Field becoming head of Marshall Field & Company, now having the largest wholesale and retail dry goods business in the world. Founded, with gift of $1,000,000, the Field Columbian museum of Chicago. Died in 1906, leaving an immense fortune.

Field, Stephen Johnson, American jurist, was born at Haddam, Conn., 1816, son of David Dudley Field. He studied law and took up its practice in California. Chief-justice of California, 1859-63; associate justice of the United States supreme court, 1863-97. Died at Washington, 1899.

Fielding, Henry, famous English novelist, was born near Glastonbury, England, 1707. He was early sent to school at Eton, and afterward to the University of Leyden. On his return from Leyden he commenced writing for the stage, and for ten years was a prolific play-writer. In 1737 he entered as a student of the Middle Temple, and in 1740 was admitted to the bar; but his new profession not proving remunerative he returned to literature, and in his remaining years produced the works with which his name is now principally associated. Chief of these are *Joseph Andrews; The History of Jonathan Wild; Tom Jones;* and *Amelia.* He died in 1754.

Fielding, William Stevens, Canadian statesman and journalist, minister of finance in the Canadian cabinet, was born at Halifax, Nova Scotia, 1848. He was educated at Halifax; D. C. L.; LL. D.; represented city and county of Halifax in the provincial legislature, 1882-96; member of the provincial cabinet a few months after his election, and prime minister, 1884-96. He was a representative of Canada at the colonial conference, London, 1902; one of his majesty's plenipotentiaries for the negotiation of the Franco-Canadian commercial treaty, Paris, 1907.

Fiesole, Fra Giovanni Da. See **Angelico, Fra.**

Figueras (*fē-gā'räs*), **Estanislao,** Spanish statesman, was born at Barcelona, 1819. On the abdication of King Amadeus in 1873 he became president of the Spanish republic, but resigned soon after. He died in Madrid, 1882.

Fildes (*fildz*), **Sir Luke,** English painter, was born at Liverpool, England, 1844. He received a private education; studied at South Kensington art schools and Royal academy, London; illustrator of books and magazines for several years; afterward painted English and Venetian subjects. He was elected R. A. in 1887.

Fillmore, Millard, American statesman, thirteenth president of the United States, was born in Summerville, N. Y., 1800. Removed to Buffalo, N. Y., 1823, and then found entrance to the bar. He entered congress in 1832. He became comptroller of the state of New York in 1844, was elected vice-president of the United States in 1848, and succeeded to the presidency on the death of General Taylor in 1850. By signing the act for the surrender of fugitive slaves he brought about the utter defeat of the whig party in 1853. In 1856 he was nominated for the presidency, but received only scanty support. Died, 1874.

Finch, Francis Miles, jurist and poet, was born at Ithaca, N. Y., 1827. He was graduated at Yale, 1849, studied law and entered upon its practice at Ithaca. He assisted materially in the organization of Cornell University, of which he was an original trustee. In 1892 he became dean of the Cornell Law School. Died, 1907.

Finck, Henry Theophilus, author, musical critic of *New York Evening Post* since 1881, was born at Bethel, Mo., 1854. He was graduated at Harvard in 1876. Author: *Romantic Love and Personal Beauty; Primitive Love and Love Stories; Songs and Song Writers; Fifty Mastersongs; Edvard Grieg,* etc.

Finlay, George, distinguished English historian, was born at Faversham, Kent, 1799, of Scotch parents. He received a university training at Glasgow and Göttingen; his valuable history, published in various parts, traces the national life of Greece from 146 B. C. to A. D. 1864. Died at Athens, 1875.

Finley, John Huston, educator, was born at Grand Ridge, Ill., 1863. He was graduated at Knox College, 1887; Ph. D., LL. D. He was secretary of state, charities aid organization, New York, 1889-92; president of Knox College, 1892-99; professor of politics, Princeton, 1900-03; president of college of the city of New York since 1903.

Finley, William Wilson, president of Southern railway, was born at Pass Christian, Miss., 1853; chairman of Trans-Missouri traffic association at Kansas City, 1889-90; chairman of Western passenger association, 1890-92; general traffic

manager of Great Northern and Montana Central railroad, 1892-95; second vice-president of Southern railway, 1896-1906; president of same 1906-1913. Died 1913.

Finney, Charles Grandison, American clergyman and educator, was born in Connecticut, 1792. He began to preach in the Presbyterian church in 1824. In 1835 he became professor of theology at Oberlin College, and from 1851 to 1866 was president of that institution. Died at Oberlin, Ohio, 1875.

Firdausi (*fēr-dou'sē*), or **Firdusi** (*fēr-dōō'sē*), pseudonym of Abul Kasim Mansur, the great poet of Persia, born near Tūs, in Khorassan, about 940. He spent thirty years in writing the *Shah Namah*, or *Book of Kings*, a national epic. He died about 1020.

Fischer, Emil, a noted German chemist, was born at Euskirchen, 1852. Educated at Strassburg. Formerly professor at Munich, Erlangen, and Würzburg respectively. Professor of organic chemistry at University of Berlin since 1892.

Fischer, Ernst Kuno Berthold, German historian of philosophy, was born at Sandewalde, Silesia, 1824. As a student of Erdmann at Halle he was smitten with the love of philosophy, and gave his life to the study of it. In 1856 he was elected to the chair of philosophy in Jena, and sixteen years later was called to Heidelberg as Zeller's successor. His chief work is a *History of Modern Philosophy*. Died, 1907.

Fischer, Louis Albert, physicist, was born at Washington, 1865; B. Sc., Columbian (now George Washington) University, 1884. In office of Weights and Measures, United States Coast and Geodetic Survey, 1891-1901; chief of weights and measures division, Bureau of Standards, with title of association physicist since 1901. Author: *Recomparison of United States Prototype Meter; History of Weights and Measures;* etc. Compiler: *Laws Relating to Weights and Measures in United States;* etc.

Fish, Hamilton, American diplomat, was born at New York in 1808. He graduated at Columbia in 1827. As secretary of state under Grant from 1869 to 1877, he signed the Washington treaty of 1871, and completed the settlement of the Alabama question. Died, 1893.

Fish, Stuyvesant, banker, railway official, was born in New York, 1851; graduated at Columbia, 1871, A. M., 1874; treasurer and purchasing agent of New Orleans, Jackson and Great Northern railroad 1877-82; president Illinois Central Railroad Company, May, 1887, to November, 1906; trustee of New York life insurance and trust company; vice-president and director of National Park bank, and director in other corporations; president of American railway association, 1904-06.

Fisher, George Park, historian, theologian, professor of divinity, 1854-61, and professor of ecclesiastical history, Yale, 1861-1909, was born at Wrentham, Mass., 1827; graduated from Brown, 1847; LL. D., Yale. He was the author of a nmmber of books on universal and church history. Died 1909.

Fisher, Harrison, American illustrator, was born in Brooklyn, N. Y., 1875. He was educated in San Francisco, and soon evinced fine capabilities in drawing and illustration. Author: *The Harrison Fisher Book*, a collection of drawings.

Fisher, Irving, economist, professor of political economy at Yale since 1898, was born at Saugerties, N. Y., 1867. Studied at Berlin and Paris, 1893-94. Member of many economic and other learned societies. Editor of *Yale Review;* contributor to economic journals. Author: *The Nature of Capital and Income; The Rate of Interest.*

Fisher, John, bishop of Rochester, was born about 1457 at Beverley, Yorkshire, England. In 1483 he entered Michælhouse, now part of Trinity College, Cambridge, of which he became a fellow in 1491, and master in 1497. In 1527 he pronounced firmly against the divorce of Henry VIII.; and, for refusing the oath of succession, was sent with More to the Tower. In May, 1535, Pope Paul III. made him a cardinal, on June 17th the old man, worn by sickness and ill-usage, was tried for denial of the king's supremacy; on the 22d he was beheaded on Tower hill.

Fisher, Sir John Arbuthnot, admiral of the British navy, senior naval lord on the board of admiralty since 1904, was born in 1841; commander-in-chief of North American and West Indies station, 1897; commander-in-chief of the Mediterranean, 1899-1902; Portsmouth, 1903; first sea lord, 1904; and admiral of the fleet, 1905. He was a member of the Esher war office committee, 1903. He received the degree LL. D. from Cambridge University.

Fisher, Sydney Arthur, minister of agriculture, Canada, was born at Montreal, Canada, 1850; graduated at Trinity College, Cambridge, and adopted farming at Knowlton, in eastern townships, province of Quebec; entered parliament of Canada as M. P. for County Brome, 1882.

Fisher, Sydney George, lawyer, author, was born in Philadelphia, Pa., 1856; graduated from Trinity College, 1879; L.H.D., Western University of Pennsylvania; LL.D., Trinity. After two years at Harvard law school he was admitted to the Pennsylvania bar, 1883.

Fiske, Harrison Grey, editor and proprietor *New York Dramatic Mirror*, was born at Harrison, N. Y., 1861. Was editorial writer and dramatic critic, *Jersey City Argus*, and later on *New York Star;* became contributor to *New York Dramatic Mirror*, 1879, 1883, and became sole proprietor, 1888. He is manager of Mrs. Fiske, Bertha Kalich, and the Manhattan stock company.

Fiske, John, whose original name was Edmund Fiske Green, was born at Hartford, Conn., 1842. He was graduated from Harvard in 1863, and from Harvard law school in 1865. His *Discovery of America* was but one of a long series of important works on American history. His chief works are: *Myths and Mythmakers; Outlines of Cosmic Philosophy; The Destiny of Man; The Idea of God; American Political Ideas*, and *The Critical Period of American History*. Died 1901.

Fiske, Minnie Maddern, American actress, was born in New Orleans, La., 1865, daughter of Thomas W. and Elizabeth (Maddern) Davey. At fifteen became a star, under the name of Minnie Maddern. Married, 1890, Harrison Grey Fiske, journalist and playright in whose *Hester Crewe*, she returned to the stage; since then she has starred in various plays.

Fitch, John, American inventor, was born in Connecticut, 1743. In 1793 he went to France, to find his projects frustrated by the revolution; but it is said that his plans of a steamboat were shown to Robert Fulton. Penniless, Fitch worked his passage back to America, and there poisoned himself, 1798.

Fitch, William Clyde, author and playwright, was born in New York in 1865. He was graduated at Amherst, 1886; A.M., 1902. Author: *The Smart Set; Nathan Hale; Captain Jinks of the Horse Marines; The Cowboy and The Lady; The Climbers; Lover's Lane; The Way of the World; The Girl With the Green Eyes; Her Own Way; The Woman in the Case; Girls*, etc. Died 1909.

Fitzgerald, Edward, English scholar, was born at Bredfield house in Suffolk, 1809. He entered Trinity College, Cambridge, where he took his degree in 1830. About this time he took up Persian, and in 1856 published an anonymous version of Jami's *Salámán and Absál*. The quatrains of Omar Khayyam were then little known, but Fitzgerald at once recognized their beauty, and his and Omar's names will remain indissolubly linked together through his rendering of them. Died 1883.

Fitzgerald, Lord Edward, Irish revolutionist, was born in 1763, son of the duke of Leinster. In 1791-92 he visited France, fraternized with the leading republicans, and married the reputed daughter of the Duc d'Orleans and Mme. de Genlis. In 1796 he joined the "society of united Irishmen," Arrested on a charge of high treason, he died in prison, 1798.

Fitzgerald, John Joseph, lawyer, congressman, was born in Brooklyn, N. Y., 1872. He was graduated from Manhattan College, New York; studied law at the New York law school, LL.B., and was admitted to the bar, 1893; has been a member of congress since 1899. He is a conspicuous member of the house, and an able and resourceful debater.

Fitzpatrick, Sir Charles, Canadian jurist, chief-justice of Canada and deputy of the governor-general since 1906, was born at Quebec in 1853. He was educated at Quebec seminary; crown-prosecutor for city and district of Quebec, 1879; resigned as provincial member for Quebec county, 1896; and was elected to sit as member for Quebec county in Dominion parliament; solicitor-general, 1901; minister of justice, Dominion of Canada, 1901-06.

Flagler, Henry M., capitalist, was born at Canandiagua, N. Y., 1830. Owned Ponce de Leon and Alcazar hotels, Florida, also owned about 600 miles of railroad in Florida. Vice-president and director of Standard Oil Company; director Western Union Telegraph company, Morton Trust company and other corporations. Died 1913.

Flammarion (*flá-má-rē-ôn'*), **Camille,** French astronomer, was born at Montigny-le-Roi, 1842. He was educated at Langres, the Paris observatory, and at the Sorbonne, Paris; entered the Paris observatory in 1858.

Flamsteed (*flam'stēd*), **John,** first astronomer-royal of England, was born at Denby near Derby, 1646. His success in mathematics and astronomy procured for him the appointment of astronomer to the king in 1675. Next year Greenwich observatory was built, and Flamsteed began the observations that mark the rise of modern practical astronomy. Died 1719.

Flanagan, John, American sculptor, was born at Newark, N. J. He was a pupil of Augustus Saint Gaudens, New York, and of Henry Chapu and Alexandre Falguière, Ecole des Beaux Arts, Paris.

Flandrin (*flaN'draN'*), **Jean Hippolyte,** French painter, was born at Lyons, 1809. In 1832 he won the prix de Rome, and during his five years' residence in Italy produced *St. Clare Healing the Blind*, now in Nantes cathedral. In 1842 he began his great frescoes in the church of St. Germain-des-Prês, Paris. After this he was mainly engaged in fresco painting, although he executed many fine portraits. He died at Rome, 1864.

Flaubert (*flō'bâr'*), **Gustave,** French novelist, was born at Rouen, 1821. Flaubert's life was extremely uneventful; in his youth some obscure form of brain-disease to some extent arrested his intellectual development. He was a very late producer, and his works, when they did appear, were marked by a strong and morbid idiosyncrasy. Died 1880.

Flaxman, John, greatest of English sculptors, was born at York, 1755. At the age of fifteen he became a student in the Royal academy, but never worked in the studio of any master. He was elected an associate of the Royal academy in 1797, royal academician in 1800, and in 1810 was appointed professor of sculpture to that institution. Died 1826.

Fleming, Sir Sandford, chancellor of Queen's University, Canada, since 1880, was born in Scotland in 1827. He has lived in Canada since 1845; president of royal society of Canada, 1880-89. Author: *The Inter-Colonial, a History*, 1832-76; *England and Canada; The New Time Reckoning.*

Fletcher, Andrew, Scotch patriot and publicist was born in Saltoun, East Lothian, 1655. After some years of travel he sat in the Scottish parliament in 1681, and offered so determined an opposition to the measures of the duke of York that he had to flee to England, and thence to Holland. After the union of Scotland with England, he retired in disgust from public life, devoting himself to promoting agriculture. He died at London in 1716.

Fletcher, Duncan Upshaw, lawyer, United States senator, was born in Sumter county, Ga., 1859. He was graduated from Vanderbilt University, Nashville, Tenn., 1880; studied law there, and has practiced law in Jacksonville since 1881; was elected United States senator from Florida for the term 1909-15.

Fletcher, Horace, author, lecturer, was born at Lawrence, Mass., 1849. Since 1895 he has devoted his attention to sociology, and especially to scientific research in human nutrition, in chemical-physiological laboratories of University of Cambridge, England, and Yale University.

Fletcher, John, English dramatist, whose name is inseparably associated with that of his friend and co-worker, Francis Beaumont, was born in Northamptonshire, in 1576. The chief piece of his own unaided composition is a dramatic pastoral entitled *The Faithful Shepherdess*. The collaborated plays, such as *The Scornful Lady*, and *Rule a Wife and Have a Wife*, were during two centuries the delight of the stage. Died 1625.

Fleury (*flû'rē'*), **André Hercule de, Cardinal,** French statesman and prelate, was born at Lodève, 1653. He became almoner to Louis XIV., in 1698 bishop of Fréjus, and preceptor to Louis XV., who in 1726 made him prime minister. In the same year he received the cardinal's hat. Died 1743.

Fleury, Claude, French historian and ecclesiastic, was born at Paris, 1640; was tutor to various princes, prior of Argenteuil, and confessor to young Louis XV. Died 1723.

Flexner, Simon, American physician, was born at Louisville, Ky., 1863. He graduated at the University of Louisville, M.D., 1889; D.Sc., Harvard, 1906; director of Ayer clinical laboratory, Pennsylvania hospital, 1901; pathologist, University hospital and Philadelphia hospital, 1900, and director of laboratories of Rockefeller Institute for medical research, New York, since 1903.

Flint, Austin, American physician and medical writer, was born at Petersham, Mass., 1812. After graduation from the medical department of Harvard, he settled to practice in his native state. He was president of the New York academy of medicine, 1872-85. He is the author of a treatise on the diseases of the heart, *Principles and Practice of Medicine*, and *Manual of Auscultation and Percussion*. Died, at New York, 1886.

Flint, Austin, American physician and physiologist, son of preceding, was born in Northampton, Mass., 1836. Graduate of Jefferson medical college, 1857; LL.D., 1885. One of founders and professor of physiology, 1861-98, Bellevue hospital medical college; professor of physiology, Long Island college hospital, 1862-68; Cornell University medical college since 1898. Author: *Physiology of Man*, five vols.; *Chemical Examination of the Urine in Disease; Physiological Effects of Severe and Prolonged Muscular Strain.*

Flint, Robert, British educator and philosophical writer, was born in Dumfriesshire, Scotland, 1838. He was educated at Glasgow University, and became parish minister. Professor of divinity, Edinburgh University, 1876-1903. Author: *Christ's Kingdom on Earth; Philosophy of History in Europe; Theism; Anti-Theistic Theories; Historical Philosophy in France; Socialism; Sermons and Addresses; Agnosticism.*

Flotow (*flō'tō*), **Friedrich, Freiherr von,** German composer, was born at Teutendorf in Mecklenburg, 1812. He studied music under Reicha, in Paris, and made his reputation by *Le Naufrage de la Méduse, Stradella*, and *Martha*, the last two characterized by pleasing melody. From 1856 to 1863 he was dierctor of the theater at Schwerin. He died at Darmstadt, Germany, 1883.

Flourens (*flōō'rāns'*), **Marie Jean Pierre,** French physiologist, was born at Maureilhan, France, 1794. He attracted attention by works on the nervous system, and, after lecturing for Cuvier, 1828-30, became perpetual secretary of the academy of sciences, 1833, professor at the Collège de France, 1855, and member of the academy, 1840. Died 1867.

Flower, Sir William Henry, English zoölogist, was born at Stratford-on-Avon, 1831. 1884-98 was natural history director at the British museum. He wrote on anatomy, zoölogy, anthropology, the osteology of mammalia, etc. In 1892 he was created a K.C.B. Died at London, 1899.

Foley (*fō'li*), **John Henry,** Irish sculptor, was born in Dublin, 1818. He was elected in 1849 an associate, and in 1858 a member of the Royal academy. He designed the seal of the Confederate States of America, and executed a statue of Stonewall Jackson for the state of South Carolina. Died 1874.

Folk, Joseph Wingate, lawyer, former governor of Missouri, was born in Brownsville, Tenn., 1869. He was graduated at Vanderbilt University, and was admitted to the bar in 1890. He was circuit attorney, St. Louis, 1900-04, and prosecuted numerous bribery cases. From 1905 to 1909 he was governor of Missouri.

Fontana (*fōn-tä'nä*), **Domenicho,** celebrated Italian architect, was born on the borders of Lake Como in 1543. He erected the obelisk near St. Peter's, Rome, in 1586, and built the Lateran palace and vatican library. Other important works were also confided to him by the pope. He died in 1607.

Fontenelle (*fŏnt-nel'*), **Bernard le Bovier de,** eminent French writer, was born at Rouen, 1657. He was a nephew of Corneille, the great tragic poet, and in 1699 was appointed perpetual secretary of the Academy of Sciences. His long life, extending over nearly one hundred years, was filled with literary activities, and, as a man of the world, his brilliant, though somewhat cynical wit, gave him a great reputation among his contemporaries. Died 1757.

Foote, Andrew Hull, American naval officer, was born in New Haven, Conn., 1806. After the outbreak of the Civil war, he acted with signal credit in the reduction of Forts Henry and Donelson, 1862. In the same year he was promoted to rear-admiral. Died 1863.

Foote, Mary Hallock, author, artist, was born in Milton, N. Y., 1847. She married Arthur D. Foote, a civil engineer, and lived some years in Colorado, Idaho, and California. Studied art in New York; has done much work in black and white for magazines and book illustration.

Foraker (*fōr'ä-kĕr*), **Joseph Benson,** lawyer, jurist, United States senator, 1897-1909, was born in 1846, on farm near Rainsboro, Highland county, Ohio. Enlisted July 14, 1862, in the 89th Ohio volunteer infantry, and served to end of war; graduated at Cornell, 1869; admitted to bar and began practice at Cincinnati, 1869; but elected governor in 1885 and 1887; delegate-at-large from Ohio to national republican conventions, 1884-1904; in conventions of 1892 and 1896, served as chairman of committee on resolutions, presented name of William McKinley to the conventions of 1896 and 1900. He was elected to the United States senate in 1896, reëlected in 1902, and served as one of the conspicuous members of that body until 1909.

Forbes, Archibald, British war correspondent, special correspondent of the *London Daily News*, was born at Boharm Manse, Keith, Scotland, 1838. He was for some years in the royal dragoons but in 1870-71 went through the Franco-German war as war-correspondent. He lectured in Great Britain, America, and Australia, and wrote *Drawn from Life; Glimpses Through the Cannon Smoke; Chinese Gordon; Studies of War and Peace; Napoleon III.*, etc. Died 1900.

Forbes-Robertson, Johnston, English actor, was born in London in 1853. He was educated at Charterhouse, London, at Rouen, and at the Royal Academy of Arts. He has been theatrical manager since 1896. He played Romeo, Hamlet, and Macbeth in a most impressive manner. He was the chief support of Mrs. Patrick Campbell in her tour of the United States.

Ford, John, English dramatist, was born in Devon, 1586, studied at Exeter College, Oxford, and entered in 1602 the Middle Temple. His first work was an elegy on the earl of Devonshire entitled *Fame's Memorial*. Among those following were: *The Lover's Melancholy; The Fancies Chaste and Noble*, and *The Lady's Trial*. His two great tragedies, *'Tis Pity* and *The Broken Heart*, are not far inferior to Webster's masterpieces. Died 1639.

Ford, Paul Leicester, American author, was born in Brooklyn, N. Y., 1865. He was educated privately, and early devoted himself to literature. Author: *The Honorable Peter Stirling; The True George Washington; The Many Sided Franklin; Janice Meredith; Wanted: A Chaperon*, etc. Died at New York, 1902.

Forgan, James Berwick, financier, president of First national bank, Chicago, was born at St. Andrews, Scotland, 1852. He was educated at Madras College and Forres academy, Scotland. About 1888 he became cashier and manager of the Northwestern national bank; came to First national bank, Chicago, as vice-president, 1892. He succeeded Lyman J. Gage as president of the latter.

Forrest, Edwin, celebrated American actor, was born in Philadelphia, Pa., 1806. He went on the stage at fourteen, and finally made his way to New York, where his rendering of Othello at the age of twenty raised him to the front rank among actors. After his final appearance on the stage in 1871 he continued for a short time to give Shakespearean readings. He left a splendid library exceedingly rich in Shakespearean literature, which was destroyed by fire in 1873. Died 1872.

Forster, John, English political and historical writer, was born at Newcastle, 1812. He was educated for the bar, but in 1832 became the dramatic critic of the *True Sun*. He edited successively the *Foreign Quarterly Review*, the *Daily News*, and the *Examiner*. He was the author of many admirable biographical and historical essays. He died in 1876.

Forster, William Edward, English statesman, was born of Quaker parentage at Bradpole, Dorsetshire, 1818. In 1861 he entered parliament for Bradford. In 1870 he accepted a seat in the cabinet, and carried the elementary education bill; in 1872 he piloted the ballot bill through the commons. Under the Gladstone administration of 1880 Forster was chief-secretary for Ireland in troublous times. He was attacked unceasingly in parliament by the Irish members, and his life was threatened by the "invincibles." A strong opponent of home rule, he died in London, 1886.

Forsyth (*for-sith'*), **John,** American statesman, was born in Virginia, 1780. He practiced law in Georgia, was elected attorney-general of that state in 1808, and sat in congress from 1813 to 1818, when he became United States senator. In 1834 he resigned and served as secretary of state under Jackson and his successor, Van Buren, until he died in 1841.

Fortescue (*fōr'tes-kū*), **Sir John,** English jurist, was born in Somerset about 1394, and educated at Exeter College, Oxford. He accompanied Margaret of Anjou and her son into Scotland, and there was probably appointed lord chancellor by Henry VI. In 1463 he embarked with them for Holland, and during his exile wrote his celebrated *De Laudibus Legum Angliae* for the instruction of Prince Edward. Died, 1476.

Fortier, Alcée, university professor, was born at St. James Parish, La., 1856; was educated at the University of Virginia and in Paris; Litt. D., Washington and Lee, and Laval University. Professor of romance languages, Tulane University of Louisiana, since 1880. Author: *Le Chateau de Chambord; Bits of Louisiana Folk-Lore; Histoire de la Littérature Francaise; Louisiana Studies; Louisiana Folk Tales; History of Louisiana; History of Mexico;* etc. Editor of a number of French texts for colleges.

Fortuny (*fōr-tōō'nē*), **Mariano,** Spanish painter, was born at Reus in Tarragona, 1839. When Spain declared war against Morocco, Fortuny followed the army, and filled his portfolios with studies of eastern life. He died at Rome in 1874.

Foscari (*fos'kä-rē*), **Francesco,** was born about 1372. He was named procurator to St. Mark's at Venice in 1415, and became doge of that city in 1423. He was forced to abdicate in 1457. He survived his loss of power but two days.

Foss, Eugene Noble, manufacturer, was born in West Berkshire, Vt., 1858; studied at University of Vermont. Elected governor of Massachusetts, 1910. He has been prominent since 1902 in advocacy of tariff revision and reciprocity.

Foss, Sam Walter, poet, librarian, was born at Candia, N. H., 1858; graduated at Brown, 1882; editor, 1883-93; general writer, 1893-98; librarian, Somerville, Mass., public library, since 1898. Lecturer and reader of his own poems. Died, 1911.

Foster, George Eulas, member of the privy council of Canada; general manager of the Union Trust company, ltd., was born in New Brunswick, Canada, 1847; educated at the University of New Brunswick, Edinburgh University, and Heidelberg; became minister of marine in Sir John A. Macdonald's government, 1885; finance minister, 1888, in same ministry.

Foster, John Watson, lawyer, diplomat, was born in Pike county, Ind., 1836. He was graduated from Indiana University, 1855; student one year at Harvard Law School; LL.D., Princeton. Entered the Union army in 1861 as major of the 25th Indiana volunteers, and was promoted to lieutenant-colonel and colonel in Indiana regiments, and brevetted brigadier-general. Established, 1881, in practice in international cases in Washington, representing foreign legations before commissions, arbitration boards, etc. Minister to Spain, 1883-85; invited by emperor of China and participated in peace negotiations with Japan; agent for United States Alaskan boundary tribunal, London, 1903. Author: *A Century of American Diplomacy; American Diplomacy in the Orient; Arbitration and the Hague Court.*

Foster, Sir Michael, English physiologist, was born at Huntington, 1836; practiced there, 1860-66; In 1870 became lecturer on physiology at Trinity College, Cambridge, and was professor of physiology in the university, 1883-1903. His best known work is his *Text-Book of Physiology*. He died in 1907.

Foster, Murphy J., lawyer, United States senator, was born at Franklin, La., 1849; graduated at Cumberland University, Lebanon, Tenn., 1870, In 1879 he was elected a member of the senate of Louisiana, and was returned for three consecutive terms; was elected U. S. senator 1901 and 1907.

Foster, Stephen Collins, American song writer, was born in Pittsburg, Pa., 1826. He first wrote negro melodies, *Old Uncle Ned*, and *Oh, Susanna* which immediately gained a wide popularity. *Nelly Bly, My Old Kentucky Home*, and *O Boys, Carry Me 'Long*, were just as popular. He died in New York, 1864.

Foucault (*fōō'kō*), **Jean Bernard Léon,** French physicist, was born at Paris, 1819. He demonstrated the rotation of the earth by means of a graduated disk, invented the gyroscope and introduced physics into the study of astronomy. Died 1868.

Fouché (*fōō'shā'*), **Joseph,** duke of Otranto, French revolutionist and statesman, was born at Nantes in 1763. In 1792 he obtained a seat in the national convention, and on the trial of Louis XVI. voted for death without appeal. At a later period he became Napoleon Bonaparte's minister of police, and in 1809 was created duke of Otranto. Subsequently, Bonaparte having returned from Elba, Fouché again became minister of police. He advised Bonaparte to abdicate after the battle of Waterloo, was placed at the head of the provisional government by the chambers, and negotiated with the allies. Died 1820.

Foulke (*fōlk*), **William Dudley,** author, publicist, was born in New York, 1848. He was graduated from Columbia, 1869, and Columbia Law School, 1871. Removed to Indiana, 1876. United States civil service commissioner, 1901-03. Author: *Slav or Saxon; Life of Oliver P. Morton; Maya, a Story of Yucatan; Protean Papers;* frequent contributor to magazines on history and other subjects.

Fouqué (*fōō'kā'*), **Friedrich Heinrich Karl de la Motte,** famous German novelist and poet, was born in Brandenburg, 1777. He died in Berlin, 1843.

Fourier (*fōō'rē-ā'*), **François Charles Marie,** famous French socialist, was born in Besancon, 1772. In 1808 he disseminated his peculiar views on socialism by the publication of a work entitled *A Theory of Four Movements and General Destinies*, which in 1822 was reproduced in a completed form under the name of *A Treatise on Domestic and Agricultural Association*. Died 1837.

Fourier, Jean Baptiste Joseph, baron, celebrated French geometrician, was born at Auxerre in 1768. In 1802 he was appointed prefect of the Isère, and in 1815 of the Rhône. Being afterward displaced, he gave himself up entirely to scientific studies; was admitted in 1817 a member of the academy of sciences. His chief works are *Annales de Physique, theorie de la Chaleur*, and the *Analyse des Equations Déterminées*. He died in 1830.

Fowler, Charles Newell, lawyer, member of congress, was born at Lena, Ill., 1852; graduated from Yale University, 1876, Chicago law school, 1878. He has been a member of the United States house of representatives from New Jersey since 1895.

Fox, Charles James, English statesman, was born in Westminster, 1749. He was educated at Eton and at Hertford College, Oxford, entered parliament at the age of nineteen as member for Midhurst. In 1782 he became secretary of state under Lord Rockingham, but on the latter's death, in the same year, refused to serve under Lord Shelburne. When his great rival, Pitt, formed his last administration, he wished Fox to join it, but the king gave a steady refusal. On Pitt's death, in 1806, the king was at last obliged to admit him to office, and Fox became foreign secretary in Grenville's ministry. His last motion in parliament was directed against the slave trade, and he died at Chiswick in 1806, a few months before the measure founded upon it passed into law. He was the first orator of his time.

Fox, George, founder of the society of Friends, was born in County Leicester, England, 1624. Early adopting the peculiar tenets and manners known as Quakerism, he suffered for many years continual persecution. His leading doctrines or convictions were the futility of learning for the work of the ministry, the presence of Christ in the heart as the "inner light" and the necessity of trying men's opinions and religions by the Holy Spirit, and not by the scriptures. He died in London, 1691.

Fox, John, Jr., American novelist, was born in Kentucky, 1863, and was graduated from Harvard in 1883. After some experience in journalism, he traveled in Southern states and California, and afterward engaged in business at Cumberland Gap, where he had ample opportunity for the study of mountain life.

Fox, John, English martyrologist, was born at Boston, in Lincolnshire, 1517. At sixteen he entered Brasenose College, Oxford, and was a fellow of Magdalen, 1538-45. On Queen Elizabeth's accession he was pensioned by his old pupil, the duke of Norfolk, and received a prebend of Salisbury cathedral, 1563. He published numerous books, but the one upon which his fame rests is popularly known as *Foxe's Book of Martyrs*. Died 1587.

Fragonard (*frä-gō-när'*), **Jean Honoré,** French painter, was born at Grasse, 1732, and gained the prix de Rome in 1752. In 1765 he received 2,400 francs, from Louis XV for his *Callirrhoe*, commissioned for reproduction in Gobelins tapestry. Died 1806.

France (*frăns*), **Jacques Anatole Thibault,** French author, member of French academy, was born in Paris, 1844, and educated at Collège Stanis-

laus. Author: *Le Crime de Sylvestre Bonnard; L'Etui de Nacre; La Vie Littéraire; Le Mannequin d'Osier; Vie de Jeanne d'Arc*, and many other books.

rancia (*frän'sē-ä*), **José Gaspar Rodriguez,** dictator of Paraguay, was born near Asuncion, about 1757. Though politically despotic, he improved agriculture, promoted education, repressed superstition, and enforced strict justice in his law-courts, however little he regarded it for himself. Died, 1840.

rancis I., king of France, was born at Cognac, France, 1494, and became king in 1515. His first act was to reconquer Milan. His reign is marked by the French renaissance, the beginning of the Protestant reformation, and the strengthening of the power of the monarchy. He fostered learning and art, invited painters and scholars to his kingdom, founded libraries, opened schools, and built several of the finest palaces in France; but his persecution of the Vaudois has left a stain on his memory. He died in 1547.

rancis I., emperor of Germany, was born in 1708, eldest son of Leopold, duke of Lorraine. On the death of his father, 1729, Francis succeeded him in the dukedom, which in 1735, he ceded to Stanislaus Leszcynski, father-in-law of Louis XV., to revert after his death to the crown of France. Francis died at Innsbruck, 1765. His son Joseph succeeded him.

rancis II., emperor of Germany, and I. of Austria, was born at Florence, Italy, 1768, and succeeded his father, Leopold II., in 1792. His reign was a series of wars against Napoleon, in which, with the exception of the last, he was beaten. In 1806 he formally abdicated the crown of the holy Roman empire. He died at Vienna, 1835.

rancis Ferdinand of Austria, archduke, son of the late Archduke Charles Louis, by his second marriage with the Princess Maria Annonciata, daughter of Ferdinand II., king of the Two Sicilies, was born at Gratz, 1863. Until recently he has been a conservative figure in Austrian society, and, of course, holds aloof from politics because of his position.

rancis Joseph Charles, emperor of Austria and king of Hungary, was born in 1830, son of the Archduke Francis Charles, and grandson of the Emperor Francis I., and nephew of the Emperor Ferdinand I. He took part in the campaign against the Hungarians, and was present at the capture of Raab in June, 1849. Restored to the mastery of his dominions, he proceeded to undo the work of 1848. A dispute between Austria and Prussia as to Schleswig-Holstein led to war between the two nations in 1866. In this war the Austrians were completely defeated, and were compelled to accept the North German confederation under the leadership of Prussia, and to give up Venice to Italy. After these disasters the emperor restored national self-government to Hungary, and in June, 1877, was declared king of that country. In later years the emperor's influence in foreign politics has been chiefly directed to forming a closer alliance with Germany and Italy. By the suicide of Crown Prince Rudolph in February, 1889, he was deprived of all hope of a direct successor, and the crown will pass, on his death, to his nephew, Francis Ferdinand, son of his brother, Charles Louis.

rancis, Charles Spencer, journalist, diplomat, was born in Troy, N. Y., 1853; graduated from Cornell University, 1877. On his father's death, 1897, succeeded to editorial direction and sole ownership of *Troy Times;* regent of University of the State of New York, 1903-06. United States minister to Greece, Roumania, and Servia, 1900-02; ambassador to Austria-Hungary since 1906.

rancis, David Rowland, merchant, ex-governor of Missouri, was born at Richmond, Ky., 1850. He was graduated at Washington University 1870; LL.D.: in 1877 established what became Francis, Brother and Co., and D. R. Francis and Brother Commission company, grain merchants, of which he is president. Mayor of St. Louis, 1885-89; governor of Missouri, 1889-93; secretary of the interior, United States, 1896-97.

rancis, Sir Philip, reputed author of the *Junius Letters*, was born in Dublin, 1740. Leaving Ireland at twelve, he entered St. Paul's school in London, and at sixteen became a junior clerk in the secretary of state's office. In 1816 John Taylor wrote a book identifying Francis with *Junius*, but Francis never acknowledged having written the seventy letters, which appeared in the *Public Advertiser*, 1772. He died in 1818.

rancis de Sales (*frän'sis de säl*), **Saint,** an eminent theologian, orator, and writer, bishop of Geneva, was born at Sales, near Geneva, 1567, died in 1622, and was canonized in 1665. He was a Savoyard, coadjutor bishop, 1599, bishop of Geneva, 1602, and cofounder of the order of the Visitation, 1610.

rancis of Assisi, founder of the Franciscan order, one of the most extraordinary men of his age, was born 1182. His baptismal name was John; but from his familiarity with the Romance, or language of the troubadours, in his youth, he acquired the name of *Il Francesco*, "The little Frenchman."

He engaged eagerly in exercises of chivalry and of arms; and in one of the petty feuds of the time he was taken prisoner, and detained for a year in captivity at Perugia. An illness which he there contracted turned his thoughts from earth; and although he again engaged in military pursuits, a second illness, at Spoleto, decided his career for life. He resolved to fulfill literally the counsels of the gospel, and he especially devoted himself to poverty. His father having in vain confined him in a dark room of his own house, cited him before magistrates, and, on Francis' declining all civil jurisdiction in such a case, before the bishop, in order to compel him to renounce his inheritance. Francis abandoned all, even to the very clothes he wore. This was in his 26th year, in 1208.

His enthusiasm by degrees excited emulation. Two of his fellow-townsmen, Bernard Quintavelle and Peter Cattano, were his first associates. They were followed, although slowly, by others; and it was not till 1210 that, for his brotherhood, now increased to eleven in number, he drew up a rule, selected in the true spirit of religious enthusiasm, by thrice opening at random the gospels upon the altar, and taking the passages thus indicated as the basis of the young institute. In common with the older forms of monastic life, the Franciscan institute is founded on the three vows of chastity, poverty, and obedience; but of these the second was, in the eyes of Francis, the first in importance and in spiritual efficacy.

Numbers now crowded to the standard of Francis, and he sent them off in parties to different provinces of Italy. Five of the brotherhood repaired to Morocco to preach to the Moors, and, as the first martyrs of the order, fell victims to their holy daring. Success removed all the hesitation with which the institute at first was regarded, and in 1216 the order was solemnly approved by Pope Innocent. From this date it increased with extraordinary rapidity. At the first general assembly, held in 1219, 5,000 members were present. Francis himself inaugurated the future missionary character of his brotherhood by going (1223) to the East, and preaching the gospel in the presence of the sultan himself. It is after his return to Italy that his biographers place the celebrated legend, which, to friends or to enemies, has so long been a subject of veneration or of ridicule—his receiving, while in an ecstasy of prayer, the marks (*stigmata*) upon his own person of the wounds of our divine redeemer. Francis died in 1226.

References.—*Lives* by St. Bonaventura, Hase, Paul Sabatier, Mrs. Oliphant, Alemany, and Chérancé. Also Butler's *Lives of the Saints;* Milman's *History of Latin Christianity; Francis and Dominic*, by Professor Herkless; and Carmichael's *The Lady of Poverty*.

Francis of Paola (*pou'lä*), **Saint,** founder of the Minims, was born in 1416 at Paola in Calabria. At thirteen he was a Franciscan; and at nineteen he retired to a cave and inflicted on himself every species of self-mortification. He died at Plessis on Good Friday, 1507, and was canonized in 1519.

Francis Xavier, Saint. See **Xavier.**

Francke (*fräng'kē*), **Kuno,** educator, literary critic, professor of German culture, and curator of the Germanic museum, Harvard University, was born at Kiel, Germany, 1855; graduated gymnasium, Kiel, 1873; Ph.D., University of Munich, 1878; LL.D., University of Wisconsin, 1904; chevalier of the royal Prussian order of the Red Eagle and of the order of the Crown. Author: *Social Forces in German Literature; Glimpses of Modern German Culture; German Ideals of To-Day*, etc.

Frank, Henry, lecturer, author, was born at Lafayette, Ind., 1854; graduated from Phillips academy, Andover, Mass., 1874; founded, 1897, and since pastor of Metropolitan Independent church, Carnegie lyceum, New York. Actively engaged in social reform, and ethical forward movements. Associate editor of *Metaphysical Magazine*, 1901-02. Author: *Skeleton and the Rose; His Bold Experiment* (a sociological novel).

Frankland, Percy Faraday, English chemist, professor of chemistry, the university, Birmingham, since 1900, was born at London, 1858. He was educated at University college school, London, President of the institute of chemistry, 1906; member of council of Royal society, 1903.

Franklin, Benjamin, American writer and statesman, was born at Boston, 1706, died at Philadelphia, 1790. He was placed with his brother, a printer, to serve an apprenticeship to that trade, and his brother having started the *New England Courant*, Franklin secretly wrote some pieces for it, and had the satisfaction to find them well received. But, on this coming to the knowledge of his brother, he was severely lectured for his presumption, and treated with great harshness. Soon after, he quitted his brother's employment, and at the age of seventeen started for Philadelphia, where he obtained employment as a compositor.

Here he attracted the notice of Sir William Keith, the governor of Pennsylvania, who induced him to go to England for the purpose of purchasing types to establish himself in business. He got work in a printing-office, and after a residence of eighteen months in London returned to Philadelphia. He again returned to his trade, and in a short time formed a partnership for the publication of a newspaper, which was managed with such ability that Franklin acquired much reputation. By his exertions, a public library, improved systems of education, a scheme of insurance, etc., were established in Philadelphia.

In 1732 he published his *Poor Richard's Almanack*, which continued to be issued till 1757. In 1746 he saw, for the first time, some experiments in electricity, which led him to begin those investigations which resulted in the identification of lightning and electricity, and the invention of the lightning conductor. As member of the provincial assembly of Pennsylvania he showed himself very active, and in 1757 he was sent to England as the agent of the province. His reputation was now such, both at home and abroad, that he was appointed agent of the provinces of Massachusetts, Maryland, and Georgia. Oxford and Edinburgh conferred on him their highest academical degrees, and the Royal society elected him a fellow.

In 1762 he returned to America; but was again appointed agent in 1764, and brought to England a remonstrance against the project of taxing the colonies. He opposed the stamp act, and in 1774 presented to the king the petition of the first American Congress. On his return he was elected member of the Congress, and exerted all his influence in favor of the Declaration of Independence. In 1776 he was sent to France as commissioner plenipotentiary, to obtain supplies from that court. After the surrender of Burgoyne he concluded with France the first treaty of the United States with a foreign power (1778), and was subsequently named one of the commissioners for negotiating peace with the mother country. On his return to his native country he filled the office of governor of Pennsylvania, served as a delegate in the Federal convention of 1787, and approved the constitution then formed. His works include his unfinished *Autobiography*, and a great number of political, anti-slavery, financial, economic, and scientific papers.

References.—See *Lives of Franklin* by Sparks, Parton, and Morse. Also McMaster's *Benjamin Franklin as a Man of Letters;* Ford, *The Many-Sided Franklin;* Fisher, *The True Benjamin Franklin;* Hale, *Franklin in France;* and MacDonald, *Some Account of Franklin's Later Life, Principally in Relation to the History of His Times*.

Franklin, Fabian, mathematician, editor *Baltimore News* since 1895, was born at Eger, Hungary, 1853; graduated at Columbian (now George Washington) University, 1869; Ph.D., LL.D.; associate professor and professor of mathematics, Johns Hopkins, 1879-95; contributor of mathematical papers to the *America Journal of Mathematics*, and other mathematical journals.

Franklin, Sir John, English rear-admiral, arctic explorer, and colonial governor, was born in Lincolnshire, England, 1786. In 1845 he commanded an expedition for the discovery of the northwest passage. Many expeditions were sent out in search of the missing boats and their crews, and the relics and skeletons found proved that Sir John Franklin and his men had perished by starvation and exposure in 1847. A monument was erected to him in 1875, in Westminster abbey.

Franklin, William Suddards, educator, electrician, was born in Geary City, Kan., 1863. He was graduated at the University of Kansas, 1887, M.S., 1888; professor of physics and electrical engineering, Iowa State College, 1892-97; Lehigh University, 1897-1903; professor of physics Lehigh, since 1903.

Franz (*fränts*), **Robert,** German composer, was born, lived, and died at Halle, 1815-92. Franz's best songs rank with those of Schubert and Schumann. His published works first appeared in 1843.

Franzén (*frän-sän'*), **Frans Michael,** Swedish poet, was born in Uleaborg, Finland, 1772. After the conquest of Finland, he settled in Sweden as a

clergyman, finally removing to Stockholm where he was made bishop. He wrote: *Emili, or an Evening in Lapland; Columbus; Gustav Adolf in Germany.* Died, 1847.

Franzos (*frän'tsōs*), **Karl Emil,** Austrian novelist, was born in Russian Podolia of Jewish parentage, 1848. Among his principal works is *Aus Halbasien,* sketches of South Russia and Roumania, and the novel *Junge Liebe.* Died, 1904.

Fraser, Alexander Campbell, British author and educator, professor emeritus of logic and metaphysics in Edinburgh University, was born at Ardchattan manse, County Argyll, 1819. D.C.L., Oxford; LL.D., Princeton; Litt.D., Dublin. Author: *Essays in Philosophy; Essays, Philosophical and Miscellaneous; Collected Works of Bishop Berkeley,* annotated; *Biographia Philosophica.*

Fraser, Mrs. Hugh, novelist and writer of travels, was born at Rome, Italy. Author: *The Brown Ambassador; Palladia; A Chapter of Accidents; The Looms of Time; A Diplomatist's Wife in Japan;* etc.

Fraunhofer (*froun'hō-fēr*), **Joseph von,** German optician, was born at Straubing in Bavaria, 1787. In 1807 he was employed to found an optical institute at Benediktbeuern, which, under his management, was in 1819 removed to Munich. He is most celebrated for his improvements in telescope prisms and in the mechanism for manipulating large telescopes, and above all for his discovery of the dark lines in the sun's spectrum. Died, 1826.

Frederick I., called Barbarossa or Redbeard, was, born about 1121, and became emperor of Germany in 1152. At home he managed his vassals by a system of conciliation, and by keeping the balance of power among them equal. He asserted his power, moreover, over Poland, Hungary, Denmark, and Burgundy. At the height of his fame and influence, he took the cross to fight against Saladin. He defeated the Mohammedans in two battles, but was himself drowned in Pisidia, 1190.

Frederick II., of Germany, son of Emperor Henry VI., was born at Jesi near Ancona, 1194. In his fourth year his father died, leaving him king of Sicily. When eighteen he wrested the imperial crown from Otto IV., and was crowned in 1215. During his reign he was engaged in a harassing contest with the pope, whose hands were strengthened by the accession of the revolted Lombard cities and of several princes and towns of Germany, headed by his son, Henry. Disaster and misfortune were gathering around him, when he died at Fiorentino in 1250.

Frederick II. of Prussia, commonly called *Frederick the Great,* was born, 1712, and began to reign in 1740. He found himself in possession of a full treasury and a powerful army, which he soon employed in attacking Austria, and conquering the province of Silesia (1740-1742). In 1744 he engaged in a second war with Austria, which was terminated in 1745, and left him in possession of Silesia, but with no augmentation of power, though his military renown was raised throughout Europe.

The great struggle of the Seven Years' War began in 1756. Prussia was now attacked by the Austrians, the Russians, the French, the Saxons, and the Swedes, and its destruction and dismemberment seemed inevitable. England was Prussia's only ally; but the country went through the struggle, and came out triumphant. When the peace of Hubertsburg was concluded in 1763, Prussia did not cede an inch of land, or pay a dollar of money; and from that time forth was recognized as one of the five great powers of Europe. For this glorious result it was indebted to Frederick.

It is not merely the military genius of Frederick, as displayed during the sanguinary campaigns of the Seven Years' War, that demands our attention, but we must also admire his moral courage and his indomitable energy under reverses which would have crushed almost any other spirit. Though victorious at Prague, at Rosbach, and Lissa (1757), at Zorndorf (1758), at Liegnitz and Torgau (1760), he suffered heavy defeats at Collin (1757), at Hochkirchen (1758), at Kunnersdorf (1759); and his lieutenants, with the exception of Prince Ferdinand of Brunswick, were generally unsuccessful. But Frederick's firmness never failed him, even when all hope seemed lost. In a period of extreme danger, he wrote to Voltaire (who had advised him to beg mercy from his enemies), "I am a man, and therefore born to suffer. To the rigor of destiny I oppose my own constancy. Menaced with shipwreck, I will bear the storm; I will be king in spirit; and I will die, as I have lived, a king."

After the conclusion of the war, Frederick exerted himself earnestly in relieving the suffering which so many years of carnage and devastation had brought upon Prussia. He died 1786. He was fond of the society of literary men, and was himself an author of many works of considerable merit. During his struggles against Austria and France, Frederick was regarded in England and America as the champion of Protestantism, and he was called a second Gustavus Adolphus. He ill deserved the title. The disciple of Voltaire, he is supposed to have had no religious faith, whatever.

References.—Carlyle's *History of Frederick II.;* Droysen's *Friedrich der Grosse;* Kugler's *Hist. of Frederick the Great;* Longman's *Frederick the Great and the Seven Years' War;* and Reddaway's *Frederick the Great.*

Frederick III., eighth king of Prussia and emperor of Germany, son of William I., was born near Potsdam, 1831. After arousing the world's best expectations by his goodness and wisdom no less than by his bravery, he ascended the throne in 1888, during his last illness, in which he suffered as heroically as he had fought. He died when fifty-seven years old, 1888. He was succeeded by his son, William II.

Frederick VI., king of Denmark, son of Christian VII. and the princess Caroline Matilda, was born in 1768. Frederick ascended the throne on the death of his father in 1808. In 1814 he was robbed of Norway, and was at last compelled to send a contingent of 10,000 men against the French. The country had become bankrupt in 1813, but by his wise measures financial order was finally restored. Died, 1839.

Frederick Charles, prince and field-marshal of Germany, was born in Berlin, 1828. He was the eldest son of Prince Charles, brother of Emperor William I. He was known as "the red prince" from the fact that he always wore a red hussar uniform. His daughter, Louise Margaret, married the duke of Connaught, son of Queen Victoria, in 1879. Died, 1885.

Frederick William, the great elector of Brandenburg, was born in 1620. On his accession in 1640 he found the state disorganized, exhausted, and devastated by the Thirty Years' war. He strenuously regulated the finances, made a treaty of neutrality with Sweden, organized his army, and strove to repeople his deserted towns and villages. By the treaty of Westphalia, 1648, he recovered eastern Pomerania, Halberstadt, and Minden, with the reversion of the archbishopric of Magdeburg; and out of a quarrel between Sweden and Poland he contrived to secure the independence of the duchy of Prussia from Poland, 1657. He founded the royal library at Berlin, reörganized the universities, opened canals, established posts, and greatly enlarged Berlin. He left a well-filled exchequer and a highly organized army. He made Brandenburg virtually an absolute monarchy, only less powerful than Austria. He died at Potsdam in 1688, and his son became King Frederick I. of Prussia.

Frederick William I., king of Prussia, son of Frederick I., was born 1688, and on his accession in 1713 became embroiled in the war waged by Sweden against Russia, Poland, and Denmark, at the end of which he acquired Pomerania with Stettin. The remainder of his reign was devoted to improving the internal condition of Prussia. He was sternly practical, blunt, and determined; he despised the arts and sciences, was rigidly economical, and strict in his ideas of justice. At his death in 1740 he left a treasure of $5,750,000, and an army of more than 80,000 men, the best-disciplined force in Europe, which made Prussia fourth in military power.

Frederick William II., king of Prussia, nephew of Frederick the Great, was born in 1744. The abolition of some of his predecessor's oppressive measures made him very popular at his accession in 1786. He acquired large areas of Polish Prussia and Silesia by the partitions of Poland in 1793 and 1795, as also Ansbach and Baireuth. He died in 1797.

Frederick William III., of Prussia, son of Frederick William II., was born in 1770. He was more than once embroiled with the pope, on account of his violation of the concordat. He concluded the great German commercial league known as the *Zollverein,* which organized the German customs and duties in accordance with one uniform system. Died, 1840.

Freeman, Edward Augustus, eminent English historian, was born at Harborne, England, 1823. He was educated at Trinity College, Oxford. He wrote histories of the Saracens and of the Ottoman power in Europe; *General Sketch of European History; Growth of the English Constitution; Comparative Politics; Historical Geography of Europe; William the Conqueror;* and various other works. In 1884 he was appointed regius professor of modern history at Oxford. Died, 1892.

Freeman, John Ripley, civil and mechanical engineer, was born in West Bridgeton, Me., 1855; graduated at the Massachusetts institute of technology, 1876; honorary Sc. D.; chief engineer investigations Charles river dam, Boston harbor, 1903; engineer member of Massachusetts metropolitan water board, 1895-96. Consulting engineer to New York board of water supply since 1905; consulting engineer isthmian canal locks and dams, 1907.

Freeman, Mary E. Wilkins, author, was born at Randolph, Mass., 1862. She was educated there and at Mt. Holyoke seminary 1874; came into prominence as a writer for magazines—poems, short stories, etc.; married Dr. Charles M. Freeman, 1902. Author: *A Humble Romance; Evelina's Garden; The Love of Parson Lord; By the Light of the Soul; People of Our Neighborhood.*

Freiligrath (*frī'lig-rät*), **Ferdinand,** German poet, was born at Detmold, 1810, and was led by the success of a volume of poems published in 1838 to desert commerce for literature. Chief among his political poems are *Ca Ira,* and *Neuere Politische und Soziale Gedichte.* He translated Longfellow, Shakespeare, etc. His collected works appeared in 1870.

Frelinghuysen (*frē'ling-hī-zen*), **Frederick,** American statesman, was born in New Jersey, 1753. He raised a corps of artillery, fought in the Revolutionary war, was a member of the continental congress in 1778 and 1782-83, and a United States senator in 1793-96. He died in 1804.

Frelinghuysen, Frederick Theodore, nephew of above, was born in New Jersey, 1817. From 1866 to 1869 he served as United States senator. He was a member of the Hayes-Tilden electoral commission. In 1881 he became secretary of state in President Arthur's cabinet, and held office until his death in 1885.

Frelinghuysen, Theodore, son of Frederick, was born in New Jersey in 1787. He studied law, practiced in New Jersey. In 1829 he was chosen United States senator, and served until 1835. Afterward he was mayor of Newark, and in 1839 became chancellor of the University of New York. In 1850 he became president of Rutgers College, which position he held until his death in 1862.

Frémiet (*frā-mye'*), **Emmanuel,** noted French sculptor, was born at Paris, 1824. He studied at La Petite Ecole, and under Rude; made drawings at the Jardin des Plantes, and later drew plates for medical works. Died 1910.

Frémont (*frē-mont'*), **John Charles,** explorer of the Rocky mountains, was born at Savannah, Ga., 1813. In 1842 he crossed the Rocky mountains, and demonstrated the feasibility of an overland route across the continent. During the Mexican war he cleared northern California of Mexican troops. In 1849 he settled in California; was United States Senator, 1850-1; and first Republican candidate for President in 1856. In 1861-62 he served in the regular army as major-general. He was governor of Arizona in 1878-82, and died in New York, 1890.

French, Alice, author, better known as Octave Thanet, was born at Andover, Mass., 1850, daughter of Hon. George Henry French. She was educated at Abbot academy there, but her life since then has been spent in the South and West. Author of *Man of the Hour, The Heart of Toil,* etc.

French, Daniel Chester, American sculptor, was born at Exeter, N. H., 1850. He was educated in Exeter, N. H., and Massachusetts institute of technology, Boston, one year; A.M., Dartmouth College; studied art with William Rimmer in Boston, and with Thomas Ball in Florence, Italy; occupied a studio in Washington 1876-78, in Boston and Concord, Mass., 1878-87, and in New York, 1887-1900. Among his best-known works are: *The Minute Man of Concord,* at Concord, Mass.; *John Harvard,* at Cambridge, Mass.

Freneau (*frē-nō'*), **Philip,** American poet, was born in New York city, 1752. After the return of peace Freneau became in succession editor of a newspaper, and captain of a ship. In 1790 he edited the New York *Daily Advertiser.* From that time until his death he rarely came before the public. Died, 1832.

Frère (*frâr*), **Pierre Edouard,** French painter, was born at Paris, 1819. He studied under Delaroche. His paintings are mostly figures and scenes from domestic life. He died at Ecouen, 1886.

Fresenius (*frā-zā'nē-ōōs*), **Karl Remigius,** noted German chemist, was born in 1818. He studied at Bonn and Giessen under Liebig, and in 1845 became professor of chemistry at Wiesbaden. Died, 1897.

Fresnel (*frā-nel'*), **Jean Augustin,** eminent French physicist, was born at Broglie, Eure, France, 1788. He was educated at the polytechnic school in Paris, and in 1816 received a permanent appointment there through the celebrated Arago. He invented the compound lighthouse lens. He died in 1827.

Freund (*froint*), **Wilhelm,** German philologist, was born of Jewish parents at Kempen in Posen, 1806. On his *Wörterbuch der lateinischen Sprache* most English-Latin dictionaries are based. Died, 1894.

Freycinet (*frā'sē'ne'*), **Charles Louis de Saulces de,** French statesman, was born at Foix, France, 1828. He was graduated at the Polytechnic school in Paris, 1848, and was originally an engineer. Elected to the senate in 1876, he became minister of public works in 1877, premier in 1879, 1882, 1886, and 1890, and in 1892 remained war minister under his successor, M. Loubet. Admitted to the academy of sciences in 1887, and to the French academy in 1890.

Freytag (*frī'tăĸ*), **Gustav,** German novelist and dramatic writer, was born in Silesia, 1816. He studied at Breslau and Berlin, and lectured on German literature in the University at Breslau. He wrote poems, successful plays, and novels. His best-known work is *Debit and Credit*, which has appeared in several English translations. He died at Wiesbaden, 1895.

Frick, Henry Clay, manufacturer, philanthropist, was born in West Overton, Pa., 1849. Was president, and since 1897 chairman of board of directors of the H. C. Frick coke company, now the largest coke producer in the world, operating nearly 40,000 acres of coal and 12,000 coke ovens, with daily capacity of 25,000 tons.

Frobisher (*frob'ish-ĕr* or *frō'bish-ĕr*), **Sir Martin,** famous English navigator, was born near Doncaster about 1535, and brought up to the sea. Persuaded that there was a northwest passage to the Indies, and after many fruitless efforts to enlist the merchants in his cause, he obtained in 1576 from the government of Queen Elizabeth three vessels, explored portions of the Arctic coast, and, passing through the strait which has since borne his name, he returned to England and was knighted. Died 1594.

Froebel (*frû'bel*), **Friedrich Wilhelm,** founder of the famous kindergarten system, was born at Oberweissbach Germany, 1782. He founded a kindergarten at Blankenburg in 1837. His system was founded on that of Pestalozzi—under whom he worked from 1807 to 1809—which combined physical, moral, and intellectual training, commencing with the years of childhood. Died 1852.

Frohman, Charles, theatrical manager, was born at Sandusky, Ohio, 1860. He was educated in the public schools of New York. In 1881 he saw *Shenandoah* at a Boston museum; organized a company and bought rights to that play, outside of Boston; made a great success with that and succeeding ventures; organized Charles Frohman stock company, 1890.

Frohman, Daniel, theatrical manager, was born at Sandusky, Ohio, 1853. Manager of Fifth Avenue theater and Madison Square theater, New York, 1879-85; manager of Lyceum theater since 1885; manager of Daly's theater, New York, and Daniel Frohman stock company. President of actors' fund of America.

Fromentin (*frō'măn'tăn'*), **Eugene.** French painter and author, was born at La Rochelle, France, 1820. He was a pupil of Rémond and Cabat; traveled in 1842-46 in Algeria, Egypt, and the East, and was made an officier of the legion of honor, 1859. Died 1876.

Frontenac (Fr. *frŏn'tē-nàk'*; Eng., *fron'tē-nak*), **Louis de Buade, Comte de,** French colonial officer, governor of Canada, was born in 1621. He served in the French army, and in 1672 was appointed governor of the French possessions in North America. He died at Quebec, 1698.

Frost, Arthur Burdett, illustrator, author, was born at Philadelphia, Pa., 1851. He was self-taught in art, and exhibited at the Paris exposition, 1900. Author: *Bull Calf and Other Tales; Golfer's Alphabet*; etc. He lives chiefly in France.

Frothingham, Arthur Lincoln, Jr., university professor, was born at Boston, 1859. Educated at the Royal University, Rome, 1875-81; M. A., Ph. D., University of Leipzig, 1883. Professor of archæology and history of art, 1887-98, ancient history and archæology, since 1898, Princeton University. Author: *A History of Sculpture; Mediæval Art Inventories of the Vatican*. Author and reviewer of the departments of architecture, art and archæology in the *New International Encyclopædia* and many contributions to American, English, French and Italian periodicals.

Frothingham (*froth'ing-am*), **Octavius Brooks,** clergyman and author, was born at Boston, Mass., 1822. He was graduated at Harvard in 1843, and became pastor of a Unitarian church in Salem, Mass. In 1855 he removed to New Jersey, and in 1859 to New York, where he acted as minister of an independent religious organization for twenty years. Died 1895.

Frothingham, Paul Revere, clergyman, author, was born at Jamaica Plain, Mass., 1864. He was graduated from Harvard, 1886, Harvard divinity school, A. M., S.T.B., 1889; preacher to Harvard University, 1899-1902; minister of Arlington Street church, Boston, since 1900. Author: *William Ellery Channing; The Temple of Virtue*, etc.

Froude (*frōōd*), **James Anthony,** eminent English historian and general writer, professor of history at Oxford from 1892 to his death, was born at Dartington, England, 1881. He was educated at Oriel College, Oxford. In literature his best-known works are those on the Carlyle family, and *Erasmus*. His accuracy has been greatly criticised in detail, but his brilliant yet simple style, and power of presenting broad effects have secured for his histories great influence and popularity. Died 1894.

Fry, Sir Edward, English lawyer and jurist, was born at Bristol, England, 1827. He was educated at Bristol College, University College, London; lord justice of appeal, 1883-92; presided over the royal commission on the Irish land acts, 1897-98; appointed ambassador extraordinary and first British plenipotentiary to The Hague peace conference, 1907.

Fry, Elizabeth, English philanthropist, was born near Norfolk, 1780, daughter of John Gurney, a banker. Mrs. Fry visited prisons in different parts of Great Britain and on the continent, everywhere effecting ameliorations. She died at Ramsgate, 1845.

Frye, William Pierce, lawyer, United States senator from Maine since 1881, was born in Lewiston, Me., 1831. He was graduated at Bowdoin college, 1850; LL.D., 1889; LL.D., Bates, 1881; member of congress, 1871-81; elected United States senator in 1881, reëlected for the period 1883-1913. President *pro tem.* during Roosevelt's administration, and reëlected in 1907. Died, 1911.

Fryer, John, Agassiz professor of oriental languages and literature, University of California since 1896, was born at Hythe, Kent, England, 1839; graduated from Highbury College, London, 1860; LL.D.; general editor and chairman of executive committee of educational association of China, 1887-96; hon. secretary of Chinese Polytechnic institution, Shanghai, since 1870. Author: *Educational Directory for China; Translator's Vade-Mecum, or Vocabulary of Scientific Terms in Chinese and English*, etc.

Führich (*fōō'rĭĸ*), **Joseph von,** Austrian painter, was born at Kratzau, Bohemia, 1800. He became professor of painting in the academy of Vienna, and painted many scriptural subjects. Died 1876.

Fukushima (*fōō'kōō-shē'mä*), **Baron,** Japanese general, was born at Matsumoto, 1853. General staff officer, 5th division, first army; then chief of administrative bureau of territory occupied by Japan during war with China; in command of Japanese contingent until fall of Tientsin, then attached to General Yamaguchi, then to Field-Marshal Waldersee as general staff officer during Boxer troubles, 1900-01; attended King Edward's coronation; general staff officer, headquarters, Manchurian army, Russo-Japanese war, 1904-05; succeeded General Kodama as vice-chief of general staff of the army, 1906.

Fuller, George, American figure, portrait, and landscape painter, was born at Deerfield, Mass., 1822. He studied in Boston, New York, London, and on the continent, and achieved his first success in 1857. Had notable exhibits at Boston and New York, 1876 and 1879, respectively. Died 1884.

Fuller, Melville Weston, chief-justice of the United States supreme court, was born in Augusta, Me., 1833. He was graduated from Bowdoin College in 1853, and attended a course of lectures at Harvard law school; LL. D. He became chief-justice of the United States on October 8, 1888; was chancellor of Smithsonian institution; chairman of trustees of Peabody education fund; member of permanent court of arbitration, The Hague; member of arbitral tribunal in the matter of the Muscat Dowhs, at The Hague, 1905. Died 1910.

Fuller, Sarah Margaret, Marchioness Ossoli, transcendentalist, was born at Cambridgeport, Mass., 1810. In 1844 she published *Woman in the Nineteenth Century*. In 1847 at Rome she met the Marquis Ossoli, and married him. In 1849, during the siege of Rome, she took charge of a hospital; and after the capture of the city by the French she and her husband sailed with their infant for America, 1850. On July 16th the vessel was wrecked on Fire island near New York.

Fulton, Robert, celebrated American inventor and engineer, was born at Little Britain, Pa., 1765. He was received as a civil engineer in 1795, and wrote a work on canals in which he developed his system. Accepting an invitation from the United States minister at Paris, he proceeded to that city in 1796, and remained there for seven years, devoting himself to new projects and inventions. In 1803 he constructed a small steamboat, and his experiments with it on the Seine were attended with great success. He returned in 1806 to New York and pursued his experiments there. In 1807 he launched his steam-vessel, the *Clermont*, upon the Hudson, which made a successful start, in the presence of thousands of astonished spectators. In 1815 he launched the war-steamer *Fulton*, and died the same year.

Funk, Isaac Kaufman, author, publisher, clergyman, was born at Clifton, Ohio, 1839. He was graduated at Wittenberg College: D. D., 1860; LL. D., 1896; editor-in-chief of *Standard Dictionary;* entered into partnership with A. W. Wagnalls in 1878, merging into the Funk and Wagnalls company, 1890. Author: *The Next Step in Evolution; The Widow's Mite, etc.* Died, 1912.

Funston, Fred, brigadier-general of United States army, was born in Ohio, 1865. He studied in Kansas State University; was captain, major, and lieutenant-colonel in the insurgent army in Cuba, 1896; served eighteen months; was wounded; returned to United States; commissioned colonel of 20th Kansas volunteers, 1898; went to Philippines; took part in several battles; for crossing the Rio Grande at Calumpit on small bamboo raft in face of heavy fire and establishing rope ferry, by means of which the United States troops were enabled to cross and win the battle, he was promoted to brigadier-general of United States volunteers, 1899. Continued in active service in Philippines. Organized and commanded expedition resulting in capture of Aguinaldo, head of Filipino insurrection, and was appointed brigadier-general of United States army, 1901; commandant army service school, Ft. Leavenworth, Kan., 1909.

Furness (*fûr'nes*), **Horace Howard,** author, editor, Shakespearean scholar, was born in Philadelphia, Pa., 1833; graduated from Harvard, 1854; Ph.D., University of Halle; Litt.D., Columbia College and Cambridge (England); LL.D., University of Pennsylvania, Harvard, Yale, 1901. Died, 1912.

Furniss (*fûr'nis*), **Harry,** English caricature artist, author, and lecturer, was born at Wexford, 1854. Settled in London at nineteen; many years contributor to *Illustrated London News; The Graphic; Black and White; Illustrated Sporting and Dramatic News;* and the principal magazines in England and America.

Furnivall (*fûr'ni-val*), **Frederick James,** English philologist, was born at Egham, Surrey, England, 1825. He was educated at University College, London, and Trinity hall, Cambridge, where he took his degree, 1846; M.A., Ph.D., Litt.D. He devoted himself to English philology, and founded the Early English text society, 1864; the Chaucer society, 1868; the ballad society, 1868; and the New Shakespeare society, 1874; was active in starting the Browning society, 1881, and the Wycliffe society, 1882. He personally edited many works, chiefly through the medium of some one of the above societies; the most important being *Saint Graal;* Roberde of Brunne's *Handlyng Synne;* Walter Map's *Queste del Saint Graal; Political, Religious, and Love Poems;* Bishop Percy's *Folio MS. of Ballads and Romances*. His most valuable works are his splendid edition of Chaucer's *Canterbury Tales*, and the *Century Shakespeare* in 39 volumes. Died 1910.

Fuseli (*fū'zē-li*), **John Henry,** Swiss painter, was born at Zürich in 1741. He was at first a clergyman and writer of Zürich, visited England, afterward studied art in Italy, returned to London in 1778, and executed pictures for Boydell's Shakespeare gallery. Died 1825.

Fustel de Coulanges (*fus-tel' dē kōō-lănzh'*), **Nuam Denis,** French historian, was born at Paris, 1830. He filled chairs at Amiens, Paris, Strassburg, and from 1875 at the Ecole Normale at Paris. After the war of 1870 he turned his attention to history, though he had written previously *Chio* and *Polybe*. His first historical work, *La Cité antique*, made its author famous. Member of the French institute. Died 1889.

Fyffe (*fif*), **Charles Alan,** English historian, was born at Blackheath, England, 1845. In 1867 he took classical honors at Balliol College, Oxford, and was elected a fellow of University College. During the Franco-German war he was war correspondent for the *London Daily News*, and was in Paris during the commune. Died, 1892.

Gabelentz (*gä'bē-lents*), **Hans Conon von der,** German philologist, was born at Altenburg, 1807. He was educated at the Universities of Leipzig and Göttingen. He furnished contributions to periodicals on the Mordvinian and Samoyed languages. Died 1874.

Gade (*gä'de*), **Niels Wilhelm,** Danish composer, was born, lived, and died at Copenhagen, 1817-90. He was court organist at Copenhagen, and wrote several symphonies, overtures, and cantatas, as well as many choral and solo productions.

Gadsden (*gadz'den*), **Christopher,** American patriot was born in Charleston, S. C., 1724. He was a member of the first continental congress, 1774, became brigadier-general during the revolution, and was lieutenant-governor of South Carolina at the time of the surrender of Charleston to Sir Henry Clinton in 1780. He died in 1805.

Gadsden, James, grandson of above, was born at Charleston, S. C., 1788. He served in the war of 1812 and against the Seminoles. In 1853 he was appointed minister to Mexico, and negotiated the purchase of part of Arizona and New Mexico, known as the "Gadsden purchase." He died in 1858.

Gage, Simon Henry, biologist, educator, was born in Otsego county, N. Y., 1851. He was graduated at Cornell; instructor, assistant professor and full professor of Cornell from 1878; studied in Europe, 1889, and is now one of the editors of *American Journal of Anatomy*.

Gage, Thomas, English general, last royal governor of Massachusetts, was born in 1721. In 1763 he was made commander-in-chief of the British forces in America. In 1774 he was nominated governor of Massachusetts, a post of peculiar difficulties. On June 17th the battle of Bunker Hill was fought, which resulted in a dearly bought victory to the English; but numerous complaints being lodged against Gage, he was recalled by the British government in October, 1775. Died, 1787.

Gagern (*gä'gern*), **Heinrich Wilhelm August,** German statesman, was born at Baireuth, Germany, 1799. He was educated at the military school at Munich. In 1821 he entered political life under the government of Hesse-Darmstadt. In 1832 he vigorously opposed the policies of the state governments and of the federal diet. In 1846 he published a work against the government of Hesse. Died 1880.

Gailor, Thomas Frank, prelate, bishop of Tennessee since 1893, was born at Jackson, Miss., 1856. He graduated at Racine College, and the General theological seminary, New York; D.D., S.T.D. He became professor of ecclesiastical history, University of the South, 1882, and chaplain 1883; vice-chancellor of university, 1890-93.

Gainsborough (*gānz'b'rō*), **Thomas,** eminent English painter, was born at Sudbury, England, 1727. He excelled as a portrait painter, and more than two-thirds of his 300 pictures were portraits. His later years were devoted to landscape painting, especially after settling in London in 1774. At the creation of the Royal Academy he was chosen one of the first members. He died in 1788.

Gairdner (*gārd'nĕr*), **James,** British historian, was born at Edinburgh, England, 1828. He was educated at the University of Edinburgh; LL.D., Edinburgh, 1897; edited the *Paston Letters*, 1872-75; has edited also some volumes for the late Camden society; author of *England* in the series *Early Chroniclers of Europe.*

Gaius (*gā'yus*), or **Caius,** Roman jurist, flourished in the second century of our era. He was the author of more than fifteen works, of which the *Institutes* was the most important.

Galba (*gal'bā*), **Servius Sulpicius,** Roman emperor, was born B. C. 3. He was commander of the army in Spain when the emperor Nero died, in 68 A. D., and was so popular with the soldiers that they made him emperor when seventy-one years old. He was murdered after a reign of only seven months, in 69 A. D.

Galdós (*gäl-dōs'*), **Benito Pérez,** Spanish novelist and dramatist, was born in the Canary islands, 1845, but was brought up at Madrid. His *Gloria Dona Perfecta, Trafalgar, Léon Roch, Marianela,* etc., have been translated into English, and entitle him to be classed among the most noted modern writers.

Galen (*gā'len*), or **Claudius Galénus,** celebrated Greek physician, was born at Pergamus, in Mysia, 130 A. D. He first studied medicine at Pergamus, afterward at Smyrna, Corinth, and Alexandria. In his thirty-fourth year he went to Rome, where he stayed for about four years, and gained such a reputation that he was offered, but declined, the post of physician to the emperor. The place and time of his death are alike unknown, though the latter is believed to have been 201.

Galilei, Galileo (*gä'lē-lā'ō*), celebrated Italian astronomer and physicist, born at Pisa, 1564. While a student he had enunciated the law of vibrations or swings of a pendulum—i. e., its isochronism. In 1588 he was provided with a lectureship at Pisa University. At this period he invented the hydrostatic balance. Owing to veiled suspicion and hostility and the loss of court favor, he quitted Pisa, and obtained the professorship of mathematics in Padua University in 1592.

In 1609 he constructed a telescope on the model of that of Hans Lippershey of Middleburg, Holland, and with it discovered four satellites of Jupiter, as well as the fact that they were not stationary, but actually revolved around the bright planet. The uneven configuration of the surface of the moon was demonstrated; and he detected sun-spots. The astronomer was invited to Florence, in 1610, by his patron, Cosimo, Grand Duke of Tuscany, and established as his philosopher and mathematician. Continued advocacy of Copernican principles, and their Scriptural significance, brought him under the ban of the church.

In 1632 appeared his *Dialogues on the Systems of the World*, after which he was peremptorily summoned to Rome by Pope Urban VIII. Stricken in years, and dreading imprisonment, Galileo publicly abjured his own philosophy. Accused of heresy, he was, among other penalties, to suffer detention, while his book was prohibited. At the close of 1633 he was permitted to return to Arcetri, Florence, where he thereafter lived in seclusion. An edition of Galileo's works and correspondence, including what is perhaps his most important production, *Dialogues of the New Sciences*,, was undertaken by the Italian government in 1890. Died in 1642.

References.—See *Lives* by Viviani; T. Henri Martin; Favaro; and Fahie. Also Lodge's *Pioneers of Science;* Shelley's *Literary and Scientific Men of Italy;* Ball's *Great Artronomers.*

Gall (*göl;* Ger., *gäl*), **Franz Joseph,** German physician, founder of phrenology, was born at Tiefenbronn, on the borders of Baden and Würtemberg, 1758. In 1785 he established himself as a physician in Vienna, where for many years he carried on a series of elaborate investigations on the nature of the brain and its relation to the outer cranium. Died 1828.

Gallait (*gäl-lā'*), **Louis,** Belgian historical painter, was born at Tournay, 1810, became famous by pictures on subjects from the history of the low countries. He died in 1887.

Galland (*gä-lăn'*), **Antoine,** French orientalist, was born at Rollot in Picardy, 1646. Attached in 1670 to the French embassy at Constantinople, he traveled in Syria and the Levant, 1673-79. In 1709 he became Arabic professor in the Collège de France. Is best known by his translation of the *Arabian Nights.* Died 1715.

Gallatin (*gal'ä-tin*), **Albert,** American financier and statesman, was born at Geneva, Switzerland, 1761. He graduated there in 1779, came to the United States in 1780, taught French at Harvard, bought land in Virginia and Pennsylvania, and entered political life in 1789. In 1795 he entered congress from Pennsylvania, and in 1801-14 was secretary of the treasury. From 1827 he devoted his time to historical and ethnological researches, writing on finance, politics, and the Indian tribes. He was one of the founders, and the first president of the ethnological society of America. Died 1849.

Galaudet, Thomas Hopkins, educator, philanthropist, was born in Philadelphia, Pa., 1787. He was graduated at Yale College, 1805; tutor there, 1808-10; founded and became superintendent of the American asylum for deaf mutes at Hartford. Died 1851.

Galle (*gäl'lĕ*), **Johann Gottfried,** German astronomer, was born in Prussian Saxony in 1812. He studied at Berlin, 1830-33, became director of the Berlin observatory, and shares with Leverrier the honor of discovering the planet Neptune. He afterward became professor of astronomy at Breslau. Died in 1910.

Gallinger, Jacob Harold, physician, United States senator from New Hampshire, was born in Cornwall, Ont., 1837. He received an academic education, graduated in medicine, 1858, and practiced until he entered public life. Member of congress, 1885-89. Elected to United States senate, 1891, and reëlected 1897, 1903, and 1909.

Galt (*gôlt*), **Sir Alexander Tillock,** Canadian statesman, was born at Chelsea, England, 1817, and emigrated to Canada when a boy. From July to November, 1867, he was finance minister of the Dominion. After 1857 he allied himself with the liberal-conservative party, and was considered one of the leading authorities on finances in the Dominion. He became grand commander of the order of St. Michael and St. George in 1878. He wrote *Canada from 1849 to 1859.* Died 1893.

Galt, Sir Thomas, Canadian jurist, brother of the foregoing, was born in England in 1815, and educated in Scotland. He removed to Canada in 1832, and was admitted to the bar in 1845. In 1858 he became queen's counsel, in 1869 judge of the common pleas, and in 1887 chief justice of the court of common pleas. He was knighted in 1888. Died 1901.

Galton (*gôl'tun*), **Francis,** English scientist and traveler, was born near Birmingham, England, 1822; cousin of Charles Darwin. He was educated at King Edward's school, Birmingham, and King's College, London, studied medicine, and was graduated at Trinity College, Cambridge, 1844; D.C.L., Oxford; Sc.D., Cambridge. He has been an officer and member of many scientific societies, and for his *Narrative of an Explorer in Tropical South Africa* received the gold medal of the Royal Geographical society. Died, 1911.

Galvani (*gäl-vä'nē*), **Luigi,** Italian physician and physicist from whom "galvanism" derived its name, was born in Bologna, 1737. He made those discoveries, partly by means of experiments on the muscles of frogs, which he published to the world in 1791 in his treatise entitled *De Viribus Electricitatis in Motu Musculari Commentarius.* The now fully-established doctrine of animal electricity owes its origin to the patient and laborious investigations of the Bologna professor. Died 1798.

Gama (*gä'mä*), **Vasco da,** Portuguese navigator, was born about 1469 at Sines in Alemtejo. He early distinguished himself as an intrepid mariner and was selected by King Emanuel to discover the route to India around the cape. After rounding the cape, despite hurricane and mutinies he made Melinda early in the following year. For twenty years Da Gama lived inactive at Evora, while the extended Portuguese conquests were presided over by five viceroys. The fifth was so unfortunate that John III. in 1524 despatched Da Gama to India, where he succeeded in making Portugal once more respected, but soon after his arrival he died at Cochin, 1524.

Gamaliel (*gä-mā'li-el*), St. Paul's teacher, was a prominent Pharisee, and taught "the law" early in the first century. Tolerant and peaceful, he seems to have placed Christianity on a par with other sects; and he exhorts to long-suffering on all sides.

Gambetta (*gam-bet'ä*), **Léon Michel,** French lawyer, statesman, and orator, was born at Cahors, 1838. He studied law, and in 1859 joined the Paris bar. It was not until 1868 that his name came prominently before the public. When the national assembly was resolved upon in 1871, Gambetta sought by decree to give it an exclusively republican character. The decree was canceled at the instigation of Prince Bismarck, and Gambetta resigned office as minister. He subsequently entered the assembly as a member for Paris. He became premier in 1881, but in a few months resigned. Died 1882.

Gannett (*gan'et*), **Henry,** geographer and statistician, United States geological survey, since 1882, was born at Bath, Me., 1846. He was graduated from Lawrence scientific school, Harvard University; LL.D., Bowdoin; assistant director census of Cuba, 1907-08. Author: *Statistical Atlas of Eleventh Census; Scribner's Statistical Atlas* (in part); *Dictionary of Altitudes.*

Garcia (*gär-thē'ä*), **Manuel,** musical genius, was born at Seville, Spain, 1775. After acquiring a considerable reputation as a singer in Cadiz and Madrid, he went to Paris in 1808, where he obtained great success at the Italian opera; and in 1811 proceeded to Italy, where he was received with equal favor in Turin, Rome and Naples. Died at Paris, 1832.

Garcilaso de la Vega (*gär'thē-lä'sō dā lä vä'gä*), Spanish soldier and poet, was born at Toledo about 1503. He wrote a number of sonnets and other poems, several eclogues, and is sometimes called the "Spanish Petrarch." Died at Nice, 1536.

Garcilaso de la Vega, Peruvian historian, known as "the Inca," was born at Cuzco, in Peru, about 1540. At the age of twenty he proceeded to Spain, and never again visited America. His first work was a *History of Florida*, containing an account of the conquest of the country by Hernando de Soto. Died 1616.

Gardener, Helen Hamilton, author, was born at Winchester, Va., 1858. She was graduated at Cincinnati high and normal schools; married Col. S. A. Day, United States army, in 1901. She has done much magazine work as editor and contributor, and written many stories, essays and scientific articles.

Gardiner, Samuel Rawson, English historian, was born in 1829; was educated at Winchester and Christ Church, Oxford. In 1884 he was elected fellow of All Souls', and was for some years professor of modern history at King's College, London. His historical works include *England Under the Duke of Buckingham and Charles I. The Personal Government of Charles I.* and the *Fall of the Monarchy of Charles I.* Died 1902.

Garfield, Harry Augustus, educator, was born at Hiram, Ohio, 1863, the son of James Abram Garfield. He was graduated at Williams College, 1885; studied law at Columbia Law School one year, and at Oxford, England, and Inns of Court, London. He practiced law as a member of the firm Garfield, Garfield, and Howe, Cleveland, 1888-1903; professor of politics, Princeton, 1903-08; elected president of Williams College, 1907, and assumed duties in June, 1908.

Garfield, James Abram, twentieth president of the United States, was born in Orange, Cuyahoga county, Ohio, 1831. He entered Williams College, Mass., and was graduated in 1856. He studied and practiced law, and was a member of the Ohio senate, 1859-60; entered the army in 1861 as colonel of the 42d Ohio volunteers; served in southeastern Kentucky, and was promoted to be brigadier-general of volunteers, 1862; promoted to major-general of volunteers. He resigned to occupy a seat in the thirty-eighth congress; elected United States senator in the spring of 1880. He was elected to the presidency at the close of 1880, and entered upon office in the spring of the following year; but on the 2d of July he was shot by the assassin Guiteau, while at the Washington station of the Baltimore and Potomac railway, and died at Elberon, N. J., after lingering for nearly three months. His untimely death was mourned, not only by his own countrymen, but by the whole civilized world. Died 1881.

Garfield, James Rudolph, lawyer, former secretary of the interior, and son of James Abram Garfield, was born in Hiram, Ohio, 1865. He was graduated at Williams College, Mass., 1885; studied at Columbia Law School; was admitted to the bar in 1888; practiced law in Ohio, 1888-1902; was member of Ohio senate, 1896 to 1900; was secretary of the interior, 1907-09.

Garibaldi (*gä-rē-bäl'dē*), **Guiseppe,** Italian patriot, was born at Nice, France, 1807. He associated himself enthusiastically with Mazzini for the liberation of his country. He took part in the defense of Rome against France, but, being defeated, fled to New York, to return to the isle of Caprera, biding his time. He joined the Piedmontese against Austria, and in 1860 set himself to assist in the overthrow of the kingdom of Naples and the union of Italy under Victor Emmanuel. Landing in Calabria, he entered Naples and drove the royal forces before him, after which he returned to his retreat at Caprera. In 1870-71 he commanded a French force in the Franco-German war. Died 1882.

Garland, Hamlin, American novelist and short-story writer, was born of Scotch descent at West Salem, Wis., 1860. Since 1890 he has devoted himself to lecturing and writing. Besides a collection of verse entitled *Prairie Songs* he has published the following books: *Rose of Dutcher's Coolly; A Little Norsk; Jason Edwards; A Member of the Third House; Crumbling Idols; Wayside Courtships; Prairie Folks; Hesper; The Tyranny of the Dark; The Shadow World*, etc.

Garnier (*gär'nyā*), **Jean Louis Charles,** French architect, was born at Paris, France, 1825. He studied at the school of fine arts, and began to exhibit water colors in 1853, after considerable travel in Italy and Greece. In 1854 he set up as an architect in Paris, and in 1861 competed for the design of the new opera house in Paris. Died, 1898.

Garrett, R. W., Canadian physician, professor of obstetrics, Queen's University, Kingston, Canada, was born in the county of North Ontario, 1853. He was educated at Ontario College, Picton; M.A., M.D.; appointed demonstrator of anatomy in the Royal College of Physicians and Surgeons, and later filled the chair of professor of anatomy. Senior surgeon in the Kingston general hospital, and surgeon-major in the 14th battalion princess of Wales' own rifles.

Garrick, David, English actor, son of a captain in the army, was born in Hereford in 1717. He made his first appearance, under the name of Lyddal, at Ipswich, in 1741, and soon after played *Richard III.* in the theater of Goodman's Fields. In 1743 he went to Dublin; in 1747 he became joint patentee of Drury Lane, two years later marrying Mademoiselle Violette. He acted at Drury Lane until 1776. He died in 1779 and was buried in Westminster abbey.

Garrison, Lindley M., secretary of war, lawyer, jurist, was born at Camden, N. J., Nov. 28, 1864. He received his academic education at Phillips Exeter Academy and Harvard, and was graduated in law from the University of Pennsylvania, 1886. He was admitted to the New Jersey bar, 1888, practised in Camden for ten years, and, 1899-1904, was a member of the law firm of Garrison, McManus & Enright, Jersey City. He was vice-chancellor of the New Jersey supreme court, 1904-13, when he was appointed secretary of war by President Wilson. On June 30, 1900, he married Margaret Hildeburn.

Garrison, William Lloyd, American abolitionist, was born at Newburyport, Mass., 1805. In 1831 he founded *The Liberator*, which he published at Boston during thirty-five years. His whole course was attended by the most malignant opposition from the pro-slavery party; his life was frequently threatened, and more than once he was assaulted and publicly handled; but his courage, energy, and ability were inexhaustible, and he lived to see the complete success of the movement which he had done so much to promote. Died 1879.

Gary, Elbert H., chairman of board of directors and chairman of finance committee of United States steel corporation, was born at Wheaton, Ill. 1846; educated at Wheaton College and Chicago University; graduated from law school University of Chicago 1867. Admitted to Illinois bar 1867; bar of United States supreme court, 1878; practiced law in Chicago twenty-five years; president of Chicago bar association 1893-94; Trustee of Northwestern University.

Gaskell, Elizabeth Cleghorn Stevenson, English novelist was born at Cheyne Row, Chelsea, 1810. She married in 1832 William Gaskell. In 1848 she published anonymously *Mary Barton*, followed by the *Moorland Cottage;* and *Cranford*. She died suddenly at Holybourne, Alton, in Hampshire, 1865.

Gassendi (*gä'sȧN'dē'*), or **Gassend, Pierre,** French philosopher and mathematician, was born at Champtercier in Provence, 1592. In 1645 appointed professor of mathematics in the Collége Royal at Paris, where he died, 1655.

Gates, Horatio, famous American general, was born in England, 1728. Sent to America in 1755, as captain of infantry, he served under General Braddock. In 1755 was made adjutant-general in the colonial army. He accompanied Washington to Massachusetts in July of the same year, where he remained until June, 1776, when he received the chief command of the army, which had just retreated from Canada. This brilliant success gained at Saratoga won him a great military reputation. In 1780 he was called by congress to the command of the army of the south. He was superceded, and was not acquitted of blame until 1782. He then retired to Virginia until 1790, when he emancipated all his slaves, and settled in New York. Died, 1806.

Gates, Merrill Edwards, educator, author, was born at Warsaw, N. Y., 1848; graduated from University of Rochester, 1870; Ph.D., LL.D., L.H.D., president of Amherst College, 1890-99. He is a member of the American philosophical society, American history association, etc. Author: *Sidney Lanier, Poet and Artist; Land and Law as Agents in Educating the Indians*, etc.

Gatling, Richard Jordan, American inventor, was born in North Carolina, 1818. He took his degree in medicine about 1849, but did not practice. His most celebrated invention was that of the revolving gun, which bears his name, the conception of which came to him in 1861. Among Dr. Gatling's later inventions were an improved method of casting steel cannon and a pneumatic gun for discharging explosives. Died 1903.

Gauss (*gous*), **Karl Friedrich,** oted German mathematician, was born in Brunswick, Germany, 1777. He was graduated at the Collegium Carolinum in his native city in 1795, at the University of Göttingen in 1798. In 1807 he was called to the chair of mathematics and the directorship of the observatory in the University of Göttingen, positions which he held until his death. Died 1855.

Gautama (*gô'tȧ-mȧ*), **Buddha.** See Buddha.

Gautier (*gō'tyā*), **Théophile,** French poet and novelist, was born at Tarbes, 1811. From painting he turned to literature, and became a "romanticist" of extreme type. His poetry reached its highest point in *Emaux et Camées*, 1856. In 1835 appeared his celebrated novel, *Mademoiselle de Maupin*. Other works were an enlarged edition of his *Emaux et Camées; Les Grotesques*, on the writers of the sixteenth and seventeenth centuries: *Honoré de Balzac*; *Ménagerie Intime*, a kind of informal autobiography. He died at Neuilly, 1872.

Gay, John, English poet, was born in 1685. He wrote a large number of poems and ballads, besides several operas; but little of his poetry is now read. His greatest success was *The Beggar's Opera*, which ran sixty-two nights. Died 1732.

Gay, Sydney Howard, American journalist and author, was born at Hingham, Mass., 1814. He became connected with the New York *Tribune* and was its managing editor from 1862 to 1866. In 1881, in conjunction with William Cullen Bryant, he wrote a *History of the United States*. Died 1888.

Gay, Walter, American artist, was born at Hingham, Mass., 1856. He was educated in Boston public schools and Roxbury Latin school. Went to Paris, 1876, to study art, where he was a pupil of Bonnat. He received gold medals at Antwerp, Vienna, Berlin, Munich, Paris, and Hors Concours, Paris. Life fellow of the Metropolitan museum of fine arts, New York.

Gayarré (*gā'ȧ'rā'*), **Charles Etienne Arthur,** American historian, was born in New Orleans, 1805. He was admitted to the Philadelphia bar in 1829. In 1835 he was elected to the United States senate, but on account of ill health resigned his seat. During the civil war he supported the confederacy, and after its close became reporter of the state supreme court. Died 1895.

Gay-Lussac (*gā'lü'sȧk'*), **Joseph Louis,** French chemist and physicist, was born at St. Leonard in Haute Vienne, 1778. He was educated at the Paris Polytechnic School, passed in 1801 to the department of ponts et chaussées, and began a series of researches on vapor, temperature, and terrestrial magnetism. In 1808 he made the important discovery of the law of volumes. He was the first to form synthetically the hydriodic and iodic acids; and in 1815 he succeeded in isolating cyanogen. In 1818 he received the appointment of superintendent of the government gunpowder factories, and in 1829 was made chief assayer of the mint. In 1839 he was made a peer of France. Died 1850.

Gaynor, William Jay, jurist, mayor of New York was born in Whitestown, Oneida county, N. Y., 1851; educated there and in Boston; worked on New York and Brooklyn newspapers, 1873-75, while studying law; admitted to bar and began practice, 1875. Justice of appellate division of supreme court; received democratic nomination for mayor of New York city, 1909, and was the only candidate on the ticket elected. Died 1913.

Geddes (*ged'is*), **Patrick,** British biologist and botanist, was born at Perth, 1854. He was educated at the Normal school of science, London, and at several foreign universities; became professor of botany at Dundee.

Geefs (*gāfs*), **Guillaume,** Belgian sculptor, was born at Antwerp, 1806. After studying there for some time he went to Paris, where he worked in the studio of M. Ramey. During the revolution of 1830 he quitted Paris and returned to Belgium, and soon after executed at Brussels a monument to the memory of the victims of the revolution of 1830. He died in 1883.

Geibel (*gī'bel*), **Emanuel von,** German poet, was born at Lübeck, 1815. He studied at Bonn and Berlin. His *Voices of the Time* appeared in 1841, a book of *Sonnets* in 1846, and *Songs of Junius* 1848. He obtained a professorship at Munich, 1852, which he resigned, 1868. Died 1884.

Geikie (*gē'ki*), **Sir Archibald,** British geologist, was born at Edinburgh, 1835. He was educated at the Edinburgh high school and university. Was director-general of the survey of the United Kingdom, and head of the geological museum, London, 1882-1901. He was knighted in 1891.

Geikie, James, British geologist, brother of preceding, professor of geology and mineralogy since 1882 and dean of the faculty of science, Edinburgh University, was born at Edinburgh, 1839. He was graduated at Edinburgh University; LL.D., D.C.L. one of the founders and president of the royal Scottish geological society, and editor of *Scottish Geographical Magazine*. Author: *The Great Ice Age; Prehistoric Europe*.

Gelée (*zhe'lā*), **Claude.** See **Claude of Lorrain.**

Gellert (*gel' ert*), **Christian Furchtegott,** German poet and moralist, was born at Hainichen, Saxony, 1715. He was educated at Leipzig, and in 1751 became a professor there. He died in 1769.

Gellius (*jel'i-us*), **Aulus,** Latin author, supposed to have been born at Rome about 117 A.D. He practiced law there. He died about 180 A. D.

Gelon (*jē'lon*), tyrant of Gela and Syracuse, was the son of Deinomenes, and a native of the former city. In 485 B. C. made himself master of Syracuse. His influence soon extended itself over the half of Sicily. His clemency and the wisdom of his measures rendered him so generally beloved that when he appeared unarmed in an assembly of the people, and declared himself ready to resign his power, he was unanimously hailed as the deliverer and sovereign of Syracuse. Died 478 B. C.

Genêt, or Genest (*zhē-nē'*), **Edmond Charles Edouard,** French diplomat, was born in France in 1765. He entered the French diplomatic service as *chargé d'affaires* at St. Petersburg in 1789. He settled in New York, and married a daughter of Governor Clinton. He was the author of some historical works, and translated a Swedish history. Died at Schodak, N. Y., 1834.

Geneviève (*zhen'yev'*), **Saint,** patroness of Paris, was born at Nanterre near Paris, about 422. She took the veil, and acquired an extraordinary reputation for sanctity, increased by her assurance that Attila and his Huns would not touch Paris, and by an expedition for the relief of the starving city during Childeric's Frankish invasion. Died 512.

Genghis Khan (*jen'giz kȧn'*), celebrated Mongol conqueror, was born near Lake Baikal, 1162. the son of a Mongol chief. By his military skill and daring example he gradually raised his people to a position of supremacy in Asia, and established by means of them a kingdom which, at his death, stretched from the Volga to the Pacific, and from Siberia to the Persian gulf. Died 1227.

Genseric (*jen'sĕr-ik*), king of the Vandals, son of Godigisdus, founder of the Vandal kingdom in Spain, and natural brother of Gunderic, whom he succeeded in 429, was born in 406 A. D. He continued master of the seas until his death in 477, despite strenuous efforts of the Roman emperors to crush his power.

Gentz, von (*fŏn gents'*), **Frederick,** German diplomat and publicist, was born at Breslau, 1764. In 1786 he entered the public service of Prussia, but in 1802 exchanged into that of Austria. He wrote bitterly against Napoleon. Died 1832.

Genung (*jē-nung'*), **John Franklin,** educator, professor of rhetoric, Amherst College, was born at Willseyville, N. Y., 1850. He graduated at Union College, 1870, Rochester Theological Seminary, 1875; Ph.D., 1881; D.D., Yale. Author: *Tennyson's In Memoriam; The Working Principles of Rhetoric; Stevenson's Attitude to Life; The Hebrew Literature of Wisdom In the Light of Today*.

Geoffroy Saint-Hilaire (*zhō'frwȧ' sȧN'tē'lȧr'*) **Etienne,** French naturalist, was born at Etampes 1772, became a pupil of Haüy at the College of Navarre, Paris, and in 1793 professor of zoölogy in the museum of natural history. He was the author of several valuable works illustrative of the science. Died 1844.

George, Grace, actress, was born in New York, 1880. She received a convent education, and married William A. Brady, 1899. Made her début in *The New Boy*, New York, 1894; appeared in leading parts in *The Girl I Left Behind Me; Charley's Aunt;* starred in *The Princess Chiffon*, 1899.

George, Henry, American economist and sociologist, was born in Philadelphia, 1839. In 1876 he was state inspector of gas meters, but in 1880 removed to New York, and the next year visited Ireland on his way to England. He wrote *Progress and Poverty* in 1879, and undertook lecturing tours in 1883 and 1889 in support of his principles. Besides this book he published *The Irish Land Question, Social Problems, Protection and Free Trade*, and *The Science of Political Economy*. In 1886 and again in 1897 he was a candidate for the mayoralty of New York. Died 1897.

George, Henry, journalist, author, son of the above was born in Sacramento, Cal., 1862. He accompanied his father, 1883, on a lecturing tour in Great Britain, as secretary. Author: *Life of Henry George, The Menace of Privilege, The Romance of John Bainbridge*, etc.

George I., king of Great Britain from 1714 to 1727 was born in 1660. He was the son of Ernest Augustus, elector of Hanover, and of Sophia the granddaughter of James I. of England; and on the death of Anne, he ascended the throne being the first monarch of the house of Hanover. In 1727 the king set out on a visit to his Hanoverian dominions, but had only reached Osnabrück when he was struck down by apoplexy. By his marriage with Sophia Dorothea, a daughter of the duke of Zell, he left one son, George Augustus, who succeeded him.

George II., son and successor of George I., and king of Great Britain from 1727 to 1760, was born in 1683. Ascending the throne when forty-five years of age, he had the advantage over his father of being able to speak English, which George I. could never do. In 1756 the Seven Years' war broke out, in which England sided with Prussia; and the last years of the king's reign saw the British victors in India, Canada, and on the seas. He died in London, 1760.

George III., king of Great Britain from 1760 to 1820, and king of Hanover (elector from 1760 to 1815), eldest son of Frederick Louis, prince of Wales, was born in London, 1738. In 1761 he married Princess Charlotte Sophia of Mecklenburg-Strelitz, by whom he had fifteen children. More English in sentiment and education than his two predecessors, George's main interest was centered in his English kingdom, and never during his long life did he once set foot in his Hanoverian possessions. At his accession he found the Seven Years' war in progress, and he was later involved in the war of the American revolution and the Napoleonic wars. Died at Windsor 1820.

George I., king of Greece, was born at Copenhagen, 1845. He is a brother of the dowager empress of Russia, Queen Alexandra, and King Frederik of Denmark. Assassinated at Salonica, 1913.

George, Saint, the patron saint of England. His true history is not clearly known. Some say the real Saint George was a soldier in the army of Diocletian, 300 A. D., and that he suffered death for the Christian faith. English crusaders brought home his fame from the East, and Edward III. made him patron of his new order of the garter.

Gérard (*zhā-rar'*), **Etienne Maurice, Count,** marshal of France, was born in Lorraine, 1773. He specially distinguished himself at Austerlitz, Halle, Jena, Erfurt, Lintz, and Wagram. On the morning after this last battle he received the title of baron of the empire. In 1835 he was made grand chancellor of the legion of honor. Died, 1852.

Gérard, François Pascal, Baron, French painter, was born in Rome, 1770. Nearly the whole of his life was spent in Paris. Famous portraits were those of Napoleon, Talleyrand, Talma, and Mme. Récamier. Died in Paris, 1837.

Gerhardt (*ger'härt*), **Karl Friedrich,** German chemist, was born at Strassburg in 1816. At the time of his death he was professor of chemistry in the University of Strassburg. Gerhardt and Laurent were the joint authors of the system of chemical notation now in use. All his suggestions and discoveries are embodied in his *Traité de Chimie Organique*. Died, 1856.

Gerhardt, Paul, Lutheran hymn-writer, was born at Gräfenhainichen in Saxony, 1607. He became assistant pastor at St. Nicholas in Berlin in 1657, but for opposing the elector's attempted union of the Lutheran and Reformed churches was banished in 1666. Died, 1676.

Germanicus, Cæsar (*jẽr-man'i-kus*), son of Nero Claudius Drusus, and of Antonia, daughter of Mark Antony and niece of Augustus. In 12 A. D. he was consul, in 13 was appointed to the command of the eight legions on the Rhine, and in 14 quelled a great mutiny. Died, 19 A. D.

Géróme (*zhā-rōm'*), **Jean Léon,** distinguished French painter, was born at Vesoul, Haute-Saone, France, 1824. After studying at Paris and traveling in the East he was appointed professor of painting in the school of the fine arts at Paris. Among the best known of his works are *Phryne before Her Judges; Cleopatra and Cæsar*. Died, 1904.

Gerry, Elbridge, American statesman, fifth vice-president of the United States, was born in Marblehead, Mass., 1744. He was graduated at Harvard College, 1762. In 1776 he was elected a delegate to the continental congress, signed the declaration of independence, and was placed on the most important committees. He was a member of congress, 1789-93, and in 1797-98 special envoy to France, with Pinckney and Marshall. In 1812 he was elected vice-president of the United States. Died, 1814.

Gerson (*zher'sôn'*), **Jean Charlier de,** French theologian, was born at Gerson, in the diocese of Rheims 1363. He became chancellor of the University of Paris, 1395, and used his great influence for church unity and ecclesiastical reform. Died at Lyons, 1429.

Gervais (*zher'vā'*), **Honoré Hippolyte Achille,** member of Canadian house of commons for city of Montreal since 1904, was born at Richelieu, Quebec, 1864. Promoter of technical schools of Montreal and Quebec and high school of agriculture of Oklahoma; administrator of Laval University; corresponding member of La société de législation comparée de France; member of council of Montreal bar; Bâtonnier of the bar of Montreal, 1908, bâtonnier of the bar of the province of Quebec, 1908.

Gervinus (*ger-vē'nōōs*), **Georg Gottfried,** German critic and publicist, was born at Darmstadt, 1805, became in 1836 professor of history at Göttingen. In 1844 he was appointed honorary professor in Heidelberg, and from this period wrote in behalf of constitutional liberty. His great commentaries on Shakespeare were translated into English in 1862. He died in 1871.

Gesenius (*gē-sē'ni-us*), **Friedrich Heinrich Wilhelm,** German Hebraist and oriental scholar, was born at Nordhausen, 1786. He became professor of theology at Halle in 1811. His greatest work is his *Hebrew and Chaldee Lexicon* left unfinished at his death. He died in 1842.

Gessner (*ges'nẽr*), **Salomon,** German pastoral poet, who also painted and engraved landscapes, was born at Zürich, 1730, where he was a bookseller. His landscape-paintings are all in the conventional classic style, but his engravings are of real merit. Died, 1788.

Gfrorer (*g' frûr' ẽr*), **August Friedrich,** German church historian, was born at Calw, Würtemberg, 1803. In 1830 he became librarian at Stuttgart. In 1846 he became professor of history at Freiburg. Died at Carlsbad, 1861.

Ghiberti (*gē-ber'tē*), **Lorenzo,** Italian sculptor, was born in Florence about 1378. He was the sculptor of the bronze doors of the baptistry of San Giovanni, Florence. He died in Florence in 1455.

Ghika (*gē'kä*), **Helena,** or "Dora d'Istria," daughter of Prince Michael Ghika, was born at Bucharest, 1828. Her works include *La Vie Monastique dans l'Eglise Orientale; La Suisse Allemande Les Femmes en Orient*. She wrote much for the *Revue des Deux Mondes*. Died, 1888.

Ghirlandajo (*gẽr'län-dä'yō*), otherwise called **Corradi,** or **Bigordi, Domenico del,** Florentine painter, was born in 1449. He assisted in the decoration of the Sistine chapel in Rome, and executed a series of frescoes in the Sassetti chapel in Santissima Trinità, Florence. Died, 1494.

Gibbon, Edward, celebrated English historian, was born at Putney in 1737. He was sent to Magdalen College, Oxford, where he became a convert to the Roman Catholic Church; and finally to Lausanne, where he renounced the Catholic faith, without embracing any other, and became a skeptic.

On returning to England, he entered upon the duties of active life, but read much, and prepared himself for authorship. In 1763 he went to Italy; and while sitting amidst the ruins of the Capitol at Rome, he conceived the idea of writing the history of the decline and fall of that city. In the meantime, he joined M. Deyverdun, a Swiss scholar, in publishing a journal called, *Memoires Litteraires de la Grand Bretagne*, which met with no success.

In 1770 he began his celebrated history of the *Decline and Fall of the Roman Empire*, the first volume of which appeared in 1776, the second and third in 1781, and the three concluding volumes in 1788. Previous to this undertaking, Gibbon was chosen member of Parliament for Liskeard; and when hostilities commenced between England and France, in 1778, he was employed to draw up the manifesto on that occasion, after which he was made commissioner of the board of trade, but lost his place on the change of administration in 1783. He then went to reside at Lausanne, where he remained till the French Revolution obliged him to return to England; and died in 1794.

Gibbon's great history abounds with proofs of immense learning, of a mind penetrating and sagacious, and of almost unrivalled talents for ridicule. No other proof of the substantial trustworthiness of the *Decline and Fall* is needed than the fact, perhaps unparalleled, that, notwithstanding the very great advance made in historical studies and criticism during the present century, it still holds its place as preëminently the history of the period it embraces.

References.—Milman's *Life and Correspondence of Gibbon;* the *Memoirs*, ed. by Emerson, and Morison's *Gibbon* in English Men of Letters Series.

Gibbons, Grinling, English sculptor and wood-carver, was born at Rotterdam, 1648. Died in London, 1720.

Gibbons, James, Roman Catholic cardinal, was born in Baltimore, Md., 1834. Entered St. Charles College, Maryland, 1855; transferred, 1857, to St. Mary's Seminary, Baltimore; ordained priest, 1861; later private secretary to Archbishop Spalding and chancellor of the arch-diocese; assistant chancellor, second plenary council of American Roman Catholic church, Baltimore, 1866; vicar apostolic of North Carolina; coädjutor archbishop of Baltimore, 1877; succeeded to the see, 1877; was nominated as cardinal; invested with the princely insignia, 1886.

Gibbs, Oliver Wolcott, American chemist, was born in New York city, 1822; was graduated at Columbia, 1841, studied chemistry in Paris and Berlin. In 1849 he was chosen professor of physics and chemistry in the College of the City of New York. Died, 1908.

Gibson, Charles Dana, illustrator, was born in Roxbury, Mass., 1867. He was educated at Flushing, L.I., and at the art students' league, New York, 1884-85. He has done much illustrating in principal magazines; also illustrated numerous books.

Gibson, John, British sculptor, was born a market-gardener's son, at Gyffin near Conway, North Wales, 1790. The innovation of tinting his figures he defended by a reference to Grecian precedents. He died at Rome in 1866.

Gibson, John Morison, lieutenant-governor of Ontario since 1908, was born in 1842. He was graduated at the University of Toronto; LL.D., queen's counsel, 1890; bencher of law society of upper Canada, 1899; president of Dominion power and transmission company.

Gibson, William Hamilton, American painter and naturalist, was born at Sandy Hook, Conn., 1850. He was educated in Connecticut and at the Brooklyn Polytechnic Institute. He was early attracted to the study of flowers and insects, and his first work in drawing was of these natural objects. Died, 1896.

Giddings, Franklin Henry, sociological writer, professor of sociology, Columbia, since 1894, was born at Sherman, Conn., 1855. He graduated at Union College, 1877; Ph.D., LL.D.; professor of Bryn Mawr College, 1888-94. Member of Authors' and Century clubs.

Giddings, Joshua Reed, American statesman, was born in Athens, Pa., 1795. He removed with his parents to Ohio, was admitted to the bar in 1820, and elected to the Ohio legislature in 1826. He sat in congress, 1838-59, and was an anti-slavery leader. Died, at Montreal 1864.

Giers (*gẽrs*), **Nikolai Karlovitch de,** Russian diplomat and statesman, was born in Russia, of Swedish origin, 1820. He entered the diplomatic corps at eighteen years of age. In 1876, and again in 1877, during the war with Turkey, M. de Giers directed the affairs of the foreign office. He became a privy councillor, and when Prince Gortchakoff attended the Berlin congress M. de Giers for a third time took his place. Died, 1895.

Giesebrecht (*gē'zē-brekt*), **Friedrich Wilhelm Benjamin von,** German historian, was born in Berlin, 1814. He became professor of history at Königsberg in 1857, and in 1862 at Munich.

Gieseler (*gē'zē-lẽr*), **Johann Karl Ludwig,** German church historian, was born near Minden, 1792. In 1813 served in the war against France. On the conclusion of the war he held educational appointments at Minden; was nominated in 1819 to the chair of theology at Bonn, and in 1831 was appointed to a like professorship in Göttingen. Died, 1854.

Gifford, Robert Swain, American painter, was born in Massachusetts, 1840. He studied painting under Albert van Beest, and opened a studio in Boston, 1864. In 1866 he settled permanently in New York city, and became an academician in 1878. Died in New York, 1905.

Gifford, Sandford Robinson, American painter, was born in Greenfield, N. Y., 1823. In 1854 he became a member of the National Academy, New York. Died, 1880.

Gifford, William, English critic and poet, was born at Ashburton, 1756. Gifford's editorship of the *Anti-Jacobin* procuring him favor with the tory magnates, he was appointed to offices that brought him 900 pounds a year. He died in 1826.

Gilbert, Grove Karl, geologist, was born in Rochester, N. Y., 1843. He was graduated at the University of Rochester, 1862; LL.D. United States geological survey, since 1879. Past president of American association for the advancement of science. Author: *Geology of the Henry Mountains*.

Gilbert, William Schwenck, English dramatist, was born in London, 1836. In conjunction with Sir Arthur Sullivan, besides *Thespis* and *Trial by Jury*, he has produced *The Sorcerer; H. M. S. Pinafore; The Mikado; Ruddigore; The Yeoman of the Guard; The Gondoliers*. Died, 1911.

Gilder, Jeannette Leonard, journalist, critic, was born at Flushing, N. Y., 1849. With brother, Joseph B. Gilder, started, 1881, *The Critic*, which she still edits; was for eighteen years, over the pen-name "Brunswick," New York correspondent for *Boston Saturday Evening Gazette* and *Boston Evening Transcript*; now regular correspondent of *Chicago Tribune*.

Gilder, Richard Watson, author, editor, was born in Bordentown, N. J., 1844, and educated at his father's seminary at Flushing, L.I.; LL.D., A.M. L.H.D., Yale, LL.D.; managing editor of *Scribner's Monthly*, 1870; editor-in-chief, 1881, under its present name *The Century Magazine*. President of public art league of United States; member of council of national civil service reform league. Author; *The New Day; The Celestial Passion; Lyrics; In Palestine*. Died, 1909.

Gildersleeve, Basil Lanneau, professor of Greek in Johns Hopkins since 1876, was born in Charleston, S. C., 1831. He was graduated from Princeton, 1849; Ph.D., LL.D., 1869; Harvard, 1896, D. C. L., L.H.D. Editor of *American Journal of Philology* since it was founded, 1880. Author: *Latin Grammar*.

Gill, Theodore Nicholas, zoölogist, educator, was born in New York, 1837. Assistant librarian, library of congress, 1866-75; LL.D., 1895, Columbian University. Adjunct professor of physics and natural history, 1860-61; head department zoölogy, Columbian (now George Washington) University. President of American association for the advancement of science, 1897. Author: *Principles of Zoögraphy: Scientific and Popular Views of Nature Contrasted*, etc.

Gillette, William Hooker, actor, playright, was born at Hartford, Conn., 1855. Began theatrical work, 1877. Author of the following plays (unpublished): *The Professor; The Private Secretary; Held by the Enemy; Because She Loved Him So; Settled Out of Court; Secret Service*, and *Sherlock Holmes*.

Gillray, James, English caricaturist, was born, a Lanark trooper's son, at Chelsea in 1757. He died in 1815.

Gilman, Daniel Colt, educator, was born in Norwich, Conn., 1831. He was graduated at Yale, 1852; LL.D., professor of physical and political geography, Yale, 1856-72; president of University of California, 1872-75; first president of Johns Hopkins University, 1875-1902; first president of Carnegie Institution, 1901-04; editor-in-chief, *New International Encyclopædia*. Died, 1908.

Gilman, Nicholas Paine, sociologist, professor of sociology and ethics of Meadville Theological School 1895-1912, was born at Quincy, Ill., 1849. He graduated at Harvard Divinity School, 1871. Settled as Unitarian clergyman over three parishes

in Massachusetts, 1872-84. Author: *Profit Sharing Between Employer and Employee; Methods of Industrial Peace.* Died 1912.

Ginn, Edwin, publisher, was born at Orland, Me., 1838. Graduated at Tufts College, 1862. Head of the firm of Ginn and Company, publishers of school and college text-books. His first book was Allen's *Latin Grammar,* 1868. Died 1914.

Gioberti (*jō-bär'tē*), **Vincenzo,** Italian statesman, was born at Turin, 1801. He settled at Brussels as a private tutor, and published an *Introduzione allo Studio della Filosofia.* Died, in 1852.

Giorgione (*jōr-jō'nā*), or **Giorgio Barbarelli,** Italian painter, was born at Castelfranco about 1478. Several early portraits by him have disappeared, but his *Enthroned Madonna* is an altarpiece at Castelfranco. Died, 1511.

Giotto (*jōt'tō*), or **Ambrogio** (or Ambrogiotto, shortened to Giotto), **di Bondone,** Italian painter and architect, was born in 1276. He was a pupil of Cimabue and friend of Dante, whose portrait he painted at Ravenna. Was employed at Padua and Florence, where his frescoes in the Peruzzi chapel of Santa Croce were discovered in 1863. He also painted the *Miracle of the Loaves and Fishes,* at Naples, and designed the campanile of Florence. He died in 1336.

Girard (*ji-rärd'*), **Stephen,** American philanthropist, was born near Bordeaux, France, 1750. He was very eccentric in his habits, a freethinker, a liberal benefactor of public charities. During several yellow fever seasons in Philadelphia no citizen was more active in relieving distress; and at his death nearly all his estate was bequeathed to various charitable and municipal institutions. Died, 1831.

Gladden, Washington, author, Congregational clergyman, was born in Pottsgrove, Pa., 1836. He was graduated at Williams College, 1859; D.D., LL.D., University of Wisconsin and Notre Dame University, Ind. He held several pastorates and editorial positions prior to becoming, in 1882, pastor of First Congregationalist church, Columbus, Ohio. Author: *Plain Thoughts on the Art of Living; From the Hub to the Hudson; Parish Problems; Burning Questions; Santa Claus on a Lark; Christian Pastor; How Much is Left of the Old Doctrines; Straight Shots at Young Men; Christianity and Socialism,* etc.

Gladstone (*glad'stun*), **William Ewart,** English statesman, orator, and man of letters, was born in Liverpool, 1809. He was graduated at Oxford, and entered the house of commons in 1832 for the borough of Newark. In 1838 he published his first work, *The State in its Relations with the Church.* In 1847 he was elected a member of parliament for the University of Oxford, which he represented for eighteen years. In 1858 he accepted a special mission to the Ionian islands. In the same year he published an elaborate work on *Homer and the Homeric Age.* In 1866, now leader of the house of commons, he brought in a reform bill, the defeat of which caused Earl Russell to resign. Gladstone, in 1869, disestablished the Irish church; in 1870 carried his Irish land bill; and in 1872 carried the ballot bill. In 1874 he dissolved parliament, and on the unfavorable result of the ensuing election the Gladstone ministry resigned. On the defeat of the Disraeli administration at the polls, 1880, he became premier, but resigned in 1885. Early in 1886 after the shortlived administration of Lord Salisbury, Gladstone again came into power, and signalized his return to office by presenting in 1886 a dual scheme of Irish government—a land bill and a home rule bill. Intense and bitter opposition from liberals and conservatives alike greeted the measure, and the bill was rejected on its second reading in 1886. In consequence parliament was dissolved, and Gladstone and his colleagues appealed to the country, but were defeated. During the succeeding years, 1887-91, Gladstone was in opposition, the chief incident in his career being his outspoken advocacy of home rule in Ireland and his consequent alliance with the Irish party. At the general election of 1892 his supporters obtained a slight majority in parliament, and he became prime minister for the fourth time. He resigned in 1894 on account of increasing years, and spent his last days chiefly in literary work. He died at Hawarden, 1898, and was buried in Westminster abbey.

Glanville, Ranulf de, chief-justiciary of England in 1180-89, and reputed author of the earliest treatise on the laws of England, the *Tractatus de Legibus et Consuetudinibus Angliae,* was born at Stratford St. Andrew, near Saxmundham, about 1130. In 1174 he raised a body of knights to fight against William the Lion of Scotland. He died at the siege of Acre, 1190.

Glasgow, Ellen Anderson Gholson, American novelist, was born at Richmond, Va., 1874. Author: *The Descendant; Phases of an Inferior Planet; The Voice of the People,* etc.

Glauber (*glou'bēr*), **Johann Rudolph,** German chemist and physician, was born at Karlstadt in Franconia, 1604. In 1648 he discovered hydrochloric acid. Died, 1668.

Glazebrook (*gläz'brōōk*), **Richard Tetley,** British educator and physicist, principal of University College, Liverpool, 1898-99, was born in 1854. He was educated at Liverpool College, and at Trinity College, Cambridge; Sc.D., Victoria and Heidelberg. Author: *Text-books of Physical Optics, and of Practical Physics; Cambridge Natural Science Manuals.* President of the Institute of Electrical Engineers, 1906.

Glendower (*glen'dōōr*), or **Glendwr, Owen,** Welsh chief, claimed descent from Llewelyn, the last prince of Wales, and was born in Montgomeryshire about 1359. In 1402 he captured Lord Grey and Sir Edmund Mortimer, both of whom married daughters of the Welsh chieftain. In 1404 Glendower entered into a treaty with Charles VI. of France, who in 1405 sent a force to Wales; and the Welsh prince, though often defeated, kept up a desultory warfare until his death, about 1416.

Glinka (*gling'kä*), **Michael Ivanovitch,** composer, "The Russian Beethoven," was born near Novospaskoi, 1804. He studied under John Field in St. Petersburg. He died at Berlin in 1857.

Gluck (*glōōk*), **Christoph Willibald,** German composer, was born at Weidenwang, in Bavaria, 1714. He studied music at Prague, Vienna, and Milan, and began his career at Vienna at the age of twenty-two. His last years were passed in Vienna, where he died 1787.

Gneist (*g'nīst'*), **Rudolph von,** German jurist, was born in Berlin, 1816. From 1844 until his death he held the chair of jurisprudence in the University of Berlin. He became a member of the privy council in 1875; was ennobled in 1888, and died in 1895.

Godfrey of Bouillon. See **Bouillon.**

Godkin, Edward Lawrence, American editor and publicist, was born in Ireland, 1831. He was educated at Queen's College, Belfast. He studied law under David Dudley Field, and was admitted to the New York bar in 1859. He died in England, 1902.

Godolphin (*gō-dol'fin*), **Sidney, first Earl of,** English statesman, was born about 1645. In 1702, on the accession of Anne, he accepted the office of lord high treasurer, raised the public credit, induced the queen to contribute 100,000 pounds toward the war. The contest between Godolphin, and Harley for the premiership resulted finally in the defeat of Godolphin, who was dismissed from office in 1710. He died in 1712, and was interred in Westminster abbey.

Goethe, (*gū'tē*), **Johann Wolfgang von,** German author, born in Frankfort, 1749, died 1832. Before he was 10 years of age he wrote several languages, and had a considerable familiarity with works of art. In 1765 he was sent to Leipsic to begin his collegiate studies. Here he wrote two dramas. He was transferred in 1770 to the University of Strasburg, where he studied jurisprudence and the natural sciences.

In 1772 he went to Wetzlar to practice law, and in 1773 published *Götz von Berlichingen,* a dramatic version of the story of Götz of the Iron Hand. It excited the greatest enthusiasm in the literary world, and romantic dramas for a time became the fashion. An unrequited love romance of his own, and the suicide of a friend on account of a similar passion, suggested the incidents of his novel called *Die Leiden des jungen Werther,* "The Sorrows of Werther," which met with an extraordinary success. The same year he wrote *Clavigo,* a drama founded on Beaumarchais's memoir on Clavijo.

An invitation from Charles Augustus of Saxe-Weimar in 1775 to visit his court resulted in his making Weimar his permanent residence. He was created a privy councillor of legation, but his principal public occupation seems to have been to superintend the artistic pleasures of the court. His first years there were spent in wild and tumultuous enjoyments, but his intellectual activity was too great to be long beguiled by frivolities. In 1779 he produced *Iphigenie auf Tauris,* and, after a visit to Switzerland the same year, composed a little opera called *Jery und Bätely.* Many of his best small poems were produced at this period (1780-'83), and he also studied natural science.

In 1786 he went to Italy, and spent nearly two years in study and in the composition of the drama *Torquato Tasso.* On his return to Weimar in 1788, he published *Egmont,* a romantic drama. In 1792 he accompanied the Prussian army into France, and soon after appeared his metrical version of *Reinecke Fuchs.* The results of his scientific studies appeared in his *Beiträge zur Optik* and his *Farbenlehre.* The first part of *Wilhelm Meister* (the *Lehrjahre*) appeared in 1795. *Hermann und Dorothea,* a pastoral poem in hexameters, the most perfect of his minor productions, was written in 1797, and the *Achilleis* the same year; and he engaged in friendly rivalry with Schiller in bringing forth a series of ballads, which are among the masterpieces of German literature.

In 1805 appeared the first part of *Faust,* a work which raised Goethe to the highest pinnacle of fame, and he was universally acknowledged to be the first poet of his age. When the French occupied Weimar, he took refuge in his books and scientific experiments, and exhibited such impassiveness amid the political disturbances as to incur the reproach of a want of patriotism. He afterward accepted Napoleon's invitation to visit Paris. In 1809 Goethe printed the most exceptionable of his novels, the *Wahlverwandschaften* ("Elective Affinities"). Next appeared the ballads *Der Todtenkranz, Der getreue Eckart,* and *Die wandelnde Glocke,* the *Dichtung und Wahrheit,* an autobiography, and the *Westöstlicher Divan,* a collection of oriental songs and poems. In 1816 he published an art journal, to which he contributed largely; and in 1818 the second part of *Wilhelm Meister.*

In 1831 the second part of *Faust* appeared, a continuation of the first part, obscure and mystical, but full of passages of rare splendor, profound thought, grotesque humor, and bewitching melody. One year after the completion of *Faust* Goethe was taken ill of a cold, which turned into a fatal fever; but still continued to work. His last writing was an essay on the dispute between Geoffroy Saint-Hilaire and Cuvier, on the question of unity of composition in the animal kingdom and his last words were, "More light."

References.—Grimm's *Goethe;* Heinemann's *Goethe;* Carlyle in *Miscellaneous Essays;* G. H. Lewes's *The Life of Goethe;* J. R. Seeley's *Goethe reviewed after Sixty Years;* Caro's *La Philosophie de Goethe;* E. Lichtenberger's *Etudes sur les Poesies Lyrique de Goethe.*

Goff, John W., American jurist, was born at Wexford, Ireland, came to the United States in childhood, studied law in offices of United States District Attorney S. G. Courtney, and was admitted to the bar of New York; is now serving as justice of the supreme court of New York from the first district, for the term 1907-20.

Goff, Nathan, jurist, United States circuit judge since 1892, was born at Clarksburg, W. Va., 1843. He was educated at the Northwestern Virginia Academy, Georgetown College, and New York University. Admitted to bar, 1866; member of West Virginia legislature, 1867; secretary of the navy, United States, 1881; member of congress, 1883-89; U. S. Senator, 1913-19.

Gogol (*gō'gōl-y'*), **Nikolai Vassilyevitch,** Russian novelist, was born at Sorochintsi in Poltava, 1809. In 1828 he settled in St. Petersburg, and became famous through two series of stories of Little Russia. He was the first great master of the Russian novel. Died at Moscow, 1852.

Goldmark, Karl, Austrian composer, was born at Keszthely, Hungary, of Jewish parents, about 1832, but has chiefly resided in Vienna. His *Landliche Hochzeit* (*Country Wedding*) symphony is a great favorite.

Goldoni (*gōl-dō'nē*), **Carlo,** Italian dramatist, was born at Venice, 1707. A tragedy, *Belisario,* proved successful, but he soon discovered that his forte was comedy, and set himself to effect a revolution in the Italian comic stage. In 1761 he undertook to write for the Italian theater in Paris, and was attached to the French court until the revolution. He died in 1793.

Goldsmith, Oliver, British poet and novelist, was born in Ireland, 1728. He was graduated at the University of Dublin, 1749, and then went to Italy, where he took his degree of M.D. at Padua or Louvain, and returned to England in 1756. His first publication of note, an *Inquiry into the Present State of Polite Learning in Europe,* was published in 1759. In 1764 *The Traveler* appeared, and at once placed him in the front rank of English authors. Two years after this he published the *Vicar of Wakefield,* which may be said to have indicated his proper rank in the literary world. In rapid succession he produced his other works: the comedy of the *Good-Natured Man,* in 1768; the *Roman History,* in 1769; and *The Deserted Village*—the sweetest of all his poems—in 1770. In 1773 his comedy *She Stoops to Conquer* was produced at Covent Garden with great applause. Although now in receipt of large sums for his works, Goldsmith had not escaped from pecuniary embarrassment. In 1774 returning to London, ill in body and harassed in mind, and took to bed on March 25th. He died April 4th, more sincerely lamented than any other literary man of his time.

Gómez y Baez (*gō'mās ē bä'äs*), **Maximo,** Cuban patriot, was born in San Domingo, 1826. He served in the Spanish army in San Domingo and in Cuba. In the insurrection of 1868-78 he became a colonel and later commander. In 1895, on the breaking out of the second revolution, he returned to Cuba, became general-in-chief of the Cuban army, and later put his force at the disposal of the American troops when they landed in Cuba. Died, 1905.

Gompers (*gom'pĕrs*), **Samuel,** labor leader, president of the American federation of labor, was born in England, 1850. He is a cigar-maker by trade. He is one of the founders of the American federation of labor and editor of its official magazine.

Goncourt (*gôn'kōōr*), **Edmond** and **Jules de,** French novelists, born, the former at Nancy in 1822, the latter at Paris in 1830. Artists primarily, in 1849 they set out to traverse France for water-color sketches. The important work of the De Goncourt brothers commenced when they took to novel-writing. The first of these novels, *Les Hommes de Lettres*, was followed by *Soeur Philomène; Renée Mauperin; Germinie Lacerteux; Manette Salomon;* and *Madame Gervaisais.* After Jules' death in 1870, Edmond, who lived until 1896, issued the extraordinarily popular *La fille Elisa.*

Gonsalvo de Córdova (*gōn-säl'vō dā kôr'dō-vā*), "the great captain," Spanish commander, was born at Montilla near Cordova, Spain, 1453. Sent to assist Ferdinand II. of Naples against the French, 1495, he conquered the greater part of the kingdom of Naples, and expelled the French. When the partition of Naples was determined upon in 1500, Gonsalvo again set out for Italy, but first took Zante and Cephalonia from the Turks, and restored them to the Venetians. He then landed in Sicily, occupied Naples and Calabria, and demanded from the French that they should keep the compact. Recalled in 1506, and treated by the king with neglect, he withdrew to his estates in Granada, and died in 1515.

Goodale (*gōōd'āl*), **George Lincoln,** botanist, professor of botany since 1878 and Fisher professor of natural history and director of botanic garden, Harvard, was born at Saco, Me., 1839. He graduated at Amherst, 1860; M.D., professor at Bowdoin and in medical school of Maine, 1867-72; assistant professor of vegetable physiology, Harvard 1873-78. He is author of various works on plant physiology and economic botany, and associate editor of *American Journal of Science.*

Goodnow, Frank Johnson, educator, author, was born at Brooklyn, N. Y., 1859. He was graduated at Amherst College, 1879, and at Columbia Law School, 1882. Lyall professor of administrative law and municipal science, Columbia, since 1883. Author: *Comparative Administrative Law; Municipal Home Rule; Municipal Problems; Politics and Administration.*

Goodwin, Nathaniel Carl, American actor, was born in Boston in 1857; studied under Wyzeman Marshall, then manager of Boston theater; went to New York and played in *Law in New York*, 1876, and later as Captain Crosstree in *Black-eyed Susan*, a burlesque.

Goodwin, William Watson, educator, Greek scholar, was born in Concord, Mass., 1831. He was graduated at Harvard, 1851; Ph.D., Göttingen, LL.D., Cambridge, England, 1883; Harvard, 1891; D.C.L., Oxford, 1890. Knight of Greek order of the Redeemer; professor of Greek literature, Harvard, 1860-1901; professor emeritus since 1901; overseer of Harvard, 1903. Author, *Greek Grammar.* Died, 1912.

Goodyear, Charles, inventor of vulcanized rubber, was born in New Haven, Conn., 1800. In 1844 he produced his new method of hardening rubber by means of sulphur. His patents latterly amounted to sixty, and both medals and honors were awarded him in London and Paris. Died, 1860.

Gordon, Charles George, British soldier, familiarly known as "Chinese Gordon," was born in 1833. In 1884 he proceeded to the Soudan, in lower Egypt, as an emissary of England to quiet the insurgent tribes under El Mahdi, the "false prophet of the Soudan." He was killed when Khartoum was captured by El Mahdi, 1885.

Gordon, Charles William, Canadian novelist, Presbyterian clergyman, was born in Indian Lands, Glengarry, Ontario, Canada, 1860; was graduated at Toronto University, 1883. He was a missionary to Banff, etc., Rocky mountains, 1890-94; minister of St. Stephen's church, Winnipeg, since 1894. Author: *Black Rock; Beyond the Marshes; Gwen's Canyon; The Sky Pilot; The Prospector; The Doctor;* all under the pseudonym of *Ralph Conner.*

Gordon, George Angier, Congregational clergyman, religious writer, was born in Scotland, 1853. He was educated in common schools, Insch, Scotland, and was graduated at Harvard in 1881; D.D., Bowdoin and Yale, 1893, Harvard, 1895. Minister of Old South church, Boston, since 1884; Author: *The Witness to Immortality; The Christ of To-day; Immortality and the New Theodicy; The New Epoch for Faith;* etc. University preacher to Harvard, Yale.

Gordon, John Brown, American soldier, was born in Georgia, 1832. He served with distinction in the confederate army, 1861-65, and rose to the rank of lieutenant-general. From 1873 to 1879 and 1891 to 1897 he was a member of the United States senate; governor of Georgia, 1886-90. Died, 1904.

Gordon-Cumming, Constance Frederica, Scotch traveler and writer, was born at Altyre, 1837. Author: *At Home in Fiji and New Zealand; A Lady's Cruise in a French Man-of-War among the South Sea Isles.*

Gore, Christopher, American statesman and diplomat, was born in Boston, Mass., 1758. He was a graduate of Harvard, a lawyer by profession, and the first United States district attorney for Massachusetts. He was governor of his state in 1809, and United States senator, 1814-17. Died 1829.

Gore, Thomas Pryor, lawyer, United States senator, was born in Webster county, Miss., 1870. He lost the sight of both eyes by accident when a boy. Graduated from the law department of Cumberland University, Lebanon, Tenn., 1892, moved to Texas in 1896 and to Oklahoma in 1901. After serving one term in the territorial senate, he was appointed United States senator by the governor, 1907; was elected by the legislature, 1909, and was reëlected in the same year for the full term 1909-15.

Gorglas (*gôr'ji-ăs*), celebrated Greek rhetorician of the time of Socrates, was born at Leontini about 487 B. C., and settled in Greece, residing for the most part at Athens, and at Larissa in Thessaly. He has been immortalized by Plato in a dialogue which bears his name. Two works attributed to him are extant, *The Apology of Palamedes* and the *Encomium on Helena.* Died about 380 B. C.

Gorki (*gôr'kē*), **Maxim,** pen name of Alexei Maximovitch Pyeshkoff, a self-educated Russian novelist, was born in Nizhni-Novgorod, 1868 or 1869, the son of an upholsterer. After the death of his parents he was engaged in various occupations until, through the influence of his friend Kalushni, his attention was turned to literary work, and his first story, *Makar Chudra*, appeared in 1892. He is one of the most original and popular of modern Russian writers.

Gortchakoff (*gôr'chä-kôf'*), **Prince Alexander Mikhailovitch,** Russian statesman, was born at St. Petersburg, 1798. As ambassador at Vienna, 1854-56, he displayed great ability during the Crimean war. As chancellor of the empire, 1863, he was, until Bismarck's rise, the most powerful minister in Europe. After the conclusion of the Russo-Turkish war, the repudiation of the treaty of San Stefano, and the signing of the treaty of Berlin, his influence began to wane. He died at Baden-Baden, 1883.

Gosnold (*gos'nuld*), **Bartholomew,** English navigator, was born in England about the middle of the sixteenth century. In 1602 he left Falmouth with a ship and twenty colonists, attempting to cross the ocean in a direct line. Contrary winds took his vessel to the Azores, whence, after a tedious voyage of seven weeks, he reached the coast of Maine. Following the land-line in a southwesterly direction, he discovered Cape Cod and Martha's Vineyard. In 1606 Gosnold united with Captain John Smith to locate in Virginia. Through their joint efforts the settlement at Jamestown was established in 1607. He died in Virginia, 1607.

Gosse (*gos*), **Edmund,** English poet and writer, librarian to the house of lords since 1904, was born at London, 1849. M.A., Trinity College, Cambridge; LL.D., St. Andrews, 1899; translator to board of trade, 1875-1904; Clark lecturer in English literature at Trinity College, Cambridge, 1884-90, and lectured in United States, 1884-85. Author: *Collected Poems; Life of Gray; Seventeenth Century Studies; The Secret of Narcisse; Questions at Issue; History of Modern English Literature;* etc.

Gosse, Philip Henry, British naturalist, was born at Worcester, 1810. In 1827 he went to Newfoundland as a clerk, and was afterward farmer in Canada, schoolmaster in Alabama, and naturalist in Jamaica. Author: *The Birds of Jamaica; A Naturalist's Sojourn in Jamaica;* and *The Romance of Natural History*, his best-known work. He died at St. Mary Church near Torquay, 1888.

Gottschalk (*got'shälk*), **Louis Moreau,** American pianist and musical composer, was born in New Orleans, 1829. He studied in Europe, and from 1845 to 1852 made successful tours of the continent, returning to America in 1853 to tour this country, and meeting with wonderful success, playing and conducting his own compositions. Died at Rio Janeiro, 1869.

Gough (*gof*), **John Bartholomew,** temperance lecturer, was born at Sandgate, Kent, England, 1817. He came at twelve to America, and in 1831 found employment in New York, but lost it by dissipation, and was reduced to singing comic songs at grog-shops. In 1842 he was induced to take the pledge; and, devoting the rest of his life to the cause of temperance, he became a singularly effective lecturer. He published an *Autobiography; Orations; Sunlight and Shadow*, etc. Died 1886.

Gouin, Sir Lomer, prime minister and attorney-general of Quebec since 1905, was born at Grondines, Quebec, 1861. He was admitted to the Quebec bar, 1884; elected member provincial parliament for Montreal, 1897; appointed member of public instruction council, 1898; minister of colonization and public works. Quebec 1900; reëlected for Montreal (St. James division), 1900, 1904, and 1905; elected for Portneuf, 1908.

Goujon (*gōō'zhôN'*), **Jean,** French sculptor and architect, was born in Paris about 1515. He was employed on the church of St. Maclou, at Rouen, 1540, and on the cathedral there, 1541; worked with Pierre Lescot, architect of the Louvre, on the restorations of St. Germain l'Auxerrois, 1542-44; was employed with Bullant on the Château d'Ecouen; and on the accession of Henry II. entered the royal service. In the Louvre he executed the reliefs of the Escalier Henri II., the carvings at the southwestern angle of the court, and the Tribune des Cariatides and was the author of what is considered the masterpiece of French sculpture, the *Diane Chasseresse*, now in the Louvre collection. His death is believed to have occurred in the St. Bartholomew massacre, 1572.

Gould, Benjamin Apthorp, American astronomer, was born at Boston, Mass., 1824. He was graduated at Harvard College in 1844, afterward studied at Göttingen, where he took a degree in 1848, and was for some time an assistant in the observatory at Altona, Germany. In 1856 he was appointed director of the Dudley observatory, at Albany, N. Y. In 1866 he established an observatory at Valentia, Ireland, and made the first determination of transatlantic longitude by telegraph cable. His principal works are: *Report on the Discovery of the Planet Neptune; On the Transatlantic Longitude*, and several charts of stars of scarcely less importance than those already noted. Died 1896.

Gould, Elgin R. L., economist, was born at Oshawa, Ontario, 1860. He was educated at Victoria University, and at Johns Hopkins University, Ph. D., 1886. Formerly lecturer at Johns Hopkins and professor at Chicago University; chamberlain of city of New York, 1902-04. He has been very active in public, religious, and philanthropic affairs. Author: *The Gothenburg System of Liquor Traffic; Housing of the Working People; Public Control of the Liquor Traffic; The Social Condition of Labor; Civic Reform and Social Progress*, etc.

Gould, George Jay, American capitalist and man of affairs, was born in New York, 1864, and received a private education. As trustee of the Gould estate he is a director in numerous large railroad and other corporations.

Gould, Helen Miller, American philanthropist, was born in New York, 1868, daughter of the late Jay Gould. She has been identified with philanthropic work for many years; gave a library building, costing $310,000 to university of city of New York; $100,000 for cyclone sufferers, St. Louis; $100,000 to United States government for war purposes, 1898; $50,000 to naval branch of Brooklyn Y. M. C. A., and numerous other donations for educational and charitable purposes. She also established and maintains a home for children.

Gould, Jay, American financier, was born at Roxbury, N. Y., 1836; was brought up on his father's farm; attended Hobart academy a short time, and began his railroad career shortly after the panic of 1857. He first invested in bonds of the Rutland and Washington railroad, and became president, treasurer, and superintendent of the road. Soon afterward he removed to New York, opened a broker's office, and began dealing in Erie stocks and bonds. In association with James Fisk, Jr., he entered the directory of the company, and was elected president, with Fisk as vice president and treasurer. He subsequently invested heavily in the various Pacific railroads, secured control of a number of important lines, built branches, and effected combinations which resulted in the establishment of what is known as the "Gould system." He died in 1892, worth some $100,000,000.

Gould, John, English ornithologist, was born at Lyme Regis, 1804. He became curator of the zoölogical society's museum in 1827. His eighteen works include *A Century of Birds from the Himalaya Mountains; Icones Avium; The Birds of Europe; The Birds of Australia; The Mammals of Australia; The Family of Kangaroos; Humming Birds; The Birds of Great Britain*, etc. Died, 1881.

Gounod (*gōō'-nō'*), **Charles François,** French operatic composer, was born in Paris in 1818. He studied music at the Paris conservatoire, and in 1839 gained the prize for composition. He then visited Rome and Vienna, and in 1849 became an organist in Paris. His first opera, *Sappho*, was written in 1851. This was followed by *Sa Nonne Sanglante; le Médecine malgré lui; la Colombe; Philémon et Baucis; Mireille; la Reine de Saba; Roméo et Juliette*, and *Faust*—the two latter being the best known of his works. He was a member of the Academy of Fine Arts, and was decorated with the legion of honor. Died 1893.

Gowan, Sir James Robert, jurist, member of Canadian senate, was born in Ireland, 1815. He settled in Canada, 1832; admitted to the upper Canada bar, 1839; appointed judge, 1843; one of the three judges appointed to frame a new procedure *in re* probate administration and guardianship, 1858; engaged in revision and consolidation of the whole statute law of United Canada and the provinces of upper and lower Canada (afterward enacted), 1859; chairman of board of judges, Ontario, 1869 to 1889; retired from bench, 1883, and was appointed by the crown a life member of the senate, 1885. He introduced a new procedure on bills of divorce before parliament, which was adopted and now governs in Canada. He was admitted to Irish bar, 1890, and created C. M. G., 1893, "in recogni-

tion of his long and valuable services in the Dominion of Canada." In 1855 he founded the *Canada Law Journal*.

Graaf (*grăf*), **Regnier de,** Dutch physician and anatomist, was born in Schoonhove, 1641. He was specially distinguished by his discovery that all animals are oviparous. The Graafian vesicles were also discovered and named after him, though he mistook their functions. He rendered great service to anatomy through his use of the injections into the blood-vessels which Swammerdam and Ruysen afterward brought to a state of comparative excellence. Died at Delft, 1673.

Gracchus (*grak'us*), name of a distinguished Roman family, to which belonged the two celebrated tribunes, Tiberius Sempronius Gracchus (163-133 B. C.) and Caius Sempronius Gracchus (159-121 B. C.). The former was tribune of the plebs 133 B. C., and the latter 123-122 B. C. They were both the sons of Tiberius Sempronius Gracchus (who had been tribune of the plebs in 187 B. C.), and of Cornelia, the daughter of Publius Scipio Africanus the elder. Both the brothers fell victims to their zeal in attempting to contend with the growing corruptions of the Roman state.

Grady, Henry Woodfin, journalist, orator, was born at Athens, Ga., 1851. He was educated at the state university at Athens, and took a post-graduate course at the University of Virginia. He became editor of the Rome, Ga., *Daily Commercial*, and afterward of the Atlanta *Herald*, and in 1880 became part owner and managing editor of the Atlanta *Constitution*, which he conducted until his death. He was an eloquent speaker, a man of broad and liberal views; and, during his brief public life, did as much as any one man could to advance the interests of Georgia and the South. Died at Atlanta, Ga., 1889.

Grand, Sarah, assumed name of Frances Elizabeth Clarke, British novelist, was born in Ireland, of English parents; daughter of Edward John Bellenden Clarke, lieutenant royal navy. She married at sixteen, brigade-surgeon Lieutenant-Colonel McFall, who died in 1898. She traveled for five years in the East, China, and Japan; wrote *Ideala* at twenty-six, and has since interested herself in the woman's movement. She is vice president of the Central and Western society for woman's suffrage, vice-president of the Scottish association for the promotion of women's public work, vice-president of Garden City association, etc.

Grant, Frederick Dent, United States army officer, was born at St. Louis, Mo., 1850, son of President Ulysses Simpson Grant. He was graduated from the United States military academy, 1871; commissioned second lieutenant 4th cavalry, 1871, and served on the frontier, 1873-81. Appointed United States minister to Austria by President Harrison, 1885; police commissioner of New York, 1894-98; major-general of United States army, 1906. Served in Puerto Rico one year, and after war commanded military district of San Juan; in Philippine islands, 1899-1902; commanded department of Texas, 1902-04, department of the Lakes, January-September, 1904, department of the East, 1904-08. Died 1912.

Grant, James, British military novelist, was born in Edinburgh, 1822. Having contributed copiously to the *United Service Magazine* and the *Dublin University Magazine*, he published in 1846 his *Romance of War*, the first of a long series of novels and histories, illustrative mainly of the achievements of Scottish arms abroad. He died in London, 1887.

Grant, Robert, author, judge probate court and court of insolvency for Suffolk county, Mass., since 1893, was born at Boston, 1852. He was graduated at Harvard College, 1873; Ph. D., 1876; Harvard Law School, 1879; was water commissioner, Boston, 1888-93. Author: *The Confessions of a Frivolous Girl*; *The Little Tin God on Wheels* (verse); *The Lambs* (verse); *Yankee Doodle* (verse); *The Oldest School in America* (verse); *An Average Man*; *The Art of Giving*; *Search-Light Letters*; *Unleavened Bread*; *The Undercurrent*; *The Orchid*; *The Law-Breakers*, etc. He has been an overseer of Harvard College since 1895.

Grant, (Hiram) Ulysses Simpson, eighteenth president of the United States, was born at Point Pleasant, Clermont county, Ohio, 1822; graduated at the military academy of West Point in 1843, and served under General Taylor in the war with Mexico, 1846, up to the capture of Monterey. In 1852 he served in Oregon; but in 1854 resigned his commission and settled in St. Louis, Mo., whence, in 1859, he moved to Galena, Ill., and engaged in the leather trade. At the beginning of the civil war in 1861, he volunteered his sevices, and was appointed colonel of an Illinois regiment. In August he was appointed brigadier-general, commanding the important post of Cairo, occupied Paducah, and led an expedition on the Mississippi. In February, 1862, he distinguished himself in the capture of Fort Donelson, on the Tennessee river, and was made major-general. On April 6th following, after a preliminary defeat, he won a great battle over the confederates at Pittsburg Landing, or Shiloh. Succeeding General Halleck in the West, he commanded the land forces which, in conjunction with the navy, reduced Vicksburg, July 4, 1863, soon followed by the fall of Fort Hudson, and the opening of the Mississippi. He then in 1864, was appointed lieutenant-general and commander-in-chief, and personally directed the operations of the great final struggle in Virginia, in which the northern forces, though often repulsed with heavy losses, finally compelled the evacuation of Richmond, April 2, 1865, followed on the 9th by the surrender of the confederate army under General Lee, and soon after of the entire confederate forces. Congress, in recognition of his eminent services, passed an act reviving the grade of "general of the army of the United States," to which Grant was immediately appointed. In 1868 he was elected, on the republican platform, president of the United States; and having in 1872 been reëlected over a notable opponent, Horace Greeley of the *New York Tribune*, he retired in 1877 after his second term of office. In the latter year Grant visited Europe, and toured the world In England and France he received an enthusiastic welcome. Simple, reticent, earnest, and persevering in his character, he owed his military success not so much to strategy as to superior numbers and resources, and hard fighting in which even a series of victories left his enemy less able to resist. Having lost his moderate fortune in an unfortunate speculation, Grant wrote an account of his life, which, being successful, to some extent relieved him. He died of cancer, in 1885 after a year of severe suffering.

Gratianus (*grā'shi-ā'nus*), **Augustus,** Roman emperor from 375, was born in Sirmium, Pannonia, 359. Grantianus was pious, temperate, and eloquent; but his fondness for frivolous amusements and his persecution of pagans and heretics alienated his subjects; so that when Maximus was proclaimed emperor crowds flocked to his standard. Gratianus was defeated by him near Paris, and fled to Lyons, where he was put to death, 383.

Grattan (*grat'an*), **Henry,** Irish orator and statesman, was born in Dublin in 1746. He was educated at Trinity College, Dublin; in 1772 was admitted to the Irish bar, and in 1775 was returned to the Irish parliament. Mainly to him was owing, among other things, the partial abolition of the heavy restrictions on Irish commerce. As an orator he stands in the first rank. His style is full of point, rapidity, antithesis, and poetic suggestiveness. His eulogy on Chatham and his invective against Bonaparte are not surpassed in British eloquence. Died, 1820.

Graves, John Temple, journalist and orator, was born at Willington Church, Abbeville county, S. C., 1856. He was graduated at the university of Georgia, 1875; was editor of *Daily Florida Union*, Jacksonville, 1881-83; *Atlanta* (Ga.) *Daily Journal*, 1887-88; *Tribune* of Rome (Ga.), 1888-90; editor-in-chief and co-proprietor of *Atlanta Daily Georgian*, 1905-07; editor-in-chief of *New York American* since 1907. Presidential elector-at-large, Florida, 1884; was colonel on staff of Governor Northern of Georgia. Author: *History of Florida of To-Day*; *Twelve Standard Lectures*; *Platform of To-Day*; *Speeches and Selections for Schools*; *The Negro*. Contributor to various American periodicals as advocate of separation of black and white races, etc.

Gray, Asa, American botanist, was born at Paris, N. Y., 1810. He was graduated in medicine at Fairfield College, and in 1843 received the appointment of botanist of the United States exploring expedition. He was afterward appointed professor of botany in the university of Michigan; but before he had entered upon the duties of that office he was elected, in 1842, Fisher professor of natural history at Harvard University. In addition to his prelections at Cambridge he delivered some lectures at the Lowell Institute in Boston. He ranked among the leading botanists, not only of America, but of the age. He wrote: *Elements of Botany*; *Flora of North America*; *How Plants Grow*; *Field, Forest and Garden Botany*; *Darwiniana*; *Synoptical Flora of North America*; *Natural Science and Religion*, etc. Died, 1888.

Gray, George, jurist, was born at New Castle, Del., 1840. He was graduated at Princeton, 1859; LL. D., 1889. Studied law at Harvard, and was admitted to the bar, 1863; attorney-general of Delaware, 1879-85; United States Senator, 1885-99; member of peace commission, Paris, 1898; appointed by the President a member of the joint high commission at Quebec, 1898, and member of the international permanent court of arbitration under The Hague convention, 1900; judge of United States Circuit Court, third judicial circuit, since 1899; chairman of anthracite coal strike commission, 1902.

Gray, Horace, American jurist, was born at Boston, 1828; was graduated at Harvard, 1845, and its law school, 1849; was admitted to the bar, 1851; Associate-justice of the Massachusetts supreme court, 1864-73, and chief-justice, 1873-81, when he was appointed successor to Judge Clifford in the United States supreme court. He remained a member of this tribunal until shortly before his death, 1902.

Gray, John Chipman, lawyer, educator, was born at Brighton, Mass., 1839; graduated at Harvard, 1859; LL. B., 1862; LL. D., Yale and Harvard. Admitted to bar, 1862, but in same year entered army and served, 1862-65, from lieutenant to major and judge-advocate of United States volunteers. Since the war he has continuously engaged in the practice of law in Boston. Lectured at Harvard Law School, 1869-71; Story professor of law, 1875-83, and Royal professor of law since 1883, in same school. Author: *Restraints on Alienation; The Rule Against Perpetuities; Select Cases and Other Authorities on the Law of Property* (6 vols.), etc. Died 1909.

Gray, Thomas, English poet, was born in London, 1716. He was educated at Cambridge, and appointed professor of history and modern languages there in 1769. He had a just appreciation of the natural beauty of his native country, made notes wherever he went, and wrote copious descriptions of what he had seen to his literary friends. He published his *Ode to Eton College* in 1747, and his *Elegy Written in a Country Churchyard*, by which he is best known, several years afterward. On the death of Colley Cibber he was offered, but declined, the post of poet laureate. Died, 1771.

Greeley, Horace, American journalist, was born at Amherst, N. H., 1811. He entered a printing office as an apprentice at East Poultney, Vt., 1825. On the completion of his apprenticeship he worked for some time as a journeyman printer, and in 1834 founded the *New Yorker*, a literary weekly paper, for which he wrote essays, poetry and other articles. After one or two other attempts at editorship he founded, in 1841, the New York *Tribune*, and became the leading editor. The *Tribune* under his leadership was an earnest advocate of temperance, woman's rights, the abolition of slavery and capital punishment, and other reforms, and was recognized as the organ of the extreme or radical party. His aspirations to political position were defeated by the more conservative party leaders, and he, in turn, influenced the election of Lincoln instead of Seward, in 1860. On the secession of several of the southern states from the Union, Greeley at first admitted their right to secede, in accordance with the principles of the declaration of independence; but, when the war began, he became its most zealous advocate, and is supposed to have caused the premature advance that resulted in the defeat at Bull Run, 1861. In 1872 he was an unsuccessful candidate for the presidency. Died, 1872.

Greely, Adolphus Washington, American general, was born at Newburyport, Mass., 1844. Entering the volunteer service, he attained the rank of captain during the civil war, and at its close was transferred to the regular army with the rank of lieutenant. In 1868 he was placed in the signal service, and in 1881 was assigned to the command of the Lady Franklin bay expedition to northern Greenland. After suffering extreme and terrible hardships, Greely and a few surviving members of his command were rescued in 1884, by an expedition sent to his relief by the United States Government. He published an account of the expedition in 1886, under the title of *Three Years of Arctic Service*. In 1887 he became chief of the United States signal service, and was head of the weather bureau from that time until it passed under control of the department of agriculture. He was made major-general in 1906 and retired 1908.

Green, Hetty Howland Robinson, American financier, was born in New Bedford, Mass., 1835, daughter of Edward Mott Robinson, who died in 1865, leaving her a large fortune. She is said to be the richest woman in America, and probably the greatest woman financier in the world. She personally manages her large property in stocks, bonds, and real estate in Chicago, New York, and elsewhere.

Green, John Richard, English historian, was born at Oxford, England, 1837, and educated at Magdalen College school and Jesus College. He took orders in 1860, and was for some time vicar of St. Philip's, Stepney, becoming in 1868 librarian at Lambeth. Author: *A Short History of the English People*; *A History of the English People*; *The Making of England*, and *The Conquest of England*. The latter was published after his death by his wife, who assisted him in various works, and herself wrote *Henry II.* in the Twelve English Statesmen series. Died, 1883.

Green, Thomas Hill, English philosopher, was born in Yorkshire, 1836. Educated at Rugby and Balliol College, Oxford, 1859, he in 1860 was elected to a Balliol fellowship, and reëlected in 1872, became in 1877 Whyte professor of moral philosophy, and died in 1882. Green's noble character, contagious enthusiasm, philosophical profundity, and strong interest in social questions drew around him many of the best men at Oxford. His *Prolegomena to Ethics*, left incomplete at his death, was edited by A. C. Bradley, and two "lay-sermons" by Arnold Toynbee in the same year. His scattered essays in *Mind* and elsewhere were edited as *The Works of T. H. Green* by R. L. Nettleship.

Green, William Henry, American Presbyterian theologian, was born at Groveville, N. J., 1825. He was graduated from Lafayette College, 1840, and at Princeton theological seminary, 1846. In 1851 he was made professor of biblical and oriental literature at Princeton, and was chairman of the committee which revised the old

testament. He wrote: *A Grammar of the Hebrew Language*; *Moses and the Prophets*; *The Hebrew Feasts*, etc. Died at Princeton, N. J., 1900.

Greene, Nathanael, American general, was born in 1742, at Potowhommet, Rhode Island. In 1774 he enlisted as private, and in 1775 was appointed to the command of the Rhode Island contingent to the army at Boston, with the rank of brigadier-general. He was promoted to major-general in 1775, and distinguished himself at the engagements of Trenton and Princeton. At the battle of Brandywine, he commanded a division, and by his skillful movements saved the American army from utter destruction; and at Germantown he commanded the left wing. In 1778 he became quartermaster-general. In 1780 he succeeded Gates in the command of the army of the south, and found the army in a wretched state, without discipline, clothing, arms, or spirit. By dint of great activity he got his army into better condition, and remained on the defensive for the remainder of the year. In 1781 with 5,000 new recruits, he entered upon more active operations, and finally defeated the English at Eutaw Springs, the hardest fought field of the revolution, which put an end to the war in South Carolina. Congress struck and presented to him a medal in honor of this battle, and the Carolinas and Georgia made him valuable grants of land. When peace was restored in 1783, Greene returned to Rhode Island, where he received numerous testimonials of the public admiration. In 1785 he retired with his family to his estate in Georgia, where he died of sunstroke in 1786. He was one of the very best generals of the war of independence, second, perhaps, only to Washington, whose intimate friend he was.

Greenough (*grēn'ō*), **Horatio,** American sculptor, was born in Boston, Mass., 1805. He graduated at Harvard in 1825, and from that year till 1851 lived chiefly in Italy. His principal work is the colossal statue of Washington formerly in front of the capitol. Others are "Medora," "Venus Victrix," and a group of four figures, "The Rescue." He died at Somerville, Mass., 1852.

Greer, David Hummell, Protestant Episcopal clergyman, bishop coadjutor was born at Wheeling, W. Va. 1844. He was graduated at Washington College, Pa., 1862; studied theology at Protestant Episcopal seminary, Gambier, Ohio; D. D., Brown university, LL. D., Washington and Jefferson College; S. T. D., Columbia; was ordained deacon, 1866, priest, 1868; rector Grace church, Providence, R. I., 1871-88, St. Bartholomew's church, New York, 1888-1904; bishop of the diocese of New York since 1908.

Grégoire (*grā'gwär'*), **Henri,** French ecclesiastic and revolutionist, was born near Lunéville, 1750. He took orders and lectured at the Jesuit College of Pont-à-Mousson. Curé of Emberménil in Lorraine, and an ardent democrat, he was sent to the states-general of 1789 as a deputy of the clergy, attached himself to the tiers-état party, and acted a prominent part throughout the revolution. He was the first of his order to take the oaths, and was elected "constitutional bishop" of Loire-et-Cher. At the blasphemous feast of reason he refused, in the face of the infuriated rabble, to renounce Christianity. He became a member of the constituent assembly, 1789, but the concordat forced him to resign his bishopric. He died at Paris, unreconciled with the church, 1831.

Grégorovius (*grĕg'ō-rō'vĭ-ŭs*), **Ferdinand,** German historian, was born at Neidenburg in East Prussia, 1821. He studied theology, but devoted himself to poetry and literature. His great work—the standard work on the subject—is the *History of the City of Rome in the Middle Ages*. He wrote on Italian geography and history, also a tragedy on the death of Tiberius, and an epic, *Euphorion*.

Gregory I., Pope, called "the great," was born in Rome about 540. After being secretary to Pelagius II., he succeeded him as bishop of Rome; renounced communion with the eastern Christians because of the assumption of the title "universal bishop" by the patriarch of Constantinople; composed chants, and established a musical school, in which he himself taught, and collected and arranged fragments of ancient hymns. He was the author of numerous sacred works, of which the chief was his *Morals from the Book of Job*. Died, 604.

Gregory VII., Pope, Hildebrand, son of a carpenter, was a native of Soano, Tuscany. He was the friend and counsellor of Leo IX. and the four succeeding popes, and on the death of Alexander II., 1073, succeeded him.

He obtained confirmation in his election from the Emperor Henry IV., and immediately applied himself zealously to reforms, ecclesiastical and political. He menaced the emperor and the king of France, the latter without effect. In 1074 he assembled a council, by which it was forbidden the prelates to receive investiture of a layman; and this was the first step in the quarrel with the emperor, which lasted so many years. Henry, disregarding the papal authority, was summoned to Rome; but he held a diet at Worms, and pronounced the deposition of the pope. To this Gregory replied by procuring the deposition of the emperor and the election of Rudolph of Suabia.

Henry now promised submission; and in the early winter of 1077 went with his wife and child to Italy. The pope was at the castle of Canossa, and there, after keeping the penitent king of Germany three days waiting at the gate, he received and gave him absolution. The terms imposed on him were intolerable, and he soon broke them, made war on Rudolph, and defeated him, set up a rival pope in Guibert, archbishop of Ravenna, with the title of Clement III., and after several unsuccessful attempts entered Rome in 1084, had himself crowned emperor by his own pope, and besieged Gregory in San Angelo. The pope was delivered by Guiscard, and retiring to Salerno, died there in 1085.

Whatever may be said of the power in itself, or of the length to which it has at times extended, the occasion and the object of its exercise in the hands of Gregory were always such as to command the sympathy of the philosophical student of the history of the Middle Ages. By his firm and unbending efforts to suppress the unchristian vices which deformed society, and to restrain the tyranny which oppressed the subject as much as it enslaved the Church, he taught his age "that there was a being on earth whose special duty it was to defend the defenceless, to succor the succorless, to afford a refuge to the widow and orphan, and to be the guardian of the poor."

References.—See *Lives* by Gfrörer; W. R. W. Stephens, Delarc, and Vincent. Also, Neil's *Epoch Men;* and Villemain's *Gregory VII.*

Grenville, George, English statesman, was born in 1712. He entered parliament in 1741, in 1762 became secretary of state and first lord of the admiralty, and in 1763 succeeded Lord Bute as prime minister. In his administration befell the American stamp act, which excited the American colonies to resistance. He resigned in 1765. Died, 1770.

Gresham (*grĕsh'am*), **Sir Thomas,** English financier, philanthropist, was born at London in 1519. From Cambridge in 1543 he became connected with the Mercers' company, and in 1551 was employed as King's agent at Antwerp. In two years he paid off a heavy loan and restored the king's credit. He was knighted by Queen Elizabeth in 1559, and was for a time ambassador at Brussels. In 1569, by his advice, the state borrowed money from London merchants instead of from foreigners. Having in 1564 lost his only son, Richard, in 1566-71 he devoted a portion of his great wealth to building an exchange, in imitation of that of Antwerp; he made provision for founding Gresham College, and left money for eight almshouses. Died, 1579.

Gresham, Walter Quinton, American politician and jurist, was born in Harrison county, Ind., 1832. He was admitted to the bar in 1853; was elected to the state legislature in 1860, but resigned to accept a commission in an Indiana regiment. He was severely wounded near Atlanta and received the brevet of major-general of volunteers for his gallantry. In 1869 he was appointed United States judge for the district of Indiana by President Grant, but in April, 1882, resigned from the bench to become postmaster-general under President Arthur. On the death of Secretary Folger, in 1884, he became secretary of the treasury. In October, 1884, he was appointed United States judge for the seventh circuit. In 1893 he became secretary of state in President Cleveland's cabinet. Died at Washington, 1895.

Greuze (*grûz*), **Jean Baptiste,** French painter, was born at Tournus near Mâcon, France, 1725. He studied under Gromdon at Lyons, and at the academy in Paris. His first notable works were historical; after a visit to Italy, 1775, he painted Italian subjects; but he is seen at his best in such studies of girls as "The Broken Pitcher," the "Girl with Doves," and "Girl with Dead Canary." His art, though full of delicacy and grace, is marred by its triviality and pursuit of mere prettiness. Died, 1805.

Grévy (*grā'vē'*), **Francois Paul Jules,** French statesman, was born at Mont-sous-Vaudry, in the Jura, near the boundary of Switzerland, 1807. When not yet twenty years of age he began his law studies at the capital, and, becoming interested in politics, took part in the revolution of 1830, which drove Charles X. from the French throne. The voters of his old department, the Jura, elected him to represent them in the constituent assembly of 1848, and he took a prominent part in the organization of the government. After Napoleon's downfall, he was chosen president of the national assembly which met in 1871, and in 1873, when the young republic seemed to be headed toward another monarchy, Grévy earnestly advocated democracy as the only hope of France. In 1879 he was chosen president of the republic by an enormous majority. In 1886 he was reëlected, but on account of a scandal in which his son-in-law was implicated he was forced to resign, 1887. Died, 1891.

Grey, Albert Henry George, fourth Earl Grey, English statesman and administrator, governor-general of Canada since 1904, was born in 1851. He is the son of General Charles Grey; was educated at Harrow and Trinity College, Cambridge, and succeeded his uncle, the third Earl Grey, in 1894. He was a liberal member of the House of commons, 1880-86; administrator of Rhodesia, 1896-97; director of British South Africa company, 1898-1904; was lord-lieutenant of Northumberland, 1899-1904. He succeeded Lord Minto, as governor-general of Canada in 1904 and served until 1911.

Grey, Charles, second Earl Grey, English statesman, was born at Falloden, Northumberland, 1764, and educated at Eton and King's College, Cambridge. In 1806 Grey, now Lord Howick, became first lord of the admiralty, and, on the death of Fox, foreign secretary and leader of the house of commons. In 1807 he succeeded his father as second Earl Grey. In 1830 he formed a government whose policy, he said, would be one of peace, retrenchment, and reform. The first reform bill was produced in 1831; its defeat led to a dissolution and the return of a parliament still more devoted to reform. Early in 1832 another bill was carried in the commons, and it weathered the second reading in the house of lords; but when a motion to postpone the disfranchising clauses was adopted, ministers resigned. The duke of Wellington failed to form an administration, and Grey returned to office with power to create a sufficient number of peers to carry the measure. Wellington now withdrew his opposition, and in June the reform bill passed the house of lords. He carried the act for the abolition of slavery in the colonies, as well as a number of minor reforms; but dissensions sprang up, and in consequence of his Irish difficulties he resigned in 1834. He died at Howick House, Alnwick, 1845.

Grey, Sir Edward, English statesman, secretary of state for foreign affairs since 1905; member of parliament for Berwick-on-Tweed since 1885; was born in 1862. He was graduated at Balliol College, Oxford, and succeeded to the baronetcy in 1882; was under-secretary for foreign affairs, 1892-95. He is a man of brilliant talents of whom Gladstone is alleged to have said: "I have never remembered so signal a capacity for parliamentary life and so small a disposition to it."

Grey, Lady Jane, eldest daughter of Henry Grey, marquis of Dorset, afterward duke of Suffolk, and of Lady Frances Brandon, was born at Bradgate, Leicestershire, 1537. In 1553, Lady Jane Grey, now sixteen years old, was married to Lord Guilford Dudley, fourth son of the duke of Northumberland. The king, failing in body and weak in mind, and surrounded by selfish or fanatical advisers, was persuaded to make a deed of settlement, setting aside the right of succession of his sisters Mary and Elizabeth, and Mary, queen of Scots, leaving the crown to Lady Jane, who was innocent of the conspiracy. After the king's death her ambitious relatives hailed her as "queen." The people of England resented the unscrupulous conduct of Suffolk and Northumberland, and, learned, brilliant, and amiable as Lady Jane was, they rallied round Mary. Northumberland was defeated, sent to the Tower, and beheaded August 22, 1554; and in the following November Lady Jane and her husband were also condemned and she was executed in February, 1554.

Grieg (*grēg*), **Edward Hagerup,** Norwegian composer, was born at Bergen, Norway, 1843. His nationality became a strong element even in his earliest compositions. He spent the winter of 1865-66 and some months of 1870 in Rome where he inaugurated a Norse music concert. In 1888 he went to London, where he both played and conducted, and this was followed by important engagements in Germany and elsewhere. Among his compositions are numerous pieces for the piano, songs, dances, and an opera. He died in 1907.

Griffis (*grĭf'ĭs*), **William Elliot,** lecturer, author, was born in Philadelphia, Pa., 1843. He served with the 44th Pennsylvania regiment in the civil war, 1863; graduated at Rutgers, 1869; Union Theological Seminary, 1877; D. D., Union College, 1884; L. H. D., Rutgers College, 1899. In 1870 he went to Japan to organize schools; professor of physics, Imperial University, Tokio, 1872-74. Author: *Brave Little Holland and What She Taught Us; The Religions of Japan; Romance of Discovery; Romance of Conquest; The Pilgrims in Their Three Homes; America in the East; In the Mikado's Service; A Maker of the New Orient; The Japanese Nation in Evolution*, etc.

Griggs, Edward Howard, lecturer, author, was born at Owatonna, Minn., 1868. He was graduated from Indiana University, 1889, A. M., 1890; special studies, university of Berlin; was instructor of English literature and professor of literature, Indiana University; professor of ethics and later head of combined departments

of ethics and education Leland Stanford Jr., University; public lecturer since 1899. Author: *The New Humanism; A Book of Meditations, Moral Education, Human Equipment*, etc.

Griggs, John William, lawyer, United States attorney-general, 1898-1901, was born at Newton, N. J., 1849. He was graduated at Lafayette College, 1868; admitted to the bar, 1871; practiced at Paterson; member of New Jersey general assembly, 1876 and 1877; state senator, 1882-88; president of New Jersey senate, 1886; governor of New Jersey from January, 1896, until he resigned, January, 1898, to take office of attorney-general in President McKinley's cabinet; member of Hague permanent court of arbitration.

Grillparzer (*gril'pär-sĕr*), **Franz,** Austrian dramatic poet, was born at Vienna, 1791. He studied jurisprudence, and in 1813 entered the imperial civil service, in which he remained until 1856. He first attracted notice in 1817 by a tragedy, *Die Ahnfrau*, which was followed by *Sappho*; *Das goldene Vlies*; *Des Meeres und der Liebe Wellen*; *Der Traum ein Leben*, etc. He produced in lyric poetry much meritorious work; and one good prose novel, *Der Arme Spielmann*. Died at Vienna, 1872.

Grimm, Friedrich Melchior, Baron von, German-French critic and writer, was born at Ratisbon, 1723. He became acquainted with Rousseau in 1749, and through him with Diderot, Holbach, and Madame d'Epinay. His connection with the encyclopedists, added to his own acquirements, opened up a brilliant career. In 1776 he was made a baron by the duke of Gotha, and appointed minister-plenipotentiary at the French court. At the revolution he withdrew to Gotha, and afterward to the court of Catharine II., whence he was sent in 1795 as Russian minister to Hamburg. He died at Gotha, 1807.

Grimm, Jakob Ludwig Karl, German philologist and antiquary, was born at Hanau, in Hesse-Cassel, 1785. Though holding at various times important public offices, his life was devoted to philological and antiquarian studies. His German *Grammar*, in four volumes, is perhaps the greatest philological work of the age. After 1814, in company with his brother, Wilhelm, he published numerous works of a more popular character, the best known of which is *Kinder- und Hausmärchen*, nursery and fireside stories. The greatest joint undertaking of the two brothers was the *Deutsche Wörterbuch*, begun in 1852. Jakob Grimm died in 1863. Wilhelm was born in 1786 and died at Berlin in 1859.

Grimston (*grim-stun*), **Mrs. Margaret B.** See **Kendal, Mrs.**

Grimston, William H. See **Kendal, Mr.**

Gros (*grō*), **Antoine Jean, Baron,** French historical painter, was born at Paris, 1771. He studied in the school of David, and acquired celebrity by his great pictures of Napoleon's battles, "Francis I. and Charles V. at Saint Denis," "Departure of Louis XVIII. for Ghent," "The Plague at Jaffa," and "Embarkation of the Duchess of Angoulême" He drowned himself in the Seine, 1835.

Gross, Samuel David, American surgeon, was born in Pennsylvania, 1805. He was graduated from Jefferson medical College, 1828; was professor of pathological anatomy in Cincinnati medical College, 1835-39; professor of surgery in university of Louisville, 1839-50, and at university of New York, 1850-51; professor of surgery in Jefferson Medical College, 1856-84. He wrote: *System of Surgery* (2 vols.); *American Medical Biography*, etc. He was the founder and chief editor of the *North American Medico-Chirurgical Review*, and was president of the American Medical Association, 1867. Died, 1884.

Grosscup (*grōs'kup*), **Peter Stenger,** jurist, judge of United States circuit court of appeals, 7th circuit, since 1899, was born at Ashland, Ohio, 1852. He was graduated from Wittenberg College, 1872, Boston Law School, 1874; practiced law at Ashland, Ohio, 1874-83, where he was city solicitor for six years; practiced in Chicago, 1882-92; United States judge of northern district of Illinois, 1892-99. He has been president of the John Crerar library, Chicago, since 1901.

Grosvenor, Edwin Augustus, educator, historian, was born in Newburyport, Mass., 1845. He was graduated from Amherst, 1867, Andover theological seminary, 1872; LL. D., Wabash, 1903. Professor of modern governments and their administration, 1898-1901, modern government and international law since 1901, Amherst College. Author: *The Hippodrome of Constantinople; Constantinople; The Permanence of the Greek Type; Contemporary History*, etc.

Grote (*grōt*), **George,** English historian and politician, was born at Clay Hill, Kent, England, 1794. He published many pamphlets on reform, and contributed to the *Westminster Review*. In 1833 he was elected to parliament for the city of London, for which he continued to sit until 1841, as one of the "philosophical radicals." His *History of Greece* appeared between 1846 and 1856, and was followed by *Plato and Other Companions of Socrates*. He died in 1871, and is buried in Westminster abbey.

Grotius, or **De Groot, Hugo,** eminent Dutch scholar and statesman, was born at Delft, Holland, in 1583. He was descended from a noble family, received an excellent education, and gave early manifestations of surprising talents.

In 1599 he commenced his career as advocate; and was successively appointed historiographer, advocate-general of Holland and Zealand, a member of the states-general, and envoy to England. Hitherto his life had been marked by splendor, but now it began to be clouded by the part which he took in the Arminian controversy. In 1613 he became syndic, or pensionary, of Rotterdam, and declaring himself on the side of Barneveldt, he supported him and the cause of the Arminians by his pen and influence. For this he narrowly escaped the fate of Barneveldt, (who suffered on the scaffold,) and received sentence of imprisonment for life in the fortress of Loewestein. He remained in prison 18 months, which he had employed in writing his celebrated *Treatise on the Truth of the Christian Religion*, and then succeeded in escaping. This was effected by the management of his wife, who contrived to have him carried out of the castle in a chest that had been used for the conveyance of books and linen.

Grotius at first sought an asylum in France; and it was during his residence there that he composed his great work, *De Jure Belli et Pacis* "On the Law of War and Peace." After an absence of 12 years, he returned to his native country, relying on the favor of Frederick Henry, prince of Orange, who had written him a sympathizing letter. But by the influence of his enemies he was condemned to perpetual banishment. He passed the remnant of his life in the diplomatic service of Sweden, and died at Rostock, in 1645.

With the talents of the most able statesman, Grotius united deep and extensive learning. He was a profound theologian, a distinguished scholar, an acute philosopher, a learned jurist, and an erudite historian. Among his works not mentioned above may be noticed *De Antiquitate Reipublicae Batavicae; a History of the Goths*, etc.

References.—Burigny's *Life of Hugo Grotius;* Buller's *Life;* and *Grotius* trans. by D. P. de Bruyn.

Grouchy (*grōō-shē'*), **Emmanuel, Marquis de,** distinguished French marshal, was born in Paris, 1766. He entered the French army, 1781; was a lieutenant in the royal body-guard, 1787-93; served with Lafayette, was promoted brigadier-general, commanded the cavalry in the army of the Alps, aided in the conquest of Savoy, and after fighting in La Vendee, 1794, was cashiered with all other officers of the nobility. He then enlisted as a private soldier, and after the fall of Robespierre was reinstated and promoted general of division by a special decree. Defeated the Prussian cavalry at Zehdenik, 1806; was governor of Madrid, 1808; took part in the battle of Wagram, 1809; distinguished himself at Borodino, 1812; and commanded Napoleon's body-guard on the retreat from Moscow. When Napoleon reappeared from Elba, Grouchy was given a command and made a marshal of France for his successes in the north. He then marched into Belgium, defeated the allied English and Prussian armies at Fleurus and Ligny, and by following Napoleon's orders to the letter to pursue Blücher is believed to have caused the French defeat at Waterloo. He was again banished by the Bourbons, lived five years in Philadelphia, was recalled to France, 1819, and after the revolution of 1830 was restored to rank as marshal and created a peer. Died, 1847.

Grove, Sir George, British engineer and writer on music, was born at Clapham, 1820. He was trained as a civil engineer, erected in the West Indies the first two cast-iron lighthouses, and assisted in the Britannia tubular bridge, which unites Anglesey and Wales. He was made D. C. L. by Durham, LL. D. by Glasgow, and was knighted in 1883 on the opening of the Royal College of music, of which he was director until 1895. He died in 1900.

Grove, Sir William Robert, English lawyer and physicist, was born at Swansea, 1811. He studied at Oxford, was admitted to the bar, raised to the bench, 1871, knighted, 1872, and in 1875-87 was a judge in the high court of justice. He greatly distinguished himself in the subjects of electricity and optics, and in 1839 he invented the powerful voltaic battery known by his name. He published very important lectures, in which he propounded the theory of the mutual convertibility of the natural forces; the *Correlation of the Physical Forces; Voltaic Ignition*, and the *Continuity of Natural Phenomena*. Died 1896.

Grundtvig (*grōnt'vēg*), **Nikolai Frederik Severin,** Danish poet and theologian, was born at Udby in Zealand, 1783. He first became known by his *Northern Mythology*, published in 1808, and *Decline of the Heroic Age in the North*, in 1809. These were followed by the *Rhyme of Roeskilde* and the *Roeskilde Saga*, and by a collection of patriotic songs. In 1818 he had begun the translation of Snorri Sturluson and Saxo Grammaticus; in 1820 published a Danish translation of *Beowulf*. After 1861 he had the title of bishop, though he held no see. He died in 1872.

Grundy (*grun'dē*), **Felix,** American jurist and statesman, was born in Berkeley county, Va., 1777. In 1799 he was chosen a member of the Kentucky constitutional convention, and from that time until 1806 served as a member of the legislature. He was appointed judge of the supreme court of errors and appeals in 1806; in 1807, became chief-justice, in 1811 was sent to congress, and reëlected in 1813 and in 1829 became United States senator, to fill the unexpired term of John H. Eaton. Later he was elected to fill that place as a partisan of Andrew Jackson. In 1838 he served for a few months as United States attorney-general during the administration of Martin Van Buren; resigning this office he was immediately reëlected to the United States senate. Died at Nashville, Tenn., 1840.

Grunsky, Carl Ewald, civil engineer, was born in San Joaquin county, Cal., 1855. His first professional work was as topographer with river surveying party of state engineering department of California, 1878; member of San Francisco sewerage commission, 1892-93; city engineer, San Francisco, 1900-04; member of isthmian canal commission, 1904-05; consulting engineer, United States reclamation service, Washington, 1905-1907; and, since 1907, consulting engineer, New York.

Guarini (*gwä-rē'nē*), **Giovanni Battista,** Italian poet and diplomat, was born at Ferrara, 1537. He was intrusted by Duke Alfonso II. with diplomatic missions to the pope, the emperor, Venice, and Poland. His chief work was the famous pastoral play, *Il Pastor Fido*, really an imitation of Tasso's *Aminta*. Died, 1612.

Guericke (*gä'ri-kē*), **Otto von,** German physicist, was born at Magdeburg, in Prussian Saxony, 1602. As a physicist he is chiefly known by his discoveries relative to nature and effects of air. The experiments of Galileo and Pascal on the weight of air led Guericke to attempt the creation of a vacuum. This resulted in the first air-pump, invented about 1650. Guericke's invention soon became famous, and in 1654 he was summoned to the presence of the emperor Ferdinand III. of Germany at Ratisbon, at which time he made the famous experiment commonly known as the "Magdeburg hemispheres," in demonstration of atmospheric pressure. Died at Hamburg 1686.

Guesclin (*ge'klaN'*), **Bertrand,** French general and the most famous French soldier of the age, was born in 1320. Becoming a soldier of fortune under Charles, he gained great distinction at the siege of Vannes, 1342. He was knighted, and in 1351 went, with the lords of Brittany, to England to secure the release of his captive master. He soon took service under the French king, and, after several brilliant actions, was made marshal of Normandy and count of Longueville. At the battle of Auray, 1364, he was taken prisoner, but was ransomed for a large sum of money, and led his soldiers into Spain. He was afterward taken prisoner by the Black Prince, then in alliance with Pedro "the cruel." Being again ransomed, he restored Henry to the throne in 1369. In 1370 he was made constable of France, and for ten years was active and successful in driving the English from the south and west of France. In 1373 he seized and held most of the strongholds in the duchy of Brittany. He died while besieging the fortress of Châteauneuf-Randon, 1380.

Guggenheim, Simon, capitalist, United States senator, was born in Philadelphia, Pa., 1867. He was graduated from public schools of Philadelphia, after which he studied languages in Europe two years. Went to Pueblo, Col., 1888, and engaged extensively in mining and smelting in the United States and Mexico. He was elected United States Senator from Colorado 1907-13.

Guido Reni (*gwē'dō rā'nē*), Italian painter of the electic (Bolognese) school, was born near Bologna, 1575. He studied under Calvaert, but subsequently followed the more refined and ideal school of the Caracci, previous to finally striking out a style for himself. In 1608 he went to Rome where he remained for twenty years, and was a rival of Caravaggio. The "Aurora" of Guido, on the ceiling of one of the halls of the Rospigliosi palace, a fresco of world-wide fame, is considered the greatest of his works. Died 1642.

Guild, Curtis, Jr., journalist, ex-governor of Massachusetts, was born at Boston, 1860. He was graduated at Harvard, 1881; entered office of *Commercial Bulletin*, Boston, founded by his father; served from bill collector to editor, and, since 1902, sole owner of the paper. He was brigadier-general of state militia at outbreak of Spanish war; served as lieutenant-colonel, inspector-general on staff, 7th corps (General Fitzhugh Lee) until break-up of corps in Cuba; lieutenant-governor of Massachusetts, 1902-05; governor of Massachusetts, 1906-09.

Guiscard (*gēs'kär'*), **Robert,** Norman soldier, and son of Tancred d'Hauteville, was born in 1015. He defeated Leo IX. at Civitella, and, with his

brother Humphrey, became count of Apulia. Subsequently he rescued Gregory VII. from the emperor Henry IV., invaded the Greek empire, and died, 1085, when on another expedition against it, having defeated the fleets of the eastern empire and Venice.

Guise (*gü-ēz'*), a ducal family of Lorraine, was so named from the town of Guise. The most prominent members historically are the following: Claude of Lorraine (1496-1550), fifth son of René II., duke of Lorraine, was born at the chateau of Condé, fought at Marignano in 1515, but after that campaign remained at home to defend France against the English and Germans. For suppressing the peasant revolt in Lorraine, 1527, Francis created him duke of Guise.

Mary of Lorraine (1515-60), his daughter, in 1534 married Louis of Orleans, duke of Longueville, and in 1538 James V. of Scotland, at whose death, in 1542, she was left with one child, Mary, Queen of Scots. During the troublous years that followed, the queen-mother acted with wisdom and moderation; but after her accession to the regency in 1554 she allowed the Guises so much influence that the Protestant nobles raised a rebellion, which continued to her death in Edinburgh castle.

Francis (1519-63), her brother, second duke, became one of the greatest generals of France. He and his brother Charles, the cardinal, afterward conspicuous at the council of Trent, managed to become all-powerful during the reign of Francis II. Heading the Roman Catholic party, they sternly repressed Protestantism. Guise and Montmorency won a victory over the Huguenots at Dreux, 1562, and Guise was besieging Orleans when he was assassinated by a Huguenot.

Henry (1550-88), third duke, fought fiercely against the Protestants at Jarnac and Moncontour, 1569, and forced Coligny to raise the siege of Poitiers. He was ambitious to succeed to the throne of France, when Henry III. procured his assassination at Blois.

Henry (1614-64), his grandson, fifth duke, at fifteen became archbishop of Rheims, but in 1640 succeeded to the dukedom. Having joined the league against Richelieu, he was condemned to death, but fled to Flanders. He put himself at the head of Masaniello's revolt in Naples as the representative of the Anjou family, but was taken by the Spanish, 1647, and carried to Madrid, where he remained five years. After another attempt to win Naples, 1654, he settled at Paris.

Guiteras, Juan, physician, professor of general pathology and tropical diseases, university of Havana, since 1900, was born at Matanzas, Cuba, 1852. He was educated at La Empresa, Matanzas; M. D., University of Pennsylvania, 1873; Ph. D.; was professor of pathology, university of Pennsylvania; on staff of General Shafter as yellow fever expert in Santiago campaign, 1898. Editor of *La Revista de Medicina Tropical*, and member of many medical and scientific associations.

Guizot (*gē'zō'*), **François Pierre Guillaume,** French statesman and historian, was born at Nimes, France, 1787. His first work, the *Nouveau Dictionnaire Universal des Synonymes de la Langue Francaise*, appeared in 1809. He contributed to the dissolution of the *Chambre Introuvable* by writing a memorial which was placed in the hands of Louis XVIII. by Decazes. The latter committed to him the direction of the administration of the communes and departments in 1819. After the revolution of 1830, he became successively minister of public instruction, and minister of the interior, an office which he held, with two interruptions, until 1836. In 1847 he became the official leader of the cabinet, which maintained its ground, as the organ of Louis Philippe's policy, until the revolution of 1848. Among his works are his *History of the English Revolution; Life of Oliver Cromwell; History of Civilization in Europe;* and *History of Civilization in France.* He died in 1874.

Gunsaulus (*gŭn-sô'lŭs*), **Frank Wakeley,** Congregational clergyman, educator, was born at Chesterville, Ohio, 1856. He was graduated at Ohio Wesleyan University, 1875; D. D., Beloit College, Wisconsin. Pastor of Memorial Congregational church, Baltimore, 1885-87; Plymouth church, Chicago, 1887-99; Central church, Chicago, 1899; president of Armour Institute of technology, since 1893; lecturer at Yale theological seminary 1882; professorial lecturer of university of Chicago. Author: *Phidias and other Poems; Songs of Night and Day; Transfiguration of Christ; Monk and Knight; Life of William Ewart Gladstone; Metamorphosis of a Creed; November at Eastwood; Loose Leaves of Song; The Man of Galilee; Paths to Power; Paths to the City of God; Higher Ministries of Recent English Poetry,* etc.

Gunter (*gŭn'tĕr*), **Edmund,** English mathematician, was born in Hertfordshire about 1581. He was educated at Westminster and Christ Church, Oxford. He invented the sector, with the lines known as Gunter's scale. We also owe to him the invention of the surveying-chain, and the first observation of the variation of the compass. Died, 1626.

Gustavus Vasa (*gŭs-tā'vŭs vä'sä*), king of Sweden, was born of a noble house at Lindholmen in Upland, 1496, and in 1518, during the patriotic struggle with Christian II. of Denmark, was treacherously carried off to Denmark as a hostage. After a year he escaped to Lubeck, thence to Sweden, where he strove in vain to rouse a spirit of resistance against the Danes. Retreating to Delecarlia, he wandered for months with a price set on his head, and worked on farms and in mines. At last the infamous "blood-bath" of Stockholm, 1520, roused the Swedes, and soon Gustavus had an army large enough to attack the enemy. His capture of Stockholm in 1523 drove the Danes from Sweden, and he was elected king. He found the whole country demoralized. Yet after a forty years' rule he left Sweden a peaceful and civilized realm, with a full exchequer and a well-organized army. He died in 1560, and was succeeded by his eldest son, Eric.

Gustavus II., Adolphus, was born at Stockholm, 1594. He was the grandson of Gustavus Vasa by his youngest son, Charles IX., at whose death, in 1611, he succeeded to the throne of Sweden. He was acquainted with eight languages, five of which he spoke and wrote fluently, was well read in the classics and ancient history. He was proficient in music, and excelled in all warlike and manly exercises. Having made various administrative reforms, and availed himself of the short interval of peace to promote the material prosperity of the country, he remitted the charge of the government to his chancellor, Oxenstiern, and set sail, in the summer of 1630, with an army of about 15,000 men, to aid the Protestants of Germany in their hard struggle against the Catholic league, which was backed by the power of the empire. With and for the Germans he fought until his death on the battlefield of Lützen, 1632. He made Sweden a power in northern Europe.

Gustavus III., king of Sweden, was born at Stockholm, 1746, and succeeded his father, Adolphus Frederick, in 1771. In 1792 he was mortally wounded by Ankarström at a masked ball in the opera house which he himself had built. Gustavus was a man of varied learning, and the author of several dramatic works and poems of considerable merit.

Gustavus V., king of Sweden, was born in 1858, and married, in 1881, Princess Victoria of Baden, first cousin of the German emperor, and a descendant of the old Swedish royal family of Vasa. He succeeded his father, King Oscar II., on December 8, 1907, having several times previously acted as regent. The king's eldest son, Prince Gustavus Adolphus, married Princess Margaret of Connaught, June, 1905. His majesty is a knight of the garter of Great Britain, and received the royal Victorian chain in April, 1908.

Gutenberg, Johann, or **Henne** (*goo'tenbärg*), the inventor of printing, was born in Mentz, Germany, about 1400, died 1468. His father's name was Gensfleisch or Gansfleisch, Gutenberg being the name of his mother, or of an estate belonging to his family, which was of noble lineage.

He became a citizen of Strasburg about 1420, where he appears to have devoted many years to mechanical experiments, and as early as 1438 he had a press, movable types, forms, and other appliances for printing. After 1444 all trace of him is lost till 1448, when he was again in Mentz. In 1450, he entered into a partnership with Johann Faust of Mentz for the purpose of carrying on the business of printing, the latter undertaking to furnish the funds. The partnership terminated at the end of five years, most of the materials being taken by Faust for his advances; and Gutenberg appears to have afterward carried on printing with considerable activity alone.

In 1465 he abandoned the business, and entered the service of the archbishop-elector Adolphus of Nassau. In his own and in modern times he has been obliged to share with Faust and Peter Schöffer the credit of his invention; but in the preface to a German translation of Livy (Mentz, 1505) it is distinctly declared by Johann Schöffer that the "admirable art of printing was invented in Mentz in 1450 by the ingenious Johann Gutenberg." The opinion of most modern writers seems to be that Gutenberg not merely invented the art, but practiced it long before he became associated with Faust.

References.—Pearson's *Gutenberg and the Art of Printing;* Hessels's *Gutenberg;* Zatzman's *Gutenberg;* Lamartine's *Celebrated Characters.*

Gutzkow (*gōōts'kō*), **Karl Ferdinand,** German dramatist and author, was born in 1811. He started a newspaper in 1831; went to Stuttgart to assist in editing Menzel's *Literaturblatt*; was imprisoned three months and had all his writings suppressed for the atheistic and socialistic views expressed in his novel, *Wally, die zweiflerin*, 1835, and in the same year elaborated his opinions in *Nero*, a dramatic work. To escape the surveillance of the Prussian government he went to Hamburg in 1837, thence to various German cities, and in 1870 made his permanent residence in Berlin. He was author of numerous comedies, tragedies, dramas, and novels, which attained wide popularity. Died, 1878.

Guyon (*güē'yōN'*), **Jeanne Marie Bouvier de la Motte,** French mystic, was born at Montargis, 1648. She was married at sixteen to Jacques Guyon, and, left a widow at twenty-eight, determined to devote her life to the poor and needy, and to the cultivation of spiritual perfection. At Turin, Grenoble, Nice, Genoa, Vercelli, and Paris, where she finally settled in 1686, she became the center of a movement for the promotion of "holy living." In 1688 she was arrested for heretical opinions, and for having been in correspondence with Molinos, the leader of the movement in Spain; and out of a commission appointed to inquire into her teachings arose a controversy between Fénelon and Bossuet. Released by the intervention of Madame de Maintenon, after a detention of nine months, but again imprisoned in 1695, she was not released from the Bastille until 1702. She died at Blois in 1717.

Guyot (*gē'yō*), **Arnold Henry,** Swiss geographer and geologist, was born at Neuchâtel, 1807. He came to America in 1848, and devoted his life to science; was professor of geology and physical geography at Princeton College, 1855-84. He formed an intimacy with Agassiz, and made numerous maps, mathematical tables and textbooks. His greatest works were *The Meteorological and Physical Tables*, issued by the Smithsonian Institution, and his *Earth and Man*. Died, 1884.

Haakon VII. (*hô'kŏn*), king of Norway, was born in 1872, and is the second son of King Frederik of Denmark, and a nephew of Queen Alexandra of Great Britain. His baptismal name was Charles, but he assumed the above title on becoming king November 18, 1905, on the separation of Norway and Sweden. King Haakon and Queen Maud made their formal entry into Christiania November 25, 1905, and the king took the oath before the Storthing on the 27th, and was crowned at Trondhjem on June 22, 1906. The king married Princess Maud Alexandra, daughter of King Edward VII., July 22, 1896. His son and heir-apparent is Prince Alexander, born July 2, 1903, and renamed Prince Olaf on his father's accession to the throne.

Hackett, James Keteltas, actor, was born at Wolfe island, Ont., 1869. He was graduated at the college of the city of New York, 1891, and studied at New York Law School. Made his début on stage in Palmer's stock company, 1892; was leading man at New York Lyceum at twenty-six. His most notable successes were *Prisoner of Zenda*, and its sequel, *Rupert of Hentzau*, and *The Pride of Jennico*, under the management of Daniel Frohman. He is now one of the few actor-managers in America.

Hading (*ä'dăN'*), **Jane,** stage name of Jeanne-Alfrédine Tréfouret, French actress, was born at Marseilles, France, 1859. At the age of three she played Blanche de Caylus in *Le Bossu*, her father at the same time playing the leading character. Some years later she was sent to the Marseilles conservatoiré, where she won considerable distinction. On leaving she entered upon an engagement at the Algiers theater, and when but fourteen played Zouella in *Le Passant*, Stefano in *Chef d'œuvre in Connu*, the blind girl in *Les Deux Orphilines*, and Pedro in *Giroflé-Girofla*. At the Palais Royal she played La Chaste Susanna, and at the Renaissance she was the original Jolie Persane and Belle Lurette, and the heroine in *Hélbise and Abelard*. She again appeared in comedy as Paulette in *Antour de Mariage*, and as Claire de Beaulieu in *La Maitre de Forges*. She subsequently appeared in London at the Royalty theater, and in 1888 and 1894 made a successful tour of the United States, accompanied by M. Coquelin. One of her latest successes was in *The Second Mrs. Tanqueray*.

Hadley, Arthur Twining, American educator and economist, president of Yale University since 1899, was born in New Haven, Conn., 1856. He was graduated at Yale, 1876; was a student of University of Berlin; LL. D., Harvard, 1899; Columbia, 1900; Johns Hopkins, 1902. Tutor, 1879-83, lecturer, 1883-86, Yale; commissioner of labor statistics, Connecticut, 1885-87; professor of political science, Yale, 1886-99; president of American Economic Association, 1899-1900. Author: *Railroad Transportation: Its History and Laws; Connecticut Labor Reports*, 1885-86; *Economics; An Account of the Relations Between Private Property and Public Welfare; The Education of the American Citizen; Freedom and Responsibility; Baccalaureate Addresses; Standards of Public Morality*, etc. He was American editor of the tenth edition of *Encyclopedia Britannica*.

Hadley, James, father of preceding, American classical scholar and writer, was born in Fairfield, N. Y., 1821. He was graduated at Yale College in 1842, became tutor in mathematics at Middlebury College, and in 1845 tutor of classical history at Yale. In 1848 he was appointed assistant professor, and in 1851 succeeded Theodore D. Woolsey as professor of Greek, which position he held until his death in 1872. He was a dis-

tinguished student of philology and civil law; was one of the American committee for the revision of the New Testament, and a member of a number of learned societies.

adrian, or **Publius Ælius Hadrianus,** Roman emperor from 117 to 138, was born in 76 A. D. He was elected by the army successor of Trajan. His reign was one of the happiest periods in Roman history, the only important war which broke out during the reign being a rebellion of the Jews which lasted for three years. After his death, which took place at Baiae, 138 A. D., he was succeeded by Antoninus Pius. The mausoleum which he built for himself in Rome forms the groundwork of the present castle of St. Angelo.

aeckel (*hĕk'el*), **Ernst Heinrich,** German naturalist and writer, was born at Potsdam, Prussia, 1834. He studied medicine and science at Würzburg, Berlin, and Vienna, where he was appointed professor of zoölogy. Between 1866 and 1875 he traveled over the greater part of Europe, besides visiting Syria and Egypt. Later he visited India and Ceylon, and published a lively account of his travels. He is regarded in Germany as the foremost supporter of Darwin's theories. Among his works are *The History of Creation; The Origin of the Human Race; Life in the Deep Seas; The History of Man's Development; Popular Lectures on Evolution; Voyage of H. M. S. Challenger*, etc.

Hafiz (*hä'fĭz* or *hä-fēz'*), **Mohammed Shamsuddin,** or **Shams-ud-Din,** better known by his poetical name of Hafiz, was the greatest of Persian lyrical poets. The name of Hafiz is a household word throughout Persia, and his songs are recited in every social assembly. The date of his birth is unknown, but he is said to have died at a good old age in 1388 A. D.

Haggard, Henry Rider, English novelist, barrister, and social reformer, was born in England, 1856. He accompanied Sir Henry Bulwer, as secretary, to Natal in 1875, and formally hoisted the British flag over Transvaal territory, 1877. He retired from the colonial service in 1879; returned to England and became a barrister. His first book, published in 1882, of a political character, is named *Cetywayo and His White Neighbors.* Subsequently he published *She,* a novel of great power; *Ayesha,* or *the Return of She; Jess; Cleopatra,* etc. He has also written *Rural England* and *A Farmer's Year,* and has made extensive studies in socialistic settlements.

Hague (*hāg*), **Arnold,** American geologist, was born in Boston, Mass., 1840. He was graduated at the scientific school of Yale, 1863, and for several years studied in Germany. D. Sc., Columbia, 1901; LL. D., Aberdeen, 1906. He was assistant geologist of United States geological exploration of 40th parallel, 1867-77; secretary, national academy of sciences, since 1901, and member of many scientific societies. Author: *Descriptive Geology; Geological Exploration of 40th Parallel; Geology, Yellowstone National Park; Geological Atlas of Yellowstone Park,* etc.

Hahnemann (*hä'nĕ-män*), **Samuel Christian Friedrich,** physician, founder of the homeopathic system of medicine, was born at Meissen, Saxony, in 1755. He received the degree of M. D. at Erlangen in 1779. While translating Cullen's *Materia Medica* from English into German, 1790, he noticed a similarity between the effects of Peruvian bark—cinchona—upon a healthy person and the results of certain diseases for the cure of which that drug was used. In other words, he rediscovered, quite independently, Hippocrates' old "law of similars." After many experiments he became convinced of the truth of the principle *similia similibus curantur*—that is, the cure for a disease is the very drug that would in a healthy individual produce the symptoms of such disease. Further investigation caused him to conclude that the conventional doses of his day were injurious, and this led him to another principle, that of very minute doses, made by a process of "potentization," described by him at length in his *Organon,* 1810, which work was translated into many languages. He encountered much opposition, and, after having practiced medicine at Leipzig for more than thirty years, was driven out of that city, 1821, by the apothecaries who invoked the aid of the German law which prohibited physicians from dispensing their own prescriptions. The grand duke of Anhalt, however, appointed him court physician, and he remained at Köthen, occupying that position until 1835, when he removed to Paris. He died in 1843.

Hakluyt (*hăk'lōōt*), **Richard,** English author, was born about 1552. He was lecturer on cosmography at Oxford University, and was the first to teach the use of globes. He was afterward professor of divinity, and in 1584-89 was in Paris, where he published several works. On his return he joined Raleigh's company of gentlemen adventurers and merchants for colonizing Virginia. His chief work is *The Principal Navigations, Voyages, and Discoveries of the English Nation,* commonly called *Hakluyt's Voyages.* Died, 1616.

Haldane (*häl'dān*), **Richard Burdon,** British statesman and writer, was born in 1856. He was educated at Edinburgh academy and university and at Göttingen; in 1879 was called to the chancery bar, and in 1890 was made a queen's counsel; hon. D. D. L., Oxford; LL. D. Edinburgh. He entered parliament in 1885 as member for Haddingtonshire, and became British secretary of state for war in 1905. In *Education and Empire,* 1902, he zealously insisted on educational reform as essential to national well-being. He also wrote *Essays in Philosophical Criticism,* etc.

Haldeman (*hôl'dē-man*), **Samuel Stehman,** American naturalist and philologist, was born near Columbia, Pa., 1812. He occupied the chair of natural history, and later of comparative philology, in the University of Pennsylvania, and was the author of numerous articles on philology, conchology, entomology, and paleontology. His work, *Analytic Orthography,* obtained in England the highest Trevelyan prize over eighteen competitors, 1858. He died in 1900.

Hale, Edward Everett, Unitarian clergyman, author, was born in Boston, Mass., 1822. He was graduated at Harvard University, 1839; S. T. D., 1879; LL. D., Dartmouth, 1901; Williams, 1904. Studied theology, and became minister of the church of the Unity, Worcester, Mass., 1846-56; minister of South Congregational (Unitarian) church, Boston, Mass., 1856-1909; chaplain United States Senate, 1902-09. He actively promoted the Chautauqua movement, assisted in the organization of "Lend-a-Hand" clubs, and was a prolific editor and writer. Author: (stories) *The Man Without a Country; In His Name; His Level Best; The Ingham Papers; Christmas Eve and Christmas Day; Christmas in Narragansett; Our Christmas in a Palace,* etc. Also: *Sketches in Christian History; The Story of Massachusetts; Sybaris and Other Homes; Ralph Waldo Emerson; We, the People; New England Ballads,* etc. Died, 1909.

Hale, Eugene, United States Senator from Maine, 1881-1911, was born in Turner, Oxford county, Me., 1836. He received an academic education; LL. D., Bates College, Colby University and Bowdoin College; was admitted to the bar, 1857; member of Congress, 1869-79; delegate to national Republican conventions, 1868, 1876, and 1880. He was elected to the United States senate to succeed Hannibal Hamlin in 1881, and continued in that until 1911.

Hale, George Ellery, American astronomer, was born at Chicago, Ill., 1868. He was graduated at Massachusetts Institute of technology; studied at Harvard College Observatory, 1889-90, University of Berlin, 1893-94; Sc. D., Yale, 1905; LL. D., Beloit, 1904. Professor astrophysics, University of Chicago, 1897-1905; director Yerkes observatory, 1895-1905; director solar observatory of Carnegie Institution of Washington at Mt. Wilson, Cal. Joint editor *Astronomy and Astrophysics;* editor *Astrophysical Journal* since 1895. He has written many papers on the sun, stellar spectroscopy, etc.

Hale, Sir Matthew, English lawyer and jurist, was born at Alderley, England, 1609. He was graduated at Oxford, studied law at Lincoln's Inn, and was admitted to the bar in 1637. Became a judge of common pleas in 1653, and sat in parliament until the restoration, when he was made lord chief baron of the exchequer. In 1671 he became lord chief justice, and resigned shortly before his death in 1676.

Hale, Nathan, American patriot, was born in Coventry, Conn., 1755. He was graduated at Yale College in 1773, and devoted himself to the cause of the colonies in the contest with Great Britain. After the defeat of the patriot army of Long Island he endeavored to obtain knowledge of the enemy's plans and position for the information of Washington. He obtained the knowledge, but was arrested by the British before he could return, and, the papers containing the information being found on his person, he was hanged as a spy, by order of Sir William Howe, 1776. His sentence was carried into effect in the most unfeeling manner; he was refused the attendance of a clergyman, and the letters which he wrote to his mother a short time before his death were destroyed. His last words were, "I only regret that I have but one life to lose for my country."

Halévy (*ä'lā'vē'*), **Jacques François Fromental,** French composer, was born at Paris, of Jewish parentage, 1799. The first work that brought him any considerable reputation was *La Juive,* produced at the Grand Opéra in 1835. The most important of his subsequent pieces were *La Reine de Chypre; Charles VI.; La Juive Errant,* and *La Magicienne.* Those executed for the Opera Comique are regarded as his most successful; the principal are: *Les Mousquetaires, L'Eclair,* and *Le Val d'Andorre.* He was a great favorite with his countrymen, but his style was so purely national that, in spite of his great dramatic power, he did not enjoy a great celebrity out of France until recently. He died in 1862.

Halévy, Ludovic, French novelist and dramatic author, was born at Paris, 1834, and received his education at the Lycée Louis le Grand. He was chief of the department for Algiers and the colonies, and in 1861 was appointed to edit the proceedings of the *corps législatif.* This position he resigned to devote himself to the drama. Under his own name, and with various collaborators, he produced *Ba-La-Clan; Rose et Rosette; Orphée aux Enfers; La Belle Hélène,* a burlesque of ancient Greek life, which had a great success; *La Barbe Bleue; Froufrou; L'Abbé Constantin; Karikari,* etc. In 1872 he published *L'Invasion,* personal recollections of the war; and in 1873, *Madame et Monsieur Cardinal.* He was a member of the French academy. Died, 1908.

Haliburton (*häl'ĭ-bûr'ĭ'n*), **Thomas Chandler,** Canadian humorist, was born at Windsor, Nova Scotia, 1796. He was judge of the supreme court of Nova Scotia, but is best known as a satirical writer. In 1837 he published *The Clockmaker; or the Sayings and Doings of Samuel Slick of Slickville,* which became very popular. In 1856 he went to England to reside permanently, and in 1859 entered the house of commons as member for Launceston, which seat he held until within a few months of his death. Besides the works already mentioned, he wrote several other books. He died at Isleworth, Middlesex, England, 1865.

Halifax, Charles Montagu, Earl of, British poet and statesman, was born at Horton, England, 1661. He was educated at Trinity College, Cambridge. He was member of parliament for Maldon in 1689, and a lord of the treasury in 1692, and in that year proposed to raise a million sterling by way of loan—so the national debt was established. In 1694, Montagu founded the bank of England, as proposed by William Paterson three years earlier. His next work was the recoinage in 1695, appointing his friend, Newton, warden of the mint, and raising a tax on windows to pay the expense; and now he first introduced exchequer bills. In 1697 he became premier, but his arrogance and vanity soon made him unpopular, and he was impeached in 1701, but was protected by the lords and the proceedings fell to the ground. He was president of the royal society, 1695-98. Died, 1715.

Hall, Charles Cuthbert, American theologian, was born in New York city, 1852; graduated at Williams College, 1872; D. D., University of New York, 1890; Harvard, 1897; Yale, 1901; LL. D., Union, 1905. Studied theology at Union Theological seminary and in London and Edinburgh. Pastor of Union Presbyterian church, Newburgh, N. Y., 1875-77; First Presbyterian church, Brooklyn, 1887-97. Barrows lecturer for the University of Chicago to the far East, 1902-03 and 1906-07; Cole lecturer, Vanderbilt University, 1905; Noble lecturer at Harvard, 1906. Was president of Union theological seminary from 1897 until his death. He did much to encourage higher criticism, and to induce a more liberal and broad-minded attitude on the part of the clergy. Author: *Christian Belief Interpreted by Christian Experience; Redeemed Life After Death; Universal Elements of the Christian Religion; Christ and the Human Race; The Witness of Oriental Consciousness to Jesus Christ.* Died, 1908.

Hall, Charles Martin, inventor, manufacturer, was born at Thompson, Ohio, 1863; graduated at Oberlin College, 1885, A. M., 1893. Invented the electrolytic process for the manufacture of aluminum now universally used, 1886; commenced its commercial manufacture in 1888 with Pittsburg Reduction company, now the Aluminum Company of America. The Hall process has reduced the price of aluminum so as to make it a common metal of commerce, where it was formerly as costly as silver and little used. Member of many scientific societies; trustee of Oberlin College.

Hall, Granville Stanley, American educator and psychologist, president of Clark University since 1888, was born in Ashfield, Mass., 1846. He was graduated at Williams College, 1867; Ph. D., Harvard, 1878; LL. D., University of Michigan, 1888; Johns Hopkins, 1902; studied in Berlin, Bonn, Heidelberg, and Leipzig; lecturer on psychology in Harvard and Williams, 1880-81; professor of psychology, Johns Hopkins, 1881-88. Author: *Hints Toward a Select and Descriptive Bibliography of Education* (with John M. Mansfield); *Adolescence* (2 vols.); etc. Editor and founder of *The American Journal of Psychology; The Pedagogical Seminary,* and *American Journal of Religious Psychology and Education.*

Hall, Robert, British pulpit orator, was born at Arnsby near Leicester, England, 1764. He was appointed assistant minister and tutor in the Bristol Academy, where his eloquent preaching attracted overflowing audiences. He went in 1790 to Cambridge, where he rose to the highest rank of British pulpit orators. In 1807 he settled in Leicester, but returned in 1826 to Bristol. He died in 1831. Among his writings are *Apology for the Freedom of the Press* and *On Terms of Communion.*

Hallam, Henry, English historian and critic, was born at Windsor, England, 1777. He was graduated at Christ Church, Oxford, 1799, and subsequently called to the bar. LL. D., D. C. L., Cambridge and Oxford respectively. His first writings were published in periodicals; afterward he was distinguished among the literary men of Europe for his extensive and profound learning, powers of generalization, taste, judgment, and conscientiousness, exhibited in a succession of great works, the principal of which are *Europe During the Middle Ages, The Constitutional History of England,* and *Introduction to the Literature of Europe.* Died, 1859.

Halleck, Fitz-Greene, American poet, was born in Guilford, Conn., 1790. He began life as a clerk in a store in Guilford, but when twenty-one years old he was employed in a banking-house in New York, where he remained many years. His earliest poem, *Twilight*, was printed in 1818. Five years after he visited Europe, and in 1827 a volume of his poetry, including *Marco Bozzaris*, appeared. He died in Guilford, 1867. A bronze statue of him has been erected in Central park, New York.

Haller (*häl'ĕr*), **Albrecht von,** Swiss anatomist, botanist, physiologist, and poet, was born at Bern, 1708. He started practice in 1729, but in 1736 was called to a chair at Göttingen. Here he organized a botanical garden, an anatomical museum and theater, and an obstetrical school; helped to found the academy of sciences; wrote anatomical and physiological works; and took an active part in the literary movement. His poems were descriptive, didactic, and (the best of them) lyrical. Died, 1777.

Halley, Edmund, English astronomer, was born in 1656. He went to St. Helena in 1676 to study the southern heavens, and in 1679 published his *Catalogus Stellarum Australium*, containing the positions of 360 stars, and numerous other observations. In 1681, near Paris, he discovered the comet known by his name; his prediction of its return was the first of the kind that proved correct. He prevailed on Sir Isaac Newton to complete his *Principia*, the first volume of which was printed by Halley at his own expense. In 1703 he was chosen Savilian professor of geometry at Oxford. In 1721, after the death of Flamsteed, he was appointed astronomer royal; and he continued for twenty years, without an assistant, to carry on the operations of the Greenwich observatory. In 1721 he published his method of finding the longitude at sea, and in 1725 drew up his tables for computing the places of the planets, which did not appear until 1749. Died, 1742.

Halliwell-Phillipps (*häl'ĭ-wĕl-fĭl'ĭps*), **James Orchard,** English Shakespearean scholar and antiquary, was born at Chelsea, 1820. He studied at Jesus College, Cambridge. His studies embraced the whole field of our earlier literature, but gradually he concentrated himself upon Shakespeare alone, and more particularly upon the facts of his life, the successive editions of his *Outlines of the Life of Shakespeare* recording the growing results of his discoveries. In 1872 he added to Halliwell the surname of Phillipps, that of his first wife, a Worcestershire heiress. Besides his sumptuous folio edition of Shakespeare, he published *Nursery Rhymes and Tales of England* and *Dictionary of Archaic and Provincial Words*. Died, 1889.

Hals (*häls*), **Frans,** the elder, portrait and genre painter, was born, probably at Antwerp, between 1580 and 1584. He settled in Haarlem about 1604, and is regarded as the founder of the Dutch school of genre-painting. His subjects of feasting and carousal are treated with marvelous vivacity and spirit. His works are distributed among the chief galleries of England and the continent. He died at Haarlem, 1666.

Hamerton (*hăm'ĕr-tun*), **Philip Gilbert,** English writer on art, was born at Laneside, Oldham, the son of a solicitor at Shaw, 1834. He began as an art-critic by contributing to the *Fine Arts Quarterly* and *Saturday Review*. From 1869 he edited the *Portfolio*. *The Intellectual Life*, published in 1873, is a volume of letters of advice addressed to literary aspirants and others; *Human Intercourse* is a volume of essays on social subjects; *The Graphic Arts*, finely illustrated, is a treatise on drawing, painting, and engraving. He died at Boulogne-sur-Seine, 1894.

Hamilcar Barca (*hă-mĭl'kär bär'kä*), Carthaginian general, was born shortly before the first Punic war. While very young he was appointed to the command of the Carthaginian forces in Sicily in 247 B. C., at which time the Romans had possession of almost all the land. His first care was to discipline his infantry thoroughly; he then established himself on Mount Erete (now Pellegrino, near Palermo), and from this point made pillaging excursions in all directions, sending his privateers along the coast of Italy as far north as Cumae, thus obtaining abundant supplies for his troops. In 241 B. C., Hamilcar was compelled to abandon his fortress and evacuate Sicily. He was next appointed commander-in-chief of the Carthaginian army, and was engaged for some time in wars with the neighboring tribes, which were abruptly ended by his entering upon the Spanish campaign in (probably) 236 B. C. His great aim was to found a new empire in Spain, from which, as his basis, he might assail the Romans. He spent nine years in Spain, and at length, in 228 B. C., met his death on the field of battle while fighting against the Vettones. His military genius is considered scarcely inferior to that of his son Hannibal.

Hamilton, Alexander, celebrated American statesman, was born in the West India island of Nevis, 1757, son of a Scotch merchant who had married a young French widow. His father soon failed in business, and Alexander, at the age of twelve, had to enter the counting-house of a rich American merchant. His extraordinary abilities, however, induced some of his friends to procure for him a better education than could be secured at home. He was accordingly sent to a grammar-school at Elizabethtown, N. J.; and shortly afterward entered Columbia College, New York. On the outbreak of the war he obtained a commission as captain of artillery, gained the confidence of Washington, was made his aide de-camp in 1777, and acquired the greatest influence with him as his friend and adviser. On the termination of the war he left the service with the rank of colonel, and, betaking himself to legal studies, soon became one of the most eminent lawyers in New York. In 1782 he was elected by the state of New York a representative to the continental congress; in 1786 he became a member of the New York legislature; and in 1787 he was appointed one of the delegates to the convention which met at Philadelphia, for the purpose of revising the Articles of Confederation. In conjunction with Madison, he had the most important share in drawing up the constitution afterward adopted. He was a strong supporter of the federal, as opposed to the democratic party; and, along with Jay and Madison, defended the constitution against all attacks, by a series of letters in the New York *Daily Advertiser*, afterward collected and published under the title of *The Federalist*. On the establishment of the new government in 1789, with Washington as president, Hamilton was appointed secretary of the treasury. In order to re-establish public credit, he carried, in spite of much opposition, a measure for the funding of the domestic debt, founded a national bank, re-arranged the system of duties, and altogether showed himself one of the greatest of American financiers. In 1795 he resigned his office, and resumed the practice of law in New York. When the war with France broke out in 1798, he was, according to the wish of Washington, made major-general of the United States army; and, on the death of Washington, he succeeded to the chief command. When peace was restored, he returned to his civil duties, but became involved in a political quarrel with Aaron Burr. This difference unhappily culminated in a duel in which Hamilton received a wound of which he died the following day, 1804.

Hamilton, Allan McLane. American physician, great-grandson of General Philip Schuyler and grandson of Alexander Hamilton, was born in Brooklyn, N. Y., 1848. He was graduated at the college of physicians and surgeons, New York, 1870; became a health inspector, 1873; later was physician in charge of the New York state hospital for diseases of the nervous system, and visiting physician to the epileptic and paralytic hospital on Blackwell's island, N. Y.; recently professor of mental diseases in Cornell university medical college, New York. He was appointed health officer of the port of New York in 1889. Author: *Clinical Electro-Therapeutics; Nervous Diseases; Medical Jurisprudence; A System of Legal Medicine; Railway and Other Accidents;* and many articles in medical journals.

Hamilton, Rt. Rev. Charles, bishop of Ottawa since 1896, was born at Hawkesbury, 1834. He was educated at Montreal high school and University College, Oxford; D. D., Bishop's College, 1885; D. C. L., Trinity College, Toronto, 1885; ordained, 1857; curate of Quebec cathedral, 1857-58; incumbent, St. Peters, Quebec, 1858-64; rector of St. Matthews, Quebec, 1864-85, and bishop of Niagara, 1885-96.

Hamilton, Sir William, Scottish metaphysician, was born at Glasgow, 1788. He studied at Glasgow and Oxford, was admitted to the bar, but rarely practiced. From 1836, he was widely known as a philosophical writer. His chief books were an edition of Reid's works, *Discussions in Philosophy*; *Literature and Education*; *Metaphysics, Logic*, and his *Lectures*, published after his death. He left his library to the University of Glasgow. Died at Edinburgh, 1856.

Hamilton, Sir William Rowan, British mathematician, inventor of quaternions, was born in Dublin, 1805. He was educated at Trinity College, Dublin, and in 1827 was appointed professor of astronomy at Dublin and Irish astronomer-royal; in 1835 he was knighted. He published many important treatises and papers, and his memoir on *Algebra as the Science of Pure Time* was one of the first steps to his great invention of quaternions. On this subject he published in 1853 a large volume of *Lectures*. He died in 1865.

Hamlin, Hannibal, American statesman, was born in Paris, Me., 1809. He practiced as a lawyer many years, and became a member of the state legislature. In 1842 he was elected to congress; was United States senator from 1848 to 1857, when he was elected governor on the republican ticket, but resigned immediately on again being elected senator. In 1861 he became vice-president under Lincoln, whose views he shared. He was again senator from 1869 to 1881, when he was named minister to Spain, 1881-83. Died, 1891.

Hammer, William Joseph, consulting engineer, was born in Schuylkill county, Pa., 1858; He was assistant to Edward Weston in Weston malleable nickel company, Newark, N. J., 1878; in 1880 became an assistant to Thomas A. Edison in the laboratory at Menlo Park, N. J., and was sent to England the following year to become chief engineer of the English Edison company; installed in London the first central station in the world for incandescent electric lighting. Was manager of the Boston Edison electric illuminating company for a year. Since 1890 he has been engaged in practice as a consulting engineer. Member of many scientific societies.

Hammerstein (*hăm'-ĕr-shtīn*), **Oscar,** theater manager was born in Berlin, Germany, 1847. He came to the United States in 1863; invented and patented several labor-saving devices, wrote three one-act comedies in German, 1868, which were produced in New York. He became lessee and manager of Stadt theater, New York, 1870; built Harlem opera house, 1880; later Columbus theater, Manhattan opera house, Olympia (now the New York) theater, Victoria theater, Belasco theater, and New opera house.

Hammond, James Bartlett, typewriter inventor, was born in Boston, 1839. He was graduated at the University of Vermont, 1861; was newspaper correspondent during civil war; graduate of Union theological seminary, 1865; devoted many years to mechanical experiments; patented, 1880, a typewriting machine made on scientific principles; introduced "Ideal" keyboard and true alignment in the Hammond typewriter; put machine on market, 1884, and won highest honors in competition. Died 1913.

Hammond, John Hays, mining engineer, was born in San Francisco, 1855. He was graduated at the Sheffield scientific school, Yale, 1876; M. A., Yale; pursued a mining course at royal school of mines, Freiburg, Saxony. He has examined properties in all parts of the world; become consulting engineer for Barnato Bros., 1893, and later for Cecil Rhodes, of whom he became a strong supporter. Was consulting engineer of consolidated gold fields of South Africa, British South Africa company, and the Randfontein Estates gold mining company. Was one of four leaders in reform movement in the Transvaal, 1895-96; after Jameson raid (with which he was not in sympathy), he was arrested and sentenced to death. Sentence was afterward commuted to fifteen years' imprisonment; and later he was released on payment of a fine of $125,000. He then went to London and became interested in many large mining companies. Returned to the United States and has traveled extensively, examining mines in United States and Mexico.

Hammond, William Alexander, American physician, was born in Annapolis, Md., 1828. He was graduated from the medical department of the University of the city of New York, and entered the United States army in 1848 as assistant surgeon. At the beginning of the civil war he entered the army as an assistant surgeon. When the medical bureau was organized, in 1862, he was appointed surgeon-general of the army, with the rank of brigadier-general, and served as such until 1864. In that year he was court-martialed and dismissed from the army, but in 1878 was reinstated. He practiced his profession in New York, where he made a specialty of nervous diseases. He published *Diseases of the Nervous System*; *Insanity in its Relation to Crime*; *On Certain Conditions of Nervous Derangement*, etc. Died at Washington, D. C., 1900.

Hampden, John, celebrated English patriot, was born in London in 1594. He graduated at Oxford, studied law, and in 1621 entered the house of commons as member for the borough of Grampound. In 1627, for refusing to pay his proportion of the general loan which the king attempted to raise on his own authority, Hampden was committed to close imprisonment in the Gatehouse. After the dissolution of the parliament of 1628-29 he retired to his estate, and devoted himself to study and to country sport and occupations. In the short parliament of 1640 he took a prominent part in the great contest between the crown and the house of commons; to the long parliament he was returned both for Wendover and the county of Buckingham. For his resistance to the king's proceedings he was one of the five members whom Charles, in 1642, rashly attempted in person to seize in the house of commons; and on the breaking out of the civil war he raised and became colonel of a regiment in the parliamentary army under the Earl of Essex. Prince Rupert having attacked a parliamentary force at Chinnor, near Thame, Hampden put himself at the head of a few cavalry that were rallied in haste to oppose him, and in the fight that ensued at Chalgrove Field received in the first charge a wound, of which he died, 1643.

Hampton, Wade, American politician and soldier, was born at Columbia, S. C., 1818. He was a grandson of General Wade Hampton, and, though opposed to secession, he joined the confederate army and raised a force called "Hampton's legion." These troops he led with distinction at the first battle of Bull Run. He attained the rank of lieutenant-general, and was thrice wounded. In 1877-79 he was governor of South Carolina; United States senator, 1879-91; and United States commissioner of railroads, 1893-97. He died in 1902.

ancock, John, American patriot, was born in 1737. He was one of the leaders in the revolt in Massachusetts, the seizure of his sloop, *Liberty*, being the occasion of a riot in Boston. He was very active in denouncing the "Boston massacre," and was one of the persons whose seizure was attempted by the expedition which led to the battle of Lexington. He was president of the continental congress from 1775-77, and governor of Massachusetts, 1780-85, 1787-93, and the first signer of the declaration of independence. He presided at the constitutional convention of 1788, and favored the adoption of the proposed federal constitution. Died, 1793.

ancock, Winfield Scott, American general, was born in Pennsylvania, 1824. After graduating at West Point in 1844, he served with great gallantry during the Mexican war. Appointed brigadier-general of volunteers in 1861, he took part in the campaign on the Potomac, fought at Antietam, and commanded a corps in the battle of Gettysburg, where he was wounded, 1863. In 1864 he became brigadier-general in the regular army, in 1866 a major-general. At his death, in 1886, he was in command of the department of the East.

andel, George Frederick, noted German musician, was born at Halle, Saxony, 1685. At ten years of age he composed a set of sonnets. In 1703 he went to Hamburg, where he played a violin in the orchestra of the opera. He was soon its director, and composed his first opera, *Almira*, which was rapidly followed by *Nero*, *Florinda*, and *Daphne*. His violent temper involved him in a quarrel with a brother-composer, which resulted in a duel; the sword of his adversary was stopped by a button or a music score.

He next visited Italy. In Florence he composed *Rodrigo*, 1709. His *Agrippina*, composed in Venice, had a run of 30 nights. At Rome he produced his *Il Trionfo del Tempo*. At Naples he composed *Acis and Galatea*, and in 1710 returned to Germany, where he was appointed chapel-master to the Elector of Hanover, afterwards George I.

He afterwards went to England where he was patronized by Queen Anne and the nobility. He composed *Rinaldo*, *Pastor Fido*, *Theseus*, and in 1715, *Amadis da Gaula*, in which Nicolini and Valentini first sung in England. The opera was an exotic in England, and a plant of slow growth. A royal academy of music was formed, and after some competition was placed under Handel's management; but his overbearing temper could not cope with musical jealousies. An opposition house was started, and both soon failed, with a loss to Handel of $50,000.

He now began the composition of his oratorios. *Esther* was produced in 1733; it was followed by *Deborah*, *Alexander's Feast*, and *Israel in Egypt;* and in 1740 appeared *L'Allegro e Penseroso*, and *Saul*. These were produced in the Lincoln's Inn Fields theatre, but with no profit. Even the *Messiah*, the most sublime of his compositions, was at first a failure. Tired of this titanic struggle, Handel went to Dublin, where he remained nine months, and received a generous support. On his return to London he composed his *Samson*, and produced his *Messiah* for the benefit of the Foundling Hospital. It was repeated annually for the same purpose, and from 1749 to 1777 brought to that charity $51,500.

Handel became blind, but he still composed, and played on the organ, being led to his seat, and forward to receive the plaudits of the audience. Died 1759.

References.—Marshall's *Handel;* Rockstro, *Life of G. F. Handel;* and the German life by Chrysander.

anly, J. Frank, lawyer, ex-governor of Indiana, was born in St. Joseph, Ill., 1863. He was educated in common schools, Champaign county, Ill., taught school for nine years in Warren county, Ind., and was admitted to the bar in 1889. He practiced at Williamsport, Ind., 1889-96; was elected to the state senate, 1890; elected to congress, 1894, serving one term, and was a candidate for the United States senate, 1899. He was governor of Indiana, 1905-09.

anna, Marcus Alonzo, American politician and legislator, was born in New Lisbon, Columbiana county, Ohio, 1837. He began his career in his father's wholesale grocery house. In 1867 entered the firm of Rhodes and company, dealers in coal and iron, and ten years later the firm name was changed to M. A. Hanna and company. He was appointed to the United States senate as a republican by Governor Bushnell, 1897, to fill a vacancy caused by the resignation of John Sherman, who resigned to accept the position of secretary of state in President McKinley's cabinet, and took his seat March 5, 1897. His term of service under the appointment expired in January, 1898, and he was elected for a full term, and served until his death in 1904. He proved a remarkable political organizer, was a man of excellent judgment, and an effective debater.

Hannibal, Carthaginian general, the famous son of Hamilcar Barca, was born in 247 B. C. At nine years he accompanied his father on his Spanish expedition, and before starting swore an oath of eternal hatred to the Roman name. He attacked Saguntum, a city in alliance with Rome, for making aggressions on the Torboletes, subjects of Carthage. After eight months' siege the city was taken, and the Romans, after unsuccessfully demanding the surrender of the general who had thus wantonly violated the treaty, declared war in 218 B. C. Hannibal started from New Carthage in 218 B. C. with 90,000 foot and 12,000 horse. From the Pyrenees he marched to the Rhone without opposition, since Scipio was at Massilia (Marseilles), four days' march from the point where Hannibal crossed the river in the face of the Celtic hordes who sided with the Romans. He effected the passage of the Alps in fifteen days, in spite of the attacks of the mountain tribes, the snow, storms, and other difficulties. Scipio, having returned from Massilia, took command of the army in the north of Italy, and first met Hannibal on the plain near the river Ticinus. The Romans were entirely routed, and Scipio, severely wounded, retreated across the Po. Hannibal next inflicted a severe defeat, near Lake Thrasymene, on the consul Flaminius. He wintered in Cannæ, and in June, or, according to others, in August, 216 B. C., almost annihilated a Roman army of 90,000 men under Terentius Varro and Æmilius Paulus. In this battle about 50,000 are said to have fallen, including Æmilius Paulus. Hannibal traversed Italy in all directions, surprised the Roman generals, defeated their armies, captured their towns. The defeat of Hasdrubal, his brother, at the river Metaurus, and the loss of his army, compelled Hannibal to confine himself to the mountainous peninsula of Brutium, where for four years he resisted all the efforts of the Romans to dislodge him. At length, after having maintained himself in Italy for upward of fifteen years, he was recalled to Africa, to defend his country against Scipio; but notwithstanding his utmost exertions and the bravery of his veteran troops he was defeated near Zama with a loss of 20,000 men, 201 B. C. The surrender of Hannibal was one of the conditions of peace; but, foreseeing such a result, he fled to Bithynia, and, seeing no hope of escape, he committed suicide by taking poison, 183 B. C.

Hapgood, Isabel Florence, author, was born in Boston, Mass., 1851. She was educated at Worcester, Mass., and at Miss Porter's school, Farmington, Conn., 1865-68. Author: *The Epic Songs of Russia; Russian Rambles; A Survey of Russian Literature*, etc. She has made many translations of standard works from Spanish, French, Italian, and Russian authors.

Hapgood, Norman, editor, author, and critic, was born in Chicago, Ill., 1868. He was graduated at Harvard, 1890; LL.B., Harvard law school; A. M., 1893. Author: *Literary Statesmen; Daniel Webster; Abraham Lincoln; The Stage in America*, etc. He was dramatic critic of New York *Commercial Advertiser*, and *Bookman*, 1897-1902, and has been editor of *Collier's Weekly* since 1903.

Harahan, James Theodore, president of Illinois Central railroad company 1906-1911, was born at Lowell, Mass., 1843. He rose step by step in the service of the Orange and Alexandria railroad, the Nashville and Decatur, and the Louisville and Nashville, from 1864 until he became general manager of the latter, 1885. He was then successively assistant general manager of the Lake Shore and Michigan Southern railway, general manager of the Chesapeake and Ohio, and later of the Louisville, New Orleans and Texas railway until 1890, when he became second vice-president of the Illinois Central railroad.

Harben, William Nathaniel. American novelist, was born at Dalton, Ga., 1858. He was educated at high schools and privately. He has traveled extensively, and was associate editor of the *Youth's Companion*, Boston, 1891-93. Author: *Whit Marie; Almost Persuaded; A Mute Confessor; The Land of the Changing Sun; From Clue to Climax; The Caruthers' Affair; Northern Georgia Sketches; The Woman Who Trusted; Westerfelt; Abner Daniel; The Substitute; The Georgians; Pole Baker; Ann Boyd; Mam' Lindy; Gilbert Neal*, etc.

Hardenberg (*här'den-berg*), **Karl August, Prince von,** Prussian statesman, was born at Essenroda in Hanover, 1750. In 1791 he became a Prussian minister, and in 1804 first Prussian minister. In 1810 he was appointed chancellor, and addressed himself to the task of completing the reforms begun by Stein. In the war of liberation he played a prominent part, and after the treaty of Paris, in 1814, was made a prince. He took part in the congress of Vienna, and in the treaties of Paris. To Hardenberg Prussia is mainly indebted for the improvements in her army system, the abolition of serfdom and the privileges of the nobles, the encouragement of municipalities, and the reform of education. Died, 1822.

Hardie (*här'-di*), **James Keir,** British labor leader, member of parliament for Merthyr-Tydvil since 1900, was born in Scotland, 1856. In 1895 he was an unsuccessful candidate for East Bradford. He was appointed editor of the *Cumnock News* 1882, but resigned in 1886. He visited India and Australia, 1907; founded the *Labor Leader*, and has been a frequent contributor to magazines and reviews.

Harding, Samuel Bannister, university professor, was born in Indianapolis, 1866; graduated from Indiana University, 1890; Ph. D., Harvard, 1898. Professor of history, Indiana University, since 1895. Author: *Greek Gods, Heroes and Men* (collaborated with wife); *The City of the Seven Hills* (with same); *The Story of the Middle Ages; Essentials in Mediæval and Modern History; Select Orations; The Story of England* (with W. F. Harding); etc.

Hardinge (*här'ding*), **Henry, Viscount,** English general, governor-general of India, was born at Wrotham, Kent, 1785. Gazetted an ensign in 1798, he served through the Peninsula war. From 1809 to 1813 he was deputy-quartermaster-general of the Portuguese army. From 1826 to 1844 he took an active share in parliamentary life, being secretary of war under Wellington in 1828, and afterward chief secretary for Ireland. In 1844 he was appointed governor-general of India. After the peace of Lahore in 1845 he was created a viscount, and granted a pension of 5,000 pounds by the East India company, as well as one of 3,000 pounds by parliament. Returning to England in 1848, he succeeded Wellington as commander-in-chief in 1852, and in 1855 was made field-marshal. He died at South Park, Tunbridge Wells, 1856.

Hardy, Arthur Sherburne, diplomat, author, was born at Andover, Mass., 1847. He was graduated at West Point, 1869; served one year in 3d United States artillery; was professor of civil engineering, Iowa college, 1871-73; was editor of the *Cosmopolitan Magazine*, 1893-95; United States minister and consul-general, Teheran, Persia, 1897-99; minister of United States to Greece, Roumania, and Servia, 1899-1901; to Switzerland, 1901-03, and to Spain, 1903-05. Author: *Elements of Quaternions; Elements of Calculus; Elements of Analytic Geometry; New Methods in Topographical Surveying; Imaginary Quantities;* also several novels, etc.

Hardy, Thomas, English novelist, was born in Dorsetshire, 1840. He was educated as an architect. The scenes of his novels are chiefly laid in the south of England, the early Wessex. His chief works are: *Under the Greenwood Tree; Far From the Madding Crowd; The Return of the Native; The Trumpet Major; The Woodlanders; Tess of the D' Urbervilles; Jude the Obscure; The Pursuit of the Well-Beloved; Wessex Poems; Poems of the Past and the Present; The Dynasts*, a drama, etc.

Hare, Augustus John Cuthbert, English author, was born in Rome, 1834. He was educated at Harrow and at University College, Oxford. He wrote the famous and often reprinted *Walks in Rome; Wanderings in Spain; Days near Rome; Cities of Northern and Central Italy; Walks in London; Cities of Southern Italy and Sicily; Sussex*, etc. Other works are his delightful biography of Maria Edgeworth; *Memorials of a Quiet Life and Letters of Baroness Bunsen; Two Noble Lives* etc. Died, 1903.

Hare, John, English actor, was born in London, 1844. He was educated at Giggleswick grammar school, Yorkshire, and obtained an engagement at a London theater, 1865. In 1875 he became manager of the Court theater, and 1879-88 maintained a partnership with W. H. Kendal. From 1889 to 1895 his tenancy of the Garrick theater was important for his production of *La Tosca* and *A Pair of Spectacles*, the latter possibly his greatest success. He visited the United States, 1896-97, and again in 1900.

Hargreaves (*här'-grēvz*), **James,** English mechanic and inventor, was born probably at Blackburn, England, about 1745. He was an illiterate weaver and carpenter of Stanhill near that town. In 1760 he invented a carding-machine, and about 1764 the spinning-jenny. He removed to Nottingham, where he erected a spinning-mill, but his patent proved invalid. He continued to carry on business as a yarn manufacturer until his death in 1778.

Harkness (*härk'-nes*), **Albert,** American classical scholar, was born at Mendon, Mass., 1822. He was graduated at Brown University in 1842, studied at Berlin, Bonn, and Göttingen, and became professor of Greek in Brown University in 1855. He published a series of Latin classics, and a standard *Latin Grammar* which has been widely used. Died, 1907.

Harlan (*här'-lan*), **John Marshall,** jurist, associate justice of the United States supreme court 1877-1911, was born in Boyle county, Ky., 1833. He was graduated at Centre College, Ky., 1850; LL.D., Bowdoin, 1883. Studied law at Kentucky University, practiced at Frankfort, Ky., removed to Louisville in 1867 and practiced law there. Colonel of 10th Kentucky regiment in Union army, 1861-63; attorney-general of Kentucky, 1863-67; his name was presented by republican convention of Kentucky for vice-president of United States in 1872; member of Louisiana commission, 1877; one of American arbitrators

on Bering sea tribunal which met in Paris, 1893; was vice-moderator of the general assembly of the Presbyterian church in 1905; and had been for more than fifteen years, and was at time of his death, lecturer in George Washington University. Died, 1911.

Harley, Robert, earl of Oxford and Mortimer, British statesman, was born in 1661. He entered parliament which met under the chieftainship of Rochester and Godolphin in 1689, and in 1701, was, by a large majority, elected speaker. He retained this post until 1704, when he became secretary of state. The principal act of his administration was the treaty of Utrecht. When George I. was proclaimed, Oxford was sent to the Tower for conspiracy to restore the Stuarts and after two years' imprisonment brought to trial. The two houses quarreled as to the mode of procedure, and the commons having in anger refused to take any part in the trial, he was acquitted by peers, and released. He spent the remainder of his life in retirement. Died, 1724.

Harmon, Judson, American lawyer and statesman, was born in Hamilton county, Ohio, 1846. He was graduated at Denison University, 1866, and from the Cincinnati law school, 1869; LL.D., Denison, 1892. He was judge of common pleas court, 1876-78; was attorney-general of the United States, 1895-97; president of Ohio bar association, 1897-98, and member of faculty law department, university of Cincinnati. In 1908 he was elected governor of Ohio, and re-elected 1910.

Harmsworth (*härmz'würth*), **Sir Alfred Charles William,** Lord Northcliffe, first baron of the isle of Thanet, was born in Chapelizod, county of Dublin, 1865. He founded, 1888, the weekly periodical *Answers*, which had an immediate success. He bought the *London News* in 1894, two years later founded the *Daily Mail*. He subsequently founded the *Glasgow Daily Record*, and acquired the *Leeds Mercury* and the *Birmingham Gazette*. He visited the United States in 1900 and 1909, and in 1906 was elevated to the peerage as Lord Northcliffe.

Harnack (*här'nak*), **Adolf,** the foremost of living church historians, was born in Dorpat, Russia, 1851, educated at the University there, 1869-72; became privat-docent at Leipzig, 1874; professor extraordinary of church history there in 1876; ordinary professor of church history at Berlin in 1889. He is a man of strong and inspiring personality, and his lectures are attended by hundreds of students from Europe and America. Is the author of many standard works on theology, the most important of which are his *What is Christianity*, and the *History of Dogma*. Since 1881 he has edited, with E. Schurer, the *Theologische Litteraturzeitung*.

Harned (*här'ned*), **Virginia,** American actress, was born in Boston, Mass., 1868; joined George Clark's company at sixteen and appeared as Lady Despar in the *Corsican Brothers*. She made her début at Fourteenth street theater, 1890, in *A Long Lane, or Green Meadows*. She was engaged as leading woman for E. A. Sothern under Daniel Frohman's management; subsequently played leading roles in A. M. Palmer's stock company. Created the title role in *Trilby*, Park theater, Boston, 1895, and starred in that play one season. She married E. H. Sothern in 1896, and subsequently appeared in leading parts in his company.

Haroun al Raschid (*hä-rōōn' är-rä-shēd'*), famous caliph of Bagdad, the fifth of the Abbasides dynasty, was born about 765. He invaded Greece, and obtained from the empress Irene 70,000 gold dinars; in 801 he sent presents to Charlemagne; he raised Bagdad to unprecedented eminence in learning, commerce, and splendor, and it is around him that the tales of the *Arabian Nights* center. He died in 809, when on an expedition against Khorassan.

Harper, William Rainey, American educator and scholar, president of University of Chicago, 1891-1906, was born in New Concord, Ohio, 1856. He was graduated at Muskingum College, 1870; Ph.D., Yale, 1875; D.D., Colby, 1891; LL.D., Yale, 1901; Johns Hopkins, 1902. He was principal of Masonic College, Macon, Tenn., 1875-76; tutor, 1876-79; principal preparatory department Denison University, Granville, Ohio, 1879-80; professor of Hebrew, Baptist Union theological seminary, Chicago, 1879-86; professor of Semitic languages, Yale, 1886-91, and professor of biblical literature, 1889-91; principal Chatauqua college of liberal arts, 1885-91; head professor of Semitic languages and literature, University of Chicago, 1891-1906. Author of many textbooks. Died, 1906.

Harraden (*har'-ä-den*), **Beatrice,** English novelist, was born at Hampstead, 1864, youngest daughter of Samuel Harraden. She was educated at Dresden, Cheltenham College, Queen's College, Bedford College, and received a B. A. at London university. Author: *Things Will Take a Turn* (for children); *Ships that Pass in the Night; In Varying Moods; Hilda Strafford; Untold Tales of the Past* (for children); *The Fowler; Katharine Frensham; The Scholar's Daughter; Interplay*, etc.

Harriman, Edward Henry, capitalist, railroad administrator, was born at Hempstead, L. I., N. Y., 1848. He was the son of a clergyman, received a common school education, became a broker's clerk in Wall street at fourteen, and later a stock broker on his own account. He was a member of the New York stock exchange from 1870 until his death. Was president and director of the Southern Pacific railway; director of Union Pacific railway company, Delaware and Hudson railroad, Central Pacific railway, Illinois Central railway, Western Union telegraph company, Pacific Mail steamship company, Oregon railroad and navigation company, Wells-Fargo and Company, Colorado fuel and iron company, National city bank, etc., trustee Equitable trust company, and director in many other corporations. He was considered the greatest genius in railroad organization and administration in modern times. Died, 1909.

Harrington, B. J., Canadian educator and scientist, Macdonald professor of chemistry, McGill University, Montreal, was born at St. Andrews, province of Quebec, Canada, 1848. He was graduated at McGill University, 1869; Ph.D., Yale University, 1871; LL.D., McGill, 1899. He was appointed lecturer in chemistry at McGill, 1871, and the following year succeeded Dr. T. Sterry Hunt as chemist and mineralogist to the geological survey of Canada. Was appointed David Greenshields professor of chemistry and mineralogy in 1883, and for many years also lectured on both mining and metallurgy. He has been president of the national historical society of Montreal, president of the chemical and physical section of the royal society of Canada; vice-president, chemical section of British association, etc. Author: *Notes on Dawsonite, a new Carbonate; Notes on the Iron Ores of Canada and their Development; The Sap of the Ash-leaved Maple; Life of Sir William Logan, First Director of the Geological Survey of Canada*, etc.

Harris, George, American educator, president Amherst College since 1899, was born at East Machias, Me., 1844. He was graduated at Amherst, 1866; D.D., Amherst, 1883, Harvard, 1899, Yale, 1901; LL.D., Dartmouth, 1899; and graduated at Andover Theological Seminary, 1869. Professor Christian theology, Andover Theological Seminary, 1883-99. Preacher to Dartmouth College, 1894-99; to Harvard, 1897-99. Author: *Moral Evolution, Inequality and Progress*, etc., and was one of the editors of *Andover Review*, 1884-93.

Harris, James Rendel, English biblical scholar, director of studies at the Friends' settlement for social and religious study, Woolbrooke, near Birmingham, England, since 1903, was born at Plymouth. Was professor at Johns Hopkins University, 1882-85; professor at Haverford College, 1886-92; university lecturer in palæography Cambridge, 1893-1903; professor of theology, University of Leyden, 1903-04; president Free church council, 1907-08. He has traveled extensively in the East in search of MSS. Author: *The Teaching of the Apostles and the Sibylline Books; The Teaching of the Apostles; The Apology of Aristides; Union with God; The Gospel of the Twelve Apostles; Tract on Triune Nature of God; The Guiding Hand of God*, etc.

Harris, Joel Chandler, American author, was born in Eatonton, Ga., 1848. He served apprenticeship to printing trade, and was one of the editors of the *Atlanta Constitution* twenty-five years. Author: *Uncle Remus: His Songs and His Sayings; Nights with Uncle Remus: Uncle Remus and His Friends; Mingo; Little Mr. Thimblefinger; On the Plantation; Daddy Jake, the Runaway; Balaam and His Master; Mr. Rabbit at Home; The Story of Aaron; Sister Jane; Free Joe; Stories of Georgia; Aaron in the Wild Woods; Tales of the Home Folks; Georgia, From the Invasion of De Soto to Recent Times; Evening Tales; Stories of Home Folks; Chronicles of Aunt Minerva Ann; On the Wings of Occasion; The Making of a Statesman; Gabriel Tolliver; Wally Wanderoon; A Little Union Scout; The Tar Baby Story and other Rhymes of Uncle Remus*, etc. Died, 1908.

Harris, William Torrey, American educator and philosophical writer, United States commissioner of education, 1889-1906, was born at North Killingly, Conn., 1835. Ph.D., Brown, 1893; University of Jena, 1899; LL. D., University of Missouri, 1870, University of Pennsylvania, 1894; Yale, 1895; Princeton, 1896; settled at Concord, Mass., in 1880 and became lecturer at school of philosophy. Established, in St. Louis, 1867, *Journal of Speculative Philosophy;* was chief editor of the Appleton school readers. Edited department of philosophy in *Johnson's Cyclopædia*, writing many important articles; and was editor-in-chief of *Webster's International Dictionary*. Author: *Introduction to the Study of Philosophy; The Spiritual Sense of Dante's Divina Commedia; Hegel's Logic, A Book on the Genesis of the Categories of the Mind*, and *Psychologic Foundation of Education*. He died in 1909.

Harrison, Benjamin, lawyer, twenty-third president of the United States, was born in North Bend, Ohio, 1833. He was a great-grandson of Benjamin Harrison, signer of the declaration of independence, and grandson of William Henry Harrison, ninth president of the United States. He was graduated at Miami University, 1852; studied law in Cincinnati; removed to Indianapolis, Ind., in 1854, and laid the foundation of a fine legal practice; entered the Union army in 1862, serving with conspicuous gallantry in the Atlanta campaign, finally returning to civil life at the close of the war with the rank of brevet brigadier-general; entered the United States senate in 1881, and in 1888 was nominated for the presidency of the United States; elected in the ensuing November, and inaugurated, 1889. His administration was quiet, successful, and measurably popular. In 1892 he received again the nomination in the national republican convention, but by this time the able and persistent attacks of the democracy on the high tariff policy led to a general revulsion against it, and he was defeated at the election by Grover Cleveland. He thereupon pursued a private law practice, occasionally giving public addresses. He died in Indianapolis, Ind., 1901.

Harrison, Charles Custis, American educator, provost University of Pennsylvania 1895-1910, was born at Philadelphia, Pa., 1844. He was graduated at the University of Pennsylvania, 1862; LL. D., Columbia, 1895; Princeton, 1896; Yale, 1901. Was in active business as a manufacturer, 1863-92. He has been a trustee since 1876, and was acting provost, 1894-95, University of Pennsylvania.

Harrison, Elizabeth, principal of Chicago Kindergarten College, was born in Kentucky, and educated in Iowa and Chicago. From 1880 to 1883 her time was devoted to kindergarten teaching and special instruction in kindergarten work and philosophy under Mrs. Alice H. Putnam, Miss Susan E. Blow, Professor John Kraus and Madam Kraus-Boelte together with observation work in England and France. Kindergarten teacher Loring School, Chicago, 1884-1890; studied in Germany with Frau Schrader and Baroness Maren Holtz von Bulow, 1890; founder and principal Chicago Kindergarten College, since 1890. She was, also, for two years head of kindergarten department, Chicago Normal School, and for fifteen years has been prominent as public speaker or lecturer on kindergarten subjects. Author of *A Study of Child Nature; In Storyland; Two Children of the Foothills; Christmas-tide; Kindergarten Building Gifts; Some Silent Teachers; Misunderstood Children*, etc.

Harrison, Francis Burton, lawyer, congressman, was born in New York city, 1873. He was graduated from Yale, 1895, from New York law school, 1897, and was instructor at New York law school, 1897-99. During the war with Spain he was a private, troop A, New York volunteer cavalry, and captain and assistant adjutant-general, United States volunteers. Was elected to the fifty-eighth congress from the thirteenth New York district; was democratic candidate for lieutenant-governor of New York, 1904. He was elected to the sixtieth congress, and reëlected to the sixty-first congress, from 16th district.

Harrison, Frederic, English essayist and philosophical writer, was born in London, 1831. He was educated at Wadham college, Oxford, became fellow and tutor of his college, and was called to the bar in 1858. A positivist and an advanced liberal, he has written *The Meaning of History; Order and Progress; The Present and the Future; On the Choice of Books; Oliver Cromwell; Annals of an old Manor House; William the Silent*, etc. From 1889 to 1892 he was an alderman of the London county council.

Harrison, James Albert, American philologist, educator, was born at Pass Christian, Miss., 1848. He was graduated at the university of Virginia, 1868; studied in Germany, 1871; L.H.D., Columbia, 1887; LL. D., Washington and Lee University; professor of English and modern languages, Washington and Lee, 1876-95; professor of English and romance languages, 1895; now professor of Teutonic languages, university of Virginia; lecturer on Anglo-Saxon poetry, Johns Hopkins. Author: *Spain in Profile; French Syntax; History of Spain; Story of Greece*, One of the editors of the *Century Dictionary* and *Standard Dictionary*. Died 1911.

Harrison, John, British inventor of the chronometer, was born at Foulby near Pontefract, 1693. By 1726 he had constructed a time keeper with compensating apparatus for correcting errors due to variations of climate. In 1713 the government had offered three prizes for the discovery of a method to determine the longitude accurately. After long perseverance Harrison made a chronometer which, in a voyage to Jamaica in 1761-62, determined the longitude within eighteen geographical miles. After further trials, he was awarded the largest prize of 20,000 pounds. He wrote five works on his chronometer, etc. Died 1776.

Harrison, William Henry, ninth president of the United States, was born in Virginia, 1773, son of Benjamin Harrison, who signed the declaration of independence. On the death of his father he joined, in 1792, as ensign, the army which Wayne was leading against the Indians of the Northwest. He left the army in 1798. In the war against the Indians in 1811, and which soon became also a war against the English in Canada, Harrison, as commander-in-chief of the American army, showed great military talent. He defeated the Indians in an important battle at Tippecanoe, and by the victory of Perry on Lake Erie was

enabled to pursue the British invaders into Canada, where, in 1813, he totally routed them in the battle of the Thames. In 1824 became a member of the United States senate. In 1828 he went as ambassador to Colombia, but was recalled in 1829, and the following few years he spent in retirement as clerk in a county court in Ohio. The whig party tried in vain to make him president of the United States in 1835, and succeeded in 1840. He died suddenly in 1841, after serving one month.

Hart, Albert Bushnell, American educator and historian, was born in Clarksville, Pa., 1854. He was graduated at Harvard, 1880; Ph.D., Freiburg, Baden, 1883; LL.D., Richmond College, 1902. In 1897 he was made professor of history at Harvard University. Author: *Introduction to the Study of Federal Government; Formation of the Union; Guide to the Study of American History* (with Edward Channing); *Foundations of American Foreign Policy; Actual Government; Essentials of American History.* Editor: *Epochs of American History* (3 vols.); *American History Told by Contemporaries* (4 vols.); *American Citizen Series; Source-Book of American History; Source Readers in American History* (4 vols.); *The American Nation,* etc. Joint editor: *American History Leaflets; Harvard Graduates' Magazine; American History Review.*

Hart, James McDougal, American landscape painter was born in Kilmarnock, Scotland, 1828. When a child he removed with his family to America, and lived at Albany, N. Y. He was made an academician in 1859. His pictures are admired for their harmony of color and quiet peacefulness of tone. The best known among them are: *Woods in Autumn; Moonrise in the Adirondacks; Peaceful Homes; Coming Out of the Shade; Threatening Weather; Indian Summer.* Died at Brooklyn, N. Y., 1901.

Hart, Joel T., American sculptor, was born in Kentucky, 1810. While working as a stonecutter at Lexington he began modeling busts in clay. He soon attained a phenomenal success in portrait busts, and on receiving a commission for marble statue of Henry Clay, 1849, went to Florence to study and work. He executed many busts and statues of eminent men during his twenty-eight years' residence in Florence. He died in 1877, and his remains were removed from Florence to Lexington, Ky., 1884, where the state erected a monument over them.

Hart, Sir Robert, British diplomat, was born at Milltown, County Armagh, Ireland, 1835. He was educated at Queen's college, Taunton, Wesley college, Dublin, and Queen's College, Belfast, graduating from the latter in 1853; M.A., 1871; hon. LL. D., 1882. Secretary to the allied commissioners for the government of the city of Canton, 1858; granted special permission to resign and accept an appointment in the Chinese imperial maritime customs, 1859; officiating inspector-general, 1861-63; commissioner at Shanghai, with charge of Yangtze ports and Ningpo, 1863; inspector-general, 1863; gazetted minister plenipotentiary, 1885, but declined. Author of *These From the Land of Sinim,* etc. Died, 1911.

Hart, William, American painter, brother of James McDougal Hart. was born in Scotland, 1823. He came to Albany, N. Y., 1831, and, like his brother, developed a taste for landscape painting, and in 1848 exhibited a specimen of his work in the national academy of design in New York. For several years he was president of the Brooklyn academy of design. Some of his most notable works are: *The Last Gleam; The Golden Hour; Sunset in Dark Harbor, New Brunswick; Opening in the Elands; Up in the Glen.* He was one of the founders, and for some years, president of the water-color society, and was himself eminent in that branch of art. Died, 1894.

Harte (*härt*), **Francis Bret,** American writer, was born in Albany, N. Y., 1839. He was at different times a miner, school teacher, printer, and editor. From 1864 to 1870 he was in San Francisco as secretary of the United States mint, and, in 1869, he published *The Heathen Chinee.* He was named American consul at Grefeld in 1878, at Glasgow in 1880, and after leaving the latter in 1885, lived in London. Chief among his works are *Condensed Novels; The Luck of Roaring Camp and Other Sketches; Poetical Works; Tales of the Argonauts; The Twins of Table Mountains and Other Stories; By Shore and Sedge; A Millionaire of Rough and Ready and Devil's Ford; A Ward of the Golden Gate,* etc. Died, 1902.

Hartly, Sir Charles Augustus, British engineer, engineer-in-chief and consulting engineer to the European commission of the Danube, 1856-1907, was born at Heworth, in Durham, 1825. He served in Crimea as captain in the Anglo-Turkish contingent, 1855-56, and in 1867 reported to foreign office on important questions of engineering connected with the river Scheldt. He was appointed member of a board of engineers to report on the improvement of the Mississippi, 1875; was nominated by the British government member of international technical commission of Suez canal, 1884, and served until 1907; has been consulted at various periods by the Indian, Austrian, Russian, Egyptian, Roumanian, and Bulgarian governments. Author: *Delta of the Danube; Public Works in the United States and Canada; Finland Navigations in Europe; History of the Engineering Works of the Suez Canal,* etc.

Hartley, David, British philosopher, was born near Halifax, 1705. A clergyman's son, at fifteen he entered Jesus College, Cambridge, and in 1727 became a fellow. He studied for the church, but, dissenting from some points in the thirty-nine articles, abandoned his intention. As a medical practitioner he attained considerable eminence at Newark, Bury St. Edmunds, London, and Bath. His chief work is *Observations on Man.* Died, 1757.

Hartmann, Karl Robert Eduard von, German philosopher, was born at Berlin, 1842. His great work was *The Philosophy of the Unconscious,* followed by books on the ethical consciousness, the development of the religious consciousness, German æsthetics, Lotze, and Kant, besides a work on the self-destruction of Christianity, criticisms of neo-Kantianism and contemporary philosophies, defenses of his own system, and political and educational treatises. He died in 1906.

Harvard, John, founder of Harvard College, was born in Southwark, England, 1607. He was graduated at Emmanuel College, Cambridge, England, 1631; married and came to America, 1637; was made a freeman of Massachusetts, and given a tract of land in Charlestown, where he began preaching as a Congregational minister. In his will he bequeathed about 750 pounds and 320 volumes from his library for the establishment of a college. He died at Charlestown, Mass., 1638. A granite monument was erected over his remains in Charlestown, 1828, and a memorial statue on the delta at the university was unveiled in 1884.

Harvey, George Brinton McClellan, editor of the *North American Review,* and president of Harper and Brothers, publishers, was born in Peacham, Va., 1864. He was educated at Peacham academy; was consecutively reporter on the *Springfield Republican, Chicago News,* and the *New York World;* was later managing editor of the *New York World,* insurance commissioner, New Jersey, colonel and aide-de-camp of Governors Green and Abbett, New Jersey. He has been president of Harper and Brothers since 1900, and bought the *Metropolitan Magazine,* 1903. He was made honorary doctor of laws by Erskine College, South Carolina, 1905, and by the University of Nevada, 1908. Was Bromley lecturer on journalism at Yale, 1908.

Harvey, William. English physician, and discoverer of the circulation of the blood, was born at Folkestone, 1578. He studied at the University of Cambridge, completing his medical studies and graduating M. D. at Padua. After his return to England he became fellow of the Royal college of physicians, and physician to St. Bartholomew's Hospital. In 1623 he was named physician to James I., and held the same post under Charles I.

His great discovery, developed and completed by careful and laborious investigation, was published in 1628, in the treatise entitled *Exercitatio de Motu Cordis et Sanguinis.* It was at once generally accepted, and though controversy was excited and many opponents started up, many more books were written in favor of than against it. No Englishman wrote against it. The reputation of Harvey was European. The only reply he published to any of his opponents was that to Riolanus, professor of anatomy, Paris. Harvey was author also of *Exercitationes de Generatione Animalium.* He wrote other works, the manuscripts of which were mostly burned during the English civil war; two only being preserved in the British museum. He died in 1657.

References.—Willis' *Life of Harvey;* Power's *William Harvey,* in *Masters of Medicine.*

Hase (*hä'zē*), **Karl August von,** German theologian, was born at Steinbach in Saxony, 1800. Became in 1823 tutor at Tübingen. From 1830 to 1883 he was professor of theology at Jena, after which he was ennobled. His chief writings are *Desalten Pfarrers Testament; Handbook of Dogmatics; Gnosis; Life of Jesus; Church History; Francis of Assisi; Handbook of Protestant Polemical Theology; Life of St. Catharine of Siena;* and lectures on church history. Died, 1890.

Haskell, Charles Nathaniel, ex-governor of Oklahoma, was born in Putnam county, Ohio, 1860. He was reared on a farm, taught school and read law, and was admitted to the bar in 1881. He began practice at Ottawa, Ohio; engaged in railway building and other construction work, 1888; went to Muskogee, I. T., 1901, and built many lines of railroad there. Was member of Oklahoma constitutional convention, and was elected first governor of the state of Oklahoma, 1907-1911.

Hassall (*has'al*), **Arthur,** British historical writer, was born at Bebington, Cheshire, 1853. He was graduated at Trinity College, Oxford; was lecturer and tutor of Keble College, 1880-83; student of Christ Church, 1884; censor of Christ Church, 1894-95, and student and tutor since 1895. Author *Life of Bolingbroke; Louis XIV.; A Handbook of European History; The Balance of Power; A Class Book of English History; History of France; The French People; Mazarin; The Tudor Dynasty; War and Reform; The Expansion of Great Britain,* etc.

Hassam, Childe, American artist, was born in 1859. He was educated in Boston public schools, and studied art in Boston and Paris, 1886-89. He has exhibited widely in this country and in Europe, and follows generally the methods of the French impressionist school. His pictures are represented in the collections of the Pennsylvania academy of fine arts; Carnegie institute, Pittsburg; Cincinnati museum; Corcoran art gallery, Washington; Boston art club, etc.

Hastings, Warren, English statesman and administrator in India, was born in 1732. He became a member of the council of Madras, and in 1772 governor of Bengal, a position which, in 1774, became that of governor-general of India. He was now involved in quarrels with his council, and sent in his resignation, which, however, when accepted, he disavowed. The supreme court decided in his favor, and he was reappointed. During his first term of office he sold the vale of Rohilcund to Siraj-ud Dowlah and obtained the execution of Nucomar, his enemy. Three years after his return he was impeached before the lords for high crimes and misdemeanors, but, after a trial which proceeded at intervals for seven years, and in spite of the eloquence of Burke and Sheridan, he was acquitted in 1795. He was ruined by the expense, but was granted an annuity by the court of directors. To him the British government is largely indebted for its political and judicial organization in India and its method of Indian administration. Died, 1818.

Hauff (*houf*), **Wilhelm,** German novelist, was born at Stuttgart, 1802. He studied at Tübingen, was for two years a tutor, and had been editor of a paper for nearly a year when he died, 1827. His *Märchen* and his *Novellen* are admirable for their simplicity and playful fancy. His other works include: *Die Bettlerin vom Pont des Arts; Das Bild des Kaisers; Lichtenstein,* an imitation of Scott; and *Mitteilungen aus den Memoiren des Satans,* a story rich in satiric humor.

Haupt (*houpt*), **Lewis Muhlenberg,** American civil engineer, was born at Gettysburg, Pa., 1844. He attended the Lawrence scientific school, Harvard, and graduated at the United States military academy, 1867. Member of the Nicaragua canal commission, 1897-99; Isthmian canal commission, since 1899; president Colombia Cauca arbitration, 1897; chief engineer survey for ship canal across New Jersey; consulting engineer of Lake Erie and Ohio River ship canal, etc. He edited *The American Engineering Register,* 1885-86. Author: *Engineering Specifications and Contracts; Special Report on Railway Plant of Paris Exposition; Canals and Their Economic Relation to Transportation; A Move for Better Roads;* and a number of pamphlets and other contributions to engineering.

Haupt, Paul, philologist, professor of Semitic languages, Johns Hopkins, since 1883, was born at Görlitz, Germany, 1858. He was graduated at Gymnasium Augustum, Görlitz, 1876; University of Leipzig, Ph.D., 1878; LL. D. University of Glasgow, 1902. Editor: *The Polychrome Bible, New Critical Edition of Hebrew Text of the Old Testament.* Co-editor: *The Assyriological Library; The Johns Hopkins Contributions to Assyriology and Comparative Semitic Grammar.* Author: *The Sumerian Family Laws; The Babylonian Nimrod Epic; The Cuneiform Account of the Deluge; The Book of Canticles; The Book of Ecclesiastes;* and numerous papers on biblical and Assyrian philology, history and archæology, comparative Semitic grammar, Sumeria, etc.

Haussmann (*ōs'män'*), **George Eugene,** French magistrate, was born in Paris, 1809. He entered the public service, and under Napoleon III. became prefect of the Seine in 1853. He then began his task of improving Paris by widening streets, laying out boulevards and parks, building bridges, etc. For these services he was made baron and senator; In 1871 he was appointed director of the *Crédit Mobilier,* and in 1881 was elected to the chamber of deputies. He died in comparative poverty, 1891.

Havelock (*hav'lok*), **Sir Henry,** English general, was born at Bishop-Wearmouth, in Durham, 1795. He entered the army a month or two after the battle of Waterloo, went to India in 1823, and honorably distinguished himself in the Afghan and Sikh wars. In 1856 he commanded a division of the army that invaded Persia, and subsequently took an important part in quieting the Indian mutiny. After the relief of Lucknow Havelock was attacked by dysentery, and died in 1857.

Hawkins, Anthony Hope, English novelist, was born in London, 1863. He was graduated from Balliol College, Oxford; received his M.A. there, and was admitted as a barrister of the Middle Temple, 1887. Author: *The Prisoner of Zenda; The King's Mirror; Tristram of Blent; The Intrusions of Peggy; Double Harness; A Servant of the Public; Sophie of Kravonia; The Great Miss Driver,*

etc. Plays: *The Adventure of Lady Ursula, Pilkerton's Peerage*, etc.

Hawkins, Sir John, English navigator, was born at Plymouth in 1532. He was one of the first Englishmen to carry on the slave trade, in which so little shame was seen in those days that Queen Elizabeth allowed him to use as the crest of his coat-of-arms a Moor bound. He afterward became noted in fighting the Spaniards, was a rear-admiral in the great struggle with the Spanish armada, and commanded expeditions with Frobisher and Drake. He died at sea in the West Indies, 1595.

Hawthorne, Julian, American novelist, journalist, historical writer, biographer, was born in Boston, Mass., 1846. He was educated at Harvard, and at Dresden, Germany; He has written: *Saxon Studies; Garth; Archibald Malmaison; Sebastian Strome; Dust; A Fortune's Fool; Sinfire; Biography of Nathaniel Hawthorne; History of Oregon; History of United States* (3 vols); *History of American Literature; Love is a Spirit; Hawthorne and His Circle;* and many others. He was reviewer on *London Spectator*, 1877-81, and literary editor *New York World*, 1885.

Hawthorne, Nathaniel, celebrated American novelist, was born at Salem, Mass., 1804. He was graduated at Bowdoin college in 1825, and three years later published his first novel, *Fanshawe*. He then wrote a number of stories for the journals, which he afterward collected in 1837, and published under the title of *Twice-told Tales*, a second volume of which appeared in 1842. In 1843 he took up his residence at the charming village of Concord, in a manse which had formerly been the dwelling of Emerson, and which suggested the title of his next work, *Mosses from an Old Manse*, published in 1843. This sketch, in which he gives some interesting recollections of his boyhood, first made his name known in Europe. After a three years' residence at Concord he accepted a situation in the custom-house at Salem, and removed to that city. *The Scarlet Letter* appeared in 1850, and was received with universal approbation, as was likewise *The House of the Seven Gables*, published in 1851. His *Blithedale Romance*, published in 1852, may be regarded as a kind of autobiography so far as it goes, and is founded on incidents in his own life. In 1853 he received the appointment of consul at Liverpool from his friend and classmate, President Pierce, whose life he had written. He resided in Liverpool discharging the duties of his office for five years, and afterward went to Italy to recruit his impaired health—a journey which furnished him with material for his fantastic romance, *The Marble Faun*, generally regarded as one of the best of his works. After his return to America he published a sketch of England and the English. He died suddenly at Plymouth, N. H., 1864. As a writer he combined a true poetic spirit with a charming style, and displayed a deep knowledge of human nature.

Hay, John, American statesman and writer, was born in Salem, Ind., 1838. He was graduated from Brown University, 1858, and settled in Illinois as a lawyer. He went to Washington in 1861, as one of Lincoln's private secretaries, acting also as his aide-de-camp. He was subsequently in the United States diplomatic service, stationed at Paris, Vienna, and Madrid. In 1897 he was made ambassador to England, and in 1898 secretary of state. In the latter capacity he inaugurated the important "open door" policy, for all nations, in China, and laid the foundation for subsequent diplomatic relations with the Orient. As secretary of state he gained a standing equal to that of the most eminent men who have held that high office. In coolness, foresight, and statesmanlike appreciation of current and coming events, he had no superior among contemporary diplomats. His literary reputation rests upon *Pike County Ballads, Castilian Days*, a volume of travel, and *Life of Abraham Lincoln* (with J. G. Nicolay). Died, 1905.

Haydn, Joseph, Austrian composer, was born at Rohrau, Austria, 1732. He was the son of a poor wheelwright, and, manifesting great musical talent, he was received, at the age of eight, into the choir of the cathedral of St. Stephen's at Vienna. In the latter part of 1750 he composed his first quartet for stringed instruments. In 1759 a certain Count Morzin engaged him as music director and composer, "with a salary of 200 florins, free lodging, and table with his secretaries and other officials." In 1760 Prince Esterhazy placed him at the head of his private chapel. For him Haydn composed his beautiful symphonies and the greater number of his magnificent quartets. He is often called "Father Haydn," as having been the inventor of the symphonic form as we now essentially know it. After the death of Prince Esterhazy, in 1790, Haydn accompanied Salomon, the violinist, to England, where, in 1791-92, he produced six of his "Twelve Grand Symphonies." In England he first obtained that recognition which afterward fell to his share in his own country. On his return to Austria he purchased a small house with a garden in one of the suburbs of Vienna. Here he composed his oratorios, the *Creation* and the *Seasons*. The former work, the harmonies of which are pervaded with the fire of youth, was written in his sixty-fifth year, and is considered by many to be equal to the finest productions of Handel; the *Seasons* was almost his last work. Died, in Vienna, 1809.

Haydon, Benjamin Robert, English historical painter, was born at Plymouth, England, 1786. He exhibited his first picture at the academy in 1807, *Joseph and Mary Resting with our Saviour After a Day's Journey on the Road to Egypt*. His great work, *Christ's Entry into Jerusalem*; was exhibited in 1820, but it took some time to find a purchaser. While in prison for debt he painted the *Mock Election* which George IV. purchased for 500 guineas. Of his succeeding works, *Napoleon Musing at St. Helena* has been frequently reproduced. He forsook the brush for the platform, and his lectures on art, in London and the provinces, brought him fame and, for the time being, money. He died by his own hand in 1846.

Hayes, Rutherford Birchard, nineteenth president of the United States, was born at Delaware, Ohio, 1822. He was graduated at Kenyon College and at Harvard Law School, and began the practice of law at Lower Sandusky in 1845. At the outbreak of the civil war he was appointed major of the 23d Ohio infantry, and shortly afterward lieutenant-colonel. He distinguished himself in the campaigns of West Virginia and in the battles around Winchester, and was severely wounded at South Mountain. In 1864 he was made brigadier-general and in 1865 brevetted major-general. He was elected to congress from Ohio, 1864-66, and was governor of that state, 1868-72 and 1876-77. He was the republican candidate for the presidency in 1876, and, after the memorable contest with Samuel J. Tilden, was inaugurated in 1877. As chief magistrate his career was marked with moderation, wisdom, and a sympathy with all true reforms. His independence of character, however, was strongly shown by his vetoes, his steady adherence to principle, and his refusal to pander to mere party politics. Died, 1893.

Hayne, Robert Young, American statesman, was born in South Carolina, 1791. He was admitted to the bar in 1812. He sat in the United States senate from 1823 to 1832. He was a vigorous opponent of protection, and in 1832 boldly supported in congress the doctrine of nullification. The great debates between Daniel Webster and Hayne on the principles of the constitution, the authority of the general government, and the rights of the individual states are of unusual historical value. He was mayor of Charleston, 1835-37. Died, 1840.

Hazlitt, (*haz'lit*) **William,** English essayist and miscellaneous writer, was born in Kent, England, 1778. In 1803 he went to London, and shortly after published his *Essay on the Principles of Human Action*. In 1813 he delivered a course of lectures on the history of English philosophy, and he subsequently delivered courses on the English poets. He wrote essays in the *Examiner* in conjunction with Leigh Hunt, which were afterward republished in a volume entitled *The Round Table*. He also wrote *Characters of Shakespeare's Plays; View of the Contemporary English Stage; Life of Napoleon*, etc. Died, 1830.

Hearst (*hûrst*), **Phoebe Apperson,** philanthropist, was born in 1840; became a teacher. In 1861 she married George Hearst, late United States senator from California, and a man of large wealth. Gave $200,000 to build National Cathedral school for girls; established working girls' clubs, San Francisco; erected and equipped a mining building at University of California as a memorial to her husband; built, endowed, and gave thousands of volumes to free libraries at Lead City, South Dakota, and Anaconda, Mont. Her other charities extend to numerous objects and institutions. She is a regent of the University of California.

Hearst, William Randolph, American newspaper publisher and politician, was born in San Francisco in 1863, son of late Senator George F. and Phoebe Apperson Hearst. He was educated in the public schools of San Francisco and at Harvard. He then became editor and proprietor of the *San Francisco Examiner*, 1886; bought *New York Journal*, 1895; later bought the *New York Advertiser* to secure news franchise, and consolidated it with the *Journal;* started the *Chicago American*, 1900. In 1902 changed name of morning issue in Chicago to *The Examiner*, and morning issue in New York to *The American*. After 1904 he also acquired the *Boston American* and the *Los Angeles Examiner*. He was elected to the 58th and 59th congresses from the 11th New York district, as democrat. He was candidate for mayor of New York in 1905 and 1909, and for governor in 1906. Was chief promoter of the independence league, and was responsible for making it a factor in the presidential campaign of 1908.

Heber (*hē'bēr*), **Reginald,** English prelate and hymn writer, was born at Malpas, Cheshire, 1783. He entered Brasenose College, Oxford, 1800, and in 1803 wrote his prize poem *Palestine*. He was appointed a prebendary of St. Asaph in 1812, Bampton lecturer in 1815, and preacher of Lincoln's Inn in 1822. In 1823 he accepted the see of Calcutta; but an episcopate of apostolic zeal was terminated by his sudden death at Trichinopoly, 1826. He published sermons, *A Journey Through India*, etc., and edited Jeremy Taylor's *Works*. His fame rests upon hymns, which include *Lord of Mercy and of Might; From Greenland's Icy Mountains; Holy, Holy, Holy*, and *The Son of God Goes Forth to War*.

Hébert (*ā'bâr*), **Louis Philippe,** French-Canadian sculptor, was born in the province of Quebec, 1850. In early days he worked on a farm; obtained prize at provincial exhibition, Montreal, for wood-carving in 1873; afterward studied in Paris, and won prize given by Dominion government for full-length statue of George Cartier. His chief works consist of statues, among which are those to Maisonneuse and Chénier, in Montreal.

Hecker, Isaac Thomas, founder and superior of the order of Paulist fathers, was born in New York in 1819. In 1843 he joined the Brook Farm community in West Roxbury, Mass. Later he established a similar society at Worcester, Mass., then took up the study for the Episcopal ministry, but in 1845 joined the Roman Catholic church, and became a Redemptorist father. Much of his time was devoted to literature. He founded the *Catholic World*, organized the Catholic publication society, and wrote *Questions of the Soul; Aspirations of Nature; The Church and the Age*, etc. Died, 1888.

Hedin (*he-dēn'*), **Sven Anders,** Swedish traveler and geographer, was born in Stockholm, 1865. He was educated at Stockholm, at Upsala, and in Germany; Ph.D., Halle. He began his explorations in Persia in 1885, and has traveled through Khorasan and Turkestan, several times through Tibet and other parts of central Asia. His books include: *Through Asia; Central Asia and Tibet; Scientific Results of a Journey in Central Asia; The Tarim River*, etc.

Hegan, Alice Caldwell. See **Rice, Alice Hegan.**

Hegel, Georg Wilhelm Friedrich, German thinker, and founder of a new school of philosophy, was born at Stuttgart, 1770. He was professor successively at Jena, Heidelberg, and Berlin. He was at first the disciple of Schelling, with whom he was associated in the conduct of a philosophical journal in 1802-3. But his opinions gradually took a different turn. He rejected Schelling's intellectual intuition as an unwarrantable assumption, although he continued to maintain its leading idea—the unity of the subjective or ideal, and the objective or real; and in this idea endeavored to establish that absolute cognition and absolute truth, which alone, according to this school, can satisfy the demands of the philosophical spirit.

Hegel seems not to have perfected his system; and as he had no power of exposition, or of lucid expression of his thoughts, it is impossible to give a clear view of his philosophy. Indeed, it would appear that he himself had the same notion; for he is said to have remarked, that, "of all his numerous disciples, only one had ever understood him, and even he had understood him falsely."

Be this as it may, his system has been the subject of much philosophical interest in the speculative world, chiefly from the widely discrepant deductions, political and religious, which his friends and enemies draw from it; some maintaining it to be favorable to the present order of things in church and state, others founding upon it conclusions at variance with all ordinary notions of religion or morality. Hegel died of cholera, at Berlin, 1831. A considerable portion of Hegel's system is accessible in translations; the *Logic* and *Philosophy of Mind* from the *Encyclopaedia* translated by Wallace; the *Philosophy of Right* by Dyde; part of the *Philosophy of Fine Art* by Bosanquet; *Philosophy of History* by Sibree; *Philosophy of Religion* by Speirs and Sanderson; *History of Philosophy* by Haldane.

References.—Caird's *Hegel*, in *Phil. Classics;* Wallace's *Prolegomena to Hegel's Logic;* Seth's *Hegelianism and Personality;* Ritchie's *Darwin and Hegel;* and Macintosh's *Hegel and Hegelianism*.

Heine (*hī'nē*), **Heinrich,** German poet and wit, was born at Düsseldorf, of Jewish parents, 1797. He abandoned Judaism, and was baptized in the Lutheran church of Heiligenstadt. He studied at Göttingen, and was graduated there in law. His *Buch der Lieder*—a portion of which had first appeared as *Youthful Sorrows*, in Berlin, 1822—was a brilliant success. Many of these songs are of the most exquisite and ethereal beauty. They are unmatched in German literature, except by the lyrics which Goethe wrote in his youth. About 1845 Heine was attacked by disease of the spine, and was almost constantly bedridden. He suffered the most acute pain, together with the loss of his sight, with the most

remarkable equanimity and even good-humor, until the day of his death, which took place in Paris. 1856.

Held, Anna, comedienne, was born in Paris, 1877, daughter of Maurice Held. She was educated in an academy at Rouen, France, and married in Paris F. Ziegfeld Jr. of Chicago. She made her début as comedienne in Paris, 1890; since then in many rôles; began starring, 1896, in *French Maid, Papa's Wife, Mme Napoleon,* at the Broadway theater, New York; in *Parisian Model,* Drury Lane theater, London; in United States in *The Little Duchess,* Casino theater, New York, etc.

Helmholtz, Herman von, German scientist, was born at Potsdam 1821. He was elected professor of physiology at Königsberg in 1849, at Bonn in 1855, and at Heidelberg in 1858. Although his earlier researches were mainly physiological, he took rank as a physicist and mathematician in 1847, when he published his striking tract on the *Conservation of Energy.*

Naturally gifted with a powerful mathematical mind and a profound physical intuition, he gave a new direction to physiological research in optics and sound. His *Sensations of Tone* and his *Physiological Optics* were epoch-making works. Meanwhile he had created a new field in hydrodynamics by his famous investigations on vortex motion; and his inquiry into the connection between sensation and knowledge led him to the study of the foundations of geometry.

He was called to Berlin in 1871, to fill the chair of physics. His contributions to the theory of electro-dynamics, in which he aimed at greater generality than was given by Maxwell's theory, are of great importance; and it was at his instigation that Hertz demonstrated the existence of Maxwellian electromagnetic waves. He enriched the theory of thermo-dynamics by his discussion of "monocyclic" systems, and in his later papers endeavored to get at the real essence of the principle of least action. Although the idea is tentatively put forth in Maxwell's writings, Helmholtz was the first to work out explicitly the notion of the electric atom or electron, as it is now called. From 1887 until his death in 1894, he was director of the technological institute at Charlottenberg, near Berlin.

References.—M'Kendrick's *Life* in Masters of Medicine Series; *Life,* in German, by Konigsberger; and article by Prof. Rucker in the *Fortnightly Review* for Nov., 1894.

Helmont (*hel'mont*), **Jan Baptista van,** Belgian chemist, was born at Brussels in 1577. In 1609 he settled at Vilvorde, near Brussels, where he practiced medicine gratuitously for thirty years. He was the first to point out the imperative necessity for employing the balance in chemistry. He paid much attention to the study of the gases, and is supposed by some authorities to have been the first to apply the term *gases* to elastic aëriform fluids. Of these gases he distinguished several kinds. His works were published under the title *Ortus Medicinæ.* Died, 1644.

Helps, Sir Arthur, English essayist and historian, was born at Streatham, 1813. He was graduated at Cambridge in 1835, and on leaving the university obtained a post in the civil service. He then resigned and retired to Bishop's Waltham, in Hampshire, where, in the possession of ample means, he enjoyed lettered ease. His first work of consequence was entitled *Essays written in the Intervals of Business.* Died, 1875.

Helst (*helst*), **Bartholomeus van der,** Dutch painter, was born at Haarlem or Dordrecht, between 1611 and 1614. He was joint-founder in 1654 of the painters' guild of St. Luke at Amsterdam, where he attained great celebrity as a portrait-painter. His best-known work is *The Banquet of the Civic Guard,* now in the Amsterdam gallery. He died in 1670.

Helvetius (*hel-vē'shi-us*), **Claude Adrien,** French philosopher, was born at Paris, 1715. In 1758 appeared his celebrated work *De l'Esprit,* in which he endeavors to prove sensation to be the source of all intellectual activity, and that the grand lever of all human conduct is self-satisfaction. He visited England in 1764, and the year following was entertained by Frederick the Great at Potsdam. His complete works were published after his death. Died, 1771.

Hemans (*hĕm'anz*), **Felicia Dorothea,** English poet, was born in Liverpool, 1793, daughter of George Browne, a Liverpool merchant, and became the wife of Captain Hemans. Her best poem of any length is *The Forest Sanctuary;* but her shorter pieces, published under the title of *Songs of the Affections,* etc., are by far the most popular. Many of these shorter pieces have become standard English lyrics, and upon them, almost exclusively, depends her claim to remembrance. She died in Dublin, 1835.

Henderson, Charles Richmond, American educator, sociologist, professor of sociology, University of Chicago, since 1892, was born at Covington, Ind., 1848. He was graduated at the University of Chicago, 1870; B.D., 1873; D.D., 1885, Baptist Union theological seminary; Ph.D., Leipzig, 1901. Associate editor of *American Journal of Theology* and *American Journal of Sociology.* Author: *Introduction to Study of Dependents; Social Spirit in America; Social Settlements;* Edited: *The Christian and Civic Economy of Large Towns; Modern Methods of Charity; Modern Prison Systems,* etc.

Henderson, William James, American writer, music critic, *New York Sun,* since 1902, was born at Newark, N. J., 1855. He was graduated at Princeton University, 1876. Was member of staff of *New York Tribune,* 1876; *Times,* 1883; music critic, 1887-1902. Author: *Story of Music; Preludes and Studies; Elements of Navigation; What is Good Music? How Music Developed; The Orchestra and Orchestral Music; Richard Wagner; Modern Musical Drift; Pipes and Timbrels, poems; The Art of the Singer,* etc. Associate editor, *Standard Dictionary.*

Hendricks, Thomas Andrews, vice-president of the United States in 1885, was born in Muskingum county, Ohio, 1819. Graduated at Hanover College in 1841, and was admitted to the bar in 1843. He was a democratic member of the house of representatives, 1851-55, served as United States senator, 1863-69, and as governor of Indiana, 1873-77. In 1876 he was nominated for the office of vice-president of the United States by the democrats, but was defeated. In 1876, 1880, and 1884 he was a prominent candidate for the nomination for the presidency; and in 1884, when Cleveland was nominated, he consented to take the nomination for the vice-presidency and was elected. He died at Indianapolis, Ind., 1885.

Heney, Francis Joseph, lawyer, was born in Lima, N., Y. 1859, and has been a resident of San Francisco practically since 1864. Was admitted to the bar, 1883. He engaged in cattle business in Arizona, 1885-89; practiced law, Tucson, Arizona, 1889-95; was attorney-general of Arizona, 1893-94; removed to San Francisco, 1895, and confined cases to civil business until urged by United States Attorney-General Knox to undertake land fraud cases at Portland, Ore.; discovered conspiracy of United States Attorney John H. Hall to protect guilty politicians in consideration of reappointment; secured removal and indictment of Hall, and indictment of Senator Mitchell, George C. Brownell, and others. He was then district attorney for San Francisco, but was defeated for reëlection in 1909

Henley, William Ernest, English poet, playwright, critic, and editor, was born at Gloucester, 1849. Months of illness in Edinburgh infirmary, 1873-75, bore fruit in *Hospital Rhymes,* and *A Book of Verses,* which won much attention, and was followed by *Views and Reviews; The Song of the Sword; For England's Sake; Hawthorn and Lavender,* etc. He edited the *Magazine of Art,* the *Scots Observer,* and the *New Review,* besides an edition of Burns. He also collaborated with R. L. Stevenson in four plays, *Deacon Brodie: Beau Austin; Robert Macaire,* and *Admiral Guinea.* He died in 1903.

Hennepin (*hen'ē-pin*), **Louis,** French priest, missionary and traveler, was born in Belgium about 1640. When La Salle undertook his exploration of the Mississippi valley, Father Hennepin was assigned to his command. They discovered Niagara falls, travelling west as far as Mackinac, and thence to Peoria, on the Illinois river. Here La Salle was obliged to leave the party, and Father Hennepin and two men in a canoe went down the Illinois river to its mouth, and thence north up the Mississippi, a journey of some six weeks, when they fell into the hands of a party of Sioux Indians. Father Hennepin spent nearly a year among the Indians, and was finally rescued by Du Luth, after whom Duluth was named. Upon his return to Europe, Hennepin published a history of his travels, which is of the grestest value in dealing with the early explorations of the Mississippi valley. Died at Utrecht about 1706.

Henry I., king of England, youngest son of William the Conqueror, was born in 1068. He successfully held the crown against his brother Robert, at first negotiating with him, and granting him a pension to resign his pretensions, but finally making war against his badly governed duchy. Robert was defeated in a bloody battle before the walls of Tenchebray in 1106, taken prisoner, and shut up in Cardiff castle during the remaining twenty-eight years of his life. The acquisition of Normandy, the ancient patrimony of his family, had been a point of ambition with Henry, but he had some trouble in keeping it, as the French king, Louis VI., and the counts of Anjou and Flanders took part with William, Roberts' youthful son, whose virtues and misfortunes secured him friends. Henry, however, brought over to himself the count of Anjou; he rendered neutral, by his eloquence and fair promises, Pope Calixtus II. and defeated the French king and his mailed knights in the almost bloodless battle of Brenneville, 1119. Next year his successes in arms and intrigues were darkened for life by the death of his only son William, who was drowned at sea on his passage from Normandy to England. Henry was styled *Beauclerc,* or "the scholar," in honor of his learning, which, for a king in his age, was not undeserving of distinction. Died, 1135.

Henry II., king of England, grandson of Henry I., was born in 1133. He was crowned with his queen, Eleanor, who was countess of Poitou and duchess of Aquitane in her own right. Henry inherited from his father Anjou, Touraine, and Maine, and his father and mother succeeded in keeping and taking possession of Normandy for themselves and him; so that, by one method and another, he came to be possessed of a large portion of France as well as England. His chief rivals in power were the clergy. To aid him in reducing the church to subjection to the civil power he appointed his trusted chancellor, Thomas à Becket, to the see of Canterbury, and compelled him and the other ecclesiastics to agree to the constitutions of Clarendon. Becket, however, proved to be a true churchman, and the long and obstinate struggle between him and his monarch was only terminated by his murder. During his reign occurred the conquest of Ireland. This was a nominal conquest, for the majority of the Irish tribes and chieftains continued to be independent barbarians for centuries. Henry's sons, incited by their jealous mother, Queen Eleanor, rebelled against him, and their cause was espoused by the kings of France and Scotland. In the course of this filial rebellion Henry, the eldest, died of a fever, and Geoffrey was killed in a tournament at Paris. Richard, surnamed Coeur de Lion, with King Philip of France, obtained some advantages over his father. A treaty of peace was concluded between them, of which one of the stipulations was for an indemnity for all the followers of Richard. Died, 1189.

Henry III., king of England, grandson of Henry II., and eldest son of King John, was born in 1207. He came to the throne in 1216 when a minor, and in the course of a long reign provoked much hostility by his foreign favorites and his submission to papal exactions. This discontent culminated in the barons' war, 1262-65, in which he was defeated and compelled to submit to control of the government by De Montfort and his friends. During this reign the great charter (with important clauses omitted) was frequently renewed and Westminster abbey was almost entirely built. Died, 1272.

Henry IV., king of England, first king of the house of Lancaster, was born in 1367, and surnamed Bolingbroke, from his birthplace. About 1380 he was made earl of Derby, and married Mary de Bohun. In 1397 he supported Richard II. against Gloucester, and the following year was banished. Upon the death of his father, John of Gaunt, his estates were forfeited. In July, 1399, he landed in York with three small vessels, and on September 29th he obtained from Richard, then a prisoner in the Tower, an abandonment of his claims to the throne. On the next day, Henry arose in parliament and claimed kingdom and crown. In 1412 he sent two expeditions into France, but in his closing years he was afflicted with epileptic fits, in one of which he died at Westminster, 1413.

Henry V., king of England, was born at Monmouth, 1387, eldest son of Henry IV. by Mary de Bohun. He was crowned in 1413, and at the outset of his reign liberated the young earl of March, the true heir to the crown, restored Hotspur's son to his father's lands and honors, and had Richard II's. body buried in Westminster. The great effort of his reign was an attempted conquest of France; and in 1414 he demanded the French crown, to which he seems to have believed that he had a valid claim through his great-grandfather, Edward III. In 1415 he sailed with an army of 30,000 men and in September took Harfleur. In October, at Agincourt, he gained a battle against such odds as to make his victory one of the most notable in history. In 1420 was concluded the "perpetual peace" of Troyes, under which Henry was recognized as regent and "heir of France," and married the French king's daughter, Catherine of Valois. In 1421 he took his young queen to England to be crowned; but in a month he was recalled by the news of the defeat at Beaugé of his brother, the duke of Clarence. Henry's wonted success was attending him, when he was seized with illness, and died at Vincennes, 1422, leaving an infant to succeed him.

Henry VII., king of England, was born about 1457, first of the Tudor dynasty. He was the son of Edmund Tudor and Margaret Beaufort, a descendant of John of Gaunt. He invaded England in 1485, and defeated Richard III. at Bosworth, after which he married Elizabeth, daughter of Edward IV. His reign was marked by three Yorkist risings, which he defeated, by the measures he enforced against the nobles, by his system of marriages with foreign princes, and the enactment of Poyning's law. Died, 1509.

Henry VIII., king of England, second son of Henry VII. and Elizabeth of York, was born in 1491. Betrothed at twelve, he was married in 1509, shortly after his succession, to Catharine of Aragon, his brother's widow, six years his senior. He chose his ministers wisely, and, leaving much to their

discretion, nevertheless held the reins of government himself. Wolsey, archbishop of York, his chief minister, held almost unlimited power, dependent, however, on the king's will and favor. In 1521 Henry gained from the pope the title "defender of the faith," still borne by the English sovereign, for his *Assertio Septum Sacramentorum* against Luther. The appearance at court of Anne Boleyn, and the failure of a male heir, encouraged Henry to raise the old question as to the legality of the marriage with Catharine. Wolsey zealously aided him, seeing in a divorce the possibility of a breaking of ties with Charles V. and an alliance with France. The appeal to the pope in 1527 resulted only in the appointment of a commission. In 1533 Henry, impatient at the delay, was privately married to Anne, with whom he had long been living; three months later the marriage was announced, and Cranmer, calling a court, as the highest ecclesiastical authority in England, pronounced the divorce from Catharine and declared the marriage null and void from the beginning. A year later Clement decided in favor of Catharine, but not until Henry had severed all connections with Rome, by making it treason to deny his authority as head of the church of England. In quick succession came the translation of the Bible, its introduction into every church, the act of uniformity, and the ten articles of faith, later changed again to six articles, embodying substantially the old creed, with the penalty of death for denial. In 1536 Henry charged Anne Boleyn with infidelity, sent her to the block and married Jane Seymour, by whom he had a son, Edward VI. She died in 1637 and three years later he married Anne of Cleves, at Cromwell's suggestion. She proved far from handsome, was divorced, and Cromwell sent to the block. On the day of his execution Henry married Catherine Howard, but she was soon found unfaithful, and beheaded. In 1543 Henry married Catharine Parr, who survived him. He died, 1544.

Henry II., king of France, was born in 1519, son of Francis I., whom he succeeded in 1547. By his alliance with the German Protestants, he acquired Metz, Toul, and Verdun, carried on his father's war with Spain, was defeated at St. Quentin in 1557, but in 1558 he regained Calais from the English. He died in 1559 of a wound inflicted in a tournament held to celebrate the conclusion of the war by the marriage of his daughter and Philip II. of Spain.

Henry III., king of France, third son of Henry II. and Catharine de' Medici, was born in 1551. In 1573 the intrigues of the queen-regent secured his election to the crown of Poland; but in 1575 he succeeded his brother, Charles IX., on the French throne. His reign was a period of almost incessant civil war between Huguenots and Catholics, the duke of Guise having formed the holy league to assert the supremacy of Catholicism and secure the reversion of the throne to the Guises. In 1588 the assassination of the duke of Guise roused the Catholics to the utmost pitch of exasperation; Henry threw himself into the arms of Henry of Navarre, and the two marched upon Paris at the head of a Huguenot army. But in August, 1589, Henry was stabbed by a fanatical Dominican named Jacques Clément; he died, the last of the house of Valois, on the following day, nominating Henry of Navarre as his successor.

Henry IV., king of France, was born in 1553, son of Anthony of Navarre, a descendant of Louis IX. He was founder of the Bourbon dynasty, succeeding Henry III. in 1589. His marriage with Marguerite de Valois, in 1572, was the occasion of the Bartholomew massacres. In 1576 he quitted the court and became leader of the Huguenots and opponent of the league, being the rival of the Guises for the succession. He defeated them at Arques and Ivry, but was unable to conquer Paris without becoming a Roman Catholic, which he did in 1593. He concluded peace with Philip II. at Vervins, and issued the edict of Nantes. He was assassinated by Ravaillac, 1610.

Henry IV., emperor of the holy Roman empire, was born at Goslar, Prussia, 1050, son of Henry III. He was crowned emperor in 1084 by Clement III. The chief occurrence of his reign was the struggle with Gregory VII., with whom he began the investiture disputes. During this celebrated controversy he deposed Gregory, but was himself excommunicated and deposed, and was obliged to submit at Canossa in 1077. In 1084 he again invaded Italy, and captured Rome. Died, 1106.

Henry, Joseph, American physicist, was born in Albany, N. Y., 1799; was appointed professor of natural philosophy in the college of New Jersey at Princeton, 1832; and, in 1846, was called to the office of secretary or director of the Smithsonian institution at Washington, to the organization and wide reputation of which he had mostly contributed. Henry made most important discoveries in electro-magnetism, and disputed with Morse the invention of the electric telegraph. Died, 1878.

Henry, Patrick, American orator and statesman, was born in Virginia in 1736. After receiving a common school education and spending some time in trade and agriculture, he commenced the practice of law, after only six weeks of preparatory study. In spite of several years of poverty, he first rose to distinction in managing the popular cause in the controversy between the legislature and the clergy, touching the stipend which was claimed by the latter. In 1765 he was elected a member of the Virginia house of burgesses, with express reference to an opposition to the British stamp act. He was one of the delegates sent by Virginia to the first general congress of the colonies, in 1774, and in that body distinguished himself by his boldness and eloquence. In 1776 he was appointed the first governor of the commonwealth, and to this office was repeatedly reëlected. In 1788 he was a member of the convention which met in Virginia to consider the constitution of the United States, and exerted himself strenuously against its adoption. Without extensive information upon legal or political topics, he was a natural orator of the highest order, possessing great powers of imagination, sarcasm, and humor, united with great force and energy of manner, and a deep knowledge of human nature. Died 1799.

Henry, king of Navarre. See **Henry IV.,** king of France.

Henry the Lion, duke of Saxony and Bavaria, was born in 1129. He was the son of Henry the Proud, a rebellious noble who had been deprived of his estates by Conrad III. On his death these dukedoms were restored to his son Henry the Lion, who became the greatest of all the German princes. Great improvements were made by him in his dominions, and he became so powerful as to determine to be no longer a subject even to the emperor. Died in 1195.

Henry the Navigator, son of John I., king of Portugal, and the English Philippa, daughter of John of Gaunt, was born in 1394. He distinguished himself at the capture of Ceuta in 1415; took up his residence at Sagres, in Algarve; and during the war against the Moors his sailors reached parts of the ocean before unknown. Henry's thoughts were now directed toward the gold-producing coasts of Guinea; and in 1434 one of his mariners sailed round Cape Nun, and touched Cape Bojador. Next year another expedition reached a point 120 miles beyond Cape Bojador. Up to this period the prince had borne the expense of these voyages himself; henceforth, societies for the purpose were formed under his guidance. In 1445 Henry's captain, Nuno Tristam, doubled Cape Verde, and in 1448 Gonzalez Vallo discovered three of the Azores. Henry died in 1460, after his mariners had reached Sierra Leone.

Henson, Herbert Hensley, canon of Westminster abbey and rector of St. Margaret's since 1900, was born in London, England, 1863. He was educated privately and at Oxford; was a fellow of All Souls College, Oxford, 1884-91; reëlected, 1896; B. D., 1898; hon. D.D., Glasgow, 1906. Author; *Light and Leaven; Apostolic Christianity; Cross Bench Views of Current Church Questions; Preaching to the Times; English Religion in the 17th Century; Moral Discipline in the Christian Church; Religion in the Schools; Christ and the Nation*, etc.

Hepburn, Alonzo Barton, banker, was born at Colton, N. Y., 1846. He was graduated at Middlebury College, Vermont, 1871; LL. D., St. Lawrence university, 1900; D.C.L., 1906. United States bank examiner for New York, 1888-92; comptroller of the currency, 1892-93; president Third national bank, New York city, 1893-97; president Chase national bank since 1899. He is also a trustee in the New York life insurance company; director Bankers trust company, etc. Author of *History of Coinage and Currency*, and frequent contributor to reviews and magazines.

Hepburn, James Curtis, American physician and medical missionary, was born at Milton, Pa., 1815. He graduated at Princeton College, 1832; University of Pennsylvania medical department, M.D., 1836; LL. D., Lafayette, 1872, Princeton, 1905. Went to China as medical missionary, 1840; went to Japan, 1859; lived in Yokohama until 1892; returned to United States, 1893, and retired. He compiled first English dictionary of Japanese language; published an *English-Japanese Dictionary;* wrote a grammar of the Japanese language; translated the Bible into the Japanese language, 1872-88, and published a Japanese *Dictionary of the Bible*, 1891.

Hepburn, William Peters, lawyer, congressman, was born in Wellsville, Ohio, 1833. His parents removed to Iowa in 1841, where he was educated in local schools and in a printing office. He was admitted to the bar in 1854; in the Union army, 1861-65, as a captain, major, and lieutenant-colonel, 2d Iowa cavalry; was presidential elector, 1876 and 1888; member of congress, 1881-87, and 1893-1909 from the 8th Iowa district. While a member of congress he was chairman of committee on interstate and foreign commerce, and author of the Hepburn bill to regulate interstate commerce. He was regarded as one of the ablest debaters in the lower house for many years.

Heraclius (*her-ā-kli'us*), Byzantine emperor, was born in Cappadocia about 575. In 610 he headed a revolt against Phocas, slew him, and mounted his throne. After thirty years of almost incessant fighting, he died in 641.

Herbart (*her'bärt*), **Johann Friedrich,** German philosopher, was born at Oldenberg, Germany, 1776. He then studied at Jena, became the pupil of Fichté, and received his philosophy with enthusiasm; but after more reflection he found himself obliged to reject much of his system, and to form one of his own. In 1808 he was appointed professor at Göttingen, and in 1809 obtained the chair of philosophy at Königsberg. In 1833 he returned to Göttingen, where he remained until death. His collected works were published by his scholar, Hartenstein, 1850-52. Died, 1841.

Herbert, George, English poet, was born in Montgomery castle, Wales, 1593. In 1609 he entered Trinity College, Cambridge, in 1615 was elected a fellow, and was public orator, 1619-37. He looked for advancement at court, but, by the gift of a prebend of Lincoln and the friendship of Nicholas Ferrar, he was drawn toward a religious life, and in 1630 was presented to the vicarage of Bemerton near Salisbury. He held it only three years, when he died in 1633. His *Country Parson* is generally considered to be a picture of himself; *The Temple, or Sacred Poems and Private Ejaculations* contains some of the purest religious verse in the English language.

Herbert, Victor, conductor, composer, was born in Dublin, Ireland, 1859. He began his musical education in Germany at the age of seven, studying under leading masters, and gained his first position of prominence as principal violoncello player in court orchestra, Stuttgart. Subsequently he was connected with Theodore Thomas', Seidl's, and other orchestral organizations as soloist and conductor. Bandmaster of 22d regiment band, New York, since 1894; conductor of Pittsburg, Pa., orchestra, 1898-1904; Victor Herbert's New York orchestra, since 1904. Composer: *The Captive*, an oratorio; *Prince Ananias; The Wizard of the Nile; The Serenade; Cyrano de Bergerac; The Ameer; The Viceroy; The Idol's Eye; The Fortune Teller; The Singing Girl; Babette; Babes in Toyland; It Happened in Nordland*, etc., all comic operas. He has also written several compositions for orchestra, songs, and a concert for violoncello and orchestra.

Herder (*her'dēr*), **Johann Gottfried von,** German critic and poet, was born at Mohrungen in East Prussia, 1744. He studied at Königsberg, and there became acquainted with Kant and Hamann. Between 1766 and 1769 he wrote two works, in which he maintained that the truest poetry is the poetry of the people. In 1769 he made the acquaintance of Goethe at Strassburg. In 1802 he was ennobled by the elector of Bavaria. He wrote many important works, among them: *Fragments of the more Modern German Literature; Origin of Language; The Oldest Record of the Human Race; Folk-Songs; Voices of the Nations in Songs; Letters for the Advancement of Humanity*, etc. He died at Weimar, 1803.

Herkomer (*hûr'kō-mēr*), **Hubert von,** English artist, was born in Waal, Bavaria, 1849. His father, Lorenzo Herkomer, a skillful wood-carver, emigrated with his family to the United States, 1851, but in 1857 removed to England and settled in Southampton. At the age of thirteen Herkomer entered the art school at Southampton, and won a bronze medal there. He then studied at Munich, established himself in the village of Hythe, and there painted two pictures, which he exhibited at the Dudley gallery. He finally removed to London, where he occupied himself successfully with water-color painting and designing for wood engravings. Subsequently he turned his attention to etching and other branches of practice. He became a member of the royal academy, an honorary member of the imperial academy of Vienna, and succeeded Ruskin as Slade professor of art at Oxford, 1885-94.

Hermes (*her'mās*), **Georg,** Roman Catholic philosopher, was born at Dreyerwalde in Westphalia, 1775. He sought to base the Catholic faith and doctrines on a critical theory of knowledge like Kant's. The Hermesian method departed widely from the old text-books of the schools; and although his substantial orthodoxy was not questioned, his doctrines were condemned by a papal brief in 1835 as heretical, and his followers were deprived of their chairs. Died, 1831.

Herne (*hûrn*), **James A.,** American actor and dramatist, was born at Troy, N. Y., 1840. He appeared chiefly in his own plays, chief of which are: *Hearts of Oak; Margaret Fleming; Shore Acres; Rev. Griffith Davenport; Sag Harbor.* He was an actor of great ability and a skillful stage manager. Died, 1901.

Herod (*her'ud*) **the Great,** king of Judæa, was born at Askalon, 63 B. C., became governor of Galilee about 47, and through the influence of Mark Antony ascended the throne of Judæa in 40. During his reign occurred the birth of the Messiah, and the consequent massacre of the innocents. Herod was so cruel by nature that for deeds of blood and violence his name became a proverb. Died, 4 B. C.

Herodotus, Greek historian, styled the father of history, was born in Halicarnassus, Asia Minor, about 484 B. C., and died about 420. He belonged to an illustrious family, received a high education and engaged in frequent and distant travel. He visited Babylon, Ardericca near Susa, the remoter parts of Egypt, Cyrene, Colchis, Scythia, Thrace,

Tante, Dodona, and Magna Græcia, thus ranging over a space more than 1,700 miles from east to west and 1,600 miles from north to south.

It is related that in 446 the Athenian assembly decreed a reward to him for his *History*, which he had read publicly; and that he made known his work by recitation not only at Athens but in other cities, and also before the assembled Greeks at the great Olympian festival. He went about 440 to Thurii, a colony newly founded by the Athenians near the site of the former Sybaris, where he is said to have passed the remainder of his life, perfecting his *History*. The abruptness of its close and occasional traces of incompleteness indicate that it was not entirely finished at his death.

The main subject of Herodotus' *History* is the Persian war of invasion, yet he takes every opportunity of diverging from it in order to introduce his various historical, geographical, and antiquarian knowledge. In Egypt the priests took advantage of his ignorance of the language to magnify the antiquity of their nation, and to modify inglorious portions of their history. His accounts of Babylon are correct in outline, but lack the fullness and precision of the narrative of Berosus. His Persian history is based in the main on authentic national records, diversified especially in the earlier part by circumstances and adventures from romantic chroniclers.

His chief defect as a historian is an undue love of the marvelous; but he is truthful and accurate whenever he speaks from his own observation. The simple beauty of his style, the grandeur of his historical combinations, and the entertainment which his narrative furnishes, have never been questioned; and he is esteemed by scholars the earliest and best of romantic historians.

References.—His *History*, with commentary, has been translated into English, by Rawlinson, by Sayce, and by Macan. There is also a good translation by G. C. Macaulay. See also Wheeler's *Life and Travels of Herodotus*.

Herrera (*er-rā'rä*), **Antonio de,** Spanish historian, was born at Cuellar near Segovia, 1549. Philip II. made him chief chronicler of America, and historian of Castile, which offices he filled for many years. He wrote a history of *Castilian Exploits in the Pacific*, a description of the West Indies, a history of England and Scotland in the time of Mary Stuart, etc. Died, 1625.

Herrera, Fernando de, Spanish lyric poet, was born at Seville about 1534, and took orders in the church. Many of his love-poems are remarkable for tender feeling, while his odes display a lofty enthusiasm. He wrote a prose history of the war in Cyprus, and translated from the Latin of Stapleton a *Life of Sir Thomas More*. Died, 1597.

Herrera, Francisco, "the elder," Spanish painter, was born in Seville, 1576. He painted historical pieces, wine-shops, fairs, carnivals, and scenes from the life of the people, and was one of the most eminent Spanish painters of the school of Seville. The cupola of the church at St. Bonaventure displays his skill in fresco-painting. Some of his best works are in the Louvre at Paris. Died, 1656.

Herrick, Myron T., financier, ex-governor of Ohio, was born at Huntington, Ohio, 1854. He was educated in the district schools in Ohio, at Oberlin College and Ohio Wesleyan University; was admitted to the bar, Cleveland, 1878. He retired from law practice, 1886. From 1903 to 1906 he was governor of Ohio, and has since been influential in the politics of the state.

Herrick, Robert, English poet, was born in Cheapside, London, 1591, son of a goldsmith. He was educated at St. John's College and at Trinity Hall, Cambridge. After taking orders as a clergyman of the church of England, he was presented by Charles I. to the vicarage of Dean Prior. In 1648 he published his celebrated Collection of lyrical poems, entitled *Hesperides, or the Works both Human and Divine of Robert Herrick, Esq.* About the same time he published *Noble Numbers, or Pious Pieces*. His poems, not fewer than thirteen hundred in number, include, though they are very unequal, some of the finest lyrical pieces in the language. Died, 1674.

Herrick, Robert, educator, novelist, was born at Cambridge, Mass., 1868. He was graduated at Harvard, 1890; was instructor in rhetoric, Massachusetts Institute of technology, 1890-93; professor of English, University of Chicago, since 1893. Author: *The Man who Wins*; *Literary Love Letters* and *other Stories*; *The Gospel of Freedom*; *Love's Dilemmas*; *Composition and Rhetoric* (with Professor L. T. Damon); *The Web of Life*; *The Real World*; *Their Child*; *The Common Lot*; *The Memoirs of an American Citizen*, etc.

Herschel (*hûr'shel*), **Caroline Lucretia,** sister of the astronomer, Sir (Frederick) William Herschel, was born in Hanover, 1750. When William was appointed astronomer to George III. she acted as his assistant, and in that character received a small salary from the king. She discovered seven comets, for five of which she has the credit of priority of discovery. Several remarkable nebulæ and clusters of stars included in her brother's catalogues were described from her original observations. She was made an honorary member of the royal society, and died in 1848.

Herschel, Sir John Frederick William, English astronomer, son of Sir (Frederick) William Herschel was born in 1792. About 1825 he began his observations in sidereal astronomy, to which he chiefly devoted himself. His great enterprise was his expedition toward the close of 1833 to the Cape of Good Hope to take observations of the southern firmament. In 1847 appeared his *Results of Astronomical Observations at the Cape of Good Hope*, one of the most valuable works of our time. His residence at the cape gave not only valuable additions to astronomy, but also to meteorology. His observations on the milky way, on the brightness and the color of stars, on variable stars, on the sun's rays, on the atmospheric air, and on the Magellanic clouds, are all very valuable. He also made valuable researches in light, sound, and celestial physics. His best known work is *Outlines of Astronomy*. Died, 1871.

Herschel, Sir (Frederick) William, German-English astronomer, was born in Hanover, 1738. In 1757 he went to England. Here he turned his attention to astronomy. Wanting a telescope, and unable to afford a reflector, he made one for himself. In 1781 he discovered the planet Uranus, which discovery resulted in his appointment as private astronomer to George III., with a salary of 200 pounds a year. He was knighted by George III., and made a D. C. L. by the University of Oxford. He greatly added to our knowledge of the solar system; discovered six satellites of Uranus, and two satellites of Saturn; detected the rotation of Saturn's ring, the period of rotation of Saturn itself, and the existence of the motion of binary stars, the first revelation of systems besides our own. He threw new light on the milky way and the constitution of nebulæ, and, in fact, was the first to give the human mind a proper conception of the immensity of the universe. Died, 1822.

Hertz (*hêrts*), **Henrik,** Danish poet and dramatist, was born in Copenhagen, 1798. He was of Jewish descent, was educated at the University of Copenhagen, traveled abroad, and returned as a professor of the University. His first important work was *Letters of a Ghost*, a rhymed satirical poem. His subsequent works include: *Svend Dyring's House*; *The Saving's Bank*; *Love and Politics*; *The Heirs*, etc. Died, 1870.

Hervieu (*er'vyû'*), **Paul Ernest,** French author and dramatist, was born at Neuilly-sur-Seine, 1857. He was educated at the Lycée Condorcet, Paris; and at the Ecole de Droit, and was admitted as an advocate, 1877. In 1900 he was elected to the French academy. He has written several novels, but his most notable achievements are his dramas, which are marked by keen observation of life and delicate fancy.

Herzog (*her'tsōk*), **Johann Jakob,** German theologian, was born at Basel, 1805. He became professor at Lausanne, 1830, at Halle, 1847, and Erlangen, 1854. He wrote books on the Plymouth brethren and the Waldenses, lives of Calvin and Œcolampadius, a church-history, etc., and edited the great *Realencyklopädie für Protestantische Theologie und Kirche* (22 volumes). Died, 1882.

Hesiod (*he'si-ŏd*), one of the earliest Greek poets, was born in Bœotia, lived in the eighth century B. C., chiefly at Orchomenos, probably of humble birth. Of the works ascribed to him the principal were the *Works and Days*, the *Theogony*, and the *Shields of Hercules*. His poems treat of the quiet pursuits of ordinary life, the orgin of the world, the gods and heroes, while those of Homer are occupied with the restless and active enterprises of the heroic age.

Hewlett, Maurice Henry, English historical writer and novelist, was born at London, 1861. He was educated at the London International College, at Spring Grove, Isleworth; was admitted as a barrister, 1891. Author: *Earthwork out of Tuscany*; *The Masque of Dead Florentines*; *Songs and Meditations*; *The Forest Lovers*; *Pan and the Young Shepherd*; *Little Novels of Italy*; *Richard Yea-and-Nay*; *New Canterbury Tales*; *The Queen's Quair*; *The Road in Tuscany*; *Fond Adventures*; *The Fool Errant*; *The Stooping Lady*; *Half-way House*, etc.

Heyburn, Weldon Brinton, United States senator, lawyer, was born in Delaware county, Pa., 1852. He received an academic education, studied law, and was admitted to the bar in 1876. He removed to Shoshone county, Idaho, 1883, and has since practiced there. He was a delegate to republican national conventions, 1888, 1892, 1900; was republican nominee for congress, 1898, but was defeated; elected United States senator from Idaho, 1903, for term 1903-09, and relected 1909-15.

Heyne (*hī'nē*), **Christian Gottlob,** German classical scholar, was born in Saxony, 1729. In 1753 he obtained the situation of under-clerk in the Brühl library at Dresden. In 1756, unfortunately for Heyne, the Seven Years' war broke out. Frederick the Great marched against Dresden, and burned, among other things, the Brühl library, but not before Heyne had edited, from a *codex* there, the *Enchiridion* of Epictetus. In 1763, on the death of Gessner, professor of rhetoric at Göttingen, Heyne was appointed his successor. Died, 1812.

Heyse (*hī'zē*), **Paul Johann,** German poet, dramatist, and novelist, was born in Berlin, 1830. He was educated at Berlin and Bonn, and settled at Munich in 1854. He has published more than a score of collections of novelettes, good specimens of which are contained in *Das Buch der Freundschaft*. His poetic works include narrative poems, such as *Urica*, and epics, such as *Die Braut von Cypern* and *Thekla*.

Hezekiah, king of Judah, son and successor of Ahaz, reigned from 726 to 696 B. C. There was "none like him among all the kings of Judah" is the praise bestowed upon him in the book of *Kings*. At the head of a repentant and united people Hezekiah returned to assume the aggressive against the Philistines, and in a series of victories not only re-won the cities his father had lost, but captured others. At length Sennacherib with a mighty host advanced against Jerusalem, but by some catastrophe 180,000 men in the Assyrian camp were killed in a single night, and Sennacherib was obliged to retreat. A second Assyrian invasion, however, under Merodach-baladan, resulted in the capture and the end of Hezekiah's rule.

Hibben, John Grier, Educator, president of Princeton University, was born at Peoria, Ill., 1861. He was graduated from Princeton, 1882; Princeton Theological seminary, 1886; Ph.D. 1893; LL. D., Lafayette College, 1907. Pastor of Presbyterian church 1887-91; instructor and professor of philosophy, Princeton, 1891-1912. President of Princeton since Jan. 1912. He is the author of several works on philosophy, chiefly logic, and also editor of *Epochs of Philosophy*, in twelve volumes, by English and American writers.

Hick, Elias, American Quaker preacher, was born at Hempstead, L. I., 1748. At twenty-seven he was a well-known and influential Quaker preacher, and for many years traveled through the United States and Canada. He exercised great influence among his co-religionists until his Unitarianism brought him into disfavor with orthodox Friends; but he defended his views with perseverance, and at eighty he still preached. The result was schism of the society into two divisions, known as orthodox and Hicksite Friends. He was a vigorous abolitionist. Died, 1830.

Higginson, Henry Lee, banker, was born in New York, 1834. He entered Harvard in 1851, but did not complete course. He served in United States volunteers in civil war, becoming major and brevetted lieutenant-colonel of 1st Massachusetts cavalry, and was severely wounded at Aldie, Va., June, 1863. He later entered the firm of Lee, Higginson and Company, bankers, Boston. He has devoted a considerable sum to organization of the symphony orchestra in Boston, and has dispensed numerous other philanthropies.

Higginson Thomas Wentworth, American writer, was born in Cambridge, Mass., 1823. He graduated at Harvard, 1841; LL. D., Harvard. After several years in the ministry he entered into the movement against slavery; took part in the civil war as captain of the 51st Massachusetts volunteer militia, later colonel 1st South Carolina (Union) volunteers, and afterward of the 33d United States colored troops. Author: *Outdoor Papers*; *Army Life in a Black Regiment*; *Life of Margaret Fuller Ossoli*; *Larger History of the United States*; *The Monarch of Dreams*; *The New World and the New Book*; *Concerning All of Us*; *Such As They Are*, poems; *English History for Americans*; *Old Cambridge*; *Contemporaries*; *Henry W. Longfellow*, in American Men of Letters series; *John G. Whittier*, in English Men of Letters series; *A Reader's History of American Literature*; *Part of a Man's Life*, etc. Died, 1911.

Hildebrand (*hil'dē-brand*), **Saint.** See **Gregory VII.**

Hildreth (*hil'dreth*), **Richard,** American historian, was born in Deerfield, Mass., 1807. He was graduated at Harvard College in 1826; admitted to the bar in 1830, and became connected with the Boston *Atlas* and other newspapers. In 1861 he became United States consul at Trieste, Austria. Among his most notable works are the *White Slave*, an anti-slavery novel; *History of the United States* (6 volumes); *Banks, Banking and Paper Currency*; etc. He died at Florence, Italy, 1865.

Hilgard (*hil'gärd*), **Eugene Woldemar,** professor of agriculture, University of California, and director California agricultural experiment station since 1875, was born at Zweibrücken, Rhenish Bavaria, 1833. Was graduated at Heidelberg, Ph. D., 1853; LL. D., Columbia. He was state geologist, Mississippi, 1855-73; also professor of chemistry, University of Mississippi, and professor of geology and natural history, University of Michigan, 1873-75. Received the Liebig medal for distinguished achievements in agricultural sciences from academy of sciences, Munich; also gold medal, Paris exposition, 1900, as collaborator in agricultural science. Author: *Report on the Geology and Agriculture of Mississippi*;

Report on the Agricultural Features of the Pacific Slope; *Reports and Bulletins California Experiment Station*, 1877-1903. Editor: *Cotton Culture in the United States, 10th Census.*

Hill, Adams Sherman, educator, was born in Boston, Mass., 1833. He was graduated at Harvard College, 1853; Harvard Law School, 1855; LL. D., 1903. He was law reporter, correspondent, and editor, New York, Washington, and Chicago, 1856-68; assistant professor of rhetoric, 1872-76, Boylston professor of rhetoric and oratory, Harvard, 1876-1904, emeritus professor same since 1904. Author: *Principles of Rhetoric*; *Our English*; *Foundations of Rhetoric*; *Beginnings of Rhetoric and Composition*, etc. Died, 1911.

Hill, Albert Ross, educator, president University of Missouri since 1908, was born in Nova Scotia, 1869; graduated at Dalhousie University, 1892; Ph. D., Cornell, 1895; LL. D., University of South Carolina, 1905, and director of psychological laboratories, University of Nebraska; professor educational psychology and dean of teachers' college, University of Missouri, 1903-07; professor philosophy of education, director of school of education and dean of college of arts and sciences, Cornell University, 1907-08. He was president of the Western philosophical association, 1904-05.

Hill, Ambrose Powell, American soldier, was born in Virginia, 1825. He was graduated at West Point, 1847, served in the Mexican war, and entered the confederate army in 1861 as colonel. He served in Johnston's command at the first battle of Bull Run; became a major-general, 1862; commanded the right wing of Jackson's corps at Chancellorsville; was promoted to lieutenant-general, 1863; commanded a corps at Gettysburg; repelled, with Longstreet, the attack on Weldon railroad; was killed near Petersburg, Va., 1865, while reconnoitering.

Hill, David Bennett, American lawyer and politician, was born at Havana, N. Y., 1843. He was educated at the district schools and Havana Academy, and was admitted to the bar in 1864. Delegate to national democratic conventions, 1876, 1884, 1896, 1900, 1904; seconded nomination of William J. Bryan for presidency, 1900; mayor, 1882, Elmira, N. Y.; lieutenant-governor of New York, 1882-85; governor of New York, 1885-91; United States senator, 1891-97; prominent candidate for presidential nomination in national democratic convention, 1892; candidate for governor of New York, 1894; Died, 1910.

Hill, David Jayne, American diplomat, scholar, was born in Plainfield, N. J., 1850. He was graduated at Bucknell University, Pa., 1874; LL. D., Colgate, University of Pennsylvania, President of Bucknell University, 1879-88; president of University of Rochester, 1888-96; resigned; spent nearly three years in study of public law of Europe; professor of European diplomacy in school of comparative jurisprudence and diplomacy, Washington. Assistant secretary of state of United States, 1898-1903, envoy extraordinary and minister plenipotentiary of United States to Switzerland, 1903-05; to the Netherlands, 1905-07; ambassador to Germany 1908-1911. Author: *Life of Washington Irving*; *Principles and Fallacies of Socialism*; *Genetic Philosophy*; *International Justice*; *The Life and Work of Hugo Grotius*; *The Contemporary Development of Diplomacy*; *A History of Diplomacy in the International Development of Europe*, etc. Also numerous political pamphlets in English and German, and printed addresses.

Hill, James J., railway official, capitalist, was born near Guelph, Ont., 1838. He was educated at Rockwood Academy; left his father's farm for business life in Minnesota. He established in 1870 the Red River transportation company, which was the first to open communication between St. Paul and Winnipeg; organized, 1875, the Northwestern fuel company, and three years later sold out his interest, in the meantime having organized a syndicate which secured control of the St. Paul and Pacific railroad, from the Dutch owners of the securities. He reörganized the system as the St. Paul, Minneapolis and Manitoba railway company, and was its general manager, 1879-82; vice-president, 1882-83, and president after 1883. This railway became part of the Great Northern system, 1890. He became president of the entire Great Northern system, 1893; retired in 1907 and became chairman of the board of directors of same. He gave $500,000 toward establishing the Roman Catholic theological seminary at St. Paul, Minn., and has dispensed numerous other philanthropies.

Hill, Sir Rowland, originator of penny postage, was born at Kidderminster, England, 1795, and was a teacher from an early age down to 1833. Sensible of the urgent need for reducing the high rates of postage, he advocated, in 1837, an adhesive postage stamp and a low and uniform rate between all places in the British isles in a pamphlet, *Post-office Reform*. Two years later Hill was attached to the treasury for the purpose of putting his projected reforms into execution; and in 1840 the present uniform penny rate came into force. In 1844 Hill became secretary to the postmaster-general, and in 1854 secretary to the post-office. In 1864 he resigned owing to ill-health, and was awarded a pension of 2,000 pounds for life, together with a parliamentary grant of 20,000 pounds. He died at Hampstead in 1879, and was buried in Westminster abbey.

Hill, Thomas, American educator and writer, was born at New Brunswick, N. J., 1818. He graduated at Harvard, 1843, and from the divinity school, 1845. He was pastor of the Unitarian church at Waltham, Mass., 1845-59; president of Antioch College, 1859-62; president of Harvard, 1862-68, resigning on account of poor health. He then accompanied Agassiz to South America on a scientific expedition, and in 1873 became pastor of a Unitarian church at Portland, Me. He was an able mathematician, an authority on natural sciences, and a gifted classical scholar. Died at Waltham, Mass., 1891.

Hillel (*hil'el*), surnamed Hababli, "the Babylonian," and Hazaken, "the elder," one of the greatest doctors of the Jewish law, was born in Babylonia about 60 B. C. He was president of the sanhedrim in Jerusalem, through appointment of Herod I., 30 B. C. to 9 A. D., and was distinguished for his humility, gentleness, and humane spirit. He founded the Talmudic Judaism, and wrote extensively on law and morals. Died, 10 A. D.

Hillis (*hil'is*), **Newell Dwight,** clergyman, author, was born in Magnolia, Ia., 1858. He was educated at Iowa College, Lake Forest University and McCormick theological seminary; M. A.; D. D., Northwestern University. He entered the Presbyterian ministry; was pastor at Peoria, Ill., 1887-90; at Evanston, Ill., 1890-94; succeeded the late Professor David Swing as pastor of Central church, Chicago, 1894; pastor of Plymouth church, Brooklyn, since January, 1899. Author: *The Investment of Influence*; *A Man's Value to Society*; *How the Inner Light Failed*; *Foretokens of Immortality*; *Great Books as Life Teachers*; *Influence of Christ in Modern Life*; *Quest of Happiness*; *Success Through Self-Help*; *Building a Working Faith*; *The Quest of John Chapman*; *The Fortune of the Republic*, etc.

Hincmar (*hingk'mär*), French churchman of the family of the counts of Toulouse, was born about 806. He was educated in the monastery of St. Denis, and in 845 was elected archbishop of Rheims. Hincmar helped to degrade and imprison Gottschalk, who died in 868 after eighteen years' captivity, for his predestinarian views. He died in 882.

Hipparchus (*hi-pär'kus*), first great Greek astronomer, was born at Nicæa in Bithynia, flourished between 160 and 125 B. C., and made observations at Rhodes. He discovered the precession of the equinoxes and the eccentricity of the sun's path, determined the length of the solar year, estimated the distances of the sun and moon from the earth, drew up a catalogue of 1,080 stars, and fixed the geographical position of places on the earth by giving their latitude and longitude.

Hippocrates (*hi-pok'rä-tēz*), Greek physician, the most celebrated of antiquity, was born in the island of Cos, probably about 460 B. C.; and thereafter visiting Athens, he settled in practice. He died at Larissa in Thessaly in 377 or 359. Seventy-two works bear his name. He seems to have gathered up all that was sound in the past history of medicine, was good in diagnosis and prognosis, and believed that the four fluids or humors of the body, blood, phlegm, yellow bile, and black bile, are the primary seats of disease. His works were first printed in a Latin translation in 1525. The first Greek edition appeared in 1526.

Hirsch (*hürsh*, Ger. *hirsh*), **Emil Gustav,** German-American clergyman, educator, was born in Luxemburg, Germany, 1852. He received his education in Germany; was graduated at University of Pennsylvania, 1872; LL. D., Austin College, Ill., 1896; L. H. D., Western University of Pennsylvania, 1901. Minister of Sinai congregation, Chicago, since 1880. President and member of public library board, Chicago, 1888-97; professor of rabbinical literature and philosophy, University of Chicago, since 1892. Editor of *The Reform Advocate*, Chicago. Editor of biblical department, *Jewish Encyclopedia*. Author of various monographs on biblical and religious subjects, and prominent as orator on public and patriotic occasions.

Hitchcock, Charles Henry, American geologist, was born at Amherst, Mass., 1836. He was graduated at Amherst College, 1856; LL. D., 1896; Ph. D., Lafayette, 1870; professor of geology, Dartmouth College, since 1868. He headed the expedition occupying Mt. Washington, N. H., in winters of 1870-71, the first high mountain observatory in this country. Was one of the founders of the geological society of America. Author: *Mt. Washington in Winter*; *Report on Geology of New Hampshire*, etc.

Hitchcock, Edward, American geologist, was born at Deerfield, Mass., 1793. He was educated at Yale and ordained to the Congregational ministry, 1821; professor of chemistry and natural history in Amherst College, 1825-45; president and professor of natural theology and geology, 1845-54, and subsequently held the chair of geology until his death. In 1824 he published *The Geology of the Connecticut Valley*. In 1850 he was appointed agricultural commissioner for his native state, visited and examined the chief agricultural schools of Europe, and subsequently published his *Report on the Agricultural Schools of Europe*. Died, 1864.

Hitchcock, Frank Harris, American politician, postmaster-general, was born at Amherst, Ohio, 1867. He was graduated at Harvard, 1891; at the Columbian University Law School, 1894; LL. M. 1895; was admitted to bar of District of Columbia, 1894, and to that of the United States Supreme Court, 1897. He entered the government service in 1891; was chief of division of foreign markets, United States department of agriculture, and was first assistant postmaster-general, 1905-08. He was chosen chairman of the republican national committee in 1908, and conducted the presidential campaign of that year. He served as postmaster-general under President Taft, 1909-13.

Hitchcock, Roswell Dwight, American clergyman and theologian, was born in Maine, 1817. He was graduated at Amherst College in 1836; taught in several seminaries, and in 1845 became pastor of a Congregational church in Exeter, N. H. He was professor of church history in Union theological seminary, New York, 1855-80; in 1871 was chosen president of the American Palestine exploration society, and in 1880 became president of the union theological seminary, still retaining his professorship. The degree of D. D. was conferred upon him by the University of Edinburgh in 1884. From 1863 to 1870 he was one of the editors of the *American Theological Review*, to which he furnished many papers, mostly upon ecclesiastical history. Died, 1887.

Hoar, George Frisbie, American statesman, lawyer, was born in Concord, Mass., 1826. He was graduated from Harvard College, 1846, and afterward from the Dane law school, Harvard. He practiced law at Worcester, was member of congress, 1869-77, and United States senator from 1877 until his death. He was an able lawyer, a keen debater, and a man of scholarly attainments. He left valuable *Memoirs* containing his observations during his long career. In the senate he was a steadfast opponent of President McKinley's policy in the Philippines. Died in Worcester, Mass., 1904.

Hobart (*hō'bärt*), **Garret Augustus,** American legislator and vice-president of the United States. He was educated in Rutgers College, studied law, member of the republican national committee. He was nominated and elected vice-president by the republican party in 1896, and to a greater extent, perhaps, than any of his predecessors made his office one of real influence and power. Died in office, 1889.

Hobbes (*hobz*), **John Oliver,** pseudonym of Mrs. Pearl Mary Teresa Craigie (*nee* Richards), novelist, was born at Boston, Mass., 1867, and died in 1906. She wrote *Some Emotions and a Moral*; *The Sinner's Comedy*; *A Study in Temptations*; *The Gods, some Mortals, and Lord Wickenham*; *The Herb-moon*; *The Ambassador*, a play; *The School for Saints*; *Robert Orange*, etc.

Hobbes, Thomas, English philosopher, was born at Malmesbury, England, 1588. He was graduated at Oxford, and in 1610 went abroad with the earl of Devonshire as his pupil, and made a tour of France and Italy. His first original work, entitled *Elementa Philosophica de Cive*, was printed in Paris, 1642. After the meeting of the long parliament he went to Paris, from his dread of the civil troubles. In 1647 he was appointed mathematical tutor to the prince of Wales, afterward Charles II. Then followed his *Leviathan*, embodying his famous "social compact" theory, and *Liberty and Necessity*. His last works were a translation of Homer and a history of the civil wars. Died, 1679.

Hobson, Richmond Pearson, congressman, lecturer, was born in Greensboro, Ala., 1870. He was graduated from the United States naval academy, 1889, studied at the Ecole National Superior des Mines and Ecole d'Application du Génie Maritime, Paris. Served on flagship *New York* in blockade duty, in bombardment of Matanzas in expedition against San Juan de Puerto Rico, commanded collier *Merrimac* and sunk her in Santiago harbor to prevent the exit of the Spanish fleet. As a result was captured and made a prisoner in Spanish fortress, June 3 to July 6, 1898. He was then superintending naval construction of the Crescent shipyard, Elizabeth, N. J., May-June, 1902. He resigned from the United States navy, 1903, and has been a member of congress from the sixth Alabama district since 1907. Author: *A Study of the Situation and Outlook in Europe*; *The Disappearing Gun Afloat*; *The Yacht Defender, and the Use of Aluminum in Marine Construction*; *The Sinking of the Merrimac*, etc.

Hodge, Charles, American theologian, was born in Philadelphia, Pa., 1797. He was graduated at Princeton College in 1815, and in 1822 became a professor in the Princeton theological seminary, where he remained until the close of his life. Author: *Commentaries on Romans, Corinthians, and Ephesians*; *History of the Presbyterian Church in America*; *What is Darwinism?* *Systematic Theology*, etc. Died, 1878.

Hodges, George, American clergyman and writer, dean of the Episcopal theological school, Cambridge, Mass., since 1894, was born in Rome, N. Y., 1856. He was graduated from Hamilton, 1877; D. D., Western University of Pennsylvania, 1892; D. C. L., Hobart, 1902. Was ordained priest, 1882. Author: *The Episcopal Church*; *Christianity Between Sundays*; *Fountains Abbey*; *The Human Nature of the Saints*; *Three Hundred Years of the*

Episcopal Church in America; *The Administration of an Institutional Church*; *The Happy Family*; *The Pursuit of Happiness*; *The Year of Grace*; *Holderness*, etc.

Hodgins (*hoj'inz*), **John George,** Canadian educator and writer, librarian and historiographer of the education department of Ontario since 1890, was born in Dublin, 1821. He removed to Canada, 1833, and was educated at Upper Canada academy, Victoria College, Coburg. He was graduated in law at Toronto University, 1860; LL. D., 1870; was admitted to the bar of Ontario, 1870. He was editor of the *Upper Canada Journal of Education* nearly thirty years; Lovell's *General Geography*; *First Steps in General Geography*; *School Manual*; *Lectures on the School Law*.

Hodgins, Thomas, Canadian jurist, judge of the admiralty division of the exchequer court and master-in-ordinary, supreme court, Ontario, was born in Dublin, 1828. He emigrated to Canada, 1848, was graduated from Toronto University, 1856; LL. B., 1858; M. A. 1860; honorary LL. D., 1906; was admitted to the bar, 1858; queen's counsel for Dominion, 1873; member for West Elgin in the Ontario legislature, 1871-78; contested West Toronto, 1878, and West York, 1882, for the Dominion house of commons; declined the county judgeship of York, 1875. Author: *Bills of Exchange*, *Notes and Cheques*; *British and American Diplomacy affecting Canada*, 1782-1899; etc.

Hodgkin (*hoj'kin*), **Thomas,** English historian, was born at Tottenham, 1831. He was graduated at University College, London, and was a partner in the banking firm of Hodgkin, Barnett and Company, Newcastle-on-Tyne Since 1874 he has devoted his leisure time to historical writing, and has now completely retired from business. Author: *Italy and her Invaders*; *Life of George Fox*; *Life of Charles the Great*, in Foreign Statesmen series; *Political History of England*, etc.

Hodzumi, Nobushige, Japanese educator and law writer, professor of law in the imperial University of Tokyo since 1881, was born in 1855. He was educated at Tokyo University, Middle Temple, London, England, and at Berlin University. He was a member of the house of peers, 1890-92, and with two colleagues drafted the present Japanese civil code. Author: *Ancestor Worship and Japanese Law*; *The New Japanese Civil Codes as Material for the Study of Comparative Jurisprudence*; *Gonin-gumi, or the System of Mutual Help and Supervision among Five Families*, etc.

Hoe, Robert, manufacturer, inventor, was born in New York, 1839. He was educated in the public schools, entered printing press factory of R. Hoe and Company, founded by his grandfather, Robert, and developed the printing press from the "Hoe cylinder" of the 1846 patent to the present double-sextuple Hoe. He was one of the founders of the Metropolitan museum of art. Died, 1909.

Hoeber, Arthur, painter; was born at New York, 1854; educated at the Art Student's League and at Ecole des Beaux Arts, Paris, under Gérôme, 1881-6. First exhibit at Salon, Sur la Grande Route, 1882; last exhibit Salon, Le Pain Quotidien, 1885 and contributor to most American exhibitions. Writer and lecturer on art; art critic *New York Times*, three years; associate editor of *Illustrated America*, one year; now art critic *The Globe and Commercial Advertiser*, New York. Member of American Newspaper Association. Author: *Treasures of the Metropolitan Museum of Art*; *Painting in XIX. Century in France, Belgium, Spain and Italy*; art contributor to the *New Encyclopædia Britannica*; etc.

Hofer (*hō'fēr*), **Andreas,** Tyrolese patriot, was born at St. Leonard, 1767. In 1796 he led a body of Tyrolese against the French on the lake of Garda; in 1808 secret deputies, among whom was Hofer, arrived at Vienna, to present to the archduke John the sufferings of the people, and their wish to be reunited to Austria. By the desire of the archduke, Baron von Hormayr sketched for them a plan of insurrection, which met with such success that, in three days, from the 11th to the 13th of April, 1809, nearly the whole country was liberated. Napoleon, however, at once marched three armies to the Tyrol, to subdue the rebellious peasantry. At first Hofer concealed himself in a cave, but when Speckbacher, Joachim Haspinger, a Capuchin, and Peter Mayer, at the head of the armed population, renewed the defense of the Tyrol, and repeatedly defeated the enemy, Hofer issued from his retreat, and took the leadership of the Tyrolese. At the battle fought August 12th on the Iselberg, Lefebvre was driven from the Tyrol. Hofer continued to conduct the civil and military administration until the peace of Vienna. The French and Bavarians poured into the country for the third or fourth time, and after a brief struggle Hofer was obliged to take refuge in concealment. After a lapse of two months he was betrayed into the hands of the French by a priest named Douay, conveyed to Mantua, tried, and condemned to be shot. The sentence was carried into execution in 1810.

Hoff (*hof*), **Jakobus Hendrikus van't,** Dutch chemist, was born at Rotterdam, 1852. He was appointed professor of chemistry, mineralogy, and geology at Amsterdam, and in 1896 became professor of chemistry in the University of Berlin. He has made notable researches in physical chemistry, and is the founder of stereo-chemistry. In 1901 he received the Nobel prize for the most important contribution to chemistry. Died, 1911.

Höffding (*hūf'deng*), **Harold,** Danish psychologist, philosopher, and educator, professor of philosophy, University of Copenhagen, was born in 1843. He graduated from the University of Copenhagen, and received his Ph. D. in 1870; D. Sc., Oxford; LL. D., St. Andrews, Aberdeen. He is a member of the royal Danish society of letters and sciences; Author: *Psychology*; *Ethics*; *History of Modern Philosophy*; *Philosophical Problems*; *Modern Philosophers*; *The Philosophy of Religion*, etc.

Hoffmann, Ernst Theodor Wilhelm, German writer, composer, critic, and caricaturist, was born at Königsberg, 1776. In 1797 he was appointed assessor at Posen; but his love of caricature got him into trouble, and he was degraded to an inferior post. In 1815 he resumed his career in the Prussian service, and from 1816 until his death held a position in the supreme court at Berlin. His shorter tales were mostly published in collections. Died, 1822.

Hofmann, August Wilhelm von, German chemist, was born at Giessen, 1818. He became assistant there to Liebig, and, when the royal college of chemistry was established in London in 1845, Hofmann was made superintendent. In 1865 he went to Berlin as professor of chemistry, and, ennobled in 1888, died there in 1892. His contributions to the scientific journals were mainly on organic chemistry. His *Introduction to Modern Chemistry* led to great reforms in the teaching of chemistry. He wrote *The Life-work of Liebig*, etc.

Hogarth (*hō'gärth*), **William,** English painter, engraver, and pictorial satirist, was born at London, 1697; about 1720 began business for himself, first employed in engraving coats of arms, crests, etc., and designing plates for booksellers. He made the illustrations for Gray's edition of Butler's *Hudibras*. He secretly married the daughter of Sir James Thornhill in 1729, and in 1730 began the painting of his satires, among them being: *Harlot's Progress*; *A Midnight Modern Conversation*; *A Rake's Progress*; *The Distressed Poet*; and his master-piece, the famous *Marriage à la Mode*. He died at London, 1764.

Holbein (*hōl'bīn*), **Hans,** or **Johann,** called "the younger," German painter, was born at Grünstadt, 1497. About 1526 he contracted an intimacy with Erasmus, whose portrait he painted, and soon after visited England, where he passed the remainder of his life. Henry VIII. made him court painter. As an engraver he is chiefly known by the celebrated "*Dance of Death*," a series of fifty-three woodcuts engraved from his own designs, although it is seldom found with more than forty-six. Died, 1543.

Holberg (*hol'berк*), **Ludvig, Baron,** creator of modern Danish literature, was born at Bergen in Norway, 1684. His first notable works were satirical poems, among them *Peder Paars*, in which he ridicules the pedantic stiffness and stupidity of contemporary life and thought. In 1721 the first Danish theater was opened at Copenhagen, and Holberg began to write comedies with marvelous success. After 1724 he turned to history. In 1741 he produced the romance *Niels Klim's Subterranean Journey*; and lastly the serious reflective works, *Moral Thoughts* and *Epistles*, and his own *Autobiography*. Died, 1754.

Holden (*hōl-den*), **Edward Singleton,** American astronomer, was born in St. Louis, Mo., 1846. He was graduated at the scientific school in Washington University in 1866, at West Point in 1870, and was appointed second lieutenant of artillery. In 1873 he became professor of mathematics in the United States navy, and was ordered to the naval observatory at Washington, D. C. In 1881 he became professor of astronomy in the University of Wisconsin and director of the Washburn observatory, where he remained with brief intermission until 1885, and published four volumes of observations. He was chosen president of the University of California, 1885-88; director of the Lick University on Mt. Hamilton, 1888-98; and librarian of the United States military academy since 1901.

Holland, Sir Henry, English physician and writer, was born at Knutsford, Cheshire, 1788. He was graduated at Edinburgh, 1811, and in 1815 published *Travels in Albania, Thessaly*, etc. He settled in London in 1816; became one of the most eminent members of his profession; in 1840 was appointed physician to the prince consort, in 1852 to the queen; and in 1853 was created a baronet. He died in London, 1873.

Holland, Josiah Gilbert, American writer, was born at Belchertown, Mass., 1819. He studied medicine and practiced for some three years, and then became superintendent of public schools at Vicksburg, Miss; was one of the founders of *Scribner's Magazine* in 1870, and remained editor of it and of its successor, the *Century Magazine*, until his death. He was a prolific author, and all his books were of a high moral tone. Some of the best known of them are *Letters to Young People*; *Bitter-Sweet*; *Gold Foil*; *Arthur Bonnicastle*; *The Story of Seven Oaks*. Died at New York, 1881.

Holland, Thomas Erskine, English law writer and educator, professor of international law and diplomacy at Oxford, was born in 1835. He was graduated at Oxford; D. C. L., Oxford; LL. D., Bologna, Glasgow, Dublin. He is a fellow of the British academy; associate of the Royal academy of Belgium. He was British plenipotentiary at the Geneva conference, 1906; bencher, Lincoln's Inn, 1907. Author: *The Elements of Jurisprudence*; *The Institutes of Justinian*; *The Admiralty Manual of Naval Prize Law*; *Studies in International Law*; *The Laws and Customs of War on Land*; *Neutral Duties in a Maritime War*, etc.

Holland, William Jacob, educator, naturalist, was born in Jamaica, West Indies, 1848, of American parentage. He was graduated at Amherst, 1869, and Princton theological seminary, 1874; Ph. D., 1886, Sc. D., 1902, Washington and Jefferson; LL. D., St. Andrews University, 1905. He was chancellor Western University of Pennsylvania, 1891-1901; since 1897 director of Carnegie institute, Pittsburg, Pa. He is regarded as an authority on zoölogy and museum administration. Author: *The Butterfly Book*; *The Moth Book*, and of many scientific papers published by the United States government, the zoölogical society of London, etc. Editor of the *Annals* and *Memoirs* published by the Carnegie museum.

Holmes, Oliver Wendell, jurist, was born in Boston, Mass., 1841. He was graduated from Harvard, 1861, and from Harvard law school, 1868; LL. D., 1895; Yale, 1886. He served three years in the 20th Massachusetts volunteers; was wounded at Ball's Bluff, 1861, at Antietam, 1862, and at Marye's Hill, Fredericksburg, 1863, and received brevets as major, lieutenant-colonel, and colonel. After the war he engaged in practice at Boston, and was editor of the *American Law Review*, 1870-73; was professor of law, Harvard law school, 1882; associate justice, 1882-99; chief-justice, 1899-1902, supreme judicial court of Massachusetts; associate justice of supreme court of United States since December, 1902. Author: *The Common Law*, lectures at Lowell institute, *Speeches*, etc. Edited the twelfth edition of *Kent's Commentaries*.

Holmes, Oliver Wendell, American physician and poet, was born in Cambridge, Mass., 1809. He was graduated at Harvard in 1829, studied law for a period, but subsequently devoted himself to medicine, and, after attendance in the hospitals of Europe for several years, received his degree in medicine in 1836. In 1838 he became professor of anatomy and physiology in Dartmouth College, and in 1847 was appointed to the same chair at Harvard. He gained some reputation as an anatomist, and was, besides, an able microscopist and a skillful auscultator; but his widest fame is as a poet, a wit, and a man of letters. His wit and humor are transcendent, and all his literary efforts of rare originality and excellence. He was also a fascinating and instructive lecturer, while his admirable social qualities endeared him to the large and intellectual circle he so adorned. The first collection of his poems appeared in 1836, and attracted marked attention. Then followed his Phi Beta Kappa poems, *Poetry*; *Terpsichore*; *Urania*; and *Astræa*, all of which added to his reputation. In 1857 he contributed his *Autocrat of the Breakfast Table*, a connected series of prose essays, to the *Atlantic Monthly*, which was followed by *The Professor at the Breakfast Table*; *The Poet at the Breakfast Table*; and *Over the Teacups*. This brilliant series, which was in his happiest vein, was interspersed with poems, and was fraught with humor, pathos, practical wisdom, and a healthy sentiment grateful and refreshing. His other works include *Currents and Counter-Currents in Medical Science*; *Elsie Venner*, a romance; *Songs in Many Keys*; *Soundings from the Atlantic*; *The Guardian Angel*; and *Mechanism in Thought and Morals*. Died, 1894.

Holmes, William Henry, American anthropologist, archæologist, was born in Harrison county, Ohio, 1846. He was graduated at McNeely Normal College, 1870; curator department aboriginal pottery, United States national museum, 1882-93; archæologist United States bureau ethnology, in charge of explorations, 1889-98; curator anthropology, Field Columbian museum and professor anthropic geology, University of Chicago, 1894-97; head curator department anthropology, 1898-1902; chief bureau American ethnology since 1902; curator prehistoric archæology, 1903, and national gallery of art, 1907, United States national museum. Member of numerous scientific societies, foreign and domestic. Author: *Archæological Studies Among the Cities of Mexico*; *Stone Implements of the Potomac-Chesapeake Tidewater Province*, etc.

Holmested, George Smith, Canadian lawyer and legal writer, was born in England 1841; educated in English private schools, studied law in Canada, and was admitted to the bar in 1864; registrar in Chancery 1881 and following; and now senior registrar of the High Court of Justice of Ontario. Kings Counsel, 1902. Author: annotated editions of the *Ontario Mechanics Lien Act*; *Workmen's Compensation Act*; *Ontario Judicature Act*; *Imperial Statutes Relating to Property and Civil Rights*; etc.

Holst (*hōlst*), **Hermann Eduard von,** German-American historian, was born in Fellin, Livonia, Russia, 1841. He came to the United States in 1867, engaged in literary work and lecturing for several years; returned to Europe, and became professor in the University of Strassburg, 1872, and at Freiburg, 1874. He was appointed professor of history in the University of Chicago,

1892, which post he retained until 1900, when he returned to Freiburg and retired. Died, 1904.

Holt, Henry, publisher and author, was born at Baltimore, Md., 1840. He was graduated at Yale, 1862; Columbia law school, 1864; LL. D., University of Vermont, 1901. Began publishing business with G. P. Putnam, 1863, and is now senior member of Henry Holt and Company, publishers, New York. Author: *Calmire—Man and Nature*; *Talks on Civics*; *Sturmsee—Man and Man*; *On the Civic Relations*; and has contributed many articles on social and literary subjects.

Holyoake (*hŏl'yōk*; *hŏl'i-ōk*), **George Jacob,** English reformer, founder of "secularism," was born at Birmingham, 1817. He taught mathematics for several years; was secretary to Garibaldi's British contingent, edited the *Reasoner*, and promoted the bill legalizing secular affirmations. Holyoake was the last person imprisoned in England on a charge of atheism. He wrote *The Rochdale Pioneers*; *Self-help a Hundred Years Ago*; *Trial of Theism*; *Sixty Years of an Agitator's Life*; etc. Died, 1906.

Homer, was the greatest poet of Greece and of the ancient world; he lived about the ninth century B. C., and was an Asiatic Greek. Seven cities disputed for the honor of being his birthplace; he was blind and poor, and went about reciting his verses for bread; the *Iliad* and the *Odyssey* were his works; such are the main items of the almost universal and unquestioned belief respecting Homer in the ancient world. To sum up all doubts and denial on the matter in one word—no one knows even so much as the fact of the existence of the great poet.

The *Iliad* and the *Odyssey* are facts beyond doubt; their high antiquity, their immense importance as sources not only of later poetic inspiration, but even of the popular religious faith of the Greeks, and their incalculable influence on all subsequent literature, are also unquestionable. It is, however, established by recent criticism that the *Iliad* is not *one* poem; but that this work, in common with the *Odyssey*, is made up of a series of antecedent lays of heroic and mythological character, bearing on one subject, and skillfully welded together, perhaps in great measure re-written, by the unknown person who gave these works to the world.

The origin of these remarkable poems has been critically studied by many learned authors within recent time, whose conclusions generally agree with the statements given above.

Among the numerous English or American translations of Homer we must name the earliest and very spirited version by Chapman, afterward republished; those by Pope in heroic verse, and by Cowper in blank verse; and, more recently, the *Iliad* in blank verse, by the Earl of Derby, and in the same meter by Wright; the *Odyssey* in blank verse, by Musgrave; the excellent translation of the *Iliad* in blank verse by W. C. Bryant, published in 1870 and which is still generally considered the best. The *Odyssey* has been translated by Worsley, Morris, and Butcher and Lang.

References.—Lang's *Homer and the Epic*; Jebb's *Introduction to Homer*; Leaf's *Companion to the Iliad*; Gladstone's *Studies on Homer*; Autenrieth's *Homeric Dictionary*; and Ridgeway's *Early Age of Greece*.

Homer, Winslow, American artist, was born at Boston, 1836. While young he worked at lithography in Boston, and in 1859 went to New York and became a student of art at the academy of design. He pursued his studies in Paris, and won recognition as an artist of originality. Among his pictures are *Prisoners from the Front*; *Snap the Whip* and the marine paintings: *Northeaster*; *Stormbeater*; *The Maine Coast*, his masterpiece; and *Wood's Island by Moonlight*. The last named gained the medal of honor at the exhibition of the academy of fine arts at Philadelphia in 1906. Died 1910.

Homiakoff, Nicholas Alexelevitch, Russian statesman, president of the Russian duma, was born in 1850. His father was a well-known member of the Slavophil School, and he is the godson of Gogol. He was for some years director of the department of agriculture, and became a member of the second duma, taking his place among the "Octobrists." He is an ardent upholder of the constitution, and a strong believer in reform.

Honorius (*hō-nō'ri-us*), **Flavius,** emperor of the West, was born at Constantinople, 384 A. D. He was the second son of Theodosius the Great, at whose death the empire was divided between his sons Arcadius and Honorius. The latter when only ten years old received the western half. Stilicho was the *de facto* ruler of the western empire until 408; and after his death Alaric the Goth overran Italy, and took Rome in 410. Honorius died at Ravenna, which he had made his capital, in 423.

Hood, John Bell, American general, was born in Kentucky, 1831. He was graduated from the United States military academy in 1853, and appointed lieutenant of infantry in the same year. He was actively engaged on frontier duty until 1861, when he entered the confederate army, where he served in every position from first lieutenant to that of division commander with the rank of lieutenant-general. He took a conspicuous part in the Virginia peninsular campaign, at the second battle of Bull Run, Antietam, Gettysburg, and Chickamauga, where he lost a leg, and in 1864 succeeded Johnston in command of the army resisting Sherman's invasion of Georgia. He died in 1879.

Hood, Samuel, Viscount, English admiral, was born at Thorncombe, Dorset, 1724. He entered the British navy in 1741, and became post-captain in 1756. In 1778 he was made commissioner of the Portsmouth dockyard. In 1780, promoted to flag rank, he was sent to reinforce Rodney on the North American and West Indian stations. In the West Indies in 1782 he showed himself a masterly tactician in the series of maneuvres by which he outwitted De Grasse off St. Kitts; and he had a conspicuous share in the decisive victory of Dominica. For his services he was made Baron Hood in the Irish peerage; and in 1788 became a lord of the admiralty. In 1793, appointed to the Mediterranean, he directed the occupation of Toulon and the operations in the gulf of Lyons. In 1796 he was made Viscount Hood, and died at Bath, 1816.

Hood, Thomas, English poet and humorist, was born in London, 1798. In 1821 he was offered the post of sub-editor of the *London Magazine*, at once entered upon its duties and acquired an extensive literary acquaintance. He published *Whims and Oddities* in 1826, of which a second and third series appeared during the following two years. In 1829 he commenced *The Comic Annual*, and continued it for nine years. In 1831 he wrote his novel of *Tylney Hall*. In 1838 he commenced the publication of *Hood's Own*, to which his portrait was attached. In 1844 he started *Hood's Magazine*, and contributed to its pages until within a month of his death. His *Song of the Shirt* and *Bridge of Sighs* are among the most perfect poems of their kind in the English language. He died in 1845.

Hooke, Robert, English natural philosopher, was born at Freshwater, Isle of Wight, 1635. He was educated at Westminster and Christ Church, Oxford. He has justly been considered one of the greatest philosophical mechanics. His theory of gravitation subsequently formed part of Newton's; he anticipated the invention of the steam-engine. His other discoveries were the law of the extension and compression of elastic bodies, the simplest theory of the arch, the balance-spring of watches and the anchor-escapement clocks. The quadrant, telescope, and microscope are also materially indebted to him. He died in 1703.

Hooker, Joseph, American general, was born in Hadley, Mass., 1814. He was graduated at West Point in 1837, and fought in the Florida and Mexican wars, being three times promoted for gallant conduct. In 1853 he resigned, and became a farmer in California. When the civil war began he entered the army again, and soon became a major-general. He fought under McClellan on the march to Richmond, and afterward in northern Virginia and Maryland, receiving a wound at the battle of Antietam. His bravery in action brought him the nickname "Fighting Joe Hooker." In January, 1863, he was made commander of the army of the Potomac, and in May he fought the bloody battle of Chancellorsville. Owing to a difference between Hooker and his commander-in-chief, General Halleck, the former resigned his command, June 27, 1863, but he still served as a major-general, and fought under Sherman at Atlanta. After the war he commanded in different departments, and in 1868 retired from the army. He died at Garden City, N. Y., 1879.

Hooker, Sir Joseph Dalton, British botanist, was born at Glasgow in 1817. He graduated as an M. D., but has always devoted his attention to botany. In 1871 he made an expedition to Morocco, ascended the Great Atlas, the summit of which had never before been reached by a European, and secured a valuable collection of plants. He was appointed assistant-director at Kew gardens in 1855, and, on the death of his father in 1865, succeeded him as director, retiring in 1885. He was president of the British association in 1868, and was elected president of the royal society in 1873. His great work, which he undertook in conjunction with George Bentham, is the *Genera Plantarum*, the first part of which appeared in 1862; and the first part of the second volume, bringing down the work to the *Compositae*, was published in 1873. Died 1911.

Hooker, Richard, English theologian and writer, was born in Exeter, England, 1554. He was graduated from Oxford, 1574, was a fellow of Corpus Christi College, Oxford, and deputy professor of Hebrew. The archbishop of York promoted him to the mastership of the Temple in London, 1585. The morning and afternoon services belonged respectively to him and to Walter Travers, the one inclining to the Arminian view and maintaining the Anglican form of worship, the other maintaining Calvinistic opinions and inclining to the Presbyterian form. A controversy arose, which was the occasion of Hooker's great work on *Ecclesiastical Polity*. Died, 1600.

Hooker, Thomas, English clergyman and American colonist, was born at Markfield, Leicester, about 1586. He became a fellow of Emmanuel College, Cambridge, and was for three years a Puritan lecturer at Chelmsford. In 1630 he retired to Holland; in 1633 sailed for Massachusetts, and received a charge at Cambridge. In 1636 he removed with his congregation to Connecticut, and founded Hartford. He was joint-author with John Cotton, of the *Survey of the Summe of Church Discipline*. Died, 1647.

Hopkins, Edward Washburn, American oriental scholar, professor of Sanskrit, Yale University, was born at Northampton, Mass., 1857. He was graduated at Columbia, 1878; Ph. D., Leipzig University, 1881; LL. D., Columbia, 1902. Author: *Castle in Ancient India*; *India, Old and New*; and many special essays on oriental and linguistic subjects. He is also editor of the *Journal of American Oriental Society*.

Hopkins, Mark, American educator, was born in Massachusetts, 1802. He was graduated at Williams College in 1824, and received the degree of M. D. in 1828; was professor of moral philosophy and rhetoric in Williams College from 1830 until his death; was president of the college 1836-72; in 1857 became president of the American board of commissioners for foreign missions. He is the author of *Evidences of Christianity*, *Law of Love and Love as a Law*, and *An Outline Study of Man*. Died, 1887.

Hopkinson, Francis, American politician and author, was born in Philadelphia, Pa., 1737. He was a delegate to the continental congress from New Jersey, and was one of the signers of the declaration of independence. He wrote *The Battle of the Kegs*; *A Pretty Story*; *The Political Catechism*, and other works in prose and verse. His son, Joseph, judge of the United States district court, wrote *Hail Columbia*. Died, 1791.

Hopper, De Wolf, comedian, was born in New York, 1858. He made his first professional appearance in *Our Boys*, 1878; later with Daniel Frohman's Madison square company as Pittacus Green in *Hazel Kirke* and other rôles; studied vocal music and joined the McCaull opera company. For several years he starred in comedy rôles at the head of his own company; later with Weber and Fields company; then again starred at the head of his own company, playing *Mr. Pickwick*. He became famous in *Wang* and his latest production, *Happyland*.

Horace, Quintus Horatius Flaccus, famous Roman poet, was born near Venusia, Italy, 65 B. C. Athens was at this time regarded as the university of the world, and thither Horace repaired in his nineteenth year to complete his education by a course of philosophy and science under Greek masters. But the civil wars which followed the death of Julius Cæsar, in 44 B. C., interrupted him in his studies. The arrival of Brutus at Athens roused the patriotic feelings of the youthful Romans, and along with others Horace ardently embraced the cause of the republic. Though entirely inexperienced in war, he was promoted to the rank of military tribune, with the command of a legion, and in this character shared in the defeat at Philippi, 42 B. C. After the battle he returned to Rome, and by acting as clerk in the quæstor's office he contrived to live until he found means of making himself known to the poets Varius and Vergil, by whom his name was first mentioned to Mæcenas. The friend of the prime minister found easy access to the emperor; Horace was soon on terms of familiarity with Augustus, and enjoyed his friendship and patronage during the remainder of his life. But the friendship of Mæcenas, who gave him an estate in the Sabine territory, about thirty-four miles from Rome, made him independent for life. His works consist of two books of *Satires*, a book of *Epodes*, four books of *Odes*, two books of *Epistles*, and a treatise on the *Art of Poetry*. Died, 8 B. C.

Hornaday (*hôr'nȧ-dȧ*), **William Temple,** American naturalist, director of the New York zoölogical park since 1896, was born in Plainfield, Ind., 1854. He was educated at Iowa Agricultural College, studied zoölogy and museology in this country and Europe. He was chief taxidermist of United States national museum, 1882-90; and since 1896 has been director of New York zoölogical park. Author: *Two Years in the Jungle*; *The Extermination of the American Bison*; *The American Natural History*; *Camp-Fires in Canadian Rockies*, etc.

Hornblower, William Butler, American lawyer, was born in Paterson, N. J., 1851. He was graduated at Princeton University, 1871; LL. B., Columbia law school, 1875; LL. D., Princeton, 1895, and is now a member of the firm of Hornblower, Miller and Potter of New York; was appointed, 1893, by President Cleveland, associate justice of the United States supreme court, but was not confirmed by senate owing to opposition by New York senators for political reasons. He is a member of the board of commissioners of statutory consolidation now engaged in examining and consolidating all general statutes of New York from 1777.

orsford (*hôrs'fĕrd*), **Eben Norton,** American chemist, was born in Livingston county, N. Y., 1818. He studied engineering and was engaged on the geological survey of the state of New York. He studied in Germany, under Liebig, and, on his return to the United States in 1847, was elected Rumford professor of science at Harvard. After sixteen years' service there he resigned to engage in chemical manufactures. He wrote extensively on scientific subjects. Died, 1893.

oskin, John, Canadian lawyer, chairman of the board of governors of the University of Toronto, was born at Holsworthy, Devon, England, 1836, He was educated in London; went to Canada, 1854, and was admitted to the bar, 1863. He was made a queen's counsel in 1873; and is now a member of the dominion senate for Toronto University; hon. LL. D., 1889; D. C. L., Trinity University. He is head of the firm of M'Carthy Osler, Hoskin, and Harcourt; and director of many corporations.

osmer (*hoz'mĕr*), **Harriet,** American sculptor, was born in Watertown, Mass., 1830. She early showed a talent for sculpture by modeling figures in clay. To prepare herself for her chosen career she studied anatomy, first with her father, and afterward at the medical school at St. Louis. Returning to her home in 1851, she modeled her first work, *Hesper* which had so decided a success that she was sent to Rome, where she became the pupil of Gibson. Her most ambitious work is a colossal statue of *Zenobia in Chains*. She devised a method for converting Italian limestone into marble. Died, 1908.

osmer, James Kendall, American author, librarian of Minneapolis public library, 1892-1904, was born at Northfield, Mass., 1834. He was graduated at Harvard, 1855; Ph. D., University of Missouri; LL. D., Washington University. Served in civil war as private in 52d Massachusetts volunteers; after the war was professor in Antioch College, in University of Missouri, and professor of English and German literature, Washington University, St. Louis, Mo., 1874-92. Author: *Color Guard*; *Short History of German Literature*; *Story of the Jews*; *Life of Samuel Adams* in American Statesmen series; *History of the Louisiana Purchase*; *History of the Civil War in America*, etc.

oudon (*oō'dôn'*), **Jean Antoine,** French sculptor, was born in Versailles, France, 1741. He studied in Paris and Rome, and executed numerous busts and statues of prominent persons, and other works. In 1785 he accompanied Franklin to the United States to prepare the model for the statue of Washington ordered by the state of Virginia. The statue is in the capitol at Richmond, and according to Lafayette and others is the best representation of Washington ever made. He died in Paris, 1828.

ough (*huf*), **Emerson,** American author, was born at Newton, Ia., 1857. He was graduated at the State University of Iowa, 1880. He traveled over the wildest portions of the West; explored Yellowstone park during the winter of 1895, and the act of congress protecting the park buffalo was due to this trip. He was for ten years writer of *Chicago and The West* department and western manager since 1889 of *Forest and Stream*, New York. Author: *The Singing Mouse Stories*; *The Story of the Cowboy*; *The Law of the Land*; *Heart's Desire*; *The Story of the Outlaw*; etc.

ouston, David Franklin, secretary of agriculture, educator, was born in Union county, N. C., Feb. 17, 1886. He was graduated from South Carolina College, 1887, and received the degree A. M. from Harvard, 1892; LL.D., Tulane, and University of Wisconsin. After his course at Harvard, he was professor of political science at the University of Texas, 1894-1902; president of the Agricultural and Mechanical College of Texas, 1902-5; president of the University of Texas, 1905-8; and chancellor, Washington University, St. Louis, Mo., 1908-13. He was made secretary of agriculture by President Wilson, 1913. On Dec. 11, 1895, he married Helen Beall, of Austin, Texas.

ouston (*hū'stun*), **Edwin James,** American electric engineer, was born at Alexandria, Va., 1844; emeritus professor of physical geography and natural philosophy, Central high school, Philadelphia, and of physics in Franklin institute, Philadelphia; for two terms president of the American institute of electrical engineers, and received the degree Ph. D. from Princeton University. Author: *Outlines of Natural Philosophy*; *The Electric Transmission of Intelligence*; *Alternating Currents*; *Electric Railways*; *Electro-Dynamic Machinery*; *Telegraphy*; *Telephony*; *Electricity in Every Day Life*, etc.

ouston, Sam, American soldier, was born in Virginia, 1793. He enlisted in the war of 1812, was chosen ensign, and fought under Jackson with a courage that won his lasting friendship. In 1823 he became a member of congress, and in 1827 governor of Tennessee. In 1829 he married the daughter of ex-Governor Allen and in the following April, for reasons never made public, abandoned wife, country, and civilization, was adopted as a son by the chief of the Cherokee nation, and was formally admitted as a chief. In 1832 he went to Washington and procured the removal of several United States Indian agents on charges of fraud. The Texan war offered a new field to his ambition, and he was made commander-in-chief; fought the remarkable and decisive battle of San Jacinto, 1836, at one blow annihilated the Mexican army, and achieved the independence of Texas. The "hero of San Jacinto" was elected first president of Texas, and reëlected in 1841, and on the annexation of Texas to the United States in 1845 was sent to the United States senate, where he remained until 1859, when he was elected governor of Texas. He opposed secession, but retired to private life when he found that opposition was fruitless. Died, 1863.

Howard, John, noted English philanthropist, was born at Enfield, near London, 1726. Appointed high sheriff of Bedford in 1773, his attention was called to the state of the prisons of the country. His sympathies once aroused, he extended his inquiries over the whole kingdom, bringing to light an amount of misery and degradation of which hitherto his countrymen had had no conception. In 1774 he was examined before a committee of the house of commons, and many reforms were the result. In 1777 after a tour through England, he published a volume entitled, *The State of the Prisons in England and Wales, with Preliminary Observations, and an Account of some foreign prisons*. Died, 1790.

Howard, Leland Ossian, American entomologist, chief of bureau entomology, United States department of agriculture, since 1894, was born at Rockford, Ill., 1857. He was graduated at Cornell, 1877; Ph. D., Georgetown University, 1896; was assistant entomologist, United States department of agriculture, 1878-94. He was for some years editor of *Insect Life*, a journal of the department of agriculture; prepared definitions in entomology for *Century* and *Standard* dictionaries; is lecturer on insects at Swarthmore College, and in the graduate school Georgetown University. Author: *Mosquitoes—How They Live, Etc.*; *The Insect Book*, and many government publications.

Howard, Oliver Otis, American soldier, was born at Leeds, Me., 1830. He was graduated at Bowdoin College, 1850; at West Point, 1854; LL. D., Waterville College, 1865; Shurtleff College, 1865; Gettysburg theological seminary, 1866, and Bowdoin College. He served in the civil war; lost an arm at the battle of Fair Oaks, 1862; was made major-general of volunteers, 1862; accompanied Sherman on his march to the sea. At the close of the civil war he was placed at the head of the freedmen's bureau. From 1869-73 he was president of Howard University; became brigadier-general in the United States army, 1864; brevet major-general, 1865; superintendent of West Point military academy, 1881-82; commanded the department of the East, 1888. Founder, 1895, and president board of directors, Lincoln Memorial University, Cumberland Gap, Tenn.; chevalier legion of honor, France, 1884, commander's medal, legion of honor, 1904. Author: *Donald's School Days*; *Nez Perces Joseph*; *Our Wild Indians*; and *Autobiography*, 2 vols. Died, 1909.

Howe, Elias, inventor of the lock-stitch sewing-machine, was born at Spencer, Mass., 1819. He worked at Lowell and Boston as a mechanic. At the latter place he developed, constructed, and patented the sewing-machine, 1846. By his royalties he in time obtained $200,000 per annum, and amassed a fortune of $2,000,000. During the civil war he served as a private. Died, 1867.

Howe, Julia Ward, American author, was born in New York, 1819, daughter of Samuel Ward. She received a private education, and married in 1843 the eminent philanthropist, Dr. Samuel Gridley Howe. With him, she conducted the *Boston Commonwealth*, an anti-slavery paper, prior to the civil war. After the slavery question was settled she became active in woman suffrage, prison reform, cause of peace, etc. She was a Unitarian preacher, lecturer, and writer. Her *Battle Hymn of the Republic* is widely known. Author: *Passion Flowers*; *Words for the Hour*; *Life of Margaret Fuller*; *Modern Society*; *Is Polite Society Polite?* *Sketches of Representative Women of New England*, etc. Died 1910.

Howe, Richard, Earl, British admiral, was born in 1726. He was with Admiral Vernon in 1745, and took part in the siege of Fort William. He was commodore of the squadron which sailed in 1758 for St. Malo. In the same year he took Cherbourg. In 1578 he succeeded to the Irish title of viscount. He took part in the defeat of the fleet under the Marquis de Conflans, and captured the *Hero*. In 1756 he commanded a fleet on the American coast, and in 1778 defended the American coast against a superior naval force under D'Estaing. He received an English earldom in 1788. When war with France broke out in 1793 he took the command of the channel fleet, and next year gained a signal victory off Ushant. George III. visited him on board the *Queen Charlotte*, gave him a sword, and made him a knight of the Garter. Died, 1799.

Howe, Samuel Gridley, American philanthropist, was born in Boston, 1801. He was graduated from Brown University, 1821, and from Harvard Medical College, 1824. In 1831 he went to Paris to study the methods of educating the blind, and becoming involved in the Polish insurrection, spent five weeks in a Prussian prison. On his return to Boston he established schools for the blind and for idiots, and was the teacher of the famous Laura Bridgman. He was chairman of the Massachusetts state board of charities, 1865-74. Died, 1876.

Howe, Sir William, English general, was born in 1729. He served at Quebec under Wolfe and succeeded General Gage in command of the royal troops during the American revolution. In 1775 he was made commander-in-chief of the English army in North America; had command at the battles of Bunker Hill, Long Island, White Plains, and Brandywine. He was superseded by Sir Henry Clinton in 1778, as he had failed to crush the rebellion. Died, 1814.

Howe, William Wirt, American jurist and law writer, was born at Canandaigua, N. Y., 1833; received an academic education, studied law, and was admitted to the bar. He served in the Union army, 1861-65, becoming major. He was associate justice supreme court of Louisiana; president American bar association, 1898. Trustee Carnegie institution, Washington; professor of Roman and civil law, George Washington and Tulane Universities, and United States district attorney of Louisiana, 1900-08. Author: *Municipal History of New Orleans*; *Studies in the Civil Law*; *Comparative Jurisprudence*, etc. Died, 1909.

Howell, Clark, editor, was born in Barnwell county, S. C., 1863. He was graduated from the University of Georgia, 1883; entered newspaper work, succeeding Henry W. Grady as managing editor of the *Atlanta Constitution*, 1889, and succeeding his father as editor-in-chief in 1897. He was member of the Georgia house of representatives six years; speaker, 1890-91; director of associated press of America for past ten years.

Howell, William Henry, American physician and educator, dean of Johns Hopkins medical school since 1899, was born at Baltimore, Md., 1860. He was graduated at Johns Hopkins, 1881; Ph. D., 1884; M. D., University of Michigan, 1890; LL. D., Trinity, 1901; was associate professor of physiology, Johns Hopkins University, 1888-89; professor of physiology and histology, University of Michigan, 1889-92; associate professor of physiology, Harvard University, 1892-93, and professor of physiology, Johns Hopkins University, 1893. He has contributed widely to both American and foreign medical literature; is author of *Text-Book of Physiology*, etc.

Howells, William Dean, American novelist, was born at Martin's Ferry, Ohio, 1837. His early education was largely gained in newspaper offices, though he was given the degree A. M. by Harvard, 1877; Litt. D., Yale, 1901; Oxford, 1904; Columbia, 1905; LL. D., Adelbert College, 1904. He was United States consul to Venice, 1861-65; was editorial writer on *New York Nation*, 1865-66; editor, 1872-81, *Atlantic Monthly*; editorial contributor to *Harper's Magazine*, 1886-91; now writer of *Editor's Easy Chair* for *Harper's*. Author: *Life of Abraham Lincoln*; *A Chance Acquaintance*; *A Foregone Conclusion*; *Dr. Breen's Practice*; *A Modern Instance*; *A Woman's Reason*; *April Hopes*; *A Hazard of New Fortunes*; *The Shadow of a Dream*; *The Quality of Mercy*; *The Day of Their Wedding*; *Their Silver Wedding Journey*; *Literary Friends and Acquaintances*; *Between the Dark and the Daylight*, etc.

Howison (*hou'i-sun*), **George Holmes,** American educator and writer, Mills professor of philosophy, University of California, since 1884, was born in Montgomery county, Md., 1834. He was graduated at Marietta College, 1852; Lane theological seminary, 1855; LL. D., 1883; professor of logic and philosophy of science, Massachusetts institute of technology, 1871-79; lecturer on ethics, Harvard, 1879-80; lecturer on philosophy, University of Michigan, 1883-84. Author: *Treatise on Analytic Geometry*; *Limits of Evolution and Other Essays in Philosophy*. Co-editor: *Psychological Review*, etc.

Howitt (*hou'it*), **William** and **Mary,** English authors, may properly be treated together. William Howitt was born in 1792, at Heanor, in Derbyshire. In 1823 he married Miss Mary Botham, a lady of literary acquirements, born 1799, and whose family, like his own, was attached to the principles of Quakerism. For three or four years they employed themselves in contributions to annuals and magazines, and in 1827 a selection from these fugitive pieces appeared under the title of *The Desolation of Eyam*. In 1837 they removed to Esher, in Surrey, and at that place William wrote *Rural Life in England*; *Colonization and Christianity*; *Boy's Country Book*, and *Visits to Remarkable Places*, first series. Mary at the same time employed herself in writing *Tales for Children*, many of which are popular. William died in 1879; Mary died in 1888.

Hoxie, Vinnie Ream, sculptor, was born in Madison, Wis., 1847. After modeling one year she received a commission from congress, in 1862, to execute a life-size statue of Abraham Lincoln. He sat for his bust at the White House, and his statue is now in the rotunda of the capitol. Later, congress commissioned her to make the heroic statue of Admiral Farragut which now stands in Farragut square, Washington. These are the only two statues ever ordered by the United States government from a woman. She married Colonel Richard L. Hoxie, United States engineers, 1878.

Hoyles, Newman Wright, Canadian lawyer and educator, principal of law school, Osgoode hall, Toronto, since 1894, was born at St. John's, Newfoundland, 1844. He was graduated from Trinity

College, Cambridge, England, admitted to Ontario bar, 1872; queen's counsel, 1889. He is president of the corporation and chairman of the council of Wycliffe College, Toronto; member of the senate of the University of Toronto. He has written numerous articles in legal magazines, and is prominent in the auxiliary work of the church of England.

Hubbard, Elbert, author, journalist, lecturer, was born in Bloomington, Ill., 1859, and received a common school education; hon. M. A., Tufts College. He is editor of *The Philistine*, and proprietor of *The Roycroft Shop*, devoted to making *de luxe* editions of the classics. Author: *Little Journeys to the Homes of American Authors; Little Journeys to the Homes of Famous Women; Old John Burroughs; Contemplations; Consecrated Lives; The Man of Sorrows*, etc.

Huc (*ūk; hük*), **Evariste Regis,** Roman Catholic missionary, was born at Toulouse, 1813. In 1839 he joined the mission of the Lazarist fathers to China. Huc's health having broken down, he returned to France in 1852. He wrote *Souvenirs* of his great journey; *L'Empire Chinois; Le Christianisme en Chine*, etc. Died 1860.

Hudson, Henry, English navigator, of whose early life nothing is known. In 1607 he sailed in search of a short route to China and India by way of the northern ocean, but was stopped by the ice off the coast of Greenland and forced to return. In 1609, while in the service of the Dutch East India company, he discovered the Hudson river, and sailed up to where Albany now stands. On a fourth voyage, 1610, he discovered Hudson strait and bay, which are also named after him. Impeded by ice, he determined to spend the winter on the shores of the bay. Here he and his men suffered terribly from want of food and started to return in 1611. The men mutinied on the return voyage, got possession of the ship, put Hudson, his son John, and seven sailors into an open boat and turned them adrift. Nothing was ever known of their fate.

Hufeland (*hōō'fē-länt*), **Christoph Wilhelm,** noted German physician, was born at Langensalza, in Thuringia, 1762. His *Makrobiotik*, or the art of prolonging life, has been translated into almost all the European languages; he also wrote a work on the physical education of the young, and an *Enchiridion Medicum*. Died, 1836.

Huggins (*hug'inz*), **Sir William,** English astronomer and spectroscopist, was born in London, 1824. Having in 1856 built an observatory near London, he began the study of the physical constitution of stars, planets, comets, and nebulæ. He determined the amount of heat that reaches the earth from some of the fixed stars. He became a fellow of the royal society, 1865, and president of the royal society, 1900. He has been president of the British and other associations, and received the order of merit in 1902. Died 1910.

Hugh Capet (*hū kā'pet*), founder of the third, or Capetian dynasty of French monarchs, was born 939 and was king of France, 987-996. As count of Paris, on the death of Louis V., last of the Carlovingians, he usurped the throne and was confirmed in its possession by a confederacy of nobles. The race of Capet has given 118 sovereigns to Europe:—thirty-six kings to France, twenty-two to Portugal, five to Spain, eleven to Naples and Sicily, three to Hungary, and three to Navarre; three emperors to the East; seventeen dukes to Burgundy, thirteen to Brittany, two to Lorraine, and four to Parma. Died, 996.

Hughes, Charles Evans, justice United States supreme court, was born in Glens Falls, N. Y., 1862. He was graduated from Brown University, 1881, LL. B., Columbia law school, 1884; LL. D., Brown, 1906; admitted to New York bar, 1884; practiced in New York, 1884-91; prize fellow Columbia law school, 1884-87; professor of law of contracts, evidence, etc., Cornell University school of law, 1891-93; active practice in New York from 1893 to 1906 as a member of the law firm, Hughes, Rounds & Schurman. He was special lecturer at Cornell university school of law, 1893-95, New York law school, 1893-1902, and Yale University, 1909. He was the republican nominee for mayor of New York, 1905, but declined; attorney for Armstrong commission of New York legislature, investigating methods of large life insurance companies. Governor of New York 1906-1910; associate justice United States supreme court since 1910.

Hughes, Rupert, author, was born at Lancaster, Mo. 1872; graduate of Western Reserve University, 1892; M. A., Yale, 1899. Was assistant editor *Godey's Magazine*, *Current Literature* and *The Criterion*. Author: *American Composers; The Musical Guide; The Whirlwind; Love Affairs of Great Musicians; Songs by Thirty Americans; Colonel Crockett's Coöperative Christmas;* etc, and numerous plays.

Hughes, Thomas, English author, was born at Uffington, Berks, 1823. He was educated at Rugby under the celebrated Dr. Arnold; entered Oriel College, Oxford, 1841; took his degree of B. A. in 1845. In 1856 he gave to the world *Tom Brown's School Days*. It was followed in 1858 by *The Scouring of the White Horse*, in 1861 by *Tom Brown at Oxford*, and in 1869 by *Alfred the Great*. He gained the confidence and goodwill of the working classes by endeavoring to promote a better understanding between masters and men, and by teaching the latter the value of coöperation as a means of social elevation. Died at Brighton, England, 1896.

Hugo, Victor Marie, Vicomte, distinguished French poet, politician, and man of letters, was born at Besançon, 1802. He received a classical education in a religious house, and, in 1822, brought out the first volume of his *Odes and Ballads;* and his tales *Hans of Iceland*, and *Bug Jargal*, were also written about this time. In 1826 he published a second volume of the *Odes and Ballads*, which exhibited a change in his political and literary opinions, and, in 1827, he composed his drama *Cromwell*. In 1829 he published his *Last Days of a Condemned Criminal*, a work which, owing to its fearful interest, gained an immense success.

Hugo now prepared a further attack on the classical style of French dramatic literature in his *Hernani*, first played at the Théâtre Français in 1830, when it caused a scene of riotous confusion. The French academy went so far as to complain to the king against Hugo's attempted innovations. Charles X. sensibly replied, that "in matters of art he was no more than a private person."

Shortly after the revolution of July, 1830, his *Marion Delorme*, which had been suppressed under the restoration, was performed with success. *Le Roi s' Amuse* was also performed at the Théâtre Français in 1832, but interdicted by the government the day after. His lyrical poems, *Les Orientales*, published in 1828, and *Les Feuilles d' Automne*, which appeared in 1832, were received with enthusiasm. Hugo, who published afterward a number of dramatic pieces of various merit, was, after much opposition, admitted into the academy in 1841, and was created a peer of France by Louis Philippe. In 1849 he was chosen president of the peace congress of which he had been a leading member.

On the *coup d' etat* of December 2, 1851, Hugo, then a member of the legislative assembly, was among those deputies who vainly attempted to assert the rights of the assembly and to propose the constitution. His conduct led to his proscription. He took refuge in the island of Jersey, and subsequently in that of Guernsey, having steadfastly refused to avail himself of the general amnesties issued in 1859 and in 1869.

He wrote much after he had left France. His very trenchant satire, *Napoléon le Petit* (Napoleon the Little,) appeared at Brussels in 1852, and was rigorously suppressed in France, into which country it had been smuggled. *Les Châtiments* was brought out in 1852 also in Brussels; and in 1856 he published, under the title *Les Contemplations*, a collection of lyrical and personal poems which are among his best performances. Hugo's admirable romance *Notrê-Dame de Paris* has been translated into most European languages, and is known in English under the title of the *Hunchback of Notre-Dame*. His social romance, *Les Miserables*, appeared in 1862.

On the fall of the empire in 1870 he returned to France, was elected to the national assembly, but soon resigned and repaired to Brussels, whence he was expelled by the government on account of the violence of his political writings and his sympathy with the communists. Returning to Paris, he was (1876) elected a senator for six years. Of his later works may be mentioned *The Man Who Laughs*, *The History of a Crime*, and *Les Quatre Vents de L'Esprit*, a volume containing some of his most charming lyrics. Died in Paris, 1885, and was buried in the Pantheon.

References.—Swinburne's *A Study of Victor Hugo;* Renouvier's *Victor Hugo, the Poet;* Marzial's *Life of Victor Hugo;* King's *French Political Leaders;* Barbou's *Victor Hugo and his Time.*

Hull, Isaac, American naval officer, was born in Derby, Conn., 1773. In 1812 he commanded the frigate *Constitution*, which was pursued by a British squadron for three days, but escaped by skillful sailing. While cruising in the gulf of St. Lawrence he met the British frigate *Guerriere*, which, after a bloody fight of half an hour, surrendered, August 19, 1812. This was the first naval battle of the war of 1812, and congress gave Captain Hull a gold medal for his services. He died in Philadelphia, Pa., 1843.

Humbert I. (*hum'bērt*), king of Italy, eldest son of King Victor Emmanuel, was born in 1844. When the war between Prussia and Austria becam imminent, Prince Humbert was dispatched t Paris to ascertain the sentiments of the Frenc government in reference to the alliance betwee Italy and Prussia. On the outbreak of hostiliti he obtained command of a division of Gener Cialdini's army with the title of lieutenant-ge eral; and was present at the disastrous battle c Custozza, 1866. He succeeded to the throne o the death of his father, 1878. The most notab event in his reign was the formation of the trip alliance, 1887. He was assassinated at Mona near Milan, 1900.

Humboldt (*hum'bōlt*), **Friedrich Heinrich Alex ander, Baron von,** eminent German scientist an traveler, was born in Berlin, 1769. He becam director-general of the mines of Bayreuth an Anspach in 1792. In 1799 he started with Bon pland for South America, and occupied four yea in the exploration of that continent. After hi return to Europe in 1804, he passed a period c twenty years in Paris, and was there admitted t the institute. His chief works are: *Journey t the Equinoctial Regions of the New Continen Central Asia; Researches on the Chains of Moun tains and the Comparative Climatology; Aspects c Nature;* and what is commonly esteemed hi masterpiece, *Kosmos—Essay of a Physical Descrip tion of the Universe*—begun in his seventy-fourt year. He died in Berlin, 1859.

Humboldt, Karl Wilhelm von, elder brother of th preceding, was born at Potsdam, 1767. In 180 he became Prussian minister at Rome, and wa a most generous patron of young artists and me of science. Berlin University owes its existenc to him. In 1810 he went to Vienna as ministe plenipotentiary, and from this time took part i all important Prussian political affairs. He wa the first to study Basque scientifically; he als worked much on the languages of the East an of the South sea islands. Died, 1835.

Hume, David, Scottish philosopher and his torian, born at Edinburgh, 1711. After short experience with merchandizing and law he turned to the life of a student. In 173 he went for a time to France, and there wrot the important *Treatise of Human Natur* (1739-40). Hume then turned his pen t subjects of more general interest, and i 1742 published *Essays—Moral, Politica and Literary.*

During 1747-9 he served as secretary t an embassy, after which he settled down t literary work in Edinburgh. Two othe philosophical works, which were really popu lar abridgments of parts of the *Treatise*, wer published about this time—the *Inquiry Con cerning Human Understanding*, in 1748, an the *Inquiry Concerning the Principles of Mor als*, in 1751; and another volume of essays the *Political Discourses*, followed in 1752

With the exception of his *Natural Histor of Religion* (1755), his literary activity fo the next ten years was mainly concentrate on his *History of England*. In 1763 he wa again abroad, attached to an embassy t France; and on his return he was, for a shor time, under-secretary of state. In 176 he returned to Edinburgh, where he remaine till his death in 1776. His *Dialogues Con cerning Natural Religion* were published i 1779.

The philosophy of Hume was an extrem and thoroughgoing development of the sen sationalism that was latent in Locke' account of the origin of knowledge. Apply ing Locke's method of analysis in all its strict ness, he set up as a general test for all idea that they must be capable of being referre to a definite source or original in impression Ideas which cannot conform to this test hav no real or objective meaning; they are illu sions produced in the mind by the workings o imagination.

Thus, to take a single instance, Hum reduces the conception of causal connectio to a mere blind belief engendered by custom the constant conjunction of two impression (*e. g.* flame and heat) suggesting the ide of the so-called cause. The outcome of suc criticism applied to the fundamental concept on which knowledge rests was naturally total scepticism.

References.—Huxley's *Hume* in *English Me of Letters*; Seth's *Scottish Philosophy;* his *Auto biography* edited by Adam Smith; and Burton' *Life and Correspondence of David Hume.*

Hume, Martin Andrew Sharp, English educato and writer, lecturer in Spanish history and liter ature, Pembroke College, Cambridge, was bor at London, 1847. He was attached to the Turkis army during the campaign on the Lom, 1878-79 traveled much in South America and Africa; ha since been prominently identified with the uni

versities at Cambridge, London, and Birmingham. Author: *Chronicle of Henry VIII; Calendar of Spanish State Papers; Elizabeth*, 4 vols.; *The Love Affairs of Mary Queen of Scots; Cambridge Modern History*, vols. iii. and iv.; *Queens of Old Spain; The Court of Philip IV.*, etc.; and many historical articles in the principal English and Spanish magazines and reviews.

Humperdinck (*hōōm'pĕr-dingk*), **Engelbert,** German composer, was born at Siegburg, near Bonn, Prussia, 1854. He studied music at Cologne, Frankfort, Munich, and Berlin. In 1890-96 at Frankfort, he became famous as the composer of the musical fairy play, *Hänsel und Gretel*, which was phenomenally successful, compositions that have earned for him the title of the "modern Wagner." In 1900 he became professor of music at Berlin.

Humphreys (*hum'friz*), **Milton Wylie,** American educator and scholar, professor of Greek, University of Virginia, since 1887, was born in Greenbrier county, Va. (now W. Va.), 1844. He was graduated at Washington and Lee, A. M., 1869; Ph.D., Leipzig, 1874; LL.D., Vanderbilt. He was professor of Greek, Vanderbilt University, 1875-83, and professor of Latin and Greek, University of Texas, 1883-87. President in 1882-83 of the American philological association, and was ten years American chief editor to *Revue de Philologie*, Paris. Edited, with notes: *The Clouds of Aristophanes, The Antigone of Sophocles*, etc.

Huneker (*hun'e-kĕr*), **James Gibbons,** journalist, music critic, was born in Philadelphia, Pa., 1860. He was graduated at Roth's military academy, Philadelphia, 1873; studied law and conveyancing at law academy, Philadelphia, five years. Music and dramatic critic of *New York Recorder*, 1891-95, and of the *Morning Advertiser*, 1895-97. He was formerly music and dramatic, now art editor, of the *New York Sun*. Author: *Mezzo-tints in Modern Music; Visionaries* etc. He also wrote the article on music, *New International Encyclopædia*, and has been a contributor to leading magazines.

Hunt, James Henry Leigh, English poet and essayist, was born at Southgate, near London, 1784. In 1813, as editor of *The Examiner*, he wrote some articles severely criticising the prince regent, afterward George IV., and for these he was prosecuted by order of the government, and sentenced to two years' imprisonment in the Surrey jail. While in jail he wrote *The Descent of Liberty, a Masque; The Story of Rimini*, an Italian tale in verse; and *The Feast of the Poets*. In 1828 he published *Lord Byron and some of his Contemporaries*, in which, having quarreled with Byron during a visit to Italy, he indulged in some severe animadversions upon the character of that poet. Among his last works was his *Autobiography*. He died at Putney, England, 1859.

Hunt, Thomas Sterry, American chemist and geologist was born in Connecticut, 1825. In 1845 he became assistant to Professor Silliman in his chemical laboratory at Yale College, and in 1847 was appointed chemist and mineralogist to the geographical survey of Canada. He held this post for more than twenty-five years, resigning in 1872 to accept the chair of geology in the Massachusetts institute of technology. He furnished many important articles in his specialty to Appleton's *American Cyclopedia*, and was a member of the leading societies of both continents. He died in New York, 1892.

Hunt, Walter, English painter, was born in Middlesex, England, 1861. He has been a constant exhibiter at the royal academy since 1881. The following are among his best pictures: *A Rainy Day; A Foster-Mother; The Orphan; The Otter Hunt—the Find; Motherless; An Old Offender; Home from Work*, etc.

Hunt, William Henry, creator of the English school of water-color painting, was born in London, 1790, the crippled child of a tinplate worker. He is ranked by Ruskin with the greatest colorists of the school. He generally chose very simple subjects for his pictures, such as: *Peaches and Grapes; Old Pollard; Wild Flowers; Too Hot; Fast Asleep*, etc., but they are conceived in a finely poetical spirit, and present the perfection of finish. Died, 1864.

Hunt, William Holman, English painter, was born in London, 1827. In 1845 he was admitted a student of the royal academy, and next year exhibited his first picture, *Hark!* He shared a studio with D. G. Rossetti, and the two, along with Millais and a few others, inaugurated the "pre-Raphaelite brotherhood," which aimed at detailed and uncompromising truth to nature. Among the first of his pre-Raphaelite works was *Rienzi*, in 1849. It was followed by *A Converted British Family Sheltering a Christian Missionary* and *The Light of the World*, now in Keble College, Oxford. In 1905 he was nominated to the order of merit, and was made a D. C. L. by Oxford. Died 1910.

Hunt, William Morris, American genre and portrait painter, was born in Brattleboro, Vermont, 1824. He was educated at Düsseldorf, and under Couture at Paris; but made the technic of the French school subsidiary to his own original ideas, and was one of the first to introduce the characteristics of the French school into the United States. Among his productions are: *The Lost Kid; The Choristers; Bugle Call*, etc. He painted *The Flight of Night* and other decorations in the state capitol at Albany, N. Y. Died, 1879.

Hunter, John, noted British surgeon, anatomist, and physiologist, was born in Lanarkshire, Scotland, 1728. He spent five years at the University of Edinburgh, and went to London and studied at Chelsea hospital. His progress in anatomy and surgery was so rapid that in the second session he was able to undertake the directing of the pupils in their dissections. After ten years in the dissecting room his health gave way, and in 1759 he applied for an appointment in the British army, was immediately made staff-surgeon, and sent out to Belle isle, and afterward to the Peninsula. In 1767 he was elected a fellow of the royal society, and in the following year was appointed surgeon to St. George's hospital. In 1776 he was appointed surgeon-extraordinary to the king. His famous operation for the cure of aneurism, that of simply tying the artery at a distance from the tumor, and between it and the heart, has been more fruitful in important results than any since Ambrose Pare's application of ligatures to divided arteries. He died in 1793.

Huntingdon (*hun'ting-dun*), **Selina, Countess of,** daughter of Earl Ferrers, was born in 1707. She married the earl of Huntingdon, 1728, and became a widow in 1746. Joining the Methodists in 1739, she made Whitefield her chaplain in 1748, and assumed a leadership among his followers, who became known as "the countess of Huntingdon's connection." She died in London, 1791, bequeathing to four persons her sixty-four chapels, most of which became identical with the Congregational churches.

Huntington, Daniel, American painter, was born in New York, 1816, and was educated at Hamilton College. In 1835 he began to study art under Morse, and still later with Inman. In 1839 he visited Italy; returned the next year and commenced work. Thereafter he became a permanent resident of New York, and painted the portraits of many notable people. He is probably best known by his picture, *The Republican Court in the Time of Washington*, in which there are more than sixty figures. Died, 1906.

Hunyadi (*hōōn'yod-i*), **János,** Hungarian general, was born at Hunyad, Transylvania, about 1387. He was governor of Transylvania in 1442, and distinguished himself against the Turks, who at that time were the terror of the whole of Christendom. The most splendid of his deeds was the storming of Belgrade, where the monk John Capistran, carrying the holy cross, raised the enthusiasm of the Christian warriors to such a height that a most complete victory brought that fortress again into the possession of the Hungarians. Shortly after dysentery broke out in the camp, and Hunyadi, after a short illness, fell a victim to the disease, 1456.

Hurd, Henry Mills, American physician, superintendent Johns Hopkins hospital since 1889, was born in Union City, Mich., 1843. He was graduated at the University of Michigan, 1863; M.D., 1866; A. M., 1871; LL. D., 1895. Was superintendent eastern Michigan asylum, Pontiac, 1878-89, and professor psychiatry, 1889-1906, Johns Hopkins. Editor *American Journal of Insanity* since 1897; of *Johns Hopkins Hospital Bulletin* and of *Johns Hopkins Hospital Reports* since 1890. Author: *Hints to Hospital Visitors*, with Dr. John S. Billings; also editor, with same, *Hospitals, Dispensaries and Nursing*, etc.

Hurlbut, Jesse Lyman, Methodist Episcopal clergyman, editor, was born in New York, 1843. He was graduated at Wesleyan University, Connecticut, 1880. Was pastor Methodist Episcopal churches, 1865-79; editor of Sunday school literature and secretary of Sunday school union and tract society, 1888-1900. Author: *Outline Normal Lessons; Studies in the Four Gospels; Our Church; Hurlbut's Story of the Bible*, etc.

Hurst (*hûrst*), **John Fletcher,** American clergyman and writer, was born in Maryland, 1834. He was graduated at Dickinson college, and became a Methodist Episcopal clergyman. In 1871, he became professor of theology in Drew seminary, Madison, N. J., and from 1873 until 1880 was president of that institution. At Cincinnati in the last-named year he was elected bishop. In 1891 he was made chancellor of the American University, at Washington. He died at Washington, 1903.

Huss, or **Hus** (*hus;* Ger., *hōōs*), **John,** Bohemian religious reformer, was born at Hussinecz, in Bohemia, about 1370. He studied at the University of Prague, was appointed dean of the philosophical faculty in 1401, and rector of the university, 1402. As a preacher he was greatly esteemed both by the common people and by the students, while as confessor to Queen Sophia he obtained access to the court. At this time he became acquainted with the writings of Wycliffe, which exercised a great influence over him. In 1412 Pope John XXIII. having published a bull of indulgence in order to organize a crusade against Ladislaus, the excommunicated king of Naples, whose kingdom the pope claimed as a papal fief, Huss boldly raised his voice against the whole procedure as unchristian, while Jerome of Prague also stood forth to condemn, in the strongest manner, both the bull and the venders of indulgences. An interdict against Huss in 1412 was the consequence. Huss, however, appealed from the pope to a general council and to Christ, and wrote a book *On the Church*, in which he condemned the abuses of the papacy, and denied the unconditional supremacy of the Roman pontiff. In 1414 he went to Constance to the general council, under a safe-conduct from the emperor, but his opponents procured his imprisonment as a heretic, and, on refusal to retract, he was burned at the stake, 1415.

Hutchins (*huch'inz*), **Harry Burns,** American educator, president of the University of Michigan, since 1910, was born at Lisbon, N. H., 1847. He was graduated at the University of Michigan, Ph. B., 1871; LL. D., University of Wisconsin. He was professor of law, 1884-87; professor of law, Cornell, 1887-95; acting president of University of Michigan, 1897-98, and since 1909. He revised and annotated five volumes *Michigan Supreme Court Reports*, under appointment of the supreme court, 1882-83; edited American edition of *Williams on Real Property*, and contributes to legal periodicals.

Hutchinson (*huch'in-sun*), **Anne,** religious enthusiast, was born about 1590, and emigrated from Lincolnshire, England, to Boston, Mass., 1634. Banished from the colony for heresy she and her friends now obtained from the chief of the Narragansetts liberty to reside in Rhode Island, where they set up a community on the highly commendable principle that no one was to be "accounted a delinquent for doctrine." After the death of her husband, who shared her opinions, she removed to a Dutch settlement in the colony of New York, where, in 1643, she and her whole family of fifteen persons were taken prisoners by the Indians, and all but one daughter barbarously murdered.

Hutchinson, John, Scotch sculptor, was born in Edinburgh, Scotland, 1832. He was apprenticed to a wood-carver in Edinburgh at the age of thirteen; executed wood carvings and other decorations in relief for the picture gallery at Hospitalfield, Arbroath, 1852, and studied in Edinburgh and in Rome. Principal works: *King Robert Bruce; John Knox*, a colossal bronze statue in Edinburgh, etc.

Hutton (*hoot'en*), **Ulrich von,** German reformer and humorist, was born in 1488. When he was ten years of age he was placed in the monastery at Fulda; but, disliking this mode of life, he fled to Erfurt in 1506, where he associated with scholars and poets. In 1518 he accompanied Albert, archbishop of Mainz, to the diet of Augsburg, where Luther had his famous conference with Cajetan. He took sides with Luther, was persecuted by his enemies, and availed himself of the protection of Franz von Sickingen, but was soon forced to flee. From this time he was compelled to adopt a wandering life, and died in 1523 in the isle of Ufnau, in the lake of Zürich.

Hutton (*hut 'n*), **Maurice,** Canadian educator, professor of Greek since 1887, and principal since 1901, University College, Toronto, was born at Manchester, England, 1856. He was educated at Magdalen College school and Worcester College, Oxford; M. A., Oxford; LL. D., Toronto and Queen's. He was fellow of Merton College, Oxford, 1879-86; lecturer on classics and ancient history at Firth College, Sheffield, 1880, and professor of classics in the University College, Toronto, 1880. He is the author of *Hellenism*, and various articles of a popular character on the classics and on Oxford.

Huxley (*huks'li*), **Thomas Henry,** noted English biologist and comparative anatomist, was born at Ealing, England, 1825. He was graduated at London University, 1845. Imbued with a passion for natural history, Huxley devoted himself with zeal and intelligence to the study of numerous marine animals collected from time to time and made them the subject of scientific papers. In 1851 papers on other branches of the same subject were printed in the *Philosophical Transactions*, and in the same year Huxley was elected a fellow of the royal society. In 1854 he was appointed professor of natural history in the royal school of mines, and among his lectures in that institution he delivered courses to workingmen with beneficial results. In 1874 he was made lord rector of Aberdeen University; was Rede lecturer at Cambridge in 1883, and president of the royal society, 1883-85. Among his many works in addition to those mentioned are: *Oceanic Hydrozoa; Evidence as to Man's Place in Nature; Physiography; Science and Culture; Evolution and Ethics*, etc. He died in Eastbourne, England, 1895.

Huygens (*hī'genz;* Dutch *hoi'gens*), or **Huyghens, Christian,** Dutch physicist and astronomer, was born at The Hague in 1629. He improved the telescope, and devised new methods for grinding and constructing lenses. He also invented the first pendulum clock; defined the rings of Saturn; and developed the wave theory of light. He was made a fellow of the royal society, 1663, and at the invitation of Louis XIV. lived for a number of years in Paris where he produced many of his scientific works. Died, 1695.

Hyde, William De Witt, American educator and writer, president of Bowdoin College since 1885, was born in Winchendon, Mass., 1858. He was graduated at Harvard, 1879; D. D., Harvard; LL. D., Syracuse. Author: *Practical Ethics; Social Theology; Practical Idealism; The Evolution of a*

College Student; God's Education of Man; The Art of Optimism; School Speaker and Reader; The Cardinal Virtues; Jesus' Way; The New Ethics; From Epicurus to Christ, etc.

Hypatia (*hī-pā'shi-ä*), Greek female philosopher, daughter of Theon, an astronomer of Alexandria. She was renowned for her knowledge of mathematics and of the Platonic philosophy, of which she was a teacher at Alexandria. Being accused by the clergy of undue influence over Orestes, prefect of Alexandria, against St. Cyril, then archbishop there, she was attacked by a mob led by priests, dragged into a church, stripped of her clothing, and killed. This occurred about 415 A. D., when she was about sixty years of age. Hypatia has been made the subject of a romance by Charles Kingsley.

Hyrcanus (*hĕr-kā'nus*), **John,** Jewish high priest, who lived about 135 B. C. He succeeded his father, Simon Maccabæus, in the high priesthood as one of the Asmonean rulers of Judea. His reign has been compared to that of Solomon. He was succeeded by his son, Aristobulus, a weak, irresolute character, who took the title of king of Judea. Died about 105 B. C.

Hyslop (*his'lop*, **James Hervey,** American psychologist and psychic investigator, professor of logic and ethics, Columbia University, was born at Xenia, Ohio, 1854. He was graduated at Wooster University, 1877; Ph. D., Johns Hopkins, 1887. Author: *Elements of Logic; Ethics of Hume; Science and a Future Life; Enigmas of Psychical Research; Borderland of Psychical Research.* Editor of *Proceedings and Journal of American Society for Psychical Research.*

Hyvernat, Eugene Xavier Louis Henry, French-American educator and orientalist, professor of oriental languages and archæology, Catholic University of America, since 1889, was born at St. Julien-en-Jarret, Loire, France, 1858. He was graduated at the University of France, Lyons, 1876; studied divinity, Séminaire de St. Sulpice, Issy, 1877-79, and at Paris, 1879-82; D. D., Pontifical University of Rome, 1882. He was chaplain at St. Louis of the French, Rome, 1882-85; professor interpreter of oriental languages for Propaganda, Rome, 1885-89; professor of Assyriology and Egyptology, Roman seminary, Rome, 1885-88; intrusted with scientific mission in Armenia by the French government, 1888-89; chief department Semitic and Egyptian literatures, Catholic University of America, since 1889. Author: *Les Actes des Martyrs de l'Egypte; Album de Paléographie Copte; Du Caucase au Golfe Persique*, with Dr. Paul Muller-Simonis; and has been a contributor to Vigouroux's *Dictionnaire de la Bible, The Jewish Encyclopædia*, and various American, French, and German reviews.

Iberville d' (*dē 'bĕr'vēl'*), **Pierre le Moyne, Sieur,** French-Canadian commander, was born at Montreal, Canada, 1661, and was distinguished in the French service. Sailing from Brest in 1698 with two frigates he reached the mouth of the Mississippi with his brother Bienville; fortified Biloxi, the first outpost in Mississippi, and in 1700 ascended the river. In 1701, on account of the unhealthiness of the climate, he transferred the colony from Louisiana to Mobile, and began the settlement of Alabama. In 1702 he fortified Dauphin island, in Mobile bay. Died at Havana, Cuba, 1706.

Ibrahim Pasha (*ib 'rä-hēm' pä-shä'*), Egyptian general, adopted son of Mehemet Ali, viceroy of Egypt, was born in 1789. Mohammed Ali having conceived the design of adding Syria to his dominions, Ibrahim crossed the Egyptian border with an army in 1831, took Acre by storm, and quickly made himself master of the whole of Syria. In 1848, when the aged viceroy reached absolute dotage, Ibrahim went to Constantinople and was installed viceroy of Egypt. Died, 1848.

Ibsen (*ib'sen; ip'sen*), **Henrik,** Norwegian poet and dramatist, was born at Skien, in south Norway, 1828. He studied medicine, was a chemist's assistant at Grimstad, 1842-50, but soon devoted himself wholly to literature. His first drama, *Katilina*, was a failure. In 1857 he became director of the national theater in Christiana. His next dramas were *The Warriors in Helgeland, The Pretenders, Love's Comedy.* The first two, reproducing the spirit of the old sagas, placed Ibsen in the foremost rank of Scandinavian dramatists; the last was a precursor of his satirical social dramas. In 1862 the national theater became bankrupt, and Ibsen, enraged because Norway held aloof from the Danes in their struggle against the Germans, forsook his country, 1864-92, living in Rome, Dresden, and Munich. The Norwegian parliament granted him a pension in 1866. In 1866-67 appeared the lyric drama *Emperor and Galilean.* There followed *Pillars of Society; A Doll's House; Ghosts; Rosmersholm; Hedda Gabler; The Master Builder; Solness; When We Dead Awaken;* and *John Gabriel Borkman.* These plays aroused a storm of controversy in the literary world from 1889, because of their author's passionate advocacy of individual liberty. The interest and method of his plays are almost exclusively psychological. Died, 1906.

Ide, Henry Clay, governor, jurist, was born at Barnet, Vt., 1844. He was graduated at Dartmouth College, 1866; LL. D., 1900, Tufts College, 1903. He was a member of Vermont state senate, 1882-85; United States commissioner to Samoa, 1891; chief-justice of Samoa under joint appointment of England, Germany, and the United States, 1893-97; member Taft commission, on establishment of civil government in Philippine islands, 1900; secretary of finance and justice for Philippine islands, 1901; vice-governor, 1904-05, acting governor, 1905-06, governor-general since 1906, Philippine islands. Author: *Code of Procedure in Civil Actions and Special Proceedings in the Philippine Islands*, etc.

Ignatieff (*ig-nä 'tyef*), **Nikolai Pavlovitch,** Russian diplomat, was born at St. Petersburg, 1832. In 1856 he entered the diplomatic service, and in 1858 induced China to give up the Amur province. In 1864 he was made ambassador at Constantinople. An ardent panslavist, he intrigued with the Balkan Slavs, and took a principal part in the diplomatic proceedings before and after the Russo-Turkish war of 1878. Under Alexander III. he was minister of the interior, 1881-82, and subsequently retired to private life. Died, 1908.

Ihmsen, Maximilian Frederick, journalist, was born at Pittsburg, Pa., 1868. He was educated in the public schools in Stuttgart, Germany, in Allegheny, Pa., and the Pittsburg Catholic College. He became clerk in the Pittsburg postoffice, 1887; reporter *Pittsburg Post*, 1889; was first newspaper man to reach the dam above South Fork, Pa., which, by bursting, caused the Johnstown flood; Albany correspondent *New York Journal*, 1895; city editor, 1896-98, and 1901-02; Washington correspondent, 1898-1900, and now political editor *New York American.* Was fusion nominee for sheriff of New York county, 1907.

Ihne (*ē'nē*), **Wilhelm,** German historian, was born at Fürth in 1821, and was educated at Bonn. He was a private tutor in England, 1843-47, later had charge of a school at Liverpool, 1849-63, and in 1873 became a professor at Heidelberg. He published his great *History of Rome*, in 8 vols., 1868-90; *Early Rome*, 1876; and a number of other historical works. Died, 1902.

Illington, Margaret (Mrs. Bowes), former actress, was born at Bloomington, Ill., 1881, daughter of I. H. and Mary Ellen Light. She was educated at Illinois Wesleyan University and studied at Chicago Musical College. In 1903 she married Daniel Frohman, from whom she was divorced in 1909; married in the same year Edward J. Bowes. She made her début in *The Pride of Jennico* at the Criterion theater, New York, 1900; played in Daniel Frohman's stock company, Lyceum theater, New York; created leading rôle in *The Japanese Nightingale; The Two Orphans; Mrs. Leffingwell's Boots; The Lion and the Mouse; His House in Order; The Thief*, etc.

Inchbald (*inch'bôld*), **Elizabeth,** English actress, dramatist, and novelist, daughter of John Simpson, was born near Bury St. Edmunds, 1753. In 1772 she went to London to seek a theatrical engagement, and married Joseph Inchbald, an actor. Here she remained, without notable success, until 1789 when she found her true vocation —literature. Her earliest efforts were plays, her first being *The Mogul Tale*, a farce. She wrote or adapted nineteen plays. She edited *Inchbald's British Theater.* But her fame rests mainly upon her novels, *A Simple Story* and *Nature and Art*, which rank among English standard novels. She died in 1821.

Ingalls, John James, American lawyer, essayist, and statesman, United States senator, was born at Middleton, Mass., 1833. He was graduated at Williams College, studied law, and was admitted to practice in Massachusetts in 1857, and in 1858 settled in Kansas. He was elected United States senator from Kansas in 1873, and was again elected in 1879 and 1885. During his last senatorial term he was president *pro-tem* of the senate. He was the author of the famous sonnet *Opportunity.* He died at Las Vegas, New Mexico, 1900.

Ingalls, Melville Ezra, railroad president, was born in Harrison, Me., 1842. He was educated at Bridgeton academy, studied at Bowdoin college, and graduated at Harvard law school, 1863. He practiced first at Gray, Me., but soon removed to Boston. President in 1870, receiver in 1871, of the Indianapolis, Cincinnati and Lafayette railroad, and from a bankrupt condition, with the aid of reorganizations in 1873 and 1880, he put its successor, the Cincinnati, Indianapolis, St. Louis and Chicago, upon a sound footing, consolidating it with other roads into the Cleveland, Cincinnati, Chicago and St. Louis railroad, comprising the "Big Four" system, of which he became president. He was president of the Merchants' national bank, Cincinnati. Died 1914.

Ingelow (*in'jē-lō*), **Jean,** English poetess and novelist, was born at Boston, Lincolnshire, England, 1820. A great part of her poetry is of a devotional type, sweet and simple, and filled with beautiful thoughts. Among her noted works is the ballad, *The High Tide on the Coast of Lincolnshire*, and the larger poem, *A Story of Doom.* Her works of fiction are *Off the Skelligs; Fated to be Free; Sarah de Berenger; Don John;* and others. She died, 1897.

Ingersoll (*ing'gĕr-sol*), **Robert Green,** American lawyer, orator, and writer, was born at Dresden, N. Y., 1833. He settled to the practice of law at Peoria, Ill., 1857; became colonel of the 11th Illinois cavalry, 1862, was captured and exchanged; resigned and retired to private life, and, in 1866, was attorney-general of the state. He was a well-known orator, lecturer, and religious controversialist. He published *The Gods, and Other Lectures; Some Mistakes of Moses; Great Speeches*, etc. Died at Dobbs Ferry, N. Y., 1899.

Ingraham (*ing'grä-am*), **Joseph Holt,** American clergyman and novelist, was born at Portland, Me., 1809. After some years spent at sea, he became a teacher of languages in Mississippi, and was ordained Episcopal clergyman in 1855; prior to his ordination he wrote stories of adventure, *Captain Kyd*, etc., but subsequently confined himself to biblical subjects. His best known work is *The Prince of the House of David.* He died at Holly Springs, Miss., 1860.

Ingram (*ing'gram*), **Arthur Foley Winnington,** bishop of London since 1901, dean of the Chapels Royal, was born in Worcestershire, 1858. He was educated at Marlborough College and Keble College, Oxford; chaplain to the archbishop of York and to the bishop of St. Albans, 1889; canon of St. Paul's cathedral, 1897-1901, and bishop of Stepney, 1897-1901. Author: *Work in Great Cities; Messengers, Watchmen, Stewards; The Men who Crucify Christ; Christ and His Friends; Banners of the Christian Faith*, etc.

Ingres (*an'gr'*), **Jean Dominique Auguste,** French painter, was born at Montauban, 1780. He studied under David, and after taking the *grand prix* in 1801, worked in Rome, 1806-20. To this period belong his best portraits, and his *Œdipus and the Sphinx; Venus Anadyomene; Vergil Reading the Æneid; Raphael and the Fornarina*, etc. Died, 1867.

Inman, Henry, American painter, was born in Utica, N. Y., 1801. He was noted for his skill as a portrait painter, and besides making portraits of Chief-justice Marshall and many other distinguished Americans, he visited England and painted portraits of Wordsworth and Macaulay. In 1845 he began a series of historical paintings for the capitol at Washington, but before they were completed he died in New York, 1846.

Innes (*in'is*), **Cosmo,** Scottish historian and antiquarian, was born at Durris, Scotland, 1798. He was graduated both at Glasgow and Oxford, and in 1822 passed as an advocate. He became in 1846 professor of constitutional law and history in the University of Edinburgh. He is best known as the author of *Scotland in the Middle Ages* and *Sketches of Early Scotch History.* Died, 1874.

Inness (*in'es*), **George,** American artist, was born at Newburg, N. Y., 1825; studied in New York, France, and Italy. He excelled as a painter of American landscapes, and became a national academician in 1868; resided in Italy, 1871-75; died at Bridge of Allan, Scotland, 1894. Among his best paintings are: *Delaware Valley; American Sunset; Pontine Marshes; Niagara Falls; Sunset—Montclair; Autumn Oaks*, etc. Died 1894.

Inness, George, Jr., artist painter, was born in Paris, France, 1854, son of the preceding. He was a pupil of his father in Rome, Italy, 1870-74; studied one year in Paris, 1875; after that lived in Boston and New York, where he occupied studio with his father, 1878. He resided with his family in Montclair, N. J., after 1880, but had his studio in Paris, 1895-99, and exhibited annually at the Paris salon. He received a gold medal at the 1899 Paris salon.

Innocent III., one of the greatest of the popes, was born at Anagni, Italy, 1161, son of Count Trasimund, a Roman noble. He was educated at Paris, Rome, and Bologna, and was elected pope in 1198. He aimed at making the papacy supreme in all European affairs; extended the territorial power of the church, and made nearly all Christendom subject to its sway; was zealous for the purity as well as supremacy of the church, and countenanced every movement that contributed to enhance its influence and stereotype its beliefs as well as its forms of worship. The papal power probably attained its greatest height during his pontificate He died at Perugia, Italy, 1216.

Ireland, John, American prelate, Roman Catholic archbishop of St. Paul since 1888, was born in Ireland, 1838. He came to the United States in boyhood; was educated in the cathedral school, St. Paul; studied theology in France, and was ordained priest in 1861; LL. D., Yale, 1901. He was chaplain of the 5th Minnesota regiment in the civil war; rector of the cathedral at St. Paul; secretary and later coadjutor to Bishop Grace, of St. Paul, and was consecrated archbishop in 1888. He has been active in establishing Roman Catholic colonies in the Northwest, and in the organization of total abstinence societies. Author: *The Church and Modern Society.*

Irene (Lat., *i-rē'nē*: Eng., *ē-rin'*), Byzantine empress, once a poor orphan girl of Athens, Greece, was born about 752. Her beauty and talents drew the attention and love of the emperor Leo IV., and he married her in 769. After his death she ruled as regent, during the minority of her son Constantine VI. She was banished to Lesbos in 802, where she died in the following year. The Greek church counts her among its saints.

Irving, Sir Henry (John Henry Brodribb), English actor, was born in Keinton, near Glastonbury, 1838. He acted at the Theater Royal, Edinburgh, 1856-59, and afterward for seven years at Manchester. He played in London, 1859, but attracted little notice until his appearance

at St. James' theater, 1866. He soon established a connection with the Lyceum, of which he became manager in 1878. There he played his chief parts, in conjunction with Miss Ellen Terry, producing among other plays, *Hamlet; The Merchant of Venice; Faust; Macbeth; Henry VIII.; The Bells*, and other well-known productions. He first came to the United States in 1883, with Miss Terry and his Lyceum company, and made his début in New York, as Mathias, in *The Bells*. He died in England, 1905, and was buried in Westminster abbey.

Irving, Isabel, actress, was born at Bridgeport, Conn., 1871. She made her début as Gwendolyn Hawkins in *The Schoolmistress*, with Rosina Vokes company, 1887; She was selected by Charles Frohman to create the rôle of Lady Jocelyn Leigh in *To Have and To Hold*, at the Knickerbocker theater, New York; later starred under the management of James K. Hackett in *The Crisis;* was engaged by Clyde Fitch to play the comedy part in *The Toast of the Town*, 1906; and was starred by Liebler and Company in *Susan in Search of a Husband*, 1907. She married W. H. Thompson, 1899.

Irving, Washington, distinguished American author, was born in the city of New York, 1783. Irving, at the age of sixteen, entered a law office; but found greater profit from his father's well-stocked library, Chaucer and Spenser being his favorite authors. New York, at this period, was a town of about 50,000 inhabitants, many of whom were descendants of the original Dutch settlers, having quaint manners and customs, of which Irving was a curious observer. In 1809 he wrote *A History of New York, from the Beginning of the World to the End of the Dutch Dynasty, by Diedrich Knickerbocker*, a burlesque chronicle written in so quiet a vein of humor that it has sometimes been taken for a veritable history. At the close of the war, in 1815, he visited England, where he was warmly welcomed by Campbell, whose biography he had formerly written, and was introduced by him to Walter Scott. In 1819 he published the well-known *Sketch Book*, containing *The Legend of Sleepy Hollow* and *Rip Van Winkle*. At the invitation of Edward Everett, American ambassador to Spain, he accompanied him to Madrid to translate documents connected with the life of Columbus. With these materials he wrote his *History of the Life and Voyages of Columbus; Voyages of the Companions of Columbus; The Conquest of Granada*, and many Spanish works. In 1842 he was appointed United States minister to Spain. In 1846 was published his *Life of Goldsmith*, and his great work, the *Life of Washington*, was published in 1855-59. He spent the last years of his life with his nieces at Sunnyside, in his own "Sleepy Hollow," on the banks of the Hudson, near Tarrytown, where he died suddenly of disease of the heart, 1859.

Irwin, Wallace, author, was born at Oneida, N. Y., 1875. He studied at Stanford University, 1896-99, and was editor *San Francisco News Letter*, 1901; editor *Overland Monthly*, 1902. Burlesque writer Republic theater, 1903; writer of topical verse, *New York Globe*, 1904-05, and on staff *Collier's Weekly*, 1906-07. Author: *The Love Sonnets of a Hoodlum; At the Sign of the Dollar; Chinatown Ballads; Random Rhymes of Odd Numbers*, etc. He is a prolific contributor to magazines and weeklies.

Isabella (*iz'ä-bel'ä*), queen of Castile, daughter of John II., was born in 1451, and united in 1469 to Ferdinand V., king of Aragon. When a union of the kingdoms of Aragon and Castile took place, Ferdinand and Isabella together assumed the royal title of Spain. She was a woman of fine intellect, a wise and humane ruler, was always present during the transaction of state business, and her name was placed beside that of the king in state ordinances. She proved also a stanch supporter of Columbus in his search for the western route to India. Died, 1504.

Isabey (*ē'zä'bē*), **Jean Baptiste,** court painter and favorite of Napoleon, was born at Nancy, 1767. He was a pupil of Girardet Claudet, Dumont, and David. He painted the portraits of Josephine, Napoleon, his marshals, and the chief personages of Europe. He visited the Russian court at the invitation of Alexander. Died at Paris, 1855.

Isaiah (*ī-zā'yä, ī-zä'yä*), one of the most eminent of the Hebrew prophets, flourished about 740-701 B. C. He was the son of Amoz, but of his personal history very little is known. His prophecies, though delivered later in point of time than several of those uttered by other prophets, occupy in our Bible, the first place, both on account of their bulk, and for the sublimity and importance of the predictions.

Isidore (*iz'i-dor*) **of Seville,** or **Isidorus Hispalensis,** one of the most distinguished ecclesiastics of the sixth century, was born at Cartagena, Spain, about 560. The episcopate of Isidore, which began in 600, is rendered notable by the half-ecclesiastical, half-civil counsels of Toledo, in 619 and 633, which were held under his presidency, and the canons of which may almost be said to have formed the basis of the constitutional law of the Spanish kingdoms, both for church and for state, down to the great constitutional changes of the fifteenth century. Died, 636.

Ismail Pasha (*is'mä-ēl' pä-shä*), khedive of Egypt, was born in 1830. He succeeded Saïd Pasha as fifth viceroy of Egypt, 1863; promoted the Suez canal project, and gained wealth by the cultivation of cotton during the American war. Financial disaster coming in 1879, he abdicated in favor of his son, Mohammed Tewfik, and lived after 1888 in Constantinople. Died, 1895.

Isocrates (*ī-sok'ra-tēz*), Greek orator and teacher, was born in Athens, 436 B. C. About 390 B. C. he set up as a teacher of oratory, though he professed also to give a general practical education. He drew to him pupils subsequently distinguished as statesmen, historians, and orators. But he also wrote speeches intended to be practical; the *Archidamus* may actually have been composed for the Spartan king Archidamus. As a politician, Isocrates' one idea was to unite all Greeks together in a joint attack upon the common foe, Persia. The outcome was the destruction of Greek freedom at Cheronea by Philip. Died, 338 B. C.

Israels (*ēs'rä-els'*), **Josef,** Dutch painter, was born at Groningen, 1824. He studied at Amsterdam, under Kruseman, and next at Paris, under Picquet, and received gold medals of honor at Paris, Brussels, and Rotterdam. He also had conferred upon him the Belgian order of Leopold, and was nominated a member of the French legion of honor. Principal works: *The Shipwrecked Mariner; The Cradle; Interior of the Orphans' Home at Katwyk; The True Support*. Died, 1911.

Ito (*ē'tō*), **Marquis Hirobumi,** Japanese statesman was born in the province of Choshu, 1841. In 1871 he visited the United States for the purpose of examining the coinage system, and on his return to Japan was successful in establishing a mint at Osaka. He became prominent in the Japanese cabinet in 1886, made many reforms, and in 1888 prepared the written constitution of Japan which was promulgated in 1889. In 1900, on the resignation of the Yamagata ministry, he was summoned by the emperor to form a cabinet. Assassinated, 1909.

Ito, Count Yuko, Japanese admiral, chief of the naval general staff, was born in Satsuma province, 1843. He was educated at the Tokyo Kaisei College. Entered the imperial Japanese navy, 1868; attained the rank of lieutenant-commander, 1872; was promoted rear-admiral and commander of the standing squadron, 1886; vice-admiral and chief of Yokosuka naval station, 1892; fought the battle of Yalu with all the combined squadrons under command, 1894; chief of the naval general staff, 1895; created viscount for services in the war, and made a full admiral in 1898. Died, 1914.

Ivan, III. (*ē-vän', ī'van*), **Vasilevitch,** czar of Russia, sometimes named "the great," may be regarded as the founder of the Russian empire. He was born in 1440, was at first only grand-duke of Moscow, but succeeded in shaking off entirely the yoke of the Tartars, and in subjecting a number of the Russian principalities to his own sway. In 1472 he married Sophia, a niece of Constantine Palæologus, assumed the title of "ruler of all Russia," and adopted the two-headed eagle of the Byzantine empire. Died, 1505.

Ivan IV., Vasilevitch, czar of Russia, called "the terrible," was born in 1530. He did much for the advancement of his country in arts and commerce, as well as for its extension by arms. But his hand fell with merciless cruelty upon the boyars of his kingdom, and upon some of his towns, as Moscow, Tver, and Novgorod. Ivan died of sorrow for his son, whom three years before he had slain in a mad fit of rage. Died, 1584.

Ives (*īvz*), **Frederic Eugene,** American inventor, was born at Litchfield, Conn., 1856. He was educated in the public schools at Litchfield, Norfolk, Newton, Conn. In charge of photographic laboratory, Cornell University, 1874-78. His experiments in color photography on the so-called trichromatic principle, commenced in 1878, culminated in the three-color printing process in the typographic press, now an important industry and in the Kromskop system. Author: *Isochromatic Photography with Chorophyll, A New Principle in Heliochromy*. Contributor to technical and educational journals on photographic processes.

Ixtlilxochitl (*ēsh'tlil-shō'chēt'l*), **Fernando de Alva,** Mexican antiquarian, was born in Mexico, about 1568. He was a descendant of the kings of Tezcuco, was interpreter of the native languages to several viceroys of Mexico, and a laborious collector of the ancient MSS. and traditions of his country. Died, 1648.

Jackson, Abraham Valentine Williams, American educator and scholar, professor Indo-Iranian languages, Columbia University, since 1895, was born in New York, 1862. He was graduated at Columbia, 1883; L. H. D., 1885; Ph. D., 1886; LL.D., 1904. He traveled in India, 1901, and Persia and Central Asia, 1903 amd 1907. Author: *A Hymn of Zoroaster; An Avestan Grammar; Persia, Past and Present;* He edited *A History of India*, 9 volumes, and the Columbia University Indo-Iranian series, in three volumes.

Jackson, Andrew, seventh president of the United States, was born in North Carolina, 1767. His father, a Scotch-Irishman, emigrated to America in 1765. When Jackson grew up he was sent to study for the church, but on the outbreak of the American revolution he and his brothers were summoned to the field. In 1784 he commenced the study of law, and in 1788 was appointed solicitor for the western district of North Carolina, now the state of Tennessee. In 1813, at an outbreak of hostilities with the Creek Indians, he raised a volunteer force of 3,000 men and defeated them. Jackson's final victory on March 27, 1814, broke the power of the Indian race in North America. He was appointed major-general of the United States army; defended New Orleans against the attack of the British under General Packenham, December, 1814. The result of this action gave General Jackson a great and enduring popularity. After Spain had ceded Florida to the United States he was made governor of the territory, and subsequently was chosen United States senator from Tennessee. He was, in spite of opposition, elected president of the United States by the democratic party in 1828, and in 1832 reëlected by a still more overwhelming majority. His administration was marked by singular firmness. He vetoed important measures against large majorities, destroyed the bank of the United States, and took the first steps toward a specie currency and an independent treasury. He retired with undiminished popularity after the election of President Van Buren. Died, 1845.

Jackson, Helen Hunt, American author and poet, was born in Amherst, Mass., 1831. Her maiden name was Helen Maria Fisk. She studied at Ipswich female seminary, and in 1852 was married to Major E. B. Hunt, of the United States engineers. She afterward married William S. Jackson, and lived most of the latter part of her life at Colorado Springs, Colo. She began to write verses about 1870 over the signature "H. H.," which soon became familiar to magazine readers. In 1883 Mrs. Jackson was made a commissioner by the government to look into the condition of the Mission Indians of California. Her last book, *Ramona*, which deals with Indian life, leaped at once into great popularity. She died at San Francisco, 1885.

Jackson, John Price, electrical engineer, was born at Philadelphia, 1868; graduated at Pennsylvania State College, 1889, M. E., 1892, E. E., 1901; was electrical engineer with Sprague and Edison electrical companies, 1890-2; professor electrical engineering, 1893-1907; dean school of Engineering since 1907, Pennsylvania State College. Member electrical jury, St. Louis Exposition, 1904; member American Institute Electrical Engineers, American Society Mechanical engineers, etc. Joint Author: *Alternating Currents and Alternating Current Machinery; Elementary Electricity and Magnetism;* etc.

Jackson, Samuel Macaulay, American educator and writer, professor of church history, New York University, was born in New York city, 1851. He was graduated from the college of the city of New York, 1870; Union theological seminary, 1878; LL. D., Washington and Lee University, 1892; D. D., New York University, 1893. He has been editor of numerous church dictionaries and encyclopædias. His other publications include: *Huldreich Zwingli, Handbooks for Practical Workers in Church and Philanthropy*, etc.

Jackson, Thomas Jonathan, better known the world over as "Stonewall Jackson," American general, was born in Lewis county, Virginia (now West Virginia), 1824. He was graduated at West Point academy in 1846, and after serving with distinction in the Mexican war, he became a professor in the military institute at Lexington, Va. At the outbreak of the civil war he was appointed brigadier-general in the confederate service. At the battle of Bull Run, July 1861, his command on that occasion "stood like a stone wall," hence the sobriquet; captured Harper's Ferry with 11,000 federal prisoners; commanded a corps at Antietam; and was made lieutenant-general for his services in largely contributing to the federal defeat at Fredericksburg. In 1863, by a clever flank movement, he defeated the 11th corps of General Hooker's army at Chancellorsville; and on the evening of the same day was fired at by a patrol party of his own men, who mistook him and his staff, in the darkness, for a detachment of Union cavalry, and died of his wounds on May 10, 1863.

Jacobi (Ger. *yä-kō'bē*), **Abraham,** American physician, was born at Hartum, Westphalia, 1830. He studied at the Universities of Griefswald and Göttingen; was graduated from Bonn, M. D., 1851; LL. D., University of Michigan, 1898, Columbia, 1900; Yale, 1905; Harvard, 1906. He settled in practice in New York, 1853; was professor of diseases of children, New York Medical College, 1860-65, and at New York University, 1865-70; later professor of diseases of children, College of Physicians and Surgeons. Author: *Dentition and Its Derangements; The Raising and Education of Abandoned Children in Europe; Therapeutics of Infancy and Childhood; Intestinal Diseases*, etc.

Jacobi, Friedrich Heinrich, German philosopher, was born at Düsseldorf, 1743. He was trained for a mercantile career but in 1772 was appointed finance officer for Jülich and Berg and devoted himself to literature and philosophy. He elaborated no system of philosophy but criticised all other philosophies from his special doctrine that by the "reason," not the understanding, we have immediate conviction or belief not only of the reality of objects perceived by the senses,

but also of the reality of the highest verities that lie beyond the apprehension of sense. Died, 1819.

Jacobi, Karl Gustav Jakob, celebrated German mathematician, was born in Prussia, 1804. In 1829 he became a professor at Königsberg, and published his celebrated work, *Fundamenta nova Theoriae Functionum Ellipticarum*, for which he received the great medal of the Academy of Sciences of Paris. He also wrote a great number of memoirs on the different branches of the higher mathematics, chiefly on *Series and Definite Integrals*, and was a regular contributor to the celebrated *Journal für reine und angewandt Mathematik* of Crelle. Died, 1851.

Jacotot (*zhá'kō'tō'*), **Jean Joseph,** inventor of the "universal method" of education, was born at Dijon France, 1770. The principles of his system are that the mental capacities of all men are equal; the unequal results of education depend almost exclusively upon will; everyone is able to educate himself, provided he is once started in the right way; knowledge should first be acquired through instinctive experience, or by the memory. He expounded his views in *Enseignement Universel*. Died, 1840.

Jacquard (*zhá'kár'*), **Joseph Marie,** French inventor, was born at Lyons, 1752. He attempted to establish a manufactory for weaving figured fabrics, planned several ingenious improvements in machinery, and brought to perfection the apparatus for figured weaving, which now perpetuates his name—the Jacquard loom. He resided at Lyons for many years, encountering much opposition from a prejudice excited against machinery, but eventually triumphed. He passed his latter years in tranquil retirement, and died in 1834. During his life he received the cross of the legion of honor, and in 1840 a public statue was erected to his memory at Lyons.

Jahn (*yän*), **Friedrich Ludwig,** the "Turnvater" or father of gymnastics, was born at Lanz in Prussia, 1778. In 1811 he started the first gymnasium in Berlin. His system, meant to revive patriotism, attracted the Prussian youth, and to the training thus obtained must be largely attributed the expulsion of the French. But the gymnasiums began to witness political gatherings, too liberal to please the Prussian government, and they were closed in 1818. Jahn, who had taken a prominent part in the movement, was arrested in 1819 and suffered five years' imprisonment. He was elected to the Frankfort national assembly in 1848. Died, 1852.

Jahn, Otto, German philologist, archæologist and classical editor, was born at Kiel, 1813. He lectured at Kiel, Griefswald and Leipzig. Deprived of his chair in 1851 for his part in the political movements of 1848-49, he became in 1855 professor of archæology at Bonn. He published works on Greek art, representations of ancient life on vases, a number of Latin and Greek classics, besides a *Life of Mozart*, and a number of masterly essays on music. Died, 1869.

James I. of England, VI. of Scotland, the only son of Mary, queen of Scots, and Henry, Lord Darnley, was born in Edinburgh, 1566. When his mother was forced to resign the crown, James was proclaimed king of Scotland, 1567. In 1578 the earl of Morton, then regent, was driven from power, and James assumed full control. In the winter of 1589 James went to Denmark, where he married Princess Anne, daughter of Frederick II., king of that country. By the death of Elizabeth in 1603, James succeeded to the throne of England. He soon became unpopular with his new subjects. He really governed through his favorites, Kerr and Buckingham, both of them unpopular; and England's prestige as a power, which had been gained under Elizabeth, soon disappeared. The so-called King James Bible was completed during his reign. He has been described as two men in one—"a witty, well-read scholar, who wrote, disputed and harangued, and a nervous, driveling idiot who acted." Died, 1625.

James II. of England and **VII. of Scotland,** son of Charles I. and Henrietta Maria, was born in 1633. In 1648, during the civil war, he made his escape to France. He then entered the military service of Spain. At the restoration he was made lord high admiral of England. On the death of Charles II., 1685, James succeeded to the crown without opposition. On becoming king he promised to maintain the church and to respect the liberties of the people, but his government, nevertheless, was arbitrary and tyrannical; he paraded his Catholicism, persecuted the covenanters, subordinated English interests to French, permitted the "bloody assize," suspended the test act, violated the rights of the Universalists, gave church offices to Roman Catholics, and by these and many other acts of despotism made his deposition necessary; leading statesmen invited William of Orange to assume the throne, and James fled to France; an invasion of Ireland in 1689 ended in his defeat at the battle of the Boyne. He retired again to France, and lived at St. Germains until his death, 1701.

James IV. of Scotland, son of James III. and Margaret of Denmark, was born in 1473. His rule gave promise of being both vigorous and popular, while the personal beauty he possessed and his open frankness won the hearts of his people. In 1503 the king married Margaret, eldest daughter of Henry VII. of England, an alliance which led to the union of the two crowns just one hundred years later. Henry VIII. came to the English throne in 1509, and, in the disputes which followed, James invaded England with an army. He was met by the earl of Surrey, and in the battle which took place at Flodden, 1513, the king and many of his nobles were killed. He was forty-six years old, and had reigned twenty-six years.

James, Edmund James, American educator, was born in Jacksonville, Ill., 1855. He was educated at the Illinois state normal school and at Northwestern and Harvard Universities; Ph. D., 1877, University of Halle; LL. D., Cornell College, Wesleyan, Queen's College. Professor of political and social science, University of Pennsylvania, 1884-95; professor of public administration, and director of extension division of the University of Chicago, 1896-1901; president of Northwestern University, 1902-04, and president of the University of Illinois since 1904. Author: *Relation of the Modern Municipality to the Gas Supply; The Legal Tender Decisions; Charters of City of Chicago; Growth of Great Cities in Area and Population; Government of a Typical German City—Halle;* etc.

James, George Payne Rainsford, English historical novelist, was born in London, 1801. He was educated at Putney and in France, and by seventeen had written some Eastern tales, which found favor with Washington Irving. In all he published seventy-seven works, historical romances mostly, but also biographies, poems, etc. Died, 1860.

James, Henry, American author, was born in New York, 1843. He was educated in France and Switzerland, and at Harvard law school. He began his literary career as contributor to periodicals, 1866, and since 1869 has lived in England. Author: *Confidence; Diary of a Man of Fifty; Washington Square; The Portrait of a Lady; Siege of London; Portraits of Places; Tales of Three Cities; A Little Tour in France; The Author of Beltraffio; The Bostonians; The Lesson of Balzac; American Scenes*, etc.

James, William, eminent American psychologist and philosophical writer, was born in New York, 1842. He was educated in private schools and by tutors, and at Lawrence scientific school, 1861-63; M. D., Harvard medical school, 1870; Ph. D. and Litt. D., Padua, 1893; L. L. D., Princeton, 1896, Edinburgh, 1902, Harvard, 1905. He was professor of psychology, 1889-97, and professor of philosophy, 1897-1907, Harvard University. He was Gifford lecturer on natural religion, University of Edinburgh, 1899-1901. Corresponding member of the French institute, Paris, royal Prussian academy of sciences; member National Academy of Sciences, etc. Author: *Principles of Psychology*, 2 vols.; *The Will to Believe, and Other Essays in Popular Philosophy; Human Immortality—Two Supposed Objections to the Doctrine; The Varieties of Religious Experiences; Pragmatism—A New Name for some Old Ways of Thinking*, etc. Died, 1910.

Jameson (*jām'sun*), **Mrs.** (Anna Brownell Murphy) British writer, was born in Dublin, 1794. She was the daughter of an artist, and many of her books are about pictures, painters, and other art matters. In 1823 she married Robert Jameson, and went with him to Canada, where he held a government office. Among her books are: *Memoirs of Celebrated Female Sovereigns; Characteristics of Women; Memoirs of Italian Painters; The History of Sacred and Legendary Art;* and *Legends of the Madonna*. She died in London, 1860.

Jameson, John Franklin, American educator, historian, was born in Boston, 1859. He graduated at Amherst College, 1879; Ph. D., Johns Hopkins, 1882; LL. D., 1902; Amherst, 1898; was head of department of history, University of Chicago, 1901-05, and director department of historical research, Carnegie institution, Washington, since 1905. He was managing editor of *American Historical Review*, 1895-1901 and since 1905; president American historical associations, 1907-08. Author: *Willem Usselinx, Founder of the Dutch and Swedish West India Companies*, etc. He edited the *Correspondence of John C. Calhoun*, and has been editor of the historical publications of the Carnegie institution since 1905.

Jameson, Leander Starr, South African politician, was born at Edinburgh, 1853. He studied medicine there and at London, and began practice at Kimberley in 1878. Through Cecil Rhodes he engaged in pioneer work, was in 1891 made administrator of the South African company at Fort Salisbury, and won enormous popularity. During the troubles at Johannesburg between the Uitlanders and the Boer government, Jameson, who by order of Rhodes had concentrated the military forces of Rhodesia at Mafeking on the Transvaal frontier, started with five hundred troopers to support the Uitlanders, 1895. At Krugersdorp they were overpowered by an overwhelming force of Boers, and, sleepless and famishing, were compelled after a sharp fight to surrender, January 2, 1896. Handed over to the British authorities, Jameson was in July condemned in London to fifteen months' imprisonment, but was released in December. In 1900 he was elected to the legislative assembly, and was, from 1904 to 1908, premier of Cape Colony.

Janet (*zhá'ne'*), **Paul,** French philosopher, was born in Paris, 1823. In 1864, he became professor of the history of philosophy at the Sorbonne, and a member of the Academy of Moral and Political Sciences. Among his works are: *Histoire de la Science Politique; Les Maîtres de la Pensée Moderne*, etc. He was an officer of the legion of honor. Died in Paris, 1899.

Janeway (*jān'wā*), **Edward Gamaliel,** American physician, was born in New Jersey, 1841. He was graduated at Rutgers College, 1860; was graduated at the College of Physicians and Surgeons, New York, 1864; LL. D. From 1864 to 1911 was in practice in New York, and was from 1868-1911 identified with the Bellevue Hospital Medical College, first as curator, then in 1873 as professor of pathological anatomy, and later as professor of medicine and dean. Died, 1911.

Jansen (*jan'sen;* D., *yän'sen*), **Cornelius,** sometimes called Jansenius, bishop of Ypres, in the Netherlands, and founder of the Jansenists, was born at Acquoi, near Leerdam in Holland, 1585. In 1636 he was made bishop of Ypres. He died in 1638, just as he had completed his great work, the *Augustinus*, in 3 vols., which sought to prove that the teaching of St. Augustine against the Pelagians and semi-Pelagians on grace, free-will, and predestination was directly opposed to the teaching of the Jesuit schools. On the publication of the *Augustinus* in 1640, it was received with loud clamor, especially by the Jesuits, and was prohibited by a decree of the inquisition in 1641; in the following year it was condemned by Urban VIII. in the bull *In Eminenti*.

Jastrow (*yäs'trō*), **Joseph,** American educator, professor of psychology, University of Wisconsin, since 1888, was born at Warsaw, Poland 1863. He was graduated at the University of Pennsylvania, 1882; Ph. D., Johns Hopkins, 1886. Author *Time-Relations of Mental Phenomena; Epitomes of Three Sciences*, part author; *Fact and Fable in Psychology; The Subconscious*, etc.,

Jastrow, Morris, Jr., American orientalist, professor of Semitic languages, and librarian, University of Pennsylvania, was born in Europe, 1861. He was graduated at the University of Pennsylvania, 1881; Ph.D., University of Leipzig, 1884, and also studied at other universities of Germany and France. He is a recognized authority on Semitic religions, languages, and literatures. Author: *Religion of the Babylonians and Assyrians*. Editor: *Jewish Encyclopædia; Encyclopædia Britannica; Hastings' Dictionary of Religions; Journal American Oriental Society;* and various other technical publications.

Jay, John, American statesman and jurist was born in New York city, 1745, and was there admitted to the bar in 1768. In 1774, as a member of the first continental congress, he formed one of the committee of three which drew up the celebrated address to the people of Great Britain. He largely assisted in framing the New York state constitution, in 1777 was appointed chief-justice of New York, and in the following year became president of congress. He next took part in negotiating the treaty of peace entered into at Paris, 1783, between Great Britain and the United States. On his return he was appointed secretary of foreign affairs and in 1789 chief-justice of the United States supreme court. In 1794 he proceeded on a special mission to England, where he concluded a treaty which met with violent opposition from the anti-federalist party. He afterward held the governorship of New York state, and, after refusing a second nomination to the chief-justiceship, died, 1829.

Jebb, Sir Richard Claverhouse, British Greek scholar, was born at Dundee, Scotland, 1841. He was graduated from Trinity College, Cambridge, as senior classic in 1862, and was elected fellow. In 1869 he became public orator of the University, in 1875 professor of Greek at Glasgow, and in 1889 regius professor of Greek at Cambridge. In 1891 he was elected member of parliament for Cambridge University. His books include *Characters of Theophrastus; The Attic Orators; Primer of Greek Literature;* and his *Bacchylides*. But his greatest work is his translation of Sophocles. Died, 1905.

Jeejeebhoy (*jē-jēb-hoi'*), **Sir Jamsetjee,** Hindu philanthropist, was born at Bombay, India, 1783. He was taken into partnership by his father-in-law, a Bombay merchant, in 1800. By 1822 he had amassed 2,000,000 pounds, and began to exhibit a magnificent liberality. He contributed generously to various educational and philanthropic institutions in Bombay, and spent upward of a quarter of a million pounds in benevolence. Queen Victoria knighted him in 1842, and in 1857 he was made a baronet. Died, 1859.

Jefferson, Charles Edward, Congregational clergyman, was born at Cambridge, Ohio, 1860. He was graduated at Ohio Wesleyan University, 1882; School of Theology, Boston University, 1887; D D., Oberlin, 1898; Union, 1898; Yale, 1903. He was ordained to the Congregational ministry, 1887; now pastor of Broadway tabernacle, New York. Author: *Quiet Talks with Earnest People in My Study; The Minister as Prophet; Faith and Life; The World's Christmas Tree; The Old Year and the New; The New Crusade*, etc.

Jefferson, Joseph, American actor, was born at Philadelphia, Pa., 1829. He came from a family of actors, and made his first appearance as a

child in *Pizarro*. From 1856 to 1858 he played minor parts, and managed several theaters in the South, meanwhile visiting London. Shortly after he made his first substantial success as Dr. Pangloss in *The Heir at Law*, at New York. He toured Australia and New Zealand, 1861-65, returned by way of London, and played an engagement at the Adelphi theater in that city in an adaptation of *Rip Van Winkle*. He presented the same play in New York, 1866, and confined himself almost solely to it for fifteen years. In 1880 he produced *The Rivals* with himself as Bob Acres, and in the two last-named characters his great reputation was made on the American stage. He died at Palm Beach, Fla., 1905.

Jefferson, Thomas, third president of the United States, was born at Shadwell, Va., 1743. He graduated from William and Mary College, and studied law. In 1773, as a member of the assembly, he took a prominent part in the measures which resulted in the calling of the continental congress, to which he was sent as a delegate, and where he drew up the declaration of independence. During the war in defense of this declaration, he was governor of Virginia, and in 1784 was sent as minister to France. Returning in 1789, he was appointed, by Washington, secretary of state. In this capacity Jefferson led the party in favor of states' rights and a federal government of restricted and carefully defined powers. The other party took the name of Federalists; the former were first called Anti-Federalists, then Republicans, and finally adopted the title, first given them as a reproach, of Democrats.

When Washington retired, after eight years as president, Jefferson became the vice-president in 1797 under John Adams. The strife of these parties culminated in 1800, when Jefferson and Aaron Burr were elected president and vice-president, against John Adams the federal candidate. The most important act of his administration was the purchase of Louisiana from France.

Though born and educated in the first rank of colonial life, he was a democrat in theory and practice; he held that "the world is governed too much," and that "that government is best which governs least." Though a large slaveholder, he labored for the prohibition of the slave trade and of slavery in the territory beyond the Ohio river, and advocated emancipation in Virginia.

His writings consist mostly of state papers and letters. His only literary work was his *Notes on Virginia*, published in 1782. His death occurred on the 4th of July, 1826, while the nation was celebrating the fiftieth anniversary of the declaration of independence, which he had written.

References.—The best edition of his *Writings* is that edited by P. L. Ford in 10 volumes. See biographies by Randall, Parton, Morse, in the "American Statesmen" series, and Schouler in the "Makers of America" series.

Jeffrey, Francis, Lord, Scottish critic and jurist was born at Edinburgh, 1773. He studied at Glasgow and Oxford, and in 1794 was admitted to the Scottish bar, but as a whig made little progress for many years. In 1820 and again in 1823 he was elected lord rector of Glasgow University; in 1829 dean of the faculty of advocates. After the passing of the reform bill he was returned for Edinburgh, which he represented until 1834, when he was made a judge of the court of sessions. From 1815 he lived at Craigcrook, where he died in 1850. It is as literary critic and leader in a new departure in literary enterprise that Jeffrey holds his title to fame. Together with Sydney Smith, Francis Horner, and a few others, he established the *Edinburgh Review*, of which he was editor until 1829. His own contributions were very numerous and brilliant, if biased.

Jeffreys, George, Baron, English judge, was born at Acton near Wrexham, 1648, and was called to the bar in 1668. Hitherto nominally a Puritan, he now began to intrigue for court favor, was made solicitor to the duke of York, was knighted in 1677, and became recorder of London in 1678. His first exploit was the judicial murder of Algernon Sidney, but in every state-trial he proved subservient to the crown, thus earning the favor of James, who raised him to the peerage in 1685. Among his earliest trials were those of Titus Oates and Richard Baxter; later he was sent to try the followers of Monmouth, and hanged 331, transported 849 to the American plantations, and whipped or fined thirty-three others. He was lord chancellor from 1685 until the downfall of James. On James' flight he tried to follow his example, but was caught at Wapping, disguised as a sailor and sent to the Tower to save him from the mob. Here he died four months after, 1689.

Jelliffe, Smith Ely, American physician, was born in New York, 1866. He was graduated at the Brooklyn polytechnic, 1886; medical department of Columbia University, 1889; Ph.D., Columbia, 1900. He began practice, 1889, spent one year in Europe, and since 1895 has practiced in New York. He is professor of mental diseases at Fordham University; visiting neurologist to the city hospital; and an authority in mental and nervous diseases. Author: *Nervous Diseases in Butler's Diagnostics; Outlines of Pharmacognosy;* Editor and translator: *Dubois' Psychoneuroses;* and contributor to medical, botanical, and pharmaceutical press.

Jenkin, Henry Charles Fleeming, British engineer and electrician, was born in Scotland, 1833. In 1859 he began experiments in conjunction with Sir William Thompson (Lord Kelvin) in electricity, and was specially occupied with practical work in cable telegraphy, 1858-73. He was made fellow of the royal society, 1865, became professor of engineering in University College, London, same year, and in 1868 professor at Edinburgh University. Died, 1885.

Jenks, Jeremiah Whipple, American economist and educator, professor of economics and politics, New York University since 1912. Was born in St. Clair, Mich., 1856. He was graduated from the University of Michigan, 1878; LL.D., 1903; Ph.D., University of Halle, 1885. Studied law, and was admitted to the Michigan bar. Expert agent of United States industrial commission on investigation of trusts and industrial combinations in the United States and Europe, 1899-1901; and consulting expert of United States department of labor on same subject. Special commissioner of war department, United States, to investigate questions of currency, labor, internal taxation and police in the Orient, 1901-02. Author: *The Trust Problem; Citizenship and the Schools; Government Action for Social Welfare;* etc. since 1907 a member of the United States immigration commission.

Jenner (*jen'ĕr*), **Edward,** English physician, discoverer of vaccination, was born at Berkeley vicarage, Gloucestershire, 1749. He was apprenticed to a surgeon at Sodbury, in 1770 went to London to study under John Hunter, and in 1773 settled at Berkeley, where he acquired a large practice. In 1775 he began to investigate the truth of the traditions respecting cow-pox, became convinced that it was efficacious as a protection against small-pox. Many investigations delayed the actual discovery of the prophylactic power of vaccination, and the crowning experiment was made on May 14, 1796. This experiment was followed by many others; and in 1798 Jenner published his *Inquiry into the Causes and Effects of the Variolae Vaccinae.* Yet the practice met with violent opposition for a year, when upward of seventy of the principal physicians and surgeons in London signed a declaration of their entire confidence in it. Parliament voted him in 1802 a grant of 10,000 pounds, and in 1807 a second grant of 20,000 pounds. He died at Berkeley, 1823.

Jeremiah, one of the four great prophets of Israel, author of the book in the Bible which bears his name, and of the book of *Lamentations*, flourished about 629-580 B. C. The writings of this prophet, dictated by him to Baruch, although arranged with little regard to order, exhibit great tenderness and elegiac beauty of sentiment, but lack the sublime grandeur of Isaiah. He often borrows from his poetic predecessors. Several of the *Psalms* have been attributed to him, especially by modern critics.

Jeroboam (*jer-ō-bō'am*), first king of the divided kingdom of Israel, ruled about 937-915 B. C. After Solomon's death he headed the successful revolt of the northern tribes against Rehoboam, and, as their king, established idol shrines at Dan and Bethel to wean away his people from the pilgrimages to Jerusalem. He reigned twenty-two years.

Jerome (*jē-rōm'*), **Jerome Klapka,** English humorist, writer, and lecturer, was born at Walsall, England, 1859. He has been at various times clerk, school-master, actor, journalist, and editor of *Idler*, with Robert Barr, 1892-97, and of *To-day*, 1893-97. Author: *Idle Thoughts of an Idle Fellow; Three Men in a Boat; Ruth; Wood Barrow Farm; Prude's Progress; The Second Thoughts of an Idle Fellow; Three Men on the Bummel; Tea Table Talk; Passing of the Third Floor Back; The Angel and the Author*, etc.

Jerome of Prague, the friend of Huss, was born at Prague between 1360 and 1370. He studied at Oxford, became a convert there to Wycliffe's doctrines, and zealously taught them after his return home in 1407. Jerome entered with his whole soul into the contest carried on by Huss. When Huss was arrested at Constance, Jerome hastened to his side to defend him, but, being refused a safe-conduct, he set out to return to Prague, was arrested in Bavaria, 1415, and was brought back to Constance. He recanted, but withdrew his recantation, and went to the stake, 1416.

Jerome, Saint, Sophronius Eusebius Hieronymus, was born at Stridon Dalmatia, at some period between 331 and 345. In 379 he was ordained and went in 382 to Rome, where he resided until 384, as secretary of the pope Damascus, and where, although already engaged in his great work of the revision of the Latin version of the Bible, he attained to great popularity and influence by his sanctity, learning, and eloquence. Many pious persons placed themselves under his spiritual direction, the most remarkable of whom were Lady Paula and her daughter Eustochium. These ladies followed him to the holy land, whither he returned in 384. He permanently fixed his residence at Bethlehem in 386, Lady Paula having founded three convents and a monastery, the latter by Jerome himself. He is universally regarded as the most learned and eloquent of the Latin fathers. He died in 420.

Jerome, William Travers, American lawyer, was born at New York, 1859. He was educated at Williston seminary and Amherst College; was graduated at Columbia law school, 1884; admitted to the bar, 1884. He was justice of special sessions, 1895-1902. District attorney, New York county, 1901-09. During his career as district attorney he appeared in many noted trials, and attained a high rank as a lawyer and pleader. Author: *Liquor Tax Law in New York.*

Jerrold (*jer'uld*), **Douglas William,** English journalist, author, and wit, was born in London, 1803. He is chiefly remembered for his contributions to *Punch*, with which he was connected from 1841 until within a short time of his death. His best play is *Black-eyed Susan*, published in 1829; his best novels are *St. Giles and St. James*, and *The Chronicles of Clovernook.* An edition of his *Works* was published during his lifetime; and his *Life and Remains* was edited by his son, Blanchard Jerrold, about a year after the father's death in 1857.

Jerrold, William Blanchard, son of Douglas Jerrold, was born in London, 1826. He was a writer for many of the principal newspapers of London, and wrote also many plays, novels, books of travel, and other works. Among his best books are *Trips through the Vineyards of Spain; The Story of Madge and the Fairy Content; London,* illustrated by Doré, and *Life of Napoleon III.* He died in 1884.

Jevons (*jev'unz*), **Frank Byron,** English classical writer, subwarden of Durham University since 1902, was born in 1858. He was graduated at Wadham College, Oxford, and was University treasurer, 1898-1902. Author: *Plutarch's Romance Questions; A Manual of Greek Antiquities; An Introduction to the History of Religion; Religion in Evolution*, etc.

Jevons, William Stanley, English economist and logician, was born in Liverpool, 1835. He studied there and at University College, London. In 1866 he became professor of logic and political economy at Owens College, Manchester, and 1876-81 held the chair of political economy at University College, London. He was drowned in 1882 while bathing at Bexhill, near Hastings. He popularized the mathematical methods of Boole, and wrote many works on logic.

Jewett, Sarah Orne, American author, was born at South Berwick, Me., 1849, daughter of the late Dr. Theodore H. Jewett. She was educated at Berwick academy; Litt. D., Bowdo in College. Author: *Country By-Ways; The Mate of the Daylight and Friends Ashore; Betty Leicester—A Story for Girls; Strangers and Wayfarers; The Life of Nancy; The Country of the Pointed Firs*, etc. Died, 1909.

Joan of Arc (*jō -an'; jōn uv ärk'*) or **Jeanne d' Arc,** the maid of Orleans, French national heroine, was born of poor but devout parents, in the village of Domremy, 1412. During that unhappy time a prophecy was current in Lorraine, that the kingdom should be saved by a virgin, and no doubt this together with her visions helped to define her mission to the young peasant girl. She put on male dress and a suit of white armor, mounted a black charger, bearing a banner of her own device. Her sword was one that she divined would be found buried behind the altar in the church of St. Catherine de Fierbois. Thus equipped she put herself at the head of an army of 6,000 men, dictated a letter to the English, and advanced to aid Dunois in the relief of Orleans. Her arrival fired the fainting hearts of the French with a new enthusiasm, and, on April 29, 1429, she threw herself into the city, and, after fifteen days of fighting, the English were compelled to raise the siege and retreat. On May 24, 1430, with a handful of men she forced her way into Compiégne, ~~which~~ was then besieged by the forces of Burgundy; was left behind by her men, taken prisoner, and sold to the English by John of Luxembourg. In December she was carried to Rouen, the headquarters of the English, heavily fettered and flung into a gloomy prison, and at length she was arraigned before the spiritual tribunal of Pierre Cauchon. Her trial was long, and was disgraced by every form of shameful brutality. She was burned at the stake on May 30, 1431.

John, Saint, the apostle, was born about 4 A.D., and was one of the earliest of Christ's disciples. During the crucifixion our Lord commended His mother to his care, and the apostle "took her to his own home." John afterward became bishop of Ephesus. According to Tertullian, he was plunged into a caldron of boiling oil during the persecution under Domitian, but received no injury. He was subsequently exiled to the island of Patmos, where he is said to have written the

book of *Revelation*. He was also author of the gospel and epistles which bear his name. Died about 99.

John the Baptist, forerunner of Christ, was the son of the priest Zacharias and Elizabeth, the cousin of Mary, mother of our Lord. He baptized and preached repentance and forgiveness of sins. He had denounced Herod Antipas for taking Herodias, his brother Philip's wife, was flung into prison, where he was executed at the request of Salome, daughter of Herodias.

John II., Casimir, king of Poland, was born in 1609, the younger son of Sigismund III. During his reign Poland was attacked by Russia and Sweden, resulting in wars which terminated in the cession of several provinces on the Baltic and Dnieper. His wife intriguing for the son of the prince of Condé as successor to the throne, and the nobles contending among themselves, he abdicated at the diet of Warsaw, 1668, and retired to France, where he was kindly received by Louis XIV. Died, 1672.

John III., Sobieski, king of Poland, was born about 1624. He was sent to Paris to complete his education, and entered the musketeers of Louis XIV. under Condé; but in 1648 he returned to combat the revolted Cossacks. He fought bravely against them and against the Swedish and other invaders, and next to Czarniecki he was foremost in saving the country from ruin. In 1672 he defeated the Turks and Tartars, and when King Michael, being besieged by the Turks in Kamenetz, concluded an ignominious treaty, he caused its rejection by the senate, hastened to Podolia, and routed the Turks at Khotin, 1673. The king had died a few days before, and Sobieski was elected his successor in 1674. He resumed the war, and rescued the fortress of Trembowla, but subsequently at Zurawno, barely escaped surrender. In 1683 he hastened to the rescue of Vienna, which was besieged by an army of 300,000 Turks. Sobieski, after a triumphal entry into Vienna, pursued the enemy into Hungary, which was soon restored to the emperor. He afterward made attempts to conquer Wallachia, but failed. The last years of his life were embittered by civil as well as domestic troubles. Died, 1696.

John, king of England, surnamed Lackland, was born in 1166. He was the youngest son of Henry II., and the successor, in 1199, of Richard I., his brother. In 1203 he murdered his nephew Arthur at Rouen, and imprisoned Arthur's sister Eleanor, known as the damsel of Brittany, in Bristol castle. In 1215, on the demand of his barons, who were headed by Stephen Langton, now archbishop of Canterbury, he signed *Magna Charta*. Though John thus accepted the charter which has been solemnly ratified on thirty-eight different occasions by subsequent kings, yet he had no intention of being bound by it. He actually procured from the pope a bull annulling the charter, and introduced foreign soldiers to fight against the barons, who immediately offered the throne to Louis, son of Philip of France, an offer which was readily accepted, but which led to no result. During this reign the English lost nearly all their French possessions, even Normandy falling to the crown of France. Died, 1216.

John II., king of France, surnamed "the good," the second son of the Valois family, was born in 1319. He succeeded his father, Philip VI. of Valois, in 1350. He commenced his reign by acts of despotism and cruelty. England, being appealed to by the friends of those whom he had slain, invaded France, when John was defeated by Edward, the Black Prince, at Poitiers in 1356, and carried to Bordeaux and then to London, where he was a prisoner for three years. He died in 1364.

John, king of Saxony, was born in 1801. He was the youngest son of Duke Maximilian of Saxony and Princess Carolina of Parma. His brother, Frederick Augustus II., dying without issue, in 1854, he became king. In the war of 1866 he took the side of Austria. The Prussians entered Saxony, and the Saxon army, having withdrawn to Bohemia, fought against them in the battle of Königgrätz. Subsequently Saxony entered the North German confederation, and her troops took part in the Franco-Prussian war of 1870-71. Under the pseudonym Philalethes, John published a translation of Dante's *Divina Commedia*, with critical and historical notes, and left manuscript translations of seventy English poems. Died, 1873.

John of Austria, or **Don Juan d'Austria,** natural son of the emperor Charles V., was born at Regensburg, about 1547. He was early taken to Spain, and after the death of his father was acknowledged by his half-brother Philip II. In 1570 he was sent with an army against the Moors in Granada, whom he completely expelled from the country. He sought to win the favor of the people by mildness; hard pressed for a time by William the Silent, he with the help of Parma's troops won the victory of Gembloux in 1577. But Philip now feared he might make himself king of the Netherlands, and Don John's death at Namur, 1578, was not without suspicion of poison.

John of Gaunt (*gänt; gônt*), or **Ghent,** fourth son of Edward III., who made him duke of Lancaster, was born in 1340, at Ghent. In the French wars he served with great bravery under his brother, Edward, the black prince. In 1359 he married Blanche, heiress of the duke of Lancaster, and himself became duke in 1362. Toward the end of his father's reign he became the chief man in the kingdom, and perhaps wished to succeed him; at any rate, the young king, Richard II., distrusted him and sent him on another wild expedition to recover his Castilian kingdom. This resulted in a treaty between John and Henry Trastamara, who had possession of the throne, by which John's daughter Catharine should succeed as queen of Castile. John of Gaunt died at London, 1399.

John of Salisbury, English schoolman, by Bishop Stubbs styled "for thirty years the central figure of English learning," was born at Old Sarum, about 1118. He studied at Paris and Chartres, and from 1150 lived at Canterbury, meanwhile often visiting Italy. From 1164 to 1170 he had to take refuge at Rheims, but he returned in time to witness Becket's murder. In 1176 he became bishop of Chartres. His Latin works include over 300 letters, the *Policraticus*, etc. Died, 1180.

John XXII., pope, otherwise, Jacques d'Use, was born at Cahors, France, about 1244. Attempting, after his election as pope in 1316, to carry out the vast policy of Gregory VII., he interposed his authority in the contest for the imperial crown between Louis of Bavaria and Frederick of Austria, supporting the latter and excommunicating his rival. He died at Avignon in 1334, having accumulated 18,000,000 gold florins.

John XXIII., pope, a Neapolitan named Balthazar Cossa, was born at Naples about 1360. He became chamberlain to Boniface IX., who in 1402 made him a cardinal. He succeeded Alexander in 1410. By the decree of a council held at Constance in 1414, John was deposed and imprisoned under charge of Lewis, duke of Bavaria, for four years. At the end of that time he was liberated, and found such favor with the existing pope, Martin V., that he was created by that pontiff cardinal-bishop of Tusculum, and dean of the sacred colleges, and allowed precedence over the other cardinals. He died at Florence, Italy, 1419.

Johnson, Andrew, seventeenth president of the United States, was born at Raleigh, N. C., 1808. He was self-educated, a tailor by trade, and made his entry into politics in 1840 as a presidential elector in Tennessee for Van Buren, the democratic candidate. In 1843 he became a member of congress, where for ten years he supported the policy of the democratic party. In 1853 he was elected governor of Tennessee, and again in 1855. In 1857 he was elected to the United States senate, and on the occupation of Nashville by the federals, 1862, was appointed by President Lincoln military governor of Tennessee. In this position he gave such satisfaction to the North that in 1864 he was nominated by the republican party for the office of vice-president, and was elected with President Lincoln, then reëlected for his second term. On April 14, 1865, by the assassination of President Lincoln, he succeeded to the presidency. Some indiscreet and violent speeches, during a tour to Chicago and St. Louis, turned the tide against him, and in the congressional elections his opponents triumphed by increased majorities. His vetoes were generally nullified by the two-thirds vote of both houses. In 1867 Johnson suspended Stanton, secretary of war, who was reinstated by the senate the following year. An attempt to gain possession of the war department during this quarrel led to the impeachment of the president in 1868, but he was acquitted by a single vote. Chief-justice Salmon P. Chase, one of the most eminent American statesmen and jurists, presided at this remarkable trial. His term of office expired in 1869; and afterward he was elected United States senator, taking his seat in 1875. Died, 1875.

Johnson, Charles Frederick, author and educator, was born in New York, 1836; graduated at Yale 1855; Litt. D., 1898; LL. D., Trinity, 1909. Studied law but did not practice; assistant professor mathematics, U. S. Naval Academy, 1865-70; professor English Literature, Trinity College, Conn., 1883-1907. Author; *English Words; Elements of Literary Criticism; Outline History of English and American Literature; Forms of English Poetry; Shakespeare and His Critics;* etc.

Johnson, Clifton, author, illustrator, was born at Hadley Mass., 1865. He was educated in the common schools there, 1870-80, and ten years later entered upon a literary career. Author: *The New England Country; The Country School; The Farmer's Boy; Highways and Byways of the South; Highways and Byways of the Mississippi Valley.* Illustrator: White's *Natural History of Selbourne;* Barrie's *Window in Thrums;* Burroughs' *Year in the Fields,* etc.

Johnson, Eastman, American artist, was born in Lovell, Me., 1824. He studied two years in royal Academy, Düsseldorf. Among many notable genre pictures are: *The Kentucky Home; Husking Bee* and several portraits of distinguished persons. He is represented in the Metropolitan museum of art and Lenox galleries; New York; Corcoran gallery, White House and treasury building, Washington; capitol at Albany; Knickerbocker, Century, and Union League clubs, chamber of commerce, etc., New York. Died, 1906.

Johnson, Joseph French, American educator and economist, was born at Hardwick, Mass., 1853. He was graduated at Harvard, 1873. He was engaged on the Springfield *Republican*, later as financial editor of the Chicago *Tribune*, and established at Spokane, Wash., the *Spokesman*, 1890, which he sold in 1893. He has been professor of political economy, New York University, since 1901, and dean of the school of commerce, accounts and finance, since 1903. Author: *Money and Currency; Syllabus of Money and Banking;* and articles on financial and economic topics in leading reviews. He is also editor of the *Journal of Accountancy.*

Johnson, Reverdy, American lawyer and politician, was born in Annapolis, Md., 1796. He began to practice in upper Marlboro, and in 1817 removed to Baltimore. From 1845 to 1849 he sat in the United States senate as a whig, but he supported the Mexican war beyond the lines of the political party to which he belonged. Later he was appointed attorney-general in President Taylor's cabinet. He again entered the United States senate in 1863, sustained the government throughout the civil war, and, when peace was restored, argued in favor of the prompt reädmission of the southern states. In 1868-69 he was minister to Great Britain. On his return from England he renewed his law practice. Died, 1876.

Johnson, Samuel, English writer and lexicographer, was born at Lichfield 1709, where his father was a bookseller. He was educated partly at Lichfield and partly at Sowbridge, and entered Pembroke College, Oxford, 1728. Here he remained for three years, and was compelled to leave the university without a degree. In 1731 Johnson became usher in a school in Market Bosworth, Leicestershire. Disgusted with the ill-treatment he received there he left, and was next employed in Birmingham in translating for a bookseller. Here in 1736 he married the widow of Mr. Porter, a mercer. His wife was twenty years his senior, but this disparity she compensated for by bringing her husband 800 pounds. Relying upon this capital he opened a classical boarding school, but procured only three pupils, one of whom was the celebrated Garrick. Disappointed in this enterprise, he started in company with Garrick for London. They reached the metropolis in 1737, where Johnson was employed by Cave, the founder and proprietor of the *Gentleman's Magazine*. In 1738 his poem *London*, an imitation of the third satire of Juvenal, was published. From 1740 to 1743 he wrote the parliamentary debates for the *Gentleman's Magazine*, and in 1747 issued the prospectus of his *English Dictionary*, for which he was to receive 1,575 pounds. In 1750 he commenced his periodical, *The Rambler*, and in 1755 his great *Dictionary* appeared. For this work the University of Oxford awarded him the degree of M. A. On the death of his mother in 1759, Johnson wrote the story of *Rasselas* to pay her funeral expenses. In 1762 a pension of 300 pounds per annum was granted to him by the king, and subsequently he received the title of doctor of laws from both the Universities of Dublin and Oxford. In 1781 he published his *Lives of the Poets*, and, after a life spent in incessant literary labor, died at his house in Bolt-court, Fleet street, London, 1784.

Johnson, Tom Loftin, American politician and reformer, was born at Georgetown, Ky., 1854. He became clerk in street railway office, Louisville, Ky., 1869-75. He invented several street railway devices; bought a street railway in Indianapolis; later acquired large street railway interests in Cleveland, Detroit, and Brooklyn. He also engaged in the business of iron manufacturing in Cleveland. Was member of congress, 1891-95, prominent advocate of the *Single-tax* theories of late Henry George, and has given much attention to taxation questions and municipal reform. He was mayor of Cleveland, 1901-10, and during his tenure of office gained national prominence by his campaign for a three-cent fare on the Cleveland street railway system, which, however, failed in 1909. Died, 1911.

Johnston, Albert Sydney, American general, was born in Kentucky, 1803, and was graduated at West Point, 1826. In 1837 he superseded General Houston as commander-in-chief of the Texan army. In 1857 he commanded the expedition sent against the Mormons of Utah; and in 1860 was made military commander of the department of Kentucky and Tennessee by the confederate government. After the surrender of Fort Donelson he formed a junction with the army of General Beauregard, and fell in the battle of Shiloh, 1862.

Johnston, Alexander, Scottish painter, was born at Edinburgh, 1815, and first exhibited at the royal academy in 1836. His earlier pieces were derived from Scottish song and story: *The Covenanter's Burial.* Then followed: *The Arrest of John Brown the Lollard; The Pressgang; John Bunyan in Bedford Jail; The Cotter's Saturday Night,* etc. He died at Hampstead, 1891.

Johnston, Alexander, American historian, was born at Brooklyn, N. Y., 1849. He was graduated at Rutgers College, 1870; was admitted to the bar, 1876; was professor of political economy and jurisprudence at Princeton from 1883 until his death in 1889. He wrote: *History of American Politics; The Genesis of a New England State; History of the United States; The United States: its History and Constitution,* etc.

ohnston, Sir Harry Hamilton, English traveler and writer, was born at Kennington, London, 1858. He was graduated at King's College, London; was a student at the royal academy of arts, 1876-80. He traveled in North Africa, 1879-80; explored Portuguese West Africa and River Kongo, 1882-83; commanded a scientific expedition of the royal society to Mount Kilimanjaro, 1884; made an expedition to Lakes Nyasa and Tanganyika, which led to the founding of the British Central Africa protectorate, 1889; commissioner and consul-general, 1891; consul-general of regency of Tunis, 1897-99; special commissioner, commander-in-chief and consul-general for Uganda protectorate, etc., 1899-1901. Author: *Essays on the Tunisian Question*; *The Uganda Protectorate*; *British Mammals*; *The Nile Quest*; *Liberia*; *George Grenfell and the Congo*, etc.

ohnston, Joseph Eggleston, American soldier, was born in Virginia, 1807. He was graduated at West Point, 1829; served in the Mexican war, 1846-47; and was commissioned quartermaster-general of the United States army, 1860. He joined the confederate army as a brigadier-general at the outbreak of the civil war, served with distinction throughout that conflict, and in 1865 was in command of the army of the Tennessee. He published a volume of memoirs, chiefly military, in 1874. Died, 1891.

ohnston, Joseph Forney, lawyer, United States senator, was born in North Carolina, 1843. He left school to join the confederate army as a private in 1861; served during the war, was wounded four times, and rose to the rank of captain. After the war he was admitted to the bar; practiced law seventeen years; was a banker ten years; and was elected governor of Alabama in 1896, reëlected in 1898, serving four years. He was unanimously elected to the United States senate from Alabama to fill out the unexpired portion of the term of Hon. E. W. Pettus, deceased, ending 1909, also for the term 1909-15.

ohnston, Mary, American novelist, was born at Buchanan, Botetourt county, Va., 1870, daughter of John William Johnston. She was educated at home, and exhibited literary talent at an early age. Author: *Prisoners of Hope*; *To Have and To Hold*, *Audrey*; *Sir Mortimer*; *The Goddess of Reason*, etc.

oinville (*zhwan'vēl'*), **Jean, Sire de,** French historical writer, was born in 1224, and became sénéschal to the count of Champagne and king of Navarre. When almost eighty he undertook his delightful *Vie de Saint Louis*. His style conforms closely to his character; it is veracious, flowing, naive, often singularly expressive. Died, 1317.

okai (*yō'ko-ī*), **Maurice,** Hungarian novelist, was born at Komorn, Hungary, 1825. He published his first book in 1845, and took part as a journalist in the revolution of 1848. In 1863 he entered the Hungarian parliament, and during his long career there was one of the principal supporters of Koloman Tisza, 1875-90. He wrote about 200 novels. Died, 1904.

oliet (Fr., *shō'lyā'*; Eng., *jō'li-et*), **Louis,** French-Canadian explorer, one of the early explorers of the Mississippi, was born at Quebec, 1645. He studied for the priesthood at the Jesuit College, Quebec. With Marquette he was selected to explore the western country and to push through to the Mississippi. They started West in May, 1673, reaching the Mississippi at the mouth of the Wisconsin in June. They floated down the Mississippi, passing the mouths of the Missouri and the Ohio, and going far enough to be sure that the river flowed into the gulf of Mexico. Joliet upset his canoe on his way back, losing all his maps and papers, so that the only accurate report of the expedition was Marquette's. Few men have contributed more to the geography of that time than did Joliet. Died, 1700.

ly de Lotbinière, Sir Henry Gustave, Canadian statesman, was born in 1829. He was educated at the Sorbonne, Paris, France, and admitted to the bar of Quebec, 1855; queen's counsel, 1878; premier of Quebec, 1878-79; leader of opposition, 1883-85; vice-chairman, Dominion liberal convention, 1883; minister of inland revenue for Dominion of Canada, 1896-1900; and lieutenant-governor of British Columbia, 1900-06. He has always taken an active interest in forestry, and was vice-president of the American forestry congress, 1885. He has published various writings on forestry and on the metric system.

omini (*zhō'mē'nē'*), **Henri, Baron,** noted Swiss soldier and military writer, was born at Payerne, Switzerland, 1779. When very young he entered the Swiss guard of Louis XVI., but when it was disbanded returned to his own country, and before he was twenty years old was made head of the war department. In 1812 he was invited by Napoleon to join the campaign against Russia, and was appointed historian of the grand army. When the cause of Napoleon was almost lost he resented an affront he had received by going over to the allies. Napoleon bore him no ill-will for this course, saying, "He was not a Frenchman, and there was no love of country to retain him." He is known now chiefly by his works on military history and the art of war. He died at Passy, near Paris, 1869.

ones, Henry Arthur, English dramatic author, was born at Grandborough, England, 1851. He was educated at Winslow, Bucks; hon. M. A. from (40)

Harvard University, 1907. Author: *A Clerical Error*; *The Rogue's Comedy*; *The Physician*; *The Liars*; *The Manœuvres of Jane*; *Carnac Sahib*; *The Lackey's Carnival*; *Mrs. Dane's Defence*; *The Princess's Nose*; *The Idol*; *Whitewashing Julia*; *Joseph Entangled*; *The Chevalier*; *The Heroic Stubbs*; *The Hypocrites*; *The Evangelist*; *The Renascence of the English Drama*; essays, lectures, etc.

Jones, Inigo, English architect, was born in London about 1573. At Venice his attention was drawn to the works of Palladio, which awoke in him a passion for architecture, to which his attention was thenceforward wholly directed. Having been appointed first architect to Christian IV. of Denmark, when that monarch visited James I. in England, Jones attended him, remained there, and became architect to the queen. In 1620 he was named one of the commissioners for repairing St. Paul's cathedral, and in the following reign he erected the banqueting-house at Whitehall. He wrote a book on *Stonehenge*. Died, 1652.

Jones, Jenkin Lloyd, independent minister, editor, and lecturer, was born at Cardiganshire, South Wales, 1843. He served as a private in the 6th Wisconsin battery for three years in the civil war; was graduated from Meadville, Pa., theological seminary, 1870; was nine years pastor of All Souls church, Janesville, Wis.; secretary of western Unitarian conference for nine years; organized and was first secretary of western Unitarian Sunday-school society; in 1878, with others, established *Unity*, a weekly paper, now organ of the congress of religions, and has been its editor since 1879; organized and since 1882 has been pastor of All Souls church, Chicago.

Jones, John Paul, American naval commander, was born at Arbigland, in Scotland, 1747. His original name was John Paul. He settled in Virginia, assuming the name of Jones. When the congress, in 1775, resolved to fit out a naval force, he offered his services; and, visiting the British coast in a brig of eighteen guns, performed some remarkably bold exploits, and took advantage of his familiarity with the scenes of his boyhood to make a hostile visit to the shores of the Solway Firth. In 1779 he was appointed to the command of a small squadron of French ships displaying the American flag, with which he again visited the British coasts, causing great alarm and taking some prizes. Off Flamborough he fell in with a fleet of forty-one British merchantmen, convoyed by the forty-gun *Serapis* and the twenty-gun *Countess of Scarborough*. Jones lashed his *Bon Homme Richard* to the *Serapis* and after three hours of desperate fighting compelled her surrender, after which, his own ship sinking, he transferred his crew to the *Serapis*. In 1787 he accepted an appointment in the Russian service, and the command of a fleet at the mouth of the Dnieper, with which he took an active part in the Turkish war. He died at Paris, 1792.

Jones, Samuel Milton, American political reformer, known as "Golden Rule" Jones because of his persistent advocacy of that practice in politics and in business, was born in Wales, 1846. Brought to America in 1849, he worked as a boy in the oil fields. He established large manufacturing plants at Toledo, Ohio, and gained an immense fortune and a splendid reputation in business. Elected as a republican mayor of Toledo in 1897, he was reëlected on an independent ticket in 1899, 1901, and 1903; used his office to defeat graft and dishonesty and to secure the rights of the common citizen. Died, 1904.

Jones, Wesley L., lawyer, United States senator, was born near Bethany, Ill., 1863. He was graduated at Southern Illinois College, 1886; read law in Chicago, and moved to the territory of Washington just before its admission as a state, 1889. He first worked in a real estate office; began law practice, 1890. He took part as speaker in Blaine campaign, 1884, and Harrison campaign, 1888, in Illinois, and since that in every campaign in Washington. He was member of congress from the state-at-large, 1899-1909, and was elected to the United States senate for the term 1909-15.

Jones, Sir William, English orientalist, was born in London, 1746. In 1765 he became tutor to the son of Earl Spencer; in 1774 was called to the bar, and in 1776 became commissioner of bankrupts. In 1783 he obtained a judgeship in the supreme court of judicature in Bengal, and was knighted. He at once devoted himself to Sanskrit, whose startling resemblance to Latin and Greek he was the first to point out in 1787. He established the Asiatic society of Bengal in 1784, and was its first president. He died at Calcutta, 1794. There is a monument to his memory, erected by the East India company, in St. Paul's cathedral.

Jonson, Benjamin, or **Ben,** English dramatist, was born at Westminster, about 1573, and was educated at Westminster school. The first piece that brought him into prominence was *Every Man in His Humor*, published in 1598. The best of his subsequent productions are *Volpone, or the Fox*, *The Silent Woman*, and *The Alchemist*. He also composed two tragedies, *Sejanus* and *Catiline's Conspiracy*. His *Masques*, written for the courts of James and Charles, are very graceful. Jonson had a pension from these monarchs, but his improvidence involved him in difficulties, and he died in poverty, 1637.

Jordaens (*yôr'dāns*), **Jakob,** Flemish painter, was born at Antwerp, 1593. He ranks next to Rubens among Flemish painters, and was master in the guild of St. Luke. He excelled in humorous scenes of Flemish life, also painted scriptural and mythological subjects. Among his numerous works are: *Jesus in the Midst of the Doctors*; *The Adoration of the Shepherds*; *The Satyr and the Man who Blew Hot and Cold*, etc. Died, 1678.

Jordan, David Starr, American naturalist and educator, president of Leland Stanford Jr. University, was born at Gainesville, N. Y., 1851. He was graduated at Cornell University, M. S., 1872; M. D., Indiana Medical College, 1875; Ph. D., Butler University, 1878; LL. D., Cornell, 1886, Johns Hopkins, 1902; president of Leland Stanford University since 1891. He is also United States commissioner in charge of fur seal investigations, etc. Author: *A Manual of Vertebrate Animals of Northern United States*; *Standeth God Within the Shadow*; *The Philosophy of Despair*; *The Blood of the Nation*; *Food and Game Fishes of North America*, with B. W. Evermann; *A Guide to the Study of Fishes*; *Voice of the Scholar*; *The Call of the Twentieth Century*.

Joseph, favorite son of Jacob by his wife Rachel, who excited the envy of his elder brothers and was by them sold into Egyptian slavery, was born in Haran and died in Egypt. He flourished about the nineteenth century B. C. Having acquired the confidence of Pharaoh through his successful interpretation of dreams, he was placed as viceroy at the head of the arrangements for provisioning the kingdom during seven consecutive years of famine, and was thus enabled to preserve, in the persons of his father and brothers, with their families, the future Israelitish nation. His body was embalmed and carried up into Canaan by the Israelites at their exodus.

Joseph I., emperor of Germany, was born at Vienna, 1678, and was crowned king of Hungary in 1687. He then succeeded his father, Leopold I., as emperor of Germany in 1705. He granted privileges to the Protestants, and, in alliance with Britain, prosecuted successfully the war of the Spanish succession against France, under command of Prince Eugene and the duke of Marlborough. He died in 1711.

Joseph II., emperor of Germany, son of Francis I. and Maria Theresa, was born in 1741. In 1764 he was elected king of the Romans, and after his father's death, in 1765, emperor of Germany. As soon as he found himself in full possession of the government of Austria he declared himself independent of the pope, and prohibited the publication of any new papal bulls without his *placet*. He suppressed 700 convents, reduced the number of the regular clergy from 63,000 to 27,000, prohibited papal dispensations as to marriage, and in 1781 published the edict of toleration for Protestants and Greeks. He also abolished serfdom, reörganized taxation, and curtailed the feudal privileges of the nobles. In 1788 he engaged in an unsuccessful war with Turkey; and the vexation caused by this, and by revolts in his dominions, hastened his death, 1790.

Josephine, Marie Josephe Rose Tascher de la Pagerie, first empress of the French, was born in Martinique, 1763. She married first the Vicomte de Beauharnais, by whom she became mother of Eugene Beauharnais, and Hortense, mother of Napoleon III. Her husband perished during the reign of terror, and she married, in 1796, Napoleon Bonaparte, the newly-appointed commander-in-chief of the army of Italy. Sharing her husband's fortunes, she became in time the occupant of an imperial throne, which she adorned by her beauty, grace, and womanly virtues. Failing, however, to afford an heir to the new monarchy, Napoleon resolved to divorce her, which act was consummated in 1809. Josephine thereupon retired to her château at Malmaison. Died, 1814.

Josephus (*jō-sē'fus*), **Flavius,** celebrated Jewish historian, was born at Jerusalem, 37 A. D. As a dependent of the Flavian family, he assumed his name of Flavius. His *Antiquities of the Jews*, in twenty books, gives an account of Jewish history from the creation of the world to 66 A. D. A remarkable passage in this work relating to Jesus Christ is now believed to be spurious. His other works are: *History of the Jewish War*, and an *Autobiography*. He died about 100 A. D.

Joshua (*josh'ū-a*), celebrated Hebrew warrior under whose leadership the land of Canaan was conquered, was the son of Nun, of the tribe of Ephraim, and was born in Egypt. The so-called book of *Joshua*, in its present form, containing an account of the conquest and division of the "land of promise," is of composite structure. The compiler made copious use, especially in the earlier chapters, of documents drawn up during the period of the conquest. He died about 1425 B. C.

Josiah (*jō-sī'a*), king of Judah, succeeded his father Amon at eight years of age, and flourished about 649-609 B. C. He reëstablished the worship of Jehovah, and instituted the rites in the newly-discovered "book of the law." He fell at Megiddo attempting to check Pharaoh-Necho's advance against the Assyrians.

Joubert (*you'bert*), **Petrus Jacobus,** Boer general and statesman, was born in Cape Colony, 1831. He was a farmer and ranchman; became a member of the Volksraad; was attorney-general in 1870; and in 1874 was acting-president. He was one of the triumvirate who organized a Transvaal

revolt against the British government in 1880, held the chief command in the engagements at Laing's Nek, Ingogo river, and Majuba hill. In 1899 he was commander-in-chief of the Boer forces in the war with England. He conducted the siege of Ladysmith, but was forced to retire on account of ill-health. He died 1900.

Jouffroy (*zhoo'frwä'*), **Theodore Simon,** French philosopher, was born at Pontets in the Jura, 1796. He studied under Cousin, and from 1817 taught philosophy in Paris, until in 1838 he exchanged his chair for the post of librarian to the university. The lucid interpreter of the Scottish philosophers, Reid and Dugald Stewart, he translated their works. His own best books were *Mélanges Philosophiques*, *Cours du Droit Natural*, and *Cours d'Esthétique*. Died, 1842.

Joule (*joul*), **James Prescott,** English physicist, was born at Salford, England, 1818. He was a pupil of Dalton's, and devoted his time to physical and chemical research; made discoveries in connection with the production of heat by voltaic electricity, demonstrated the equivalence of heat and energy, and established on experimental grounds the doctrine of the conservation of energy. Died, 1889.

Jourdan (*zhoor'dăn'*), **Jean Baptiste, Comte,** French marshal, was born at Limoges, France, 1762. In 1797 he became president of the council of five hundred, but was expelled in 1799, owing to his opposition to Bonaparte, by whom, however, he was afterward employed. He subsequently followed the fortunes of Joseph Bonaparte in Naples and Spain. He owed his title to Louis XVIII., but joined in the revolution of 1830. Died, 1833.

Jowett (*jou'et*), **Benjamin,** English classical scholar, master of Balliol College, Oxford, was born at Camberwell, 1817. He was a fellow and tutor of his college until his election to the mastership in 1870. He wrote *On the Interpretation of Scripture*, a commentary on certain epistles of St. Paul; but he achieved his greatest literary successes by his translation of Plato's *Dialogues*, the *History* of Thucydides, and the *Politics* of Aristotle. Died, 1893.

Joy, George William, British artist, was born at Dublin, Ireland, 1844. He was educated at Harrow, and studied at Kensington, the royal academy, and at Paris under Charles Jalabert and Bonnat. Pictures: *Domenica*; *Chess-players*; *Laodamia*; *Young Nelson's First Farewell*; *Wellington at Angers*; *The Death of General Gordon*, and many portraits. He obtained gold medals at Paris, Munich, and Berlin, and also the Chicago medal.

Juárez (*hwä'räs*), **Benito,** Mexican politician, was born in Oaxaca, 1806, of Indian parents. He became an advocate, and was governor of his native state in 1847-52. In 1861 he entered the capital, and was elected president for four years. In 1866 the French emperor declared war against Juarez, who retreated to the northern frontier; but, on the withdrawal of the French, he reëntered Mexico city in 1867, the emperor, Maximilian, having meanwhile been shot by court-martial. Juarez was elected president again in 1871, though the risings became fiercer and more frequent. He died in 1872.

Juch (*yōōk*), **Emma Johanna Antonia** (Mrs. Francis L. Wellman), operatic singer, was born during the sojourn of her parents in Vienna, Austria-Hungary, 1863, daughter of Justin Juch. She studied three years with Murio-Celli; made her début in concert at Chickering hall, N. Y., and her operatic début in her majesty's grand Italian opera, London, 1881, as Felina in *Mignon*. Later she sang during three seasons under Colonel Mapleson in soprano rôles, alternating with Nilsson as Elsa in *Lohengrin* under management of Theodore Thomas. Was prima donna with the American opera company three seasons, and since then has sung in concerts, and in the Emma Juch English opera company.

Judson, Harry Pratt, American educator, president of the University of Chicago, since 1907, was born in Jamestown, N. Y., 1849. He was graduated at Williams College, 1870; LL. D., 1893; LL. D., 1903, Queens University, Canada. He was teacher and principal of high school, Troy, N. Y., 1870-85; professor of history, University of Minnesota, 1885-92; and head professor of political science and dean of the faculties of arts, literature and science, Chicago University, 1892-1907. Author: *The Latin in English*; *The Mississippi Valley*, in Shaler's *United States of America*; *The Young American*; *The Government of Illinois*.

Julian (*jōōl'yan*; *jōō'li-an*), or **Julianus, Flavius Claudius,** surnamed the Apostate, Roman emperor, 361-63, was born in Constantinople, probably 331 A. D. In 355 he was declared Cæsar, and sent to Gaul, where he obtained several victories over the Germans; and in 316 the troops in Gaul revolted from Constantius and declared for Julian. He took from the Christian churches their riches and divided them among his soldiers. He sought likewise to induce the Christians, by flattery or by favor, to embrace paganism. His malice was further evinced by extraordinary indulgence to the Jews, and an attempt to rebuild the temple at Jerusalem, that the prophecy of Christ might be falsified; but the design was frustrated. He did not long survive his disappointment, being killed in 363 in his expedition against the Persians.

Julien (*zhü'lyan'*), **Stanislas Aignan,** Chinese scholar, was born at Orleans, France, 1799. He became at twenty-one assistant professor at the Collège de France. He gave himself with such zeal to the study of Chinese that in less than a year he was able to make a Latin translation of Mencius. He succeeded Abel Rémusat as professor of Chinese at the Collège de France, 1832. Julien produced admirable French versions of specimens of the Chinese drama and of Chinese romances, as well as a collection of Indian novels. His *Syntaxe Nouvelle de la Langue Chinoise* appeared 1869-70. Died, 1873.

Julius II., Pope (Cardinal Giuliano della Rovere), was born in Italy, 1443, became pope in 1503. He endeavored to extend the papal territory, and, after driving Cæsar Borgia from the Romagna, formed the league of Cambrai with Maximilian and Louis XII. against Venice in 1508. In 1511 the holy league was formed, and the French army driven back over the Alps. He sanctioned the marriage of Henry VIII. with Catharine of Aragon, commenced to rebuild St. Peter's at Rome, and was the patron of Michelangelo and Raphael. Died, 1513.

Junot (*zhü'nō'*), **Andoche,** marshal of France, was born at Bussy-le-Grand, 1771, and distinguished himself in the early wars of the republic. In 1804 he was made governor of Paris, in 1807 was appointed to the command of the army of Portugal. He quickly made himself master of all the strong places in the kingdom, was created Duc d'Abrantès, and appointed governor of Portugal. He served in Germany and Russia, and, made one of the scapegoats for the Russian disaster, was sent to govern Illyria. Becoming deranged, he was taken to his father's house near Dijon, threw himself from a window, 1813, and died soon afterward.

Jusserand (*zhü's'-răn'*), **Jean Adrien Antoine Jules,** French diplomat and man of letters, French ambassador at Washington since 1902, was born at Lyons, 1855. He was educated at Lyons and Paris, and entered the foreign office in 1876. LL. D., Harvard. He was councillor of the French embassy at London, 1887-90; member of the legion of honor, 1883, and minister at Copenhagen, 1898. Author: *Les Anglais au moyen âge*; *La Vie Nomade et les Routes d'Angleterre au xiv. siècle*; *Le Roman au temps de Shakespeare*; *Histoire littéraire du Peuple anglais*; *Shakespeare en France*; *Les sports et jeux d'exercice dans l'ancienne France*, etc.

Jussieu (*zhü'syū'*), **Antoine Laurent de,** French botanist, was born at Lyons, France, 1748. He reformed the arrangement of the gardens and collections of plants under his uncle's ideas in regard to the natural method. For thirty years he continued to develop his novel views; and when his *Genera Plantarum*, which he began in 1778, was completed in 1789, the natural system was finally established as the true basis of botany. In 1793 he became professor of botany in the newly organized Jardin des Plantes, where he continued to teach until 1826, when blindness compelled him to resign his chair to his son Adrien. Died in Paris 1836.

Justin, surnamed the Martyr, was born at Shechem in Samaria about 100 A. D., and was successively a stoic and a Platonist; and after his conversion to Christianity wandered about, arguing for the truth of the new faith. At Rome between 150 and 160 he wrote the *Apologia* of Christianity addressed to the emperor, followed by a second one. He is said to have been martyred about 165 A. D.

Justinian (*jus-tin'i-an*) **the Great** (Flavius Anicius), nephew of the emperor Justin, was born 483 A. D., in the village of Tauresium. His reign, which extended from 527 over a period of thirty-eight years, was the most brilliant in the history of the eastern empire. Immediately on his accession he compiled a code which comprised all the constitutions and laws of his predecessors, now known as the *Code of Justinian*. He died in 565.

Juvenal, or **Juvenalis, Decimus Junius,** celebrated Latin poet and satirist, was born in Aquinum, about 60 A. D. His satires, sixteen in number, are written in indignant scorn of the vices of the Romans under the empire, in the descriptions of which the historian finds a portrait of the manners and morals of the time. He practiced at Rome as an advocate, and, it is thought, also visited Egypt. Died about 128 A. D.

Kalakaua (*kä'lä-kou'ä*), **David,** king of the Hawaiians, 1874-91, was born in Honolulu, 1836, and was descended from Keawe, an ancient king of the islands. In 1860 he visited California. On the death of Lunalilo, who appointed no successor, Kalakaua was elected king in 1874 by the legislature, over Emma, queen dowager and relict of Kamehameha IV. In 1887 he granted a new constitution. Died, 1891.

Kames (*kāmz*), **Henry Home, Lord,** Scottish philosopher and critic, was born at Kames in Berwickshire, 1696. He was admitted to the bar in 1723, and appointed to the bench as Lord Kames in 1752. Besides books on Scotch laws he published *Essays on Morality*; *An Introduction to the Art of Thinking*; *Elements of Criticism*, his best-known work; and *Sketches of the History of Man*. Died, 1782.

Kamimura, Hikonojo, Japanese admiral, was born in Satsuma, 1850. He commanded a cruiser in the China-Japanese war, 1894-95, was promoted vice-admiral, 1903, and at the outbreak of the Russo-Japanese war was placed in command of the second Japanese squadron. In 1904 he sank the Russian cruiser *Rurik* off Ulson, Korea, and gained a decisive victory over the Russian squadron.

Kane, Elisha Kent, arctic explorer, was born in Philadelphia, Pa., 1820. He entered the United States navy as a surgeon, in which capacity he visited China, India, the East Indies, and, under leave of absence, Arabia, Egypt, Greece, and western Europe. In 1850 he commenced his career of arctic discovery as surgeon, naturalist, and historian to the first Grinnell expedition. In the spring of 1853 he was again sent out, this time as commander of a second Grinnell expedition, in which he achieved important results. Died, 1857.

Kant, Immanuel, celebrated German philosopher, the founder of the "critical" or Kantian philosophy, was born at Königsberg, Prussia, 1724, died at the same place 1804. He early showed great application to study, and was sent to the Collegium Fredericianum, and then to the university of his native city. Leaving the university after three years, he engaged in teaching, and it was not till 1755 that he took his doctor's degree.

Soon after this he was appointed to a place in Königsberg University, and lectured on logic, metaphysics, mathematics, and natural philosophy, to which, at subsequent periods, he added natural law, moral philosophy, natural theology, and physical geography. In 1770 he became a full professor, obtaining the chair of logic and metaphysics, a post that he occupied till 1797.

The philosophy of Kant profoundly influenced all subsequent philosophical speculations. Dissatisfied with the dogmatisms of Wolff and the skepticism of Hume, he set himself to investigate the field of metaphysics for himself, and in the first place proceeded to the examination of the origin, extent, and limits of human knowledge. According to him, part of our knowledge is knowledge *a priori*, or original, transcendental, and independent of experience; part of it is *a posteriori*, or based on experience. What he calls the "pure reason" has to do with the former.

His great work named the *Kritik der reinen Vernunft*—"Critique of Pure Reason" contains the foundation for his whole system of philosopny. In 1790 he published a supplementary work, the *Kritik der Urtheilskraft*—"Critique of the Power of Judgment." Far from rejecting experience, Kant considers the work of all our life but the action of our innate faculties on the conceptions which come to us from without. He proceeds in a similar way with morality; the idea of good and bad is a necessary condition, an original basis of morals, which is supposed in every one of our moral reflections, and not obtained by experience. He treats this part of his philosophy in his *Kritik der praktischen Vernunft*—"Critique of Practical Reason."

References.—The works of Kant above referred to are translated: *The Critique of Pure Reason* by Max Müller, by Meiklejohn, and by Morris; *Kant's Theory of Ethics* by Abbott; the *Critique of Judgment* by Bernard. The fullest English account of Kant's philosophy is Caird's *Critical Philosophy*—a more compendious view. See also Adamson's *Philosophy of Kant*; Watson's *The Philosophy of Kant as Contained in Extracts from His Own Writings*; Wallace's *Kant*; Paulsen's *Immanuel Kant*; and Mahaffy's *Kant's Critical Philosophy for English Readers*.

Katsura (*kä'tshoo-rä*), **Marquis Taro,** Japanese statesman, premier of Japan, was born in the province of Coshiu, 1847. During the restoration era, in 1867, he distinguished himself in the civil war. In 1891 he was promoted to lieutenant-general, and in the following year was appointed to the command of the third division of the army. During the China-Japanese war he marched with his division through Korea to Manchuria; and later on served under General Nodzu. For his services he was created a viscount, and two years after promoted to the rank of general. He was premier of Japan from 1901 until 1906, covering the period of the war with Russia, and in 1906 was appointed a member of the high military council of Japan. Created marquis, 1907. He became premier again in 1908. Died 1913.

Kauffman (*kouf'măn*), **Angelica,** Swiss historical and portrait painter, was born at Coire, Grisons, in the Tyrol, 1741. In 1781 she married the Italian painter Zucchi, and, returning to Rome, spent the remainder of her life in a circle of poets, artists, and scholars. Died at Rome, 1807.

Kaulbach (*koul'bȯk*), **Wilhelm von,** German painter, was born at Arolsen, 1805. He studied at Düsseldorf, Munich, and Rome, and from 1849 was director of the Munich Academy of Painting. For several years he was painting the vestibule

of the new museum at Berlin with a cycle illustrating the progress of civilization. His last gigantic painting was the *Sea-fight of Salamis* at Munich. Died, 1874.

Kaunitz (*kou'nits*), **Wenzel Anton, Prince von,** Austrian statesman, was born at Vienna, 1711. He distinguished himself in 1748 at the congress of Aix-la-Chapelle, and as Austrian ambassador at the French court in 1750-52 converted old enmity into friendship. In 1753 he was appointed chancellor, and for almost forty years had the principal direction of Austrian politics. He took an active part in the ecclesiastical reforms of Joseph II., and was a liberal patron of arts and sciences. Died, 1794.

Kean, Charles John, British actor, was born in Waterford, Ireland, 1811, son of Edmund Kean. He was educated at Eton, and made his début at Drury Lane, 1827, but did not establish his reputation until 1838, when he acted as Hamlet, Richard III., and Sir Giles Overreach. In 1842 he married Miss Ellen Tree, a celebrated actress. His last appearance was as Louis XI. at Liverpool in 1867. Died, 1868.

Kean, Edmund, English actor, was born in London, 1787, son of Nance Carey, a strolling actress. A stage cupid and a cabin-boy to Madeira, he himself about sixteen turned a "stroller," and after ten years in the provinces made his first appearance at Drury Lane as Shylock in 1814. He at once took rank as the first actor of the day. A period of wonderful success followed. He was cordially received in 1827 after a twelve-months' visit to America; but both mind and body gave way, and, breaking down hopelessly in 1833, he died at Richmond in May of that year.

Keane, Augustus Henry, British ethnologist and geographer, emeritus professor of Hindustani, University College, London, was born at Cork, Ireland, 1833. He was educated in Jersey, Italy, Dublin, and Hanover, Germany, and traveled extensively in Europe, Asia, and North America. LL. D., St. Andrews University. Author and editor: Stanford's *Asia, Africa, Central and South America*; *Ethnology*; *Man, Past and Present*; *The Gold of Ophir*; *The Boer States*; *The World's Peoples*.

Keane, John Joseph, American scholar and educator, Roman Catholic archbishop of Dubuque, Ia., since 1900, was born in Ballyshannon, Ireland, 1839. He came to the United States in 1846; was educated at St. Charles' College and St. Mary's seminary, Baltimore, Md. Ordained priest, 1866. Was active in organizing Roman Catholic societies, and was rector of the Catholic University of America, at Washington, 1886-97, when he resigned and went to Rome. Upon his return to America he was installed as bishop of his present see. Author: *Onward and Upward*, etc.

Kearny (*kär'nĭ*), **General Philip,** American soldier, was born in New York, 1815. He was attached to the staff of General Scott, 1841-44, and distinguished himself in the Mexican war. Commanded the cavalry of the army of the Potomac in the peninsular campaign during the civil war, in which he won an enviable reputation for courage and gallantry. He took an active part in the second battle of Bull Run and also at Chantilly, Va., where he was killed in 1862 by a confederate soldier while reconnoitering in front of his command.

Keats, John, English poet, was born in London, 1795. He was apprenticed to a surgeon at Edmonton, near London, and found time to cultivate that taste for poetry which he had exhibited from his boyhood; in 1817 he published a volume of juvenile poems, having already made several contributions to the *London Examiner*, then under the editorship of Leigh Hunt. In 1818 appeared his *Endymion*, a poetic romance founded in part on the model of Fletcher's *Faithful Shepherdess*. This work, though the production of a youth of little more than two-and-twenty, was severely criticised in the *Quarterly Review*, and in *Blackwood's Magazine*, the wrath of the reviewers being probably inspired by their hatred of the political party with which Keats had identified himself, and which was represented by Keat's friends, Hazlitt and Hunt. He profited, however, by the criticisms of his reviewers; and in 1820 published his *Eve of St. Agnes*; his odes to *The Nightingale* and *The Grecian Urn*; and the fragments of *Hyperion*, taken, like *Endymion*, from mythological sources, and written in an airy strain of classic imagery, characterized by much pensive quiet beauty. But already consumption had taken hold of the poet; he went to Naples, from there to Rome, where he died, 1821.

Keble (*kē'b'l*), **John,** English clergyman and poet, was born in 1792. At the age of fifteen he entered Corpus Christi College, Oxford, where he won several prizes and otherwise distinguished himself. In 1827 he published his volume of sacred poetry entitled the *Christian Year*, which attained a very large circulation and an influence that can hardly be overestimated. He was one of the leading spirits in what was known as the "tractarian movement" in the English church, and for several years was actively engaged with Pusey, Newman, and others in issuing *Tracts for the Times*. He died at Bournemouth, 1866.

Keen, William Williams, American surgeon, was born in Philadelphia, Pa., 1837. He was graduated at Brown University, 1859; M. D., Jefferson Medical College, Philadelphia, 1862; LL. D., Brown, 1891, Northwestern, Yale, 1906. He was assistant surgeon of 5th Massachusetts regiment, 1861; since 1866 has been in practice in Philadelphia; professor of artistic anatomy at Pennsylvania academy of fine arts, 1876-90; and has been professor of surgery at Jefferson Medical College since 1889. Member of many medical and other bodies. Author: *Keen's Clinical Charts*; *History of the Philadelphia School of Anatomy*.

Keifer (*kē'fer*), **Joseph Warren,** congressman, ex-speaker of United States congress, was born in Clark county, Ohio, 1836. He was educated at Antioch College, and since 1858 has practiced law at Springfield, Ohio. He served in the Ohio volunteers in the field, 1861-65; four times wounded. Was department commander of Ohio G. A. R., 1868-70; member of congress, 1877-85, and since 1905; speaker of congress 1881-83. He was appointed and served, 1898-99, as major-general of volunteers in the war against Spain. Author: *Slavery and Four Years of War*.

Keith (*kēth*), **George Keith-Elphinstone, Viscount,** British admiral, son of the tenth Lord Elphinstone, was born at Elphinstone Tower, Stirling, 1746. He commanded the expedition in 1795-97 which took Cape Town, and the fleet landed Abercromby's army in Aboukir bay in 1801. He was made Baron Keith in 1797, and a viscount in 1814. Died, 1823.

Keller, Helen Adams, American authoress, was born at Tuscumbia, Ala., 1880, daughter of Captain Arthur H. Keller. She is descended on her father's side from Alexander Spottswood, colonial governor of Virginia, and through her mother related to Adams and Everett families of New England. She has been deaf and blind since the age of nineteen months as result of illness. At the age of seven she was placed under the instruction of Miss Anne Mansfield Sullivan, her teacher from the beginning of her education to the present time. She entered Radcliffe College, 1900, and graduated, A. B., 1904. She has contributed occasional papers to *Century Magazine*; *Youth's Companion*; *Ladies' Home Journal*; *McClure's Magazine*, etc., and is the author of *The Story of My Life*; *Optimism*, an essay, etc.

Kellerman (*kel'ĕr-măn*), **François Christopher,** French soldier, was born in Bavaria, 1735, and entered a regiment of French hussars at the early age of seventeen. When the revolution broke out, he had risen to the rank of major-general. For his services in Italy, he was made duke of Valmy and marshal of the empire by Napoleon. The Bourbons, whose party he joined at the restoration, confirmed his title of duke, and also created him a peer of France. He died in 1820.

Kellogg, Clara Louise, American prima donna, was born at Sumpterville, S. C., 1842. She made her début in opera, 1861-62, as Gilda in *Rigoletto* at the academy of music, New York; and from that time rose steadily and securely in the estimation of the public. She sang repeatedly in London, and once or twice before Queen Victoria, at Buckingham palace. She sang in Italian opera for several years and organized her own English opera company, and has appeared principally at concerts of late years. She married, 1887, Carl Strakosch, nephew of the well-known impressarios, Max and Maurice Strakosch.

Kellogg, Frank B., American lawyer, was born at Potsdam, N. Y., 1856. He went to Minnesota with his parents in 1865; studied law, and was admitted to the bar. He removed to St. Paul in 1887. He was general counsel of the Chicago Great Western railway company, Duluth and Iron Range railroad company, Duluth, Messabe and Northern railway company, Minneapolis iron company, Oliver iron mining company, etc.; special counsel for United States in the case against the paper and Standard oil trusts, and special counsel for interstate commerce commission in the investigation of the Harriman railroads.

Kelly, Howard Atwood, American physician, was born at Camden, N. J., 1858. He was graduated at the University of Pennsylvania, 1877; M. D., 1883; L. L. D., Aberdeen, 1905, Washington and Lee, 1906, university of Pennsylvania, 1907; F. R. C. S., Edinburgh. He was founder of the Kensington hospital, Philadelphia; now professor of gynecology, Johns Hopkins University, and gynecological surgeon, Johns Hopkins hospital. He is a member of many medical and scientific societies, both foreign and American. Author: *Operative Gynecology*, 2 vols.; *The Vermiform Appendix and Its Diseases*, etc.

Kelly, James Edward, American sculptor, was born at New York, 1855. He studied art at the National Academy of design. His first piece of sculpture was *Sheridan's Ride*, 1878; forty generals, including Grant, Sherman, Sheridan, and Hancock, gave him sittings for a series of bronzes. Prominent works: *Monmouth Battle Monument*, *Call to Arms*, Troy, N. Y.; equestrian figures of General Sherman, Colonel Roosevelt at San Juan hill; busts from life of Admirals Dewey, Sampson, and C. E. Clark, and President Roosevelt as colonel of the Rough Riders; panels from life of Dewey's captains, Sampson's captains, etc. He was one of the founders of the art students' league.

Kelvin, William Thomson, Lord, was born at Belfast in 1824. After graduating at Cambridge, he was appointed, 1846, to the chair of natural philosophy in Glasgow University, a post he retained till 1899.

His research work includes all branches of mathematical and practical physics. In heat, his principal work has been in extending thermodynamical principles—notably in devising a method of arriving at an absolute scale of temperature, in discovering the "Joule-Thomson effect," and in enunciating the principle of the dissipation of energy. In general physics, he has done much to apply mathematics as a means of expressing the relations of observed facts; and in particular he has worked out most fertile ideas as to the nature of the ether, of inertia, and the application of vortex motion to explain the properties of atoms.

His principal work, however, is probably in the field of electricity and magnetism, the first fruit of which appeared in the paper he published in 1845 on the laws of electrostatics, and which was greatly developed in his researches on electrodynamics and submarine telegraphy. These theoretical investigations he applied to the Atlantic and other cables from 1857 to 1879, and used in his invention of many instruments of the highest precision for the use both of the investigator and of the practical man.

Among the best known of these appliances are the reflecting galvanometer, the siphon recorder, several forms of electrometer, the ampère balance, electrostatic voltmeter, and electric supply meters. He has also taken much interest in navigation, and in this connection invented an improved form of mariner's compass and an invaluable sounding-machine, besides working out methods for compass correction and for the investigation of tidal phenomena. In addition to three series of monographs—(1) *Electrostatics and Magnetism*, (2) *Mathematical and Physical Papers*, and (3) *Popular Addresses*—he has also published *Baltimore Lectures on Molecular Dynamics and Wave Theory of Light*, and, in collaboration with Professor P. G. Tait, *A Treatise on Natural Philosophy*. He was given a peerage in 1892.

References.—Fitzgerald's *Lord Kelvin*; S. P. Thomson's *Life of Lord Kelvin*.

Kemble, Charles, English tragedian, was born at Brecknock, in South Wales, 1775. In 1794 he made his first appearance at Drury Lane, London, in the character of Malcolm in *Macbeth*. He visited the United States in 1832. Appointed examiner of plays in 1836, he performed the duties of his office by proxy until he relinquished the stage in 1840. Died, 1854.

Kemble, Frances Anne, English actress and Shakespearean reader, was born in London, 1809. She was the daughter of the celebrated Charles Kemble, and was commonly known by the name of "Fanny." She made her début at Covent Garden in 1829, and in 1832 came to the United States with her father, where she met with great success. In 1860 she left America, and from that time her residence was partly in England and partly in the United States. Died, 1893.

Kemble, John Philip, English tragedian, was born at Prescott, 1757. His first appearance was at Wolverhampton in 1776. The success of his sister, Mrs. Siddons, gave him his opportunity, and in 1783 he played Hamlet at Drury Lane, and aroused the keenest interest. In 1802 he purchased a share in Covent Garden theater, became manager, and made his first appearance there in 1803 as Hamlet. He retired in 1817, and afterward settled at Lausanne, where he died, 1823.

Kempis, Thomas à, German mystic and writer, so called from Kempen, a town in the Prussian Rhine provinces, where he was born about 1379. He was educated at Deventer, and in 1400 entered an Augustinian convent in the diocese of Utrecht. His death took place in 1471, at which time he certainly had attained his ninetieth year, and most probably his ninety-second. The character of Kempis for sanctity and ascetic learning stood very high among his contemporaries, but his historical reputation rests almost entirely on his writings, which consist of sermons ascetical treatises, pious biographies, letters, and hymns. Of these, however, the only one which deserves special notice is the celebrated ascetical treatise, *Imitation of Christ*, a work that in the regard of many ranks second to the Bible, and is thought likely to survive in the literature of the world as long as the Bible itself.

Kendal, Mr. (William Hunter Grimston), English actor and manager, was born in London, 1843. He commenced his career on the stage at Glasgow in 1862, where he remained until 1866, in which year he made his first appearance in London at the Haymarket theater in *A Dangerous Friend*. He became lessee and manager with John Hare, of

St. James' theater 1879-88. He produced there *The Queen's Shilling*; *The Squire*; *Impulse*; *The Iron Master*; *A Scrap of Paper*; *Lady of Lyons*; *As You Like It*; *William and Susan*; *Ladies' Battle*, etc. He toured with Mrs. Kendal in the United States and Canada, 1889-95, with phenomenal success.

Kendal, Mrs. (Margaret Brunton Robertson), English actress, was born at Cleethorpes, Lincs, 1849. She married William Hunter Kendal (Grimston), 1869. She made her début in London, in 1865, as Ophelia to the Hamlet of Walter Montgomery, and in the following month she played at the same theater, Desdemona to the Othello of Ira Aldridge. The creation of the character of Lilian Vavasour in *New Men and Old Acres* gave Mrs. Kendal a position among the leading comédiennes of the day. In 1875 she began a short engagement at the Opera Comique. During the period 1889-95, Mr. and Mrs. Kendal played highly successful engagements in the United States and Canada.

Kennan (*ken'an*), **George,** American author and lecturer, was born at Norwalk, Ohio, 1845. He became telegraph operator and later manager of the Western Union office, Cincinnati, 1863-64; went to northeast Siberia as explorer and telegraphic engineer, 1865; investigated Russian exile system in Siberia, 1885-86, and since then has been a lecturer in the United States and Great Britain. In 1898 he went to Cuba on the steamship *State of Texas*, with American national red cross society, and as special commissioner for *The Outlook*. Went to Japan, 1904, to report on Russo-Japanese war for *The Outlook*, and joined the staff of *McClure's Magazine*, 1907. Author: *Tent Life in Siberia*; *Siberia and the Exile System*, 2 vols.; *Campaigning in Cuba*, etc.

Kent, Charles Foster, American biblical scholar, Woolsey professor of biblical literature, Yale University since 1901, was born at Palmyra, N. Y., 1867. He was graduated at Yale University, 1889, Ph. D., 1891; Berlin University, 1891-92. Author: *Outlines of Hebrew History*; *The Wise Men of Ancient Israel and Their Proverbs*; *Narratives of the Beginnings of Hebrew History*; *Israel's Historical and Biographical Narratives*; *Origin and Permanent Value of the Old Testament*; *Israel's Laws and Traditional Precedents*; *Work and Teachings of the Earlier Prophets*, etc.

Kent, Charles William, university professor, was born at Louisa C. H., Va., 1860; graduated from the University of Virginia, 1882; student Göttingen, Berlin, Leipzig, 1884-7. Ph. D., 1887; LL. D., University of Alabama, 1906. Was professor of English and modern languages, University of Tenn., 1888-93; professor English literature, rhetoric and belles lettres, Linden Kent Memorial School of English Literature, University of Virginia, since 1893. Author: *Shakespeare Note Book*; *Graphic Representations of English and American Literature*. Editor: Cynewulf's *Elene*; *Idyls of the Lawn*; *Selected Poems from Burns*; Tennyson's *Princess*; *Poe Memorial Volume*; Poe's *Poems*; *Library of Southern Literature*, 15 vols., etc.

Kent, James, American lawyer and jurist, was born in Philippi, N. Y., 1763. He was graduated at Yale College, 1781, was admitted to the bar when twenty-two years old, and soon became noted for his legal learning. He was several times elected to the New York legislature, and in 1793 became professor of law in Columbia College. He is best known for his *Commentaries on American Law*, which were published from 1826 to 1830, and are now used by every American lawyer, as well as by many in other countries. He died in New York, 1847.

Kepler, Johann, great German mathematician and astronomer, was born 1571, near Weil (Würtemberg), died at Ratisbon 1630. He studied at the University of Tübingen, and in 1593 he was appointed a teacher of mathematics at Gratz, Styria.

Here he devoted himself with much ardor to the study of astronomy; but in 1599 the religious persecutions commenced in Styria, and Kepler, being a protestant, gladly accepted Tycho Brahe's invitation to Prague, to assist in the preparation of the new astronomical tables, called the Rodolphine tables. Tycho died in 1601, and Kepler continued the work alone, being appointed imperial mathematician and astronomer. After twenty-five years' incessant labor the tables were published in 1627 at Ulm. Kepler had become the happy possessor of all Tycho's papers, and the mass of observations made by that astronomer during twenty years, with a precision till then unsurpassed, enabled Kepler to establish his three laws which have proved so fruitful in the development of astronomical science.

Kepler enjoyed the patronage of the Emperors Rodolph and Ferdinand, the Dukes of Würtemberg and Wallenstein, but his life was a continued struggle; he was exposed to much religious persecution, and his domestic relations were equally unfortunate. The latter part of his life was chiefly passed at Linz as professor of mathematics. He wrote much, but the work that has rendered him immortal is his *Astronomia Nova, seu Physica Cœlestis tradita Commentariis de Motibus Stellæ Martis* "New Astronomy, or Celestial Physics Delivered in Commentaries on the Motions of Mars."

References.—Brewster's *Lives of Galileo, Tycho Brahe, and Kepler*; Muller's *Johannes Kepler*; and Gunther's *Johannes Kepler*.

Kerens, Richard C., American capitalist, railroad builder, and diplomat, was born at Killberry, Ireland, 1842. He came to the United States in infancy, and was educated in the public schools of Jackson county, Ia. He served in the Union army, 1861-65. He has been active in politics, was one of three United States commissioners for the inter-continental railway commission, 1892-1900, and in 1909 was appointed by President Taft United States minister to Austria-Hungary.

Kern, John Worth, United States Senator, lawyer, was born in Howard county, Ind., 1849. He was graduated from the University of Michigan, 1869; was reporter of the supreme court of Indiana, 1885-89; state senator, 1892-96; city attorney Indianapolis, 1897-1901; was the democratic candidate for vice-president of the United States, 1908; and elected to the U. S. senate 1910.

Kester, Paul, American dramatist and author, was born at Delaware, Ohio, 1869. He was educated in private schools and by tutors. Author: *Tales of the Real Gypsy*. Plays: *The Countess Roudine*, with Minnie Maddern Fiske; *Zamar*; *Mademoiselle Mars*; *The Cavalier*, with George Middleton; *Dorothy Vernon*, etc.

Key, Francis Scott, American poet, author of "The Star-spangled Banner," was born in Maryland, 1780. He was a lawyer of note, and brother-in-law to Chief-justice Taney. Being detained by the British during the bombardment of Fort McHenry, September 13, 1814, his feelings found vent in the verses which have become our national lyric. They were printed on his return to Baltimore, and soon diffused widely through the country. Died, 1843.

Kidd, Benjamin, English philosopher and sociologist, was born in 1858. He first entered the British civil service, and was little known until the publication of *Social Evolution*, in 1894. He has also published: *The Control of the Tropics*; *Principles of Western Civilization*; and is the author of articles on the application of the doctrine of evolution to sociological theory and sociology, in the supplement to the 9th edition of *Encyclopaedia Brittannica*. He delivered the Herbert Spencer lecture before the University of Oxford, 1908. He traveled for economic study in the United States and Canada in 1898, and in South Africa in 1902.

Kilpatrick, Hugh Judson, American cavalry officer, was born in New Jersey, 1836. He was graduated at West Point in 1861, and was appointed to the first United States artillery. He was wounded at the battle of Big Bethel, and received rapid promotion, being a colonel of cavalry in 1862, and commissioned brigadier-general of volunteers the following year. He was commissioned major-general in 1865, and resigned from the regular army in that year and from the volunteer service, 1866. From 1865 to 1868, and again in 1881 he was United States minister to Chili. Died, 1881.

King, Charles, American soldier and author, was born at Albany, N. Y., 1844. He was graduated at West Point, 1866, and served in artillery and cavalry until retired as captain, 1879, for wounds received in action. He was inspector and instructor of Wisconsin national guard, 1882-89. In 1898 he was appointed brigadier-general of the United States volunteers in the war against Spain; served in the Philippines under General Lawton, and was commandant of Michigan Military Academy, 1902. Author: *Famous and Decisive Battles*; *Between the Lines*; *The Iron Brigade*; *Medal of Honor*; and others, over fifty in all.

King, Henry Churchill, American educator, president of Oberlin College since 1902, was born at Hillsdale, Mich., 1858. He was graduated from Oberlin, 1879; Oberlin Theological Seminary, 1882; post-graduate at Harvard, 1882-84; A. M., 1883; Berlin, 1893-94; D. D., Oberlin, 1897, Western Reserve, 1901, Yale. Author: *Outline of Erdmann's History of Philosophy*; *Outline of the Microcosmus of Hermann Lotze*; *The Appeal of the Child*; *Reconstruction in Theology*; *Theology and the Social Consciousness*; *Personal and Ideal Elements in Education*; *Rational Living*; and various pamphlets on philosophy, etc.

King, Rufus, American statesman, was born in Scarborough, Me., 1755. He was graduated at Harvard College in 1777, immediately entered as a student at law in the office of Theophilus Parsons, at Newburyport, and was admitted to the bar, 1780. In 1787 he was appointed a delegate to the general convention assembled at Philadelphia, and in 1788 removed from Massachusetts to the city of New York. In 1796 he was appointed minister to the court of Great Britain, and remained there for seven years with equal honor to the country and himself. In 1813 he was chosen by the legislature of New York as United States senator, and continued until the expiration of the term in 1825. Upon his retirement from the senate, he accepted from President Adams an invitation again to represent the United States at the court of Great Britain. During the voyage to England his health was seriously impaired, his illness induced him to return in about a year, and he died in 1827.

King, Thomas Starr, American clergyman and author, was born in New York city, 1824. He studied theology and became pastor of a Unitarian church at Charlestown, Mass., 1846. He gained wide popularity as a lecturer, and his activity in the presidential campaign of 1860 had an important part in preserving California to the union. Died, 1864.

King, William Frederick, chief astronomer of the department of the interior of Canada since 1890, was born at Stowmarket, England, 1854. He was graduated from the University of Toronto, 1875; LL. D., 1904. Was Dominion land and topographical surveyor, 1876; her majesty's commissioner for the international boundary between Canada and the United States under treaties of 1892, 1903, 1906, and 1908; and also under agreement entered into in 1899, 1901, and 1906; member of the international waterways commission, 1904-07, and director of the Dominion astronomical observatory from its opening in 1905.

King, William Rufus, American statesman, was born in North Carolina, 1786. He was a member of the North Carolina legislature for three years; entered congress from North Carolina in 1810; represented Alabama in the United States senate, 1820-44. He was then minister to France from 1844 to 1846; and again United States senator from 1848 to 1853, when, shortly before his death, he became vice-president of the United States. He died in Alabama, 1853.

Kinglake, Alexander William, English historian, was born in Taunton, 1809. He was educated at Cambridge, was called to the bar in 1837; went to Algiers in 1845, and in 1854 followed the fortunes of the British army in Crimea until the siege of Sebastopol. He represented Bridgewater in parliament, 1857-68. His works are *Eöthen*, and *The Invasion of the Crimea*. Died 1891.

Kingsley, Charles, English divine and author, chaplain-in-ordinary to Queen Victoria, was born in Devonshire, 1819. He was educated at King's College, London, and at Cambridge University, and in 1842 became curate and shortly after rector of Eversley. In 1851 he published *Yeast, a Problem*, in which he handles the condition of the English agricultural laborer; and in 1853 *Hypatia, or New Foes with an Old Face*, a most vigorous and brilliant delineation of Christianity. Two years after he published *Westward Ho!* probably the greatest of his works. He was appointed professor of modern history at Cambridge in 1860, and after resigning was made canon of Chester, 1869. Died, 1875.

Kingsley, John Sterling, biologist, was born at Cincinnatus, N. Y., 1854; graduated at Williams College, 1875; S. C. D., Princeton, 1885; University of Freiburg, 1891-2. Was professor of zoölogy, Indiana University, 1887-9; professor of biology, University of Nebraska, 1889-91; Tufts College, since 1892. Editor: *Standard Natural History*. Author: *Elements of Comparative Zoölogy*; *Vertebrate Zoölogy*; *Guides for Vertebrate Dissection*. Translator: *Hertwig's Manual of Zoölogy*, etc.

Kipling, Joseph Rudyard, English author, was born in Bombay, India, 1865. He was educated in United Services College, North Devon, England, and was assistant editor of *Civil and Military Gazette* and *Pioneer* in India, 1882-89. LL. D., McGill University, 1899; Litt. D., Durham, Oxford, and Cambridge. He was awarded the Nobel prize for literature in 1907. He has traveled extensively in Japan, China, Africa, and Australia. Author: *Departmental Ditties*; *Plain Tales from the Hills*; *Soldiers Three*; *In Black and White*; *The Light that Failed*; *Barrack-Room Ballads*; *The Jungle Book*; *Second Jungle Book*; *The Seven Seas*; *The Day's Work*; *Stalky and Company*; *The Brushwood Boy*; *Just So Stories*; *The Five Nations*; *Puck of Pook's Hill*, etc.

Kirk, Sherman, educator, was born in Belmont county, Ohio, 1865, and was graduated from Bethany College, W. Va., 1888; M. A., Drake University, 1898; held pastorates in Kansas, Nebraska and Missouri, 1891-96; professor of Greek, Drake University, since 1897, and, in 1911, dean of the College of the Bible, in that institution. Delegate to and speaker before the National Congress of the Disciples of Christ.

Kitchener (*kich'en-ẽr*), **Horatio Herbert, Lord,** British general, was born in Ireland, 1850. He was educated at the Royal military academy at Woolwich, and entered the British army in 1871. In the action at Hunduh, in 1888, he led the Egyptian troops against Osman Digna, and for his gallantry was made aide-de-camp to the queen. For subsequent service in Sudan campaigns he was made companion of the bath. In 1888 he was made adjutant-general in the Egyptian army, and held that position until 1892. He commanded at the taking of Dongola in 1896, and was then made K. C. B. In 1898 he was in command of an English and Egyptian army near Omdurman, opposite the site of Khartum, where he gained a noted victory. He was chief of staff of forces in

South Africa, 1899-1900; commander-in-chief, 1900-02; later was promoted lieutenant-general and general, and created viscount.

Kitchin, George William, English historian, was born at Naughton rectory, Suffolk, 1827. He was educated at Ipswich, King's College, London, and Christ Church, Oxford. He became dean of Winchester in 1883, and of Durham in 1894. His chief work is his *History of France.*

Kitto (*kit'ō*), **John,** biblical writer, was born at Plymouth, England, 1804. In 1817 he became stone-deaf through a fall, and learned shoe-making. The rest of his life was spent in the service of Charles Knight and other publishers. In 1850 he received a pension of 100 pounds. His works include *The Pictorial Bible*; *Pictorial History of Palestine*; *History of Palestine*; *The Lost Senses—Deafness and Blindness.* In 1844 the University of Giessen made him a D. D. He died at Cannstadt near Stuttgart, 1854.

Klaw, Marc, theatrical manager, was born at Paducah, Ky., 1858. He was educated in the public and high schools of Louisville, Ky.; studied law and was admitted to the bar. Since 1881 he has been engaged as theatrical manager, and is now a member of the theatrical firm of Klaw and Erlanger of New York.

Kléber (*klā'bâr'*), **Jean Baptiste,** French general, was born at Strassburg, 1753, and in 1776 obtained a commission in the Austrian army. In 1794 he led the left wing at Fleurus, and captured Maestricht; in 1796 he gained the victory of Altenkirchen. He accompanied Bonaparte to Egypt, was wounded at Alexandria, and won the battle of Mount Tabor, 1799. When Bonaparte left Egypt he intrusted the chief command to Kléber, who concluded a treaty with Sir Sidney Smith for its evacuation; but on Admiral Keith's refusal to ratify it Kléber resolved to reconquer Egypt, and destroyed the Turkish army at Heliopolis. In the course of an attempt to conclude a treaty with the Turks, he was assassinated by a Turkish fanatic at Cairo, 1800.

Klein (*klīn*), **Charles,** playwright, was born in London, England, 1867, and was educated at North London College. He was formerly censor of plays for Charles Frohman. Author: *A Mile a Minute*; *El Capitan*; *Heartsease*; *The Hon. John Grigsby*; *Dr. Belgraff*; *A Royal Rogue*; *The Music Master*; *The Lion and the Mouse.*

Klopstock (*klōp'shtōk*), **Friedrich Gottlieb,** German poet, was born at Quedlinburg, 1724. Incited by Virgil's *Æneid* and Milton's *Paradise Lost*, he resolved to write a great epic, and as a student at Jena, in 1745, he began *The Messiah.* The last cantos of *The Messiah* were published in 1773. Regarded in his own time as a great religious poet, he helped to inaugurate the golden age of German literature. *The Messiah* was translated into both English verse and prose. Died, 1803.

Knapp, Martin Augustine, American lawyer and jurist, chief justice of the U. S. Court of Commerce, was born in Stafford, N. Y., 1843. He was graduated from Wesleyan University, Connecticut, 1868; LL. D., 1892; hon. A. M., Syracuse University, 1892. He was interstate commerce commissioner 1891-1910; chairman of the commission, 1898-1910, and appointed chief justice of the new U. S. Commerce Court, erected 1910. For a number of years he lectured on interstate commerce law at George Washington University.

Kneisel (*k'ni'zel*), **Franz,** German-American musician, director of Kneisel quartette, was born in Roumania, of German parentage, in 1865. He studied violin instruction under Grün and Hellmesberger; was concertmaster of Hofburg theater orchestra, Vienna; later of Bilse's orchestra, Berlin, and concertmaster of the Boston symphony orchestra. He is especially prominent as violin soloist. Since 1905 he has been head of violin department in the institute of musical art, New York.

Kneller (*nel'ĕr*), **Sir Godfrey,** noted portrait-painter, was born at Lübeck, 1646. He studied at Amsterdam and in Italy, went to London, 1675, and in 1680 was appointed court-painter. In 1693 William III. knighted him, and in 1715 George I. made him a baronet. His best-known works are the *Beauties of Hampton Court*, painted for William III.; his portraits of the *Kit-Cat Club*; and of fourteen sovereigns. He died at Twickenham, 1723.

Knight, Charles, English publisher and author, was born at Windsor, 1791. He early turned his attention to publishing. In 1823 he started *Knight's Quarterly Magazine*, and continued it for some time in London. The whole of his noteworthy career was devoted to popular literature, of which he was one of the earliest and most accomplished advocates. Among the works which he published or edited are the *Penny Magazine*, which was started only a month or two after *Chambers' Edinburgh Journal* and the *British Almanac.* He died in 1873.

Knight, William Angus, Scotch educator and writer, professor of moral philosophy, University of St. Andrews, 1876-1902, was born in Scotland, 1836. He was graduated from the University of Edinburgh; LL. D., Glasgow. Author: *Studies in Philosophy and Literature*; *Essays in Philosophy, Old and New*; *Selections from Wordsworth*; *Coleridge and Wordsworth in the West Country, their Friendships and Surroundings*, etc.

Knowles, James Sheridan, British dramatist, was born at Cork, 1784. His *Caius Gracchus* was first performed at Belfast. *Virginius*, his most effective play, had been a success in Glasgow before Macready in 1820 produced it at Covent Garden. Besides *William Tell*, in which Macready achieved one of his greatest triumphs, Knowles' other best plays are *Love*, *The Hunchback*, *The Love Chase*, and *The Wife.* He appeared with fair success in many of his own pieces; but about 1844 became a Baptist preacher, drew large audiences to Exeter hall, and published two anti-Roman Catholic works. He died at Torquay, 1862.

Knox, Henry, American general, was born in Boston, Mass., 1750. He was an officer in a military company, and, when the revolution broke out, he escaped from the city with his wife, who hid his sword in the folds of her dress, and took part in the battle of Bunker Hill. He soon attracted the attention of Washington by his skill in planning fortifications and his knowledge of artillery, and throughout the war he commanded the artillery in various battles. Congress made him a major-general, and from 1785 to 1795 he was secretary of war. Died, 1806.

Knox, John, Scottish divine and reformer, was born at Giffordgate, in Haddingtonshire, 1513. He became a priest and notary in the diocese of St. Andrews before he had attained the age of twenty-five. He renounced Catholicism about 1543, and openly preached the new faith. In the reign of Mary, he retired to Frankfort, and thence to Geneva, where he became acquainted with Calvin. Having returned to his own country in 1559, he denounced the priesthood, and especially the mass and image-worship, and declaimed against the queen of Scots, whom he called Jezebel. With tireless perseverance and vehement eloquence he labored until his death for the establishment of Protestantism in Scotland. The person of Knox was diminutive, and his frame wasted and feeble, but his energy was inexhaustible. He was the author of several works, notably of a *Historie of the Reformation of Religion in Scotland.* But the influence he exerted was by the tongue rather than by the pen. Died, 1572.

Knox, Philander Chase, American lawyer and statesman, was born in Brownsville, Pa., 1853. He was graduated at Mt. Union College, Ohio, 1872; LL. D., University of Pennsylvania, 1905; Yale, 1907. He was admitted to the bar, 1875; was assistant United States district attorney, Western district of Pennsylvania, 1876-77. He was attorney-general of the United States, 1901-04; United States senator from Pennsylvania, 1904-09, and secretary of state 1909-13.

Kobbé (*kob'ā*), **Gustav,** American author and journalist, was born in New York, 1857. He was graduated at Columbia University, 1877; Columbia Law School, 1879. He engaged in newspaper and magazine work, chiefly on musical and dramatic subjects. Author: *The Ring of the Nibelung*; *Wagner's Life and Works*, 2 volumes; *Opera Singers*; *Signora, a Child of the Opera House*, a novel; *Wagner's Music Dramas Analyzed*; *Wagner and His Isolde*; *Famous American Songs*; *How to Appreciate Music*; *The Pianolist*, etc.

Koch (*kōk*), **Robert,** German physician and bacteriologist, was born at Klausthal, in the Hartz mountains, 1843. He studied medicine at Göttingen, receiving his doctor's degree in 1866. His first substantial achievement was the result of the penetration, skill, and thoroughness of his researches on the contagion of splenic fever in cattle. In 1879 he had begun his investigations into the causes of consumption, and in 1882 he announced the discovery of the tubercle bacillus before the physiological society of Berlin. He discovered the comma bacillus, or cholera germ, in 1884. He was rewarded with a gift of 100,000 marks by the government, and imperial titles and honors were showered upon him. In 1885 he was appointed a professor in the University of Berlin, the new chair of hygiene being created for him, and was made director of the hygienic institute. In 1905 he was awarded the Nobel prize for achievements in physiology. Died, 1910.

Kohlsaat (*kōl'sāt*), **Hermann Henry,** capitalist, journalist, was born in Albion, Ill., 1853. He was educated in the common schools at Galena, Ill. He was traveling salesman for two other firms, and, 1875-80, for Blake, Shaw and company, wholesale bakers; became junior partner, 1880, and had charge of a bakery lunch established by this firm. He bought that branch of the business, 1883, greatly enlarged it, and the firm of H. H. Kohlsaat and company now owns several large establishments devoted to the wholesale bakery business. He was part owner of the *Chicago Inter-Ocean*, 1891-93; was editor and publisher of *Chicago Times-Herald*, 1894; also of *Chicago Evening Post*, 1894-1901. He purchased control of the *Chicago Record-Herald* in 1910, and has been largely identified with local real estate operations.

Komura (*kō'moo-rà*), **Count Jutaro,** Japanese statesman, minister for foreign affairs since 1908, was born at Hyuga, 1855. He was educated at the University of Tokyo, and at Harvard University Law School. Was *chargé d'affaires* in China, 1893-94; minister to United States, Russia, China, 1898-1901; minister for foreign affairs, 1901-06; senior plenipotentiary to the peace conference, and signed, with Mr. Takahira, peace treaty at Portsmouth, N. H., 1905; and Japanese ambassador to Great Britain, 1906-08. Died 1911.

Körner (*kûr'nĕr*), **Karl Theodor,** German lyric poet, was born at Dresden, 1791. He studied at Freiburg, Leipzig, and Berlin, and in 1811 settled at Vienna. Here he was dramatist to a Vienna theater, and wrote some light comedies, among them *Der Grüne Domino* and *Der Nachtwächter*, and some tragedies, of which *Zriny* was the most successful. The most famous song, *Das Schwert-Lied*, was dashed off in a pause of battle only a few hours before the author fell at Gadebusch near Schwerin, 1813.

Kosciusko (*kos'i-us'kō*), **Thaddeus,** Polish general and patriot, was born in Minsk, West Russia, 1746. He became a captain in the Polish army, came to America and served in the war of independence, and returned to Poland in 1786, with the rank of general. With 20,000 regular troops and 40,000 ill-armed peasants he resisted for months the united Russian and Prussian army of 150,000 men. Overpowered by superior numbers in the battle of Maciejowice, 1794, he was captured and kept a prisoner until after the accession of the emperor Paul. When Napoleon, in 1806, formed a plan for the restoration of Poland, Kosciusko felt himself restrained from taking an active part in it by his promise to the emperor Paul. He released from servitude, in 1817, the peasants on his own estate in Poland. His death took place in 1817, in consequence of a fall from his horse.

Kossuth (*kosh'oot*), **Francis,** son of Louis Kossuth, leader of the independence party in the Hungarian parliament, was born in 1841. He suffered exile with his father, was partly educated in England, and lived in France and Italy. After his father's death in 1894 he went back to Hungary, took the oath of allegiance as a Hungarian subject, and soon became leader of those aspiring to national independence. When the coalition came into office in 1906 he became minister of commerce in the Wekérle cabinet.

Kossuth, Louis, Hungarian patriot, orator and leader, was born at Monok, 1802. In 1832 he commenced his political career as editor of a liberal paper. To his speeches must in part be ascribed not only the Hungarian revolution, but the insurrection in Vienna in 1848. To put an end to all the hopes and schemes of the moderate party he induced the national assembly at Debreczin, in 1849, to declare the independence of Hungary, and that the Hapsburg dynasty had forfeited the throne. He was then appointed provisional governor of Hungary. In 1849 he was compelled to abandon his position, and to flee into Turkey, where, however, he was made a prisoner. In 1851 he landed in the United States, where he met with a most enthusiastic reception. He returned in 1852 to England, and there he chiefly resided until the Italian war broke out against Austria, when he organized an Hungarian legion in Italy. Later he lived in Turin until his death in 1894.

Kotzebue (*kōt'se-bōō*), **Augustus Frederic Ferdinand von,** German dramatist and historic writer, was born at Weimar, 1761, and was educated at Jena and Duisburg. In 1801 he again left Russia where for several years he had resided and spent the remainder of his life in innumerable literary productions, and in politics. The emperor Alexander subsequently employed him in various posts, and in 1817 appointed him his literary correspondent in Germany. This invidious office Kotzebue is said to have filled in a manner hostile to the freedom of his native country; and for this supposed crime he was assassinated in 1819 by a youthful fanatic named Sand. His dramas number nearly three hundred. Among his other works are: *History of the German Empire*; *History of Ancient Prussia*, and various narratives and recollections of his travels.

Krehbiel (*krā'bēl*), **Henry E.,** musical critic, was born at Ann Arbor, Mich., 1854; studied law in Cincinnati, 1872-74; musical critic, Cincinnati *Gazette*, 1874-80; musical critic, New York *Tribune*, since 1880; chevalier of legion of honor, 1901. Author: *Studies in Wagnerian Drama*; *How to Listen to Music*, etc. Editor: *Annotated Bibliography of Fine Arts.*

Krouskopf (*krous'kopf*), **Joseph,** rabbi, lecturer, and author, was born in Ostrowo, Prussia, 1858. He came to America in 1872, worked as clerk at Fall River, Mass. He was graduated at the University of Cincinnati, 1883, and as rabbi from Hebrew Union College, 1883; D. D., 1885. He founded the Jewish publication society of America; founded, and has been president since organization of the National farm school, in which Jewish boys are trained in practical and scientific agriculture. Author: *The Jews and Moors in Spain*; *Evolution and Judaism*; *Some Isms of To-day*; *Gleanings from Our Vineyard*; *The Service Manual*; *The Service Ritual*, etc.

Kropotkin (*krā-pōt'kēn*), **Prince Peter,** Russian socialist, writer, was born at Moscow, 1842. In 1871 he explored the glacial deposits of Finland and Sweden; in 1872, while on a visit to Belgium and Switzerland, he associated himself with the extremest section of the International. In 1874, after his return to Russia, he was arrested, but in 1876 effected his escape to England. In France at Lyons he was condemned, in 1883, to five years' imprisonment for anarchism, but was released in 1886 and returned to England. Author: *In*

Russian and French Prisons; Mutual Aid, a Factor of Evolution; Modern Science and Anarchism; The Great Revolution 1789-1903, etc.

Kruger (*krōō'ger*), **Stephanus Johannes Paulus,** Boer statesman, was born at Rastenburg in Cape Colony, 1825. With his family he "trekked" to Natal, the Orange river free state, and the Transvaal, and won such a reputation for cleverness, coolness, and courage that in the war against England, in 1881, he was appointed head of the provisional government. *Oom Paul* was the soul of the policy that issued in the so-called Boer war of 1899-1902, showed consummate resolution and energy, and, after the tide had fairly turned against the Boers, went to Europe to seek alliances against Britain. He died, 1904.

Krupp (*krōōp*), **Alfred,** German ironmaster, was born at Essen, 1812. Krupp established the first Bessemer steel works and the first forging-hammer erected in Germany. The first steel gun manufactured by him, in 1847, was a 3-pounder muzzle-loader; in 1880 at the Düsseldorf exhibition he showed the first 100-ton steel gun. His factories now employ about 50,000 persons, and are possibly the most extensive works of the kind in the world. Krupp died in 1887.

Kubelik (*kōō'be-lik*), **Johann,** Bohemian violinist, was born in 1880 at Miehle, near Prague. He was very successful at concerts in Austria-Hungary prior to appearing in Berlin with the Philharmonic orchestra, 1900. He was then invited to England by Dr. Richter, and made his début at St. James' hall. In 1905 he began a two years' tour round the world, and met with high favor throughout Europe and America.

Kuenen (*kū'nen*), **Abraham,** Dutch theologian, was born at Haarlem, 1828. He studied at Leyden and became, in 1853, a professor there. His first important work was his *Historical-Critical Inquiry into the Old Testament,* the result of which was to reconstruct the history of Israel, the priestly code and the historical portions connected with it being made the latest element in the pentateuch. This view was developed further in a succeeding volume. He died at Leyden, 1891.

Kugler (*kōōg'lĕr*), **Franz Theodor,** German historian of art, was born at Stettin, 1808, and studied at Heidelberg and Berlin. In 1833 he became a professor at the art academy in Berlin. His most valuable work is the *Manual of the History of Art.* He is also favorably known as a poet and as the author of several dramas. Died, 1858.

Kuroki (*kōō'rō-kē*), **General, Count,** noted Japanese general, was born at Satsuma, 1844. He commanded the first army in the Russo-Japanese war, 1904-05, and was victorious at Yalu, Liu-lien-ling, Liao-Yang, Mukden, etc. In 1906 he became inspector-general of the Japanese army, and subsequently made a tour of the United States.

Kuropatkin (*kōō -ro-pät'kin*), **Alexei Nicholaevitch,** Russian general, was born in the government of Pskov, 1848. After receiving an excellent education in the Russian military schools, he entered the army and distinguished himself in the war against the Bokharans. In 1904 he was made commander-in-chief of the Russian army during the Russo-Japanese war. In 1905 he was succeeded by General Linievitch, and was appointed to command the first Manchurian army.

Kutusoff (*kōō-tōō"zōf*), **Mikhail, I. G.,** prince of Smolenskoi. Russian field-marshal, was born in 1745. He was appointed in 1805 to the command of the first *Corps d'armée* against the French. In that year he was victorious over Marshal Mortier at Dürenstein. In 1811-12 he commanded the Russian army in the war against the Turks, and, notwithstanding his advanced age, succeeded Barclay de Tolly in 1812 as commander-in-chief of the army against the French, and obtained a great victory over Davout and Ney at Smolensk. He carried on the campaign to its successful termination, but his strength was exhausted, and he died in 1813.

Kuyper (*koi"pĕr*), **Abraham,** Dutch theologian, statesman, and writer, was born at Maassluis, 1837. He was graduated at the University of Leyden; D. Sc., Delft; LL.D., Princeton; D.D., Leyden. He founded the free university at Amsterdam, 1880; became professor of theology and literature there; founded the daily *Standard* and became its chief editor, 1872; the *Heraut,* 1873; and founded the Reformed Free church, 1886. He lectured in America, England, and Belgium, and in 1897 was president of Netherland press association. He edited the *Encyclopædia of Sacred Theology,* and is the author of the following works: *The Work of the Holy Spirit; Calvinism; Socialism and Christianity; The Evolution; The South African Crisis; Varia Americana; Around the Old World,* etc.

Lackaye, Wilton, actor, was born in Virginia, 1864. He studied law for one year; began his stage career, in *Francesca da Rimini* in New York, 1883. His principal rôles have been Prince Saviana in *Jocelyn;* Don Stephano in *Featherbrain;* Jefferson Stockton in *Aristocracy;* Solomon Strong in *The Idler;* Svengali in *Trilby;* Curtis Jadwin in *The Pit;* Jean Valjean in *The Law and the Man;* John Haggleton in *The Battle.*

Lacordaire (*lä'kōr'där'*), **Jean Baptiste Henri,** French divine, was born at Recey-sur-Ource, 1802. He went to Paris in 1821 to continue his legal studies. He assisted Lamennais and Montalembert to found the *Avenir,* and was once summoned for opposing the government. In 1834 Lacordaire gave a series of "conferences" or lectures to students which attracted great attention, and led the way to his famous conferences in Notre Dame, Paris, in 1835-36. In 1839 he entered the Dominican order, and in 1840 reappeared in the pulpit of Notre Dame, where, from 1843 to 1851 he continued his conferences. His last conferences, delivered at Toulouse in 1854, are the most eloquent of all. Thenceforward until his death, in 1861, he was director of the military school of Sorrèze. He was a member of the academy.

Lacretelle (*lä'krĕ-tel'*), **Jean Charles Dominique de,** French historian and journalist, was born at Metz, 1766. He was attracted to Paris on the outbreak of the revolution. In 1809 he was made professor of history at the University of Paris where he remained until 1848. In 1810 censor of the press, and in 1808-12 published his *History of France in the Eighteenth Century,* a work of high merit. From 1811 a member of the French Academy, he became its president in 1816. He died near Mâcon, 1855.

Lacroix (*lä'krwä'*), **General de,** French general, vice-president of the supreme council of war and commander-in-chief of the French army, was born in 1844. In the Franco-Prussian war he was taken prisoner at Sedan. He served in the French expedition to Tonquin, and in 1902 succeeded General Bonnal at the Ecole de Guerre. In 1903 he was appointed military governor of Lyons and commander of the fourteenth army corps. He succeeded General Hagron in his present post in 1907.

Lactantius (*läk-tän'shĭ-us*), **Lucius Caelius, Firmianus,** Christian apologist, was born in the latter part of the third century. He was brought up in Africa, and settled as a teacher of rhetoric in Nicomedia in Bithynia, where he was converted by witnessing the constancy of the Christian martyrs under the persecution of Diocletian. His most important work is *Divinarum Institutionum libri vii.,* which is a vindication of Christianity, and an exposure of the paganism he had formerly professed. Died 325.

Ladd, George Trumbull, American educator, professor of philosophy at Yale University since 1881, was born in Painesville, Ohio, 1842. He was graduated at Western Reserve College, 1864; Andover Theological Seminary, 1869; D.D., 1879; LL.D., 1895, Western Reserve; LL.D., Princeton, 1896; lecturer on church polity and on systematic theology, Andover theological seminary, 1879-81; lectured on philosophy before University of Bombay, India, 1899-1900, and on philosophy of religion at Calcutta, Madras, Benares, etc. Author: *Principles of Church Polity; Doctrine of Sacred Scripture,* 2 vols.; *Lotze's Outlines of Philosophy,* translated to 6 vols.; *Elements of Physiological Psychology; What is the Bible? Introduction to Philosophy; Outlines of Physiological Psychology; Philosophy of Mind.* Several of his books have been translated into Japanese and into the language of the blind.

La Farge (*lä färzh'*), **John,** American artist, was born in New York, 1835. He studied architectural decoration, then painting with Couture and William M. Hunt. He began painting with religious subjects and decorative work; then devoted himself to mural painting and stained glass windows mostly of religious or ecclesiastical character. Much of his work was in churches and residences in Boston, New York, Chicago, Cleveland, Philadelphia, Washington, Detroit, and elsewhere. Author: *Lectures on Art, Letters from Japan,* etc. Died, 1910.

Lafayette (*lä'fä-yĕt'*), **Marie Jean Paul Roche Yves Gilbert du Motier, Marquis de,** French general and statesman, descended from an ancient family of Auvergne, and was born in the castle of Chavagnac, now in the department of upper Loire, 1757. He became a soldier at an early age, and in 1777 came to America to take part with the colonists in the war of independence, and was intrusted by congress with the defense of Virginia, where he rendered important services. He had imbibed liberal principles, and on his return to France eagerly sought to promote a thorough reform in his native country. He was called to the assembly of notables in 1787, and was one of those who most earnestly urged the summoning of the states-general. He took part also in the movements which converted the assembly of the states into the national assembly in 1789. The extreme French republicans soon came to dislike him, because he advocated a constitutional kingdom; and the court-party, especially the queen, did the same—in spite of the services he rendered them—because of his zeal for the new order of things. Along with Bailly he founded the club of the Feuillants. After the adoption of the constitution of 1790 he retired to his estate of Lagrange until he received the command of the army of Ardennes, with which he won the first victories at Philippeville, Maubeuge, and Florennes. Nevertheless, the calumnies of the Jacobins rendered him exceedingly unpopular, and he was accused of treason, but acquitted. After several efforts to maintain the cause of rational liberty, he left Paris for Flanders, but was taken prisoner by the Austrians, and detained at Olmütz until Bonaparte obtained his liberation in 1797. He sat in the chamber of deputies from 1818 to 1824, and from 1825 to 1830. In 1824 he revisited America by invitation of congress, which voted him a grant of $200,000 and a township of land. In 1830 he took an active part in the revolution, and commanded the national guards. Died 1834.

Lafitte (*lä'fĕt'*), **Jacques,** French banker and statesman, was born at Bayonne, France, 1767. He acquired great wealth as a Paris banker, and in 1814 became governor of the bank of France. In 1830 his house was the headquarters of the revolution, and he supplied a great part of the funds needed. In November he formed a cabinet, but he held power only until March. As the government became less liberal, Laffitte became more active in opposition; in 1843 he was elected president of the chamber of deputies. Died, 1844.

La Follette (*lä fol'et*), **Robert Marion,** lawyer, statesman, was born in Primrose, Wis., 1855. He was graduated at the University of Wisconsin, 1879; LL.D., 1901; was admitted to the bar, 1880, and became district attorney of Dane county, 1880. He was a member of congress, 1885-91. He was elected governor of Wisconsin in 1901, 1903, and 1905; and led the movement to nominate all candidates by direct vote, adopted by his state, 1904; to tax railway property by same system and at same rate as other taxable property, adopted, 1903; and also for the control of railway rates within the state by state commission enacted into a law by the legislature of 1905. He was elected United States senator in 1905 and again in 1910. He has made important contributions to railroad and other public reforms, and is regarded as one of the ablest debaters in the United States senate.

Lafontaine (*lä-fŏn'tĕn'*), **Jean de,** French poet and fabulist, was born at Château Thierry in Champagne, 1621. In 1654 he published a verse translation of the *Eunuchus* of Terence, and then went to Paris, where Fouquet awarded him a pension of 1,000 francs for a piece of verse quarterly. His *Contes et Nouvelles en Vers* appeared in 1665, his *Fables Choisies mises en Vers* in 1668, and his *Amours de Cupid et Psyche* in 1669. In 1684 he read an admirable *Discourse en Vers* on his reception by the academy. The subjects of the *Contes* are taken from Boccaccio, Ariosto, Machiavelli, Rabelais, the *Heptameron,* Apuleius, Athenæus, and other writers. He was a brilliant writer, but not a great poet. Died, 1695.

Lagrange (*lä'gränzh'*) **Joseph Louis, Count,** mathematician, was born in Turin, 1736, of French extraction. He became professor of mathematics in Turin at the age of nineteen. In 1766 he succeeded Euler as director of the Academy of Berlin. Removing to Paris in 1787, he remained there during the revolution, was after ward patronized by Napoleon, and created by him a count and a senator. Died, 1813.

Lalande (*lä'länd'*), **Joseph Jerome Le Français de,** French astronomer, was born at Bourg-en Bresse, 1732. He devoted himself with such success to mathematics and astronomy that the French Academy sent him to Berlin, 1751, to determine the moon's parallax, at the same time that Lacaille was sent to the cape of Good Hope. His chief work is *Traité d'Astronomie.* Died, 1807.

Lally-Tollendal (*lä'lē' tō'lăn'dăl'*), **Thomas Arthur, Comte de Lally** and **Baron de Tollendal,** French general; of Irish descent, was born at Romans in Dauphiné, 1702. His father, Sir Gerard Lally, was an Irish Jacobite refugee in the French service. Lally in 1756 became commander-in-chief in the French East Indies. He commenced vigorous hostilities against the British, and besieged Madras; but, being defeated, retreated to Pondicherry, which was attacked in 1760 by a superior British force. Lally capitulated in 1761, after ten months' siege, and was conveyed to England. Accused of cowardice, he returned to France, and was thrown into the Bastile. The parliament of Paris at last condemned him, and he was executed in 1766. But his son, supported by Voltaire, procured a royal decree in 1778, declaring the condemnation unjust, and restoring all the forfeited honors.

Lamar (*la-mär'*), **Lucius Quintus Cincinnatus,** American lawyer and statesman, was born in Putnam county, Ga., 1825. Removed to Mississippi, 1854, and was a member of congress from that state, 1857-60; served in the confederate army during the civil war, and was sent to Europe as agent of the confederacy. In 1866 he was made professor of political economy at the University of Mississippi; was a member of congress, 1872-77, and of the United States senate, 1877-85. President Cleveland made him secretary of the interior and, in 1888, associate justice of the United States supreme court. He died at Macon, Ga., 1893.

Lamar, Joseph Rucker, lawyer, jurist, was born at Ruckersville, Ga., October 14, 1857, educated at the University of Georgia, Washington and Lee Universities, and Bethany college; admitted to bar, 1879, and practised at Augusta, Ga., 1879-1903. Member Georgia house of representatives, 1886-9; commissioner to codify the laws of Georgia, 1895; associate justice supreme court of Georgia, 1903-10; associate justice of the United States supreme court since 1910.

Lamarck (*lä'märk'*), **Jean Baptiste Pierre Antoine Monet de,** celebrated French naturalist

and pre-Darwinian evolutionist, was born at Bazentin, 1744. In 1778 he published a *Flore Francaise*. In 1779 he became a member of the French academy and keeper of the royal garden, afterward the nucleus of *Jardin des Plantes*, and here he lectured for twenty-five years on invertebrate zoölogy. About 1801 he had begun to think about the relations and origin of species, expressing his conclusions in his famous *Philosophie Zoölogique*, in 1809. His *Histoire des Animaux sans Vertébres* appeared in 1815-22. He broke with the old notion of species, expressly denied the unchangeableness of species, sought to explain their transformation and the evolution of the animal world, and prepared the way for the now accepted theory of descent. Died, 1829.

Lamartine (*lä'mär'tēn'*), **Alphonse,** French author and politician, was born at Mâcon, 1790. He exercised a most important influence upon the revolution of 1848, restraining the populace from many excesses into which they might otherwise have been led. The greater part of his career was devoted to literature, in which he attained eminence. His *History of the Girondists*, published in 1847, undoubtedly did much to hasten the revolution; and his *History of the Revolution of 1848*, which appeared in the following year, is a deeply interesting account of a movement which, if it had not been turned into another direction by the temporarily successful ambition of Louis Napoleon, might have gained for France at once that free government which she gained only after the fall of the empire. Died, 1869.

Lamb, Charles, English essayist and poet, was born in London, 1775. He was the son of a clerk to one of the benchers at the Inner Temple, and was educated at Christ's Hospital, where he was the schoolfellow and friend of Samuel Taylor Coleridge. From 1792 to 1825 he was a clerk in the accountant's office of the East India company, retiring at last on a pension; but, during most of these years, and indeed up to the close of his life, he devoted himself, in a spirit of noble self-sacrifice, to the care of his sister Mary, who, like himself, had inherited a taint of insanity. Lamb's earliest literary efforts were in verse. In 1807 he published, in conjunction with his sister, a series of *Tales from Shakespeare;* and in 1808 two volumes of *Specimens of English Dramatic Poets who lived about the time of Shakespeare*, with short but felicitous notes. On the establishment of the *London Magazines* in 1820, he began that series of essays, signed *Elia*, which are the chief foundation of his fame. He died in 1834, his sister Mary surviving him until 1847.

Landor, Arnold Henry Savage, English artist and traveler, was born at Florence, Italy, 1865, and was educated there and at Paris. He traveled in the East several years, also in America, Australia, Azores, and northern Africa. He was the first white man to reach both sources of the great Brahmaputra river and establish their exact position; to settle the geographical problem that no range higher than the Himalayas existed north of the Brahmaputra river; He holds the world's record in mountaineering, having reached an altitude of 23,490 feet on Mount Lumpa, Nepal, 1899. Author: *Alone with the Hairy Ainu, or 3,800 Miles on a Pack-saddle; Corea, or the Land of the Morning Calm; The Gems of the East; Tibet and Nepal; Across Widest Africa*, etc.

Landor, Walter Savage, English poet and prose writer, was born at Ipsley Court, Warwickshire, 1775. He studied at Oxford where he won high reputation as a scholar, and in 1808 raised a body of men, at his own expense, and joined the Spanish patriots under Blake. He was made a colonel in the service of Spain, but resigned his commission on the restoration of King Ferdinand. He first became known as the author of a poem called *Gebir*, in 1798, which was followed by *Count Julian*. In 1824-29 appeared his *Imaginary Conversations of Literary Men and Statesmen*, in 5 vols. He was a thorough classical scholar, and his Greek and Roman characters speak as we should expect the ancient heroes to have spoken. "He has," says Emerson, "an English appetite for action and heroes." Died in Florence, Italy, 1864.

Landseer, Sir Edwin, English painter, was born in London, 1802. The first work that brought him prominently before the public was *Dogs Fighting*, exhibited in 1819. It was succeeded by the *Dogs of St. Gothard*, the popularity of which was very great. In 1830 he was elected a royal academician, and in 1850 was knighted. Among his most celebrated achievements are: *The Return from Deer-stalking; The Illicit Whiskey-still; Night; Morning; The Children of the Mist; Saved; Flood in the Highlands; Windsor Park; Squirrels Cracking Nuts.* He was elected president of the Royal Academy in 1865, but declined the honor. He was the most superb animal-painter of his time.

Lane, Edward William, English orientalist and Arabic scholar, was born at Hereford, 1801, the son of a prebendary. The result of Egyptian visits was his *Manners and Customs of the Modern Egyptians*, still a standard authority. This was followed by the annotated translation of the *Thousand and One Nights*, which was the first accurate rendering. His later years in Egypt were devoted to the great work of his life, the *Arabic-English Lexicon*. Died, 1876.

Lane, Franklin Knight, Secretary of the Interior, lawyer, was born Prince Edward Island, July 15, 1864. He was graduated from the University of California, 1886, and began the practice of law in San Francisco, 1889. Was corporation council of San Francisco, 1897-1902; candidate for governor of California, 1902, and for United States senator, 1903; and member of the Interstate Commerce Commission, 1905-13. He was appointed Secretary of the Interior by President Wilson, 1913. On April 11, 1893, he married Anne Wintermute, of Tacoma, Wash.

Lane-Poole, Stanley, English historian and archaeologist, professor of Arabic at Trinity College, Dublin, 1898-1904, was born in London, 1854. M. A., Oxford and Dublin; Litt. D., Dublin. Visited Australia, 1890; employed by Egyptian government on archaelogical research at Cairo, 1895-97; lecturer at the royal institution, 1900, and examiner in Arabic to the University of Wales, 1901-02. Author: *Catalogue of the Oriental and Indian Coins in the British Museum*, 14 vols.; *Social Life in Egypt; Studies in a Mosque; The Art of the Saracens of Egypt; Speeches and Table-talk of Mohammed; Essays in Oriental Numismatics*, 3 vols., etc. Edited: Lane's *Arabic Lexicon, The People of Turkey*, 2 vols., Lane's *Koran; Arabian Society in the Middle Ages*, etc.

Lanfranc (*lan'frangk*), prelate and scholar, archbishop of Canterbury, was born in Pavia, Italy, about 1005. In 1045 he was chosen prior of the Benedictine Abbey of Bec. William of Normandy appointed him a counsellor of state, and in 1066 abbot of a monastery in Caen, where he established a school. Afterward William caused him to be elected to the see of Canterbury, and he was consecrated in 1070. His works consist of commentaries, letters, and sermons. Died, 1089.

Lang (*lang*), **Andrew,** Scottish writer and critic, was born at Selkirk, Scotland, 1844. He was educated at St. Andrews University and Balliol College, Oxford. Litt. D., Oxford, LL. D., St. Andrews. He was elected a fellow of Merton College, 1868, and shortly became one of the busiest and brightest writers in the world of London journalism. He wrote *Ballads and Lyrics of Old France; Helen of Troy; Rhmyes à la Mode; Customs and Myth; Modern Mythology;* contributions to the study of the philosophy and religion of primitive man. Among his other works are: *The Library; Life of Lockhart; Pickle the Spy; Companions of Pickle; History of Scotland*, 2 vols.; *Prince Charles Edward; The Mystery of Mary Stuart; Homer and his Age*, etc. He has translated Theocritus and, with others, Homer, besides editing the *Fairy Books*, etc. Died, 1912.

Langevin (*länzh'van'*), **Louis Philip Adelard,** Canadian prelate, catholic archbishop of St. Boniface, Manitoba, since 1895, was born at St. Isadore, La Prairie, province of Quebec, Canada, 1855. He was educated at Montreal College, completed his course of theological study at St. Mary's College, Montreal; entered the order of oblates of Mary Immaculate, 1881, and was ordained priest, 1882. Professor of moral theology in the Catholic University of Ottawa, where he soon became vice-dean of the theological faculty, 1885; D. D., 1892. He visited England, France, Belgium, Germany, in 1890; Romo in 1896, 1898, and 1904, and the same year visited the holy land. Has founded twenty-eight parishes, twenty-four educational convents, three hospitals, two orphanages, six Indian Boarding Schools, and has doubled the number of priests and the number of missionaries among the Indians.

Langton, Stephen, English prelate, was born about 1160. He studied in Paris, and became there canon of Notre Dame and chancellor of the University. In 1207 was consecrated archbishop of Canterbury. In 1213 he joined the barons opposed to the misgovernment of John, and his name stands first among the subscribing witnesses to magna charta. He again placed himself at the head of the barons, in 1823, to demand from Henry III, the confirmation of their liberties. Died, 1228.

Lanier (*la-nēr'*), **Sidney,** American poet, was born in Macon, Ga., 1842. He was graduated at Oglethorpe College, Ga., 1860, and served in the confederate army during the war. From 1868 to 1872 he practiced law in company with his father at Macon. In 1876 he prepared an ode for the centennial exhibition at Philadelphia, and in 1877 settled in Baltimore, where he delivered lectures on English literature. In 1879 he was appointed lecturer on English literature at Johns Hopkins University. In the summer of 1880, enfeebled by consumption, he sought relief in the mountains of North Carolina, where he died 1881. His two notable books are his *Science of English Verse*, and his *Poems*.

Lankester (*lang'kes-tēr*), **Sir Edwin Ray,** English zoölogist, was born in London, 1847. He was educated at Downing College, Cambridge, and at Christ Church, Oxford; D. Sc., Oxford and Leeds; LL.D., Cambridge. He was fellow and tutor of Exeter College, regius professor of natural history, Edinburgh, 1882; Linacre professor of comparative anatomy, Oxford, 1891-98, and director of the natural history departments of the British museum, 1898-1907. Author: *A Monograph of the Cephalaspidian Fishes; Degeneration; The Advancement of Science.* Editor of *A Treatise on Zoölogy; Extinct Animals; The Kingdom of Man*, etc.

Lannes (*län*), **Jean,** duke of Montebello, French marshal, was born at Lectoure, 1769. He entered the army in 1792, and by his conspicuous bravery in the Italian campaign fought his way up to the rank of brigadier-general, 1795. He rendered Napoleon important service, and on the 9th of June, 1800, won the battle of Montebello. In 1809 he commanded the center at Aspern, where he was mortally wounded, and died in that year.

Lansdowne (*länz'doun*), **Henry Charles Keith Petty-Fitzmaurice, fifth Marquis of,** English statesman, was born in 1845. He was educated at Eton and Balliol College, Oxford; D. C. L., Oxford. He succeeded to the marquisate in 1866, from 1868 held minor offices in the liberal administration, and in 1872-74 was under-secretary of war. In 1880 he became under-secretary for India, but resigned owing to a difference with Gladstone over the compensation for disturbance bill. He was governor-general of Canada, 1883-88, of India, 1888-94, war secretary in 1895-1900, and in 1900-1905 foreign secretary, promoting the *entente* with the United States and France and the treaties with Japan.

Laotse (*lä'ō-tsü'*), Chinese sage, founder of Taoism, was born in the province of Ho-nan about 604 B. C. He was a contemporary of Confucius, and wrote the celebrated *Tao-te-King* canon, that is, of the Tao, or divine reason, and of virtue, one of the sacred books of China. He was the founder of one of the principal religions of China, although his followers, the Tao-sze, as they are called, are now degenerated into a set of jugglers.

Laplace (*lä'pläs'*), **Pierre Simon, Marquis de,** eminent French mathematician and astronomer, was born at Beaumont-en-Auge, in Normandy, 1749. He was for some time a teacher of mathematics in the military school there, and afterward went to Paris. He was gifted with wonderful scientific sagacity and solved several problems which had for many years defied the attempts of geometers. He was the author of the nebular hypothesis, and together with Lagrange did much to verify Newton's theory. His *Traité de la Mécanique Céleste*, and supplements to it, are, next to Newton's *Principia*, the greatest of astronomical works. Died at Paris, 1827.

Lardner, Nathaniel, English divine, was born in Hawkhurst, Kent, England, 1684. He studied at Utrecht and Leyden; became a minister in his twenty-fifth year; and, after having been chaplain and tutor in the family of Lady Treby, acquired equal reputation as a preacher and writer. His most celebrated work is *The Credibility of the Gospel History.* He was also the author of a *Collection of Jewish and Heathen Testimonies.* These two works—the value of which in Christian apologetics can hardly be over-estimated—occupied him for the greater part of forty-three years. Died, 1768.

Larned, Josephus Nelson, author and journalist, was born in Chatham, Ont., 1836. He was educated in the public schools of Buffalo; was on editorial staff of *Buffalo Express*, 1859-72; superintendent of education, Buffalo, 1872-73; and superintendent of Buffalo library, 1877-97. Author: *A Multitude of Councilors; Primer of Right and Wrong; History of the United States for Secondary Schools; Seventy Centuries—a Survey.* Died 1913.

La Rochefoucauld (*lä rōsh'fōō'kō'*), **François, Duc de,** French moralist, was born at Paris, 1613. He joined the Frondeurs and was wounded at the siege of Paris. In 1652, wounded again, he retired to the country. On Mazarin's death in 1661 he repaired to the court of Louis XIV. A surreptitious edition of his *Mémoires*, written in retirement, was published in 1662; as it gave wide offense he disavowed its authorship. His *Réflexions, ou Sentences et Maximes Morales* appeared in 1665. His last years were brightened by his friendship with Mme. de La Fayette, which lasted until he died, in 1680.

Larrey (*lä'rā'*), **Dominique Jean, Baron,** noted French surgeon, was born at Baudéan in 1766. He went to Paris, and entered the navy as surgeon, and afterward became a surgeon in the army. He served under Napoleon in the wars of Egypt, Germany, and Spain, and was much loved by the soldiers because of his bravery and skill as a surgeon. Once he killed his own horses to make soup for the wounded men under his care. Napoleon said of him: "If the army ever erect a monument of gratitude, it should be to Larrey;" and in his will said: "I leave 100,000 francs to the surgeon-chief Larrey, the most virtuous man I know." There is a bronze statue of Larrey in Paris, in which he is shown standing and holding Napoleon's will in his hand, open at these words. He died in Lyons, 1842.

La Salle (*lä sal'*), **René Robert Cavelier, Sieur de,** noted French navigator, was born in Rouen, 1643. He came to America in 1667. After a voyage of exploration from Lake Erie to Lake Superior and down the Mississippi, he took possession of the land around the gulf of Mexico, called it Louisiana, after the French king, and went to France to get men and means to colonize it. But quarrels arose between him and the commander of the fleet, which ended in the return of the ships, with fifty of the people, to France. With the others La Salle kept on his way, but failed to find

the Mississippi again, and wandered from place to place, until his followers were nearly all dead. At last, he started for Canada with sixteen men in 1687. On the way two of the men, who hated La Salle, shot him in 1687. He was the first European to travel from the headwaters to the mouth of the Mississippi.

Lassalle (*lă'săl'*), **Ferdinand,** founder of socialism in Germany, was born in Breslau, 1825, of Jewish parents. He became a disciple of Hegel, took part in the revolution of 1848, and was sent to prison for six months. In 1861 his *System of Acquired Rights* started an agitation of labor against capital, and he was again thrown into prison. Returning to Switzerland, he conceived a passionate affection for a lady betrothed to a noble whom she was compelled to marry, and whom he challenged, but by whom he was mortally wounded in a duel in 1864.

Latimer, Hugh, English bishop and martyr, was born at Thurcaston, in Leicestershire, about 1485, the son of a yeoman. He was educated at Christ's College, Cambridge. He was made bishop of Worcester, 1535, by Henry VIII. The bishopric, however, he resigned, on the passing of the act of the six articles; and was punished by being imprisoned during the remainder of Henry's reign. The accession of Edward VI. set Latimer at liberty, and he resumed his preaching but refused to resume the mitre. On Mary's ascending the throne, he was again incarcerated; and, in 1555, was brought to the stake, where he suffered with unshaken courage. Ridley was his fellow martyr.

Latour D'Auvergne (*lă'tōōr' dō'vern'y'*), **Theophile Malo Corret de,** noted French soldier, was born at Carhaix, Brittany, 1743. He entered the French army when twenty-four years old. He was a man of extraordinary bravery, became distinguished in the wars of 1792-1800, and was commander of the troop called the "infernal column." When peace came, Latour went to his home and lived quietly until the war again broke out; then he joined the army again in place of the only son of a friend. After his death his name was called at roll for many years, and the oldest sergeant used always to answer for him, "Died on the field of honor." He fell in battle at Oberhausen, Bavaria, 1800.

Latrobe (*la-trōb'*), **Benjamin Henry,** American architect and engineer, was born in Yorkshire, England, 1764. In 1785 he entered the Prussian army in a regiment of hussars, and was twice wounded in battle. In 1796 he came to the United States, when he was made engineer of the James river and Appomattox canal, and superintended the building of the penitentiary in Richmond. In 1798 he settled in Philadelphia, where he designed the bank of Pennsylvania, the old academy of art, and the bank of the United States. In 1811 he completed the capitol at Washington, and after its destruction by the British in 1814, superintended its reconstruction. Died at New Orleans, 1820.

Laud (*lôd*), **William,** English prelate, archbishop of Canterbury, was born at Reading, 1573, son of a clothier. He studied at St. John's College, Oxford, and became a fellow; He rose by a succession of preferments to the primacy, but declined the offer of a cardinal's hat at the hands of the pope, and became along with Strafford a chief adviser of the unfortunate Charles I. His advice did not help the king out of his troubles, and his course of action brought his own head to the block. He was beheaded for treason on Tower hill, 1645.

Laughlin (*lăf'lin*), **James Laurence,** American educator, economist, head professor of political economy, University of Chicago, since 1892, was born at Deerfield, Ohio, 1840. He was graduated at Harvard, 1873; Ph. D., 1876. He taught in Hopkinson's classical school, Boston, 1873-78; was instructor, 1878-83, assistant professor, 1883-87, of political economy at Harvard; president of Manufacturers' mutual fire insurance company, Philadelphia, 1887-90; and professor political economy, Cornell, 1890-92. Author: *Anglo-Saxon Legal Procedure in Anglo-Saxon Laws; Elements of Political Economy; Gold and Prices Since* 1873; *Facts About Money; Principles of Money; Reciprocity; Industrial America,* etc. He was lecturer in Berlin on invitation of Prussian cultus ministerium, 1906.

Laurens (*lŏ'ens*), **Henry,** American statesman, was born in Charleston, S. C., 1724. He was educated for a merchant, was very successful, and accumulated a large fortune. In 1776 he became a member of the continental congress from South Carolina, and in the following year was elected its president. In 1779 he was sent on important state business to Holland, but was captured on the way by a British ship-of-war, and taken to London, where he was kept prisoner in the Tower for fifteen months. When the war ended, he was freed and became one of the ministers to Paris, 1782, to conclude the terms of peace. He died in Charleston, 1792.

Laurie (*lōu'rē*), **Simon Somerville,** Scotch educator, was born at Edinburgh, 1829. He was educated at the University of Edinburgh; LL. D., Edinburgh, Aberdeen, and St. Andrews. He was secretary to the endowed schools of Scotland commission, 1872; and at one time president of the teachers' guild. He was Gifford lecturer at Edinburgh, 1905-06, and professor emeritus of the institutes and history of education. Author: *Philosophy of Ethics; Primary Instruction in relation to Education; Institutes of Education; Historical Survey of pre-Christian Education;* and many philosophical and educational articles.

Laurier (*lo'ri-ā'*), **Sir Wilfrid,** Canadian statesman, first French-Canadian premier of the Dominion since 1896, was born in St. Lin, 1841, and educated for the bar at L'Assomption College, 1864; D. C. L., LL. D. He rose rapidly in his profession, and in 1871 was elected as a liberal to the Quebec provincial assembly. In 1874 he was elected to the federal assembly. On the retirement of Blake in 1891 he was chosen leader of the liberal party, and at the general election of 1896 he led his followers to a notable victory. His tariff legislation during 1897, giving Great Britain the benefit of preferential trade with Canada, aroused much enthusiasm both in the colony and at home, and he was warmly welcomed when he went to London to attend the jubilee festivities. He was then appointed a member of the privy council and made a G. C. M. G. In 1900 he again secured the approval both of the Dominion and of the empire by the prompt despatch of Canadian troops to aid the mother country in South Africa, and led his party to another victory at the polls in November. He attended the colonial conference and the coronation in England in 1902. He was again returned to power in 1904 and 1908.

Lauterbach (*lou'tĕr-băx*), **Edward,** American lawyer, was born in New York, 1844. He was educated at the college of the city of New York; was admitted to the bar, 1866, and is now a member of the law firm of Hoadly, Lauterbach and Johnson. He has been prominent in important railway, telegraph, and maritime cases; is vice-president and counsel to the Pacific Mail steamship company; director of Alexander typewriter company, and numerous charitable institutions; regent of university of state of New York; chairman of board of trustees college, city of New York.

Laveleye (*lăv'le'*), **Emile Louis Victor de,** Belgian political economist, was born at Bruges, 1822. He studied at Ghent, and in 1864 became professor of political economy at Liége. His works include *De la Propriété; Lettres d'Italie; Le Socialisme Contemporain; Elements d'Economie Politique; La Péninsule des Balkans;* and works on rural economy in the Netherlands, and on current topics of the day. He was made a baron a few weeks before his death. Died, 1892.

Lavelle, Michael J., American Roman Catholic priest, was born in New York, 1856. He was graduated at Manhattan College, 1873; St. Joseph's Seminary, Troy, N. Y., 1874, and was ordained to the priesthood, 1879. He was assistant, 1879-86, and rector of St. Patrick's cathedral, since 1886; was appointed vicar general, New York, 1902, and domestic prelate to Pope Pius X., 1903. He has been prominent in educational and philanthropic movements.

Lavoisier, Antoine Laurent, celebrated French chemist, was born at Paris, in 1743. He was educated at Mazarin College, and, on quitting it, devoted himself wholly to the sciences, but more particularly to chemistry. To obtain the means of more fully prosecuting his researches, he accepted, in 1769, the office of farmer-general. In 1768, he was made an academician; in 1776, discovered a way of greatly improving the quality of gunpowder; and made other beneficial discoveries in economics, and in the application of chemistry to agriculture.

Availing himself of the discoveries of Black, Priestly, and Cavendish, and making many experiments and discoveries himself, he was led to connect the discovery of gas, oxygen, with the phenomena of combustion and of acidity; and in 1783, he proved that water can be formed by burning oxygen and hydrogen together, and that it can be decomposed into the same elements. Another great contribution to science by Lavoisier was the chemical nomenclature which he is understood to have invented, and which is still retained, having served as the basis of all subsequent improvements in this important branch of the literature of the science in general.

Notwithstanding his talents and virtues, he was condemned to death by the revolutionary tribunal of Paris, on the frivolous charge of having adulterated the tobacco with ingredients obnoxious to the health of the citizens, and was guillotined, 1794. His principal work is his *Traité Elementaire de Chimie* "Treatise on the Elements of Chemistry."

References.—*Life* by Grimaux; Thorpe's *Essays in Historical Chemistry;* Brougham's *Lives of Philosophers.*

Lawrence, Abbott, American merchant and philanthropist, was born at Groton, Mass., 1792. He was elected to congress in 1839, and in 1842 was one of the commissioners to settle the northeast boundary question with Great Britain. He founded the Lawrence scientific school at Harvard University, and made a bequest for model lodging houses. Died at Boston, Mass, 1855.

Lawrence, Amos, American philanthropist, and brother of Abbott, was born at Groton, Mass., 1786. Having acquired an immense fortune in trade, he devoted over $700,000 of it to charities and donations, among other institutions to Kenyon and Williams Colleges and the theological seminary at Bangor, Me. He died at Boston Mass., 1852, and his son published his *Life and Correspondence* in 1855.

Lawrence, James, American naval officer, was born at Burlington, N. J., 1781. In the war of 1812 he served under Commodore Decatur, and by brave conduct rose rapidly. In 1813, after a short engagement, he captured the British ship *Peacock,* and soon after was made commander of the frigate *Chesapeake.* After he had been in command of its undisciplined crew for only a few days, in June, 1813, he met the British frigate *Shannon* just out of Boston, and after a hard fight he was mortally wounded and his ship was captured. It was here that he uttered the words, "Don't give up the ship!"

Lawrence, Sir Thomas, English portrait painter, was born in Bristol, 1769; succeeded Sir Joshua Reynolds in 1792 as first painter to King George III. In 1820 he became president of the Royal Academy. He painted nearly all the monarchs and notabilities of Europe; his pictures are distinguished by fidelity of touch, and by a peculiar softness and grace of finish. Died, 1830.

Lawrence, William, American prelate, Protestant Episcopal bishop of Massachusetts since 1893, was born in Boston, 1850. He was graduated at Harvard, 1871; D.D., 1893; S.T.D., Hobart, 1889; LL.D., Princeton, 1904; He was rector of Grace church, Lawrence, Mass., 1876-84; professor of homiletics and pastoral theology, Episcopal theological school, Cambridge, 1884-93; dean of same, 1888-93. Author: *Life of Amos A. Lawrence; Visions and Service; Life of Roger Wolcott; Study of Phillips Brooks,* etc.

Lawson, Thomas William, American banker, yachtsman, and author, was born in Charlestown, Mass., 1857. He was educated at the public schools of Cambridge, has been in business as banker and broker since 1870, and was formerly senior member of the firm of Lawson, Arnold, and company, members of Boston and New York stock exchanges. He is prominent as yachtsman and as a contributor to magazines, reviews, and newspapers. Author: *The Krank; History of the Republican Party; Secrets of Success; Frenzied Finance; Friday the Thirteenth,* etc.

Layard (*lā'ard*), **Sir Austen Henry,** English diplomat, was born in Paris, 1817. Traveling along the Tigris on his way to Ceylon in 1840, he was struck with the ruins of Nimrud, the supposed site of Nineveh; and in 1845-47 carried on excavations there, finding the remains of four palaces. He published *Nineveh and its Remains, Monuments of Nineveh,* etc. He was presented with the freedom of the city of London, was made D.C.L. by Oxford, and was lord rector of Aberdeen University, 1855-56. He was member of parliament for Aylesbury, 1852-57, foreign under-secretary, 1861-66, chief commissioner of works, 1868-69, and in 1869 went as British ambassador to Spain, from 1877 to 1880 to Constantinople, being made K.C.B. in 1878. Died, 1894.

Lea (*lē*) **Henry Charles,** American author and historian, was born in Philadelphia, 1825. He received a private education; LL. D. University of Pennsylvania, Harvard, and Princeton, and was made a member of many learned societies in Europe and the United States. He was in the publishing business, 1843-80; then retired, and devoted himself to literary and historical research. Author: *A History of the Inquisition of the Middle Ages; Chapters from the Religious History of Spain; Formulary of the Papal Penitentiary in the Thirteenth Century; History of the Inquisition of Spain;* and also many articles in periodicals. Died 1909.

Learned, Marion Dexter, university professor, was born near Dover, Delaware, 1857; graduated at Dickinson College, 1880; L. H. D., 1904; studied in Germany, 1885; Ph. D., Johns Hopkins, 1887. He was instructor associate and associate professor of German, Johns Hopkins, 1886-95; professor of German, University of Pennsylvania, since 1895. President Modern Language Association of America, 1909. Author: *The Saga of Walther of Aquitaine; German Grammar; Herder and America; German Diaries of the American Revolution,* etc.

Le Brun (*lĕ brun'*) **Charles,** French historical painter, was born in Paris, 1619. He studied four years in Rome, and for nearly forty years, 1647-83, exercised a despotic influence over French art and artists, being usually considered the founder of the French school of painting. From 1668 to 1683, he was employed by Louis XIV. in the decoration of the palace of Versailles; but, being superseded, he became ill and died, 1690.

Le Brun, Marie Anne Elisabeth Vigée, French painter, was born in Paris, 1755, daughter of one Vigée a painter. In 1776 she married J. B. P. Le Brun, picture dealer and grand-nephew of Charles Le Brun. Her portrait of Marie Antoinette

in 1779, led to a lasting friendship with the queen. She painted numerous portraits of the royal family. In London she painted portraits of the prince of Wales, Lord Byron, and others. Died, 1842.

Lecky (*lek'i*), **William Edward Hartpole,** British historian and philosopher, was born near Dublin, Ireland, 1838. He was graduated in 1859 at Trinity College, Dublin. In 1861 he published anonymously *The Leaders of Public Opinion in Ireland,* four brilliant essays on Swift, Flood, Grattan, and O'Connell. His later works were *Rationalism in Europe; History of European Morals; History of England in the 18th Century;* and *Democracy and Liberty* with a volume of poems in 1891. He was elected to parliament for Dublin University in 1895 and again in 1900. Died, 1903.

Le Conte (*lē kónt'*), **Joseph,** American naturalist and physicist, was born in Liberty county, Ga., 1823. He was graduated at Franklin College, University of Georgia, in 1841, and the New York College of Physicians and Surgeons in 1845, and practiced his profession at Macon, Ga. In 1850 he went to Cambridge, Mass., where he studied under Agassiz. He subsequently held several professorships, and in 1869 became professor of geology and natural history in the University of California. He published several essays on education and the fine arts: *The Mutual Relations of Religion and Science; Elements of Geology; Sight; A Compend of Geology; Evolution,* etc. He died in the Yosemite valley, California, 1901.

Lee, Fitzhugh, American soldier, nephew of Robert E. Lee, was born in Fairfax county, Va., 1835. He was graduated at West Point military academy 1856, and became a lieutenant in the second United States cavalry. At the opening of the civil war he resigned and entered the confederate service, advancing to the rank of major-general. In 1885 he was elected governor of Virginia serving until 1890. He was appointed consul-general to Havana by President Cleveland, and was retained at that post by President McKinley. He administered his office with signal ability during the investigation of the explosion of the battleship *Maine,* and throughout the trying times preceding the Spanish-American war. In that war he served as major-general of volunteers and after peace was declared he was made governor of the province of Havana. He was later appointed brigadier-general in the regular army, retiring in 1901. Died, 1905.

Lee, Henry, distinguished American general, was born in Virginia, 1756. He was one of the most daring, vigilant, and successful cavalry officers on the side of the colonists. "Lee's legion" was probably the most effective and courageous body of troops raised in America. At the battles of Guilford Court House and Eutaw, at the sieges of Forts Watson, Motte, and Granby and Augusta, and at the storming of Fort Grierson, Lee particularly signalized himself. After the war he was sent to congress as a delegate from Virginia, advocated the adoption of a federal constitution, and in 1792 was chosen governor of Virginia. When Washington died Lee was chosen by congress to write a eulogy of him; in it occurs the famous words "First in war, first in peace, and first in the hearts of his countrymen." Died, 1818.

Lee, Richard Henry, eminent American patriot, and signer of the declaration of independence, was born in Virginia, 1732, and received his education in England. He returned to his native country in his nineteenth year. In 1764 he was appointed to draft an address to the king, and a memorial to the house of lords, which are among the best state papers of the period. The memorial of congress to the people of British America, and the second address of congress to the people of Great Britain, were both from his pen. In June, 1776, he introduced the measure that declared the colonies free and independent states, and supported it by a speech of the most brilliant eloquence. He continued to hold a seat in congress until 1780, when he declined a reëlection until 1784. In that year he was chosen president of congress, but retired at its close, and in 1786 was again chosen a member of the Virginia assembly. He was a member of the convention which adopted the present constitution of the United States, and one of the first senators under it. In 1792 he again retired from public life, and died in 1794.

Lee, Robert Edward, American general, was born in Westmoreland county, Va., 1807. At eighteen he entered West Point, was graduated second in his class in 1829, and received a commission in the corps of engineers. In the Mexican war he was chief-engineer of the central army in Mexico, and at the storming of Chapultepec was severely wounded. In 1852-55 he was superintendent of the United States military academy, and greatly improved its efficiency. He was in command in Texas in 1860, but was recalled to Washington in March, 1861, when seven states had formed the southern confederacy. Virginia seceded on April 17th, and Colonel Lee, believing that his allegiance was due to his state, sent in his resignation. Within two days he was made commander-in-chief of the forces of Virginia. At Richmond he superintended the defenses of the city until the autumn, when he was sent to oppose General Rosecrans in West Virginia. His masterly strategy in the seven days' battles around Richmond defeated McClellan; his battles and strategy in opposing General Pope, his invasion of Maryland and Pennsylvania, and other achievements are cardinal to the history of the war. On April 9, 1865, Lee surrendered his army to General Grant at Appomattox Court House, Virginia, and the war was practically ended. After the close of the war he frankly accepted the result, and, although deprived of his former property at Arlington on the Potomac, and the White House on the Pamunky, he declined proffered offers of pecuniary aid, and accepted the presidency of what came to be called the Washington and Lee University, at Lexington, Va., at whose head he remained until his death in 1870. Numerous military critics regard Lee as the greatest military leader produced by the civil war, and one of the very first produced by the nineteenth century.

Le Gallienne (*lē gal'i-en'*), **Richard,** journalist, was born in Liverpool, England, 1866. He was educated at Liverpool College, and engaged in business seven years, but abandoned it for literature. For a few months he was private secretary to Wilson Barrett, then became literary critic for several papers, and settled in London. For some years his journalistic and literary work has been confined to the United States. Author: *My Ladies' Sonnets; Volumes in Folio; George Meredith; The Book-Bills of Narcissus; English Poems; The Religion of a Literary Man; Prose Fancies; Robert Louis Stevenson and Other Poems; The Beautiful Life of Rome; Rudyard Kipling, a Criticism; The Life Romantic; Sleeping Beauty; Mr. Sun and Mrs. Moon; Odes from the Divan of Hafiz; Painted Shadows; Little Dinners with the Sphinx,* etc.

Legaré (*lē-grē'*), **Hugh Swinton,** American statesman, was born in Charleston, S. C., 1797. He studied law, traveled in Europe, and was a member of the South Carolina legislature, 1820-22 and 1824-30. In 1830 he was elected attorney-general. He was *chargé d'affaires* at Brussels, 1832-36, and took his seat as a member of congress during the session of 1837. After the accession of President Tyler in 1841, Legaré was appointed attorney-general of the United States, and in the spring of 1843 he succeeded Webster as secretary of state. He was distinguished as a scholar, and contributed largely to periodicals. Died, 1843.

Leibnitz, Gottfried Wilhelm, von perhaps the most extraordinary example of universal scholarship upon record, was born 1646 at Leipzig. In 1672 he submitted to Louis XIV. an essay entitled *Consilium Ægyptiacum,* containing a plan for the invasion of Egypt, which is by some supposed to have led to the Egyptian expedition of Bonaparte in 1798.

He was the chief organizer of the academy of Berlin, of which he was the first president, and originated both at Dresden and Vienna a project for the establishment of similar bodies. It was to him, likewise, that Peter the Great owed the plan of the since celebrated academy of St. Petersburg. He was eminent in languages, history, divinity, philosophy, political studies, experimental science, mechanical science, and even belles-letters. But it is through his philosophical reputation that he lives in history.

The principal metaphysical speculations of Leibnitz are contained in his *Théodicee, Nouveaux Essais, Système nouveau de la Nature, De Ipsa Natura, Monadologie,* and in portions of his correspondence. He controverted Locke's rejection of innate ideas, holding that there are necessary truths which cannot be learned from experience, but are innate in the soul, not, indeed, actually forming objects of knowledge, but capable of being called forth by circumstances. Authorities seem generally agreed that Leibnitz discovered the differential calculus independently of any knowledge of Newton's method of fluxions, so that each of these great men in reality attained the same result for himself.

References.—Guhrauer's *G. W. F. Leibnitz;* Dewey's *Leibnitz's New Essays Concerning the Human Understanding;* Stein's *Leibnitz and Spinoza;* Merz's *Leibnitz;* Latta's *Leibnitz: The Monadology and other Philosophical Writings;* Russell's *A Critical Exposition of the Philosophy of Leibnitz.*

Leighton (*lā'tun*), **Frederick, Lord,** English painter, was born at Scarborough, England, 1830. His early years were spent in the study of art, under the best masters in Rome, Florence, Frankfort, Paris, and Brussels. His famous picture, "Cimabue's Madonna carried in Procession through the Streets of Florence" was his first appearance in the Royal Academy in 1755, and was at once purchased by the queen. Among his other paintings are *Ariadne; Romeo and Juliet; Wedded,* etc. In 1878 he became president of the Royal Academy, was made a baronet in 1885, and raised to the peerage in 1896. In his life time he received almost every honor possible to an artist. Died, 1896.

Lemieux, Rodolphe, French statesman, postmaster-general, and minister of labor of Canada since 1906, was born at Montreal, 1866. He was educated at the seminary of Nicolet, and at Laval University, Montreal; barrister, 1891; Q. C., Quebec, 1898, and K. C., Ottawa, 1904. He was a member of parliament for Gaspé, 1896; reëlected, 1900 and 1904; represented Canada before the privy council in England, 1904; solicitor-general of Canada, 1904-06; fellow of the royal society, Canada, 1908. He is the author of several works on law and a number of addresses.

Lenbach (*len'bäk*), **Franz von,** noted German portrait painter, was born at Schrobenhausen, Bavaria, 1836. He studied at the Munich Academy under Gräfle and Piloty, and in 1858 went to Rome. In 1860 he became professor of art at Weimar, but resigned in 1862 and went to Italy and Spain. On his return to Munich he devoted himself exclusively to portraiture, but after 1872 spent much time in travel and work in Vienna, Morocco, and Egypt. His portraits of Bismarck are specially famous. Died, 1904.

Leo I., the Great, pope of Rome 440-461, was born about 390. He succeeded Sixtus III. in 440; zealously opposed the Manichæans and Pelagians, and secured the condemnation of the Eutychian heresy at the general council of Chalcedon; extended the Roman see, and induced Attila to spare Rome. He published several volumes of letters and sermons. Died at Rome, 461.

Leo X., Pope (Cardinal Giovanni de Medici), son of Lorenzo the Magnificent, was born in Florence, Italy, 1475. He was banished with his family in 1497; traveled in Germany and Flanders, and formed a friendship with Erasmus. On his return to Italy he became legate to Julius II.; was taken prisoner at Ravenna in 1512, escaped and became pope in 1513. In 1515 he signed the famous concordat with Francis I. His pontificate is one of the most brilliant periods in the history of art and literature, and is also memorable as the time when the reformation began. Died, 1521.

Leo XIII., Pope (Gioacchino Pecci), son of Count Ludovico Pecci, was born in Carpineto, in the papal states, 1810. He was educated at the Collegio Romano and the Academy of Noble Ecclesiastics; appointed by Gregory XVI. a domestic prelate in 1837. He was made archbishop of Damietta *in partibus* and sent to Belgium as nuncio in 1843, nominated archbishop of Perugia in 1846, and in 1853 created a cardinal by Pius IX. Upon the death of Pius IX, in 1878 he was elected to the papacy under title of Leo XIII. He restored the hierarchy in Scotland and composed the difficulty with Germany. He regarded himself as the despoiled sovereign of Rome, and as a prisoner at the vatican; and persistently declined to recognize the law of guarantees. He protested against heresy and "godless" schools, and in his encyclicals affirmed that the only solution to the socialistic problem is the influence of the papacy. In 1894 he constrained the French clergy and the monarchists to accept the republic. In 1883 he opened the archives of the vatican for historical investigations, and made himself known as a poet, chiefly in the Latin tongue. The jubilee of his episcopate in 1893 was marked by pilgrimages, addresses, and gifts, as was that of his priesthood in 1887. In 1896 he issued an encyclical pronouncing Anglican orders null and void. Died, 1903. Down to the time of his death he was one of the foremost figures of modern times, and a potent force in religion, education, and morals.

Leonardo da Vinci (*lā'ōnär'dō dä vēn'chē*). See Vinci.

Leonidas I. (*lē-ŏn'idas*), king of Sparta, succeeded his brother, Cleomenes I., 491 B. C. When the Persian monarch, Xerxes, approached with an immense army, Leonidas opposed him at the narrow pass of Thermopylæ, 480 B. C., with a force of 300 Spartans and more than 5,000 auxiliaries. The treachery of one Ephialtes having made it impossible to bar any longer the progress of the foe, Leonidas and his little band threw themselves on the swarming myriads, and found a heroic death.

Lepsius (*lep'sē-oos*), **Karl Richard,** noted German Egyptologist, was born at Naumburg, 1810. In 1836 at Rome he studied Egyptology, Nubian, Etruscan, and Oscan, writing numerous treatises. In 1842-45 he was at the head of an antiquarian expedition sent to Egypt by the king of Prussia, and in 1846 was appointed professor in Berlin. His *Chronologie der Ægypter* laid the foundation for a scientific treatment of early Egyptian history. His other works consist of letters from Egypt, Ethiopia, and Sinai, 1852; the *Königsbuch,* and the *Todtenbuch,* or the Egyptian *Book of the Dead.* Died 1884.

Lesage (*lē sázh'*), **Alain Réné,** French novelist and dramatist, was born in Sarzeau, in Brittany, 1668, and studied at the Jesuits' College at Vannes. After having held a situation under the farmers-general in his native province, he went to Paris in 1692, tried the bar for a short time, and then adopted the profession of an author. For some years he continued to be little known as a writer;

but in 1707 he rose at once into popularity by his comedy of *Crispin the Rival of his Master*, and his romance of *Le Diable Boiteux*. The comedy of *Turcaret*, in 1709, added to his fame, which subsequently was rendered imperishable by his admirable *Gil Blas*. He composed twenty-four dramatic pieces, and had a share in the composition of seventy-six others. He died in Paris, 1747.

Lesseps (*lĕ-seps'*), **Ferdinand, Viscount de,** French engineer and diplomat, was born at Versailles, 1805. He held various consular offices; in 1854 proposed to the viceroy of Egypt the cutting of the Suez canal, and completed the work in 1869. He entered upon the construction of the canal across the isthmus of Panama, since taken over by the United States. The sentence of imprisonment pronounced upon him by the French government in 1893, as one of the officers of the French Panama canal company, was never enforced. Died, 1894.

Lessing, Gotthold Ephraim, German critic, dramatist, and scholar, was born 1729 at Kamentz, in upper Lusatia. He entered the University of Leipzig in 1746 to study theology, but his love of the drama and his intimacy with Schlegel, Mylius, Weisse, and other young men of literary tastes, led him to abandon this intention.

After a short stay in Wittenberg he went, in 1748, with Mylius to Berlin, where he wrote for magazines and booksellers. He also undertook, with Mylius, in 1750, a publication entitled *Beiträge zur Historie und Aufnahme des Theaters* "Contributions to the History and Improvement of the Theater;" published some poems under the title of *Kleinigkeiten* ("Trifles;") translated a work of the Spanish philosopher Huarte; and wrote some articles in Voss' Gazette. He entered at this time into friendly relations with Moses Mendelssohn and the bookseller Nicolai, in conjunction with whom he established the critical journal, *Briefe die neueste Literatur treffend* ("Letters on the Newest Literature.")

In 1755 appeared *Miss Sara Sampson*, a tragedy dealing with English life. In 1760 Lessing became secretary to General Tauenzien in Breslau for five years, when he returned to Berlin and published the *Laokoon oder über die Grenzen der Malerei und Poesie* ("Laocoon, or on the Limits of Painting and Poetry,") and his comedy *Minna von Barnhelm*. About 1767 he became director of the National Theater at Hamburg. While here he wrote his *Dramaturgie*. His criticisms made him enemies, and having been compelled to quit Hamburg, the Duke of Brunswick appointed him his librarian at Wolfenbüttel.

In 1775 he went to Vienna, and accompanied Prince Leopold of Brunswick to Italy. He married in 1776, but his wife died in little more than a year. At this period he was involved in fierce theological disputes, which his philosophical drama *Nathan der Weise* did nothing to allay. Besides those mentioned, he wrote another drama, *Emilia Galotti*. He died at Brunswick in 1781.

References.—Biographies by Danzel and Guhrauer, Erich Schmidt, Borinski, Sime, Helen Zimmern, Rolleston; and Stahr's *Life and Works of Lessing*.

Leutze (*loit's*ē), **Emanuel,** German-American painter, was born at Gemünd in Würtemberg, 1816. He was brought up in America, studied in Europe, 1841-59, then settled in New York. Among his works are: *Washington crossing the Delaware; Washington at Monmouth; Landing of the Norsemen; Cromwell and his Daughter*, etc. Died at Washington, D. C., 1868.

Lever (*lē'vĕr*), **Charles James,** Irish novelist, was born at Dublin, 1806. He was graduated at Trinity College in that city, 1827; studied medicine at Göttingen, and then returned to Dublin. His most popular work, *Charles O'Malley*, is a reflex of his own college life at Dublin, and many of the incidents in this novel are no doubt drawn from his own experience in the world. He died at Trieste, Italy, 1872.

Lewes (*lū'is*), **George Henry,** English philosopher and critic, was born in London, 1817. He was educated partly at Greenwich under Dr. Burney, and partly in Jersey and Brittany; left school early to enter first a notary's office, and then the house of a Russian merchant. In 1838 he proceeded to Germany, and remained there nearly two years, studying the life, language, and literature of the country. He was married unhappily and had children when his connection with George Eliot began in 1854; it ended only with his death at their house in Regent's Park, 1878. Lewes was one of the best of critics and biographers; as a popularizer of philosophy he was inferior to none, as a popularizer of science he was inferior to few. His works, besides a tragedy and two novels, include: *Biographical History of Philosophy; Physiology of Common Life; Studies in Animal Life; Aristotle; On Actors and the Art of Acting; Problems of Mind, Life*, etc.

Lewis, Edwin Herbert, college professor, was born at Westerly, R. I., 1866. Graduated from Alfred University, 1887; Ph. D., Syracuse University, 1892; University of Chicago, 1894; studied in Italian libraries, 1888-89; professor of Latin, Alfred University, 1890-92; assistant in rhetoric, 1893-94; instructor in English, 1895-6, University of Chicago; associate professor of English, 1896-9, University of Chicago and Lewis Institute; professor of English since 1899, dean college students since 1906, Lewis Institute, Chicago. Author: *The History of the English Paragraph; A First Book in Writing English; A First Manual of Composition; An Introduction to the Study of Literature; A Second Manual of Composition; Specimens of the Forms of Discourse; Applied English Grammar*, etc.

Lewis, Meriwether, American explorer, was born near Charlottesville, Va., 1774. In 1803-06 he was engaged with Captain William Clarke in an expedition to the Pacific Ocean, the results of which were important to geographical science; and in 1807 he was made governor of the territory of Louisiana. He was subject to periods of mental depression, in one of which he is said to have taken his own life near Nashville, Tenn., 1809. His memoir by Jefferson was published, together with Biddle and Allen's *Narrative of the Lewis and Clarke Exposition*, in 1804.

Lewis, William Draper, American educator and law writer, dean of the law department, University of Pennsylvania, since 1896, was born in Philadelphia, Pa., 1867. He was graduated at Haverford, 1888; University of Pennsylvania, LL. B., Ph. D., 1891. Author: *Federal Power Over Commerce and Its Effect on State Action; Our Sheep and the Tariff; Restraint of Infringement of Incorporeal Rights*. Editor: Lewis' *Greenleaf's Evidence*, 3 vols.; Wharton's *Criminal Law*; Lewis' *Blackstone's Commentaries*, 4 vols.; *Digest of Decisions of United States Supreme Court and Circuit Court of Appeals*, etc.

L'Hôpital (*lō'pē'tăl'*), **Michel de,** French statesman, was born about 1507. He was president of the court of accounts, 1554-60, and afterward chancellor of France until 1568. He promoted the edict of Romorantin, which excluded the inquisition from France; the ordinance of Orleans, an administrative, judicial, and religious code; the edict of pacification, for the free exercise of Protestant worship; and the ordinance of Moulins, to reform the administration of justice. He died in 1573.

Liddon (*lid'un*), **Henry Parry,** English clergyman, was born at North Stoneham, Hampshire, 1829. He was graduated at Christ Church, Oxford, 1850; was ordained in 1852 as senior student of Christ Church; from 1854 to 1859 was vice-principal of Cuddesdon theological college, and in 1864 became a prebendary of Salisbury, in 1870 a canon of St. Paul's, and Ireland professor of exegesis at Oxford, until 1882. In 1886 he declined the bishopric of Edinburgh, and in 1887 visited the holy land. Canon Liddon was the most able and eloquent exponent of liberal high church principles. He died suddenly at Weston-super-Mare, 1890.

Lieber (*lē'bĕr*), **Franz,** German-American publicist, was born in Berlin, 1800. After suffering imprisonment for his political opinions, he came to America in 1827, and was made professor of history in South Carolina College, 1835-56, of political economy in Columbia College, 1857-60, and of political science in Columbia law school, 1860-72. He edited the *Encyclopædia Americana*, and wrote *Political Ethics; Civil Liberty and Self-Government; Guerilla Parties*, etc. Died 1872.

Liebig (*lē'bĭg*), **Justus, Baron von,** German chemist, was born in Darmstadt, 1803. He studied at Bonn and Erlangen; then went to Paris, and attracted the attention of Humboldt by a paper on the fulminates. He was appointed professor at Giessen in 1824, where he established a laboratory celebrated for researches in organic chemistry and the application of chemistry to agriculture, food etc. Among his chief works are: *Organic Chemistry in its Application to Agriculture; Animal Chemistry in its Application to Physiology and Pathology*. He died at Munich, 1873.

Li Hung Chang (*lē' hoong'chăng'*), Chinese statesman, was born in 1823, and studied at Hanlin College. In 1853, in the Taiping rebellion, he joined the imperial army as secretary. In 1864 he was appointed governor-general of the Kiang provinces, and in 1872 of Chih-li, and senior grand secretary. He founded the Chinese navy and promoted a native mercantile marine. On the outbreak of the war with Japan in 1894, Li, in supreme command of the military and naval forces in Corea, was thwarted by the incompetence, dishonesty, and cowardice of inferior officers. The Chinese forces were swept out of Corea, and Li, whose policy was that of peace, was deprived of his honors and summoned to Pekin. With this last command he refused to comply, and the disastrous course of events soon compelled the emperor to restore him to honor. Through his efforts the war was brought to a termination in 1895, China ceding Formosa and paying a war indemnity of $175,000,000. Professedly friendly to foreigners, and well aware of the value of western culture and industry, he visited Russia, Germany, France, England, and America in 1896. He died in 1901.

Lincoln, Abraham, American statesman, and the sixteenth president of the United States of America, was born in Kentucky 1809. He removed with his family in 1816 to Spencer county, Indiana, and for the next ten years was engaged in laborious work of various kinds, having only about a year's schooling at intervals.

At the outbreak of the Black Hawk war in 1832 he joined a volunteer company, and as captain he served three months in the campaign. He next opened a country store, was appointed postmaster of New Salem, Illinois, began to study law, and at the same time turned amateur land surveyor. In 1834 he was elected a member of the Illinois legislature, to which he was again returned at the three following biennial elections, and in 1836 he was licensed to practice law.

In 1846 he was elected a representative in congress from Illinois, and voted steadily in congress with the anti-slavery party. In 1849 and again in 1858 he was unsuccessful in attempts to enter the United States Senate. In the Republican national convention held at Chicago in May, 1860, he was nominated as a candidate for the presidency, and after several votes he gained a majority, and was eventually chosen unanimously. The southern states alarmed at the aggressive antislavery policy which many of the leading Republicans had procalimed their determination to follow, refused to acquiesce in Lincoln's election, and began one after another to announce their secession, and to organize the means of resisting the enforcement of the claims of the central government.

The election of Lincoln took place in November, 1860, and he assumed office on the 4th of March, 1861. It was the intention of Lincoln to use every means of conciliation consistent with the policy he deemed it essential to the national interest to pursue. On one point, however, his resolution was steadfast, to admit no secession, and before his assumption of office secession was as resolutely determined on the other side. On the 4th of February the southern confederacy had been constituted, and on the 14th of April the first blow in the civil war was struck by the capture of Fort Sumter by the Confederates.

The events of the civil war during the next four years in Lincoln's career belong to the history of the United States. Lincoln's persistence in raising and pouring in fresh troops after every disaster finally enabled the Federal government to subdue the secession. The toleration of slavery was always in Lincoln's opinion an unhappy necessity; and when the southern states had by their rebellion forfeited all claim to the protection of their peculiar institution, it was an easy transition from this view to its withdrawal. The successive stages by which this was effected—the emancipation of the slaves of rebels, and the offer of compensation for voluntary emancipation, followed by the constitutional amendment and unconditional emancipation without compensation—were only the natural steps by which a change involving consequences of such vast extent was reached.

The determination of the northern states to pursue the war to its conclusion on the original issue led to the reëlection of Lincoln as president in 1864. The decisive victory of Grant over Lee on April 2d, 1865, speedily followed by the surrender of the latter, had just afforded the prospect of an immediate termination of this long struggle, when, on the 14th of the same month, President Lincoln was shot in Ford's Theater, Washington, by the assassin John Wilkes Booth, and expired on the following day. In the affections of America Lincoln holds a place second only to Washington.

References.—Nicolay and Hay, *Abraham Lincoln: A History*, the same authors edited the *Complete Works of Abraham Lincoln*. See also *Lives* by Morse, Arnold, Herndon and Weik, Lamon, and Tarbell. Also see Rhodes' *History of the United States from the Compromise of 1850*.

Lincoln, Robert Todd, American lawyer, was born

at Springfield, Ill., 1843, eldest son of Abraham Lincoln. He was graduated at Harvard, 1864; entered Harvard Law School, but left to enter the army, serving until end of war as captain on staff of General Grant. He then finished his law studies, was admitted to the Illinois bar, 1867, and practiced at Chicago. He was presidential elector, 1880; secretary of war, 1881-85, and United States minister to Great Britain, 1889-93. He is also vice-president of the Commonwealth Edison company; Central Union telephone company, Commercial national bank, Pullman loan and savings bank, etc.

Lind, Jenny (Madame Otto Goldschmidt), the Swedish singer, was born in Stockholm, Sweden, 1820. At three years of age she could sing correctly any piece she had once heard, and at nine was placed under Croelius, a famous teacher of music. She visited New York in 1850, under the auspices of P. T. Barnum, and was enthusiastically received, but dissolved the engagement prematurely in 1851, was married to M. Otto Goldschmidt, a skillful pianist and conductor, and retired from the stage. She reappeared in 1855, in 1861, in 1863, and in 1880 for a limited period. She was professor of singing at the Royal College of Music, Wiesbaden, 1883-86. She died in Wynd's Point, Malvern, England, in 1887.

Lindsey, Benjamin Barr, jurist, reformer, was born in Jackson, Tenn., 1869. He was educated in the public schools studied law and was admitted to the bar. Judge of the county court and juvenile court of Denver, Colo., since 1900. He is the originator of the juvenile court system and has an international reputation as an authority on juvenile delinquency. In 1906 he was a candidate for governor of Colorado. Author: *The Beast and the Jungle.*

Linevich (*lī-nev-ich*) **Nicolay Petrovich,** Russian general, was born in the government of Techrnigoff in 1838. He served in the Russo-Turkish war and in 1900 succeeded to the command of the Siberian troops in Manchuria. In 1904 he commanded the Russian left at the battle of Mukden in the Russo-Japanese war and succeeded General Kuropatkin in 1905 as commander-in-chief in the far East. Died 1908.

Lingard, John, noted English historian was born in Winchester 1771. He studied for the Roman Catholic priesthood and took orders when twenty-four years old. His greatest work is the *History of England* in 10 vols. After his *History of England* was published Lingard was offered a cardinal's hat which he refused. He died at Hornby near Lancaster 1851.

Linne (*lin'nā*), **Karl Von,** commonly called Linnæus, the greatest botanist of his age, was born at Rsåhult, Sweden, 1707, and died at Upsala in 1778. He was the son of a clergyman, who had him educated at the grammar-school and the gymnasium of Wexiö. He showed an early interest in botany; entered the University of Lund, where his botanical tastes were encouraged; and removed to Upsala in 1728, where he undertook the supervision of the botanic garden. Here he made the acquaintance of the botanist Rudbeck, whose assistant he became.

Aided by the academy of sciences at Upsala, Linné made a journey through Lapland, the result of which was shown in his *Flora Lapponica*, published 1735. In this year he went to the University of Harderwyk in Holland and took an M. D. degree; afterward visited Leyden, where he published the first sketch of his *Systema Naturæ* and *Fundamenta Botanica.* In 1736 he visited England, went to Paris in 1738, and afterward settled in Stockholm as a physician.

He became professor of medicine at Upsala in 1741, and then of botany and natural history; was made a knight of the Polar Star with the rank of nobility; and died on his estate near Upsala from apoplexy.

The great merit of Linné as a botanist was that he arranged plants on a simple system of sexual relationship and prepared the way for the more natural and satisfactory classification which has superseded the Linnæan system. Nor must it be forgotten that he was eminent not only in botany, but in all the sciences of his time. His chief works besides those already mentioned were: *Genera Plantarum, Classes Plantarum, Flora Suecica, Fauna Suecica, Philosophia Botanica,* and the *Species Plantarum.*

References.—Sach's *History of Botany;* Carus's *History of Zoology;* Stoever's *Life of Sir Charles Linnaeus;* Caddy's *Through the Fields with Linnaeus.*

Lipton, Sir Thomas Johnstone, British sportsman and merchant was born in Glasgow, of Irish parentage, 1850. He started life as a retail merchant, acquired extensive tea, coffee, and cocoa estates in Ceylon, and accumulated a large fortune. He is chairman of Lipton, Ltd., and is also largely interested in business enterprises in the United States and Canada. He owned the yachts *Erin, Shamrock,* and *Shamrock III.,* and challenged for the American cup 1889, 1901 and 1903. He was knighted in 1898, and created a baronet in 1902.

Lister, Joseph, Lord, English surgeon, was born in Upton, England, 1827. He was graduated at London University in 1847, and in medicine, 1852. He was successively lecturer on surgery, Edinburgh; regius professor of surgery, Glasgow; professor of clinical surgery, Edinburgh; professor of clinical surgery, King's College hospital, London, and surgeon-extraordinary to Queen Victoria. In addition to important observations on the coagulation of the blood, inflammation etc., his great work has been the introduction, since 1860, of the antiseptic system, which has revolutionized modern surgery. He has received many foreign honors, and was made a baronet in 1883 and a peer in 1897. Died 1912.

Liszt (*list*) **Franz,** noted Hungarian pianist and composer, was born at Raiding, 1811. In 1849 he became conductor of the court theater at Weimar; in 1861 was made commander of the legion of honor, and in 1865 took orders and received the tonsure. In 1871 his native country granted him a pension of 600 pounds a year, and in 1875 he was named director of the Hungarian Academy of music. One of his two daughters married Richard Wagner, his lifelong friend. Though Liszt's fame as a pianist overshadows his name as a composer, yet he was the creator of the symphonic poem, and his *Hungarian Rhapsodies* for the piano are unrivaled. He died at Bayreuth, Bavaria, 1886.

Litman, Simon, educator, economist, was born in Odessa, Russia, 1873. He was educated at Odessa Commercial College, School of Political Science, Paris, at the University of Zurich, and University of Munich; lecturer at the Russian School of Social Science, in Paris, 1902; instructor in commerce University of California, 1903-1908; associate in commerce, 1908-1910, and assistant professor in economics, 1910, University of Illinois. Member of the American Economic Association, American Statistical Association, American Association for Labor Legislation and National Geographic Society. Author of *Trade and Commerce; Die Lohnfondstheorieu,* and of many articles on industry, commeree and transportation.

Littlefield, Charles Edgar, American lawyer, ex-congressman, was born in Lebanon, York county, Me., 1851. He received an academic education, was admitted to the bar, 1876, and rapidly acquired a high reputation for legal and forensic ability. Attorney-general of Maine, 1889-93; elected to 56th congress, 1899, to fill vacancy caused by the death of Nelson W. Dingley; and was reëlected to the 57th, 58th, 59th, and 60th congresses from second Maine district. In 1908 he retired from congress and took up the practice of law in New York city.

Littleton, Martin W., American lawyer, was born in Roane county, Tenn., 1872. He was practically self-educated and began practicing law in 1891. He was assistant prosecuting attorney, Dallas, Texas; delegate from New York to national democratic convention, 1904; and has appeared in many famous legal trials. He was elected to Congress 1910.

Littleton, Sir Thomas, English jurist, was born in Worcestershire, England, 1402. He was recorder of Coventry in 1450, king's sergeant in 1455, in 1466 judge of common pleas, and in 1475 a knight of the bath. His reputation rests on his treatise on *Tenures,* written in law French, and turned into English about 1500. It was the text that Coke commented on in his *Coke upon Littleton.* Died, 1481.

Littré (*lē-trā'*), **Maximilien Paul Emile,** French philosopher and philologist, was born in Paris, 1801. He studied at the Lycée Louis-le-Grand, then graduated in medicine and finally turned to philology. He fought on the barricades in 1830, was one of the principal editors of the *National* down to 1851, and became an enthusiastic follower of Comte. His *La Poésie Homerique et l'Ancienne Poésie Francaise* was an attempt to render the first book of the *Iliad* in the style of the Trouvères. His splendid *Dictionnaire de la Langue Francaise* did not prevent the academy in 1863 from rejecting its author, whom Bishop Dupanloup denounced as holding impious doctrines. In 1871 the academy at last admitted him. He was one of the first linguists and scientists of this century. Died, 1881.

Livingston, Edward, American jurist and statesman, was born at Livingston, N. Y., 1764. He was elected a member of congress in 1794, and became federal attorney and mayor of New York in 1801. In the dispute with England in 1814-15 he became aide-de-camp and secretary to General Jackson. In 1821 he was appointed to draw up a code of civil procedure for Louisiana. It was the simplest known up to that time, and received the warmest approval from Bentham and other jurists. He was thereafter United States senator for Louisiana, 1829-31; secretary of state, 1831-33; minister to France, 1833-35, and supported the demand of $5,000,000 made by the United States government for indemnity on account of French spoliations, and succeeded in securing its payment. Died at his own estate on the Hudson, 1836.

Livingstone, David, African explorer and missionary, was born at Blantyre, in Lanarkshire, Scotland, 1813. Was sent to southern Africa by the London missionary society in 1840; resided for several years at various stations near the Limpopo, discovering Lake Ngami in 1849, and penetrating to the Makololo country in 1851; in 1853-54 and in 1854-56 made his way from Loando to Quilimane following the course of the Zambesi, and discovering the Victoria falls. He returned to England in 1856, and published *Missionary Travels,* 1857; returned to Africa as consul at Quilimane in 1858; explored the country north of the Zambesi, 1858-64, discovering Lakes Shirwa and Nyassa, and in 1865 published a narrative of the journey. He undertook his third expedition in 1866, and spent the remainder of his life endeavoring to ascertain whether the Nile flowed from the water-system west of Lake Tanganyika. In 1871 he was found by Stanley at Ujiji. He died in central Africa, 1873.

Livy, or **Titus Livius,** Roman historian, was born at Patavium (Padua), in the north of Italy, 59 B. C. He was the most eminent of the Roman historians. His history of Rome was written partly at Rome and partly at Naples, under the patronage of the emperor Augustus. It consisted originally of 142 books; but of these only thirty-five have come down to us and some of these in a very imperfect state. Of all but two, however, we possess fragments, with short epitomes from another hand. The history, or as it was called by its author, *The Annals of the Roman People,* begins with the foundation of the city, and ends with the death of Drusus, the younger brother of the emperor Tiberius, 9 B. C. Died, 17 A. D.

Llorente (*lyō-ren'tā*), **Juan Antonio,** Spanish historian, was born at Rincon del Soto near Calahorra, 1756. In 1806 he was made canon of Toledo. King Joseph gave him sundry posts; and in 1809, when the inquisition was suppressed, placed all its archives in his hands that he might write its history. He died at Madrid, 1823.

Locke, George Herbert, Canadian educator, professor of education and dean of training school for teachers, Macdonald College, McGill University, Montreal, Canada, since 1907, was born in Ontario, Canada, 1870. He was educated at Victoria College, University of Toronto, and University of Chicago; instructor in history and art of teaching, Harvard University and Radcliffe College, Cambridge, Mass., 1897-99; associate professor of education, University of Chicago, 1899-1905; in editorial department of Ginn and Company, Boston, 1905-07; associate editor of *The Quarterly Journal of Pedagogy,* 1907. He is the author of many contributions to educational periodicals.

Locke, John, eminent English philosopher, was born at Wrington, in Somersetshire, 1632, and died 1704 at Oates in Essex. He was sent to Christ church, Oxford, where he took the degrees of B. A. and M. A., and applied himself to the study of medicine. In 1666 Locke made the acquaintance of Lord Ashley, afterward earl of Shaftesbury, and held various offices in the patronage of that nobleman. When in 1682 his patron was obliged to retire, for political reasons, to Holland, Locke accompanied him in his exile. Owing to the troubled condition of his country, and the continued triumph of the party which he had opposed, Locke continued to reside abroad.

He returned to England at the revolution, and was appointed commissioner of appeals under the new government. As early as 1670 he had formed the plan of his famous *Essay on the Human Understanding,* a plan which he had carefully elaborated in his exile, and which he published in its completed form in 1690. It was received with much opposition, notably by the University of Oxford, which resolved to discourage it; but despite this it acquired a great reputation throughout Europe, and was translated into French and Latin. Locke was made a commissioner of trade and plantations in 1695, but retired when unable to perform its duties, and lived with his friend Sir F. Masham until his death.

Briefly, it may be stated that the chief purpose of Locke's celebrated *Essay* was to find the original sources and the scope of human knowledge. The conclusions he arrived at were that there is no such thing as an "innate idea;" that the human mind is a sheet of white paper prepared to be written upon; that the knowledge thereon written is supplied by experience; and that "sensation" and "reflection" are the two sources of all our ideas.

Among other works of Locke are his *Letters on Toleration; Thoughts concerning Education,*

Reasonableness of Christianity; two Treatises on Government; Notes upon St. Paul's Epistles to the Galatians, Corinthians, Romans, and Ephesians; and *Treatise on the Conduct of the Understanding.*

References.—Stewart's *Philosophical Essays;* King's *Life of John Locke;* Scharer's *John Locke;* Cousin's *Philosophy of John Locke;* Bourne's *Life of Locke;* Fowler's *Locke;* Fraser's *Locke;* and Russell's *The Philosophy of Locke.*

Lockhart, John Gibson, Scottish biographer, was born in Scotland, 1794. He was graduated at Oxford, studied law at Edinburgh, and was admitted to the Scottish bar in 1816. He and John Wilson were long the chief supporters of *Blackwood's Magazine.* It was this connection which led to his acquaintance with Sir Walter Scott. In 1820 he married Sophia Scott, eldest daughter of Sir Walter. After the publication of other works, and from 1837-39, appeared his *Life of Scott,* a production of undoubted merit, but which has given rise to much bitter controversy. In 1843 Lockhart was appointed auditor of the duchy of Cornwall. He died in 1854.

Lockyer (*lok'y ĕr*), **Sir Joseph Norman,** English astronomer, was born at Rugby, 1836. He became a clerk in the war office, 1857; in 1869 was made a fellow of the royal society; in 1870 lecturer on astronomy at the normal school of Science at South Kensington; in 1894 a C. B., and in 1897 a K. C. B. He headed eclipse expeditions to Sicily, India, Egypt, and the West Indies. He has written *Elementary Lessons in Astronomy; The Chemistry of the Sun; The Dawn of Astronomy,* etc.

Lodge, Henry Cabot, American author, statesman, was born in Boston, Mass., 1850. He was graduated from Harvard College, 1871; from Harvard law school in 1875, was admitted to the Suffolk bar in 1876, and received the degree of Ph. D. from Harvard University for his thesis on *The Land Law of the Anglo-Saxons;* LL.D., Williams, Yale, Harvard; editor *North American Review,* 1873-76; university lecturer on American history, Harvard, 1876-79, and lecturer before Lowell Institute, Boston, 1880. He was elected a member of congress, 6th Massachusetts district, 1887-93, and United States senator since 1893; present term expires 1917. Editor: *Complete Works of Alexander Hamilton.* Author: *Life and Letters of George Cabot; Life of Washington, History of Boston; Certain Accepted Heroes and Other Essays in Literature and Politics; Story of the Revolution,* etc.

Lodge, Sir Oliver Joseph, British educator and physicist, principal of the University of Birmingham since 1900, was born at Penkhull, Staffordshire, 1851. He was graduated at University College, London; D.Sc., London, Oxford, Victoria, and Liverpool; LL.D., St. Andrews, Glasgow, and Aberdeen. Was professor of physics, University College, Liverpool, 1881-1900. Author: *Elementary Mechanics; Modern Views of Electricity; Pioneers of Science; Signalling Without Wires; Ministers and Stewards; Man and the Universe,* etc.

Loeb (*lōb*), **Jacques,** German-American physiologist, professor of physiology, University of California, since 1902, was born in Germany, 1859. He studied medicine at Berlin, Munich, and Strassburg; M.D., Strassburg, 1884; assistant professor of physiology and experimental biology, 1892-95; associate professor, 1895-1900; professor, 1900-02, University of Chicago. Author: *The Heliotropism of Animals and Its Identity with the Heliotropism of Plants; Studies in General Physiology,* etc.

Logan, John Alexander, American soldier, was born in Illinois, 1826. He served in the Mexican war, was admitted to the bar in 1852, and was elected to congress as a democrat in 1858. He raised an Illinois regiment in the civil war, and retired at its close as major-general. He returned to congress as a republican in 1866, was United States senator from Illinois, 1871-86. He was nominated for the vice-presidency in 1884, but was defeated with the rest of the Blaine ticket. Died, 1886.

Lombroso (*lōm-brō'zō*), **Cesare,** famous Italian alienist and criminologist, was born at Verona, Italy, 1836. He was educated at the University of Turin, became professor of mental diseases at the University of Pavia, 1862, and finally professor of forensic medicine and psychiatry at Turin. Lombroso was the author of many books on his special subject, particularly the pathology of genius, and his investigations of insanity and criminology led the way to great reforms in the treatment of these classes in Europe and elsewhere. He visited England in 1908, and died in 1909.

London, Bishop of. See **Ingram, A. F. W.**

London, Jack, American author and socialistic lecturer, was born in San Francisco, Cal., 1876. He was educated at Oakland high school and the University of California. He left college to go to the Klondike and never completed his course; went to sea before the mast, 1892; went to Japan and seal hunting in Bering sea, 1893; tramped throughout the United States and Canada for sociological and economic study, 1894, and has traveled widely at various times. Author: *The Son of the Wolf; A Daughter of the Snows; The Children of the Frost; The Call of the Wild; The Faith of Men; The Sea Wolf; White Fang; Before Adam; The Road; Martin Eden,* etc.

Long, John Davis, American lawyer and publicist, was born at Buckfield, Me., 1838. He was graduated at Harvard, 1857; LL.D., Harvard, 1880; He practiced law at Buckfield, Me., 1861-62, and since then at Boston, Mass.; was a member of the Massachusetts legislature, 1875-78; speaker, 1876-78; lieutenant-governor of Massachusetts, 1879; governor, 1880-82; secretary of the United States navy, 1897-1902. Is now senior member of the law firm of Long and Hemenway, Boston, and president of the board of overseers of Harvard College. Author: *After-Dinner and Other Speeches; The Republican Party—Its History, Principles and Policies; The New American Navy;* etc.

Long, John Luther, lawyer, author, was born in Pennsylvania, 1861. He studied law, was admitted to the Pennsylvania bar, traveled extensively, and about 1898 turned to dramatic writing. Author: *Madam Butterfly; Miss Cherry-Blossom of Tōkyō; The Fox-Woman; The Prince of Illusion; Naughty Nan; Heimweh, and Other Stories; Billy Boy; The Way of the Gods,* etc.

Long, George, English scholar, was born at Poulton, Lancashire, England, 1800. He was graduated at Trinity College, Cambridge, 1822, and in 1823 was made fellow over Macaulay's head. He was professor of Latin at University College, London, 1842-46, reader in jurisprudence to the Middle Temple, and classical lecturer at Brighton College, 1849-71. His great work was the editing of the *Penny Cyclopædia.* He died at Portfield, Chichester, 1879.

Longfellow, Henry Wadsworth, distinguished American poet, was born in Portland, Me., 1807, at which period Maine formed part of the commonwealth of Massachusetts. He was graduated in 1825 from Bowdoin College, when but eighteen years old, and began his poetical career while he was in college. When nineteen he was made professor of modern languages and literature in Bowdoin College, and passed the next three years in Europe, preparing himself for his professional duties. That time was spent in Germany, France, Spain, and Italy. He then held the chair to which he had been appointed from 1830 until 1835. *Outre-Mer: A Pilgrimage beyond the Sea,* came out two years later, and after its publication he was appointed to the professorship of modern languages and belles-letters in Harvard College. He began his official duties at Cambridge in 1837, and held the professorship until 1854, when he resigned. Meantime his career as an author went steadily on. *Ballads and Other Poems* dates from 1841. *The Spanish Student* was published in 1843, and in 1845 he prepared *Poets and Poetry of Europe,* a critical compilation. Then came *The Belfry of Bruges, and other Poems,* in 1846, and *Evangeline* in 1847, *The Golden Legend* has the date of 1851. In 1855 he published *The Song of Hiawatha.* Three years later, in 1858, *The Courtship of Miles Standish* met with the applause it deserved, *Tales of a Wayside Inn* appeared in 1863, *Flower-de-Luce* in 1867, and *New England Tragedies* in 1868. The publication of his translation of Dante took place in 1867, and filled three superb and massive volumes: His *Three Books of Song* appeared in 1872, *The Hanging of the Crane* in 1874, and *Morituri Salutamus* in 1875. In 1869 he received the degree of D.C.L. from Oxford University, and in 1874 a large complimentary vote for the lord rectorship of the University of Edinburgh. Died, 1882.

Longford, Joseph Henry, British scholar, professor of Japanese, King's College, London, since 1903 was born in 1849, in County Dublin, Ireland. He was graduated at Queen's College, Belfast, Ireland, entered the British consular service in Japan as student interpreter, 1869, and was subsequently called to the British bar. After many years of service in Japan he retired on a pension in 1902.

Longinus (*lon-ji'nus*), **Dionysius Cassius,** one of the greatest of Greek critics and philosophers, flourished during the third century. The only work which has been preserved of this eminent writer is the celebrated treatise *On the Sublime.* Died, 273 A.D.

Longstreet, James, American general, was born in South Carolina, 1821. He was graduated at West Point, 1842. He resigned his commission to take part with the South in the civil war, 1861. In 1862 he was made major-general, and after the battle of Fredericksburg, 1862, Longstreet was promoted to the command of a corps, with the rank of lieutenant-general. He surrendered with General Lee in April, 1865. In 1875 he took up his residence in Georgia, and in 1880 was sent as minister to Turkey, where he remained until 1881. He was United States marshal for the northern district of Georgia, 1881-84; and United States railroad commissioner from 1898 until his death in 1904.

Longworth, Nicholas, congressman, capitalist, was born at Cincinnati, Ohio, 1869. He was graduated at Harvard, 1891, Harvard Law School, 1893, Cincinnati Law School, 1894, and was admitted to the bar in the same year. He was a member of the board of education, Cincinnati, 1898; Ohio house of representatives, 1899-1901, Ohio senate, 1901-03, and member of congress, 1st Ohio District, 1903-13.

Loomis, Elias, American mathematician and physicist, was born in Connecticut, 1811, and was graduated from Yale College in 1830. He published a series of text books embracing the whole range of mathematics, natural philosophy, astronomy and meteorology. His *Treatise on Analytical Geometry and Calculus* has been translated into the Chinese language, and his *Treatise on Meteorology* into Arabic. His scientific papers embrace the various departments of meteorology, the phenomena of auroral exhibitions and atmospheric electricity, territorial magnetism, astronomical observations, shooting-stars, solar-spots, etc. Died 1889.

Lope de Vega (*lō'pā dā vā'gā*), **Felix.** See **Vega.**

Lorenz (*lō'rents*), **Adolf,** Austrian surgeon, surgeon-in-chief of the orthopedic department in the imperial royal general hospital, Vienna, was born in Silesia, 1854. He was graduated at Vienna University, M.D., 1880; professor of general surgery in Vienna University, since 1889. He is especially famous for his bloodless methods in orthopedic surgery, and has taught the cure of hip-deformities and all forms of club foot in a rapid bloodless way, without bone resections. In 1895 he published a treatise on *Dislocation of the Hip* which has received wide scientific approval. He visited the United States in 1902.

Lorenzo de Medici. See **Medici.**

Lorimer (*lor'i-mĕr*), **George Horace,** American journalist and writer, editor-in-chief of the *Saturday Evening Post* since 1899, was born in Louisville, Ky., 1868. He pursued a college course at Colby and Yale, and immediately entered upon a journalistic career. Author: *Letters from a Self-Made Merchant to His Son; Old Gorgan Graham; The False Gods; Jack Spurlock—Prodigal,* etc.

Lossing (*los'ing*), **Benson John,** watchmaker, wood-carver, journalist, editor, and historian, was born in Dutchess county, N. Y., 1813. He edited some magazines and prepared several illustrated works, among which are an *Outline History of the Fine Arts, Lives of the Signers of the Declaration of Independence,* and *Pictorial Field-Book of the Revolution.* Died, 1891.

Lotze (*lōt'sē*), **Rudolf Hermann,** German philosopher, was born in Bautzen, Saxony, 1817. He was educated at Leipzig, where he studied medicine and philosophy, and was appointed to a professorship there in 1842. He ranks among the first metaphysicians, and gave a strong impulse to the development of physiological psychology. Died in Berlin, 1881.

Loubet (*lōō-be'*), **Emile,** French statesman, ex-president of France, was born at Marsanne, in the department of the Drôme, 1838. He became a barrister, practicing at Montélimar, and steadily rose step by step from the municipal council of Montélimar to the presidency. As president of the senate in 1896 he was kept more or less outside of parties, though he was known to be a moderate with radical tendencies. On the sudden death of President Faure, in 1899, he was elected by a large majority to succeed him, and held office until 1906. His uprightness, patriotism, and simplicity of demeanor made him the most popular president France has ever had.

Louis IX. (Fr., *lōō-ē'*), or **Saint Louis,** of France, was born in Poissy, 1215, and succeeded his father, Louis VIII., in 1226. When he attained his majority he became involved in a war with Henry III. of England, and defeated the English at Taillebours, at Saintes, and at Blaye, 1242. During a dangerous illness he made a vow that if he recovered he would go in person as a crusader, and accordingly, having appointed his mother regent, he sailed in 1248 with 40,000 men to Cyprus whence, in the following spring, he proceeded to Egypt. He embarked on a new crusade, 1270, and proceeded to Tunis; but a pestilence breaking out in the French camp carried off the greater part of the army and the king himself. Died, 1270.

Louis XII. of France, son of Charles, duke of Orleans, was born in 1462, and succeeded Charles VIII. in 1498. In 1499 he invaded Italy, and gained possession of Milan. In 1508 he united with Ferdinand, Pope Julius II., and the emperor in the league of Cambrai against the Venetians. In 1511 Ferdinand joined Julius in the holy league against the French, who were finally driven out of Italy by means of the Swiss in 1513. By his good government he earned the title of "father of his people." Died, 1515.

Louis XIII., king of France, was born at Fontainebleau, 1601. When his father, Henry IV., was assassinated in 1610, he succeeded to the throne, but his mother, Marie de Medici, was regent during his youth. Under the guidance of his great minister, Richelieu, the king gradually increased the power of the monarchy, at the expense of the Protestant nobles, ending in the overthrow of the Huguenots by the capture of La Rochelle in 1628. His possession of Alsace and Roussillon was confirmed in the next reign. Died, 1643.

Louis XIV., king of France, 1643-1715, was born in 1638. He inherited from his father the war with Spain, and this was followed by the civil war of the Fronde, which lasted from 1649 to 1653. He changed the feudal monarchy of France into an absolute one, and his favorite motto, *L'etat c'est moi,* "I am the state," was at once the

expression of the ruling principles of his life, and a description of his policy. On the death of Philip IV., the father of his queen, he laid claim to Holland, which he invaded; but this led to the alliance against him of England, Sweden, and Holland, usually called "the triple alliance," and Louis was speedily compelled to make peace. Several other wars followed, notably the war of the Spanish succession, in which Louis sought to secure the Spanish monarchy for his grandson, the duke of Anjou. Two years afterward, 1715, Louis died at Versailles, in his seventy-seventh year. He left several children. Many of the most famous names in French literature belong to this reign.

ouis XV., surnamed "the well-beloved," king of France, 1715-74, was born at Fontainebleau, 1710. He was the son of the duke of Burgundy, and the successor of his great-grandfather, Louis XIV. On the death of Augustus, king of Poland, 1733, Louis supported the pretensions of his father-in-law to the vacant throne, and was opposed by the emperor of Germany, who upheld the claims of the elector of Saxony. Afterward, in 1755, a new war was kindled between England and France, about their possessions in Canada; and this war was not terminated until 1763, when, by the treaty signed in Paris in that year France formally ceded to England Canada, Nova Scotia and its other North American colonies, besides Granada, Dominica, and Tobago, in the West Indies. During his later years, Louis suffered himself to be governed wholly by favorites, among whom were the Marchioness de Pompadour and Madame Du Barry. He died at Versailles, 1774.

ouis XVI., king of France, 1774-93, was born at Versailles, 1754. He was the grandson of Louis XV., whom he succeeded, having already, in 1770, married Marie Antoinette of Austria, daughter of Maria Theresa, and sister of the emperor Joseph. The first acts of Louis, after his accession, endeared him to his people, for he gave them immunities to which they had been hitherto unaccustomed, and effected many reforms in the administration; but he soon became embarrassed by financial difficulties, and was not fortunate in his choice of ministers. In October a mob of armed women from Paris made an attack on the palace of Versailles, after which the king and queen were forcibly removed to Paris. In 1789 the states-general of the kingdom was convoked at Versailles. Within a few days it was superseded by the national assembly, which assumed the whole legislative authority; and then began the revolution, which culminated, as far as the king was concerned, in the insurrection of 1792, and in his execution on the scaffold in January, 1793.

ouis XVIII., king of France, a younger brother of Louis XVI., was born at Versailles, 1755. He fled from Paris on the same night as the king, Louis XVI., and reached the Belgian frontier in safety. After the execution of his brother, he proclaimed the dauphin king, under the title of Louis XVII., and in 1795 took the title of king himself. The fall of Napoleon opened the way for him to the French throne and in 1814 he landed at Calais after twenty-four years of exile. He ruled by "the divine right of kings." The revolution had taught him nothing, and his treatment of the protestants, republicans, and the followers of Napoleon, opened the way for Napoleon's return from Elba, when he fled into exile until after the battle of Waterloo. He was restored to the throne by the allied powers in 1815, and ruled until his death at Paris, 1824.

ouis Philippe (*lōō'ē' fē'lēp'*), king of France, was born at Paris, 1773, eldest son of Louis Philippe Joseph, duke of Orleans. He sought, during the revolution, in Switzerland a place of security for his sister Adelaide, wandered about for four months, and accepted a situation as teacher of geography and mathematics in a school at Reicheneau, near Chur, assuming the name of Chabaud-Latour. On the fall of Napoleon he hastened to Paris, where he was received with distrust by Louis XVIII. After the second restoration, when he returned to France, he recovered his great estates. He was very popular in Paris. He kept aloof, however, from political intrigues; and the three bloody days of the revolution of 1830 were nearly over before he was brought forward, the banker Laffitte proposing, in the provisional committee, his appointment as lieutenant-general of the kingdom, from which he proceeded to the acceptance of a constitutional throne, August 9, 1830. Insurrectionary movements caused by a demand for a more liberal suffrage, ensued in the streets of Paris in February, 1848; and the "citizen king" saw with alarm that the national guard could not be expected to support him. On February 24th Louis Philippe, deserted by his courtiers, fled to the coast of Normandy with his queen, concealed himself for some days, and at length found opportunity of escaping in a British steamboat to Newhaven under the name of Mr. Smith. He died at Claremont, 1850.

ouise, queen of Prussia, was born in 1776, at Hanover, where her father, Duke Karl of Mecklenburg-Strelitz, was commandant. She was married to the crown prince of Prussia, afterward Frederick William III., in 1793, and was the mother of Frederick William IV. and William III. afterward emperor. Died, 1810.

Lounsbury (*lounz'bĕr-i*), **Thomas Raynesford,** American educator and scholar, professor of English since 1871, and librarian at Sheffield scientific school, Yale, was born at Ovid, N. Y., 1838. He was graduated at Yale, 1859; L.L.D., Yale, 1892, Harvard, 1893, Aberdeen, 1906; L.H.D., Lafayette, 1895, Princeton, 1896. He was engaged on the *American Cyclopædia*, 1860-62; was first lieutenant 126th New York volunteers, 1862-65; instructor at Yale, 1870-71. He edited Chaucer's *Parliament of Foules*, and is the author of: *History of the English Language; Studies in Chaucer; Shakespeare as a Dramatic Artist* and many other scholarly works.

Lovett, Robert Scott, lawyer, president of Union Pacific railroad, was born in San Jacinto, Texas, 1860. He was educated in the public schools; studied law, and was admitted to the bar in 1882; attorney for Houston East and West Texas railroad, 1884-89; assistant general attorney, 1889-91, and general attorney, 1891-92, Texas and Pacific railroad; general counsel for Harriman railroads, 1904-09; succeeded Edward H. Harriman as president and chairman of board of directors, Union Pacific railroad, 1909.

Low, A. Maurice, journalist, author, was born in London, England, 1860. He was educated at King's College, London, and in Austria. Since 1886 he has been Washington correspondent of *The Boston Globe;* chief American correspondent of the *London Morning Post.* Author: *The Supreme Surrender; American Life in Town and Country,* etc.

Low, Seth, American educator and publicist, mayor of New York, 1902-03, was born in Brooklyn, N. Y., 1850. He was graduated at Columbia, 1870; LL.D., University state of New York, 1900; Amherst, 1889; University of Pennsylvania, Harvard, and Trinity, 1890. Mayor of Brooklyn, 1881-85, elected on independent ticket; unsuccessful candidate for mayor of Greater New York, 1897, and president of Columbia University, 1890-1901. In 1895 he erected for that institution a university library at a cost of $1,175,000. In 1899 he was appointed by President McKinley a member of the delegation to represent the United States at the international peace conference at The Hague. He is a trustee of the Carnegie Institution, Washington.

Lowell, Abbott Lawrence, American educator and writer, president of Harvard University since 1909, was born in Boston, Mass., 1856. He was graduated at Harvard 1877; Harvard Law School, 1880; practiced law in Boston, 1880-97. He was lecturer at Harvard, 1897-99; professor of the science of government, Harvard, 1900; trustee of the Lowell Institute of Boston, 1900, and was elected president of Harvard to succeed Dr. Charles W. Eliot, who resigned, in 1908. He is an accepted authority in the field of government and comparative politics. Author: *Essays on Government; Governments and Parties in Continental Europe.*

Lowell, James Russell, American poet and diplomat, was born in Boston, Mass., 1819. He was educated at Harvard University, spent several years abroad studying languages, and, in 1855, succeeded Longfellow as professor at Harvard. LL.D., Harvard, and Cambridge, England; D.C.L., Oxford. Was United States minister to Spain, 1877-80, and ambassador to Great Britain, 1880-85. In 1869 he published *Under the Willows, and Other Poems,* and *The Cathedral,* an epic; in 1870; a collection of essays; in 1871, *My Study Windows,* in 1887, *Democracy;* in 1888, *Political Essays. Heartsease and Rue,* etc. Among his poems the best known are *The Vision of Sir Launfal, The First Snowfall,* and the *Commemoration Ode.* He died in Cambridge, 1891.

Lowell, Percival, author, astronomer, was born in Boston, Mass., 1855. He was graduated at Harvard, 1876; LL.D., Amherst, 1907. He went to Japan in 1883, and lived there from time to time until 1893; established the Lowell observatory 1894, and undertook an eclipse expedition to Tripoli, 1900. He received the Janssen medal of the French astronomical society, 1904, for researches on Mars, and has made discoveries on the planets, especially Mars; appointed non-resident professor of astronomy, Massachusetts Institute of Technology. Author: *Annals of the Lowell Observatory; The Solar System; Mars and its Canals,* etc.

Lowther (*lou'thĕr*), **James William,** British statesman, speaker of the House of Commons since 1905, was born in 1855. In 1883 he was elected to parliament for Rutland; contested Mid-Cumberland, 1885; was under-secretary for foreign affairs, 1891; represented Great Britain at international conference at Venice, 1892; chairman of committee on ways and means and deputy speaker, 1895-1906.

Loyola, Ignatius (*lō-yō'lä*), original name Inigo Lopez de Recalde, the founder of the order of the Jesuits, was descended from a noble Biscayan family, born at the castle of Loyola, Guipuscoa, in 1491, and died 1556. He was attached in his youth as a page to the court of Ferdinand and Isabella, and trained up in all the vices and frivolities peculiar to his position.

When still a young man he entered the army, and during the defence of Pampeluna in 1521, against the French, he was severely wounded, and a long and tedious confinement was the result. The only books he found to relieve its tedium were books of devotion and the lives of saints. This course of reading induced a period of mystical devotion in which he renounced the world, made a formal visit to the shrine of the Virgin at Montserrat, and vowed himself her knight.

After his dedication he made a pilgrimage to Rome and Jerusalem, and from 1524 to 1527 attended the schools and universities of Barcelona, Alcala, and Salamanca. In 1528 he went to Paris, where he went through a seven years' course of general and theological training. Here in 1534 he formed the first nucleus of the society which afterwards became so famous. Francois Xavier, professor of philosophy, Lainez, and others joined with Loyola and bound themselves together to devote themselves to the care of the church and the conversion of infidels.

Rome ultimately became their headquarters, when Loyola submitted the plans of his new order to Paul III., who, under certain limitations, confirmed them, 1540. Loyola continued to reside in Rome and govern the society he had constituted till his death. He was beatified in 1607 by Paul V., and canonized in 1622 by Gregory XV.

References.—Of the complete *Lives,* the best in English are those by Genelli, and Stewart Rose. In French, the *Life* by Bartoli. See also Druffel's *Ignatius v. Loyola;* Gothein's *Ignatius v. Loyola und die Gegenreformation;* and Joly's *Ignace de Loyola.*

Lubbock (*lub'uk*), **Sir John, Lord Avebury,** English naturalist and politician, was born in London, 1834. He was educated at Eton College, then entered his father's banking house, and in 1858 became a member of parliament, where he served at intervals until elevated to the peerage, in 1900, as Lord Avebury. He is the author of *Prehistoric Times; The Origin of Civilization and the Primitive Condition of Men; Fifty Years of Science; Pleasures of Life,* etc. Died 1913.

Lucretius (*lū-krē'shi-us*), or **Titus Lucretius Carus,** Roman poet of the first rank, was born about 99 B. C. His principal work, *De Rerum Natura,* in six books, appeared 56 B. C. and is still unequaled as a philosophical didactic poem. Died about 55 B. C.

Lucullus (*lū-kul'us*), **Lucius Licinius,** celebrated Roman general, was born about 110 B. C. He twice defeated Tigranes of Armenia; but his legions became mutinous, and he was superseded by Pompey in 66 B. C. He attempted to check Pompey's power, and was consecutively edile and consul, but soon withdrew from politics. He died about 57 B. C.

Luini (*lōō-ē'nē*), or **Luvino, Bernardino,** painter of the Lombard school, was born at Luino, about 1475. His skill was developed in the school of Leonardo da Vinci; indeed, many of his works were at one time attributed to that great artist. He is one of the five great painters whose "supremacy" Ruskin affirmed. Died about 1533.

Lummis (*lum'-is*), **Charles Fletcher,** American author, explorer, was born at Lynn, Mass., 1859. He was graduated at Harvard, 1881; Litt.D., Santa Clara College. Edited newspaper in Ohio, 1882-84. He was city editor *Los Angeles Daily Times,* 1885-87; lived five years in Indian pueblo of Isleta, New Mexico, learning Indian languages and customs; traveled all over the southwest on horseback; also in Mexico and South America; has explored entire continent from Canada to Chili. Editor: *Out West Magazine; The King of the Broncos; The Enchanted Burro; The Awakening of a Nation; Mexico To-Day,* etc.

Lurton, Horace Harmon, American jurist was born at Newport, Ky., 1844. He was graduated at Cumberland University, Tennessee, 1867; D.C.L., University of the South, 1899. Judge of the United States circuit court, 6th judicial circuit, 1893-1909, and became associate justice of the United States supreme court in 1909. He was for a number of years professor of constitutional law and dean of the law department, Vanderbilt University. Died, 1914.

Luther, Martin, great German religious reformer, was born at Eisleben, 1483, and died there 1546. At school he made rapid progress in Latin and other studies, and, in 1501 entered the University of Erfurt; here in 1505, he received a master's degree.

About this time he discovered in the library of the university a Latin Bible, and found, to his no small delight, that it contained more than the excerpts in common use. He was destined by his father to the law, but his more intimate acquaintance with the Bible induced him to turn his attention to the study of divinity, with the view of enter-

ing monastic life. Contrary to the wishes of his father he entered the monastery of the Augustines at Erfurt in 1505. In 1507 he was consecrated priest, and in 1508, by the influence of his patron, Staupitz, who was provincial of the order, he was made professor of philosophy in the new University of Wittenberg.

In 1510 he visited the court of Pope Leo X. at Rome on business connected with the order. Returning to Wittenberg he was made a doctor of theology in 1512, and here his profound learning and powerful eloquence drew large audiences. At that time he had no controversy with the pope or the church, but the arrival in 1517 of John Tetzel in Wittenberg selling indulgences for sins roused the fiery energy of Luther, and caused him to draw up his famous protest in ninety-five propositions, which he nailed to the church-door in Wittenberg. The result was that the sale of indulgences ceased, Tetzel fled, and a great religious commotion spread rapidly through Germany.

Luther was summoned to Rome to explain his heretical proceedings, but refused to go; nor were the efforts of Cardinal Cajetan able to effect a reconciliation between him and the pope. His dispute with Dr. Eck at Leipzig in 1519, in which he denounced indulgences, and questioned the authority of the pope, was followed in 1520 by a bull of anathema—a document which Luther straightway burned publicly in Wittenberg.

This open defiance of Rome required him to vindicate his conduct, which he did in a pamphlet addressed to the *Christian Nobles of Germany*, with the result that many rallied to his aid. When summoned to appear before the German emperor, Charles V., at the Diet of Worms (1521), Luther appeared, acknowledged his writings, made an eloquent defence, but refused to recant. When he retired from Worms he was met by a friendly troop of soldiers belonging to Frederick the Elector of Saxony, who conveyed him to the castle of Wartburg, where he remained for nearly a year. Here he employed his time in translating the New Testament into German, but when he heard that disturbances had been excited in Wittenberg on the question of images, he could no longer bear the restraint of inaction. Returning suddenly, Luther succeeded in quieting the people by means of a wise and patient moderation.

In 1524 he laid aside his cowl as a priest of the Roman church, and in 1525 married Catharina von Bora, one of nine nuns who had renounced their religious vows under his teaching. The wisdom of this marriage was doubted by his friends, but his home-life and the birth of six children, contributed greatly to the happiness of the reformer.

From the year 1521 Luther had been busy translating the Bible into German with the aid of Melanchthon and others, and the great task was completed in 1534. This important work, taken in connection with the protestant confession made at Augsburg in 1530, served to establish the reformer's doctrines in Germany, and closed the important part of his public life. He continued, however, till the end his private work of teaching, preaching, and writing.

The massive character of the German reformer lay along simple lines, and found its full and direct expression in his work. The learning of Calvin, and the balanced judgment of Melanchthon were not his, but a vivid practical insight enabled him to mark the abuses of the Roman church, and his fervid energy urged him to reform them. Behind all the zeal of the reformer he had much lowly human sympathy, humor, tenderness, and a love of homely things. This side of his character is most clearly seen in his *Letters* and *Table-Talk*. His German writings were varied and extensive.

References.—Luther has been the subject of numerous biographies, including those of Melanchthon, Michelet, Koestlin, Freytag, Kolde, Jacobs, and T. M. Lindsay. See also Seiss' *Luther and the Reformation*.

Luxembourg (*lŭk'sȧn'boōr'*), **Francois Henri de Montmorency-Bouteville, Duke of,** marshal of France, was born in Paris, 1628. In 1667 he served under Comté in Franche-Comté; in 1672 he himself successfully invaded the Netherlands, and, driven back in 1673, conducted a masterly retreat. During the war he stormed Valenciennes and twice defeated the prince of Orange. Made a marshal in 1675, soon after the peace of 1678, he quarreled with Louvois, and was not employed for twelve years. Died, 1695.

Lyall (*lī'al*), **Edna,** pen-name of Ada Ellen Bayly, English novelist, daughter of a London barrister and bencher of Gray's Inn. She was born at Brighton, Sussex, and at an early age took to writing as a profession. Her first story, *Won by Waiting*, was published in 1879, and was followed by *Donovan; We Two; In the Golden Days; Knight Errant;* and *A Hardy Norseman*, etc. Her books have attained a wide-spread popularity. Died, 1903.

Lycurgus (*lī-kûr'gus*), lawgiver of Sparta, flourished in the ninth century B. C. He was uncle of the young king Charilaus, and governed wisely during his nephew's infancy, then traveled in Crete, Ionia, and Egypt. On his return, finding Sparta in anarchy, he redivided property, and remodeled the constitution, military and civil. Lycurgus was afterward honored as a god at Sparta. His laws remained in force for about seven hundred years.

Lyell, Sir Charles, British geologist, was born in Scotland, 1797. He was graduated at Oxford, and studied law, but left his practice and gave himself to the study of geology, to which he had been attracted by Alexander Buckland's lectures when he was at Oxford. He made geological tours in 1824, and again in 1828-30, over various parts of Europe, and published the results of his investigations in the *Transactions of the Geological Society* and elsewhere. The first volume of his great work, *The Principles of Geology*, appeared in 1830, the second in 1832, and the third in 1833. Died, 1875.

Lyon, Mary, American educator, founder of Mount Holyoke College, was born at Buckland, Mass., 1797. In 1837 she founded the famous seminary, now Mount Holyoke College, at South Hadley, Mass., upon the plan of uniting domestic service with intellectual culture. She died at South Hadley, Mass., 1849.

Lysander (*lī-san'dẽr*), Spartan soldier, son of Aristoclitus. In 407 B. C. he became commander of the Spartan fleet in the Ægean, and defeated the Athenian fleet off Notium. As the Lacedæmonian law did not allow the office to be held twice by the same person, he was there named vice admiral, nominally subordinate to Aracus. He captured, at Ægospotami in the Hellespont, the entire navy of Athens, except eight or nine galleys, which escaped with Conon to Cyprus, and in 404 B. C. ended the Peloponnesian war by the capture of Athens. Died 395 B. C.

Lysias (*lĭs'i-as*), Greek orator, was born about 450 B. C., son of a rich Syracusan, who settled in Athens about 440. The first use to which Lysias put his eloquence was, on the fall of the Thirty in 403, to prosecute Eratosthenes, the tyrant chiefly to blame for his brother's murder. His thirty-four surviving speeches show Lysias delightfully lucid in thought and expression, and strong in character drawing. Died, 380 B. C.

Lysimachus (*lī-sim'ȧ-kus*), Greek general, king of Thrace, was born about 360 B. C. On the division of the provinces, after the death of Alexander in 323 B. C., Thrace and the region bordering on the Danube were allotted to him. In 306 he assumed the title of king. Lysimachus so improved and enlarged New Ilium and the Mysian Alexandria that he came to be regarded as their founder. In 288 he formed a confederacy with Ptolemy, Seleucus, and Pyrrhus against Demetrius Poliorcetes, and acquired Macedonia. Having consented to the death of his son Agathocles at the instigation of his new wife Arsinoë, daughter of Ptolemy, his Asian subjects rebelled, and with the aid of Seleucus defeated and slew Lysimachus at Corus in Phrygia, 281 B. C.

Lytton, Edward George Earle Lytton Bulwer, Lord, eminent English novelist, was born in Norfolk, of an ancient family, 1803. In 1826 he was graduated at Cambridge, and published in 1827 his first novel, *Falkland*. In the year following *Pelham* appeared—a work which placed him at once in the first rank of contemporary writers of fiction. Thenceforward his literary career was one of meteoric brillancy; novel after novel, drama after drama, flowed from his pen almost without intermission. In 1866 he was created a peer of the realm. Among his principal novels are: *The Disowned; Devereux; Paul Clifford; Eugene Aram; Night and Morning; Zanoni; The Last of the Barons; Harold, the Last of the Saxon Kings; The Caxtons; Kenelm Chillingly*, etc. He is also author of the plays, *The Lady of Lyons, Richelieu*, and *Money*, and of the poems, *The New Timon*, and *King Arthur*. Died, 1873.

Lytton, Edward Robert, Earl of, "Owen Meredith," poet, diplomat, and statesman, was born at London, 1831. He was educated at Harrow and at Bonn. In 1849 he came to Washington as an attaché and private secretary to his uncle Sir Henry Bulwer. In 1873 he succeeded his father as second Lord Lytton, and in 1876 became viceroy of India. In 1892 he was appointed English ambassador to France. His literary works, of which perhaps the most popular is *Lucile*, have been published under his pseudonym. He also wrote *Clytemnestra; The Wanderer; The Ring of Amasis;* and *Fables in Song*. He died at Paris, 1891.

Maartens (*mär'tens*), **Maarten,** pen name of J. M. W. van der Poorten-Schwarz, Dutch author, was born at Amsterdam, 1858. He attended school in Germany, and studied law at Utrecht University. He is the author of a series of powerful novels, including *The Sin of Joost Avelingh; A Question of Taste; My Poor Relations; Dorothea; The Jailbird*, a one-act play; *The Healers; The Woman's Victory; The New Religion*, etc.

Mabie, Hamilton Wright, American journalist and writer, associate editor of *The Outlook*, was born at Cold Spring, N. J., 1846. He was graduated at Williams College and Columbia Law School, L.H.D., Williams; LL.D., Union College and Western Reserve University. Author: *Norse Stories Retold from the Eddas; Nature in New England; My Study Fire; Works and Days; Parables of Life; Backgrounds of Literature; Myths Every Child Should Know*.

Mabillon (*mȧ'bē'yŏn'*), **Jean,** French scholar and historian, was born at St. Pierremont in Champagne, 1632. In 1653 he entered the Benedictine order, in 1663 became keeper of the monuments at St. Denis, and from 1664 worked in the abbey of St. Germain-des-Prés at Paris. He edited St. Bernard's works, and wrote a history of his order; also *De Re Diplomaticâ; Vetera Analecta; Musaeum Italicum*, etc. Died, 1707.

Macaulay (*mȧ-kȯ'lĭ*), **Thomas Babington, Lord,** British historian and statesman, was born at Rothley Temple, Leicestershire, 1800. He entered Trinity College, Cambridge, at the age of eighteen, where he acquired a brilliant reputation both as a scholar and debater. In 1825 he contributed to the *Edinburgh Review* his famous essay on Milton, the eloquence, brilliancy of fancy, and generous enthusiasm of which quite fascinated the educated portion of the public. He was elected to parliament in 1830, where he made a brilliant reputation; and in 1834 went to India as legal adviser of the supreme council. In 1839 he was appointed war secretary. While holding this office he composed the *Lays of Ancient Rome*, and in the following year published a collected series of his *Essays*, in three volumes. In 1848 appeared the first two volumes of his *History of England from the Accession of James II*. The third and fourth volumes of his *History* were published in 1855. He died in 1859; buried in Westminster Abbey.

McAdoo (*mak-ȧ-dōō'*), **William Gibbs,** lawyer, public official, was born near Marietta, Ga., 1863, and was educated at the University of Tennessee. He was deputy clerk of United States circuit court of Tennessee, 1882; studied law and was admitted to the bar, 1885; practiced at Chattanooga. He removed to New York to practice in 1892. In 1902 he was elected president of the Hudson and Manhattan railroad, and completed in 1909 the fourth tunnel under the Hudson River. Appointed Secretary of the Treasury by President Wilson in 1913.

MacArthur, Arthur, American soldier, was born in Springfield, Mass., 1845. He was educated in the public schools of Milwaukee and by private tutors. He entered the union army in 1862 as first lieutenant, served throughout the civil war, and entered the United States army, 1866. Awarded medal of honor, 1890, for seizing colors of regiment at critical moment and planting them on captured works on the crest of Missionary Ridge, 1863. He commanded the third expedition to Manila, and took part in the battle of Manila, August, 1898. He was subsequently commander of the division of the Philippines and military governor, 1900-01, and was created lieutenant-general of the U. S. army, 1906. Died, 1912.

MacArthur, Robert Stuart, American clergyman, was born at Dalesville, Quebec, Canada, 1841. He was graduated at the University of Rochester, 1867; Rochester Theological Seminary, 1870; LL.D., Columbian, Washington, 1896. He was correspondent for years of the *Chicago Standard*; long editorially connected with *Christian Inquirer*, and *Baptist Review*, and is also a well-known lecturer on foreign travel. He has been pastor of Calvary Baptist church, New York, since 1870.

McBurney, Charles, American surgeon, was born in Roxbury, Mass., 1845. He was graduated at Harvard, 1866, and from the College of Physicians and Surgeons, New York, 1870. He was in practice as surgeon in New York from 1870; was professor of clinical surgery, College of Physicians and Surgeons, since 1896; and was consulting surgeon to President McKinley after he was shot by an assassin in 1901. Died 1913.

McCall, Samuel Walker, American congressman, lawyer, was born in East Providence, Pa., 1851. He was graduated at Dartmouth College, 1874, and was admitted to the bar, 1876. He was a member of the Massachusetts house of representatives, 1888, 1889, and 1892; member of Congress, eighth Massachusetts district, 1893-1913.

McCarthy, Justin, British novelist and historian, was born at Cork, Ireland, 1830. He was educated privately at Cork, and engaged in journalism there, 1848-52; in Liverpool, 1852-60; and London, 1880. Was chairman of Irish parliamentary party, 1890-96. Author of many novels, including: *Miss Misanthrope; Dear Lady Disdain;*

Donna Quixote; Maid of Athens; Red Diamonds; Mononia, etc.; histories: *A History of Our Own Times; Reminiscences*. Died 1912.

cClellan, George Brinton, American general, was born at Philadelphia, Pa., 1826. He was graduated at West Point, 1846. In 1861 he was commissioned major-general of the United States army, and appointed in command of the department of the Ohio. He subsequently commanded the army of the Potomac, but after indecisive engagements, was superseded by General Burnside, 1862. In 1865, as a democrat, he was the unsuccessful opponent of Lincoln for the presidency. Died 1885.

cClellan, George Brinton, lawyer, public official, was born at Dresden, Saxony, 1865, during the residence of his parents, General George Brinton and Ellen M. McClellan, in that city. He was graduated at Princeton, 1886; LL.D., 1905; LL.D., Fordham University, 1905, Union College, 1906. Admitted to the bar, 1892; president of board of aldermen, New York, 1893 and 1894; member of congress, 1895-1903, and mayor of New York, 1903-10.

cCloskey, John, American prelate, first cardinal of the Roman Catholic church in America, was born at Brooklyn, N. Y., 1810. He was the first president of St. John's College (now Fordham University), Fordham, N. Y., 1841-42; was consecrated bishop of Albany in 1847; archbishop of New York in 1864, and in 1875 was created cardinal. He built the cathedral at Albany, the Theological Seminary at Troy, was an effective preacher, and otherwise noted as an able executive and administrator. He died at New York, 1885.

cCormick, Robert Sanderson, American diplomat, was born in Rockbridge county, Va., 1849. He was graduated at the University of Virginia; envoy extraordinary and minister plenipotentiary, 1901-02, and first ambassador, 1902, to Austria-Hungary; United States ambassador to Russia, 1902-05, to France, 1905-07.

cCosh, James, Scottish-American educator and philosopher, was born in 1811, in Ayrshire, Scotland. He was educated at the Universities of Glasgow and Edinburgh. He was appointed to the chair of logic and metaphysics in Queen's College, Belfast, 1851, and remained there until 1868, when he was elected president of the College of New Jersey, at Princeton. He was president at Princeton until 1888, and wrote many important philosophical works, besides papers on education and the relation of science to religion. In 1888 he resigned his office as president to give his attention more closely to philosophical writing, and published *First and Fundamental Truths*, and *Religious Aspects of Evolution*. Died at Princeton, N. J., 1894.

acCracken, Henry Mitchell, American educator, chancellor of New York University 1891-1911, was born at Oxford, Ohio, 1840. He was graduated at Miami University, 1857; D.D., Wittenberg, 1878, LL.D., Miami, 1887; chancellor of Western University, Pittsburg, Pa., 1881-84; vice-chancellor and professor of philosophy, New York University, 1884-91; deputy to general assembly, Free church of Scotland, 1867, and to Irish Presbyterian general assembly, 1884. Author: *Tercentenary of Presbyterianism; Kant and Lotze; A Metropolitan University*, etc.

cCrea, James, American railway president, was born in Philadelphia, 1848. He entered the railway service in 1865, with Pennsylvania railroad, 1871-82, consecutively as assistant engineer and division superintendent; manager, general manager, and fourth vice-president, Pennsylvania lines west of Pittsburg, 1882-90; second vice-president, 1890-91; first vice-president, 1891-1907; and president of Pennsylvania railroad company 1907-1913. Died 1913.

cCumber, Porter James, lawyer, United States senator from North Dakota, was born in Illinois, 1858. Taught school for a few years, and took a law course in the University of Michigan, graduating in 1880. He removed to Wahpeton, North Dakota, 1881, where he has since practiced his profession. He was a member of the territorial legislature, 1895 and 1897; was elected to the United States senate, 1899, and reëlected in 1905 and 1911.

cCutcheon, George Barr, journalist, author, was born on a farm in Tippecanoe county, Indiana, 1866. He was graduated at Purdue University, and was city editor of the *Lafayette Courier*, 1893. Author: *Graustark; Beverly of Graustark*; etc., and numerous short stories in various magazines.

acdonald, George, Scottish poet and novelist, was born at Huntley, 1824; was educated at Aberdeen and the Independent College at Highbury, and became pastor at Arundel and at Manchester. His first book was one of verse, and a long series of novels followed, including *David Elginbrod; The Portent; Alec Forbes; Annals of a Quiet Neighborhood; Malcolm; St. George and St. Michael*. In 1872-73 he made a lecturing tour in the United States; in 1877 received a pension of 100 pounds. Died, 1905.

acdonald, Sir John Alexander, distinguished Canadian statesman, was born in Glasgow, 1815. His parents settled in Canada during his childhood, and he was educated at Kingston Grammar School, studied law, and was admitted to the Canadian bar in 1836. He entered the Canadian parliament in 1844; attorney-general, 1854-62 and 1864-67; prime minister, 1858. He was chairman of the London colonial conference 1866-67, and more than any other person was responsible for Canadian federation. After its establishment, he was head of the new Dominion government, as minister of justice and attorney-general, 1867-73, when he resigned from the cabinet. From 1878 until his death he was premier of the Dominion. He died at Earnscliffe Hall, near Ottawa, 1891.

Macdonald, J. A., Canadian journalist, managing editor of *The Globe*, Toronto, since 1902, was born in Middlesex, county of Ontario, Canada, 1862. He was graduated at Knox College, Toronto, 1887; was ordained to ministry of the Presbyterian church, and inducted pastor of Knox church, St. Thomas, Ontario, 1891. He was principal of the Presbyterian Ladies' College, 1896-1901; and was appointed by Ontario government to serve for six years on first board of governors of the University of Toronto, 1906.

McGee, Anita Newcomb, American physician, was born at Washington, D. C., 1864, daughter of Professor Simon Newcomb. She was educated in private schools, and graduated at Columbian University, M.D., 1892. In 1888 she married W. J. McGee, the anthropologist. She was appointed, in 1898, acting assistant surgeon of United States army, being the only woman to hold such a position. In 1904, she took a party of trained nurses formerly in the United States army, to serve in the Japanese army for six months gratuitously.

McGiffert, Arthur Cushman, American Theological writer and critic, professor of church history, Union Theological Seminary, New York, since 1893, was born at Sauquoit, N. Y., 1861. He was graduated at Western Reserve College, 1882; Union theological seminary, 1885; University of Marburg, Germany, Ph.D., 1888; studied in Germany, 1885-87, and in France and Italy, 1887-88.

McGrath, Harold, journalist, author, was born in Syracuse, N. Y., 1871, and has been engaged in journalism since 1890. Author: *Arms and the Woman; The Man on the Box; Hearts and Masks; Half a Rogue; The Best Man; The Lure of the Mask; The Puppet Crown; The Grey Cloak; The Princess Elopes; Enchantment; The Watteau Shepherdess*, an operetta; *The Goose Girl;* and numerous magazine stories.

Machiavelli (*mä'kyä-vel'lē*), **Niccolo di Bernardo del,** Italian statesman and author, was born in Florence, Italy, 1469, son of a jurist of good family. He was secretary of state at Florence from 1498 to 1512, went on several important missions, but was deprived of office and exiled in the latter year by the Medici. His chief works were *Il Principe; Istorie Fiorentine; Arte della Guerra;* some comedies and poems; and *Discorsi sulle Deche di Tito Livio*. In 1521 he again took part in affairs for a short time, but died in poverty, 1526.

Mack, Norman Edward, American journalist and politician, editor and publisher of the *Buffalo Times*, was born in Canada, 1858. He was a delegate to the national democratic conventions of 1892, 1896, 1900, 1904, and 1908; has been a member of the national democratic committee and member executive committee of the same, since 1900; and was chairman in 1908.

McKenna, Joseph, American lawyer and jurist, was born at Philadelphia, Pa., 1843. At the age of twelve he removed to California with his parents. He was educated at the College of St. Augustine, Benicia, studied law after his graduation, and was admitted to the bar in 1865. During his career in congress he was an intimate friend of William McKinley and assisted in the framing of the McKinley tariff of 1890. He was appointed to the United States circuit bench of the Pacific slope in 1893; was attorney-general of the United States, 1897-98, and associate justice of the supreme court of the United States, since 1898.

Mackenzie, Alexander, Canadian statesman was born near Dunkeld, Scotland, 1822. He moved to Canada in 1842, and engaged in business as a contractor until 1861. He was elected to the assembly of Canada, 1861-67, and was a member of the Dominion parliament representing the same constituency for twenty-five years. Upon the resignation of Sir John Macdonald he became premier of the Dominion and minister of public works. Upon the election of a conservative majority to parliament in 1878, he, with his cabinet, resigned. He died at Toronto, 1892.

McKenzie, Alexander, Congregational clergyman, was born at New Bedford, Mass., 1830. He was graduated at Harvard, 1859; Andover theological seminary, 1861; D.D., Amherst, 1879, Harvard, 1901; pastor First church, Cambridge, since 1867. He is a trustee of Phillips Academy, Andover, and Hampton Institute, Virginia; lecturer at Andover theological seminary, and president of trustees of Wellesley College. Author: *Two Boys; A Door Opened; Now*, etc.

McKim, Charles Follen, American architect, was born in Chester county, Pa., 1847. He was educated at Lawrence Scientific School, Harvard, 1866-67. He began practice, 1872, joined in partnership by William R. Mead, 1877, and by Stanford White in 1879 as McKim, Mead and White. Among the notable buildings erected by the firm are: Columbia University; state capitol, Rhode Island; music hall, public library, Boston; Newport casino; university, Harvard, Century clubs, New York, etc. He was a member of the congressional commission for the improvement of Washington park system. He was awarded the royal gold medal by King Edward for promotion of architecture, 1903. Died, 1909.

McKinley, William, American statesman, twenty-fifth president of the United States, was born in Niles, Ohio, 1843. He was educated in the public schools, at the Poland, Ohio, Academy. In 1861 he volunteered in the Union army, and entered the 23d Ohio infantry as a private. He served four years, rising by merit and faithfulness to the captaincy of his company, and to the rank of major when mustered out in 1865. He then at once began the study of law; in 1867 he was admitted to the bar, and commenced practice at Canton, Ohio, where he afterward had his residence. Elected to congress in 1876, and for six successive terms. In 1882 his election was contested, and he was unseated, but triumphantly returned at the next election. His reputation in congress rests chiefly on the tariff bill that bears his name. It was drawn by him as chairman of the ways and means committee, and passed by the fifty-first congress. In 1891 he was elected governor of Ohio by a large plurality over former Governor James E. Campbell, a very popular democrat, and reëlected in 1893 in the reactionary tidal wave of politics following a contrary tariff policy, that carried the republican party back to power in congress. By this time his name was frequently mentioned as a future candidate for the presidency. He was nominated and elected by an electoral majority of ninety-five, after a campaign of more intense interest than was displayed in any election since the civil war. President McKinley's first term is memorable chiefly for the occurrence of the Spanish-American war and its unexpected results. That his policy during 1896-1900 was acceptable was shown by his unanimous renomination and reëlection in 1900 by an electoral majority of 137. His second term began most auspiciously and ended tragically. On September 5, 1901, he visited the Pan-American exposition in Buffalo, N. Y., that day having been set apart in his honor and called the "President's day." On the afternoon of the following day, while holding a public reception in the temple of music, he was shot twice by Leon F. Czolgosz, an anarchist, who was at once arrested. The wounded president was first taken to the emergency hospital on the exposition grounds, for immediate treatment, and then removed to the residence of John G. Milburn, president of the exposition. Hopes of his recovery were entertained for several days, but on September 13 he began to sink rapidly and died at 2.15 A. M., September 14. His remains were removed to Washington on September 16, lay in state in the capitol on the 17th, and were taken to his home city, Canton, Ohio, where they were interred on the 18th.

Mackintosh, Sir James, Scotch philosopher and politician, was born in Inverness-shire, 1765. He was recorder at Bombay, 1803; judge of admiralty, Bombay, 1806; returned to England, 1811, and entered parliament, 1813. Contributed a masterly preliminary *Dissertation on Ethics* to the *Encyclopædia Britannica;* wrote the *History of the Revolution in England in 1688*, etc. Died at London, 1832.

Maclaren, Ian, pseudonym of John Watson, Scotch preacher and writer, was born at Manningtree, Essex, 1850, of Scottish parents. He was educated at Edinburgh University, and at Tübingen. In 1893 he acquired great distinction and a wide fame by a series of Scottish prose idylls, written for the *British Weekly*, and afterward published under the title of *Beside the Bonnie Brier Bush*. This work won deserved praise for the fidelity with which he portrayed humble and reverent Scottish life and scenes. The volume was followed by *The Days of Auld Lang Syne*. Died, 1907.

McLaughlin (*mak-lôf'lin*), **Andrew Cunningham,** American historian and educator, was born at Beardstown, Ill., 1861. He was graduated at the University of Michigan, 1882; law department, 1885; A.M., 1895. Professor of American history, 1891-1906, University of Michigan, and professor of history, University of Chicago, since 1906. He was director of the bureau of historical research, Carnegie institution, Washington, 1903-05. Author: *Lewis Cass*, in American Statesmen series. Editor: Cooley's *Principles of Constitutional Law; The Study of History in Schools*, etc.

MacLean, George Edwin, American educator, was born at Rockville, Conn., 1850. He was graduated at Williams College, 1871; Yale theological seminary, 1874; University of Leipzig, Ph.D., 1883. Chancellor University of Nebraska, 1895-99; and president of the University of Iowa, 1899-1911. Author: *A Chart of English Literature; Old and Middle English Reader; A Decade of Development in American State Universities*.

MacMahon (*mäk'mä'ôn'*), **Marie Edme Patrice Maurice de,** French general and statesman, was born at Sully near Autun, 1808. In 1859 was made marshal and duke of Magenta. In the Franco-Prussian war, 1870-71, he commanded

the first army corps, but was defeated at Worth, and captured at Sedan. After the war, as commander of the army at Versailles, he suppressed the commune. In 1873 he was elected president of France for seven years, and was suspected perhaps not unjustly, of reactionary and monarchical leanings. He resigned in 1879, and died at Château la Foret, 1893.

McMaster, John Bach, American Historian, professor of American history in the University of Pennsylvania since 1883, was born in Brooklyn, N. Y., 1852. He was graduated at the College of the city of New York, 1872; Ph.D., Litt.D., LL.D.; was a civil engineer, 1873-77, and instructor in civil engineering at Princeton, 1877-83. Author: *A School History of the United States; A Primary School History of the United States; Daniel Webster; Brief History of the United States; The Struggle for the Social, Political, and Industrial Rights of Man*, etc.

MacMonnies, (*mak-mun'iz*), **Frederick William,** American sculptor, was born in Brooklyn, N. Y., 1863. He studied under Augustus St. Gaudens at the Academy of Design and Art Students' League, and completed his art education at Munich. He has received many prizes and decorations, and executed the following works, among others: Sir Henry Vane, Boston Public Library, 1893, central bronze doors and statue of Shakespeare, Congressional library; equestrian statue of General Slocum, Brooklyn, etc.

McMurry, Charles Alexander, educator, was born at Crawfordsville, Ind., 1857, graduate of Illinois Normal University, 1876; University of Michigan, 1876-80; Ph.D., University of Halle. 1887. Principal of practice school, Illinois State Normal University and lecturer Teachers' College, University of Chicago, 1899, 1900; Principal practice School, Northern Illinois Normal School, 1900-1. Author: *Special Method in Reading; Special Method in Literature and History; Special Method in Geography; Special Method in Natural Science; Course of Study in the Eight Grades; Teachers' Manual in Geography; Special Methods in Manual Arts; Special Method in Arithmetics; Special Method in Language; Pioneer History Stories; William Tell*, etc.

McReynolds, James Clark, Attorney General, lawyer, was born at Elkton, Kentucky, February 3, 1862; son of Dr. John O. and Ellen (Reeves) McReynolds. He was graduated from Vanderbilt University, 1882; and from the law department of University of Virginia, 1884. He practiced at Nashville, Tennessee, many years; was professor of law at Vanderbilt University, 1900-3; Assistant Attorney General of the United States, 1903-07; thereafter engaged in private practice in New York. He was long especially retained by the Government in matters relating to enforcement of anti-trust laws, particularly in proceedings against the tobacco trust and the combination of the anthracite coal railroads.

McVeagh, Franklin, merchant, secretary of the treasury, was born in Chester county, Pa. He was graduated from Yale, 1862, Columbia Law School, New York, 1864; abandoned the practice of law because of ill health and went to Chicago. He was president of the bureau of charities and municipal art league; member of the executive committee, national civic federation, and vice-president of the American civic association, 1905. He was secretary of the treasury, 1909-1913.

McVeagh, Wayne, American lawyer, was born near Phoenixville, Chester county, Pa., 1833, He was graduated from Yale, 1853, and was admitted to the bar, 1856. United States minister to Turkey, 1870-71; member of Pennsylvania constitutional convention, 1872-74; head of "McVeagh commission" sent to Louisiana, 1877, by President Hayes amicably to adjust disputes of contending parties there; United States attorney general in cabinet of President Garfield, 1871, was ambassador to Italy, 1893-97, and chief counsel of the United States in the Venezuelan arbitration before the Hague tribunal, 1903.

Madison, James, fourth president of the United States, was born in King George county, Va., 1751. He was graduated at Princeton, N. J., 1771, and studied law. He was sent to the federal congress, 1780; in 1784, to the legislature of Virginia, in which he supported the measures of Jefferson in the revision of the laws, and placing all religious denominations on an equality of freedom without state support. He supported the adoption of the constitution, but opposed the financial policy of Hamilton, and became a leader of the republican or Jeffersonian party. In 1801, Jefferson having been elected president, Madison was made secretary of state, which post he held during the eight years of Jefferson's administration. In 1809 he was elected president of the United States. The European wars of that period, with their blockades and orders in council, were destructive to American commerce. The claim of the English government to impress seamen from American vessels was violently resisted. Madison vainly endeavored to avoid a war with England, which, nevertheless, was declared in 1812, and continued for two years, at a cost of 30,000 lives and $100,000,000. In 1817 he retired to his seat at Montpelier, Va., where he served as a rector of the University of Virginia, and a promotor of agriculture and public improvements. Died at Montpelier, 1836.

Maecenas (*mē-sē'nas*), **Galus Clinius,** Roman statesmen, was born about 70 B. C. He was the friend of Vergil and Horace, and was celebrated for his patronage of letters. In 31 B. C. Maecenas proved himself an able and vigilant governor of Rome, by crushing a conspiracy of the younger Lepidus, and thereby preventing a second civil war. Died, 8 B. C.

Materlinck (*mä'tĕr-lingk*), **Maurice,** Belgian author, was born at Ghent, 1862. He was greatly influenced in his thought by Novalis and Emerson, and his first writings were poetical. The following is a list of his chief works, some of which have been translated into English and have attracted considerable attention: *La Princesse Maleine; Pélleas et Mélisande; Alladine et Palomides; Aglavaine et Selysette; Douze Chansons; Le Trésor des Humbles; La Mort de Tintagiles; L'Intruse;* and *LaSagesse et la Destinée.*

Magellan, Ferdinand, Portuguese navigator, was born about 1480. Under Charles V.'s patronage he and Ruy Falero set out to reach the Moluccas by the west in 1519, reached the Philippines, and died in battle in Matan. On this voyage he discovered the Magellan strait, 375 miles long and 15 miles wide, between the South American mainland and Tierra del Fuego. Died 1521.

Mahaffy, John Pentland, Irish educator, writer, was born in Switzerland, 1839. He was educated in Germany and at Trinity College, Dublin, where he was graduated in 1859; LL.D., St. Andrews, D. C. L., Oxford. He is noted for a wide range of scholarship, has been a frequent contributor to periodicals and has published books on many subjects. Among these are: *Letters on Primitive Civilization; History of Classical Greek Literature; Empire of the Ptolemies; The Silver Age of the Greek World*, etc.

Mahan (*ma-han'*) **Alfred Thayer,** American naval officer and writer, was born at West Point, N. Y., 1840. He was graduated at the United States naval academy, 1859; served in the civil war; visited Eurpoe in command of the *Chicago*, 1893, receiving many honors, among them degrees from both Oxford and Cambridge. He was retired at his own request in 1896. During the war with Spain he was a member of the naval board of strategy; and in 1899 was appointed by President McKinley one of the American delegates to the universal peace conference at The Hague. Author: *The Gulf and Inland Waters; Influence of Sea Power Upon History; Life of Nelson*, 2 volumes; *Lessons of Spanish War; Retrospect and Prospect; Sea Power in its Relations to the War of 1812; From Sail to Steam.*

Mahomet (*ma-hom'et*). See **Mohammed.**

Maine, Sir Henry James Sumner, celebrated English lawyer and writer, was born in 1822. He was educated at Cambridge University, where in 1847, he became regius professor of comparative jurisprudence at Oxford. In 1847 he was elected Whewell professor of international law at Cambridge. He introduced wise reforms into Indian law, but his work in the origin and growth of legal and social institutions is the work on which his fame mostly rests. His publications include: *International Law; Dissertations on Early Law and Custom*, etc. He died at Cannes, France, 1888.

Major, Charles, American lawyer, author, was born in Indianapolis, Ind., 1856. He was educated in the common schools at Shelbyville and Indianapolis; studied law and practiced at Shelbyville. Author: *When Knighthood was in Flower; Dorothy Vernon of Hadden Hall*, etc. Died 1913.

Malebranche (*mäl'brānsh'*), **Nicholas,** French philosopher, was born in Paris, 1638. At the age of twenty-two he entered into the congregation of the Oratory, and he devoted himself to the study of Bible History and of the fathers of the church. He subsequently devoted much attention to Descartes' *Traite de l' Homme*, which led him to the study of philosophy, and called forth his famous work, *De la Recherche de la Verite.* Died at Paris, 1715.

Malherbe (*mäl-ĕrb'*), **Francoi de,** French poet, was born at Caen, 1555. In 1605 he became court poet, and is called the founder of classic poetry in France. Died in Paris, 1826.

Malibran (*mal'i-bran*), **Maria Felicita,** celebrated mezzo-soprano singer, was born at Paris, 1808. She very early showed extraordinary talent, and made her debut in Italian opera, 1825, in London. In New York she married M. Malibran, a French banker. After her husband's failure in business she returned to the stage, and was received with great enthusiasm in France, England, Germany and Italy. She was one of the most popular and successful prima donnas of modern times. Died 1836.

Malpighi (*mäl-pē'hē*), **Marcello,** Italian anatomist, was born near Bologna, Italy, 1628. He lectured in Bologna, Pisa, and other places, and wrote works on the anatomy of plants, the physiology of the silkworm, and medical subjects. His name was given to the Malpighian genus. In 1691 he became physician to Pope Innocent XII., but died in 1694.

Malthus (*mal'thus*), **Thomas Robert,** English political economist, was born near Guilford, England, 1766. He was graduated at Cambridge, 1788; was for some time fellow of Jesus College, Cambridge; published in 1798, his *Essay on Population* in which he maintained that population tends to increase out of proportion to the increase of means of subsistence. He died at St. Catherine's, near Bath, 1834.

Mann, Albert Russel, educator, agricultural writer, was born at Hawkins, Pa., 1880, and graduated from the College of Agriculture, Cornell University, 1904; assistant superintendent Boston Farm School, 1904-5; assistant on Bailey's *Cyclopedia of American Agriculture*, 1905-8; successively assistant professor of dairy industry, secretary and professor of agricultural editing, New York State College of Agriculture, Cornell University, since 1908. Author: *Beginnings in Agriculture*, etc.

Mann, Horace, American statesman and educator, was born at Franklin, Mass., 1796. He was graduated at Brawn University, 1819, studied, law, and was admitted to the bar, 1823. Member of congress, 1840-53; and from 1853 to 1859 president of Antioch College, Ohio. He wrote: *Lectures on Education; Report of an Educational Tour of Germany, Great Britian, and Ireland;* and was untiring in his efforts in the cause of educational extension and reform, in the supression of slavery, and in the promotion of temperance. Died, 1859.

Mannering, Mary, actress, was born in London, England, 1878, daughter of Richard and Florence Friend. She was educated in private schools; studied for the stage under Herman Vezin; went on the stage at the age of fifteen. She came to the United States under management of Daniel Frohman; made her American debut at Parsons' theater, Hartford, Conn., 1896, in *The Courtship of Leoni*; New York debut, Lyceum theater, four days later. She has since appeared in leading roles in modern drama.

Manning, Edward Henry, English prelate, was born in Hertfordshire, England, 1808, He was graduated at Oxford in 1830, studied theology, and was appointed rector of Lavington and Graffham, Sussex, 1834. He became archdeacon of Chicester, 1840; in 1851 resigned his preferments in the church of England, and joined the Roman Catholic Church; was ordained a priest in 1857; nominated archbishop of Westminster 1865, and created cardinal, 1875. Died 1892.

Mansfield, Richard, American actor, was born in Heligoland, Germany, 1857 He studied in England for the East Indian Civil Service; came to Boston and opened a studio, and later entered theatrical profession. He was very successful in a wide repertoire from Koko in *Mikado* to Richard III. Was head of his own company, and created such parts as Beau Brummel, Baron Chevrial, and the titular roles in *Dr. Jekyll and Mr. Hyde.* Appeared as Cyranno de Bergerec in 1899, and played Shylock, Henry V., Beaucaire, and Brutus in *Julius Cæsar.* Died 1907.

Mantegna (*män-ān'yä*), **Andrea,** Italian painter, was born in or near Padua, 1431. A precocious genius, he set up a studio of his own when only seventeen years old. His greatest works were nine pictures representing the *Triumph of Cæsar* now at Hampton Court, England. He did not aim at grace and beauty in his pictures, but his technical excellences greatly influenced Italian art. Died 1506

Mantell (*man'tel*), **Robert Bruce,** actor, was born in Irvine, Ayrshire, Scotland, 1854. He made his professional debut at Rochdale, England, as the Sergeant in *Arrah-na-Pogue*, 1876; came to the United States and played juvenile roles with Mme. Modjeska, 1878; returned to England, and for three years supported Miss Wallis as leading man. Later appeared in New York as Lord Ippanhoff in *Fedora* with Fanny Davenport; afterward became a star, and has since been at the head of his own company in classic and romantic plays.

Manzoni (*mān-dzō'nē*), **Ale andro,** Italian novelist and poet, was born at Milan, 1785. He published his first poems in 1806, married happily in 1810, and spent the next few years in writing sacred lyrics and a treatise on the religious basis of morality. His noble ode, *Il Cinque Maggio*, was inspired by the death of Napoleon. In spite of his Catholic devotedness, he was a strong advocate of a united Italy. Died at Milan, 1873, leaving the memory of a great writer and singularly nobleman.

March, Franci Andrew, American physiologist, professor of English language and comparative philology, Lafayette College, 1856-1911, was born at Millbury, Mass., 1825. He was graduated at Amherst, 1845; LL.D., Princeton, 1970; Amherst, 1871; L. H. D., Columbia, 1887; D.C.L., Oxford England, 1896; Litt.D., Cambridge, England and Princeton, 1896. Author: *Method of Philological Study of the English Language; Comparative Grammar of the Anglo-Saxon Language; Anglo-Saxon Reader.* Died, 1911.

Marconi (*mär-kō'nē*), **Gugliemo,** electrical engineer and pioneer of wireless telegraphy, was born in Girffone, near Bologna, 1874. His father was an Italian, his mother an Irish woman. He was educated at Leghorn and Bologna Universities; LL.D., Glasgow, Aberdeen, and University of Pennsylvania; D.Sc., Oxford. He began in 1890, on his father's estate, experiments to test

the theory that the electric current is capable of passing through any substance, and, if started in any given direction, of following an undeviating course without need for a wire or other conductor. Soon afterward he succeeded in sending messages from Spezia to a steamer fifteen kilometers distant; also sent messages from Queen Victoria ashore to the prince of Wales on royal yacht, 1897; came to the United States, 1899; used his method in reporting election, 1900; succeeded in establishing wireless telegraphic communication across the Atlantic ocean, 1902; daily ocean news service by wireless telegraphy inaugurated by him on trans-Atlantic liners, 1904.

Marcus Aurelius Antoninus, son of Annius Verus and Domitia Cavilla, was born at Rome, 121 A. D. His qualities attracted the notice of the emperor, Hadrian, who used to term him not *Verus*, but *Verissimus*, and who conferred high honors on him, even while a child. When only seventeen years of age he was adopted, with Lucius C. Commodus, by Antoninus Pius, the successor of Hadrian; and Faustina, daughter of Pius, was selected for his wife. He was made consul in 140 A. D., and from this period to the death of Pius, 161 A. D., he continued to discharge the duties of his various offices with the greatest promptitude and fidelity. He studied oratory under Herodes Atticus and Cornelius Fronto, and his love of learning was insatiable. Even after he had attained to the highest dignity of the state he did not disdain to attend the school of Sextus of Cherónea. Men of letters were his most intimate friends, and he received the highest honors both when alive and dead. His death in 180 A. D., was felt to be a national calamity; he was deified, and for more than a hundred years his image was found among the household gods of the Romans.

Margaret of Angoulême (*dăn'gōō'lăm'*), queen of Navarre, and daughter of Charles of Orleans, was born in 1492. In 1527 she was married to Henri d'Albret, king of Navarre, to whom she bore a son, who died in infancy, and a daughter, Jeanne d'Albert, mother of the great French monarch, Henry IV. She encouraged agriculture, the arts, and learning, and to a certain extent embraced the cause of the reformation. She died at Odos, 1549.

Margaret of Anjou (*dăn'zhōō'*), daughter of René of Anjou, was born in 1430. In 1445 she was married to Henry VI. of England. In the wars of the Roses, Margaret, after a brave struggle of nearly twenty years, was finally defeated at Tewkesbury, in 1471, and was kept in the Tower four years, until ransomed by Louis XI. She then retired to France, and died at the castle of Dampierre near Saumur, 1482.

Margaret of Austria, daughter of the emperor Maximilian and Mary of Burgundy, was born at Ghent, Belgium, 1480. She married first John of Castile, and second Philibert of Savoy; was made governor of the Netherlands in 1507, and negotiated both the league of Cambria, in 1508, and the "pair des dames," in 1529. She died at Mechlin, Belgium, 1530.

Margaret of Denmark, daughter of Waldemar IV. of Denmark, was born in 1353. She succeeded her father, became queen also of Norway on the death of her husband, Hakon VIII., but was soon expelled. She recovered Norway in 1387, and, having defeated Albert of Mecklenburg in 1389, united the three Scandinavian kingdoms by the union of Kalmar in 1397. Died, 1412.

Maria Christina, queen-dowager of Spain, was born at Naples, 1806, daughter of Francis I., king of the Two Sicilies. In 1829 she became the fourth wife of Ferdinand VII. of Spain. In 1854 a revolution expelled her from the country, and she took refuge in France, but returned to Spain in 1864, only to retire again in 1868. Died, 1878.

Maria Theresa (*mä-rī'ä te-rē'sä*), daughter of the emperor Charles VI. of Germany, was born at Vienna, 1717. By the "pragmatic sanction," for which the principal European powers became sureties, her father appointed her heir to his hereditary thrones. Frederick II. of Prussia claimed Silesia, and poured his armies into it; Spain demanded the Austrian dominions in Italy; and the Bavarians, assisted by the French, invaded Bohemia, the elector of Bavaria being crowned emperor as Charles VII., in 1742. The young queen was saved by the chivalrous fidelity of the Hungarians, supported by Great Britain. The empress-queen lost Silesia to Prussia, Parma and Piacenza to Spain, and some Milanese districts to Sardinia. She joined with Russia and Prussia in the first partition of Poland, 1772, securing Galicia and Lodomeria; while from the porte she obtained Bukowina, 1777, and from Bavaria several districts. She died in 1780. A woman of majestic figure and an undaunted spirit, she combined feminine tact with masculine energy; and not merely won the affection and even enthusiastic admiration of her subjects, but raised Austria from a wretched condition to a position of assured power. Of her ten surviving children, the eldest son, Joseph II., succeeded her.

Mariana (*mä'rē-ä'nä*), **Juan,** Spanish historian, was born in 1536. He was a Jesuit, taught theology in Rome, Sicily, and Paris, and finally lived in retirement in Toledo. In 1609 he published at Cologne *Seven Theological and Historical Treatises*, two of which were censured by the inquisition, and the author was subjected to imprisonment and penance. His chief work is his *History of Spain*, which extends to the accession of Charles V. with a summary of later events down to 1621. He died in 1623.

Marie Antoinette (*mä'rē' ăn'twä'net'*), **Josephe Jeanne,** wife of Louis XVI. of France, youngest daughter of Francis I., emperor of Germany, was born at Vienna, 1755. Soon after the accession of Louis XVI. libels were circulated by her enemies, accusing her of constant intrigues, not one of which has ever been proved. From the first hour of the revolution she was an object of fanatical hatred to the mob of Paris. At last she resolved on flight. Her husband long refused to abandon his country, and she would not go without him. A dim sense of kingly duty and honor was not wanting in Louis, but after the mob stopped his coach in 1791, and would not let him go to St. Cloud, he consented. The flight took place on the night of the 20th of June. Unfortunately the royal fugitives were recognized and captured at Varennes. From this time her attitude became heroic, but the French people could not rid themselves of the suspicion that she was secretly plotting with enemies for the invasion of the country. On August 1, 1793, she was removed to the conciergerie by order of the convention, condemned by the revolutionary tribunal October 16, and guillotined next day.

Marie de'Medici (*mä'rē' dā mā'dē-chē*), queen of France, daughter of Francis of Tuscany, was born in 1573. She married Henry IV. of France in 1600, and became the mother of Louis XIII., during whose minority she was regent. She was overthrown by Richelieu after a long contest, and left France in 1631. Died, 1642.

Mario (*mä'rē-ō*), **Giuseppe,** famous Italian opera-singer, was born at Cagliari, Italy, 1810, son of General di Candia. In 1838 he made his first appearance in opera as Robert in *Robert le Diable*. In this he achieved the first of many successes in Paris, London, St. Petersburg, and America. Mario married the famous singer, Giulia Grisi, and retired from the stage in 1867. Died, 1883.

Marion, Francis, American general and patriot, was born near Georgetown, S. C., 1732. He received a scanty education, and, after a trial of seafaring life, in which he was wrecked and with difficulty rescued, engaged in farming. His first active service was in Charleston harbor, and later in the defense of Fort Moultrie, 1776. He was present at the siege of Charleston, 1780, raised several companies of volunteers among the country lads, or "cowboys" as the British called them, and with this force marched to the relief of General Gates, at that time in North Carolina. Among the most noted engagements in which he took part may be named Fort Moste, Fort Wilson, Granby, Parker's Ferry, and Eutaw. At the close of the war Marion resumed his former occupation, and remained on his plantation until his death, 1795.

Marion Harland. See **Terhune, Mary V.**

Marius (*mä'ri-us*), **Caius,** Roman general, was born near Arpinum, 157 B. C. He served with distinction at Numantia under the younger Scipio Africanus, and in 119 was tribune of the plebs. Meanwhile an immense horde of Cimbri and Teutons had burst into Gaul, and repeatedly defeated the Roman forces. Marius, consul for the second, third, fourth, and fifth times, 104-101, annihilated them after two years' fighting in a terrible two days' battle near Aix, in Provence, where 100,000 Teutons were slain. Marius was declared the saviour of the state, the third founder of Rome, and was made consul for the sixth time in 100. Marius and Cinna were elected consuls for the year 86, but Marius died a fortnight afterward.

Mark, Edward Laurens, American naturalist and educator, professor of anatomy, Harvard, was born at Hamlet, Chautauqua county, N. Y., 1847. He was graduated at the University of Michigan, 1871; Ph.D., University of Leipzig, Germany, 1876; LL.D., University of Michigan, 1897, University of Wisconsin, 1904. Hersey professor of anatomy since 1885, director of zoölogical laboratory since 1900, Harvard University.

Markham, Edwin, American poet, writer, lecturer, was born in Oregon city, Ore., 1852. He went to California, 1857, worked at farming, blacksmithing, herded cattle and sheep during his boyhood, and earned his way through the common school. He has written poems, since early boyhood, for California papers and received recognition of best Eastern magazines; was principal and superintendent of schools in California until 1899. Author: *The Man with the Hoe, and Other Poems; Lincoln, and Other Poems;*

Marlborough, John Churchill, first **Duke of,** soldier and diplomat, was born in 1650. He obtained a commission, through the influence of his sister, with the duke of York, and first served under Turenne; deserted James II. at the revolution, but, though created earl and commander-in-chief by William III., intrigued with his former master; was appointed captain-general and duke under Queen Anne, and won the victories of Blenheim, 1704, Ramillies, 1706, Oudenarde, 1708, and Malplaquet, 1709, but was recalled in 1710, and dismissed on a charge of peculation. Died, 1722.

Marlowe, Christopher, British dramatic writer, was born about 1564. He belonged to the generation immediately preceding that of Shakespeare, and is considered by many to be second only to Shakespeare among the dramatists of the time. His chief plays are: *Tamerlane the Great; The Tragical History of Dr. Faustus*, to which Goethe acknowledged his obligations; *The Jew of Malta*; and *Edward the Second*. He died in a tavern brawl at the age of twenty-nine, in 1593.

Marlowe, Julia, American actress, was born in England, in the village of Caldbeck, Cumberlandshire, 1870. She came to the United States with her parents at the age of five; lived in Kansas two years; moved to Ohio, locating finally in Cincinnati; attended public schools until her twelfth year, then joined juvenile opera company, which gave *Pinafore, Chimes of Normandy*, and other light operas. She then retired from the stage and studied three years in New York; made her metropolitan debut as Parthenia in *Ingomar*, and since 1888 has starred in Shakespearean and other tragic and romant roles.

Marmontel (*mär'mŏn'tel'*), **Jean François,** French writer, was born at Bort, 1723. He wrote *Les Incas; Bélesaire*, and *Contes Moraux*, and made his way into Parisian society by gentleness, wit, and a dainty and candid literary power. He was elected to the French Acedafny in 1763, and was a literary disciple of Voltaire. Died, 1799.

Marquette (*mär'ket'*), **Jacques,** French Jesuit missionary and American explorer, was born at Laon, France, 1637. He founded Sault Ste. Marie and Kaskaskia Missions; accompanied Joliet in his exploration of the Mississippi, and died while attempting to establish a mission among the Illinois Indians, 1675.

Marryat (*mar'i-at*), **Frederick,** English author, was born in Westminister, 1792. He served in the navy for many years, becoming a post captain, and wrote many novels, including: *Frank Mildway; Midshipman Easy; Peter Simple; Snarleyyow; The Little Savage;* and *Valerie*. He also published a *Code of Signals for Vessels Employed in the Merchant Service*, adopted in England and other countries, and *Dairy in America*, in 6 volumes. Died, 1848.

Marsh, George Perkins, American diplomat and philologist, was born at Woodstock, Vt., 1801. He studied law, was elected to congress in 1842, was United States minister to Turkey, 1849-53, and to Italy, 1861-82. He was made LL.D. by Harvard in 1859. He died at Vallombrosa in Italy, 1882

Marshall, Alfred, English economist, was born in London, 1842. He was educated at Merchant Taylors' and St. John's, Cambridge; D.Sc., Oxford and Cambridge; honorary LL.D., Edinburgh; hon. Dr. Jur., Cracow University; professor of political economy, Cambridge University, 1885-1908; member of royal commission on labor, 1891; vice-president of the royal economic society; fellow of the British Academy, 1902, and member correspondent de l'Institut de France, 1908. Author: *Economics of Industry; Curriculum in Economics*, etc.

Marshall, Henry Rutgers, American architect and author, was born in New York, 1852. He was graduated at Columbia in 1873; L. H. D., Rutgers, 1904; in practice as architect since 1878. *Pain, Pleasure, and Æsthetics; Æsthetic Principles; Instinct and Reason*, etc. He is a contributor to art, psychological and philosophical journals and literary magazines and reviews, and was the principal speaker on æsthetics at the congress of arts and sciences, St. Louis Exposition.

Marshall, John, American jurist, chief-justice of the United States, was born in Fauquier county, Va., 1755. He was privately educated, and his law studies were interrupted by the revolution, in which he served under his father, Colonel Marshall, 1775-79, rising to the rank of captain. In 1871 he began to practice law in Fauquier county, Va. He was sent to France with Pinckney and Gerry as an envoy in 1797, and with Pinckney was ordered to leave the country when they had declined Tallyrand's request for a loan. In 1799 he was elected to congress, and in 1800 became secretary of state. He was made chief justice of the United States in 1801 by President John Adams, and held this positions until his death, which occurred at Philadelphia, Pa., 1835. His great legal learning and judicial poise dominated the supreme court for thirty-four years, during which his decisions on constitutional questions established precedents in the interpretation of the constitution that have been accepted ever since.

Marshall, Thomas Riley, Vice-President of the United States, lawyer, was born at North Manchester, Ind., March 14, 1854, son of David M. and Martha A. (Patterson) Marshall. He was graduated from Wabash College, 1873, and subsequently received the degree LL.D. from Wabash, Notre Dame and University of Pennsylvania. He was admitted to the bar, 1875; 1876-92, was member of the law firm, Marshall & McNagny of Columbia City, Ind.; and, 1892-1909, of Marshall, McNagny & Clugston. He was governor of Indiana, 1909-13; July 3, 1912, received the Democratic nomination for vice-president at the Baltimore convention; and was elected at the ensuing election. He took his seat as vice-president March 4, 1913. On Oct. 2, 1895, he married Lois I. Kinsey, of Angola, Ind.

Martel, Charles. See **Charles Martell.**

Martens (*mär'tenz*), **Frederic de,** Russian diplomat and international lawyer, late professor of international law, University of St. Petersburg, 1871-1907, was born at Pernau, in the Russian Baltic provinces, 1845. He was graduated at the University of St. Petersburg, 1867; doctor of international law, 1873; LL. D., Edinburgh, Cambridge, and Yale Universities; D. C. L., Oxford. He was Russian delegate at the peace conference at The Hague, 1899, and president of the second commission; Russian delegate at the peace negotiations between Russia and Japan in Washington, 1905. Author: *La Paix et la Guerre*; *On Consular Jurisdiction in the East*, etc.

Martin (*mär'tan'*), **Bon Louis Henri,** French historian, was born in 1810, at Saint Quentin. He studied law, but later abandoned it, and, after publishing a series of historical novels, gained celebrity by his *Histoire de France*. In 1870 he became mayor of Paris, and in 1871, a member of the national assembly. In 1876 he was elected a senator, and in 1878 a member of the French Academy. Died, 1883.

Martin, William Alexander Parsons, American missionary and Chinese scholar, was born at Livonia, Ind., 1827. He was graduated at the Indiana University, studied theology at Presbyterian Seminary, New Albany, Ind.; D. D., Lafayette, 1860; LL. D., University City of New York, 1870. Went to Peking, China, and Yeddo, Japan, with John E. Ward, United States minister, 1859. Missionary at Peking, 1863-68; president and professor of international law at Tung Wen College, thirty years. Adviser of Chinese authorities on matters of international law in several disputes with European powers; and was made a mandarin of the third class, 1885, and of the second class, 1898. Author: *Lore of Cathay*; *Siege in Peking*; *A Cycle of Cathay*; *Chinese Legends*; *Awakening of China*.

Martineau (*mär'ti-nō*), **Harriet,** English writer of Huguenot descent, was born at Norwich, in 1802. She visited the United States in 1834, and the East in 1846, publishing descriptive works on her return. She wrote *Deerbrook*, *The Hour and the Man*, and other novels, and many tales for children. She was also author of a condensation of Comte, and *History of England During the Thirty Years' Peace*. Died, 1876.

Martineau, James, English theologian, brother of the preceding, was born at Norwich, 1805. In 1841 he was appointed professor of mental and moral philosophy at Manchester new college. He was principal of the college, 1868-85. As one of the profoundest thinkers and most effective writers of his day, he received degrees from Harvard, Leyden, and Edinburgh. He died in 1900.

Marx, Heinrich Karl, German socialist, was born in Trèves, 1818, son of a lawyer. He was educated at Bonn and Berlin, took an active part in the liberal movement of 1840, and, after the suppression of the *Rhenish Gazette*, edited by him, he went to Paris. Later he settled in London, where he engaged in literary work, and took an active part in the international working men's association. After the secession of the anarchist section in 1873, he took but little part in affairs, and died at Hampstead ten years later, 1883. His chief work was *Das Kapital*.

Mary, queen of England, 1553-58, was born at Greenwich, 1516. She was the daughter of Henry VIII. and Catharine of Aragon, and succeeded to the throne on the death of her half-brother, Edward VI. In 1554 she was married to Philip II. of Spain; and in the following year, having already repealed all the laws enacted in favor of Protestantism, and reëstablished Catholicism, she began, probably reluctantly, that series of persecutions of the Protestants which have earned for her the title of the "bloody Mary." During her short reign of four years, no fewer than 284 persons, of all ages and sexes, were put to death. She died 1558, succeeded by her half-sister, Elizabeth.

Mary, queen of Scots, daughter of James V. and Mary of Lorraine, was born at Linlithgow, Scotland, 1542. She became, by her father's death, queen before she was a week old. She was educated in France, and married the dauphin, Henry II., 1558, who died 1560. In 1561 she returned to Scotland, her Kingdom, and, in 1565, married her cousin, Lord Darnley. Refraining from interference with the Protestant movement she retained her own Catholic faith, but chose Protestant advisers. Her only son, afterward James VI., was born in 1566. Darnley was murdered by Hepburn, Earl of Bothwell, almost certainly with Mary's connivance, and her marriage with Bothwell, in May, alienated the nobles. They rose, took the queen prisoner at Carberry, carried her to Edinburgh, then to Loch Leven, where they forced her to abdicate in July. Next year, escaping, she fled to England, and was there for many years a prisoner. Catholic plots were formed to liberate her and put her in place of Elizabeth on the English throne, by virtue of the fact that she was next in order of succession, being great-granddaughter of Henry VII. At last she was accused of complicity in Babbington's conspiracy, tired, found guilty, and executed in Fotheringhay castle, 1587.

Mason, George, American statesman, was born at Doeg's Neck, Va., 1725. In 1775 the Virginia convention made him a member of the committee of safety which was charged with the government of the colony. In 1777 he became a member of the continental congress. In 1787 he was one of the foremost men in the convention which drew up the constitution of the United States, and took firm ground against making slavery permanent in the country. He was chosen Virginia's first United States senator, but refused to serve. Died in Fairfax county, Va., 1792.

Mason, James Murray, American jurist and statesman, was born in Fairfax county, Va., 1798. He was elected senator from Virginia in 1847, and retained that place until the breaking out of the civil war, when he withdrew from the senate and cast in his lot with the seceding states. He was captured with John Slidell on the steamer *Trent*, in 1861, when on his way to Europe to represent the confederacy abroad, and was held prisoner by the federal authorities until January 1, 1862, when, upon the demand of the English government, he was released. He died near Alexandria, Va., 1871.

Maspero (*más'pĕ-rō'*), **Gaston Camille Charles,** French Egyptologist, was born at Paris, 1846, of Italian parents. In 1874 he became professor of Egyptology at the Collège de France, and after 1881 keeper of the Boulaq museum and director of explorations in Egypt. Author: *Egyptian Archæology*; *Life in Ancient Egypt and Assyria*; *Dawn of Civilization*; *The Struggle of the Nations*; *The Passing of the Empires*, etc.

Massasoit (*mas'ä-soit'*), chief of the Pokanoket or Wampanoag Indians, ruled over most of south Massachusetts from Cape Cod to Narragansett bay. In 1621, three months after Plymouth had been founded, Massasoit and sixty warriors, armed and painted, came to the settlement and made a treaty of peace. His home was where now stands the town of Warren, R. I., and here he entertained Roger Williams for several weeks, when on his way to Providence after being banished from Massachusetts. Massasoit was honest, kept his word, and loved peace. He died in 1661.

Masséna (*má'sā'nä'*), **André,** prince of Essling, and duke of Rivoli, one of the most celebrated of Napoleon's marshals, was born at Nice, 1758. He entered the army in 1775, and retired from it after having served for fourteen years. The revolution, however, again roused his military ardor. His rise was rapid, and he attained the rank of general of division, 1793. In 1810 he was appointed to command the army which invaded Portugal, but was foiled by Wellington, and compelled to abandon the Portuguese territory. After this period Masséna did not again appear in the field. He died in 1817.

Massenet (*má's'ne'*), **Jules Emile Frédéric,** French composer, was born at Montaud, 1842. He was educated at Lycée, Saint-Louis, and Le Paris conservatoire, under Laurent, Reber, Savard, and Ambroise Thomas. He was professor of composition at the conservatoire, 1878-96. He wrote the following operas: *La Grande Tante*; *Werther*; *Thaïs*; *Le Portrait de Manon*, *Le Jongleur de Notre Dame*, etc.

Massillon (*má'sē'yōn'*), **Jean Baptiste,** one of the most eloquent of French pulpit orators, was born at Hijères, 1663. He entered at the age of eighteen into the congregation of the oratory, and became so celebrated as a preacher that he was summoned to court to display his powers. His success there was complete. Louis XIV. complimented him in the strongest terms. His sermons and other theological works form fifteen volumes. Died, 1782.

Massinger (*mas'in-jĕr*), **Philip,** English dramatist, was born at Salisbury, England, 1583. He studied at Oxford, 1602, and in 1606 went to London. Eighteen of his plays are still extant. Notwithstanding his genius and the popularity of his plays, he lived in obscurity; and the course of his life in London is not easily traced. Among his best-known works are: *Duke of Milan*; *Fatal Dowry*, and *A New Way to Pay Old Debts*, which latter is still in use upon the stage. He was found dead in his bed in 1640, and was entered upon the book of the parish church simply as "a stranger."

Mather (*maTH'ĕr*), **Cotton,** American colonial divine, was born in Boston, 1663. The phenomenon termed "Salem witchcraft" having appeared in the colony, he investigated it, and wrote, in 1689, his *Memorable Providences Relating to Witchcraft and Possessions*. He found that devils or possessed persons were familiar with dead and foreign languages, etc., and eagerly advocated the adoption of desperate remedies for the diabolical disease. Despite his bitter bigotry and narrow-mindedness, he was an able man, and, with remarkable industry, wrote 382 works. Died, 1728.

Mather, Increase, American colonial divine, father of the preceding, was born at Dorchester, 1639. He was for about sixty years pastor of the North church, Boston. In 1684 he was also chosen president of Harvard College, for which he obtained the right to confer the degrees of B. D. and D. D. His influence was so great in the colony that he was sent to England in 1688 to secure a new charter, and had the appointment of all offices under it. Died, 1723.

Mathews, Shailer, theologian, editor, was born at Portland, Me., 1863; graduated from Colby College, 1884; graduate of Newton theological institution, 1887; University of Berlin, 1890-1; D. D., Colby, 1901, Oberlin College, 1908. Has been associate professor of New Testament history and interpretation, 1894-7, professor, 1897-1905, professor systematic theology, 1905-6, history and comparative theology since 1906; junior dean divinity school, 1899-1908, dean since 1908, University of Chicago. Editor: *The World To-Day*, 1903-1912. Author: *The Social Teaching of Jesus; A History of New Testament Times in Palestine; Constructive Studies in the Life of Christ* (with E. D. Burton), *The French Revolution—A Sketch; The Church and the Changing Order*; *The Social Gospel; The Gospel and the Modern Man*, etc.

Mathew, Theobald, "Father Mathew," apostle of temperance, was born at Thomastown in Tipperary, Ireland, 1790. He took priest's orders in the Capuchin order in 1814; and in his ceaseless labors at Cork, seeing how much of the degradation of his people was due to drink, became in 1838 an ardent advocate of total abstinence. His success was marvelous, and everywhere he roused enthusiasm and secured warm affection. But overwork ruined his health, and he died in 1856.

Matsukata (*mät'sōō-kä'tä*), **Marquis Masayoshi,** Japanese statesman, was born at Kagoshima, 1835. He received a military and literary education, and naval training from foreigners in Nagasaki. He visited Europe as president of the Japanese section of the Paris exposition of 1878; was appointed minister of home affairs, 1880; minister of finance, 1881. The redemption of inconvertible notes was the most important work accomplished during his more than ten years' service as minister of finance. He was created count, 1884; premier, 1891-92, and 1896-98; minister of finance in October of the latter year until October, 1900. The adoption of the gold standard, for which the count was mainly responsible, has been the most important incident in the history of Japan in recent years. He visited America and Europe, 1902; received an honorary D. C. L. from Oxford, 1902. Author: *Report on the Adjustment of Paper Currency*; *History of National Debts in Japan*, etc.

Matthews, James Brander, American author, professor of dramatic literature, Columbia, since 1892, was born at New Orleans, 1852. He was graduated at Columbia College, 1871; LL. B., 1873; D. C. L., University of the South, 1899, Litt. D., Yale, 1901; LL. D., Columbia, 1904. He was admitted to the New York bar, but turned to literature. Author: *The Theaters of Paris*; *French Dramatists of the Nineteenth Century*; *Introduction to the Study of American Literature*; *A Confident To-Morrow*; *The Action and the Word*; *The Historical Novel*; *Parts of Speech*, *Essays in English*; *Development of the Drama*. Decorated with legion of honor, 1907.

Matthews, Franklin, American journalist, editor of the *New York Sun* since 1890, was born at St. Joseph, Mich., 1858. He was graduated at Cornell University, 1883. He was reporter and editor of *Philadelphia Press*, 1886-90. Author: *Philadelphia*; *Our Navy in Time of War*; *The Newborn Cuba*.

Matthias (*mä-thī'as*), **Corvinus,** king of Hungary, was born in 1443. He was proclaimed king in 1458, soon after his release from imprisonment at Prague; maintained the throne against the emperor, Frederick III., and, after having engaged in successful wars with the Turks, received the Bohemian crown from the pope on condition of extirpating the Hussites. After this he engaged in two wars with the emperor, and captured Vienna in 1485, living there until his death in 1490.

Maudsley, Henry, English physician and alienist, was born near Giggleswick, Yorkshire, 1835. He was educated there and at University College, London. He graduated M. D. in 1857, was physician to the Manchester asylum, settled in London in 1862 as a consulting physician, and filled the chair of medical jurisprudence at University college, 1869-79.

Maupertuis (*mō'per'twē'*), **Pierre Louis Moreau de,** French geometrician and astronomer, was born at St. Malo, 1698. He studied at the college of La Marche, at Paris, and, after having served for four years in the army, devoted himself to science and literature. In 1745, invited by Frederick the Great, he settled at Berlin, and was made president of the royal academy there. He died in 1759.

Maurice (*mō'ris*), prince of Orange and count of Nassau, one of the most skillful and distinguished generals of his age, was born at Dillenburg, 1567, son of William I. In 1597, with the help of some English auxiliaries, he defeated the Spaniards at Turnhout in Brabant, and in 1600 won a splendid victory at Nieuwport. Finally, in 1609, Spain was compelled to acknowledge the united provinces as a free republic. Died, 1625.

Maxim, Sir Hiram Stevens, American inventor, was born at Sangerville, Me., 1840. He received a common school education, and his scientific knowledge was obtained by study and attending lectures. He was for four years an apprentice to coach-building; worked in various iron works; patented numerous inventions in the United States, and went to England in 1881, where he became a naturalized citizen. He has patented many electrical inventions, including incandescent lamps, self-regulating current machines, etc.; invented the Maxim gun, automatic system of firearms, which makes the recoil of the gun serve as the power for reloading. Chevalier légion d'honneur, France, and knighted by Queen Victoria in 1901.

Maximilian I., German emperor, was born in 1459, son of Frederick III. In his nineteenth year he married Maria, only child and heiress of Charles the Bold, duke of Burgundy, and was soon involved in a war with Louis XI. of France, who attempted to seize some of her possessions. Subsequently he married the daughter of the duke of Milan, and, although inclined to peace, he became involved in war with the Swiss, the Venetians, and the French. Died, 1519.

Maximilian, Ferdinand Maximilian Joseph, archduke of Austria and emperor of Mexico, was born in Vienna, 1832. He was the brother of the present emperor of Austria-Hungary. In 1863 Napoleon III. had it in mind to conquer Mexico and set up an empire, and he offered the crown to Maximilian, who went to Mexico in 1864. But he pleased no one, and in 1866, when the French troops left the country, the empire fell to pieces. Maximilian tried to form a native army for his own defense, but he was captured by the republicans, and, after a trial, shot near Queretaro, in his thirty-fifth year, 1867.

Max O'Rell. See **Blouet, Paul.**

Maxwell, James Clerk-, British physicist, was born at Edinburgh, 1831. He was educated at the University of Edinburgh. In the great work of his life, *Electricity and Magnetism*, 2 volumes, he constructed a theory of electricity in which "action at a distance" should have no place. He was the first to make color-sensation the subject of actual measurement. But he was best known to the public by his investigations on the kinetic theory of gases. In 1879 he edited Cavendish's *Electrical Researches*, and died in the same year.

Maxwell, William Henry, American educator, superintendent of schools of Greater New York since 1898, was born at Stewartstown, Ireland, 1852. He was educated at royal academical institution, Belfast, and Queen's Colleges, Galway and Belfast. He was teacher in the public schools, Brooklyn, N. Y., 1880-82; assistant superintendent of schools, Brooklyn, N. Y., 1882-87, and superintendent, 1887-98. He is author of a series of text-books on English grammar and composition, etc.

May, Sir Thomas Erskine, English jurist and writer, was born in London, 1815. He was educated at Bedford school. He was created successively C. B. and K. C. B., and was on his retirement, in 1886, created Baron Farnborough. His *Treatise on the Law, Privileges, Proceedings, and Usage of Parliament* has been translated into various languages; his *Constitutional History of England* 1760-1860 is a continuation of Hallam; and his *Democracy in Europe* shows great learning and impartiality. He died in 1886.

Mayer, Henry ("Hy Mayer"), caricaturist, was born at Worms-on-Rhine, 1868. He was educated in England and Germany, and came to the United States, 1886. He began his career as an artist in Cincinnati, 1887, and has resided in New York since 1893. He has been illustrator for *Fliegende Blaetter*; *Figaro Illustré*; *Le Rire*; *Pall-Mall Magazine*; *Punch*; *Life*, *New York Times*, *Herald*, etc. Author: *Autobiography of a Monkey*; *A Trip to Toyland*; *Alphabet of Little People*, etc.

Mazarin (*mȧ'zȧ'raN'*), **Jules,** cardinal and chief minister of France during the minority of Louis XIV., was born at Rome, 1602. Having accompanied a papal legate to the court of France, he became known to Richelieu about 1628. The latter perceived his great political talents, and engaged him to maintain the French interests in Italy, which he did while still employed by the pope as vice-legate to Avignon, in 1632, and nuncio to the French court. Under him the influence of France among the nations was increased, and in the internal government of the country those principles of despotism were established on which Louis XIV. afterward acted. The administration of justice, however, became very corrupt, and the commerce and finances of the country sunk into deep depression. Died, 1661.

Mazzini (*mȧt-sē'nē*), **Guiseppe,** Italian patriot and revolutionist, was born at Genoa, 1805. The organization of a new liberal league, "Young Italy," was Mazzini's first work. A new association, entitled "New Europe," and based on principles of European rights and enfranchisement, was inaugurated by the exertions of Mazzini in Switzerland. In 1837 he quitted Switzerland, and finally took up his abode in London. From there his labors in the Italian revolutionary cause were unremitting. After an ineffective scheme for a republican rising, he ventured to enter Italy, and was arrested at Gaeta, where he remained a prisoner until Rome was taken by the Italian army. On his death, 1872, the government honored him with a public funeral.

Mead, Larkin Goldsmith, American sculptor, was born at Chesterfield, N. H., 1835. His early years were spent in Vermont. He studied art at Brooklyn, N. Y., and in Italy. The colossal statue of "Vermont" on the dome of the statehouse, and of "Ethan Allen" in the portico of the same building in Vermont, and one of the same hero, given by the state of Vermont to the hall of representatives at Washington are all his work, also a colossal statue, "The Mississippi River"; colossal marble group representing Columbus appealing to Isabella, Sacramento, Cal., high relief portraits in bronze of Henry James, William D. Howells, and John Hay.

Meade, George Gordon, American general, was born in Cadiz, Spain, where his father was an agent of the United States navy, 1815. He was graduated at West Point, 1835, and, after serving one year in the army, resigned to begin practice as a civil engineer. At the outbreak of the civil war he was placed in command of a brigade of volunteers, soon rose to the command of a division, and joined his fortunes permanently to those of the army of the Potomac. At Chancellorsville he commanded the fifth corps; and when Hooker resigned the command of the army, and while the army itself was in hasty movement northward to check Lee's invasion of the North in 1863, Meade was appointed to the command. He accepted it with the greatest reluctance, and altogether from a sense of duty. He had inclined to fight on the line of Pipe creek, to the south of Gettysburg; but Reynolds fell into collision with Lee's support, and Gettysburg became historical. At the close of the war he was made major-general in the regular army, and commanded the military division of the Atlantic at the time of his death at Philadelphia, 1872.

Medici (*mȧ'dē-chē*), **Lorenzo de',** surnamed "the magnificent," was born in 1448. He was a member of an illustrious Florentine family, which for centuries exerted great influence in Italy and in Europe. In 1478 a conspiracy was formed against him and his brother Giuliano, by the Pazzi, another distinguished family of Florence, who were instigated by Pope Sixtus IV., and aided by Salviati, archbishop of Pisa. The result was that Giuliano was assassinated and Lorenzo wounded; whereupon Salviati was hung out of his palace window in his archiepiscopal robes, and Giacopo de Pazzi, with one of his nephews, shared the same fate. The pope now excommunicated Lorenzo and the magistrates of Florence, laid an interdict upon the whole territory, and, forming a league with the king of Naples, prepared to invade the Florentine dominions. Hostilities followed, and were carried on with varying success during two campaigns. The remainder of Lorenzo's administration was unmarked by any great public events; but his regard for literature was manifested by the extraordinary attention he paid to the augmentation of the Laurentian library, which had been founded by his grandfather. Died, 1492.

Meissonier (*me'sō'nyȧ'*), **Jean Louis Ernest,** French painter, was born in Lyons, 1815. He was a pupil of Cogniet, and became a member of the Beaux Arts in 1861. His best pictures distinguished for minute detail are probably the "Napoleon Cycle," among which the picture called "1814" was sold, in 1887, for the highest price ever obtained during an artist's lifetime, $170,000. He served in the Italian campaign and the early part of the Franco-Prussian war, and was colonel at the siege of Paris. Died, 1891.

Melanchthon (*mē-langk'thun*), **Philip,** Luther's fellow-laborer in the reformation, was born at Bretten, in the palatinate of the Rhine, 1497. In 1521 he published his *Loci Communes Rerum Theologicarum*, the first great Protestant work on dogmatic theology. In 1530 he made a most important contribution to the cause of Protestantism in the Augsburg confession. After Luther's death he lost, in some measure, the confidence of some of the Protestants, by those concessions to the Roman Catholics which his anxiety for peace led him to make. He died at Wittenberg, 1560.

Melba, Madame, nee Helen Porter Mitchell, operatic vocalist, was born in Melbourne, Australia, 1865. She studied under Madame Marchesi in Paris, and made her stage début in 1887 in *Rigoletto*, at the théâtre de la Monnaie, Brussels. Next year she appeared as Lucia at Covent Garden. In 1889 played Ophelia at Paris grand opera. For her Bemberg specially wrote *Elaine*, produced in London in 1892. She has taken a prominent part in recent opera seasons in London and New York, and, in 1908, proved herself equally successful in concert.

Mellen, Charles Sanger, American railway official, was born in Lowell, Mass., 1851. He has been in the railway service since 1869, beginning as clerk in the cashier's office of the Northern New Hampshire railroad; auditor, 1881-83, superintendent, 1883-84, general superintendent, 1884-88, Boston and Lowell and Concord railroads; assistant general manager, 1888-89, general traffic manager, 1889-92, Union Pacific system; general manager of New York and New England railroad at Boston, 1892; second vice-president New York, New Haven and Hartford railroad, 1892-96; president of Northern Pacific railway company, 1896-1903, New York, New Haven and Hartford railroad company, since 1903.

Mencius (*men'shi-us*), **Meng-tse,** Chinese sage, was born in Shan-tung, about 371 B. C. He founded a school on the model of that of his great predecessor Confucius. After his death his disciples collected his conversations and exhortations, and published them as the *Book of Mengtse*. The philosophic root of his system is belief in the ethical goodness of man's nature. In his liberal and enlightened system of political economy, he advocated freedom of trade, the deposition of unworthy rulers, division of labor, inspection of work by government, maintenance of good roads and bridges, poor-laws, education, and the abolition of war. Chinese ethics are based on his writings. Died about 287 B. C.

Mendelssohn-Bartholdy (*men'del-sōn bär'tōl'dē'*), **Felix,** German composer, was born at Hamburg, 1809. In 1835 he accepted the directorship of the Leipzig concerts. Here he was in the center of the musical world of Germany, and was stimulated to his highest and most brilliant efforts. His oratorios, *St. Paul* and *Elijah*, are his two greatest works, the latter second only to the greatest works of Handel. He died at Leipzig, 1847.

Mengs (*mengks*), **Anton Raphael,** modern German artist, was born in Aussig, Bohemia, 1728. From his sixth year he was compelled to exercise himself in drawing daily and hourly, and a few years later was instructed by his father in oil, miniature, and enamel painting. In 1761 Charles III. invited him to Spain, where his principal works at this time were an *Assembly of the Gods*, and a *Descent from the Cross*. In 1776 he returned once more to Rome where he died in 1779.

Menzies, Alan Wilfrid Granbrook, university professor, was born in Edinburgh, Scotland, 1877. M. A., Edinburgh, 1897, B. Sc., 1898; studied at Leipzig and Aberdeen; Ph. D., Chicago, 1910. Assistant professor chemistry, Heriot-Watt College, Edinburgh, 1898-1901; professor of chemistry, St. Mungo's College, Glasgow, 1902-08; secretary Medicial Faculty, 1907-08; research associate instructor, Chicago University since, 1908. Fellow Royal Society Edinburgh. Author: *Sensitiveness of a Thermoregulator; Phosphoric Acid Hydrates; Molecular Weight Determination of Dissolved Substances; New Methods for Measuring Vapor Pressure; Vapor Pressure of Mercury, and of Sulphur; Vapor Density Apparatus; Constitution of Calomel Vapor; Calomel and Abegg's Anomaly; Critical Temperature of Mercury; Calculation of Critical Temperatures; Physical Constants Formic Acid; Pure Lithiumand Its Coeff. of Expansion; High Temperature Oven*, etc.

Mercator (*mēr-kā'tēr*), **Gerardus,** Flemish geographer of the sixteenth century, was born at Rupelmonde, Flanders, 1512, his real name being Kraemer, "merchant," of which Mercator is the Latinized form. He took his degree as bachelor of philosophy at Louvain, but devoted his later years to the study of geography. He published several important works, including maps and descriptions of France, Germany, and Great Britain. Some of his later works were of a religious character and were supposed to favor the reformed doctrines. He died in Prussia, 1594.

Meredith, George, English poet and novelist, a native of Hampshire, was born in 1828. After studying for some time in Germany he commenced his literary career with the publication of a volume of poems. This was followed by the *Shaving of Shagpat*, an Arabian entertainment; *Farina*, a legend of Cologne; *The Ordeal of Richard Feverel*; *Poems of the English Roadside*; *Emilia in England*; *Rhoda Fleming*; *Vittoria*; *Beauchamp's Career*; *Diana of the Crossways*; *A Reading of Earth*; *One of Our Conquerors*; *Empty Purse*; *Jump to Glory Jane*; *The Amazing Marriage*; *The House on the Beach*; *Comedy, and the Uses of the Comic Spirit*; *Selected Poems*, etc. Died, 1909.

Meredith, Owen, See **Lytton, Edward Robert, Earl of.**

Mergenthaler (*mer'gen-tȧ'lēr*), **Ottmar,** inventor of the type-setting machine bearing his name, was born in Würtemberg, Germany, 1854. He came to the United States in 1872, and received a government position in Washington, D. C., to care for the mechanism of bells, clocks, and signal service apparatus. He died in Baltimore, Md., 1899.

Mérimée (*mȧ'rē'mȧ'*), **Prosper,** French novelist, historian and archæologist, was born at Paris, 1803. After several anonymous efforts, wrote *Clara Gazul*, and *La Guzla*, Spanish comedies and Illyrian songs; *La Chronique du Règne de Charles IX.*, his most famous historical novel; *Colomba*; *Carmen*; *Tamango*. He became a member of the French academy in 1844, was made a senator in 1853, president of the commission for reorganizing the bibliothêque imperiale in 1858, and commander of the legion of honor, 1860. Died at Cannes, 1870.

Merivale (*mer'i-vāl*), **Charles,** English historian, dean of Ely, was born in Exeter, 1808. He was graduated at Cambridge. He wrote a history of Rome from its foundation in 753 to the fall of Augustus in 476, but his chief work is the *History of the Romans under the Empire*, indispensable as an introduction to Gibbon. Died, 1893.

Merle d'Aubigne (*merl-dō'bēn'yā*), **Jean Henri,** ecclesiastical historian, was born near Geneva, Switzerland, 1794. In 1823 he was appointed court preacher at Brussels; but after the revolution of 1830 he declined the post of tutor to the prince of Orange; returning to Geneva, he took part in the institution of the new Evangelical College, and filled its chair of church history until his sudden death in 1872. His *History of the Reformation in the 16th Century* has enjoyed immense popularity.

Merrill, George Perkins, American geologist and educator, was born at Auburn, Me., 1854. He was graduated at the Maine State University, B. S., 1879; Ph. D.; professor of geology and mineralogy, George Washington University, since 1893. Author: *Stones for Building and Decora-*

tion; *Rocks, Rock-weathering and Soils*; *The Non-Metallic Minerals*; *The Non-Metallic Minerals—Their Occurrence and Uses*, etc.

Merritt, Wesley, American general, was born in New York, 1836. He was graduated from West Point in 1860; was commissioned brigadier-general of the United States volunteers, 1863; major-general of United States volunteers, 1865; and since the civil war regularly promoted from lieutenant-colonel to major-general, United States army. He served in the army of the Potomac until June, 1864; was superintendent of United States military academy, 1882-87; assigned, May, 1898, to command of United States forces in the Philippine islands; was in command of department of the East, Governor's island, until retirement in 1900.

Merry del Val (*mer'rē del väl'*), **Raphael,** pontifical secretary of state, was born in London of Spanish parents in 1865. He was at first attached to the diocese of Westminster, acted for many years as *Camerieri Segreto* to Pope Leo XIII., and was appointed president of the Accademia Pontificia in 1899, and Italian archbishop of Nicosia in 1900. He visited England as papal envoy on the occasions of Queen Victoria's jubilee and King Edward's coronation, and was sent to Canada on an educational mission. In 1903, on the death of Leo XIII., he was nominated consistorial secretary, and in October succeeded Cardinal Rampolla as secretary of state, being afterward created cardinal.

Mesmer, Friedrich Anton or **Franz,** founder of mesmerism, was born near Constance, Switzerland, 1733. About 1772 he took up the opinion that there existed a power of extraordinary medcinal influence on the human body, which he called animal magnetism. In 1778 he went to Paris, where he created a great sensation. He refused an annual pension of 20,000 livres to reveal his secret; but in 1785 a commission of physicians and scientists reported on him unfavorably. He fell into disrepute, and after a visit to England spent the rest of his life in obscurity at Meersburg in Switzerland. Died, 1815.

Metastasio (*mā'tȧs-tȧ'zyō*), **Pietro Bonaventura,** Italian poet, whose real name was Trapassi, was born in Rome, 1698. His tragedy of *Giustino* was produced when he was only fourteen. In 1724 he published one of his most celebrated dramas, *La Didone*, which, with *Il Catone* and *Il Siroe*, conferred on the poet a European name. In 1730 he accepted the post of poet laureate to the imperial court of Vienna. During his sojourn in Vienna he composed his *Giuseppe Riconosciuto*, *Il Demofoonte*, and the *Attilio Regolo*, his masterpiece. Died at Vienna, 1782.

Metchnikoff (*mech'ni-kōf*), **Iliya,** Russian physiologist and cytologist, was born at Livanovka, Russia, 1845. He studied at Kharkov, and afterward at Giessen and at Munich. He became chief assistant to Pasteur in 1892, and, at the latter's death in 1895, succeeded him as director of the Pasteur Institute at Paris. He is the author of *The Nature of Man*; *Immunity in Infective Diseases*; *The Prolongation of Human Life*; *Optimistic Essays*, etc.

Metternich (*met'ēr-nĭk*), **Clemens Wenzel, Prince von,** Austrian diplomat and statesman, was born in Coblentz, 1773. After a distinguished diplomatic career, he became foreign minister of the empire in 1809. This high office he held with consummate ability for a period of thirty years, exercising, almost without control, the highest authority in Austria. Died, 1859.

Meyer, Adolf, pathologist, alienist, was born in Niederweningen, near Zürich, Switzerland, 1866. LL. D., Glasgow, 1901. He came to the United States in 1892, became a fellow and later docent in neurology, University of Chicago, 1892-95. He is now director of pathology, New York state hospitals; professor of psychiatry, Cornell Medical College, and has been an extensive contributor on neurology, pathology psychiatry, etc.

Meyer, George von Lengerke, American diplomat and cabinet officer, was born in Boston, Mass., 1858. He was graduated at Harvard, 1879, and has since been engaged in business as merchant and trustee. He was United States ambassador to Italy, 1900-05; ambassador to Russia, 1905-07; postmaster-general, 1907-09; secretary of the navy under President Taft, 1909-13.

Meyerbeer, Giacomo, German composer, was born in Berlin, 1791. He began to study dramatic composition under Bernhard Anselm Weber; and in 1806 entered the school of Vogler at Darmstadt, where he formed an intimate friendship with Carl Maria von Weber. He subsequently composed an opera, *Jepthah's Vow*, produced at Munich in 1812. His subsequent works include: *Romilda e Constanza*; *L'esule di Granata*; *Il Crociato in Egitto*; *Robert le Diable*; *Les Huguenots*, in which he reached the climax of his fame; *Le Prophète*; *Pierre le Grand*; *Dinorah*. Died, 1864.

Michelangelo Buonarotti, (*mē'kel-än'je-lō bwō'när-rō'tē*), in an age when Christian art had reached its zenith, stood almost unrivaled as a painter, sculptor, and architect. He was born in 1474 at Chiusi, in Italy. He learned the rudiments of painting from Bertoldo, a pupil of Domenico Ghirlandaio, and having been admitted as a student into the school which was established by Lorenzo the Magnificent for the study of ancient art in connection with the collections of statuary in the Medicean Gardens, he attracted the attention of Lorenzo by the artistic skill with which he had restored the mutilated head of a laughing faun, and was received into the palace of the Medici, where he spent several years.

Pope Julius II. called him to Rome, and commissioned him to make his monument, which was to be erected within St. Peters'. Although this work was never completed on the scale on which it had been designed, and was ultimately erected in the Church of St. Pietro ad Vincula, it is a magnificent composition, and is memorable for having given occasion to the reconstruction of St. Peter's on its present sublime plan, in order the better to adapt it to the colossal dimensions of the proposed monument.

The pope insisted upon Michelangelo painting with his own hand the ceiling of the Sistine Chapel, and he began in 1508, and completed within less than two years his task, which proved one of the most marvelous of his works. The subjects of these cartoons are taken from the book of *Genesis*, while between these and the representations of the persons of the Savior's genealogy are colossal figures of prophets and sibyls.

His great picture of the *Last Judgment* was painted for the altar of the Sistine Chapel. This immense fresco, nearly 70 feet in height, which was completed in 1541, was regarded by contemporary critics as having surpassed all his other works. After its completion Michelangelo turned to the perfecting of St. Peter's, which, by the touch of his genius, was converted from a mere Saracenic hall into the most superb model of a Christian church. He refused all remuneration for his labor, which he regarded as a service for the glory of God. Michelangelo died in 1563 in Rome, but his remains were removed to Florence.

References.—*The Life of Michelangelo*, by J. A. Symonds; *Sonnets of Michelangelo and Campanella*, by J. A. Symonds; *Life and Work of Michelangelo Buonarroti*, by C. Heath Wilson; *Life of Michel Angelo Buonarroti*, by John Harford; *Illustrations, Architectural and Pictorial, of the genius of Michel Angelo*, by Canina, C. R. Cockerell, and John Hartford.

Michelet (*mēsh'le'*), **Jules,** French historian, was born in Paris, 1798. In 1843-46 he became widely known, not only in his own country, but also in England, by his attacks upon the Jesuits in his three works; *The Jesuits*; *Priests, Women, and Families*, and *The People*. He was the writer of many other works, several of them of considerable interest. Died, 1874.

Michelson (*mī'kel-sun*), **Albert Abraham,** scientist, educator, was born at Strelno, Germany, 1852. He was graduated at the United States naval academy, 1873; was midshipman of United States navy, 1873; instructor of physics and chemistry, United States naval academy, 1875-79; Sc. D., University of Cambridge, 1890; LL. D., Yale, 1901; University of Pennsylvania, 1906. He was professor of physics at the Case school, Cleveland, Ohio, 1883-89, Clark University, 1889-92, and has been professor and head of the department of physics, University of Chicago, since 1892. Was awarded the Nobel prize for physics, $40,000, by the Swedish academy of sciences, 1907.

Mifflin, Thomas, American general and statesman, was born in Philadelphia, 1744, was originally a merchant of his native city. He was elected to the continental congress of 1774, joined the revolutionary forces, and rose to be major-general in 1777, but was removed for his connection with the Conway cabal, 1778. In 1782 he was sent to the federal congress, and in 1783 became its president; governor of Pennsylvania, 1790-99. Died, 1800.

Milburn, John George, American lawyer, was born near Sunderland, England, 1851. Was admitted to the bar, 1874, and practiced in Buffalo as a member of the firm of Rogers, Locke and Milburn. He was president of the Pan-American exposition, 1901. He is a trustee of the New York life insurance company; member of the board of commissioners of statutory consolidation.

Miles, Nelson Appleton, American general, was born in Westminster, Mass., 1839. At the outbreak of the civil war he was engaged in mercantile pursuits in Boston, Mass.; entered the service as first lieutenant of the 22d Massachusetts regiment in 1861. In 1862 he was commissioned colonel of the 61st New York regiment, which he led at Fredericksburg and Chancellorsville, where he was severely wounded. He was promoted brigadier-general, 1864, and brevetted major-general for gallantry at Ream's station in December, 1864. At the close of the war he was commissioned colonel of the 40th United States infantry. He was promoted brigadier-general in 1880; major-general in 1890; and succeeded Lieutenant-General John M. Schofield as commander of the army in 1895. On the reörganization of the army in 1901, the grade of lieutenant-general was revived and he was promoted to it. He was retired upon reaching the age limit, 1908.

Mill, James, British historian and political economist, was born near Montrose, Scotland, 1773. He studied at the University of Edinburgh, where he distinguished himself in Greek and in moral and metaphysical philosophy. He wrote much of standard value, including *History of British India*; *Liberty of the Press*; *Law of Nations*; *Elements of Political Economy*; and *Analysis of the Phenomena of the Human Mind*. He died in London, 1836.

Mill, John Stuart, English philosopher and economist, son of the preceding, was born in 1806. He was educated at home by his father. In 1820 he went to France, where he made himself master of the French language and occasionally attended public lectures on science. In 1823 he entered the India house as a clerk in the examiner's office, where his father was assistant examiner. His first publication consisted of articles in the *Westminster Review*. He established his reputation, in 1843, by the publication of *A System of Logic*; *Ratiocinative and Inductive*, a work the success of which paved the way for *The Principles of Political Economy*. He was a member of parliament, 1865-68. He died at Avingnon, France, 1873.

Millais (*mi-lā'*), **Sir John Everett,** English painter, was born of Jersey parentage, at Southampton, 1829. He studied at the royal academy, and at seventeen exhibited a notable historical work. He then early associated with Rossetti and Hanolm Hunt, and remained for over twenty years under their influence. His chief subsequent work, in which technical interest predominates, was chiefly portraiture, including Gladstone and Beaconsfield. He was made R. A. in 1863, a baronet in 1885, and became president of the royal academy in 1896. Died, 1896.

Miller, Hugh, Scottish geologist, was born at Cromarty, 1802. In 1829 he published *Poems Written in the Leisure Hours of a Journeyman Mason* followed by *Scenes and Legends of the North of Scotland*, in 1835. His editorial labors, during the heat of the religious disruption struggle were immense, and, worn out by overwork, he shot himself in 1856.

Miller, Joaquin, pen-name of Cincinnatus Heine Miller, American poet. He was born in Indiana, 1841, became a miner in California, fought in the Indian wars, was an express messenger, practiced law in Oregon, edited a paper suppressed for disloyalty, in 1866-70 was a county judge in Oregon, was a Washington journalist, and in 1887 settled in California as a fruit-grower. His works include: *Songs of the Sierras*; *Songs of the Sunlands*; *Songs of Italy*; *Songs of the Mexican Seas*; *'49 or the Goldseekers of the Sierras*. D. 1913.

Millet (*mē'le'*), **Jean François,** French painter, was born in the village of Gruchy, France, 1814. He first worked as a farm laborer, but his taste for painting was so evident that he was sent to study with Mouchel, a painter in Cherbourg. He painted small pictures, portraits, and signboards in his first efforts to support himself. Some of his best known works are: *The Gleaners*; *Waiting*; *The Angelus*; *The Man with the Hoe*. His most celebrated picture, *The Angelus*, sold for over $100,000. He died at Barbizon, which under his influence had become an artist colony, 1875.

Mills, Clarke, American sculptor, was born in Onondaga county, New York, 1815. In 1850 he completed a model of an equestrian statue of Jackson, for Lafayette square, Washington. He produced a perfect cast in 1852, and the statue was set up the following year. He made also the equestrian statue of Washington, dedicated in Washington on February 22, 1860, and the colossal statue of Liberty, from a design by Crawford, which crowns the dome of the capitol, finished in 1863. He died at Washington, D. C., 1883.

Mills, Roger Quarles, American lawyer, ex-United States senator, was born in Todd county, Ky., 1832; was admitted to the bar at twenty years of age. He was elected to the Texas house of representatives, 1859. After the fall of General James Deshler, he took command of the brigade at the battles of Missionary Ridge, 1863; New Hope church, and Atlanta, 1864, where he was twice wounded. He was a member of congress, 1873-92; United States senator, 1892-93, and 1893-99, and was author of the Mills' tariff bill. Died, 1911.

Mills, William Lennox, bishop of Ontario since 1901, was born at Woodstock, Ontario, and was graduated at the Western University, London, 1872; D. C. L., LL. D., Queen's University, Kingston; rector of the crown rectory of St. John's, province of Quebec, 1875; rector of Trinity church, Montreal, 1882; archdeacon of St. Andrew's, diocese of Montreal, 1896; bishop coädjutor of Ontario, with title of bishop of Kingston, 1900.

Milman, Henry Hart, poet and church historian, was born in London, 1791. He was educated at Greenwich, Eton, and Brasenose College, Oxford, where in 1812 he won the Newdigate prize with his *Belvidere Apollo*, best of Oxford prize poems. 1849 dean of St. Paul's. His *Poems and Dramatic*

Works comprise *Fazio*, a *Tragedy*; *Samor*; and—his masterpiece—the *History of Latin Christianity to the Pontificate of Nicholas V.* He died in 1868.

Miltiades (*mil-ti'ā-dēz*), Athenian general, "tyrant of the Chersonese," yet, as Byron sings, "freedom's best and bravest friend," was born about 540 B. C. He particularly distinguished himself by the great victory which he gained at Marathon with a small body of Athenians and 1,000 Plateans, 490 B. C., over the Persians. He failed in an expedition against Paros, was fined fifty talents, which he was unable to pay, and consequently died in prison, 489 B. C.

Milton, John, English poet, was born in London 1608. He took his degree of M. A. at Cambridge, and, having relinquished the idea of following divinity or law, he left in 1632, and went to live at his father's house at Horton, in Buckinghamshire. There, the lived five years, reading the Greek and Latin poets, and composing *Comus*, *Lycidas*, *Arcades*, *L'Allegro*, and *Il Penseroso*. On the death of his mother, in 1637, he went abroad, visiting the chief Italian cities, and making the acquaintance of Grotius and Galileo.

In 1641 he engaged in the controversies of the times, and in the course of that and the following year he issued the treatise *Of Reformation, The Reason of Church Government Urged against Prelacy, Prelatical Episcopacy*, and *An Apology for Smectymnuus*. After the execution of Charles he was appointed Latin secretary to the council of state. In his new position his pen was as terrible as Cromwell's sword. In *Eikonoklastes*, he made a savage but effective reply to the famous *Eikon Basilike*; and in his *Pro Populo Anglicano Defensio* he assailed his opponent, Claude de Saumaire, better known as *Salmasius*, with such a storm of eloquence and abuse, that the latter, who died in Spain 1653, is believed to have lost his life through chagrin. Milton at least flattered himself with having "killed his man."

In 1643 he married Mary Powell, who left him in a few weeks, which led to his writing four treatises on divorce, although he afterward became reconciled to her. His second wife, whom he married in 1656, was a daughter of Captain Woodcock, of Hackney. She died 1658, and her husband has enshrined her memory in an exquisitely pure and tender sonnet.

Unceasing study had affected his eyesight, and about 1654 Milton became totally blind. After the restoration, he retired from affairs; he was obnoxious to the reigning power, and it is said that he was once in custody of the sergeant-at-arms. On the publication of the Act of Oblivion, he married his third wife, Elizabeth Minshull, and shortly after removed to a house in Artillery Walk, London, where he was busy with *Paradise Lost*.

This great poem was originally planned as a mystery, then some idea of treating it as a drama haunted the author's mind; finally however, he resolved to write an epic poem on the Fall of Man. The poem was published in 1667. He received five pounds from his publisher, and a promise of five pounds more when 1,300 copies should have been sold. In 1670 he published his *History of England*. Next year he printed *Paradise Regained* and *Samson Agonistes*. He died 1674, and was buried in St. Giles Church, London.

References.—Masson's *Life of Milton* and his edition of the *Poems*; also the *Life* by Mark Pattison; concordance to the *Poems* by Dr. Bradshaw; Trent's *A Short Study*; and Raleigh's *Study*.

Mirabeau (*mē'rá'bō'*), **Gabriel Honoré Riquetti, Comte de,** French orator, was born at Bignon, near Nemours, 1749. He wrote many effective political pamphlets, particularly against the financial administration of Calonne. When the states-general was convened, he sought to be elected a representative of the nobles of Provence, but was rejected, and left them with the threat that, like Marius, he would overthrow the aristocracy. To suppress insurrection, he effected in 1789 the institution of the national guard. In 1790 he was elected president of the club of the Jacobins, and, in 1791, of the national assembly. Both in the club and in the assembly he displayed great boldness and energy; but soon after his appointment as president of the latter he died, 1791.

Mitchell, Donald Grant, "Ik Marvel," American novelist and essayist, was born at Norwich, Conn., 1822. He was graduated at Yale College, and pursued law studies in New York city. In 1853 he was appointed United States consul at Venice, and in 1868 became editor of the *Atlantic Monthly*. His best known works are: *Dream Life*; *Reveries of a Bachelor*; *My Farm at Edgewood*; *English Lands, Letters, and Kings*; and *American Lands and Letters*. Died, 1909.

Mitchell, John, American labor leader, was born at Braidwood, Ill., 1870. He began work in coal mines, 1882, and has since, as worker or labor leader, been identified with mines and mining. His official connection with the United Mine Workers of America began in 1895, and from 1899 to 1908 he served as president of that organization. He directed the strikes of the anthracite miners in 1900 and 1902, and was vice-president of the American Federation of Labor in 1898, and since 1900. He is the author of a book, *Organized Labor, Its Problems, Purposes, and Ideals*.

Mitchell, Maria, American astronomer, was born at Nantucket, Mass., 1818. In 1847 she was awarded a gold medal by the king of Denmark for the discovery of a comet. She was employed in observations connected with the coast survey, and in compiling the nautical almanacs. In 1865 she became professor of astronomy at Vassar College, and held that position until the year before her death at Lynn, Mass., 1889.

Mitchell, Silas Weir, American physician, poet, and novelist, was born at Philadelphia, Pa., 1830. He studied at the University of Pennsylvania, was graduated at Jefferson Medical College, 1850; LL. D., Harvard, Edinburgh, Princeton. He established a practice in Philadelphia, became prominent as a physiologist and especially as neurologist, and stood at the head of the profession in that department of medical science. Author: *Treatise on Neurology*; *Serpent Poisons*; *Poems*; *Hephzibah Guinnes*; *Adventures of Francois*; *The Autobiography of a Quack*; *Dr. North and His Friends*; *The Wager, and Other Poems*; *Circumstance*; *Hugh Wynne*, etc. Died 1914.

Mitford, Mary Russell, English author, was born at Alresford, Hants, 1786. She was sent to school in Chelsea, and her first volume of poems appeared in 1810, and was followed by two more in 1811-12. Her charming sketches of country manners, scenery, and character were rejected by several editors, but at length found a place in the *London Magazine*, and were collected as *Our Village* in 5 volumes. She died in 1855 at Swallowfield.

Mithridates (*mith'ri-dā'tēz*) **the Great,** king of Pontus, Armenia, and Parthia, countries in Asia Minor, was born about 132 B. C. He became king when about thirteen years old. At first Mithridates conquered the Roman provinces in Asia Minor, and sent large armies to help the Greeks, but finally had to make peace with Sulla, giving up all his Asiatic conquests. In desperation he ended his life by suicide, in 63 B. C. He was one of the strong eastern despots, but a friend of culture and the arts.

Modjeska (*mo-jes'kà*), **Helena,** (Mme. Chlapowski, née Opido), actress, was born in Cracow, Poland, 1844. She made her début in Bochnia, Poland, 1861; soon became leading actress in her native country; married G. O. Modjeska in 1860, and, in 1868, Charles Bozenta Chlapowski, compatriot. Her first appearance in English was at San Francisco, 1877, in *Adrienne Lecouvreur*. She returned here after two London engagements, and played leading Shakespearean parts, Camille, Mary Stuart, etc. She retired from the stage in 1905 and died, 1909.

Mohammed, (*mō-ham'ed*), or **Mahomet,** the founder of the Mussulman religion, was born in Mecca in 570 or 571, died in Medina, 632. His family (Hashem), of the distinguished tribe of Koreish, were hereditary guardians of the Caaba, yet his parents were poor. His father Abdallah, a merchant, died two months after his birth. At the age of six years he lost his mother, and was carried to his grandfather Abd-el-Mottalib. Two years later he lost also his grandfather, and was then adopted by his uncle Abu Taleb, who held the key of the Caaba.

With his uncle, young Mohammed (in his ninth or twelfth year) made journeys through Syria and other countries, and became acquainted with a Christian (probably Nestorian) monk, who predicted his greatness. In his twenty-fifth year he was a shepherd near Mecca, and then joined the business of a linen trader named Saib. At Hajasha, a market six days' journey south of Mecca, Mohammed entered the service of a rich widow named Khadijah, whom he finally married, although she was sixteen years his senior. They had four daughters and two sons; both sons died young.

From his thirtieth to his fortieth year Mohammed frequently resorted to a solitary cave of Mt. Hara for religious contemplation. There, amid spasmodic convulsions, he had his first vision, in which the angel Gabriel commanded him to recite what he (the angel) said. The revelations continued henceforth to the end of his life, and were dictated by Mohammed to several secretaries, and after his death collected.

His wife was his first convert. During the first three years of his mission only his relatives and friends acknowledged him as a prophet. In the fourth or fifth year he proclaimed himself a prophet, but met only with imprecations. To protect him he was removed by his uncle Abu Taleb to a fortified castle outside of Mecca, where he remained three years. The Koreishites outlawed him and his disciples. When the interdict was removed he returned to Mecca. After another brief expulsion from Mecca he reported his celebrated journey to heaven.

Some pilgrims from Yathreb were converted in 621, and the new faith was established on a firm basis. The era of the Moslems begins with the flight of the prophet, the Hegira. The name of Yathreb was changed into Medinet en-Nebi, "the city of the prophet" (Medina). During the first year of the Hegira he built a mosque at Medina, and proclaimed war against the unbelievers. In an engagement at Bedr between 314 Moslems and 600 Meccans under the chief of Mecca, the Moslems were victors. In the following years Mohammed was defeated by the Koreishites in the battle of Mt. Ohod, and besieged for a time in Medina. Failing to gain admittance into Mecca with his followers as pilgrims, he led them against several Jewish tribes, with some success. He now sent written demands to Chosroes II. of Persia, the Abyssinian king, the Byzantine emperor Heraclius, the governor of Egypt, and the chiefs of several Arab tribes. He punished the Meccans, who had broken faith with him, and compelled them to acknowledge him as a soveriegn and a prophet. The possession of Mecca decided the victory of the new religion in Arabia, and the subjection of a majority of the inhabitants of Arabia to Mohammed's rule and religion became complete.

In 631 he proclaimed a holy war against the Byzantine empire, which proved a complete failure. In the following year Mohammed made his last pilgrimage to Mecca at the head of at least 40,000 pilgrims. Three months after his return to Medina he was taken seriously ill. He himself announced in the mosque the approach of his death, and he expired in the arms of Ayesha, his favorite wife. His only surviving child was Fatima, the wife of Ali, and the ancestress of all the sherifs or nobles of the Mohammedan world. Mohammed possessed natural eloquence, a keen intellect, an overwhelming fluency, and great courage.

References.—Muir's *Life of Mahomet*, and *Mahomet and Islam*; Ameer Ali's *The Life and Teachings of Mohammed*; and Margoliouth's *Mohammed and the Rise of Islam*.

Moliere (*mo-lyār*), the assumed name of Jean Baptiste Poquelin, French dramatist, was born at Paris in 1622. His father was a tradesman connected with the court, and he received a good education. He studied law, but gave it up for the career of an actor, assuming the name of Molière.

After gaining great success in the provinces he settled in Paris in 1658, having previously produced his two comedies *L'Étourdi* and *Le Dépit Amoureux*. In the following year his reputation was greatly advanced by the production of the *Précieuses Ridicules*, a delicate satire on the prevailing affectation of the character of *bel esprit*, on the pedantry of learned females, and on affectation in language, thoughts, and dress. It produced a general reform when it was brought forward in Paris. Continuing to produce new plays, and performing the chief comic parts himself, he became a great favorite both with the court and the people, though his enemies, rival actors and authors, were numerous. Louis XIV. was so well pleased with the performances of Moliere's company that he made it specially the royal company, and gave its director a pension.

In 1662 Moliere made an ill-assorted marriage with Armande Béjart, upward of twenty years younger than himself, a union that embittered the latter part of his life. Among his works other than those mentioned may be noted: *L'Ecole des Maris*, *L'Ecole des Femmes*, *Le Mariage Forcé*, *Don Juan*, *Le Misanthrope*, *Le Médecin Malgré lui*, *Le Tartuffe*, *L'Avare*, *George Dandin*, *Les Fourberies*

de Scapin, Le Bourgeois Gentilhomme, and *Le Malade Imaginaire.*

Molière died in 1673 of an apoplectic stroke, a few hours after playing in the latter. As a player he was unsurpassed in high comic parts; and in the literature of comedy he bears the greatest name among the moderns after Shakespeare. He borrowed freely from Latin, Spanish, and Italian writers, but whatever materials he appropriated he so treated them as to make the result entirely his own and original. The archbishop of Paris at first refused him burial as being an actor and a reviler of the clergy; but the king himself insisted on it.

References.—*Life* by Despois and Mesnard prefixed to his works; and also those of Taschereau, Trollope, and Hatton.

Moltke (*môlt'kē*), **Hellmuth Karl Bernhard, Count von,** chief marshal of the German empire, was born in Parchin, in Mecklenburg, 1800. He was graduated from the military academy at Copenhagen, 1818, and entered the Prussian service in 1822. He became lieutenant-general of the Prussian army in 1859, and sketched the plans of the campaigns against Denmark, 1864, and Austria, 1866. He was the commander-in-chief in the Franco-German war, 1870-71, and to his brilliant strategy are ascribed the splendid victories of the German arms. He is generally regarded as the first strategist of the day, was created a count in 1870, and chief marshal of the German empire in 1871. Died at Berlin, 1891.

Mommsen (*môm'zen*), **Theodor,** German historian, was born at Garding in Sleswick, 1817, son of a pastor. In 1852 he became professor of Roman law at Zürich, in 1854 at Breslau, and in 1858 of ancient history at Berlin. He edited the monumental *Corpus Inscriptionum Latinarum,* helped to edit the *Monumenta Germaniae Historica,* and from 1873 to 1895 was secretary of the academy of science. His fine library was burned in 1880. His greatest work, the *History of Rome,* was followed by *The Roman Provinces.* He died at Charlottenburg, 1903.

Money, Hernando De Soto, lawyer, ex-United States senator, was born in Holmes county, Miss., 1839. He was educated at the University of Mississippi, Oxford, Miss.; served in the confederate army from the beginning of the war until 1864. In 1897 was appointed to the United States senate to fill a vacancy caused by the death of Hon. J. Z. George. In 1898 he was elected to fill out the unexpired term ending 1899, and was then elected to succeed himself, 1899-1911. Died, 1912.

Monge (*mônzh*), **Gaspard,** French mathematician and physicist, was born at Beaune, 1746. After he had helped to found the Ecole Polytechnique, he was sent by the directory to Italy. Here he formed a close friendship with Bonaparte, followed him to Egypt, and was made successively professor in the Ecole Polytechnique, a senator and count of Pelusium. He died at Paris, 1818.

Monk, George, duke of Albemarle, English general, was born in County Devon, 1608. After a brief service in Holland he fought at first on the side of Charles I. during the English civil war; then, changing to the other side, he commanded a republican army in Ireland, 1646-50 and in 1651 reduced Scotland to submission to Cromwell. After the death of the protector in 1658, Monk proclaimed the former's son, Richard Cromwell his successor, and himself retained command of the army in Scotland. With that army, in 1660, he marched upon London, and declared for the restoration of Charles II. After gaining a great victory at sea over the Dutch in 1666, Monk died in 1670.

Monmouth, James Fitzroy, Duke of, English general, was born at Rotterdam, 1649. He was a natural son of Charles II. and Lucy Walters, and as such was loaded with rank and honors. In time he became the idol of the English nonconformists. In 1684 he went to Antwerp, and remained abroad until the death of the king, when he resolved to embark for England. He landed, in 1685, with a small force, at Lyme-Regis, and issued a manifesto declaring James to be a murderer and usurper, and asserting his own legitimacy and right by blood to be king of England. On the fifth day, however, his force consisted only of a rabble of some 2,000 rudely armed peasants and farmers. He was completely defeated at the battle of Sedgemoor, the last great fight on English soil, was taken prisoner, and, on July 15, 1685, was brought to the scaffold and beheaded on Tower hill.

Monroe, James, fifth president of the United States, was born in Westmoreland county, Va., 1758. He was graduated at William and Mary College, served in the revolutionary army, was present at several battles, and in 1783 entered the general congress as a delegate from his native state. During the years 1799-1802, he filled the office of governor of Virginia. In 1802, as the associate of Livingston, he was dispatched on a special mission to negotiate for the purchase of Louisiana. In 1803, in England, and in 1805, in Spain, he performed special diplomatic services for his country. In 1816 he was elected president of the United State by the republican (democratic) party, and made himself very popular. His most popular acts, perhaps, were the recognition of the independence of Mexico and the South American republics, and the promulgation of what has since been called the "Monroe doctrine." After being twice president, he was justice of the peace, a visitor of the University of Virginia, and member of a state convention. He died in 1831—like his predecessors, Adams and Jefferson—on the 4th of July.

Montagu, Lady Mary Wortley, English beauty, wit and writer, was born at Thoresby, in Nottinghamshire, about 1689, eldest daughter of Evelyn Pierrepont, duke of Kingston. She was carefully educated, and manifested precocious talents. Pope was among her friends, but he at length quarreled with and libeled her. In 1739 her declining health induced her to settle on the continent, whence, however, she returned in 1761. She died in the following year. Her *Letters* place her at the head of feminine epistolary writers in Great Britain, and leave her few rivals in other countries.

Montaigne (*mon-tān'* Fr. pron. *mon-tan-y'*), **Michel Eyquem de,** famous French essayist, was born in 1533 at the castle of Montaigne, in Périgord. He learned Latin conversationally before he could speak French, and Greek was also an early acquisition. At the age of six he became a pupil at the Collége de Guienne at Bordeaux, and at thirteen he began to study law. Little is known of his youth and early manhood.

He was a parliamentary counsellor from 1554 till 1567; he seems to have seen some military service in 1556; he married the daughter of a fellow counsellor; and at some period was appointed a gentleman of the chamber to the king. In 1571, however, he retired to his ancestral château, and devoted himself to peaceful study and meditation. In 1580 he published the first two books of his *Essais,* and immediately afterward set out on a journey through Germany, Switzerland, and Italy to restore his health, which had been shattered by the attacks of a hereditary disease.

In 1582 and 1584 he was chosen mayor of Bordeaux. In 1588 he republished his *Essais,* with the addition of a third book. After a last visit to Paris (in the course of which he was thrown into the Bastille for a short time by the Leaguers) Montaigne seems to have dwelt quietly in his château. He died of quinsy in 1592.

Montaigne's *Essais* have at all times been one of the most popular books in the French language. They embrace an extraordinary variety of topics, which are touched upon in a lively entertaining manner, with all the raciness of strong native good sense, careless of system or regularity. Sentences and anecdotes from the ancients are interspersed, with his own remarks and opinions, and with stories of himself in a pleasant strain of egotism, and with an occasional license, to which severer moralists can with some difficulty reconcile themselves.

His *Voyages,* a diary of his journeys in 1580-82, were published in 1774.

References.—See *Life,* by Alphonse Grun and Bonnefon; and Dowden's *Montaigne.*

Montalembert (*môn'tà'lăn'bâr'*), **Charles Forbes, Comte de,** French historian, orator, and publicist, was born in London, 1810, his mother being a Scotchwoman. He became a peer of France on the death of his father. In 1858 he published a pamphlet entitled, *Un Dèbat sur l'Inde,* eulogizing English institutions, and depreciating those then existing in France. For this pamphlet he was summoned before the bar of the correctional police, and was sentenced to imprisonment for six months, and to pay a fine of 3,000 francs; and, though this penalty was immediately remitted by the emperor, Montalembert appealed against the decision of the court, was again condemned, and once more pardoned, very much to his own disgust. He died at Paris, 1870.

Montcalm (*mont-kăm'*), **Louis Joseph St. Veran, Marquis de,** commander-in-chief of the French troops in Canada, 1756-59, was born near Nimes, France, 1712. He captured Fort Ontario at Oswego, 1756; Fort William Henry in 1757; repulsed the British under Abercrombie at Ticonderoga in 1758; repelled Wolfe's attack on Quebec, 1759; and was defeated and mortally wounded in the battle of Quebec, September 13 of the same year.

Montesquieu (*mon'tes-ku'*; Fr. *mon'tes'ke'u*), **Charles de Secondat, Baron de la Brede et de,** French philosophical writer, was born in the Château de la Brède, near Bordeaux, 1689. In 1716 he became president of the Parlement of Bordeaux. His first published work, the *Lettres Persanes* was a daring and subtle satire on the follies of the day, disguised in the form of letters from a Persian noble.

He gave up his president's office in 1726 and then visited Germany, Hungary, Italy, Holland, and England. In England he stayed for eighteen months, and imbibed a deep admiration for its social and political institutions. He returned to France in 1731 and in 1734 he published his *Considerations sur les Causes de la Grandeur et la Decadence des Romains.* In 1748, *L'Esprit des Lois,* the result of twenty years of labor, was published, and at once placed its author among the greatest writers of his country. Among his lesser works are *Dialogue de Sylla et d'Eucrate; Le Voyage de Paphos; Essai sur le Gout* (unfinished); *Arsace et Ismenie* (probably a work of his youth); and *Lettres Familières.* He died 1755.

References.—Ilbert's *Montesquieu* (Romanes Lecture, 1904), and Vian's *Hist. de Montesquieu, sa Vie et ses Œuvres;* Lowell's *Eve of the French Revolution.*

Monfort, Simon de, English general and statesman, was born in France about 1208, son of a French count. He went to England in 1230. He here attached himself to Henry III., married the king's sister, and was sent to govern Gascony in 1248. He returned in 1253, and passed over to the side of the barons, whom he ultimately led in the struggle against the king. He sketched a constitution for the country, and summoned the most representative parliament that had yet met, but as he aimed at the welfare not of the barons only but of the common people as well, the barons began to distrust him. He was slain at Evesham, 1265.

Montgolfier (*môn'gōl'fyā'*), **Jacques Etienne** and **Joseph Michel,** two brothers, distinguished as the inventors of balloons, were the sons of a celebrated paper manufacturer at Annonay, France. The former was born in 1745, and the latter in 1740. Joseph was a man of much genius and little education; but the two brothers were fitted to supplement each other's deficiencies, and together they made many discoveries, and were both received as members of the French academy. Joseph invented the hydraulic screw, the calorimeter, etc., and in the latter part of his life filled a post in the department of arts and manufactures. He died at Paris in 1810, eleven years after his brother.

Montgomery, James, British poet, was born in Scotland, 1771. He was intended for a Moravian preacher, but, showing little aptitude, became a shop boy. In 1797 he published a small volume of poems, *Prison Amusements,* followed by *The Wanderer of Switzerland.* Died, 1854.

Montgomery, Richard, American general, was born in Ireland, 1736. In 1772 he resigned his commission in the British service, and settled in Dutchess county, N. Y., representing it in the continental congress, 1775. As brigadier in the colonial army he took Montreal, and was killed in the assault on Quebec, December, 1775.

Moody, Dwight Lyman, American preacher and revivalist, was born in Massachusetts, 1837. He renounced Unitarianism, became a Congregationalist, served during the civil war on the Christian commission, and from 1865 entirely abandoned business and devoted himself to religious work in Chicago and elsewhere. His church and schoolhouse at Chicago having burned down in 1871, he went to England to raise funds for rebuilding them, and was successful in his object. He established a school for Christian workers at Northfield, Mass., and a Bible institute at Chicago. Died, 1899.

Moore, George Foot, American scholar and educator, professor in Harvard University since 1902, was born at West Chester, Pa., 1851. He was graduated at Yale College, 1872; D. D., 1897. Union theological seminary, N. Y.; Tübingen, LL. D., Western Reserve, 1903; Harvard, 1906. Author: *The Book of Judges in Hebrew; Index to the Journal of the American Oriental Society.* He was appointed Roosevelt lecturer at Berlin University, 1909.

Moore, Sir John, British general, was born in Glasgow, Scotland, 1761. He served in the British army during the American war; became a member of parliament in 1784; served in Corsica, 1793-94. In 1798 he was made major-general. On his return from an expedition in aid of Sweden, he was sent to Portugal to command an army to coöperate with the Spaniards, 1808. He was obliged to retreat from Salamanca to the sea, won the victory of Corunna in 1809, but fell in the battle.

Moore, John Bassett, American publicist, was born in Smyrna, Del., 1860. He was graduated at the University of Virginia, 1880; LL. D., Yale, 1901. He studied law at Wilmington, Del., and in 1885, was appointed law clerk in the state department at Washington, D. C. In 1886 he became third assistant secretary of state, and was retained in that position until he resigned, 1891,

become professor of international law and diplomacy at Columbia University. In 1913, appointed counsellor of the department of state by President Wilson. He is an authority on international law. Author: *Report of Extra-territorial Crime; Report on Extradition; Extradition and Interstate Rendition.*

oore, Thomas, Irish poet, was born in 1779. He was graduated at Trinity College, Dublin, 1798, and in 1799 went to London to study law, taking with him a translation of the odes of Anacreon, which he published in 1800. In 1801 he published *The Poetical Works of the Late Thomas Little, Esq.*, a pseudonym suggested by his diminutive stature. His *Irish Melodies* have enjoyed a popularity surpassing that of any similar poems in the language. In 1817 he completed *Lalla Rookh*, the most elaborate of his works. His most important prose work was his *Notices of the Life of Lord Byron.* His remaining works comprise: *The Summer Fête*, a poem; *Memoirs of Lord Fitzgerald.* Died, 1852.

oran, Thomas, American artist, was born at Bolton, in Lancashire, England, 1837. His early life was spent at Philadelphia, where he learned engraving. He then studied painting in England, France, and Italy. His large paintings, the *Grand Canon of the Yellowstone*, and the *Chasm of the Colorado*, were bought by congress for $20,000. His other works are mostly of the same class.

ore, Hannah, English writer, daughter of the village schoolmaster of Stapleton, near Bristol, was born in 1745. In 1774 she was introduced to the Garricks, Johnson, Burke, Reynolds, and the best literary society of London. Led by her religious views to withdraw from society, she retired, on the publication of her *Sacred Dramas*, to Cowslip Green near Bristol, where she did much to improve the condition of the poor, and still helped by her writings to raise the tone of English society. In 1828 she settled at Clifton where she died in 1833.

ore, Sir Thomas, English statesman, was born at London, 1478. He was educated at Oxford, and at Lincoln's Inn. In 1514 and 1515 he was sent on commercial embassies to the Netherlands, and after his return became a privy councillor. In 1521 he was knighted and made treasurer of the exchequer. In 1523 he was chosen speaker of the house of commons. He constantly refused to lend his authority to Henry VIII.'s project of divorce and second marriage. In 1534 he refused to swear allegiance to the act of succession for securing the throne to the offspring of Anne Boleyn, and was committed to the Tower. In July, 1535, he was brought to the bar of the high commission charged with traitorously attempting to deprive the king of his title as supreme head of the church, and was condemned. He was executed July 6th. He wrote *Utopia*, and several other works, most of them in Latin.

reau (*mō'rō'*), **Jean Victor,** celebrated French general, was born at Morlaix, 1763, and educated for the bar. He entered the army before he was eighteen, but was taken from it by his father. The revolution enabled him to gratify his wishes, and he made his first campaign under Dumouriez, 1792. He gained the rank of brigadier-general in 1793, and that of general of division in 1794. In the latter year he commanded the right wing of Pichegru's army, and obtained great successes in the Netherlands. Having engaged with Pichegru, Georges, and other royalists in a plot against the consular government, he was brought to trial, 1804, and sentenced to two years' imprisonment, but was allowed to come to America. Here he remained until 1813, when he was prevailed upon to join the allied sovereigns, and appear in arms against his country. He was, however, mortally wounded at the battle of Dresden, and died September 1, 1813.

rgagni (*môr-gän'yē*), **Giovanni Battista,** Italian anatomist, was born at Forli, Italy, 1682. He was professor at Padua from 1715, and is the reputed founder of pathological anatomy, to which his most celebrated works refer. His chief book is *On the Seats and Causes of Diseases Investigated by Anatomy.* He died at Padua, 1771.

rgan, John Pierpont, American banker, financier, and art collector, was born in Hartford, Conn., 1837. He was graduated at English high school, Boston; studied at the University of Göttingen, Germany, and entered the bank of Duncan, Sherman and Company, 1857. Became a member, 1871, of the firm Drexel, Morgan and Company, now J. P. Morgan and Company, leading private bankers of the United States, with important branch houses in London and Paris. Gave site, buildings and funds amounting to about $1,500,000 to lying-in hospital, New York, and large donations to the New York trade schools, the cathedral of St. John the Divine, Harvard Medical College, and many other institutions. He has made valuable gifts to the American museum of natural history, Metropolitan museum of art, and New York public library, and owns famous collections of pictures, books, manuscripts, curios, etc. He is president of the Metropolitan museum of art, and member of many societies, clubs, etc. Died in Rome, Italy, 1913.

rgan, John Tyler, American soldier, lawyer, and statesman, was born at Athens, Tenn., 1824. He removed to Alabama in 1833; was admitted to the bar in 1845. After the war he resumed the practice of law at Selma, Ala.; was a presidential elector, 1876; and from 1877 to 1907 was one of the ablest members of the United States senate. He was appointed by President Harrison as arbitrator on Behring sea fisheriers, 1892, and was appointed by President McKinley, in 1898, one of the commissioners to organize government in Hawaii, after passage of annexation bill. Died, 1907.

Morley, John, British statesman and writer, was born in Blackburn in 1838, and educated at Cheltenham and Oxford. He edited, among other publications, the *Fortnightly Review* from 1867 to 1882, the *Pall Mall Gazette* from 1880 to 1883, and *Macmillan* in 1883-85, and, after two unsuccessful candidatures, in 1869 and 1880, entered parliament in 1883, as member for Newcastle. From the first, he advocated home rule for Ireland, and his articles in favor of it, followed up by speeches in 1885, made him Gladstone's most conspicuous supporter. His best known books are: *Edmund Burke*; *Critical Miscellanies*; *Voltaire*, and an authoritative *Life of Mr. Gladstone.* He was created a viscount, 1908.

Morrill, Justin Smith, American legislator, was born in Strafford, Vt., 1810, and devoted himself to mercantile pursuits until his election to congress. He sat in the house of representatives from 1855 to 1867, and in the senate from 1867 until his death, the longest term of service up to that time. In 1861 he succeeded in securing President Lincoln's approval of a bill, previously vetoed by Buchanan, for the reëstablishment through public land grants of state colleges for the teaching especially of agriculture and the mechanic arts. By virtue of this bill there had been established in 1899 in the various states sixty-four institutions giving instruction to 36,000 students. Senator Morrill was also the author of the famous Morrill tariff bill of 1861. He died in 1898.

Morris, Clara, American actress, was born in Toronto, Canada, 1849. She was taken to Cleveland when a child, and grew up there; became a member of the ballet in academy of music, Cleveland, 1861, and rapidly advanced to leading lady. Soon became prominent in emotional rôles and appeared as a star in the principal American theaters. Leading rôles: Camille, Alixe, Miss Multon, Mercy Merrick in *The New Magdalene*, Cora in *L'Article 47*, etc. She married Frederick C. Harriott in 1874. Author: *A Silent Singer*; *Life on the Stage*; *The Trouble Woman*; *Life of a Star*, etc.

Morris, George Pope, American journalist and poet, was born in Philadelphia, 1802. He edited *American Melodies*, and, with N. P. Willis, *The Prose and Poetry of America.* His best known poem is *Woodman, Spare That Tree.* In 1837 he produced a drama entitled *Briarcliff*, which ran forty nights. Died, 1864.

Morris, Gouverneur, American statesman, was born in 1752. He became a member of the provincial congress of New York, and was one of those who drew up the state constitution in 1776. He was also a prominent member of the continental congress in 1777-80, the colleague of Robert Morris as superintendent of finance, and the organization of the bank of North America was largely due to him. In 1787 he was one of the committee to draft the federal constitution; was minister to France during the revolution, and became United States senator on his return. Died, 1816.

Morris, Robert, American financier, was born in Liverpool, England, 1734. He came to America at an early age and settled in Philadelphia, becoming a partner in the counting-house of C. Willing. Signed the declaration of independence, and greatly helped the American cause from his own purse, both during the revolution and afterward. He founded the bank of North America, was superintendent of finance from 1781 to 1784, but declined the secretaryship of the treasury. Died in 1806.

Morris, William, English poet and artist, was born near London, 1834. He was educated at Marlborough school and at Oxford. In an artistic capacity he did much to elevate the taste of the public in domestic decoration, designing wallpapers, fabrics, and furniture. He published *The Earthly Paradise* and many other works, and rendered into English the Anglo-Saxon *Beowulf*, the *Odyssey*, *Æneid*, etc. He also carried on for a time the *Kelmscott Press*, which reprinted various choice works. His works include, besides the above: *Defense of Guenevere and Other Poems*; *The Life and Death of Jason*, etc. He died at London, 1896.

Morse, Samuel Finley Breese, American painter and inventor, was born at Charlestown, Mass., 1791. After graduating at Yale college in 1810, he studied painting under Washington Allston and Benjamin West. He is one of the best of our earlier American portrait painters, and was one of the founders and the first president of the national academy of design. In 1835 he was appointed professor of the history of art at the university of New York.

It was while returning from Europe in 1832, on board the *Sully*, that Morse worked out roughly a plan for employing electromagnetism in telegraphy. It was not until 1835, however, that he was able to exhibit an instrument that was found to work well. Thereafter he associated with him in his work Prof. Leonard Gale and Alfred Vail, and was assisted by the published discoveries of Prof. Joseph Henry. Credit should be given to these three men in particular, and to others for material assistance in bringing the telegraph to practical success, but Morse was the inventor in the only true meaning of the word.

In 1843, after many discouragements Congress voted $30,000 for an experimental line between Washington and Baltimore. More hardships were encountered before the line was finally completed, but at last, on May 24, 1844, the first public message was sent over the line, the now historic words, "What hath God wrought?"

Morse died 1872, in New York City, after successfully defending his rights through a long series of lawsuits and after many honors had been bestowed upon him by his own countrymen and by foreign nations. It seems not unlikely that the idea of the submarine Atlantic cable originated with Morse; at all events, he laid in New York harbor the first submarine telegraph line, in 1842. With Prof. John Draper he also took the first daguerreotype to be made in this country.

References.—Prime's *Life of S. F. B. Morse*; Jeans' *Lives of Electricians*; Hubert's *Inventors*; Denslow and Porter's *World's Workers.*

Morton, Levi Parsons, American banker and statesman, was born in Shoreham, Vt., 1824. He was graduated from Shoreham Academy; LL. D., Dartmouth College, 1891, Middlebury College, 1893. United States minister to France, 1881-85; vice-president of the United States, 1889-93; governor of New York, 1895-96. He is now president of the Morton trust company, Fifth Avenue trust company, etc.

Morton, Oliver Perry, American statesman and jurist, was born in Wayne county, Ind., 1823. He was graduated at Miami University in 1843; was admitted to the bar in 1847, United States senator from Indiana, 1867-77. He declined the post of United States minister to England in 1870. In 1877 he was a member of the United States electoral commission, and died the same year.

Moscheles (*môsh'e-lās*), **Ignaz,** German pianist and composer for the piano, was born at Prague, 1794, of Jewish parents. He made frequent tours throughout Europe from 1815; from 1844 he was a professor at the Leipzig conservatory until his death, 1870. He edited in English Schindler's *Life of Beethoven*, and wrote numerous concertos, sonatas, and studies for the piano.

Moses, Hebrew leader, prophet, and legislator, was born in Egypt about 1600 B. C., during the time of the oppression of the Hebrews. His father, Amram, and mother, Jochebed, both of the race of Levi, were obliged to expose him in obedience to a royal edict, but placed him in a basket of bulrushes on the river border, where he was found by the daughter of the Egyptian king as she went to bathe. She adopted him as her son, and in all probability had him educated for the duties of the priesthood, the means of instruction thus afforded him being the best which his time possessed.

His expedition into Ethiopia, in his fortieth year, as leader of the Egyptians, when he subdued the city of Saba (Meroe), won the affections of the conquered Princess Tharbis. That he married her, rests only on the tradition preserved by Josephus. An outrage committed by an Egyptian on a Hebrew excited his anger, and he secretly slew the Egyptian. The deed became known, and he escaped the vengeance of the king only by a hasty flight into Arabia. Here he took refuge with Jethro, a Midianitish prince and a priest, and espoused his daughter Zipporah.

The promises of God that his race would become a great nation occupied much of his thoughts, and at last God appointed him the chosen deliverer from the bondage in Egypt. Being slow of speech, and possessing none of the arts of an orator, God therefore gave him power to prove his mission by miracles, and joined to him his elder brother Aaron, a man of little energy, but of considerable eloquence. Thus prepared, Moses returned to Egypt at the age of eighty years to undertake the work.

At first he had the greatest obstacles to overcome, but after the visitation of ten destructive plagues upon the land, Pharaoh suffered the Hebrews to depart. Moses

conveyed them safely through the Red Sea, in which Pharaoh, who pursued them, was drowned with his army. New difficulties arose, however. The distress of the people in the desert, the conflicts with hostile races, the jealousies of the elders, often endangered his authority and even his life, despite the miraculous attestations of his mission.

During the term of the encampment at Sinai he received the Ten Commandments and the laws for the regulation of the lives of the Israelites. When they were already near the end of their journey toward Canaan Moses saw himself compelled, in consequence of new evidences of discontent, to lead them back into the desert, for forty years more of toilsome wandering. He was not himself permitted, however, to see the Israelites settled in their new country on account of a murmur which, in the midst of his distresses, he allowed to escape against his God.

After appointing Joshua to be the leader of the Hebrews he ascended a mountain beyond Jordan, from which he surveyed the land of promise, and so ended his life in his 120th year. All superstitious reverence for his bones or his place of sepulture was prevented by the secrecy of his burial, and its effectual concealment from the people.

References.—See, for traditional view of his life, Rawlinson's *Moses, His Life and Times;* for personality and work, W. R. Smith's *Old Testament in Jewish Church;* Schultz's *Old Testament Theology;* Kittel's *History of the Hebrews;* Rothstein's *Moses as Man and Prophet.*

Motley, John Lothrop, American historian and diplomat, was born in Massachusetts, 1814. He was graduated at Harvard College in 1831, and studied at Göttingen and Berlin; D. C. L., Oxford, 1858. After traveling for some years in Europe he returned to the United States, studied law and was admitted to the bar. In 1869 he was appointed American minister to the court of St. James, a post from which he was removed in 1871. The three great works upon which Motley built up one of the foremost literary reputations of the age are: *The Rise of the Dutch Republic—a History;* its sequel, *The History of the United Netherlands from the Death of William the Silent to the Synod of Dort;* and *John of Barneveld.* Died in England, 1877.

Mott, Lucretia, née Coffin, Quaker philanthropist and reformer, was born in Nantucket, 1793. She was a delegate to the world's anti-slavery convention in London, 1840, but was not allowed to take a seat as delegate because of her sex. She published a *Sermon to Medical Students* in pamphlet form, and also a *Discourse on Women,* delivered in Philadelphia, 1849. Died at Philadelphia, 1880.

Moulton, Ellen Louise Chandler, American novelist and poet, was born in Pomfret, Conn., 1835, daughter of Lucius L. Chandler. She married William U. Moulton in 1855. Author: *This, That, and the Other; Juno Clifford; My Third Book; Bed-Time Stories; More Bed-Time Stories; Some Women's Hearts; Swallow Flights; Poems.* Died, 1908.

Moulton, Richard Green, educator, author, was born in Preston, England, 1849. He was graduated from London University, 1869; Cambridge, 1874; Ph.D., University of Pennsylvania, 1891. Is professor of literary theory and interpretation, University of Chicago. Author: *Shakespeare as a Dramatic Artist; The Ancient Classical Drama; The Literary Study of the Bible; A Short Introduction to the Literature of the Bible;* Editor: *The Modern Reader's Bible,* in 21 volumes.

Moultrie, William, American revolutionary general, was born in South Carolina, 1731. He repulsed an attack on Sullivan's island, Charleston harbor, where Fort Moultrie now stands, in 1776, for which he received the thanks of congress; defended Charleston in 1779. In 1785 and again in 1794 he became governor of his native state, and died in 1805.

Moxom (*mok'sum*), **Philip Stafford,** American clergyman, was born in Markham, Canada, 1848. Graduate of University of Rochester, 1879; A.M., 1882; D.D., Brown, 1892. Was ordained to the ministry, 1871. He served with army of the Cumberland at Fort Donelson as "captain's boy," 1862; enlisted in the 17th Illinois cavalry, 1863, serving until 1865. Author: *The Aim of Life; From Jerusalem to Nicæa; The Church in the First Three Centuries.*

Mozart (*mo-zart'*; German pron. *mō'tsart*), **Johann Chrysostomus Wolfgang Amadeus,** great German composer, was born at Salzburg 1756, died at Vienna 1791. At the age of four years his father, Leopold Mozart, a violinist of repute, began to teach him some minutes and other small pieces on the harpsichord.

From this period he made rapid progress, and a concerto for the harpsichord, which he wrote in his fifth year, was so difficult that only the most practiced performer could play it. In his sixth year Mozart was taken by his father, along with his sister, to Münich and Vienna, where the little artists were received at court with great favor. In 1763 the family made a journey to Paris, where Mozart published his first sonatas for the harpsichord; and in the following year they proceeded to England, where the child-musician performed before the court the most difficult compositions of Bach and Handel. Returning to Salzburg after visiting Holland, the family again went to Vienna in 1767, where the boy received a commission from the emperor to write the music of a comic opera, but owing to the opposition of the court musicians the work was never performed.

In 1769 Mozart, who had been made master of the concerts at the court orchestra at Salzburg, commenced a journey to Italy in company with his father. In Rome he wrote down, on hearing it, the famous *Miserere* annually sung in the Sistine chapel during the holy week. At Milan in 1770 he composed, in his fourteenth year, his first opera, *Mithridates,* which was performed more than twenty times in succession. Henceforth he resided chiefly in Salzburg, but also visited Paris, Munich, and finally Vienna. In the latter city, although he was appointed composer to the court, he found it necessary to maintain himself by giving lessons in music and writing waltzes.

Notwithstanding this poverty it was here that most of his best work, such as his famous operas, *Le Nozze di Figaro* ("The Marriage of Figaro,") *Don Giovanni, La Clemenza di Tito* ("Clemency of Titus,") *Die Zauberflöte* ("The Magic Flute,") and his last work the *Requiem,* were written. It was here also that the best pianist and greatest composer of his time—perhaps of the world—died in obscurity and was buried in a pauper's grave.

The extent of work done by Mozart during his short life is almost incredible, and in every department of composition, whether vocal or instrumental, he excelled. In the history of music he stands most prominently forward as an operatic composer, his *Don Giovanni, Magic Flute,* and *Marriage of Figaro* being works previously unequaled and never since surpassed. In his character he was kind hearted, guileless, cheerful, void of envy, almost boyish to the last.

References.—See *Lives,* by Otto Jahn, which contain a summary of everything heretofore written on Mozart; Fischer, Holmes, Nohl's *Life,* translated by Lalor; *Correspondence,* edited by Nohl; and the article in Grove's *Dictionary of Music.*

Muhlenberg (*mū'len-berg*), **Heinrich Melchior,** American clergyman, and founder of the German Lutheran church in America, was born at Eimbeck, Germany, 1711. In 1748 he was instrumental in forming the first American Lutheran synod. In 1762, while he resided in Philadelphia, he formulated the constitution for the Lutheran congregation there, which was subsequently adopted by many others. He died in 1787.

Muhlenberg (*mū'len-bûrg*), **John Peter Gabriel,** American general, son of the preceding, was born in Pennsylvania, 1746. He was pastor at Woodstock, Va., and formed a regiment among his parishioners. He was made brigadier-general in 1777, and major-general at the close of the revolution. In 1785 he became vice-president of Pennsylvania, and was a member of congress. Died, 1807.

Muller (*mūl'ẽr*), **Friedrich Max,** British philologist and orientalist, was born in Dessau, 1823, son of a German poet, Wilhelm Müller. He was educated at Leipzig; studied at Paris, and settled in England in 1846. He was appointed Taylorian professor at Oxford in 1854, and 1868-75 was professor of comparative philology there. Besides editing the *Rig-Veda,* he has published *Lectures on the Science of Language; The Origin and Growth of Religion; Comparative Mythology; Lectures on the Science of Language; Chips from a German Workshop.* Died, 1900.

Mulock (*mū'lok*), **Dinah Maria,** (Mrs. Craik), English author, was born at Stoke-upon-Trent, 1826. Settling in London at twenty, she published *The Ogilvies; Olive; The Head of the Family,* and *Agatha's Husband.* She never surpassed or even equaled her *John Halifax, Gentleman,* published in 1857. In 1856 she married George Lillie Craik, and spent a period of quiet happiness and literary industry at Corner House, Shortlands, Kent, where she died, 1887.

Mulock, Sir William, Canadian jurist, chief-justice of the exchequer division of the high court of justice for the province of Ontario since 1905, was born at Bond Head, Canada, 1843. He was graduated at the University of Toronto, 186[illegible] barrister, 1868, and Q. C., 1888. He was fir[illegible] elected to the parliament of Canada, 1882; w[illegible] postmaster-general of Canada, 1896-1905, an[illegible] minister of labor, 1900-05. He also introduce[illegible] and carried through the house of commons a bi[illegible] establishing the Canadian department of labo[illegible] 1900. He represented the Dominion of Canad[illegible] at proceedings connected with inauguration [illegible] federal parliament of Australia.

Munchhausen (*müngk'hou-zen*), **Hieronym[illegible] Karl Friedrich, Baron von,** member of an ancie[illegible] and noble German family, who attained a remar[illegible]able celebrity by false and ridiculously exaggerate[illegible] tales of his exploits and adventures, so that h[illegible] name has become proverbial, was born in Ha[illegible]over, Germany, 1720. The title of the tal[illegible] ascribed to him is *Baron Münchhausen's Narrati[illegible] of His Marvelous Travels and Campaigns in Russi[illegible]* Died, 1797.

Munroe, Charles Edward, American chemis[illegible] educator, was born at Cambridge, Mass., 184[illegible] He was graduated at Harvard, S.B., 1871; Ph.D [illegible] Columbian, 1894; professor of chemistry at Unite[illegible] States naval academy, 1874-86; chemist [illegible] torpedo corps, United States Naval Torpe[illegible] Station and War College, 1886-92; head profess[illegible] of chemistry since 1892, and dean of faculty [illegible] graduate studies, George Washington Universit[illegible] He is the inventor of smokeless powder and [illegible] authority on explosives.

Munsey, Frank Andrew, American publisher, w[illegible] born in Mercer, Me., 1854. He was educated [illegible] the public schools of Maine, and started his bus[illegible]ness career in a country store. He became man[illegible]ger of the Western Union telegraph office, August[illegible] Me.; went to New York, 1882, and started *T[illegible] Golden Argosy,* a juvenile weekly, now the adu[illegible] monthly, *The Argosy;* in 1889 he launched *Munsey[illegible] Weekly,* converted in 1891 into *M[illegible]nsey's Magazin[illegible]* He is also the owner of the Baltimore *New[illegible]* Washington *Times,* and Philadelphia *Eveni[illegible] Times.*

Münsterberg (*mün'ster-bẽrg*), **Hugo,** Germa[illegible] American psychologist, educator and autho[illegible] was born at Danzig, Germany, 1863. He w[illegible] graduated at Danzig gymnasium, 1882; pursu[illegible] post-graduate studies in philosophy, natur[illegible] sciences, and medicine in Leipzig and Heidelber[illegible] 1882-87; Ph.D., Leipzig, 1885, M. D. Profess[illegible] of psychology since 1892, and director of psych[illegible]logical laboratory, Harvard. Author: *Psycholo[illegible] and Life; American Traits; The Americans; Pri[illegible]ciples of Art Education;* Editor of *Harva[illegible] Psychological Studies* since 1903.

Murat (*mū'rà'*), **Joachim,** celebrated French ma[illegible]shall, was born at La Bastide, near Cahors, Franc[illegible] 1771. He was one of the best generals of Nap[illegible]leon I., by whom he was created King of Naple[illegible] In 1812 he accompanied the great army to Moscov[illegible] in command of the cavalry, and again commande[illegible] the cavalry at the battle of Leipzig, in the follov[illegible]ing year. After the return of Napoleon fro[illegible] Elba, he led an army against the Austrians, who[illegible] he encountered at Tolentino, in upper Italy, b[illegible] was signally defeated—losing at once his army a[illegible] his throne. Subsequently he landed with a fe[illegible] followers on the coast of Calabria, but was aga[illegible] defeated, captured, and, after trial by cour[illegible] martial, shot at Pizzo, dying with the same brave[illegible] he had exhibited during life, 1815.

Murfree, Mary Noailles (Charles Egbert Cra[illegible]dock), author, was born in Murfreesboro, Tenn[illegible] 1850, daughter of William L. Murfree. For yea[illegible] she concealed her identity and sex under her pe[illegible] name. Author: *In the Tennessee Mountains; T[illegible] Young Mountaineers; The Story of Old Fort Loudo[illegible] The Bush-whackers and Other Stories; The Champio[illegible] A Spectre of Power; Storm Centre; The Frontier[illegible]man; The Windfall,* etc.

Murillo (*moo-rēl'yō*), **Bartolomè Esteban,** Spani[illegible] painter, was born in Seville, Spain 1618. [illegible] 1646 he finished painting the little cloister of S[illegible] Francis; and the manner in which he execute[illegible] it produced the greatest astonishment among h[illegible] countrymen. He enriched the churches an[illegible] convents of Seville and other cities with numero[illegible] works. His greatest picture is probably th[illegible] "*Immaculate Conception.*" Having been invite[illegible] to Cadiz to paint the grand altar of the Capuchin[illegible] he there executed his celebrated picture of th[illegible] "*Marriage of St. Catherine.*" Died in Seville, 168[illegible]

Murray, Sir James Augustus Henry, Britis[illegible] philologist, was born at Denholm, 1837. He w[illegible] graduated from the London University. His *Di[illegible]lect of the Southern Counties of Scotland* establishe[illegible] his reputation as a philologist. The great wor[illegible] of his life, the editing of the philological society[illegible] *New English Dictionary,* was begun at Mill Hi[illegible] 1879, and has been continued at Oxford. He w[illegible] knighted in 1908.

Murray, John Clark, Canadian educator an[illegible] writer, professor of moral philosophy, McG[illegible] University, Montreal, since 1872, was born [illegible] 1836. He was educated at the Universities [illegible] Glasgow, Edinburgh, Heidelberg, and Göttinge[illegible] and was appointed to the professorship of philos[illegible]phy in Queen's University, Kingston, Canad[illegible] 1862. Author: *Outline of Sir W. Hamilton[illegible] Philosophy; A Handbook of Psychology; An Intr[illegible]duction to Ethics.*

Murray, Lindley, American grammarian, was bor[illegible] at Swatara, Pa., 1745. He was educated at

Quaker school at Philadelphia. At first in a New York counting-house, he studied law, and was admitted to the bar; but during the revolutionary war he amassed a fortune in commerce. From 1785 he was crippled by a fever. In 1787 he published his *Power of Religion on the Mind.* His *English Grammar*, long a standard, was followed by *English Exercises*, an *English Reader*, etc., Died, 1826.

usset (*mü'se'*), **Louis Charles Alfred de,** French poet, was born in 1810. In 1828 he received a prize for a Latin dissertation. His *Poésies nouvelles* contain his *Strophes a la Malibran*, and his *Nuits*, which are regarded as his finest lyrics. He was librarian in the ministry of the interior for several years before 1848, and was restored to his office in 1852, with the title of reader to the empress. His complete works appeared in ten volumes in 1865-66. Died, 1857.

utsuhito (*mōōt -sōō-hē'-tō*), emperor of Japan, was born in 1852, ascended the throne in 1867, and married Princess Haruko in 1869. His reign was marked by great reforms. Under the rule of this noted emperor, Japan entered upon an unprecedented era of prosperity. Civilization made rapid progress, and secured for Japan the foremost place among Asiatic nations. Died, 1912.

yers, Philip Van Ness, author, historian, was born at Tribes' Hill, N. Y., 1846. He was graduated at Williams College, 1871; LL.B., Yale, 1890; L.H.D., Miami University, 1891. He was president of the Farmer's College, Ohio, 1879-90; professor of history and political economy, University of Cincinnati, 1890-1900; dean academic faculty, University of Cincinnati, 1895-97. Author: *Life and Nature Under the Tropics; Remains of Lost Empires; Ancient History; Mediæval and Modern History; General History*, etc.

yrick, Herbert, publisher, editor, author, was born at Arlington, Mass., 1860. He was graduated at the Massachusetts Agricultural College, Amherst, Mass., 1882. He is now president and editor of Phelps publishing company; director of *Good Housekeeping* since 1901; was vice-president of the Orange Judd company and managing editor of *American Agriculturist* at New York, and *Orange Judd Farmer* at Chicago, 1888-1894; president, editor, and manager of Orange Judd company, New York, since 1891.

dir Shah (*nā'dēr shä*), Persian ruler, belonging to the Afshars, a Turkish tribe, was born near Kelat, in Khorassan, Persia, 1688. Having been degraded and punished for some real or supposed offense, he betook himself to a lawless life, and for several years was the daring leader of a band of 3,000 robbers, who levied contributions from almost the whole of Khorassan. He invaded India, took Delhi in 1739, and seized the Koh-i-noor diamond and the peacock throne. His last years were marked by rapacity and oppression, and he fell at last under the hand of an assassin, 1747. He is still reckoned by the Persians, however, as one of their great national heroes.

gel, Charles, lawyer, secretary of commerce and labor, 1909-13, was born in Colorado county Texas, 1849. He was graduated from the St. Louis Law School in 1872; and was admitted to the bar in 1873. President of the St. Louis city council from 1893 to 1897; has been a member of the St. Louis Law School faculty since 1886. He has taken an active part in politics for the last twenty years, and has delivered addresses before bar associations and similar organizations on various topics of public interest.

nsen (*nän'sen*), **Fridtjof,** Arctic explorer, was born in Norway, 1861, and was graduated from the University of Christiania, Ph.D., 1888. He started on his first Arctic expedition in 1882, and in May of the same year undertook his celebrated journey across Greenland, which he accomplished in forty-six days. In 1893 Nansen sailed in the *Fram* to make an examination of the entire polar regions, and penetrated farther north than any of his predecessors. He then became professor of zoölogy at Christiania University; took an active part in the separation of Norway and Sweden in 1905, was minister for Norway at the court of St. James, 1906-08; and professor of oceanography, Christiania University, since 1908. Author: *Farthest North; Scientific Results; Norway and the Union with Sweden.*

pier (*nāp'yēr; nā-per'*), **Sir Charles,** British admiral, was born at Merchiston hall near Falkirk, 1786, cousin to the hero of Sind. Commanding the *Thames* in 1811, he inflicted great damage upon the enemy in the Mediterranean. In 1814 he led the way in the ascent of the Potomac and took part in the operations against Baltimore. He also commanded the Baltic fleet in the Russian war; but the capture of Bomarsund failed to realize expectations, and he was superseded. He twice sat in the British parliament, and, until his death at his Hampshire seat, Merchiston hall, in 1860, he labored to reform the naval administration.

pier, Sir Charles James, British general, the conqueror of Sind, was born at London, 1782. He served during the Irish rebellion, and at the battle of Corunna was five times wounded and taken prisoner. He also took part in the Anglo-American war of 1812. From 1822-30 he was governor of Cephalonia; in 1838, a K. C. B., and in 1841 was sent to India to command the army of Bombay against the Ameers of Sind. Here he destroyed the fortifications of Emaun Ghur, 1843, followed by the battle of Meanee (Miani), where, with 2,800 English and Sepoys, he defeated 22,000 Baluchs. After the annexation he was appointed governor of Sind. He died near Portsmouth, 1853.

Napier (*nā'pēr*), **John,** Scottish mathematician, inventor of logarithms, was born at Merchiston castle, Edinburgh, in 1550. He made a contract with Logan of Restalrig for the discovery of treasure in Fast castle, in 1594, devised warlike machines for defense against Philip of Spain, and recommended salt as a fertilizer of land. He described his famous invention of logarithms in *Mirifici Logarithmorum Canonis Descripto*, in 1614, and the calculating apparatus called "Napier's bones" in *Rabdologiæ seu Numerationis per Virgulas libri duo*, 1617. Died at Merchiston, 1617.

Napier of Magdala, Robert Cornelis Napier, Lord, British general, was born at Colombo, Ceylon, 1810. During the Indian mutiny he was chief engineer in Sir Colin Campbell's army, distinguished himself at the siege of Lucknow, and was made K. C. B. He received the thanks of parliament for his services in the Chinese war of 1858. In 1870 he became commander-in-chief in India and a member of the Indian council, and was subsequently governor of Gibraltar, field-marshal, and constable of the Tower. He died in 1890, and was buried in St. Paul's.

Napier, Sir William Francis Patrick, brother of Sir Charles, was born near Dublin, 1785. He served in the peninsular campaign and retired as a lieutenant-general. He also wrote a famous *History of the War in the Peninsula, The Conquest of Scinde* ,and the *Life of Sir Charles Napier.* He died at Clapham. London, 1860.

Napoleon I., (Napoleon Bonaparte), emperor of the French, was born at Ajaccio, 1769. He was, at the age of eleven sent to the military school of Brienne, in Champagne, and in 1784, to the military school of Paris.

In 1785 he was appointed junior lieutenant in the army. He was in Paris on June 20, 1792, and saw the mob invade the Tuileries. He also witnessed the overthrow of the monarchy on August 10. In 1793 he took a leading part in ousting the English from Toulon, and in 1794 was appointed general of the artillery of the army of Italy, and drove back the Sardinians.

He was married to Joséphine Beauharnais in 1796, and two days later left to assume command of the army in Italy. He first overthrew the Austrians and Sardinians at Millesimo and Dego, and forced the Sardinians to make the armistice of Cherasco. He then turned against the Austrians, whom, after a severe struggle at the bridge of Lodi, he drove across the Adda. Then ensued the celebrated fights for Mantua—Castiglione Arcola, and Rivoli. Mantua fell on January 16, 1797, and the Emperor Francis II. agreed to preliminaries of peace at Leoben. Bonaparte had already organized Lombardy as a republic, and had forced the pope to make the peace of Tolentino.

On his return to Paris Bonaparte obtained leave of the directory to attempt the conquest of Egypt, which was meant to be the prelude of the restoration of the French supremacy in India. Sailing from Toulon in 1798, he captured Malta, and landed in Egypt. On July 2 he captured Alexandria, on July 21, the French won the battle of the Pyramids, and the conquest of Egypt was effected. But Nelson's victory on August 1 in the battle of the Nile (Aboukir) was a bitter reverse, destroying his fleet.

In 1799, he invaded Syria, but failed to take Acre, which was defended by Sir Sidney Smith's squadron. He then massacred 2,500 prisoners at Jaffa, and returned to Egypt, where he defeated the Turks in the battle of Aboukir. Hearing of the successes of the second coälition in Europe, of the French loss of Italy, and of the state of France, he left Kélber in command in Egypt, and returned to his native land. The revolution of November 9, 1799, arranged by Siéyès, followed, and the consulate was established.

Austria and England were now the chief foes of France. Early in 1800, Bonaparte crossed the Alps, occupied Milan, and on June 14 won the great battle of Marengo. On December 3, Moreau won the battle of Hohenlinden, and on Feburary, 9, 1801, the Emperor Francis II. agreed to the treaty of Lunéville. The terms were in the main the same as those of Campo-Formio. On March 27, 1802, the peace of Amiens was signed with Britain; on August 1 Bonaparte was proclaimed consul for life. The concordat with the pope had already been signed, and Napoleon, as he was henceforth called, gave to the nation the bank of France and the code Napoléon, reformed its educational system, conciliated many of the old nobles, and instituted the Legion of Honor.

During the years 1802 and 1803, however, Napoleon made preparations for a fresh development in foreign policy. He proposed to found one colonial empire in the New World, and another in India. But his schemes with regard to America were frustrated when fever destroyed his army in Haiti in 1803. In the same year he sold the territory of Louisiana to the United States for $15,000,000.

He then determined to rearrange the map of Germany and to destroy Britain's commerce. Early in June, 1802, he became President of the Italian republics, and in September and October he annexed Piedmont, Parma, and Piacenza. In February, 1803, he reconstituted Switzerland, and sent secret agents to stir up rebellion in Ireland. Further, he persisted in demanding the British evacuation of Malta. On May 18, 1803, war between France and England broke out, and Hanover was occupied by French troops.

The discovery of a plot headed by Georges Cadoudal strengthened Napoleon's position, and on May 18, 1804, he became emperor of the French. Then he made elaborate preparations at Boulogne for conveying troops across the channel and capturing London. In 1805 he incorporated the Ligurian Republic with France, and forced Naples to make a treaty. But the defeat of Villeneuve by Calder off Cape Finisterre in July destroyed all chance of a successful invasion of England, and in September he invaded Germany.

The fall of Ulm opened the way to Vienna; and though Nelson's victory at Trafalgar, on October 21, destroyed the Spanish and French fleets, Napoleon defeated the Austrians and Russians on December 2 at Austerlitz, and on December 26 forced the Emperor Francis II. to make the treaty of Pressburg. Austria being humbled and deprived of much territory, an opportunity was given Napoleon of forming in July, 1806, the confederation of the Rhine. Bavaria, Baden, Würtemberg, Hesse-Darmstadt, and other states placed themselves under Napoleon's protection. The Holy Roman Empire ceased to exist, and on August 6, 1806, the Emperor Francis II. formally renounced his title of German Emperor.

Prussia, however, declared war on October 1, 1806; on the 14th of the same month her army was totally defeated at Jena; on the 25th the French occupied Berlin. England and Russia were alone left unsubdued. Against the former Napoleon issued the famous Berlin decree of November 21, 1806, and at the same time prepared to attack the Russians. In February, 1807, he fought the battle of Eylau, and on June 15 he won a decisive victory at Friedland. In July the Czar Alexander and Napoleon agreed to the treaties of Tilsit, which enabled them to dominate Europe. In October, 1807, France and Spain agreed to conquer Portugal, and in November Junot entered Lisbon. No sooner had Napoleon made Joseph Bonaparte king of Spain (June, 1808) than the Spanish people rose ,and an English expedition landed in Portugal (August), and Wellington won the battle of Vimeiro. The peninsular war proved one of the principal causes of the fall of Napoleon. War with Austria again broke out in April, 1809; but after the battles of Aspern and Wagram, the Emperor Francis was forced to sign the humiliating treaty of Vienna (Schönbrunn) October, 1809.

In seeking to strengthen his position, Napoleon was led to divorce Joséphine, and in 1810 to marry Marie Louise of Austria. At the same time he made almost superhuman efforts to ruin England by means of his continental system. But on December 31, 1810, the czar intimated that he intended to modify his adhesion to the continental system, and Napoleon resolved to invade Russia. His

disastrous campaign to Moscow in 1812, undertaken while he had the Spanish War on his hands, encouraged Europe to rise, and in 1813 the war of liberation began. Russia and Prussia joined forces, and though Napoleon won the battles of Lutzen (May 2, 1813) and Bautzen (May 20), the adhesion of Austria to the ranks of his enemies was followed by the total defeat of the French at Leipzig (October 16-19, 1813).

After showing consummate but unavailing skill in the campaign in France during the spring of 1814, Napoleon was forced to abdicate in April, and Louis XVIII. entered Paris. After a short sojourn in Elba, Napoleon escaped and landed in France on March 2, 1815, and his reign of a hundred days began. The battle of Waterloo (June 18) completed the downfall of his hopes and he ended his days on the Island of St. Helena.

That Napoleon often showed himself in his earlier days kind, generous, and affectionate is undoubted; that he was patient during his last captivity is equally true. His temperament was Italian, his passionate feelings Corsican, but he was by nature neither bloodthirsty nor cruel. The code Napoléon witnesses to the boldness and clearness of his statesmanship; while, as Marbot tells us, the soldier who understands Napoleon's strategy has nothing more to learn. He waged war on a scale never before witnessed, and neither France nor any other country has produced a greater military genius. His body was conveyed to France in 1840, and laid in the Hotel des Invalides in Paris.

References.—Fournier's *Napoleon I.;* Rose's *Life of Napoleon I.;* Sloane's *Life of Napoleon Buonaparte;* Rosebery's *Napoleon:* the *Last Phase;* Lanfrey's *The History of Napoleon the First;* Seeley's *A Short Life of Napoleon;* Lévy's *Napoleon In Time;* and Browning's *Napoleon: the First Phase.*

Napoleon III., or **Charles Louis Napoleon Bonaparte,** emperor of the French, was born in the palace of the Tuileries, Paris, 1808. In 1830, he took part in a revolutionary movement in Italy, and in 1836 entered France; but, seeking to arouse the soldiery at Strassburg in his favor, he was taken prisoner and transported to the United States. In 1840 he landed at Boulogne, again hoping to arouse the French soldiery in his favor; for this second attempt he was tried for his high treason before the chamber of peers, and received a sentence of perpetual imprisonment in the castle of Ham. In 1846 he escaped from Ham in the disguise of a workman. In 1848, on the abdication of Louis Philippe, the provisional government permitted his return to France. In June of that year he was elected to the national assembly for the department of Seine and for three other departments; and in the following December he was elected by an immense majority president of the newly-constituted republic. In December, 1852, the famous *coup d'etat* took place, and Louis Napoleon secured his election as president for ten years; but a year later he again appealed to the people, and obtained an almost unanimous vote for the restoration of the empire. In 1870 the Franco-Prussian war broke out, which led to the surrender of the emperor and his army at Sedan, and to the ultimate reëstablishment of the republic. He died at Chiselhurst, England, 1873.

Narses (*när'sēz*), Byzantine statesman and general, was born toward the last quarter of the fifth century. From a menial office in the imperial household at Constantinople he rose by successive steps to the post of private chamberlain to the emperor Justinian, and ultimately to that of keeper of the privy purse. In 538 he was sent to Italy in command of a body of troops. Narses took possession of Rome, and after a series of successes, both in southern and northern Italy, completely extinguished the Gothic power in that peninsula. Justinian appointed Narses exarch of Italy in 553, and he resided at Ravenna until his death in 568.

Navarro (*nä-vär'rō*) **Mary Anderson de,** American actress, was born in Sacramento, Cal., 1859. She made her début as Juliet at McAuley's theater, Louisville, 1875. She had great success in leading legitimate roles in the United States and England until 1889, when she married Antonio de Navarro, and retired from the stage. She has since lived in England. Author: *A Few Memories.*

Neander (*nā-ăn'dĕr*), **Johann August Wilhelm,** noted German ecclesiastical historian, was born at Göttingen, 1789, of Jewish parents, named Mendel. He received his early education at the Johanneum in Hamburg. In 1811 he took up his residence at Heidelberg University as a privat docent; in 1812 he was appointed professor of theology; and the following year was called to the newly established University of Berlin as professor of church history. Here he remained until his death in 1850. The most important work of his life was his *Universal History of the Christian Religion and Church,* in 5 volumes.

Nearchus (*nē-är'kus*), Macedonian naval commander, was a native of Crete, who settled in Amphipolis during the reign of Philip, and became the companion of the young Alexander the Great. In 329 he joined Alexander in Bactria with a body of Greek mercenaries, and took part in the Indian campaigns. Having built a fleet on the Hydaspes, Alexander gave Nearchus the command. He left the Indus in November, 325, and, skirting the coast, reached Susa in 324. His narrative is preserved in the *Indica* of Arrian.

Nebuchadnezzar (*neb'ū-kăd-nez'ăr*), king of ancient Babylon, was born about 645 B. C. In 604 B. C. he became king, took Jerusalem about 606, and made Zedekiah king as his vassal. Zedekiah soon rebelled, and Nebuchadnezzar again took Jerusalem, after a terrible siege, destroyed the temple, threw down the walls of the city, and carried the people captives to Babylon. Among the captives was the Hebrew prophet Daniel, who tells much about him in the book of *Daniel.* He died about 561 B. C.

Necker (*nĕ'kär'*), **Jacques,** French financier and statesman, was born at Geneva, 1732, and was for many years a banker at Paris. His *Eulogy on Colbert,* his *Treatise on the Corn Laws and Trade,* and some *Essays on the Resources of France* inspired such an estimate of his talents for finance, that in 1776, he was appointed director of the treasury, and, shortly after, comptroller-general of France. He died at Copet, in Switzerland, 1804. The whole of his works form fifteen volumes.

Nehemiah, Jewish reformer, was a Jew of the captivity, of royal degree and in high favor. He received a commission from the king to repair to Jerusalem and restore the Jewish worship, and ruled over it for twelve years, until he saw the walls of the city, amid much opposition, restored. He subsequently returned to superintend the reform of the worship, of which the book of the old testament, named after him, relates the story.

Neill, Charles P., American economist and educator, United States commissioner of labor, was born at Rock Island, Ill., 1865. He was educated at the University of Notre Dame, Ind., 1885-88, instructor and associate professor and professor of political economy, Catholic University, Washington, 1897- 1905, and United States commissioner of labor since 1905, and member of the United States immigration commission since 1907.

Neilson (*nēl'sun*), **Lillian Adelaide,** English actress, was born in Leeds, Yorkshire, England, 1848. She made her début as Juliet when only seventeen years old; appeared as Amy Robsart in 1870, in London, with immense success; and by 1878 stood at the head of her profession. In 1872 she came to the United States, playing in Booth's theater, New York, and in Boston, where she was equally successful. She died in Paris, France, 1880.

Nelson, Horatio, Viscount, famous English admiral, was born at Burnham Thorpe, Norfolk, 1758. He entered the navy as a midshipman in 1770, and after voyages to the West Indies, the Arctic regions, and the East Indies, was promoted to a lieutenancy in 1777. While in command of the *Boreas* on the Leeward islands station, he involved himself in trouble through his severe and arbitrary enforcement of the navigation act against American traders. His conspicuous bravery at the engagement with the Spaniards off Cape St. Vincent in 1797 brought him to the rank of rear-admiral. In the same year he lost his right arm at Santa Cruz, and in the following year, with an inferior force, annihilated the French fleet in the bay of Aboukir, for which he was raised to the peerage as Baron Nelson, and created duke of Bronte by the king of Naples. During the scare of a Napoleonic invasion he kept a vigilant watch in the channel, and, on the resumption of war, he in 1805 crowned his great career by a memorable victory off Trafalgar over the French fleet commanded by Villeneuve, but was himself mortally wounded at the very height of the battle, dying in 1805.

Nelson, Knute, lawyer, United States senator, was born in Norway, 1843. He came to the United States in 1849, and resided in Chicago, Ill., until the fall of 1850; removed to the state of Wisconsin, and from there to Minnesota, 1871. He was admitted to the bar in the spring of 1867; was a member of the assembly in the Wisconsin legislature, 1868 and 1869; member of the forty-eighth, forty-ninth, and fiftieth congresses for the 5th district of Minnesota; elected governor of Minnesota in the fall of 1892 and reëlected in the fall of 1894; elected United States senator for Minnesota, 1895, and reëlected 1901, 1907 and 1912.

Nepos (*nē'pos*), **Cornelius,** Roman historian, was born probably at Verona, Italy, and flourished during the time of Julius Cæsar and the first six years of the reign of Augustus. He enjoyed the friendship of Cicero, and his only extant work, *Vitae Excellentium Imperatorum,* is held in high esteem as an educational classbook.

Nernst (*nernst*), **Walther,** German chemist and physicist, was born at Briesen, Prussia, 1864. He was educated at Zürich, Berlin, and Würzburg; appointed professor of physics at Göttingen in 1891, where in 1895 he organized the institute for physical and electro-chemistry, of which he became director in 1905. He is the inventor of the Nernst electric lamp.

Nero, Claudius Cæsar Drusus Germanicus, Roman emperor, was born at Antium, in Latium, A.D. 37. He was adopted by the emperor Claudius, who married Agrippina, A.D. 50, and four years later he succeeded Claudius on the throne, which he occupied for fourteen years. His whole reign was characterized by licentiousness, brutality, and cruelty The great fire in Rome happened in Nero's reign, and it is asserted by some writers that the city was set on fire by the order of Nero, who attributed the fire to the Christians, and persecuted them with the most unrelenting cruelty. The philosopher Seneca, who had been his tutor, and the poet Lucan were put to death by his order. At length a formidable conspiracy was raised against him, and he fled to a house about four miles from Rome, where he put an end to his own life on hearing the trampling of the horses on which his pursuers were mounted, 68 A. D.

Nesselrode (*nes'el-rō-dye*), **Karl Robert, Count,** Russian diplomat, was born at Lisbon, Portugal, 1780, son of a Russian ambassador. He gained the confidence of Emperor Alexander, took a principal part in the negotiations which ended in the peace of Paris, and in the congress of Vienna, and was one of the most active diplomats of the holy alliance. Died, 1862.

Nestorius (*nes-tō'ri-us*), celebrated heresiarch, was born in Syria. He was made patriarch of Constantinople in 428, deposed for heresy by the council of Ephesus, 431, and banished to the Lybian desert, where he died after 439.

Nethersole (*neтн'ĕr-sōl*), **Olga,** English actress, was born in London, 1870, daughter of Henry Nethersole. She joined the Garrick theater under John Hare's management in 1889; visited Australia on starring tour, 1890; several times visited the United States on starring tours, and as manager of her own company; was manager of Her Majesty's theater, London, 1898, when she produced *The Termagant,* and was manager of the Adelphi theater, London, during 1902, where she produced *Sapho,* and also of the Shaftesbury theater, 1904.

Nevada (*nē-vā'dā*), **Emma,** née Emma Wixon, prima donna, was born at Austin, Nev., 1861. She studied under Mme. Marchesi, Paris: and made her début at Her Majesty's theater, London, 1880, as Amina in *La Sonnambula.* She subsequently sang here and in Europe. In 1885 she married Dr. Raymond Palmer, and now lives in Paris.

Nevin, Ethelbert, American composer, was born at Edgeworth, Pa., 1862. From 1887 to 1893 he taught in Boston, then went to southern Europe to study until 1900 when he returned and associated himself with H. N. Parker at Yale. *Narcissus,* among a group entitled *Water Scenes,* and a song, *The Rosary,* are perhaps his most popular productions. He died in 1901 at New Haven.

Newcomb (*nū'kum*), **Simon,** American astronomer and mathematician, was born in Wallace, N. S., 1835. He came to the United States in 1858; was graduated at Lawrence scientific school, Harvard, 1858; LL.D., Columbian, Yale, Harvard, Columbia. He was assigned to duty at United States naval observatory; professor of mathematics and astronomy, Johns Hopkins, 1884-94, and editor of *American Journal of Mathematics.* In 1874 he was made correspondent, and after 1893 was one of the eight foreign associates of the Institute of France; made officer of legion of honor of France, 1899. Author: *Secular Variations and Mutual Relations of the Orbits of the Asteroids; Investigation of the Orbit of Neptune; Researches on the Motion of the Moon.* Died, 1909.

Newlands, Francis Griffith, lawyer, United States senator, was born in Natchez, Miss., 1848. Was admitted to the bar by the supreme court of the District of Columbia and went to San Francisco, where he entered upon the practice of law and continued in the active practice of his profession until 1883. He was elected to the fifty-third, fifty-fourth, fifty-fifth, fifty-sixth, and fifty-seventh congresses; and the United States senate, from Nevada, in 1903 and 1908.

Newton, Sir Isaac, English natural philosopher was born at Woolsthorpe, Lincolnshire, 1642. In 1665-7 he invented the binomial theorem, the method of tangents, and the fluxional calculus.

The story seems to be authentic that the fall of an apple in the garden at Woolsthorpe, late in 1665, started the train of thought which led him to the discovery of universal gravitation. He certainly then deduced the rule of inverse squares from Kepler's third law, and attempted to verify it by the observed motion of the moon. It was not, however, until 1685, when Picard's improved value for the terrestrial radius was at his disposal, and he had overcome the difficulty of calculating the attraction of a sphere upon an adjacent particle, that he ascertained the agreement to be exact.

The great work embodying his conclusions was published in 1687, with the title *Philoso-*

phiae Naturalis Principia Mathematica. The first book expounded generally the dynamical results of the law. The second treated of motion in a resisting medium, hydrostatics, hydrodynamics, and the theory of the tides. Finally, Book III. showed the working of the attractive principle in the solar system, and demonstrated the subjection to it of comets.

Newton's optical researches began in 1666, when he resolved white light intoi ts constituent colors. Two years later he constructed the first reflecting telescope, and in papers communicated to the Royal Society, in 1672 and 1675, described his prismatic experiments and the phenomena of thin plates. His results were collected in a volume on *Optics*, in which the emission theory of light was advocated. Newton was made Lucasian professor of mathematics at Cambridge in 1669.

He represented the university in the convention of 1689; but though again elected to parliament in the Whig interest in 1701, he was rejected at the polls in 1705. He was knighted by Queen Anne in 1705, and acted as president of the Royal society from 1703 until his death. The controversy between Newton and Leibniz regarding their respective claims to priority in the discovery of the differential calculus dragged on for a score of years from 1705. The facts elicited left no room for doubt of Newton's originality.

He was engaged in 1694-5 on the laborious task of perfecting his lunar theory, for which purpose Flamsteed's observations were indispensable. They were communicated partially and reluctantly, and the annoyances involved caused Newton to abandon his pursuit of the moon's inequalities. This contest embittered seven years of his life. He died at Kensington, 1727, and was buried in Westminster abbey.

References.—See *Lives*, by Sir David Brewster, and A. de Morgan; also Lodge's *Pioneers of Science;* and Hawthorne's *True Stories.*

Newman, John Henry, English prelate and author, was born at London, 1801, son of a London banker. He was graduated from Trinity College, Oxford, 1820, and took orders in 1824. He took a leading part in the tractarian movement, and in 1841 wrote *Tract XC.*, which was severely condemned. After living at Littlemore for some years in seclusion, he was received into the Roman Catholic church, 1845. He was created cardinal in 1879. Chief among his works are *Apologia pro Vitâ Suâ;* and *The Dream of Gerontius.* Died, 1890.

Ney (*nā*), **Michel,** French marshal, was born in Saarlouis, now in Prussia, 1769, the son of a cooper. He entered the army as a private hussar in 1788; became a general of brigade in 1796, and distinguished himself by his bravery. When Napoleon abdicated in 1814 he attached himself to Louis XVIII., but on the former's return from Elba he joined his old master, and stood by him during the hundred days. He was defeated by Wellington at Quatre-Bras, in 1815, and commanded the Old Guard at Waterloo on June 18th. On the second restoration he was arrested, tried by his peers, and shot, December 7, 1815.

Nicholas I., emperor of Russia, third son of Paul I., was born at St. Petersburg, 1796. In 1828 the war with Persia began, and on its close occurred the war with Turkey. This was followed by the rising of Poland, which he subdued, and reduced the kingdom to a mere province. His rule now became despotic and fierce. Died 1855.

Nicholas II., czar of Russia, was born in St. Petersburg, 1868, son of Alexander III., whom he succeeded in 1894. During the famine of 1891, he was, at his own request, made president of the committee of succor, and worked hard in the organization of relief. He married Princess Alix of Hesse-Darmstadt in 1894. The coronation of the czar took place with impressive ceremonial at Moscow in May, 1896, and in August of the same year he commenced a tour which included visits to the emperor of Austria and Germany, to the king of Denmark, to Queen Victoria, and to the president of France. His reign has been marked by the construction of the trans-Siberian railroad to the Pacific coast, by the Russo-Japanese war, by adroit diplomacy with China, by a strong and conservative attitude toward Turkey, as well as toward the European powers, and by the granting of a constitution in 1905.

Nicholas V., pope, Tommaso Parentucelli, was born near Pisa, Italy, 1397. He was educated at Bologna and Florence, went to Rome in 1426, and entered the ecclesiastical service. He was chosen pope in 1447. A liberal patron of scholars, he despatched agents east and west to purchase or to copy important Greek and Latin manuscripts, and may almost be said to have founded the vatican library. Died, 1455.

Nicholas, Edward Leamington, American physicist, professor of physics, Cornell, since 1887, was born of American parentage, at Leamington, England, 1854. He was graduated at Cornell in 1875. He is editor-in-chief of the *Physical Review*, and author of *The Galvanometer; A Laboratory Manual of Physics and Applied Electricity* (2 vols.); *The Elements of Physics* (3 volumes).

Nicias (*nĭsh'i-as*), Athenian statesman and general of the Peloponnesian war, was the son of the wealthy Niceratus. In 427 B. C. he defeated the Spartans and Corinthians, and ravaged Minoa, Melos, and Locris. In 415 he was appointed one of the commanders against Sicily, and in the autumn laid siege to Syracuse. At first successful, later his fleet was destroyed, his army began a retreat, and he was captured and put to death in 413 B. C.

Nicoll (*nĭk'ul*), **De Lancey,** American lawyer, was born at Bayside, L. I., N. Y., 1854. He was graduated at Princeton, 1874; Columbia Law School, 1876; was admitted to the bar, and has since practiced law in New York city. He was nominated by the Tammany organization for district attorney, 1887; was elected and served three years. Is now a member of the law firm of Nicoll, Anable and Lindsay, and has appeared in numerous corporation cases.

Niebuhr (*nē'bōōr*), **Barthold George,** German historian and critic, was born in Copenhagen, 1776, where his parents then resided. He was educated at Kiel and Edinburgh, held several appointments under the Danish government, and entered the Prussian civil service in 1806. At the opening of the University of Berlin, in 1810, he became connected with that institution. His great work is his *History of Rome*, upon which he was engaged for many years. His *Lecturers on Roman History*, and several other works, were published after his death by Dr. Schmitz and others, from notes of Niebuhr's *viva voce* lectures. He died at Bonn, 1831.

Niehaus (*nē'hous*), **Charles Henry,** American sculptor, was born at Cincinnati, Ohio, 1855. He was educated in the Cincinnati schools, and at the Royal Academy, Munich, Germany. Among his works are: equestrian statue of General Forrest, Memphis, Tenn.; statue of McKinley and lunette for tomb at Canton, Ohio; Benjamin Harrison monument, Indianapolis; pediment state capitol, Frankfort, Ky., etc.

Nielsen (*nēl'sen*), **Alice,** American opera singer, was born at Nashville, Tenn., daughter of Erasmus Ivarius. She received her musical education in San Francisco, under Mlle. Ida Valerga, and made her first stage appearance with an opera company at Oakland, Cal., 1893, as Yum Yum in *Mikado.* She studied grand opera in Rome, and made her first appearance in grand opera at Bellini theater, Naples, Italy, as Marguerite in *Faust;* appeared at San Carlo opera house, Naples, in *La Traviata*, and at Covent Garden, London, in *Don Giovanni*, *The Marriage of Figaro*, *La Boheme*, and *Rigoletto.* She toured the United States in grand opera, 1906-07.

Nightingale, Florence, a famous philanthropic nurse, was born at Florence, Italy, 1820, of wealthy English parentage. At the age of twenty-two she entered the institution of Protestant deaconesses at Kaiserswerth to be trained as a nurse, and afterward studied the methods of nursing and hospital management with the sisters of St. Vincent de Paul, Paris. In 1854 she volunteered to organize a staff of nurses during the Crimean war, and, during the terrible winter of 1854-55, she ministered with unwearied devotion to the suffering soldiers. She wrote *Notes on Nursing*, *Notes on Hospitals*, etc. Died 1910.

Nikisch (*nik'ish*), **Arthur,** noted Hungarian orchestral conductor, was born in Lébény Szent-Miklos, 1855, and at an early age disclosed extraordinary musical talent. He remained at the Vienna conservatory for eight years; was appointed first violinist at the royal opera; and, in 1878, went with Neumann to Leipzig, where he was made assistant conductor and conductor in the Old opera house. In 1889 he succeeded Herr Gericke as conductor of the Boston symphony orchestra, and in 1895 accepted the post of director of the royal opera at Budapest. He is one of the greatest conductors of our time.

Nilsson (*nil'sun*), **Christine** (Comtesse de Miranda) Swedish operatic singer, was born at Wexiö, Sweden, 1843, daughter of a peasant. She made her début at Paris in 1864, in London, 1867. She repeatedly visited the United States. In 1872 she married M. Rouzand, who died in 1882; and in 1887, at Paris, she became the wife of the Count de Miranda, and retired.

Nixon, Lewis, shipbuilder, was born in Leesburg, Va., 1861. He was graduated at the United States Naval College, 1882. He was sent to the Royal Naval College, Greenwich, England, by navy department, and transferred to construction corps of navy, 1884. In 1890 he designed the battle-ships *Oregon*, *Indiana*, and *Massachusetts*, and then resigned from navy to become superintending constructor of the Cramp shipyard, Philadelphia, Pa., and in 1895 founded the Crescent shipyard, Elizabeth, N. J. He was appointed by Mayor Van Wyck president of East river bridge commission, 1898; appointed, 1902, New York commissioner to Louisiana Purchase exposition, St. Louis. He succeeded Richard Croker as leader of Tammany Hall, 1901-02.

Nobel (*nō-bel'*), **Alfred Bernhard,** Swedish chemist and engineer, was born at Stockholm, 1833. His father, a mechanician, settled in 1837-59 in St. Petersburg, and in 1862 began to manufacture nitroglycerine. In 1867 Alfred, who assisted him, discovered through the accidental escape of some nitroglycerine from a cask into the siliceous sand of the packing, how to make a safe and manageable explosive—dynamite. He also invented blasting-jelly and several kinds of smokeless powder. At his death at St. Remo, Italy, in 1896, he left a fortune of over 2,000,000 pounds, most of which he destined to go for annual prizes for those making the most important discoveries in physics, chemistry, physiology, writing the best literature, and accomplishing the most for humanity and peace.

Nodzu (*nō'dzōō*), **Michitsura, Count,** Japanese general, was born in Satsuma, 1840. He fought on the side of the mikado in the war of restoration, and with imperialists in the Satsuma rebellion. During the war with China he captured Pinyang; was placed in command of the 5th division; later on appointed commander-in-chief of the first army, and, during the Japanese and Russian war, commander-in-chief of the fourth army. He was created a baron, 1895.

Nogi (*nō'gē*), **Kiten, Baron,** Japanese general, was born in Choshu, Japan, 1849. He served in the Satsuma rebellion of 1877, and was twice severely wounded. He commanded the third army in the Russo-Japanese war, capturing Port Arthur, 1905. Suicided, 1912, on death of Emperor.

Nordau (*nôr'dou*), **Max Simon,** German physician and writer, of Jewish descent, was born at Budapest, 1849, but is a Prussian subject. He received his university education at Budapest, Berlin, and Paris. He was co-founder and for many years vice-president of the association Litteraire et Artistique Internationale, Paris; a member of the Hellenic National Academy, Athens. His first book on Paris appeared in 1878; others, more especially two in English translation, *Conventional Lies of the Children of Culture*, and *Degeneration*, were much criticised and led to considerable discussions.

Nordenskjöld (*nō'ren-shûl'*), **Nils Adolf Eric, Baron,** Swedish explorer, geologist, was born at Helsingfors, Finland, 1832. In 1858 he was appointed state mineralogist at Stockholm, obtained letters of naturalization as a Swedish subject, and was a member of the chamber of nobles during the last two assemblies of the Swedish states. After several successive voyages and explorations in the Arctic sea, he in 1878-79 discovered the northeast passage. He was created baron in 1880. Died, 1901.

Nordhoff (*nôrd'hof*), **Charles,** American author, was born at Erwitte, Prussia, 1830. He came to the United States with his parents when a child of five years. From 1861 to 1871 he was editorial writer for the *New York Evening Post.* The next two years he spent in travel through California and the Hawaiian islands. He then became Washington correspondent for the *New York Herald.* His principal works are: *A Man of War Life; The Merchant Vessel.* Died, 1901.

Nordica (*nôr'di-ka*), **Lillian,** née Lillian Norton, stage name of Mrs. Zoltan F. Dōme, American prima donna, was born at Farmington, Me., 1859. Her earlier education was pursued at the New Englansd conservatory, Boston, and her later studies at Milan, Italy. She made her début as an opera singer at Brescia, Italy, in *La Traviata.* She has sung leading soprano parts in forty operas and in all the standard oratories, but she is best known in Wagnerian parts. She has appeared in grand opera in the United States several seasons. Died 1914.

Norman, Sir Henry, English journalist, author, and traveler, was born at Leicester, England, 1858. He was graduated from Harvard College in 1881. He was several times sent abroad upon important missions on account of his proficiency in modern languages. In 1895 he was sent to Constantinople to report upon the Armenian massacres; and from there proceeded to Washington, D. C., to write for the London *Daily Chronicle* the status of the Monroe doctrine. He was elected to parliament in 1900; founded *The World's Work* in 1902. He was knighted in 1906.

North, Frederick, eighth Lord North and second earl of Guilford, English statesman, was born in 1732, and educated at Oxford. He entered the house of commons at the age of twenty-two, and was made junior lord of the treasury in 1759. In 1770 he became prime minister, and his course, to a large extent, caused England to lose America. He resigned in 1782, and became blind five years before his death, which occurred in 1792.

Norton, Charles Eliot, American educator, critic, and scholar, professor of art at Harvard, 1874-98, was born at Cambridge, Mass., 1827. He was graduated at Harvard, 1846; Litt.D., Cambridge, 1884; L.H.D., Columbia, 1885; LL.D., Harvard, 1887, Yale 1901; honorary D.C.L., Oxford 1900. In 1864-68 he was joint editor with Lowell of the *North American Review.* In 1874 he was appointed professor of the history of art at Harvard, and in 1879 became president of the Archæological Institute of America, holding that office for eleven

years. Editor: *Letters of James Russell Lowell; Correspondence of Carlyle and Emerson; Correspondence of Goethe and Carlyle; Reminiscences and Letters of Thomas Carlyle; Letters of John Ruskin;* and translator of Dante's *Vita Nuova* and *Divina Commedia.* Died, 1908.

Novalis (*nō-vā'lis*), German lyric poet and philosopher, was born in Saxony, 1772. His real name was Friedrich Ludwig von Hardenberg. His principal works are *Lehrlinge zu Sais, Hymnen an die Nacht,* and an unfinished art romance entitled *Heinrich van Ofterdingen.* He died of consumption, 1801.

Noyes, George Rapall, American biblical scholar, was born in Massachusetts, 1798. He was graduated at Harvard College, 1818, and studied theology at Cambridge Divinity School. In 1840 he was made professor of Hebrew and oriental languages and Dexter lecturer on biblical literature at Harvard University. Died, 1868.

Nye, Edgar Wilson, American writer and humorist, who wrote largely under the pseudonym of "Bill Nye," was born at Shirley, Me., 1850. He studied law and later went to Wyoming where he was admitted to the bar and elected to the legislature. On account of ill health he returned to the East and settled in New York, having already achieved wide popularity through his humorous contributions to the press. In connection with James Whitcomb Riley he made frequent tours of the country, giving entertainments consisting of lectures and readings. He died near Asheville, N. C., in Feb., 1896.

Oberlin (*ō'bĕr-lin*), **Jean Frederic,** German clergyman and philanthropist, was born in Strassburg, 1740. He was educated at Strassburg University, studied theology, became a German Lutheran clergyman, and was celebrated for his philanthropy, and for his services to the population of Ban-de-la-Roche, among whom he labored for fifty-nine years. His name was celebrated throughout Europe, and Louis XVIII. presented him with the decoration of the legion of honor. Oberlin College, Ohio, is named after him. Died at Waldbach, 1826.

O'Brien, Morgan Joseph, American lawyer and jurist, judge of the New York supreme court, 1887-96, and of the appellate division since then, was born in New York, 1852. He was graduated at St. John's College, New York. He is a trustee of the New York public schools; trustee of New York public library, and trustee of Equitable life assurance society of the United States since 1905.

O'Brien, Thomas J., American lawyer and diplomat, was born at Jackson, Mich., 1842. He was graduated from the law department, University of Michigan, 1865, and was admitted to the bar, 1864. Candidate for judge of the supreme court of Michigan, 1883; to Denmark, 1905-07, and American ambassador to Japan since 1907.

Ocam (*ok'am*), or **Ockham, William of,** English scholastic, was born at Ockham in Surrey, between 1270 and 1280. He entered the Franciscan order, studied at Oxford and Paris, and headed the Franciscans' revolt against Pope John XXII.'s denunciation of evangelical poverty. His views on civil government are expounded in his *Dialogues;* his philosopical views in *Summa Logicse,* in his commentaries on Porphyry and Aristotle, and the commentary on the *Sententiae* of Peter the Lombard; and his theological views in this last and the *Tractatus de Sacramento Altaris.*

Ochs (*oks*), **Adolph S.,** newspaper publisher, was born in Cincinnati, Ohio, 1858. He received a common school education at Knoxville, Tenn., established *The Tradesman,* 1879, of which he is still principal owner. He became publisher and principal owner of the *New York Times,* 1896; publisher *Philadelphia Public Ledger.*

Ochs, George Washington, journalist, was born at Cincinnati, Ohio, 1861. He was educated at the University of Tennessee, Knoxville; was twice mayor of Chattanooga, Tenn., was decorated chevalier of legion of honor by French government. Became general manager of *Philadelphia Times,* 1901; in 1902 the *Public Ledger* and the *Philadelphia Times* consolidated under the name of *Public Ledger,* and he became its publisher and general manager.

O'Connell, Daniel, Irish orator and "liberator," was born in County Kerry, Ireland, 1775. Was admitted to the Irish bar in 1798. His large practice, worth, he said, $35,000 a year, was sacrificed for his country, when he took a leading part in Irish politics. He was head of the Catholic party and contended for the admission of Catholics to parliament, and himself entered parliament in 1829. In 1844 he, with his son and five others, was tried for sedition and sentenced to imprisonment for one year, and a fine of $10,000, and, though the house of lords soon set aside the verdict, the fourteen weeks he was in prison brought on the ailment of which he died. Worn out with the struggle, he left Ireland for Rome, but only reached Genoa, where he died in 1847.

O'Connell, Dennis J., American educator, was born at Charleston, S. C. He was educated at St. Charles' Seminary and St. Mary's College, Charleston; S. T. D., Propaganda, Rome, 1877. He was for some time secretary to Cardinal Gibbons; was head of the American College in Rome several years, and rector of the Catholic University of America, 1903-09.

O'Connell, William Henry, R. C. cardinal, was born at Lowell, Mass., 1859. He was graduated from Boston College, 1881; studied at the American College, Rome, 1881-84; ordained priest at Rome, 1884; rector American College, Rome, 1895; bishop of Portland, Me., 1901; assistant at pontifical throne, Rome, and special envoy to the emperor of Japan, 1905; and archbishop of Boston, 1907-1911. In 1911 he was made cardinal by Pius X.

O'Connor, Thomas Power, journalist and parliamentary leader, popularly known as "Tay Pay," was born at Athlone, Ireland, 1848. He took up journalism in Dublin and went to London later, where he was appointed a sub-editor on the *Daily Telegraph.* He was afterward employed in the London office of the *New York Herald,* and entered parliament as member for Galway, 1880. He was returned for both Galway and Liverpool, 1885; chose the latter, and was again returned in 1886, 1892, 1895, 1900. Author: *Lord Beaconsfield, a Biography; Gladstone's House of Commons.*

O'Conor, Charles, American lawyer, was born in New York city, 1804. At the age of twenty he was admitted to the bar of New York, and soon gained high rank in the profession. He was counsel in many important cases; was prosecuting lawyer in the "Tweed ring" cases; and in 1872 was nominated in the face of his absolute refusal for the presidency by the labor reform party, and by a convention of democrats dissatisfied with the nomination of Horace Greeley. Died at Nantucket, Mass., 1884.

Octavia (*ok-tā'vi-ā*), sister of the Roman emperor Augustus, and wife of Mark Antony, was born about 70 B. C. Her first husband was C. Marcellus, to whom she was married, 50 B. C. He died in 41 B. C., shortly after which she consented to marry Antony, to make secure the reconciliation between him and her brother. In 32 B. C. war, long inevitable, broke out between Antony and Octavian, and the former crowned his insults by sending Octavia a bill of divorcement. But no injury was too great to be forgiven, and after her husband's death she brought up with maternal care not only her own children, but Cleopatra's also. Her death took place 11 B. C.

Odoacer (*ō'dō-ā'sĕr*), king of the Germanic tribe of the Heruli, ruler of Italy from 476 to 493, was the son of Ædico, a secretary of Attila, and one of his ambassadors to the court of Constantinople. He entered the military service of the Western Roman empire, rapidly rose to eminence, and took part in the revolution by which Orestes, in 475, drove the emperor Julius Nepos from the throne. He extinguished the Western Roman empire, and showed himself to be a wise and politic ruler. But on March 5th, 493, Odoacer was assassinated at a feast, either by Theodoric himself or by his command.

Œhlenschlager (*ŭ'len-shlā'gĕr*), **Adam Gottlob,** Danish poet and dramatist, was born at Copenhagen, 1779. In 1803 appeared his first collection of poems, including one longer dramatic piece, *The Play of St. John's Eve,* which attracted favorable notice for the lively fancy with which national habits and local characteristics were portrayed. His poetical works comprise over thirty volumes. He ranks among the Danes as Goethe among the Germans, and his death in 1850 was felt by the whole nation.

Oersted (*ûr'stetH*), **Hans Christian,** Danish physicist, was born at Rudkjöbing, in the island of Langeland, 1777. He studied at the University of Copenhagen and received the degree of Ph. D. there in 1799. In 1819 he published his famous essay entitled *Experiments on the Effect of Opposing Electricity Upon the Magnetic Needle,* in which he showed the identity of the forces of magnetism, electricity, and galvanism, and thus opened the way for the wonderful development of knowledge in respect to those forces, which was one of the chief scientific glories of the nineteenth century. Died at Copenhagen, 1851.

Offenbach (*ŏf'en-bäH*), **Jacques,** French composer of comic operas, was born in Cologne, 1819, of German-Jewish parents. In 1835-37 he studied at the Paris conservatory; He was installed manager of the Gaîté theater in 1873, and sank some millions of francs in the experiment. He afterward visited the United States. Died at Paris, 1880.

Oglethorpe (*ō'g'l-thôrp*), **James Edward,** English general and founder of Georgia, was born at London, 1696. He served in the British army, and was thirty years in parliament. He planned a colony in America, as a refuge for debtors, who were then imprisoned in English jails, and also for persecuted German Protestants. George II. gave the land, which was named Georgia after him, and parliament contributed $50,000, and in 1733 he took out 130 persons, and founded the city of Savannah, in 1733. He left the colony in 1743, and surrendered the charter to the British government in 1752. Died in England, 1785.

Ohm (*ōm*), **Georg Simon,** German physicist, was born at Erlangen, Bavaria, 1787. He was educated at the University of Erlangen, held the chair of physics at Cologne from 1817 to 1826. "Ohm's law" was a result of his researches in electricity, and the measure of resistance, called the *ohm,* was so named in honor of his achievements by the Paris congress of physicists in 1881. He died at Munich, 1854.

Ohnet (*ō'nē'*), **Georges,** French novelist of great popularity, was born in Paris, 1848. He was educated at Sainte Barbe, and at the Lycee Bonaparte. Under the general title of *Les Batailles de la Vie* he published a series of novels, some of which have reached a hundredth edition. Chief of these are: *Serge Panine; Le Maître des Forges; La Comtesse Sarah; Lise Fleuron.*

Oken (*ō'ken*), **Lorenz,** German naturalist, was born at Bohlsbach, Swabia, 1779. He became professor of medicine at Jena in 1807, and in 1816 issued a journal called *Isis,* which led to government interference and his resignation. Died at Zürich, 1851.

Oku (*ō'kōō*), **General Hokyo, Count,** Japanese soldier, a Samurai of Ko-Kura, was born in 1845. He entered the army in 1871; was major in the imperial forces during the Satsuma rebellion of 1877. He was commander of the second army during the Russo-Japanese war, 1904-05, which landed on the east coast of the Liao-tung peninsula in May, 1904, won the brilliant victory at Kinchau, and did splendid service in the subsequent fighting in Manchuria. He was made chief of general staff, 1906, and count, 1907.

Okuma (*ō'-kōō-ma*), **Count Shigenobu,** Japanese statesman, was born at Saga, Hizen, 1838. He was a retainer of Lord Nabeshima; was one of the founders of the new government; finance minister, 1869-81; foreign minister, 1888-89; minister of agriculture and commerce, 1896-97; prime minister and foreign minister, 1898.

Olaf (*ō'lăf*), **Saint,** king of Norway, was born in 995, and, having made his name a terror on the coasts of Normandy and England, succeeded, in 1015, in securing the throne of Norway. He died in 1030, fighting for Christianity, and his body, laid in the cathedral of Trondhjem, was said to have wrought many miracles. Olaf was later proclaimed patron saint of Norway.

Olcott, Chauncey, otherwise Chancellor John Olcott, singer and actor, was born in Buffalo, N. Y., 1860. He was educated in the Buffalo public schools; was brought out as a singer by late R. M. Hooley, 1880. He was with Hooley's company for two years, sang two years in England in comic opera, then succeeded W. J. Scanlan as star in Irish musical dramas. He has since appeared in various leading roles in the United States and England.

Oliphant, Laurence, English traveler, diplomat, and writer, was born at Cape Town in 1829. He was called to the Scottish bar; later to the English bar. He became private secretary to the earl of Elgin, then governor-general of Canada. He died at Twickenham, 1888. His later mystical views he published in *Sympneumata* and *Scientific Religion.* He also wrote: *The Transcaucasian Campaign under Omar Pasha.*

Oliphant, Margaret (née Wilson), British novelist and biographical writer, was born at Wallyford, Midlothian, 1828. In 1849 she published her first work, *Passages in the Life of Mrs. Margaret Maitland of Sunnyside,* which instantly won attention and approval. It is, however, on the *Chronicles of Carlingford* that her reputation as a novelist most securely rests. She died in London, 1897.

Oliver, George Tener, manufacturer, newspaper publisher, United States senator, was born in County Tyrone, Ireland, 1848, while his parents were visiting in that country, they at the time being residents of Allegheny city, Pa. He was graduated at Bethany College, West Virginia, 1868; studied law and was admitted to the bar of Allegheny county, 1871. In 1900 he purchased the *Pittsburg Gazette,* and acquired the controlling interest in the *Pittsburg Chronicle-Telegraph,* and in 1906 merged the former with the *Pittsburg Times* under the name of the *Gazette-Times.* He was elected in 1909 to the United States senate to fill out the unexpired term of Hon. P. C. Knox, who resigned to accept the office of secretary of state.

Olmsted (*om'sted*), **Frederick Law,** American landscape-gardener, was born at Hartford, Conn., 1822. He studied engineering at Yale, became interested in landscape-gardening, traveled on foot through England in 1850 and in 1855 through France, Italy, and Germany, to study the parks and ornamental grounds of those countries. He is best known as the superintendent, with Mr. Vaux, of the laying out of Central park, New York, and also of the grounds around the capitol at Washington. Died at Waverly, Mass., 1903.

Olney, Richard, American lawyer and statesman, was born at Oxford, Mass., 1835. He was graduated at Brown, 1856, and at Harvard Law School, 1858; LL.D., Harvard, 1893, Brown, 1894, Yale, 1901. He was admitted to the bar in 1859. He is a regent of the Smithsonian Institution, Washington; member of American philosophical society, etc. While in public office he evinced great ability, and his state papers are among the most vigorous documents of those offices.

Oman, Charles William Chadwick, British historian, Chichele professor of modern history at Oxford since 1905, was born at Mozufferpore, India, 1860. He was graduated at Oxford, has been a fellow of All Souls College since 1883, and

is author of the following works: *A History of Greece; Warwick the King-maker; Short History of the Byzantine Empire*, etc.

Omar (*ō'mär*), **Abu-Hafsa-ibn-al-Khettab,** second caliph of the Moslems, was born about 581. After Mohammed's death he caused Abu-Bekr to be proclaimed caliph, and was himself appointed prime minister. On the death of Abu-Bekr, Omar succeeded as caliph, and pushed on the wars of conquest with increased vigor. He was summoned to Jerusalem, in 637, to receive the keys of that city, and before leaving gave orders to build a mosque, now called by his name, on the site of the temple of Solomon. He instituted the practice of dating from the hegira. He died in 644.

Omar Khayyám (*ō'mär kī-yäm'*), astronomer-poet of Persia, was born at Nishapur about 1017, and is said to have died there in 1123, or 1124. Omar was the poet of agnosticism, though some see nothing in his poetry save the wine cup and roses, and others read into it that Sufi mysticism with which it was largely adulterated long after Omar's death. He was a true poet; yet Fitz-Gerald's translation is far finer than the original.

Omer Pasha (*ō'mēr pä-shä'*), Turkish general, was born at Piaski, in Croatia, a province of Austria, 1806. When Medjid became sultan, he made Omer Pasha governor of Lebanon. When the Russians invaded the European dominions of Turkey, he was sent with an army of 60,000 men against them, and successfully withstood them at Kalafat, and, after their withdrawal from the country, entered Bucharest in triumph, August, 1854. He was governor-general of Bagdad, and also minister of war at different periods. He died at Constantinople, 1871.

Ontario, Bishop, of. See **Mills, William Lenox.**

Oppenheim, Nathan, American physician, medical author, was born at Albany, N. Y., 1865. He was graduated at Harvard, 1888, and from the College of Physicians and Surgeons, New York, 1891. He is attending physician, children's department, Lebanon hospital. Author: *The Development of the Child; The Medical Diseases of Childhood; The Care of the Child in Health; Mental Growth and Control;* and various scientific essays.

Opper, Frederick Burr, American artist, was born at Madison, Ohio, 1857. He left school at fourteen. He was on the art staff of *Frank Leslie's* three years; an artist on *Puck* for eighteen years, and severed his connection with *Puck*, to accept an offer from Hearst's *New York Journal*, 1899.

Optic, Oliver, American writer of books for young folks, was born in Medway, Mass., 1822. His real name was William T. Adams, and he was for several years a public school teacher in Boston. He wrote a large number of books which are published in several series. *Oliver Optic's Magazine for Boys and Girls* was edited by him for many years, but it was discontinued in 1875. He died at Boston, 1897.

Orange, Prince of. See **William I., the Silent; William III.,** king of England.

Orcagna (*ōr-kän'yä*), **Andrea di Cione,** Italian painter, sculptor, architect, and poet, was born at Florence, about 1308. He was chief architect of the cathedral at Orvieto. The frescoes of the *Last Judgment* and *Christ and the Virgin*, in the church of Santa Maria at Florence, still survive as examples of his painting. His work was studied by succeeding painters, especially by Michelangelo and Raphael. He died about 1376.

O'Reilly, John Boyle, Irish-American poet, was born at Dowth, Ireland, 1844. He passed through the various stages of journalism from type-setting to the writing of editorials. He was tried for treason, convicted, and banished to Australia in 1866. Escaping from that country, he reached the United States in 1869, and became the editor of the *Boston Pilot*. Died, 1890.

Origen (*or'i-jen*), Greek church father, was born at Alexandria, about 185. Much of his life was spent in Alexandria, in which city he obtained great reputation as a teacher, but, which he was compelled, by persecution, to leave finally in 321. His writings are said to have amounted to six thousand, but by far the greater number are lost. As to the learning of Origen and his ability as a teacher, we possess the most ample testimony. He died at Tyre, 254.

Osler (*os'lẽr*), **William,** Canadian physician, educator, and author, was born at Bond Head, Ontario, 1849. He was graduated at McGill University, Montreal, 1872; LL.D., McGill, Toronto, University of Edinburgh. He was professor of the institutes of medicine, McGill University, 1874-84; professor of clinical medicine, University of Pennsylvania, 1884-89, and at Johns Hopkins University, 1889-1905; has been regius professor of medicine, Oxford University, since 1905. Author: *The Cerebral Palsies of Children; Chorea and Chreiform Affections; Lectures on Abdominal Tumors; Angina Pectoris and Allied Stages;* etc.

Osman I. (*ōs'-män*) or **Othman** (*ōth'män*), surnamed "the conqueror," was born in Bithynia, 1259. When the Mongols overthrew the sultanate of Iconium, 1299, he seized a portion of Bithynia. From his name the terms Ottoman and Osmanli are derived. He died in 1326.

Ossian (*osh'an*), Celtic bard, supposed to have lived in Scotland or Ireland about fifteen hundred years ago. He was the son of Fingal, king of Morven, a famous hero, and was blind. His poems are remarkable for their grandeur and wild beauty, and are very different from all other poetry. They have been published in nearly all European languages.

Ossoli (*ōs'ō-lē*), **Marchioness.** See **Fuller, Sarah Margaret.**

Otho I., the Great, emperor of the West, son of the emperor Henry I., of Germany, was born in 912, and in 936 formally crowned king of the Germans. He consolidated the disjointed power of the German emperors, and established Christianity at many different points in the Scandinavian and Slavonic lands which lay beyond the circuit of his own jurisdiction. Died, 973.

Otis, James, American patriot and orator, was born at West Barnstable, Mass., 1725, and became a leader of the Boston bar. He was advocate-general in 1760. In 1761, elected to the Massachusetts assembly, he was prominent in resistance to the revenue acts. In 1769 he was savagely beaten by revenue officers and others, and lost his reason. In 1783 he was killed by lightning. His fame chiefly rests on *The Rights of the Colonies Asserted*, published by him in 1764.

Ottawa, Bishop of. See **Hamilton, Charles.**

Otter, William Dillon, Canadian general, chief of the general staff, Canada, was born in 1843. He was educated at Upper Canada College, Toronto; served for twenty-two years in active militia; since 1883 in the permanent militia, and saw active service during Fenian raids of 1866 and 1870, Northwest rebellion of 1885, and during the Boer war of 1899-1900. He is the author of *The Guide, a Manual of Interior Economy, etc., for Canadian Infantry.*

Oudinot (*ōō'dē'nō'*), **Charles Nicolas,** duke of Reggio, French marshal, was born at Bar-le-Duc, 1767. He served in the revolutionary wars, and in 1805 obtained the grand cross of the legion of honor and the command of ten reserve battalions, the "grenadiers Oudinot." In 1810 he was charged with the occupation of Holland, and took part in the Russian campaign and in the battles of 1813 with Russians and Austrians. In 1823 he commanded in Spain; became grand chancellor of the legion of honor in 1839, and succeeded Marshal Moncey as governor of the Invalides, 1842. He died at Paris, 1847.

Ouida (*wē'da*). See **De la Ramée, Louise.**

Overbeck, Johann Friedrich, German painter, was born at Lübeck, 1789. He studied art at Vienna, 1806-10, and settled in Rome, where he allied himself with the like-minded Cornelius, Schadow, Schnorr, and Veit, who, from the stress they laid on religion and moral significance, were scoffed at as church-romanticists, pre-Raphaelites, etc. His oil-pictures are inferior to his frescoes. He died in 1869.

Overman, Lee Slater, lawyer, United States senator, was born in Salisbury, N. C., 1854. He was graduated at Trinity College, N. C., 1874; member of North Carolina legislature, 1883, 1885, 1887, 1893, 1900; and speaker, 1893. He was elected United States senator, 1903, and reëlected for the term 1909-15.

Ovid (*ov'id*), or **Publius Ovidius Naso,** Roman poet and writer, was born at Sulmo, Italy, 43 B. C. He belonged to a noble family, and was brought up to the law; but his love for poetry and his natural indolence led him to desert the practice of the law, though he occupied one or two judicial positions. He died in banishment at Tomi, 18 A. D. Beside the *Metamorphoses*, consisting of all the transformations recorded in legend from the creation of the world to the time of Julius Cæsar, he was the author of a poem called *Ars Amatoria*, or the "Art of Love."

Owen, Sir Richard, British naturalist, was born at Lancaster, England, 1804. He studied medicine at Edinburgh and London, but soon began his work in zoölogy and comparative anatomy, by preparing catalogues of the collections in the museum of the Royal College of Surgeons, and lecturing on comparative anatomy. Owen's researches in zoology number nearly 400; they are largely devoted to structure, and embrace every class of animals from a sponge to man. Among his voluminous writings are: *Comparative Anatomy of Invertebrates; Comparative Anatomy and Physiology of Vertebrates; The Skeleton and the Teeth.* Died, 1892.

Owen, Robert, English social reformer, was born in Wales, 1771. In 1799 he married the daughter of David Dale, from whom, with others, he bought the village and cotton mills of New Lanark, Scotland. Here he introduced a system of reform which proved for a time highly successful. He came to the United States in 1824, and tried to found a communist society at New Harmony, Ind.; but the scheme failed, and in 1827 he returned to Great Britain, where experiments of a similar nature, attended by a similar result, were made at Orbiston in Lanarkshire, and at Tytherley in Hampshire. He finally became a spiritualist. Died, 1858.

Owen, Robert Latham, lawyer, United States senator, was born at Lynchburg, Va., 1856. Began practice of law, 1880; United States Indian agent for the five civilized tribes, 1885-89. He is the owner of extensive banking, real estate, farming, and cattle interests. As attorney for Choctaws and Cherokees he recovered from the United States government, in money, nearly $9,000,000; drew up the act of congress of 1891, giving United States citizenship to every Indian in Indian territory. He was elected United States senator from Oklahoma for the term 1907-13.

Oxenstjerna (*ōk'sen-sher'nä*), **Axel, Count,** Swedish statesman, was born at Fano, in Upland, 1583. He was made chancellor by Gustavus Adolphus in 1611; succeeded him as leader of the Protestant party in Germany, 1632-35; acted as regent throughout the minority of Christina, and became her chief minister when she assumed the government in 1644. Died, 1654.

Oyama (*ō'yä-mä*), **Iwao, Prince,** Japanese field-marshal, was born in Kagoshima, 1844. He entered the Japanese army, was appointed colonel in 1871, promoted major-general in the same year, lieutenant-general in 1877, general in 1891, and in 1898 was raised to the rank of field-marshal. Having served as military attaché during the Franco-Prussian war, upon his return to Japan, he entered the ministry of war, and assisted in the work of reorganizing the army. In 1904 he was chief of the general staff, and when war broke out with Russia he was appointed commander-in-chief in Manchuria defeating the Russians at the three great battles of Liau-Yang, the Shaho, and Mukden. He received the order of merit, 1906, and resigned his post as chief of the general staff in April. He was created prince in 1907.

Packard, Alpheus Spring, American naturalist, was born at Brunswick, Maine, 1839, was graduated from Bowdoin in 1861, and became assistant to Agassiz at Cambridge. After taking part in several scientific expeditions, he became state entomologist of Massachusetts, and professor of zoölogy and geology at Brown University. Besides many technical papers, his publications include, *Guide to the Study of Insects; Our Common Insects; Zoölogy; Entomology for Beginners; Text-Book of Entomology*, etc. Died, 1905.

Paderewski (*pä'de-ref'skē*), **Ignace Jan,** Polish pianist and composer, was born in Podolia, Russian Poland, 1860. In 1872 he went to Warsaw, studied under Roguski, and subsequently pursued his studies under the late Frederick Kiel of Berlin. In 1884 he resolved to adopt the career of a virtuoso, removed to Vienna, placed himself under his fellow-countryman, Theador Leschetizky, and at the expiration of three years' hard study made his début. Afterward he visited Germany, and in the autumn of 1889 made his first appearance before a Parisian audience. His first appearance in England took place at St. James' hall, London, 1890, and he has paid four visits to America. He has written *Manru*, an opera, *Suits for Orchestra in G*, etc.

Paganini (*pä'gä-nē'nē*), **Nicolo,** Italian violinist, son of a commission broker at Genoa, was born in 1782. His musical talent showed itself in his childhood; in his ninth year he had instructions from Costa at Genoa, and afterward from Rolla at Parma, and from Ghiretti. In 1831 his violin playing created an equal furor in Paris and London. His mastery over the violin has never been excelled. He died at Nice, 1840.

Page, Thomas Nelson, American author, was born on Oakland plantation, Hanover county, Virginia, 1853. He was educated at Washington and Lee University; LL.B., University of Virginia, 1874; Litt.D., Washington and Lee, 1887, Yale, 1901; LL.D., Tulane University, 1899. He practiced law at Richmond, Va., 1875-93, but subsequently turned to literature and lecturing. Author: *In Ole Virginia; Two Little Confederates; On Newfound River; The Old South; Among the Camps; Elsket and Other Stories.*

Page, Walter Hines, American journalist and writer, editor of *The World's Work* since 1900, was born at Cary, N. C., 1855. He was educated at Randolph-Macon College, Virginia, and Johns Hopkins University; LL.D., Randolph-Macon, and Tulane. He was literary adviser to Houghton, Mifflin and Company, 1895-99; editor of *The Atlantic Monthly*, 1896-99. Author: *The Rebuilding of Old Commonwealths*, etc.

Paget (*paj'it*), **Sir James,** English surgeon, was born at Yarmouth, England, in 1814. He entered the Royal College of Surgeons in 1836, became member of the council in 1865, president in 1875, and Bradshawe lecturer in 1882. He was made a baronet in 1871, and also an LL.D. by the University of Edinburgh. His works are *Lectures on Surgical Pathology, Clinical Lectures*, etc. Died at London, 1899.

Paine, John Knowles, American composer and organist, professor of music, Harvard, since 1875, was born in Portland, Maine, 1839. He studied music under Herman Kotzschmar there; made his first appearance as organist, 1857; studied in Germany under Haupt and others, 1858-61; and made an artistic tour there, 1866-67. He was instructor in music, Harvard, 1862-73 and became professor there in 1876; A.M., Mus.D. He composed the music for the *Œdipus Tyrannus* of Sophocles performed in Greek at Cambridge, 1881; *Hymn of the West*, words by Stedman, sung at the opening of the St. Louis exposition, 1904; the oratorio, *St. Peter;* cantatas, *Realm of Fancy, Phoebus Arise*, etc. Died, 1906.

Paine, Thomas, Anglo-American writer, was born, 1737, at Thetford, England. In 1774 he came to America, was favorably received by a bookseller in Philadelphia, and in 1776 published a pamphlet entitled *Common Sense*, in which he maintained the cause of the colonies against the mother country. The success and influence of this publication were extraordinary, and it won him the friendship of Washington, Franklin, and other distinguished American leaders. In 1791, he published *The Rights of Man*, the most famous of all the replies to Burke's *Reflections upon the French Revolution*. In 1792 the department of Pas-de-Calais elected him a deputy to the national convention, where he usually voted with the Girondists. At the trial of Louis XVI. he proposed that the king should be spared and afforded an opportunity of seeking an asylum in America. In 1802 returned to the United States, and died, 1809.

Palestrina (*pä'lās-trē'nä*), **Giovanni Pierluigi da,** distinguished Italian composer, was born near Rome about 1514. In 1581 he was made master of the Julian chapel, Rome, and in 1554 published a collection of masses, so highly approved by Pope Julius III., to whom they were dedicated, that he appointed their author one of the singers of the pontifical chapel. During the remaining years of his life the number and the quality of the works of Palestrina were remarkable. He died in 1594.

Paley (*pā'li*), **William,** English divine and writer, was born at Peterborough in 1743. He was educated at Christ's College, Cambridge, of which he became a fellow in 1766, and for ten subsequent years he resided at the University. In 1785 he at once attained high reputation by his *Principles of Moral and Political Philosophy*. He was successively made vicar of Stanwix, a prebendary of St. Paul's, subdean of Lincoln, a doctor of divinity, and rector of Bishop's Wearmouth. Died, 1805.

Palissy (*pà'lē'sē*), **Bernard,** French artist and philosopher, was born about 1510. He was apprenticed in a glass work at Agen, where he learned the art of painting on glass. Having completed his apprenticeship he set out on a tour of France and Germany, in 1528, maintaining himself by practicing his craft of glass painter and by land surveying. During his travels he studied attentively all the books within his reach, and acquired an extensive knowledge of natural science.

In 1535 he returned to France, married, and settled at Saintes. Shortly after his return his attention was attracted by a fine specimen of enameled pottery, and he thereupon resolved to discover for himself the secret of the enamel. Being ignorant of the potter's art he had to grope his way, and labored on year after year without success, almost starving, and reducing his family to the depths of poverty. At length, after sixteen years of unremunerated labor (1538-54), he obtained a pure white enamel, affording a perfect ground for the application of decorative art.

He was now able to produce works in which he represented natural objects grouped and portrayed with consummate skill, and his enameled pottery and sculptures in clay became recognized as works of art.

In 1562 he went to establish himself at Paris, where he continued to work at his art, and also delivered scientific lectures, which were attended by the most distinguished men in Paris, and contained views far ahead of his time. He suffered persecution as a Huguenot, and was arrested in 1589 and thrown into the Bastille, where he is said to have died in 1590. He left several philosophical works.

References.—Morley's *Palissy the Potter*, and *Lives* in French by Burty and Dupuy; Lamartine's *Celebrated Characters;* Hood's *Peerage of Poverty*.

Palladio (*päl-lä'dyō*), **Andrea,** famous Italian architect, was born at Vicenza, 1518. After having studied with the greatest care the writings of Vitruvius and the monuments of antiquity at Rome, he settled in his native city, and first acquired a reputation by his restoration of the basilica of Vicenza. He died at Vicenza, 1580.

Palma (*päl'mä*), **Tomas Estrada,** Cuban patriot, was born about 1836 in Bayomo, Cuba; studied law at University of Seville, but never practiced; and took part in the Cuban revolution of 1868-78. He became president of the Cuban republic, but was captured, 1877, and imprisoned until hostilities ceased, 1878. During the last Cuban revolution he was delegate-at-large and minister plenipotentiary for Cuban republic, and subsequently president of Cuba, 1902-06. He died, 1908.

Palmer, Alice Freeman, American educator, was born at Colesville, N. Y., 1855. She graduated at the University of Michigan, 1876; was professor of history at Wellesley College, 1879-81; president, 1882-87; and non-resident dean of the woman's department, University of Chicago, 1892-95. She married George Herbert Palmer, professor of philosophy in Harvard University, in 1887. Died, 1902.

Palmer, Edward Henry, English explorer and orientalist, was born, 1840, at Cambridge. He graduated from Cambridge in 1867. In 1881 he turned journalist, writing principally for the *Standard*. In 1882, on the eve of Arabi's Egyptian rebellion, sent by government to win over the Sinai tribes, he, Captain Gill, and Lieutenant Charrington were on August 11th murdered in the ravine of Wady Sadr. Among Palmer's works are the *Desert of the Exodus; Persian Dictionary*.

Palmer, Erastus Dow, American sculptor, was born at Pompey, N. Y., 1817. He was a joiner by trade, and made carvings first of animals and leaves in wood. Seeing a cameo head, he cut on a shell a portrait of his wife, and his success induced him to try working in marble. He executed busts of Alexander Hamilton, Washington Irving, Commodore Perry, and others. *The Landing of the Pilgrims*, in the capitol at Washington, is one of his largest works. He died, 1904.

Palmer, George Herbert, American educator and scholar, Alford professor of natural religion, moral philosophy, and civil polity, Harvard, since 1889, was born in Boston, 1842. He graduated at Harvard, 1864; LL.D., University of Michigan, 1894, Union, 1895, Harvard, 1906; Litt.D., Western Reserve, 1897. He was tutor in Greek at Harvard, 1870; assistant professor, 1873-83, and professor of philosophy, 1883-89. Author: *The Odyssey*, an English translation in rhythmic prose; *The Life and Works of George Herbert; Life of Alice Freeman Palmer*, etc.

Palmerston (*päm'ĕr-stun*), **Henry John Temple, Viscount,** British statesman, was born at Broadlands, in Hampshire, 1784. He entered parliament as member for Newport in 1807, and in 1811 became member for the University of Cambridge, which constituency he represented until 1831. Lord Palmerston was engaged in official life during nearly the whole of his career. In 1852 he became home secretary under the earl of Aberdeen, whom he succeeded as first lord of the treasury in 1855. In 1858 he was defeated and compelled to resign office owing to a conspiracy bill arising out of Orsini's attempt to assassinate Napoleon III.; but in the following year he returned to power, and remained prime minister until his death. He was a statesman of unerring tact and deep sagacity in relation to questions of foreign policy, of which he was an acknowledged master. Died, 1865.

Paoli (*pä'ō-lē*), **Pasquale,** famous Corsican patriot, was born in 1725 at Morosaglia, in Corsica. In 1755 he was elected captain-general of the island. In 1794, he joined the British in driving out the French. He then surrendered the island to George III., but, becoming dissatisfied with the government, he quarreled with the British viceroy. He therefore retired from the island in 1796, and spent the remainder of his life in the neighborhood of London. He died, 1807.

Pape, Eric, American artist, illustrator, was born in San Francisco, 1870. He received his art education in Paris. He exhibited at Paris salon, 1890-1900, World's Columbian exposition, 1893, Munich Kunst Austellung, 1897, Omaha exposition, 1899, Paris exposition, 1900, Pan-American exposition 1901, St. Louis exposition, 1904, and at various art museums and exhibitions in the United States and abroad, and has illustrated many important works.

Papin (*pä'pan'*), **Denis,** French physicist, was born at Blois, 1647. He studied medicine in Paris, where, after receiving his degree, he practiced for some time as a physician. To Papin undoubtedly belongs the high honor of having first applied steam to produce motion by raising a piston. Papin's sagacity led him to many other discoveries, among which was the principle of action of the siphon. Died at Marburg, Germany, 1712.

Papinianus (*pa-pin-i-ā'nus*), **Æmilius,** Roman jurist, was born about 146. He held offices at Rome under Septimus Severus, but was put to death by Caracalla in 212. He was remarkable for his juridical genius, the lucidity of his decisions and his high sense of right and morality. Nearly 600 excerpts from his legal works were incorporated in Justinian's *Pandects*.

Pappenheim (*päp'en-him*), **Gottfried Heinrich, Count von,** a great imperialist general in the Thirty Years' war, was born, 1594, at Pappenheim, Bavaria, of an old and distinguished Swabian family. He served under the king of Poland against the Russians and the Turks, and then joined the Catholic league, defeating the Bohemians at Prague in 1620. At Lützen, in 1632, he arrived in time to save Wallenstein from defeat by the Swedes, but was mortally wounded in the second charge and died at Leipzig, 1632.

Paracelsus (*par-ä-sel'sus*), otherwise **Theophrastus Bombastus von Hohenheim,** German-Swiss physician and alchemist, was born in Switzerland in 1493. He entered Basel University at sixteen, studied alchemy and chemistry with Withemina, bishop of Würzburg, and next at the mines in Tyrol learned the properties of metals and minerals. He acquired fame as a medical practitioner, was made town physician at Basel, and lectured on medicine at the University, but flouted at Galen and Avicenna, and justified the furious enmities that pursued him by his own vanity, arrogance, aggressiveness, and intemperate habits. Of some 250 works attributed to him, the critics admit only from ten to twenty-four as genuine, the others being by his followers the "Paracelsists." In spite of his attraction to alchemy and mysticism, he made new chemical compounds, and improved pharmacy and therapeutics. Died, 1541.

Paris (*pa'rē'*), **Comte de, Louis Philippe Albert d'Orléans,** grandson of King Louis Philippe, was born in Paris, 1838. He was educated in England. In 1862 he returned to France, entered the national assembly, but was expelled in 1886, and went to England where he occupied himself in writing a *History of the American Civil War*. He was the head of the Orleans family, and a claimant to the French throne. Died, 1894.

Park, Roswell, American physician, was born at Pomfret, Conn., 1852. He was graduated from Racine College; A.M., Harvard; M.D., medical department of Northwestern University, 1876; honorary M.D., Lake Forest University; LL.D., Yale, 1902. Since 1883 professor of surgery, medical department, University of Buffalo, and surgeon to Buffalo general hospital. He is a member of all national and several foreign surgical societies; and is now director of the New York state pathological laboratory in Buffalo.

Parker, Alton Brooks, American lawyer, jurist, was born in Cortland, N. Y., 1852. He was educated at the Cortland Academy, Cortland Normal School, and graduated at the Albany Law School; LL.D., Union University. Appointed justice of supreme court of New York, 1885, elected, 1886; justice court of appeals, second division, 1889-92. Chief-justice of court of appeals, 1898-1904. He resigned to accept democratic nomination for the presidency made on first ballot, July 9, 1904. He was president of the American bar association, 1906-07, and is now practicing law as a member of the firm of Parker, Hatch and Sheehan.

Parker, Edward Wheeler, statistician, was born at Point Deposit, Md., 1860; was educated at Baltimore, and in City College, Baltimore. Statistician United States Geological Survey since 1891, in charge Division of Mineral Resources since August, 1907. Expert special agent twelfth United States Census; member Anthracite Coal Strike commission, 1902; expert in charge of history of mining in United States for department of economics and sociology, Carnegie Institute. Author: *Annual Reports on Production of Coal in United States; Production of Coke in United States;* also reports on coal mining, coke manufacture and petroleum refining for United States Census, etc.

Parker, Sir Horatio Gilbert, Anglo-Canadian novelist, was born in Canada, 1862. He was educated at Trinity College, Toronto; D.C.L., Toronto. He was trained to journalism in Australia, and there first began his literary and dramatic works: *When Valmond Came to Pontiac; The Seats of the Mighty; The Battle of the Strong; The Lane That Had No Turning; The Right of Way; History of Old Quebec; The Weavers*, etc. He was returned to parliament for Gravesend as a Unionist in 1900, and was knighted in 1902.

Parker, Horatio William, American composer and organist, professor of the theory of music, Yale, since 1894, was born at Auburndale, Mass., 1863. He was educated at Auburndale and in Europe; graduated at Royal Conservatoire, Munich, 1885; M.A., Yale, 1892; Mus. D., Cambridge University, England, 1902. Organist at Trinity church, Boston since 1893. His *Hora Novissima* was performed at the Chester (England) festival, July, 1899, and, in September, 1899, at festival of the three choirs, Worcester, England. He is author of the cantatas, *King Trojan* and *The Kobolds;* and of the oratorios, *Hora Novissima* and *St. Christopher*.

Parker, Joseph, English preacher and author, the son of a stonecutter, was born at Hexham, 1830. He studied at University College, London, and became pastor of Congregational chapels at Banbury, Manchester, and, in 1869, of that now represented by the City Temple in London. *Ecce Deus* his most noted work. Died, 1902.

Parker, Matthew, second Protestant archbishop of Canterbury, was born at Norwich, England, 1504. He studied at Corpus Christi College, Cambridge, and was ordained a priest in 1527. On the accession of Queen Mary he refused to conform to the reëstablished order of things, and was deprived of his preferments, and even obliged to conceal himself. The death of Mary, and the accession of Elizabeth, called him from his compulsory retirement, when he was appointed by the queen archbishop of Canterbury. "The subsequent history of Archbishop Parker," it has been justly remarked, "is that of the church of England." It was under his presidency, that the thirty-nine articles were finally reviewed and subscribed to by the clergy, 1562. He died, 1575.

rker, Theodore, American clergyman and scholar, was born at Lexington, Mass., 1810. He entered Harvard College in 1830, and during his collegiate course supported himself by teaching private classes and schools. He then graduated from Harvard Divinity School in 1836, and the next year became a Unitarian minister at West Roxbury. His complete works, in twelve volumes, edited by F. P. Cobbe, were published in 1863-65. After a trip to Europe for his health, he returned in 1844 and for years preached to immense congregations at Melodeon and Music halls, Boston. His health compelled him to go to Mexico, thence to Italy, where he died at Florence, 1860.

rkhurst, Charles Henry, American Presbyterian clergyman, was born in Framingham, Mass., 1842. He graduated from Amherst, 1866; D.D., LL.D., Amherst. Since 1880 pastor of Madison Square Presbyterian church, New York. He became president in 1891 of the society for prevention of crime, and his assertion of partnership of police with criminals led to an investigation of the New York police by the New York legislature. Author: *What Would the World Be Without Religion? The Swiss Guide; Our Fight with Tammany; The Sunny Side of Christianity,* etc.

rkman, Francis, American historical writer, was born in Boston in 1823, and graduated at Harvard, 1844. He then began the study of law, but abandoned it to devote himself to historical literature. He lived some time among the Indians of the Rocky mountains, and wrote *The Conspiracy of Pontiac; The Old Regime in Canada; Count Frontenac and New France under Louis XIV.; Montcalm and Wolfe; A Half Century of Conflict; The California and Oregon Trail,* etc. He died at Jamaica Plain, Mass., 1893.

rmenides (*pär-men'i-dez*), Greek philosopher, and greatest member of the Eleatic school, was born at Elea, and flourished about the fifth century B. C. In his didactic poem *On Nature* he sought to demonstrate the reality of absolute being.

rnell (*pär'-nel*), **Charles Stewart,** Irish statesman, was born in 1846, in Avondale, Ireland, and was educated at Cambridge. He entered public life as member for Meath in 1875. At the general election he was elected for three constituencies, but chose Cork, and as the head of the land league was prosecuted in 1880, by the Gladstone government, the result being a disagreement of the jury. At the general election of 1885, he nominated every home rule candidate, and subsequently entered into an alliance with the followers of Gladstone. In the next parliament he proposed a bill to suspend evictions and reduce rent, after the rejection of which the agitation continued. In 1888 a special commission was appointed to examine the charges made against Parnell and others by the *London Times*, the result being his acquittal. He then brought suit for libel against the *Times* and recovered £ 5,000 damages. Died, 1891.

rrhasius (*pa-rā'shi-us*), celebrated Greek painter, was the son of Evenor, also an artist, and was born at Ephesus in the fifth century B. C. According to Pliny he was the first who established a true proportion between the different parts of a picture, and delineated with elegance and precision all the minutiæ of the features.

rrott, Robert Parker, American inventor, was born in New Hampshire in 1804, graduated at West Point in 1824. He became captain in the ordnance corps in 1836, and soon afterward superintendent of the West Point iron and cannon foundry. Here he invented the Parrott system of rifled guns and projectiles, which were first introduced into actual use at the battle of Bull Run, 1861. Died, 1877.

rsons, Alfred William, English landscape painter, was born at Beckington, Somersetshire, 1847. He was educated in private schools; was a clerk in the savings bank department of a London post office, 1865-67, since which he has devoted himself to painting. He has executed illustrations for *Harper's Magazine* and other publications; with E. A. Abbey, illustrations for *Herrick's Poems; She Stoops to Conquer; Old Songs,* etc.

rsons, Herbert, congressman, lawyer, was born in New York, 1869. He was graduated at Yale, 1890; University of Berlin, 1890-91; Harvard Law School, 1891-93, Metropolis Law School, 1893-94; admitted to bar, 1895. Member of congress, 13th New York district, 1905-09. He is a member of the board of managers of the New York association for improving condition of the poor, society for reformation of juvenile delinquents, etc.

rsons, William Barclay, American engineer, was born in New York, 1859. He was graduated at Columbia University, 1879; as chief engineer of the New York rapid transit commission, designed and constructed underground railway system in New York; was a member of the isthmian canal commission.

rton, James, American author, was born at Canterbury, England, 1822, and was brought to New York when five years old. He began literary work on the *Home Journal* of New York, and published lives of Horace Greeley, Franklin, Jefferson, and Burr, etc. He died at Newburyport, Mass., 1891.

Partridge, William Ordway, American sculptor, author, was born at Paris, France, 1861. He studied at Columbia College, and received his art education in Rome, Florence, and Paris. His works include statue of Shakespeare, Lincoln park, Chicago; equestrian statue General Grant for Union League club, Brooklyn; *Pocahontas,* Jamestown exposition, 1907, etc. He has been an exhibitor at the salon, Paris: Royal Academy, London and Berlin.

Pascal (*pàs'kàl'*), **Blaise,** French philosopher and scholar, was born at Clermont, in Auvergne, 1623. When he was in his thirty-fourth year he devoted himself wholly to religious meditation, mortification, and prayer. The last five years of his life were spent in retirement at Port Royal, near Paris. But his retirement did not prevent his noticing what was passing in the world; and he took an interest in the controversy between the Jesuits and the Jansenists, which led to the publication of the *Provincial Letters,* in favor of the latter. His *Thoughts on Religion* has been translated into most European languages, and has been many times republished. Died at Port Royal, 1662.

Pasteur (*pàs'tûr'*), **Louis,** distinguished French chemist and bacteriologist, born in 1822 at Dôle. He received the degree of doctor of science in 1847; in 1857 director of the Ecole Normale Supérieure, Paris; in 1863 professor of geology, physics, and chemistry at the School of Fine Arts; and 1867-75 professor of chemistry at the Sorbonne, Paris. From 1886 on, his researches were made in connection with the Pasteur Institute. At a very early date he became celebrated for researches on isomeric crystals and their behavior in polarized light, which obtained for him the London royal society's Rumford medal in 1856. He subsequently spent four years in studying and successfully combating the contagious silkworm disease; then the diseases of fowl-cholera and anthrax, which he successfully treated by vaccine of diluted virus. In 1882 he was elected to the French Academy. His latest work was connected with a vaccine treatment for hydrophobia. Pasteur must be regarded as the parent of the whole modern science of bacteriology. Died, 1895.

Pater (*pā'tĕr*), **Walter Horatio,** English essayist and critic, was born near London, 1839, educated at Oxford, and became a fellow at Brasenose College. He came early under the influence of Keble, Jowett, and Ruskin, and succeeded the latter as the high priest of æsthetic thought. His *Studies in the History of the Renaissance* in 1873 revealed him as a penetrating critic with a beautiful prose style. Among his other works are: *Marius the Epicurean; Imaginary Portraits; Plato and Platonism; The Child in the House;* and *Greek Studies.* He died in 1894.

Paton (*pā'tun*), **Sir Joseph Noel,** British painter, was born at Dunfermline, Scotland, 1821. He studied art at the Royal Academy, London. Scenes from fairyland and legend and religious allegory have made his work familiar and have often been engraved. Among his works are: *Home from the Crimea; Luther at Erfurt; The Fairy Raid; Gethsemane; Christ and Mary at the Sepulchre; The Man of Sorrows;* and *Thy Will Be Done.* Died, 1901.

Patten (*pat''n*), **Simon Nelson,** American economist and writer, professor of political economy, University of Pennsylvania, since 1888, was born at Sandwich, Ill., 1852. He graduated at Halle, Germany, 1878, with the degree of Ph.D. Author: *Premises of Political Economy; Economic Basis of Protection; Heredity and Social Progress; The New Basis of Civilization,* etc.

Patterson, Thomas Macdonald, lawyer, journalist, ex-United States senator, was born in Ireland, 1840. He was brought to the United States in childhood, and received his education at Asbury (now De Pauw) University, and Wabash College; was admitted to the bar, and has practiced at Denver, Colorado. He was elected United States senator from Colorado, 1901-07.

Patti (*pat'i*), **Adelina Maria Clorinda** (now Baroness Rolf Cederström), noted operatic singer, was born at Madrid, Spain, 1843. She studied under Ettore Barili, and made her début at the Academy of Music, New York, 1859. Her voice was a high soprano, of rich bell-like quality and remarkable evenness of tone. Her greatest success is generally considered to have been in the part of Marguerite in Gounod's *Faust.* She has appeared in the United States, South America, and Mexico at various times. Retired, 1889.

Pattison, Mark, English writer and scholar, was born at Hornby, in Yorkshire, England, in 1813. He studied at Oxford and became a fellow of Lincoln College, in 1839. He contributed articles to the *Quarterly,* the *Westminster,* and the *Saturday Review,* and wrote biographies of Isaac Casaubon and Milton, the latter one of the best lives in the *English Men of Letters* series. In 1861 he was made rector of Lincoln College. He died at Harrowgate, 1884.

Patton, Francis Landey, American educator, theologian, was born in Warwick Parish, Bermuda, 1843. He was educated at Knox College, Toronto, and University of Toronto; graduated from Princeton theological seminary, 1865; LL.D., Wooster University, 1878, Harvard, 1889, Toronto, 1894, Yale, 1901, Johns Hopkins, 1902. He was professor in McCormick theological Seminary, Chicago, 1872-81; pastor of Jefferson Park Presbyterian church, Chicago, 1874-81; and since 1888 professor of ethics, Princeton University. He was president of Princeton University, 1888-1902, and resigned to accept the presidency of Princeton Theological Seminary.

Paul, the apostle, commonly called Saint Paul, was born of Jewish parents at Tarsus, in Cilicia, and inherited the rights of a Roman citizen. He was highly educated and early went to Jerusalem to study under Gamaliel, one of the most celebrated Jewish rabbis.

Thus prepared for the office of teacher, he joined the sect of the Pharisees, and became a persecutor of the Christians, to crush whom the sanhedrin employed him in and out of Jerusalem. He was present at and encouraged the stoning of Stephen, and it was only when he was overtaken by a vision on his way to Damascus that he became a convert to Christianity.

His sudden conversion was indicated by the change of his name from *Saul* to *Paul,* and he engaged in the work of an apostle with an ardor that overcame every difficulty. Arabia, Syria, Asia Minor, Greece, and the islands of the Mediterranean were the scenes of his labors. The churches of Philippi in Macedonia, of Corinth, Galatia, and Thessalonica, honored him as their founder; and he wrote epistles to these churches, and to the churches in the chief cities of Greece and Asia Minor.

By admitting the gentiles to the church he incurred the hatred of the Jews, who persecuted him as an apostate. Undismayed, the apostle went to Jerusalem, and was there arrested and brought to Cæsarea, where he was kept a prisoner for two years by the Roman governors Festus and Felix. He appealed, as a Roman citizen, to the emperor; and on his way to Rome, where he arrived in the year 62, he was shipwrecked on the island of Melita. At Rome he was treated with respectful kindness, and there is reason to believe that he for some time regained his liberty. According to the tradition of the early church the apostle suffered martyrdom during the reign of Nero.

References.—Conybeare and Howson's *Life and Epistles of St. Paul;* Baur's *Paul, his Life and Works;* Pfleiderer's *Paulinismus;* Lewin's *Life and Epistles of St. Paul;* Sabatier's *L'Apôtre Paul;* Bruce's *St. Paul's Conception of Christianity;* Steven's *The Pauline Theology;* Ramsay's *St. Paul the Traveller and the Roman Citizen;* Cone's *Paul: the Man, the Missionary, and the Teacher;* Weinel's *St. Paul: the Man and his Work.*

Paul III. (Alessandro Farnese), pope from 1534 to 1549, was born in Tuscany in 1468. Though ambitious to advance his family, making cardinals of two grandsons while they were yet boys, he was, however, a wise ruler and surrounded himself with good cardinals. His bull, or decree of excommunication against Henry VIII. of England, issued in 1538, and the one forming the order of the Jesuits, 1540, are the most important edicts of his reign. He died suddenly, 1549.

Paulding, James Kirke, American author, was born at Pleasant Valley, N. Y., 1779. He was self-educated, early developed a tendency to literature, was a friend of Washington Irving, and wrote a portion of *Salmagundi.* He held at one period the post of navy agent at New York, and was appointed by President Van Buren secretary of the navy. At the close of Van Buren's presidency, in 1841, Paulding retired to a country residence at Hyde Park, N. Y., where he wrote *The Old Continental,* a novel; *The Puritan and His Daughter.* Died, 1860.

Paur (*pour*), **Emil,** German musical director, director of New York philharmonic society, was born in Austria, 1855. He was appointed first violin of Vienna imperial opera house; court conductor at Cassel, Hanover, 1876-80; conductor of Boston symphony, 1893-98; and since then leader of philharmonic society, New York. He has also appeared with leading concert organizations, and as solo pianist, and was conductor of the Pittsburg orchestra, 1904-10.

Paxton, Sir Joseph English architect, was born in Bedfordshire, England, 1801. He began life as a gardener in the service of the duke of Devonshire. His care of the great glass conservatories of the duke at Chatsworth suggested to him the use of glass and iron for the building, in Hyde Park, London, of the great exhibition of 1851. Paxton was knighted for his successful design. He sat in parliament for nine years, and died at Sydenham, near London, 1865.

Payne, John Howard, American dramatist, was born at New York, 1792. His first appearance as an actor was in that city in 1809. He was a successful actor for thirty years, and also wrote several plays, of which the best known are *Brutus,*

Charles II., and *Clari*. The song, *Home Sweet Home*, for which he is remembered, is in *Clari*, which was produced as an opera. Died 1852.

Payne, Sereno Elisha, lawyer, congressman, was born at Hamilton, N. Y., 1843. He graduated at the University of Rochester, 1864; LL.D Colgate, 1902, University of Rochester, 1903. He was admitted to the bar, 1866 and has since been in practice at Auburn, N. Y. Member of congress for 26th New York district, 1883-85, 27th district, 1885-87, and again, 1889-1909, 31st New York district. He is chairman of the committee on ways and means. He was a member of the high joint commission to negotiate a treaty with Canada, 1898.

Paynter, Thomas H., lawyer, United States senator, was born in Lewis county, Ky., 1851. He was educated at Rand's Academy, and at Center College, Danville, Ky.; studied law, and was admitted to the bar in 1872. Elected judge of the court of appeals of Kentucky in 1894 for an eight-year term, and to accept which he resigned, in 1895, from the 53d congress; was elected to the United States senate for the term 1907-13.

Peabody, Elizabeth Palmer, American educator, was born at Billerica, Mass., 1804. She taught in the celebrated school of Bronson Alcott and was one of the first to introduce the methods of Frœbel into American schools and to use object lessons in teaching. Among her best known works are: *The Kindergarten in Italy; Letters to Kindergartners; Guide to the Kindergarten*, etc. She died at Jamaica Plain, Mass., 1894.

Peabody, Francis Greenwood, American clergyman and educator, Plummer professor of Christian morals, Harvard, 1886-1913; was born at Boston, 1847. He graduated at Harvard, 1869; Harvard Divinity School, 1872; D.D., Yale; LL.D., Harvard. Author: *Mornings in the College Chapel; Afternoons in the College Chapel; Jesus Christ and the Social Question*, etc.

Peabody, George, American merchant and philanthropist, was born at South Danvers, Mass., 1795. In 1827 he first visited England, where he settled permanently ten years later. In 1851 he supplied the sum required to fit up the American department at the great exhibition in London. He contributed $1,400,000 to the city of Baltimote for an institute of science, literature, and the fine arts; and $8,000,000 for the promotion of education, endowment of libraries, etc., in the United States. He died in London, 1869.

Peabody, George Foster, American banker, was born at Columbus, Ga., 1852. He was educated in private schools there, and subsequently engaged in banking in New York. Member of board of managers of American Bible society; trustee of Hampton Normal and Agricultural Institute, Colorado College; general vice-president of American civic federation, 1905, etc.

Peale, Charles Wilson, American portrait-painter, was born at Chestertown, Maryland, 1741. He received his art education from Copley and Benjamin West. In 1785 he formed a collection of natural curiosities, and founded Peale's museum at Philadelphia. During the revolutionary war, he commanded a company of soldiers at Trenton and at Germantown. He died 1827.

Peale, Rembrandt, American painter, the son of Charles W. Peale, was born in Pennsylvania, 1778. Besides his many portraits, he painted several historical pictures, among them the well-known *Roman Daughter*, and *The Court of Death*. He published *Notes on Italy*, and *Portfolio of Art and Artists*. He died at Philadelphia, 1860.

Pearsons, Daniel Kimball, American philanthropist, was born at Bedford, Vt., 1820. He graduated in medicine at Woodstock, Vt., and practiced in Chickopee, Mass., until 1857. He then became a farmer in Ogle county, Illinois, in 1857, but in 1860 he removed to Chicago, where he rapidly accumulated a large fortune in real estate. He is best known through his large gifts to educational and eleemosynary institutions, the Presbyterian hospital of Chicago, and the Chicago Theological Seminary being especially favored. There are few of the smaller colleges to which he did not give from $25,000 to $250,000, and his gifts run well up into the millions. Died 1912.

Peary, Robert Edwin, Arctic explorer, officer of United States navy, born at Cresson, Pa., 1856. Graduated at Bowdoin, 1877; entered United vtates navy as civil engineer, 1881; Chief of Arctic expedition of academy of natural sciences of Philadelphia, 1891-92, to northeast angle of Greenland; discovered and named Melville Land and Heilprin Land, lying beyond Greenland. Commander of Arctic expedition under auspices of Peary Arctic club of New York City, 1898-1902, and attained latitude 84° 17' north. In 1908-09 made an eighth expedition, and reached the pole in April, 1909. Promoted to Rear Admiral and given thanks of congress by special act of congress, Mar., 1911. Made Grand Officer of Legion of Honor by President of France, June, 1913. Author: *Northward Over the Great Ice, Nearest the Pole, The North Pole*.

Peck, Harry Thurston, American educator, scholar and writer, professor of Latin, Columbia University, 1888-1912, was born at Stamford, Conn., 1856. He graduated at Columbia, 1881; Ph.D.; L.H.D.; LL.D.; and studied in Berlin, Paris, and Rome. He was literary editor of *The Commercial Advertiser*, 1897-1901; and editor of *The Bookman*, 1895-1907. Author: *The Personal Equation; The Semitic Theory of Creation; Latin Pronunciation*, etc.

Peckham, Rufus Wheeler, American jurist, was born at Albany, N. Y., 1838. He was educated at the Albany Academy and in Philadelphia; studied law, and was admitted to the bar, 1859; LL.D., Union College, 1894, Yale, 1896, Columbia, 1901. Justice of supreme court of New York, 1883-86; associate justice of court of appeals, New York, 1886-95; and associate justice of United States supreme court from 1895 until his death in 1909.

Pedro I. (*pā'drō*), emperor of Brazil, was the second son of John VI. of Portugal, and was born in 1798. He declared for Brazilian independence in 1822, and was crowned as Pedro I. The new empire did not prove successful under his rule, and Pedro in 1831 abdicated, withdrew to Portugal, where, after securing the throne for his daughter, he died, 1834.

Pedro II., son of the preceding, was born, 1825, became emperor of Brazil on his father's abdication, and, distinguished by his love of learning and scholarly tastes, reigned in peace until the revolution of 1889 drove him to Europe. He died at Paris, 1891.

Peel, Sir Robert, English statesman, was born near Bury, Lancashire, 1788. He graduated at Oxford in 1808, and next year entered parliament as tory member for Cashel; afterward sat for Oxford University, and after 1832 for Tamworth. Opposed to reform he became leader of the conservative opposition in the parliament of 1833, and was called to the premiership in 1834. He could not maintain his administration, however, and it was not until 1841 that the victory of protection over the free-trade agitation gave him a stable majority in the house of commons. His "conversion" split the tory party and he retired from office, becoming a supporter of the whig ministry in its economical and ecclesiastical policy. His death, in 1850, was the result of a fall from horse back.

Peelle, Stanton Judkins, American jurist, was born in Wayne county, Indiana, 1843. He was educated at Indiana University; served in the civil war; judge of the United States court of claims, 1892-1905; and chief justice, 1906-12, of United States court of claims. He is professor of the law of partnership, and bailment in the law department of George Washington University, and a trustee of Howard University.

Peirce, Benjamin, American mathematician, was born at Salem, Mass., 1809. He graduated at Harvard in 1829; in 1833 became professor at Harvard; in 1849 astronomer to the American *Nautical Almanac;* and in 1867-74 was superintendent of the United States coast survey. His papers on the discovery of Neptune, in 1848, and on Saturn's rings brought him membership in many learned socities in Europe and America. He died at Cambridge, Mass., 1880.

Pelagius (*pē-lā'ji-us*), author or systematizer of the doctrine known as Pelagianism, was born about the middle of the fourth century, in Britain, or, according to some authorities, in Bretagne. He settled in Rome; at the end of the fourth century had already acquired a considerable reputation for sanctity and for knowledge of the scriptures and the spiritual life. Of his after life nothing is known in detail.

Pélissier (*pā'lē'syā'*), **Amable Jean Jacques,** a marshal of France, was born at Maromme near Rouen, 1794. He entered the French army at the age of twenty; and after thirty-six years' service attained the rank of general in 1850. On the 8th of September he stormed the Malakoff, for which he was rewarded with a marshal's baton, and after the fall of Sebastopol he was also created Duc de Malakoff, and rewarded with a grant of $20,000. He became governor-general of Algiers in 1860 and died there in 1864.

Pellico (*pel'lē-kō*), **Silvio,** Italian patriot and poet, was born at Saluzzo, in Piedmont, 1789. In 1819 he became connected with a liberal periodical which was published in Milan under the title of *Il Conciliatore*. Arrested in the following year on a charge of conspiracy against the Austrian government, he was imprisoned from 1822 to 1830 in the subterranean dungeons of the fortress of Spielberg, near Brünn, being at last liberated by the command of the emperor. He died at Turin, 1854.

Pelopidas (*pē-lop'i-das*), Theban general of noble descent, was noted among his fellow citizens for his disinterested patriotism. In 382 B. C. he was driven from Thebes by the oligarchic party, who were supported by the Spartans, and forced to seek refuge at Athens, whence he returned secretly with a few associates, 379 B. C., and recovered possession of the Kadmeia, or citadel, slaying the Spartan leader, Leontiades, with his own hand. In 364 B. C. he won the battle of Cynoscephalæ, but was himself killed.

Pelz, Paul Johannes, German-American architect, was born in Seitendorf, Germany, 1841. He studied architecture, 1859-66, in New York, under Detlef Lienau; was connected with United States lighthouse board as architect and civil engineer, during which service he designed many lighthouses. He was one of the architects of the Congressional library building, Washington, D. C.; architect of Georgetown College Academic building; and many others.

Penn, William, celebrated Quaker, and the founder of Pennsylvania, was born in London, 1644. He studied at Oxford, early gave evidence of strong religious impulses, and adopted the new doctrines of the so-called society of Friends. In 1681, Penn, who had inherited from his father a claim against the government of £16,000, obtained from the king in satisfaction therefor a grant of an extensive tract of country lying west of the Delaware river and north of Maryland, in the American plantations, and which in the royal patent was called *Pennsylvania*. This territory Penn resolved to form into a commonwealth based upon perfect religious toleration, and accordingly set sail thither, arriving in Delaware bay on the 27th of October, 1682. In November he entered into a league with the Indians, and next founded the city of Philadelphia. In 1684 he returned to England, where he enjoyed the confidence of James II. In 1699 he paid a second visit to Pennsylvania, and his stay, which lasted two years, was marked by many useful measures, and by efforts to ameliorate the condition both of the Indians and the negroes. In 1701 he returned to England, and died, 1718.

Pennell (*pen'el*), **Joseph,** American artist, illustrator, author, was born in Philadelphia, 1860. He was a pupil of the Pennsylvania Academy of fine arts and Pennsylvania School of Industrial Art. His works are represented in the national collections of France, at Dresden, Budapest, Melbourne, Perth, Adelaide, and in many state and municipal collections in Europe and America. He was chairman of the international jury of awards, St. Louis exposition, 1904. Author: *The Illustration of Books; The Alhambra; The Work of Charles Keene; Lithography and Lithographers; The Life of James M' Neill Whistler*, etc.

Penrose, Boies, politician, United States senator, was born in Philadelphia, 1860. He graduated from Harvard College in 1881, and was admitted to the bar in 1883. He practiced his profession in Philadelphia for several years; was elected to the Pennsylvania house of representatives in 1884; to the Pennsylvania state senate in 1886, 1890, and 1894; and to the United States senate, 1897, and reëlected in 1903 and 1909.

Pepin le Bref (*pā'paN' lē bref'*), king of the Franks and father of Charlemagne, was born in 714, the youngest son of Charles Martel. On the death of his father in 741, he received Neustria and Burgundy; deposed Childeric III., and founded the Carlovingian dynasty in 751. He was the first Frankish monarch whose election received the sanction of the pope, and who was consecrated to his high dignity. He died, 768.

Pepper, Charles M., American journalist, was born in Ohio, 1859. He graduated at Wooster University, 1881. Appointed by President Roosevelt a delegate to the Pan-American congress at the city of Mexico, 1901; and foreign trade commissioner, department of commerce and labor, 1906-07. He was correspondent from Hawaii to the *Chicago Tribune* and *New York Herald*, 1897. Author: *Tomorrow in Cuba; Panama to Patagonia*, etc.

Pepper, William, American physician, educator, author, and benefactor, was born at Philadelphia, 1843, and educated at the University of Pennsylvania, from which he took both his classical and his medical diplomas. He was elected provost of the University in 1881; and during his incumbency of thirteen years it became a new institution, one of the foremost in the states. His health suffered from too constant application, and in 1894 he retired, and removed to California, where he died, 1898. His most important literary work was *Pepper's System of Medicine by American Authors*, which he edited.

Pepperell, Sir William, American general, was born in Maine in 1696. He was a member of the British council for the province of Massachusetts for thirty-two years from 1727, and in 1730 was appointed chief-justice of the court of common pleas. He commanded the successful expedition against Louisburg in 1745, and was made a baronet. He published an account of a *Conference with the Penobscot Tribe*. Died, 1759.

Pepys (*pēps, pep'is, peps*), **Samuel,** English politician and diarist, officer of the English admiralty during the reigns of Charles II. and James II., was born, 1632. For two years he was president of the royal society. He wrote *Memoirs of the Royal Navy*, 1690; left to Magdalen College, Cambridge, his large collection of books, manuscripts, and prints, including about 2,000 ancient English ballads, forming five folio volumes; but his reputation is founded on his *Diary* from 1659 to 1669, which affords a curious insight into the manners and court life of his day. Died, 1703.

Pericles (*per'i-klēz*), greatest of Athenian statesmen, and a general and orator, was born at Athens, 495 B. C. He soon gained the position of head of the more democratic party in the state, in opposition to Cimon, the son of Miltiades, who was at the head of the aristocratic party. He led the Athenians against Samos in 440 B. C., and was their principal adviser and commander during the first two years of the Peloponnesian war. Phidias was the friend of Pericles, and the public buildings erected by him during the administration of Pericles made Athens the admiration of Greece. To Pericles Athens was indebted for the Parthenon. He died, 429 B. C.

rkins, George Clement, United States senator, was born at Kennebunkport, Maine, 1839. He carried on a successful mercantile business at San Francisco; later engaged in banking, milling, mining, and the steamship business; was member of Goodall, Perkins and company, owners of the Pacific steamship company; governor of California, 1879-83; appointed United States senator, 1893, to fill vacancy caused by death of Leland Stanford and elected, 1893, for remainder of same term; reëlected, 1895, 1903, and 1909.

rkins, George Walbridge, financier, was born at Chicago, 1862. He received a common school education, and started business career in the Chicago office of the New York life insurance company, 1877. Second-vice president, 1898; chairman of the finance committee, New York Life, 1900; and vice-president, 1903. He became partner in the banking firm of J. Pierpont Morgan and company, 1901.

rry, Bliss, editor, author, educator, editor of the *Atlantic Monthly* 1899-1909, was born in Williamstown, Mass., 1860. He graduated at Williams, 1881; L. H. D., Princeton, 1900; Williams, 1902; Litt. D., Bowdoin, 1904; LL. D., Lake Forest, 1906. He was professor of English at Williams, 1886-93; at Princeton, 1893-1900; and is now professor of English literature at Harvard. General editor of Cambridge editions of the poets. Author: *The Broughton House; Salem Kittredge, and Other Stories; The Plated City; The Powers at Play; A Study of Prose Fiction; The Amateur Spirit; Walt Whitman; Whittier.*

rry, Oliver Hazard, American naval commander, was born in South Kingston, Rhode Island, 1785. During the war of 1812 he was chosen to fit out a fleet at Presque Isle (now Erie) on Lake Erie. After equipping nine vessels, he sailed against the British fleet. The English attacked the *Lawrence*, Perry's flag ship, so hotly that out of 101 men on it only eighteen were uninjured. In this strait Perry left the *Lawrence* in a small boat and was rowed to the *Niagara*. After that transfer he gained a splendid victory, taking all the English ships. In 1819 he commanded a fleet which sailed to Colombia and ascended the Orinoco river. While returning he died of yellow fever at the Port of Spain, Trinidad. In 1860 a marble statue of him was erected at Cleveland, Ohio.

stalozzi (*pes'tä-lŏt'sē*), **Johann Heinrich,** Swiss educationist, was born at Zürich, 1746. He studied at Zürich, subsequently turned his attention to agriculture, became extremely interested in the problems of education, and, in 1775, established on his estate, Neuhof, a school which was intended to draw its support from popular subscription. The idea at the basis of his system was that nothing should be treated except in a concrete way. Almost all Pestalozzi's methods are now substantially adopted by the instructors of elementary teachers in the schools of Europe and America, and to no other man has primary instruction been so largely indebted. His chief works were *How Gertrude Instructs Her Children* and his *Leonard and Gertrude*. During the last two years of his life he wrote also his autobiography. He died at Brugg, Switzerland, 1827.

ter I., The Great, Alexeievitch, emperor of Russia, was born 1672. His elder brothers, Fedor and Ivan, were feeble in constitution. Fedor succeeded his father in 1676, and died in 1682. Ivan renounced the crown, and Peter was declared czar, with his mother, the Czarina Natalia Kirilovna, as regent. Sophia, third daughter of Alexis, ambitious to govern, succeeded in having Ivan proclaimed czar jointly with Peter, and herself regent. Peter was relegated to private life, his education purposely neglected, and his bad habits encouraged.

In 1689 he wrested the power from his sister, and confined her in a convent. Peter was now virtually sole emperor, though, till the death of his brother in 1697, he associated his name with his own in the ukases of the empire. He now determined to do what he could to raise his country out of its barbarism, and to place its people in the ranks of civilized nations. He journeyed to Holland and England (1697-98), worked in shipyards, and the knowledge he there gained was amply profited by on his return.

Peter, however, not only created a navy, but gave Russia a sea-board and sea-ports by wresting the Baltic provinces from Charles XII. of Sweden. Young Russian nobles were obliged to travel; schools of navigation and mathematics were founded; agriculture was improved by the introduction of implements, seeds, and superior breeds of cattle. Peter imported foreign artisans of all kinds, established manufactories of arms, tools, and fabrics, and distributed metallurgists through the mining districts of Russia; roads and canals were made to foster internal commerce and to extend trade.

In 1703 he laid the foundation of St. Petersburg, and twenty years later of its academy of sciences. Laws and institutions which in any way interfered with his projects, he either abolished or altered. In his zeal to do good he was too frequently injudicious in choosing times and seasons, and the least show of opposition irritated him into ferocity. He repudiated his wife a few years after marriage for her reactionary leanings; for the same reason his son Alexis was ill treated, compelled to renounce the succession, and condemned to death, but died suddenly before sentence could be carried out.

Peter died 1725, the immediate cause being inflammation, contracted while assisting in the rescue of some soldiers in lake Ladoga.

References.—Oscar Browning's *Life of Peter the Great* and Schuyler's *Peter the Great.*

Peter, St., one of the foremost of the twelve apostles, originally called Simon, was the son of Jona, and a resident at Bethsaida. Peter was a man of ardent temperament, affectionate and generous. He was favored with special manifestations of his Master's confidence, and performed a more prominent part in the sacred history than any other of the twelve disciples. He was crucified with his head downward in the persecution under Nero, about A. D. 64.

Peter the Hermit, French monk and preacher, was born at Amiens, about the middle of the eleventh century. He made a pilgrimage to the holy land about 1093, and having witnessed the cruelties there inflicted upon the Christians by the Mohammedans, communicated on his return with Pope Urban II., by whom he was authorized to preach the first crusade for the recovery of Jerusalem from the hands of the Turks. His last years were spent in obscurity, in a monastery which he had founded at Huy. Died, 1115.

Peters, John Punnett, American clergyman and orientalist, was born in New York, 1852. He graduated from Yale, 1873; studied philology and theology, Yale; Ph. D., 1876; D. D., 1895; Sc. D., University of Pennsylvania, 1895; rector of St. Michael's church, New York, 1893-1904; canon residentiary, cathedral of St. John the Divine since 1904. Author: *Scriptures, Hebrew and Christian.* Translator of *Political History of Recent Times*, and editor of *Diary of David McClure.*

Peters, Madison Clinton, Baptist clergyman, was born in Lehigh county, Pennsylvania, 1859. D. D., Heidelberg University and Ursinus College. He was ordained to the ministry of the Reformed church, 1880. He has preached as an independent in the Majestic theater, New York, since 1907. Author: *Justice to the Jew; Will Our Republic Live? The Man Who Wins; The Love Affairs of Great Poets; The True St. Patrick;* etc.

Peterson, William, Canadian educator, principal of McGill University since 1895, was born in Edinburgh, 1856. He was educated at the University, Edinburgh. LL. D., St. Andrews; Princeton, New Jersey; University of New Brunswick; Yale; Johns Hopkins; Pennsylvania. Principal of University College, Dundee, 1882-95. Author: *Quintilian's Institutes of Oratory; The Dialogues of Tacitus*, etc.

Petrarch (*pē'trärk*), **Francis,** Italian poet, was born in 1304 at Arezzo in Tuscany. Having settled at Avignon, he became deeply attached, in 1327, to the beautiful Laura de Noves, in whose honor were written those sonnets and odes which have rendered his name immortal. He was invited to Naples, to Paris, and to Rome; and received the laureate crown in the capitol of the latter city. Among his warmest friends and patrons was the Colonna family. In 1348 his feelings were deeply grieved by the death of Laura. He survived her, however, nearly thirty years, during which period he was admired and honored by his own countrymen, and by foreign princes. He died, 1374.

Petrie (*pē'tri*), **William Matthew Flinders,** English Egyptologist, was born at Charlton, 1853. He was educated privately, and his earliest explorations bore fruit in his *Stonehenge*, 1880. He next turned his attention to the pyramids and temples of Gizeh, and subsequently, with the aid of the Egypt exploration fund, to the mounds of Said and Naukratis, and founded the Egyptian research account, 1894, enlarged as the British school of archæology in Egypt, 1905. Author: *Pyramids and Temples of Gizeh; Racial Portraits; Ten Years' Digging; History of Egypt; Egyptian Tales*, etc.

Pfleiderer (*pfli'der-er*), **Otto,** German theologian, was born at Stetten in Wurtemberg, 1839. He studied at Tübingen, 1857-61. In new testament criticism Pfleiderer belongs to the younger critical school which has grown out of the impulse given by Baur. He is an independent thinker, acute, suggestive, and profoundly learned, and has made his name as well known in England and America as in Germany. His chief works are: *The Philosophy and Development of Religion; Evolution and Theology*, etc. Died, 1909.

Phelps, Edward J., American jurist and diplomat, was born at Middlebury, Vt., 1822. He studied at Middlebury College, graduated in law at Yale in 1843, and was admitted to the bar in the same year. President of the American bar association in 1880. He became a professor in the law School of Yale in 1881, where he served until appointed minister to Great Britain in 1885. Phelps remained at the court of St. James until 1889. He died at New Haven, Conn., 1900.

Phelps-Ward, Elizabeth Stuart, American author, was born at Andover, Mass., in 1844. Besides lecturing, writing for magazines, and engaging in various kinds of work for the advancement of women, she has written: *Gates Ajar; The Silent Partner; Poetic Studies; An Old Maid's Paradise; Beyond the Gates; The Madonna of the Tubs; A Singular Life; The Story of Jesus Christ; The Man in the Case*, etc. In 1888, she married Rev. Herbert D. Ward. Died, 1911.

Phidias, Greek sculptor, was born about 490, B. C. He is said to have studied painting before he devoted himself to statuary. He became famous probably about 460 B. C., when he produced the bronze statue of Athena Promachos, the Lemnian Athena, and other works. From 444 to 438 he was superintendent of the building of the Parthenon at Athens, and the production of the statue of Athena for that temple. From about 437 to 433 he was in Elis, working on the statue of Zeus for the temple at Olympia.

On his return to Athens in 432 he was charged with embezzling money entrusted to him in connection with the building of the Parthenon, or, as other stories say, for impiety in introducing his own likeness and that of Pericles in the battle of the Amazons on the shield of Athena. In any case, it was as a friend of Pericles that he was attacked; condemned, and died in prison, 432 B. C.

By the general consent of antiquity Phidias was the greatest of Greek sculptors. His chief characteristics were largeness, dignity, and magnificence; all his work was marked by a certain repose; he realized that violent action cannot be represented in sculpture. His principal works were what are called chryselephantine statues—that is, there was an inner core of wood or stone, which was covered with plates of polished ivory for the parts representing flesh, while the gold was used for the drapery.

The Emperor Theodosius I. took the statue of Zeus to Constantinople about 390 A. D., and it perished there in a fire in 475. It is only the remains of the external sculptures of the Parthenon, especially the frieze (of which the Elgin marbles are a part), that survive to give us an idea of Phidias' skill; but it is not certain that they are actually his own work.

References.—Waldstein's *Essays on the Art of Phidias;* Collignon's *Phidias;* Mitchell's *History of Ancient Sculpture;* and *Phidias*, in Masters in Art series.

Philip II., king of Macedon, father of Alexander the Great, was born in 382 B. C., and came to the throne in 359 B. C. He first undertook the thorough union of his kingdom, and then speedily entered upon a policy of aggression, his object being to reduce all the Grecian states to his supremacy. In 339 B. C., the Amphictyonic council, composed of several Grecian states, declared war against the Locrians, and the next year appointed Philip commander-in-chief of all their forces. The Athenians were at last alarmed at his approach into Greece in this capacity, and formed a league with the Thebans against him; but their united forces were utterly defeated at the battle of Cheronea, 338 B. C.; and Philip was now master of all Greece. Philip was faithless in the observance of treaty obligations, and utterly unscrupulous as to the means by which he gained his end; but his great ability both as a king and a soldier is conceded by all historians. Assassinated, 336 B. C.

Philip II., of France, calling Philip Augustus, on account of his great abilities and successful administration, was born, 1165. He was crowned joint king with his father, Louis VII., in 1179, and on the death of the latter, in the year following, he came into full possession of the kingdom. He was one of the greatest monarchs of the Capet dynasty. The crusade against the Albigenses occurred in his reign, and he granted the first charter to the University of Paris. He died at Nantes, 1223.

Philip II., king of Spain, only son of the emperor Charles V., was born in 1527 at Valladolid. His first wife was Mary of Portugal; he then married Mary Tudor in 1554; spent over a year in England, and in 1555 succeeded his father in the sovereignty of Spain, Sicily, Milan, the Netherlands, Franche Comté, Mexico, and Peru. He fatally injured Spain by crushing her chivalrous spirit, by persecuting the industrious Moors, and by destroying her commerce by heavy taxation. He died, 1598.

Philip IV., "the fair," king of France, was born at Fontainebleau in 1268. He succeeded to the throne in 1285, and by his marriage with Queen Joänna of Navarre obtained Navarre, Champagne, and Brie. The chief feature of his reign was his contest with Pope Boniface VIII., which grew out of his attempt to levy taxes upon the clergy, which the pope directed them not to pay. In 1305 Philip obtained the elevation of one of his own creatures to the papal chair as Clement V., and seated him at Avignon, which place was the residence of the head of the church for seventy years thereafter. This period of papal history is often called "the seventy years' captivity." He suppressed the order of the Templars, and confiscated their lands. He died, 1314.

Philip VI., of Valois, king of France, was born, 1293, and succeeded Charles IV., in 1328. Edward III. of England contested his claim, contending that the Salic law, though it excluded females, did not exclude their male heirs. Edward was son of a daughter, Philip son of a brother, of Philip IV.; thus began the Hundred Years' war between France and England, 1337. The king afterward purchased Majorca. Died, 1350.

Philip, King, sachem of the Wampanoag tribe of Indians, was the second son of Massasoit, who for nearly thirty years had been the stanch ally of the pilgrim settlers. In 1662 Philip succeeded his elder brother and kept the treaties of his father for several years. But, at length, goaded by the encroachments of the whites, he formed a confederation of tribes, amounting to nearly 10,000 warriors, and in 1675 the war known as "King Philip's war," broke out. The Indians surprised and murdered a great many colonists but were eventually overcome, and in 1676 Philip himself was captured and slain in Rhode Island.

Philips, Andrew Wheeler, American educator, professor of mathematics and dean of the graduate school of Yale University, was born at Griswold, Conn., 1844. He graduated at Yale, 1873; Ph. D., 1877; and dean of the graduate school at Yale since 1895. Joint author: *Transcendental Curves; Graphic Algebra; The Elements of Geometry; Trigonometry and Tables; The Orbit of Swift's Comet*, etc.

Phillips, David Graham, American author, was born at Madison, Ind., 1867. He graduated at Princeton, 1887, and adopted literature as a profession immediately after graduation. Author: *The Great God Success; Her Serene Highness; A Woman Ventures; Golden Fleece; The Master Rogue; The Cost; The Plum Tree; The Social Secretary.* Assassinated, 1911.

Phillips, Stephen, English poet, was born at Somertown, near Oxford, 1868; studied for the civil service, but abandoned this and went on the stage, playing various parts with Frank Benson's company. Author: *Marpessa; Eremus; Christ in Hades; Poems; Paolo and Francesca; Herod; Ulysses; The Sin of David; Nero; The Last Heir*, drama, etc.

Phillips, Wendell, American orator and abolitionist, was born in Boston, Mass., 1811. He was graduated at Harvard in 1831, studied law there, and was admitted to the bar in 1834. A timely speech in Faneuil hall in 1837 made him at once the principal orator of the anti-slavery party; and henceforth, until President Lincoln's proclamation of January, 1, 1863, he was William Lloyd Garrison's loyal and valued ally in the struggle for abolition. He died in Boston, Mass., 1884.

Phillpotts (*fil'pots*), **Eden,** English novelist, was born at Mount Aboo, India, 1862. He was educated at Plymouth, England; went to London and studied for the stage, but abandoned it on finding his ability did not justify perseverance, and adopted literature. Author: *Some Everyday Folks; Down Dartmoor Way; Lying Prophets; Children of the Mist; The Human Boy; Sons of the Morning; The Striking Hours.*

Philo Judæus (*fī'lō jōō-dē'us*), philosopher of the first century, born in Alexandria; studied the Greek philosophy, and found in it, particularly in the teaching of Plato, the rationalist explanation of the religion of Moses, which he regarded as the revelation to which philosophy was but the key. He died about 54 A. D.

Phipps, Henry, American manufacturer and philanthropist, was born in Philadelphia, 1839. He worked in stores in Pittsburg, 1852-56; later associated with Thomas M. and Andrew Carnegie in iron and steel manufacture, building up large fortune, and having, next to Carnegie, largest interest in United States steel corporation. He is a director of United States steel corporation, Carnegie company. He gave $1,000,000 to the Johns Hopkins University endowment fund in 1909.

Phocion (*fō'shi-on*), an Athenian general and statesman, born about 402 B. C., studied under Plato and Xenocrates. As a soldier he was several times sent against Philip of Macedon, though in politics he sided with him against Demosthenes. Forty-five times he was elected strategus. Implicated in a plot to hand over the Piræus to the enemy, he was sentenced to death by the Athenians, 317 B. C. A revulsion of feeling later led to the erection of a statue in his honor.

Piccolomini (*pēk'kō-lō'mē-nē*), **Octavio,** German general, was born in Italy, 1599, died in Vienna in 1656. He was a favorite of Wallenstein, who intrusted him with a knowledge of his projects, when he purposed to attack the emperor. In spite of this he made himself the chief instrument of Wallenstein's overthrow, and, after the latter's assassination in 1634, was rewarded with a portion of his estates. He was defeated by Torstensohn at Leipzig in 1642.

Pickering, Edward Charles, American astronomer, was born at Boston, 1846. He graduated at the Lawrence Scientific School, Harvard, 1865; LL. D., University of California, 1886, Michigan, 1887, Chicago, 1901, Harvard, 1903, Pennsylvania, 1906; Ph. D.; Thayer professor of physics, Massachusetts Institute of Technology, 1867-76; and professor of astronomy and director of the Harvard College observatory, since 1876. He established the first physical laboratory in the United States, and under his administration the work of the observatory has been devoted mostly to the new fields of photometry and photography as applied to astronomical observation. Author *Elements of Physical Manipulation*, and various volumes of annals and other publications of Harvard College observatory.

Pickering, Timothy, American statesman, was born in Massachusetts, 1745. He served as colonel in the American revolution, became Washington's adjutant-general in 1777, and was a delegate to the Pennsylvania constitutional convention of 1787 and 1789. Secretary of war, 1795; secretary of state, 1795-1800; United States senator, 1803-11. He was the author of several political pamphlets, and paid much attention to agriculture. He died in 1829.

Pickett, George Edward, American soldier, was born at Richmond, Va., 1825. He graduated at West Point in 1846, and entered the army as second-lieutenant during the war with Mexico. At the outbreak of the civil war, he resigned his commission as captain in the army of the United States and entered the Confederate service as a colonel. He was engaged in several desperate battles under Lee, but won special distinction as the leader of the assaulting column at Gettysburg, July, 3, 1863, upon which the fate of the Confederacy hung. The point reached by his troops in this charge, and from which they were at last driven back, is marked upon the field of Gettysburg to-day by a granite monument. He died at Norfolk, Va., 1875.

Pierce, Franklin, fourteenth president of the United States, was born in Hillsborough, N. H., 1804. Franklin Pierce was educated at Bowdoin College, Maine, and was an officer in the college military company, in which his biographer, Nathaniel Hawthorne, was a private. In 1837 he was elected to the United States senate, of which he was the youngest member. In 1852, in consequence of the conflicting claims of the leaders of the democratic party at the Baltimore convention, he was nominated as a compromise candidate for the presidency against General Scott, the whig nominee and received the votes of all but four states. He appointed an able cabinet, including Jefferson Davis as secretary of war. During his administration the Missouri compromise was repealed, the treaty for reciprocity of trade with the British American colonies was made, and a treaty with Japan. He died in 1869.

Pillow, Gideon Johnson, American soldier, was born in Williamson county, Tennessee, 1806. He graduated at the University of Nashville in 1827, was admitted to the bar. He practiced law in his own state until the beginning of the civil war, to avert which he had proposed various compromises. But having entered the confederate service in 1861, he was rapidly advanced to the command of a brigade, and took part in the battles of Belmont and Fort Donnelson. He was second in command when the latter was taken by the federal troops. He died in Lee county, Arkansas, 1878.

Pinchot (*pin'shō*), **Gifford,** American forester, was born in Simsbury, Conn., 1865. He graduated from Yale, 1889; M. A., Yale, 1901, Princeton, 1904; LL. D., McGill, 1909. He is a member of the committee on organization of government scientific work and commission on public lands since 1903, and has been very active in a policy to protect the natural resources of the United States.

Pinckney (*pingk'ni*), **Charles Cotesworth,** American statesman, was born in South Carolina, 1746. He fought during the revolution; assisted in framing the constitution of the United States; was special envoy to France, 1796-97. He was a lawyer of eminence, and author of the famous sentiment, "Millions for defense, but not one cent for tribute." He died, 1825.

Pindar (*pin'dar*), greatest Greek lyric poet, was born at Cynoscephalæ, a village in the territory of Thebes, about 522 B. C. He commenced his career as a poet at an early age, and was employed for many years in various courts and by many of the princes of Greece to compose for them choral songs for special occasions. Of his many works—which consisted of hymns, poems, odes, songs, dirges, and encomiums on princes—only his *Epinicia*, or *Odes*, have come down to us entire. These were composed in commemoration of victories in the public games. Died at Thebes, 442 B. C.

Pinero (*pi-ner'ō*), **Sir Arthur Wing,** English dramatist, was born in London, 1855. He was educated in private schools; was an actor from 1874-81; and from that time until the present, a dramatic author. Author: *The Magistrate; The School-mistress; The Profligate; The Second Mrs. Tanquery; Trelawny of the Wells; The Gay Lord Quex; His House in Order*, and many other plays.

Pinkerton, Allan, Scottish-American detective, was born in Glasgow, 1819, and emigrated to America in 1842. He located in Illinois, where he captured a gang of counterfeiters and became a deputy sheriff four years later. In 1850 he opened a detective agency in Chicago; recovered $40,000 for the Adams express company, and, discovering a plot to murder Abraham Lincoln on his inaugural journey to Washington, was authorized to protect the president-elect. He then organized the United States secret service, of which he became the head, and conducted it until the close of the war. He wrote several books connected with his work before his death in 1884.

Pinkney, William, American lawyer and diplomat, was born at Annapolis, Maryland, 1764. He was admitted to the bar in 1786. In 1806 he was sent to England as minister extraordinary, and remained as minister resident, 1807-11. He was attorney-general of the United States 1811-18; served in the war of 1812 as commander of a volunteer corps; was elected to congress in 1815, was a member of the United States senate, 1820-22. He died, 1822.

Pisistratus (*pi-sis'tra-tus*), tyrant or ruler of Athens, was born about 612 B. C., the son of Hippocrates, who left him a large fortune. He usurped the throne in 560 B. C., and although he was twice expelled, he regained it and ruled with mildness and justice. He enforced the laws of Solon, who was his friend and relative; founded the first public library at Athens, and collected and arranged the poems of Homer. He died about 527 B. C.

Pitman, Benn, Anglo-American stenographer, was born at Trowbridge, Wilts, England, 1822. He settled in the United States, 1853, and founded the phonographic institute, Cincinnati. He was inventor of the electro-process of relief engraving, 1856; military recorder of state trials during the civil war. Author: *The Reporter's Companion; Manual of Phonography*, etc. Died, 1910.

Pitney, Mahlon, Jurist, Associate Justice U. S. Supreme Court since March 1912, was born at Morristown, N. J., 1858. He was graduated from Princeton University, 1879; LL.D., 1908; admitted to the bar 1882; practiced law 1882-1901; member of Congress, 1895-9, when he resigned and became State Senator; served in latter body 1899-1901, being president of Senate in latter year. He was Associate Justice N. J. Supreme Court, 1901-08, and Chief Justice of the N. J. Court of Chancery 1908-12.

Pitt, William, first earl of Chatham, a famous English statesman, often referred to as the elder Pitt, was born in Westminsiter, 1708. Educated at Oxford, he entered parliament in 1735. He later became a member of the privy council, and was called upon to form a new cabinet in 1756, of which the duke of Devonshire was prime minister. He resigned in 1761, but five years later was called upon to form a new cabinet, upon which he became Viscount Pitt and earl of Chatham. Ill health forced his retirement in 1768, but he kept up an active interest in public affairs, opposed Lord North's policy of taxing the colonies, and, upon the alliance of the colonies and France, protested, in a last great effort, against the proposal to make peace. At the close of his speech, he fell into the arms of his friends, and died a few days later, 1778.

Pitt, William, British statesman, son of the preceding, was born at Hayes, England, 1759. He was educated at Cambridge, studied for the bar at Lincoln's Inn, and entered parliament in 1781. At the age of twenty-three he became chancellor of the exchequer, and at twenty-five was regarded as one of England's most powerful ministers. For seventeen years he held his great position without a break. In 1784 he established a new constitution for the East India company. In 1788-89 he maintained against Fox the right of parliament to supply the temporary defect of royal authority occasioned by the incapacity of the king. Until 1801 he continued to hold the reins of government, during one of the most stormy periods of British history; and his admirers have conferred on him the title of "the pilot that weathered the storm." In 1799 he effected the union with Ireland. It was part of his scheme to relieve the Roman Catholic laity from civil disabilities, and to grant a public maintenance to their clergy; but the obstinacy of the king frustrated his design. Chagrined by this failure, Pitt resigned office in 1801. In 1804 he returned again to the head of the treasury, which position he continued to hold until his death in 1806.

Pius VI., Giovanni Angelo Braschi, pope, 1775-99, was born at Cesena, Italy, 1717. He was elected pope in succession to Clement XIV. Soon after came the French revolution and the confiscation of church property in France. The pope launched his thunders in vain, and ere long the murder of the French agent at Rome, in 1793, gave the Directory an excuse for an attack. Bonaparte took possession of the legations, and afterward of the march of Ancona, and extorted in

1797 the surrender of these provinces from Pius. Pius was called on to renounce his temporal sovereignty, and on his refusal was seized, carried to Siena, and later to Certosa, Grenoble, and finally Valence, where he died, 1799.

Pius IX., Giovanni Mastai Ferretti, pope, 1846-78, was born near Ancona, Italy, 1792. He was elected in 1846, and his pontificate covers one of the most eventful periods of the papacy. After the insurrection at Rome, 1848, he fled to Gaeta, but was restored by French aid two years later. The same year he established a Catholic hierarchy in England, and in 1854 defined the doctrine of the immaculate conception. In 1870 the infallibility dogma was promulgated by the ecumenical council held at Rome. In that year, when the French left the city, it was declared the capital of Italy, occupied by the troops of Victor Emmanuel, and the pope was practically held a captive in the vatican until his death in 1878.

Pius X., 258th Roman pontiff, was born in 1835 at Riese, near Treviso, Italy. His name was Giuseppe Sarto, and he was the son of a minor municipal official. He was educated at Castelfranco and the Diocesan Seminary of Padua, and ordained priest, 1858. In 1884 he was appointed bishop of Mantua, and Leo XIII. made him a cardinal and patriarch of Venice in 1893. His charity and tact brought him unbounded popularity, and he was more than once instrumental in settling serious strikes and labor disputes. On the death of Leo XIII., 1903, the conclave met, and, at the seventh scrutiny, elected him pope, and he chose to be known as Pope Pius X. As priest and bishop his life was spent in the pastoral and episcopal service of the church rather than in diplomatic and official service. He was constantly zealous in the reform of church music and in other matters of ecclesiastical discipline. In 1907 he issued a decree intrusting the revision of the *Vulgate Bible* to the Benedictine Order, and later an encyclical against the modernist movement in the church. Died 1914.

Pizarro (*pē-thär'rō*), **Francisco,** Spanish conqueror of Peru, was born at Trujillo, Spain, about 1470. He received little education, was of an adventurous spirit, entered the army, and embarked with other adventurers for America. On his arrival in Peru he found a civil war raging between the two sons of the emperor, who had just died. Pizarro saw his opportunity; approached Atahualpa, the victorious one, who had now become the reigning Inca, with overtures of peace and was admitted into the interior of the country. He then invited Atahualpa to a banquet, had him imprisoned, and commenced a wholesale butchery of his subjects, upon which he forced Atahualpa to disclose his treasures, and then put him perfidiously to death. Finally the followers of Almagoo, his rival, rose against Pizarro, seized him in his palace at Lima, and executed him, 1541.

Plato, who, with Aristotle, represents to modern times the whole compass of Greek philosophy, was born at Athens in the year 429 B. C. When he was twenty years old, the political troubles, of which the death of Socrates was only one terrible symptom, forced him to leave Athens for a season, and he resided at Megara, with Euclid, the founder of the Megaric sect. That he visited Italy is extremely probable; at all events, he was most closely connected with Archytas and the Pythagorean philosophers.

After returning from his first visit to Sicily, being then in his fortieth year, he began teaching philosophy publicly, in the Academia, a pleasant garden in the most beautiful suburb of Athens, and there gathered around him a large school of distinguished followers, who maintained a regular succession after his death, under the name of the philosophers of the academy. He lived to the age of eighty-two; was never married; and must have possessed some independent property, as he expresses himself strongly against teaching philosophy for fees, and we nowhere read of his having held any public office from which he could have derived emolument.

The distinctive character of the Platonic philosophy is expressed by the word idealism, as opposed to realism, materialism, or sensationalism, using these words in their most general and least technical sense. We should err greatly, however, if we looked on Plato as a man of mere speculation, and a writer of metaphysical books. Neither Plato nor any of the great Greeks looked on their intellectual exercises and recreations as an end in themselves. With them, philosophy did not mean mere knowledge or mere speculation, but it meant wisdom, and wisdom meant wise action, and wise action meant virtue.

References.—Jowett's translation of the *Dialogues of Plato;* Ritchie's *Plato;* Nettleship's *Lectures on the "Republic";* Grote's *Plato;* histories of philosophy by Zeller and Gompera; Lutoslawski's *Origin and Growth of Plato's Logic;* and also Emerson's essay in *Representative Men.*

Platt, Thomas Collier, American politician, was born in Oswego, N. Y., 1833. He was a member of class of 1853, Yale, but was compelled to give up his course because of ill health; M. A., 1876. Member of congress, 1873-77; elected United States senator, 1881. President of board of quarantine commissioners, New York, 1880-88; was president of Southern Central railroad and of Addison and Northern Pennsylvania railroad; and was the recognized leader in New York republican politics for years. He was again United States senator from 1897 to 1909. Died, 1910.

Plautus (*plô'tus*), **Titus Maccius,** the greatest comic poet of ancient Rome, was born about 254 B. C. at Sarsina in Umbria. Of the twenty-one comedies legitimately assigned him, twenty are still extant. They present great vivacity, well-constructed plots, and humorous, life-like characters and situations. He has found noteworthy imitators in Shakespeare, Molière, Dryden, Addison, and Lessing. His literary career continued uninterrupted until his death in 184 B. C.

Pliny (*plin'i*), the name of two famous Romans, usually distinguished as Pliny the Elder and Pliny the Younger. Pliny the Elder, Caius Plinius Secundus, was born probably at Como, Italy, A. D. 23, and was a famous naturalist. Of his many works, his *Historia Naturalis* is the only one that has come down to us. He perished in the great eruption of Vesuvius, which overwhelmed Herculaneum and Pompeii, 79 A. D.

Pliny the Younger, Caius Plinius Cæcilius Secundus, was born at Como, A. D. 61, was the nephew of the elder Pliny, and is celebrated chiefly for his *Letters,* of which ten books are extant. In 103 he was appointed governor of the provinces known as Bithynia and Pontus; and in this capacity he wrote his well-known letter to the emperor Trajan respecting the Christians in his province, which called forth the emperor's equally well-known reply. He died about 116 A. D.

Plutarch, (*plu'tark*), celebrated Greek biographer and moralist, was a native of Cherónea, in Boeotia. In A. D. 66 he was a pupil of the philosopher Ammonius at Delphi. He visited Italy, and spent some time at Rome, lecturing there on philosophy as early as the reign of Domitian; but his name is not mentioned by any of the eminent Roman writers, his contemporaries. He returned to his native town, where he held various magistracies, and was appointed priest of Apollo. He was still living in 120, but the time of his death is not known.

His great work is entitled *Parallel Lives,* and consists of biographies of forty-six eminent Greeks and Romans, arranged in pairs, each pair accompanied by a comparison of characters. They are written with a moral purpose, and present not orderly narratives of events, but portraitures of men, drawn with much graphic power, with great good sense, honesty, and kindheartedness.

Few books of ancient or modern times have been so widely read, so generally admired, as these *Lives.*

The English translation by the Langhornes is well known; less known, but more spirited, is that by North. A new edition of the translation called Dryden's, revised by Clough, appeared in 1859. Most of Plutarch's other writings are ethical, and are entitled *Moralia.*

References.—Trench's *Four Lectures on Plutarch;* Volkmann's *Leben, Schriften und Philosophie von Plutarch.*

Pobyedonostsev (*pō-bye-dō-nôs'tsēf*), **Konstantin Petrovich,** Russian jurist and statesman, was born at Moscow, 1827. He studied at St. Petersburg, became an official of the senate in Moscow, and later a professor of civil law there, in 1858. In 1872 he was made a member of the council of the empire, and as procurator of the holy synod, from 1880 to 1905, was the most uncompromising champion of the autocracy and of the supremacy of the orthodox Greek church. He died in 1907.

Pocahontas (*pō'ka-hon'tas*), the celebrated Princess Pocahontas, of American colonial history, was born about 1595, the daughter of Powhatan, an Indian chief of Virginia. In 1613 she married John Rolfe, one of the settlers of Jamestown, afterward secretary and recorder-general of Virginia. She died in England in 1617, leaving a son, Thomas Rolfe. Her descendants include some of the leading families of Virginia, the celebrated John Randolph being one of them.

Poe, Edgar Allan, famous American poet and romancer, was born in Boston, Mass., 1809. He was adopted by John Allan of Richmond; entered the University of Virginia in 1826, but left after a term and spent two years as a private in the regular army. He expressed a wish to remain in the army, and Mr. Allan secured him a cadetship in the Military Academy at West Point. Here he neglected his studies, and was cashiered in 1831. In 1833, the publisher of a Baltimore magazine having offered prizes for the best prose story and the best poem, Poe competed and won both prizes. In 1835 he married Virginia Clemm. In 1837 he removed to New York, where he lived by contributing to the *New York Quarterly Review* and other periodicals, and where in 1838 he published *The Narrative of Arthur Gordon Pym.* In 1839 he became the editor of *The Gentleman's Magazine* at Philadelphia, and published a collection of his best stories, with the title *Tales of the Arabesque and Grotesque.* The year 1845 was marked by the appearance of his amous poem, *The Raven.* In 1847, after the death of his wife, he began to deteriorate, and died at Baltimore, Md., in 1849. His was perhaps the most original poetical genius which America has produced.

Polk (*pōk*), **James Knox,** eleventh president of the United States, was born in North Carolina, 1795. He was educated at the University of North Carolina, and was admitted to the bar at Columbia, Tenn., in 1820. Governor of Tennesee, 1839-41; and was elected as a democrat to the presidency in 1844. The principal feature of Polk's administration, which extended from 1845 to 1849, was the Mexican war, by which the United States acquired the great states of Texas and California and the territory of New Mexico. On the expiration of Polk's term he retired to Nashville, Tenn., where he died a few months afterward, 1849.

Polk, Leonidas, general in the Confederate army, and bishop of the Protestant Episcopal church, was born at Raleigh, N. C., 1806. He graduated at West Point in 1827, and received a commission in the artillery, but resigned and studied for the ministry. Soon after the outbreak of the civil war, Polk tendered his services to the confederate government, and was appointed major-general by Jefferson Davis. He commanded an army corps at the battle of Shiloh, and in October following was made lieutenant-general. He was killed by a cannon-shot while reconnoitering on Pine mountain, 1864.

Pollock, Sir Frederick, English legal writer and educator, was born in London, 1845. He was graduated at Trinity College, Cambridge, and was admitted to the bar in 1871. LL. D., Cambridge; D. C. L., Oxford. Corpus professor of jurisprudence, University of Oxford, 1883-1930; and honorary fellow of Corpus Christi College, Oxford 1906. Author: *Principles of Contract; The Law of Torts; The Land Laws; Essays in Jurisprudence and Ethics; Introduction to the History of the Science of Politics; Indian Contract Act,* etc.

Polo (*pō'lō*), **Marco,** Italian traveler, was born in Venice, of a noble family, about 1255. In 1271 he accompanied his father and uncle, while a mere youth, to the court of the Tartar emperor of China, by whom he was received with favor and employed on several embassies. He was then captured by the Genoese, put in prison, and dictated to another captive, Rusticiano, the story of his adventures, which proved to be the first account that opened up to wondering Europe the magnificence of the eastern world. He died about 1323.

Polybius (*pō-lib's-us*), Greek historian, was born at Megalopolis, in Arcadia, about 204 B. C. He was educated and trained for a public career, was one of the thousand distinguished Archæans who were carried as prisoners to Rome, 168 B. C. After his return to Greece, he undertook numerous journeys into foreign countries, and wrote his celebrated *History.* His death was caused by a fall from his horse, about 122 B. C.

Polycarp (*pol'i-kärp*), bishop of Smyrna and, Christian martyr, was born about 69 A. D. He was brought up at Smyrna, was taught the doctrine of christianity by the apostles, particularly by John, with whom he had "familiar intercourse." He was burned alive. Polycarp wrote several *Epistolæ,* of which only one has been preserved, the *Epistola ad Philippenses,* valuable for its numerous quotations from the new testament.

Polygnotus (*pol'ig-nō'tus*), early Greek painter, was born in Thasos, and settled in Athens 463 B. C. He is considered the founder of historical painting, and is praised especially by Aristotle, who pays a high tribute to him. He was the first to attempt portrait painting and to exhibit character by his art. He was identified with Cimon in the reconstruction of Athens, and his school did much to adorn its famous temples.

Pombal (*pōm-bäl'*), **Marquis of, Dom Sebastiano José de Carvalho,** one of the greatest of Portuguese statesmen, and one of the ablest men of his time, was born in 1699. On the accession of Maria, he was, under Jesuit influence, dispossessed of power, and died in poverty, 1782.

Pompey, Cnelus Pompeius Magnus, called the Great, famous Roman general, was born, 106 B. C. He early evinced his military talents by siding with Sulla against Marius, and defeating Brutus, in 83. In 72 he reduced Spain to subjection; and on his return was elected to the consulship, with Crassus as his colleague. In this capacity, he restored the power of the tribunes and exterminated the Mediterranean pirates. He next successfully put an end to the Mithridatic war, occupied Syria, besieged and took Jerusalem, and subjugated Pontus and Bithynia. In 59 he with Cæsar and Crassus, formed the triumvirate; and, in 51, identified himself with the

aristocratic party, which brought himself into armed antagonism with Caesar. He was overthrown by Caesar on the field of Pharsalia, 48 B. C., escaped to Egypt and was assassinated.

Ponce de Leon (*pōn'thā dā lā-ōn'*), **Juan,** Spanish explorer, was born in Leon, Spain, 1460. Having heard of the existence of a fountain that could restore youth and beauty, he set out in search of it in 1512, and discovered and named Florida on Easter Sunday. At the end of a subsequent voyage he died, 1521.

Poniatowski (*pō'nyä-tôf'skē*), **Stanislaus Augustus,** last king of Poland, was born at Wolczyn, Lithuania, 1732. He tried, too late, to introduce reforms. The intrigues of discontented nobles led to Russian and Prussian intervention, and King Stanislaus resigned his crown, and died at St. Petersburg, 1798.

Poniatowski, Joseph Antony, born at Warsaw, 1762, was trained in the Austrian army. When the duchy of Warsaw was constituted, in 1807, he was appointed minister of war and commander-in-chief. Five years later, with a large body of Poles, he joined Napoleon in his invasion of Russia, and distinguished himself at Smolensk, at Borodino, and at Leipzig, where, in covering the French retreat, he was drowned in the Elster, 1813.

Pontiac (*pon'ti-ak*), chief of the Ottawa Indians, was born about 1720. After the French had surrendered Canada, his hatred of the English prompted him to organize a combined attack upon all the English garrisons and settlements with a view to the extermination of what he called "those dogs dressed in red." Pontiac resorted to every means familiar to savages to reduce Detroit, but was unsuccessful. Peace was finally made in 1766, Pontiac being forced to submit to British rule. He was killed at Cahokia, Illinois, by a drunken Indian in 1769.

Pope, Alexander, celebrated English poet, was born, 1688, in Lombard street, London. Pope was deformed, small in size, and delicate in constitution. The groundwork of learning he acquired at two private schools, and from two priests, who were employed as his tutors; for the rest he was indebted to his own persevering studies. He was a poet almost from infancy. His pastorals and some translations appeared in Tonson's *Miscellany* in 1709, but were written three or four years earlier. These were followed by the *Essay on Criticism*, 1711, and *Rape of the Lock*, 1712-17. From 1715-26 Pope was chiefly engaged on his translations of the *Iliad* and the *Odyssey*. In 1728-29 he published his greatest satire, the *Dunciad*, an attack on all poetasters and pretended wits. Died, 1744.

Pope, John, American general, was born at Louisville, Ky., 1822. He graduated at West Point in 1842, entered the engineer corps of the United States army, served in the Florida war of 1842-44, and afterward in the Mexican war. During the civil war he was appointed brigadier-general of volunteers, and in 1862 highly distinguished himself by the capture of New Madrid, Mo., and "Island No. 10," in the Mississippi river. On account of these signal successes he was transferred to the east and placed in command. In 1882 Pope was made a major-general in the regular army, and retired in 1886. He died at Sandusky, Ohio, 1892.

Porson (*pôr's'n*), **Richard,** eminent English Greek scholar, was born in Norfolk, England, 1759. He was graduated at Cambridge, held a professorship of Greek there, and proved to be a prodigy of learning and critical acumen. After his death, several of his works left in manuscript were published. Died, 1808.

Porter, David D., American admiral, was born at Chester, Pa., 1813; entered the navy as midshipman in 1829; in 1845 was transferred to the national observatory at Washington, and during the Mexican war to the naval rendezvous at New Orleans. At the commencement of the civil war he was appointed, with the rank of commander, to the steam sloop-of-war *Powhatan;* distinguished himself in the capture of New Orleans, and commanded the gunboat and mortar flotilla which coöperated with the squadron of Admiral Farragut in the first attack on Vicksburg. In the fall of 1862 he was placed in command of all the naval forces on the rivers above New Orleans, with the rank of rear-admiral. At the termination of the war he was appointed superintendent and president *ex officio* of the United States naval academy, Annapolis. He was made vice-admiral in 1866, and in 1870 became admiral. Died, 1891.

Porter, Horace, American diplomat and soldier, was born at Huntingdon, Pa., 1837. He graduated at West Point, 1860; LL. D., Union, 1894, Princeton, 1906. He served in the civil war; was lieutenant colonel and aide-de-camp to General Grant, 1864. He was assistant secretary of war, 1866; and executive secretary to President Grant, 1869-73. United States ambassador to France, 1897-1905; Author: *West Point Life; Campaigning with Grant*, etc.

Porter, Jane, English novelist, was born at Durham, England, 1776. Her first novel was *Thaddeus of Warsaw*, which was translated into several languages. In 1810 she published *The Scottish Chiefs*, which was also very popular. In 1841 she visited St. Petersburg, and died, 1850, at Bristol, England.

Porter, Noah, American educator and philosophical writer, was born at Farmington, Conn., 1811. He graduated at Yale college in 1831, and, after teaching for a number of years, studied theology and became pastor of a Congregational church at New Milford, Conn. He was professor of metaphysics and moral philosophy at Yale college, 1846-71; president of Yale, 1871-86; and died at New Haven, Conn., 1892. Among Dr. Porter's numerous works are: *The Human Intellect; Books and Reading; Elements of Intellectual Science; Elements of Moral Science.* He was the editor of Webster's *Unabridged*, and of the *International Dictionary.*

Porus (*pō'rus*), the Greek name of a king of India who lived in the time of Alexander the Great. Alexander treated him humanely, made him his ally, and enlarged his kingdom by giving him others which were conquered by the Greeks. When Alexander departed from India, he left his army in charge of Eudemus, who put Porus to death, about 317 B. C.

Post, Louis Freeland, American journalist and socialist, editor of *The Public*, Chicago, was born at Vienna, N. J., 1849. He was assistant United States attorney, New York, 1874-75; editorial writer on *New York Daily Truth*, 1879-82. He became interested in Henry George and his teachings, 1881, and has since advocated single tax and allied economic reforms. In 1891-92 he was editor of the *New York Standard;* was editor of the *Cleveland Recorder*, 1896-97; and founded *The Public*, 1898.

Potter, Cora Urquhart (Mrs. James Brown Potter), American actress, was born in New Orleans, daughter of Colonel David Urquhart. She first gained fame as an amateur in New York, and made her professional dèbut at the Haymarket theater, London, as Anne Sylvester in *Man and Wife*, 1887; appeared at the Fifth avenue theater, New York, in *Mlle. de Bremier*, 1887; and since then has appeared in a varied repertory and played during three tours around the world.

Potter, Henry Codman, American protestant Episcopal prelate, was born at Schenectady, N. Y., 1834. He was graduated at the Theological seminary, Virginia, 1857; D. D., 1865; LL. D., Union, 1878; Yale, 1901; D. D., Harvard, Trinity, Oxford, and Cambridge. He was pastor of Christ church, Greensburg, Pa., 1857-58; St. John's, Troy, 1859-66; was rector of Grace church, New York, until his death, and from 1887 to 1908 was bishop of New York. Author: *Thirty Years Reviewed; Our Threefold Victory; The Church and Her Children; The Religion for To-day.* Died, 1908.

Potter, Paul, celebrated Dutch animal-painter, was born, a painter's son, at Enkhuizen in 1625. He left Amsterdam and established himself at The Hague at an early age, where he studied painting under Jacob de Weth. Here he resided until 1653, when he returned to Amsterdam. His best pictures are pastoral scenes with animal figures, the *Young Bull* being especially celebrated. The Rijks museum at Amsterdam possesses the *Bear-hunt* and seven other pictures, and England is rich in his works. He died, 1654.

Poussin (*pōō'san'*), **Nicholas,** French painter, was born in Normandy in 1594. He was a pupil of Varin, Lallemont, and others, and in 1624 went to Rome where he studied with Dufresnoy the sculptor. His reputation mainly rests on his success in the classic style. Upward of two hundred prints have been engraved from his works. The national gallery in London has several of Poussin's pictures. He died in 1665.

Powell, Edward Payson, American journalist and author, was born at Clinton, N. Y., 1833. He graduated at Hamilton College, 1853, and from the Union theological seminary, 1858. He was editorial writer on the *St. Louis Globe-Democrat* for several years; and is now editorial writer of *The Independent.* Author: *Our Heredity from God; Liberty and Life.*

Powers, Hiram, American sculptor, was born at Woodstock, Vt., 1805. While still a boy he went to Cincinnati, Ohio, where he became an apprentice to a clockmaker, and about the same time formed the acquaintance of a German sculptor, who taught him to model in plaster. In 1835 he went to Washington, where he executed the busts of the most distinguished persons of the day. In 1837 he went to Italy to study his art, and resided in Florence until his death. In 1838 he produced his statue of *Eve*, which excited the admiration of Thorwaldsen, and in 1839 the still more popular *Greek Slave.* Died, 1873.

Poynter, Sir Edward John, English painter, was born of Huguenot ancestry in Paris, 1836. Was educated at Westminster and Ipswich; studied, 1853-54, at Rome and, 1856-60, in Paris and elsewhere. His water colors are numerous, and he was elected to the royal water color society in 1883; was R. A. from 1876. In 1871 he became Slade professor of art, University of London; in 1876-81 was director of art at South Kensington; from 1894 to 1905 was director of the national gallery, London; and since 1896 has been president of the Royal academy. In 1869-70 he designed the cartoons for a mosaic of St. George in the British house of parliament. He was knighted, 1897, and created a baronet in 1902.

Praxiteles (*prak-sit'ē-lēz*), famous Grecian sculptor, is believed to have been a native of Athens, to have flourished early in the fourth century B. C. and to have died at the age of eighty. He executed statues in both bronze and marble, and was unrivaled in the exhibition of the softer beauties of the human form, especially the female figure, his most celebrated being the marble one of Aphrodite at Cnidus.

Prentice, George D., American journalist, was born at Preston, Conn., 1802, and graduated at Brown University in 1823. After studying law, he edited the *New England Review* for two years, and in 1831 became editor of the *Louisville Journal*, which position he continued to hold until his death in 1870. He also achieved considerable reputation as a public lecturer, and was the author of a number of poems.

Prescott, William Hickling, American historian, was born at Salem, Mass., 1796. During his college course he lost the sight of an eye by a piece of bread playfully thrown by a fellow student, and his studies so affected the other that he became nearly blind. He was then sent abroad for his health, and traveled in England, France, and Italy. On his return to America he turned his attention to literature, and, in 1825, selected materials for his *History of Ferdinand and Isabella*, which appeared in 1837. He next devoted six years to the *History of the Conquest of Mexico*, and four years to the *Conquest of Peru.* From 1855 to 1858 he published three volumes of his *History of Philip II.*, but left it unfinished. He was made D. C. L. at Oxford in 1850. Died, 1859.

Price, Sterling, American general, was born in Virginia, 1809. He was a democratic member of congress, 1845-46; was made brigadier-general in the Mexican war; was governor of Missouri, 1853-57; became a noted leader of the secession party; was appointed major-general in the confederate service in 1862, and rendered distinguished service to the confederacy throughout the civil war, in the southwest. Died, 1867.

Priestly, Joseph, eminent English clergyman and experimental philosopher, was born in 1733, at Fieldhead, in Yorkshire, England. In 1774 he announced his discovery of oxygen. At Birmingham he proceeded actively with philosophical and theological researches, became the associate of Boulton, Watt, and Dr. Darwin, grandfather of Charles Darwin, and was also appointed pastor of a Unitarian congregation. In 1791, however, the scene changed. His religious principles and his avowed partiality to the French revolution excited the hatred of the high church and tory party, and, in the riots which took place in July, his house, library, manuscripts, and apparatus were committed to the flames by the infuriated mob, and he was exposed to great personal danger. He fled to Northumberland, Pennsylvania, at which place he died, 1804. His works include between seventy and eighty volumes. Among them are: *Lectures on General History; Theory and History of Language; Principles of Oratory and Criticism; Charts of Biography and History; Disquisitions Relating to Matter and Spirit*, etc.

Prim (*prēm*), **Juan,** Spanish general and statesman, was born, 1814. He entered the Spanish army when but a mere boy; became a colonel in 1837; aided Narvaez, 1843, in the overthrow of Espartero, and assisted in effecting the return of Queen Maria Christina, was banished from Madrid in 1864, but on the overthrow of Isabella, in which he aided, was welcomed back to Spain with open arms, and filled the highest posts in the realm. He is said to have furnished the pretext for the Franco-Prussian war by his offer of the Spanish crown to Prince Leopold. He was assassinated in 1870 in the streets of Madrid for having procured in the cortes the election of Amadeus to the Spanish throne.

Pritchett, Henry Smith, America educator, was born at Fayette, Mo., 1857. He graduated at Pritchett college, Glasgow, Mo., 1875; Ph. D., Munich, 1894; LL. D., Hamilton, 1900; Pennsylvania, Harvard, Yale, 1901; Johns Hopkins, 1902; Williams, Michigan, 1905; Sc. D., Tufts, 1906. Professor of astronomy and director of observatory, Washington University, St. Louis, 1883-97; superintendent of United States coast and geodetic survey, 1897-1900; president of the Massachusetts institute of technology, 1900-06; and president of the Carnegie foundation for advancement of teaching, since 1906. He is the author of various scientific papers.

Proctor, Richard Anthony, English astronomer and mathematician, was born at Chelsea, England, 1837. He was a graduate of St. John's college, Cambridge, in 1860. About 1885 he settled in St. Louis, and later moved to Florida, leaving there just before he was seized with his fatal illness in New York. His principal popular books were: *Saturn and Its System; Gnomonic Star Atlas; Half-hours with the Telescope; Half-hours with Stars; Other Worlds Than Ours; Light Science for Leisure Hours; Elementary Astronomy; Border Land of Science.* Died, 1888.

Protagoras (*prō-tag'ō-ras*), the first of the Greek sophists, was born about 480 B. C., and died about 411 B. C. A native of Abdera, he settled in Athens, and gained a reputation as a paid teacher of philosophy. His doctrine was a form of agnosticism; his favorite saying was that "man is the measure of all things."

Proudhon (*prōō'dôn'*), **Pierre Joseph,** French socialist, was born at Besancon, 1809. By his

vigorous advocacy of extreme and democratic opinions he became one of the leading figures of his day. His economic views are expounded in his *Qu'est-ce que la propriété* and his *Système des contradictions économiques*. He died at Passy, 1865.

Ptolemy I. (*tol'ē-mi*), king of Egypt, known by his surname Soter, or "the preserver," was born, 367 B. C. Ptolemy acted as one of Alexander's generals in his eastern campaigns; and, when the possessions of the latter were divided, after his death at Babylon, 323 B. C., Egypt fell to him. Two years before his death, which occurred in 283 B. C., he abdicated in favor of his son, Ptolemy Philadelphus. His reign extended from 323 to 285 B. C.

Ptolemy II., surnamed Philadelphus, son of Ptolemy I., was born, 309 B. C., in the island of Cos. His reign is remarkable for the successful cultivation of the arts of peace rather than the practice of war. He enriched the library of Alexandria with all the literary treasures of his own and of earlier times, and the museum was crowded with the learned from all countries. He also expended large amounts on public works; was the builder of the famous lighthouse on the island of Pharos; and constructed a royal mausoleum, to which he removed the remains of Alexander from Memphis. Altogether, under Ptolemy Philadelphus Egypt rose to a high rank among the nations in power and wealth. He reigned from 285 to 247 B. C.

Ptolemy, celebrated astronomer and geographer, whose proper name is Claudius Ptolemaeus, was a native of Egypt, though it is uncertain whether he was born at Pelusium or at Ptolemais in the Thebaid; flourished 139-161. Ptolemy, both as an astronomer and geographer, held supreme sway over the minds of almost all the scientific men from his own time down until about the fifteenth century; and in astronomy especially he seems to have been not so much an independent investigator as a corrector and improver of the work of his predecessors.

Pugin (*pū'jin*), **Augustus Welby,** English architect, was born in London, 1812, the son of a French architect, Augustin Pugin, in whose office he was trained, chiefly by making drawings for his father's books on Gothic buildings. He was associated with Sir Charles Barry, architect of the British houses of parliament, and designed and modeled a large part of the decorations and sculpture for those structures.

Pulaski. (*poo-lās'kē*), **Casimir,** Polish count and general, who fell in the American revolutionary war, was born in Podolia, 1748. On account of the active part he took in the Polish war against Russia, he was stripped of his estates and outlawed in the partition of Poland in 1772. In 1777 he offered his services to the American colonies in their contest against England, and for his gallant conduct at the battle of Brandywine was given a brigade of cavalry, which he commanded until March, 1778. At the siege of Savannah, in October, 1779, he fell in an assault at the head of the cavalry, and died on board the brig *Wasp* two days later.

Pulitzer (*pū'lit-sēr*), **Joseph,** American journalist, proprietor of *New York World* 1883-1911, was born at Budapest, Hungary, 1847. He was educated by private tutor; came to United States, 1864; served until end of civil war in a cavalry regiment. In 1878 he bought the *St. Louis Dispatch* and united it with *The Evening Post*, as the *Post-Dispatch*, which he still owned at the time of his death. He sat in the Missouri legislature, 1869; Missouri state constitutional convention, 1874; was elected to congress in New York for term 1885-87, but resigned after a few months' service. In 1903 he endowed with $1,000,000 Columbia University school of journalism, with agreement to give an additional $1,000,000 when the school should be in successful operation. Died, 1911.

Pullman, George M., American inventor and business man, was born at Brocton, Chautauqua county, N. Y., 1831. He made his home in Chicago in 1859, and in the same year prepared models of sleeping cars, which became the foundation of his fortune. In 1863 he began building the coaches that are called by his name the world over. A few years later he organized the Pullman palace car company which was to build them. In 1880 he founded the town of Pullman, near Chicago, where the coaches were built. He died in 1897, having amassed a large fortune from his inventions and his various business enterprises.

Pupin (*pū-pēn'*), **Michael Idvorsky,** physicist, electrician, professor of electro-mechanics, Columbia, since 1889, was born in Ivard Banat, Hungary, 1858. He graduated at Columbia University, 1883; Ph. D., Berlin. His researches in electrical resonance and wave propagation have made possible long-distance telephony and multiplex telegraphy.

Purcell (*pûr'sel*), **Henry,** noted English composer, was born at Westminster in 1658, and in 1664 became a chorister in the Chapel Royal. He wrote many anthems and other church music, and many dramatic and chamber compositions. Among them are his opera *Dido and Æneas*, written at seventeen, his music to the *Tempest*, his songs in Dryden's *King Arthur*, his music to Howard's and Dryden's *Indian Queen*. His greatest work is the *Te Deum* and *Jubilate*. His church music was edited from the original manuscript by Vincent Novello in 1829-32, with an essay on his life and works. Purcell died, 1695, and was buried in Westminster abbey.

Pusey (*pū'zi*), **Edward Bouverie,** English divine, was born at Pusey, in Berkshire, in 1800, and graduated at Oxford in 1822. In 1828 he was appointed professor of Hebrew at Oxford, a position he held until his death. In private life, Pusey was a man of warm affection, and was widely known for his gentleness, sincerity, and humility. His charity was limited only by his income; besides abundant gifts to the poor, he spent large sums in helping to provide churches in East London, and in founding and supporting sisterhoods. He died at Oxford, 1882.

Pushkin (*poosh' kin*), **Alexander Sergeyevitch,** Russian poet, was born in 1799. He was the son of a nobleman, and when quite young became a government clerk. Among his writings are the poems: *The Gypsies; Poltava; Dubrovski;* and *The Captain's Daughter*, a novel. Pushkin was killed in a duel at St. Petersburg when thirty-seven years old, 1837.

Putnam, George Haven, publisher, head of G. P. Putnam's Sons, was born in London, England, 1844. He was educated at the Sorbonne, Paris, and University of Göttingen; A. M., Bowdoin college; Litt. D., Western Pennsylvania. He left Göttingen without graduating to enter 176th New York volunteers, 1862; served from private to major, until 1865.

Putnam, Herbert, librarian of congress since 1899, was born at New York, 1861. He graduated at Harvard, 1883; Litt. D., Bowdoin, 1898; LL. D., Columbian, 1903; Illinois, 1903; Wisconsin, 1904; Yale, 1907. He took a partial course at Columbia law school, and was admitted to the Minnesota bar, 1886; to the bar of Suffolk county, Mass., 1892; and practiced law, Boston, 1892-95. Minneapolis public library, 1887-91, and Boston public library, 1895-99. He was president of the American library association, 1898, 1904, and overseer of Harvard, 1902.

Putnam, Israel, American general, born at Danvers, Mass., 1718. In 1755 he helped as a captain to repel a French invasion of New York, and was present at the battle of Lake George. In 1759 he received a regiment, in 1762 went on the west India campaign, and in 1764 helped to relieve Detroit, then besieged by Pontiac. In 1775, after the battle of Concord, he was given command of the forces of Connecticut, was at Bunker Hill, held the command at New York, and in August, 1776, at Brooklyn Heights, where he was defeated by Howe. He died, 1790.

Pyle, Howard, American artist, author, was born at Wilmington, Del., 1853. He was educated in private schools and at the art students' league, New York. Author and illustrator: *The Merry Adventures of Robin Hood; Pepper and Salt, or Seasoning for Young Folks; Within the Capes; The Wonder Clock; The Story of Sir Launcelot and His Companions.* Died 1911.

Pym (*pim*), **John,** English orator and statesman, was born at Brymore, in Somersetshire, in 1584. He was for many years member of parliament for Tavistock. In 1641 he led the impeachment of the earl of Strafford; and in the following year, 1642, he was one of the "five members" the attempt to seize whom, on the part of Charles I., immediately preceded the English civil war. Scarcely had the great conflict begun, however, when toil and anxiety brought his career to a close. He died at Derby House, 1643, and was buried in state in Westminster abbey.

Pyrrhus (*pir'us*), Greek general, king of Epirus, was born about 318 B. C., came to the throne in 306 B. C. He was expelled a few years later, but restored by the help of Ptolemy Soter in 296 B. C.; held the kingdom of Macedonia for a short time, and, in 281 B. C., went to Italy to help Tarentum against the Romans. He was at first successful, through his elephants and the phalanx, but was finally defeated in 275 B. C. Died, 272 B. C.

Pythagoras (*pi-thag'ō-ras*), celebrated Greek philosopher, was born about 586 B. C., at Samos. He began to travel at the age of eighteen. On his return he taught geometry at Samos, after which he settled at Crotona, in Magna Græcia, and established a school of philosophy, which became famous. Persecution at length drove him thence, and he took refuge in the temple of the Muses at Metapontum, where he is said to have been starved to death, about 497 B. C. Besides being an illustrious metaphysical philosopher, Pythagoras was a great geometrician and astronomer, discovered the numerical relations in music and propounded the theory of the "harmony of the spheres."

Quatrefages de Breau (*ka'tr'-fazh' dē brā'ō'*), **Jean Louis Armand de,** French naturalist, was born at Berthezème, France, 1810. In 1850 he was elected professor in the *Lycee Napoleon* and in 1855 at the natural history museum, Paris. His chief works are: *Souveniers d'un Naturaliste; Unité de l'Espèce Humaine; L'Espèce Humaine; Crania Ethnica; Les Pygmées; Darwin et ses Precurseurs Francais;* and *Théories Transformistes.* He died in 1892.

Quay, Matthew Stanley, United States senator and republican politician, was born at Dillsburg, Pa., 1833. He entered the state legislature in 1865, was twice state secretary, state treasurer, and chairman of the republican national committee during the Harrison campaign of 1888. In 1887 he was made United States senator for Pennsylvania, reëlected in 1893, and two years later was tried for alleged misappropriation of public funds, but was acquitted. He was again elected in 1901, but died in 1904.

Quesnay (*ke'ne'*), **François,** French economist and physician, was born at Méré, France, 1694. He studied medicine at Paris, and at his death was first physician to the king. But the fame of the "European Confucius" depends on his essays in political economy. Quesnay's principles are well known from his contributions to the *Encyclopedie*, and from his *Maximes du Gouvernement Economique, Le Droit Naturel*, etc. He died in 1774.

Quesnel (*kē'nēl*), **Pasquier,** French Roman Catholic theologian, was born in Paris, 1634. He studied at the Sorbonne, became in 1662 director of the Paris oratory, and here wrote *Réflexions Morales sur le Nouveau Testament.* Having refused to condemn Jansenism in 1684, he fled to Brussels, where his *Réflexions* were published 1687-94. His book was condemned in the bull *Unigenitus* in 1713. He spent his last years at Amsterdam, and died there in 1719.

Quigley, James Edward, Roman Catholic archbishop of Chicago since 1893, was born at Oshawa, Canada, 1854, and moved with his parents to Lima, N. Y. He was educated at St. Joseph's college, Buffalo, N. Y., and at the University of Innspruck and the College Propaganda, Rome. Bishop of Buffalo, 1897-1903, when he was installed in Chicago.

Quiller-Couch, Arthur Thomas, British novelist and essayist, was born in Cornwall, 1863. He was graduated at Trinity College, Oxford. Author: *Dead Man's Rock; The Blue Pavilions; The Warwickshire Avon; The Delectable Duchy; Verses and Parodies; Shakespeare's Christmas; From a Cornish Window*, etc. In 1897 he was commissioned to finish R. L. Stevenson's uncompleted novel, *St. Ives.*

Quincy, Josiah, American statesman, was born in Boston, Mass., 1772. He was graduated at Harvard, 1790, and adopted the law as a profession. In 1805-13 he was a member of congress. In 1813 he was elected to the Massachusetts state senate, and joined in the protest of the legislature against the war and the admission of Louisiana. He was mayor of Boston, 1823-28, and president of Harvard, 1829-45. He published *History of Harvard University; The Municipal History of the Town and City of Boston During Two Centuries; The Life of John Quincy Adams;* and other works. Died, 1864.

Quinet (*kē'ne'*), **Edgar,** French philosopher and author, was born at Bourg, France, 1803, and first studied at Lyons and at Paris. From this early period he formed an intimate friendship with Michelet. He then became a contributor to the *Revue des Deux Mondes*, in which *Ahasvérus*, perhaps his finest work, first appeared. From 1839 to 1842 he held the chair of foreign literature at Lyons. From here he passed to a chair at the Collège de France. He threw himself eagerly into the reform agitation that brought about the revolution of 1848, and was elected a member of the constitution and legislative assemblies, but was expelled from France. On the fall of the empire he returned to France, and was reinstalled in his chair at the Collège de France, 1870. In 1871 he was elected a member of the assembly, and died in 1875.

Quintilian (*kwin-til'i-an*), or **Marcus Fabius Quintilianus,** Latin rhetorician, was born at Calagurris, now Calahorra, in Spain, about 35 A. D. The work by which he is known is entitled *De Institutione Oratoria*, or sometimes *Institutione Oratoria*, and is comprised in twelve books. This work, which contains all that Quintilian considered most valuable in the earlier treatises, both Greek and Latin, on the subject, was discovered by Poggio Bracciolini in the monastery of St. Gall in 1417. Quintilian died probably in Rome about 97 A. D.

Rabelais (*rá'b'-le'*), **François,** the great French humorist, was born at Chinon, in Touraine, about 1490. In 1530 he settled at Montpellier, and, taking a medical degree at the university, was appointed lecturer. His romance, in which are narrated the wonderful adventures of Gargantua and Pantagruel, continues to take rank as one of the world's masterpieces of humor and grotesque invention. Lord Bacon called Rabelais "the great jester of France;" others have called him a "comic Homer." Died in Paris, 1553.

Rachel (*rá'shel'*), or **Elisa Rachel Félix,** celebrated actress, was born at Munf, in the canton of Aargau, Switzerland, 1821, daughter of poor parents, of the Jewish race. She began her career by singing in the streets of Lyons, and subsequently of Paris. Although her life was spent chiefly in Paris, she visited London, St. Petersburg, Amsterdam, and many other European cities, and in all of them her genius for tragedy was recognized as of the highest order. She died, near Toulon, France, 1858.

Racine (*rá'sēn'*), **Jean Baptiste,** distinguished French dramatist, was born at La Fertè Milon, 1639, and completed his education at the seminary of Port Royal. His first dramatic efforts,

The Thebaid, and *Alexander the Great*, gave but faint indications of superior talent, but his tragedy of *Andromache* placed him far above all his contemporaries except Corneille. He increased his fame by the production of *Britannicus*, *Berenice*, *Iphigenia*, and other tragedies, and by his comedy, *The Pleaders*. After a lapse of twelve years, he wrote, by desire of Madame de Maintenon and Louis XIV., the dramas of *Esther* and *Athalie*, to be performed at the Seminary of St. Cyr. The latter is now considered, very generally, to be his finest play. He died in 1699.

Radcliffe, Ann (nèe Ward), noted English novelist, was born in London, 1764. In her twenty-third year she married William Radcliffe, a student of law, but who became proprietor and editor of a weekly newspaper, the *English Chronicle*. Among her works are: *The Castles of Athlin and Dunbayne; A Sicilian Romance; The Romance of the Forest; Mysteries of Udolpho*, etc. She died in 1823.

Radcliffe, John, English physician and the founder of the Radcliffe library at Oxford, was born at Wakefield, Yorkshire, England, 1650. To University college he left his estate in Yorkshire. He left 40,000 pounds for the erection of a public library in Oxford, since known as the Radcliffe library, which he endowed with 150 pounds per annum for a librarian. The Radcliffe infirmary and Radcliffe observatory, at Oxford, were both erected out of this fund. He died in 1714.

Rae, John, British author and journalist, was born in Wick, Scotland, 1845. He was graduated at Edinburgh University; M. A., Edinburgh; honorary LL. D., Edinburgh. He has written largely for the leading reviews, especially on social and economic subjects, and is the author of *Contemporary Socialism; Eight Hours for Work; Life of Adam Smith*, etc.

Raeburn, Sir Henry, Scottish portrait painter, was born at Stockbridge, near Edinburgh, 1756. At twenty-two he married the widow of Count Leslie, a lady of means, studied two years in Rome, 1785-87, then settled in Edinburgh, and soon attained preëminence among Scottish artists. In 1814 he was elected A. R. A., in 1815, R. A.; was knighted by George IV. in 1822, and appointed king's painter for Scotland a few days before his death, 1823. His style was to some extent founded on that of Reynolds.

Raff (*räf*). **Joachim,** German composer, was born at Lachen on the lake of Zürich, 1822. In 1850-56 he lived near Liszt in Weimar, taught music at Wiesbaden until 1877, and was then director of the conservatory at Frankfort-on-Main. Among his operas the chief are *König Alfred* and *Dame Kobold*. Died, 1882.

Raglan (*rag'lan*), **Lord** (Fitzroy James Henry Somerset), British general, was born in 1788. He entered the army in his sixteenth year, and after serving on the staff of Sir Arthur Wellesley in the Copenhagen expedition and the peninsular war, became his secretary in 1812. In 1852 he was made master-general of the ordnance, and entered the house of lords as Baron Raglan. When war was declared against Russia, in 1854, Lord Raglan was appointed commander of the English forces in the Crimea, and, at the desperate battle of Inkerman, he won the baton of a field-marshal. Raglan died before Sebastopol, 1855.

Ragozin (*rä-gō'zēn*), **Zenaide Alexeievna,** American author, was born in Russia, 1835. She traveled extensively in Europe, came to the United States in 1874, and became a naturalized citizen. She has since devoted herself to historical and oriental literature.

Raikes (*rāks*), **Robert,** English publisher and philanthropist, founder of the modern Sunday schools, was born at Gloucester, England, 1735. He early interested himself in the pitiable condition of prisoners in the jails; and then his consideration for the misery and ignorance of many children in his native city led him in 1780 to start a Sunday school where they might learn to read and understand the Bible. Died, 1811.

Raleigh (*rō'lā; ral'i*), or **Ralegh, Sir Walter,** English courtier, colonizer, and man of letters, was born at Budleigh, in Devonshire, 1552, and was educated at Oriel college, Oxford. Shortly after returning from a voyage to America he seems to have attracted the attention of Queen Elizabeth, with whom he speedily rose high in favor. In 1584, a patent having been granted him to take possession of lands to be discovered by him on the continent of North America, he fitted out two ships at his own expense, and shortly achieved the discovery and occupation of the territory known as Virginia. It was through him that the potato and tobacco were introduced into England at this time. With the death of Elizabeth in 1603 ends the brilliant and successful portion of his career. Her successor, James, from the first regarded him with a suspicion and dislike which he was at no pains to conceal. He was accused of complicity in a plot against the king. Sentence of death was passed, but James did not venture to execute him, and he was sent to the Tower, where for thirteen years he remained a prisoner. During his imprisonment he wrote his *History of the World*, a noble fragment, still notable to the student as one of the finest models of the quaint and stately old English style. In 1615 he procured his release, and sailed for Guiana. After his return, in 1618, he was infamously executed, nominally on the sentence passed on him sixteen years before, but really there is reason to suppose in base compliance on James' part with the urgencies of the king of Spain, who resented Raleigh's persistent hostility.

Rambaud (*rāN'bō'*), **Alfred Nicolas,** French historian, was born at Besancon, 1842. He was a member of the French cabinet, 1879-80, and in 1896 became minister of public instruction. He was appointed, in 1883, professor of history in the University of Paris, and became a member of the academy of moral and political sciences in 1897. He wrote works on Russia, French civilization, colonial France, etc., and, with Lavisse, *Histoire Générale du Ivme Siecle*, in 12 volumes. Died, 1905.

Rameses I. (*räm'ē-sēz*), ruled about 1355 B. C., and was king during the nineteenth Egyptian dynasty, formed a treaty with the Hittites, and maintained the conquests of Egypt as far as Wady Halfa. He subjected Ethiopia, which had revolted, established a fleet in the Mediterranean, and erected some of the largest of the Egyptian edifices. It is usual to identify the warrior king Rameses II with the Pharaoh of the oppression, and Merenptah, his son, as the Pharaoh of the Exodus.

Ramsay, Sir William, British chemist, was born at Glasgow, 1852. He was educated at Glasgow University, and at Tübingen; M. D., Ph. D., LL. D., D. Sc. In 1887 accepted the chemistry chair at University college, London. In conjunction with Lord Rayleigh he discovered argon in 1894, and in 1895 obtained helium from clèveite. In 1904 he was awarded the Nobel prize for chemistry. He is the author of numerous papers, the most important of which are perhaps *The Molecular Surface-Energy of Liquids; Argon, A New Constituent of the Atmosphere*, in conjunction with Lord Rayleigh; and *Helium, A Constituent of Certain Minerals*.

Ramsay, Sir William Mitchell, professor of humanity at Aberdeen University, since 1886, was born at Glasgow, 1851. He was educated at the Universities of Aberdeen, Oxford, and Göttingen; honorary D. C. L., Oxford; LL. D., St. Andrews and Glasgow; Litt.D., Cambridge. Author: *The Historical Geography of Asia Minor; The Church in the Roman Empire; St. Paul the Traveler and the Roman Citizen; Impressions of Turkey; Was Christ Born at Bethlehem?*

Randall, Samuel J., American statesman, was born at Philadelphia, Pa., 1828. After spending a number of years in mercantile business in his native city, he was elected to congress as a democrat in 1862. He held this position up to the time of his death at Washington, D. C., 1890. He was elected speaker of the house of representatives, 1876, 1877, and 1879. Throughout his congressional career, his ability and integrity were conceded by men of all parties, and he was held in the highest esteem by his fellow-congressmen.

Randolph, Edmund Jennings, American statesman, was born at Williamsburg, Va., 1753, and was admitted to the Virginia bar. Was governor of Virginia from 1786 to 1788, and a member of the convention which framed the constitution of the United States. In 1789 he entered Washington's cabinet as attorney-general, and in 1794 was appointed secretary of state, to succeed Jefferson. He died in Virginia, 1813.

Randolph, John, of Roanoke, American orator and statesman, was born in Chesterfield county, Va., 1773. He was United States senator, 1825-27; United States minister to Russia in 1830; and again elected to congress in 1832. Randolph prided himself on his descent from Pocahontas, and his marked Indian features bore witness to his origin. He died in Philadelphia, Pa., 1833.

Ranke (*rāN'kē*), **Leopold von,** eminent German historian, was born at Wiehe, Thuringia, 1795. He was educated at Leipzig, and at twenty-three became head master of the gymnasium at Frankfort-on-the-Oder, where he devoted his leisure to historical studies. Six years later he published *A Critique Upon the Later Historians*, and the *History of the Roman and Germanic Peoples from 1495 to 1535*, which attracted wide attention and won him the chair of history at Berlin in 1825, which he retained until 1871. His most complete and elaborate effort, however, is his *German History in the Time of the Reformation*. In 1880, in his eighty-fourth year, he published the first volume of his *Welt-Geschichte*, or *History of the World*, writing a volume annually. Probably no man of his time, even in his own land, toiled more indefatigably or laid up greater stores of knowledge. He died in 1886.

Raphael, Santi or Raffaello Sanzio, (*raf'ā-el*), the greatest Italian painter of the Roman school, was born at Urbino, 1483. Timoteo Viti was his first master, and he entered Perugino's atelier in 1499 or 1500, where he was also under Pinturicchio's influence. To his Urbino period belong *The Vision of a Knight* and *St. Michael*. To the Peruginesque period belong, among other paintings, two madonnas in Berlin and one in the Hermitage, St. Petersburg, and *The Marriage of the Virgin*, in the Brera at Milan.

He went to Florence in 1504, and came under the influence of Leonardo da Vinci and Michelangelo. His extraordinary talents developed rapidly. With an eager power of assimilation, he put one master after another under contribution for some special power of drawing, grace of design, use of color. He carried the efforts of his predecessors to perfection rather than to introduce anything new.

His distinguishing qualities were mastery of workmanship, perfection of design and of form, harmonious beauty and serenity of expression, balanced by refinement of taste and purity of color. To his Florentine period belong *The Ansidei Madonna*, the Madonnas called *Del Granduca, Del Cardellino, La Belle Jardinière, St. Catherine*, and *The Entombment of Christ*.

In 1508 he was summoned to Rome by Pope Julius II. to decorate the state apartments in the vatican. The proximity of Michelangelo, working in the Sistine Chapel, and the world of classical antiquity around him, gave a noble direction to his mind, and ripened his powers to full perfection. Works by older masters were destroyed to give him wall-space; he collected a school of artists to aid him. Prominent among these pupil-assistants were Giulio Romano, Gianfrancesco Penni, "Il Fattore"; Perino del Vaga; and Giovanni da Udine.

He decorated the ceilings and walls of four apartments, and received 1,200 gold scudi for each wall painting. The subjects testify to the range and fertility of his creative genius—(1.) *Poetry, or the Parnassus; The Dispute of the Sacrament; Philosophy, or the School of Athens; Jurisprudence.* (2.) *Expulsion of Heliodorus from the Temple; The Mass of Bolsena; Attila at the Head of his Army; The Deliverance of Peter from Prison.* (3.) *L'Incendio del Borgo; Victory at Ostia over the Saracens; Charlemagne Crowned by Leo III.; Oath of Leo III.* (4.) *Victory of Constantine over Maxentius at Ponte Molle.* The famous loggia in the vatican were decorated with biblical scenes and arabesque ornamentations designed by Raphael.

To his Roman period also belong the various cartoons for tapestries, the Chigi *Sibyls*, the graceful and beautiful paintings in the Chigi chapel, the Farnesina designs, and the superb *Galatea*, full of the sense of life and enjoyment. Of his many madonnas the finest are, exclusive of those mentioned above, the *Garvagh, Di Casa d' Alba, Di Foligno*, and the magnificent *San Sisto* at Dresden. His madonnas were conceived with a graceful freedom delicately controlled, guided by a fine feeling for the laws of art and the sacred relationships of life, and were painted in a spirit of dreamy fancy or a cheerful outlook on life.

Among his finest portraits are *Julius II.*, *La Donna Velata*, and *Joanna of Aragon*. So beloved was he that all classes mourned his death. His body lay in state with his unfinished *Transfiguration* suspended above it, and he was buried in the Pantheon at Rome.

References.—Vasari's *Life;* Eugene Muntz's *Raphael: His Life, Work and Times;* Crowe and Cavalcaselle's *Raphael: His Life and Work;* Minghetti's *Raffaellò;* Julia Cartwright's *Early Work of Raphael;* and *The Works of Raphael in the Royal Library at Windsor;* and Berenson's *Central Italian Painters*.

Rauch (*rouK*), **Christian Daniel,** noted German sculptor, was born at Arolsen, in the principality of Waldeck, 1777. He was a pupil of Canova and of Thorwaldsen. His greatest effort was the colossal monument to Frederick the Great, which was dedicated in the city of Berlin in 1851. The greater portion of his long life was spent in Berlin, but he died at Dresden, 1857.

Rawlinson, George, English historian and orientalist, brother of Henry Rawlinson, was born at Chadlington, Oxfordshire, 1815. He was graduated at Oxford; was elected a fellow and tutor of Exeter college; canon of Canterbury cathedral in 1872; and rector of All Hallows, London, 1888. In 1860 he published his notable Bampton lectures on the *Historic Evidence for the Truth of the Christian Records*. He died at Canterbury, 1902.

Rawlinson, Sir Henry Creswicke, English oriental scholar and diplomat, was born at Chadlington, Oxfordshire, England, 1810. He was educated in Ealing, Middlesex, and entered the East India military service in 1827; served in the Bombay presidency until 1833, and was then appointed to assist in reorganizing the army of the shah of

Persia. During the six years he spent in that country, he began to study the cuneiform or wedge-shaped inscriptions and made a translation of the famous Behistun inscription of Darius, which he published in the *Journal of the Asiatic Society*. He died at London, 1985. He wrote a number of books, among which are: *England and Russia in the East; The Cuneiform Inscriptions of Western Asia; Outline History of Assyria*, etc.

Rayleigh (*rā'li*), **John William Strutt, Lord,** distinguished English physicist, was born in 1842, graduated at Trinity College, Cambridge, in 1865, and became a fellow in the following year. He succeeded to the title of baron in 1873, was professor of experimental physics at Cambridge, 1879-84, and of natural history at the royal institution, London, 1887-1905.

Raymond, George Lasning, American educator and author, was born at Chicago, 1839. He was graduated at Williams College, 1862; received degrees, A. M., Princeton, L. H. D., Rutgers; graduated at Princeton theological seminary, 1856, and was a student in Europe, 1865-68, professor of æsthetics, 1893-1905, Princeton; professor of æsthetics, George Washington, since 1905. Author: *Colony Ballads; Ideals Made Real; Orator's Manual; Ballads of the Revolution; Sketches in Song; Art in Theory; Pictures in Verse; Ryhthm and Harmony in Poetry and in Music; Proportion and Harmony of Line and Color in Painting*, etc.

Raymond, Henry J. American journalist, was born at Lima, N. Y., 1830. He was graduated at the University of Vermont in 1480, and after serving for a number of years on the staff of the *New York Tribune* and other papers, he in 1851 founded the *New York Times*, which speedily took rank among the leading journals of the country. Died, 1869.

Rayner, Isidor, lawyer, United States senator, was born in Baltimore, Md., 1850. He was educated at the University of Maryland and at the University of Virginia, where he completed the academic and law courses. He was admitted to the Baltimore bar in 1871; member of congress, 1886-92, and attorney-general of Maryland in 1899. He was council for Rear-Admiral Schley before investigation commission in 1901, and United States senator from Maryland, since 1904. He was recognized as one of the leading lawyers of the senate, was a finished orator, and an authority on constitutional law. Died, 1912.

Read, Thomas Buchanan, American poet and painter, was born in Chester county, Pa., 1822. He entered a sculptor's studio in Cincinnati, afterward studied painting, and in 1841 settled in Boston, where he began to paint portraits. In 1846 he returned to Philadelphia, and in 1850 went to Florence, where he spent most of the rest of his life. He died at New York, 1872.

Reade, Charles, distinguished English novelist, was born in Oxfordshire, England, 1814. Was graduated at Oxford, secured a fellowship there, and in 1847 was admitted to the bar as a member of Lincoln's Inn. He began his literary career by play-writing; studied the art of fiction for fifteen years and first made his mark as novelist in 1852, when he was nearly forty, by the publication of *Peg Woffington*. This was followed in 1856 by *It is Never too Late to Mend*, and 1861 by *The Cloister and the Hearth*, the last, his best, and the most popular. He died in London in 1884.

Réaumur (*rā'ō'mür'*), **René Antoine Ferchault de,** French naturalist and physicist, was born at La Rochelle, France, 1863. He was educated at Poitiers, Bourges, and Paris, and was elected a member of the academy of sciences in 1708. He discovered the method of tinning iron; and invented the Réaumur thermometer. He died in 1757, leaving behind him a voluminous array of works, the most important of which is the *Mémoires pour servir à l' Historie des Insectes*.

Récamier (*rā'kā'myā'*), **Mme.** (née Jeanne Françoise Julie Adelaïd Bernard), French woman of society, was born at Lyons, France 1777. At fifteen she was married to Jacques Récamier, and attracted to her salon at Paris a brilliant circle during the consulate and empire. A record of the splendid social triumphs of Mme. Récamier would involve notice of nearly all that was distinguished in Paris during a space of about fifty years. She became a power in the whole of France, and so continued in spite of changes of fortune which ordinarily would have involved the extinction of even more solid celebrity. Died, 1849.

Reclus (*rē'klü'*), **Jean Jacques Elisee,** French geographer, was born at Ste-Foix-la-Grande, France, 1830. He was educated at Montauban and Berlin. An extreme democrat, he left France after the *coup d'état* of 1851. In Switzerland he began his masterpiece, *Nouvelle Géographie Universelle;* wrote also a physical geography, *La Terre; Histoire d'un Ruisseau; Les Phénomènes Terrestres*. In 1983 he became a professor at Brussels. Died, 1905.

Redfield, William Cox, Secretary of Commerce, manufacturer, was born in Albany, N. Y., June 18, 1858. His parents removed to Pittsfield, Mass., in 1867, where he was educated in the grammar and high schools of that city. He removed to New York City in 1877, thence to Brooklyn in 1883, engaging in the manufacture of iron and steel forgings, tools, etc., and since 1907 in the manufacture of ventilating, heating, and drying apparatus, engines, etc. He is vice president of the American Blower Co., of Detroit, Mich., and Troy, N. Y., with offices at 141 Broadway, New York City. In 1902 and 1903 he was commissioner of public works for the Borough of Brooklyn, New York City. He was a member of the Sixty-second Congress, and appointed Secretary of Commerce by President Wilson, 1913.

Red Jacket, or **Sa-go-ye-wat'-ha,** "He keeps them awake," a noted chief of the Seneca tribe of Indians, was born at Old Castle, on Seneca lake, New York, about 1751. He was a friend of the whites, though he wished to have the Indians keep their own lands; and, when the six nations made a treaty to sell theirs, he opposed the treaty in an eloquent speech, 1784. Some years after this he visited General Washington, who gave him a silver medal. In later life he visited New York and Washington, and the speeches that he made there are among the finest specimens of Indian eloquence. He died at Seneca village, near Buffalo, N. Y., 1830.

Reed, Thomas Brackett, American lawyer and legislator, was born at Portland, Me., 1839, and was graduated from Bowdoin College in 1860. He was a member of the Maine legislature; attorney-general of the state; and was elected to congress in 1876. His ability was so clearly recognized that he soon become the acknowledged leader of the republican party on the floor; and when his party secured a majority of the house of representatives in the fifty-first congress, Reed was chosen speaker. He served in congress until 1899, and was elected speaker of the fifty-fourth and fifty-fifth congresses. Died, 1902.

Reed, Walter, American surgeon and bacteriologist, was born in Virginia, 1851. Received his medical education at University of Virginia and at Bellevue hospital in New York. Reed demonstrated that typhoid fever is spread in camps through flies and personal contact, rather than by infected water, and that yellow fever is caused only by the bite of a certain kind of mosquito. By means of the precautions he urged after the Spanish war, yellow fever was practically exterminated in Cuba. He died, 1902.

Reeves, John Sims, English tenor, was born at Shooter's Hill, Kent, 1822. He went to Paris, 1843, in order to perfect his voice and style, and on his return to England, 1847, was recognized as the first tenor in that country, a position which he maintained for a number of years. In 1892 he became professor of the Guildhall school of Music, London, and retired from the stage, returning to concert work, however, in 1896. He died at Worthing, Sussex, 1900.

Reglomontanus, (*rē-gi-ō-mon-tā'nus*), the name given from his birthplace at Königsberg (*Mons Regius*) to the mathematician and astronomer Johann Müller. He was born in 1436, studied at Vienna, and in 1461 accompanied Cardinal Bessarion to Italy to learn Greek. In 1471 he settled in Nuremberg, where with Bernard Walther, he labored at the "Alphonsine tables," and published *Ephemerides 1475-1506* in 1473. Died, 1476.

Regnard (*re'nyär'*), **Jean François,** French dramatist, was born at Paris, France, 1655. After a roving and adventurous life in various countries, he returned to France about 1683, and became prominently connected with the ministry of finance. Regnard was one of the best followers of Molière, and is regarded as second only to that great master as an exponent of French comedy. Died, 1709.

Regnault (*rē'nyō'*), **Henri,** French figure and genre painter, was born in Paris, 1843. He studied there and at Rome, later making a study of Velasquez in Madrid. His equestrian portrait of Marshall Prim was one of the finest of the century. Regnault enlisted in the army during the Franco-Prussian war and was killed at Buzevenal, 1871.

Regnault, Henri Victor, French chemist and physicist, was born at Aix-la-Chapelle, 1810. In 1841 he succeeded Dulong as professor of physics in the Collège de France; in 1847 he became chief engineer of mines, and in 1854 director of the porcelain factory at Sevres. He rendered distinguished service to science by his exact determination of physico-chemical constants, and his criticism of the law of Boyle and Mariotte. Died, 1878.

Régnier (*rā'nyā*), **Mathurin,** French poet, was born at Chartres, 1573. After a life of dissipation he became in 1609 canon of the cathedral of Chartres, and was called "the good Régnier," on account of his amiability. Boileau called him the best satirical poet before Moilère. He died at Rouen, 1613.

Regulus (*reg'ū-lus*), **Marcus Atilius,** Roman general, was consul in 267 B. C., when he took Brundusium, and received a triumph. In 256 B. C. he was a second time consul, and in conjunction with his colleague, Manlius, defeated the Carthaginian fleet of 350 sail under Hanno and Hemilcar, landed at Clypea, and ravaged the enemy's territory. The Carthaginians at last defeated him and took him prisoner. After five years' captivity he was sent in 250 B. C. to Rome as an ambassador. In the same year he returned to Carthage, where he was put to death about 250 B. C.

Reid, Sir James, British physican, physician-in-ordinary to King Edward and to the prince of Wales, was born at Scotland, 1849. He was graduated at Aberdeen University, M. A., 1869; M. D., 1875; LL.D., 1895; honorary LL.D., Glasgow, 1901. He studied at Vienna, 1876-77; practiced in Scotland, 1877-81; resident physician to Queen Victoria, 1881-1901, physician extraordinary, 1887-89; physician-in-ordinary, 1889-1901.

Reid, Robert Gillespie, Canadian railway builder and capitalist was born in Scotland 1840. In 1871 he came to America and had charge of the construction of the international railway bridge at Niagara Falls, the international bridge over the Rio Grande, and the Lachine bridge over the St. Lawrence.

Reid, Thomas, Scottish philosopher, was born at Strachen, Scotland, 1771. He took his degree of M. A. in Aberdeen in 1726, and continued to act as librarian there for a number of years. In 1763 he was chosen to succeed Adam Smith as professor of moral philosophy in the University of Glasgow, and henceforth devoted himself to mental and metaphysical speculation, resigning his chair in 1781. In 1764 he published his *Inquiry into the Human Mind;* and in 1788, his *Active Powers of the Human Mind*. Died, 1796.

Reid, Whitlaw, American diplomat and journalist was born at Xenia, Ohio, 1837. He was graduated at Miami University, 1856; LL.D., Miami, 1890, Princeton, 1899, Yale, 1901, Cambridge, 1902; D. C. L., Oxford, 1907; aide-de-camp on the staffs of Generals Thomas A. Morris and W. S. Rosecrans in West Virginia. In 1868 he was attached to the editorial staff of *New York Tribune;* managing editor, 1869, editor-in-chief and, chief proprietor, 1872-1905; was United States minister to France, 1889-92; special ambassador of the United States to Queen Victoria's jubilee, 1897; member of peace commision to Paris, 1898, special ambassador for coronation of Edward VII., 1902, and United States ambassador to England since 1905. Author: *After the War, a Southern Tour; Ohio in the War; Schools of Journalism; Newspaper Tendencies; Town Hall Suggestions; Two Speeches at the Queen's Jubilee; Some Consequences of the Last Treaty of Paris*, etc. Died, 1912.

Reinsch (*rīnsh*) **Paul Samuel,** American educator and author, professor of political science, University of Wisconsin, since 1899, was born at Milwaukee, Wis., 1869; was graduated at the University of Wisconsin, 1892; Ph. D., 1898. Author; *The Common Law in the Early American Colonies; World Politics at the End of the Nineteenth Century as Influenced by the Oriental Situation; Colonial Government; Colonial Administration; American Legislatures and Legislative Methods.*

Rejane (*rā'zhan'*), **Madame,** (Gabrielle Réju), French actress, was born in Paris, 1857. She married M. Porel, Director of the Vaudeville theater, Paris. She was educated at the Paris Conservatoire, under Regnier, and made her debut at the Vaudeville theater in *Revue des Deux Mondes*, 1875. She toured in America in 1895, and obtained an enormous success. She now manages her own theater in Paris, the Théâtre Réjane.

Rembrandt (*ram'brānt*), **Van Ryn, Paul Harmens,** a Dutch painter, was born in Leyden, 1607, and died 1669. He studied in Leyden and Amsterdam, and about 1623 fitted up a studio in his father's windmill on the bank of the Rhine. In 1628 he executed his first great work, a portrait of his mother, and in 1630 settled in Amsterdam, where he gained great celebrity, and founded a school of art based on the natural style.

His paintings and etchings, exhibiting the most powerful effects of light and shade, brought great prices, and he taught a large number of pupils. He preferred the imitation of vulgar nature to the cultivation of ideal beauty; and his manner depends upon the elaboration of a single element of art, that of chiaroscuro.

Among his historical pictures are *The Sacrifice of Abraham, The Woman Taken in Adultry*, and *The Descent from the Cross;* his portraits include *The Jew Merchant* and the *Night Watch*. His pecular style is perhaps most strikingly displayed in his etchings, especially in his *Christ Healing the Sick*. He was twice married; his second marriage involved him in difficulties, and he became bankrupt in 1656. He executed over 600 paintings, now variously valued at from $500 to $20,000.

References.—Bell's *Rembrandt;* Michel's *Rembrandt, His Work, his Life, his Time;* Middleton's *Descriptive Catalogue of the Etched Work of Rembrandt;* Memphis' *Rembrandt;* and *Study* of his work by E. Michel.

Remington, Frederic, American artist, illustrator, sculptor and author, was born in St. Lawrence county, N. Y., 1861. He early studied at Yale art school, and at the art students' league of New York, after which he led the life of a cowboy and

stockman on a ranch in Montana and Wyoming, where he became notable as an animal painter and illustrator of western scenes and modes of life on the plains. He subsequently came into note as an illustrator for magazines, treating of military subjects and of ranching life, and, after the Spanish-American war, of Cuban scenes and characteristics. Died, 1909.

Remsen, Ira, American chemist and educator, president since 1901, and professor of chemistry since 1876, Johns Hopkins University, was born in New York, 1846. He was graduated at the college of the city of New York, 1865; M. D., Ph. D., Göttingen; LL. D., Columbia. He was professor of chemistry, Williams College, 1872-76; founder, 1879, and editor of the *American Chemical Journal;* president of national academy of sciences, 1907-08. Author: *The Principles of Theoretical Chemistry*; *Inorganic Chemistry.*

Renan (*rē-nȧN'*), **Joseph Ernest,** French philologist, historian, and critic, was born at Trèguier, in Brittany, 1823. At twenty-five he received his doctorate at the University of Paris, and in 1850 obtained a post in the Bibliothèque Nationale. In 1862 he was chosen professor of Hebrew in the Collège de France; but the emperor, inspired by the clerical party, refused to ratify the appointment; and it was not until 1870 that he was established in the chair. In 1878 he was elected to the academy. His first work of importance was published in 1854, but his European reputation dates from the publication of the *Life of Jesus,* in 1863. None of the other volumes excited the extraordinary interest of the first. Of the volumes that followed, those on St. Paul, 1869, and Marcus Aurelius, 1882, are specially noteworthy. He died in 1892.

Rennie (*ren'i*), **John,** British civil engineer, was born at Phantassie farm, East Lothian, 1761. After working as a millwright he studied at Edinburgh University. In 1780 he entered the employ of Boulton and Watt, and in 1791 started in London on his own account as an engineer and bridge-builder at which he won great fame. He died in 1821 and was buried in St. Paul's.

Reuter (*roi'tĕr*), **Baron Paul Julius,** German journalist, was born in Cassel in 1821. In 1849 he established an office at Aix-la-Chapelle for supplying news by telegraph, and thereby revolutionized the press of Europe. He laid several important telegraphic cables. Died, 1899.

Revere (*rē-vēr'*), **Paul,** American patriot, was born in Boston, Mass., 1735, and learned the business of a goldsmith. He was conspicuous for his zeal against the mother country, and one of the first actors in the revolt. He became famous in history and song for his ride from Boston to Lexington to arouse the minute-men, April 18-19, 1775. He died at Boston, 1818.

Reynolds, John Fulton, American general, was born in Lancaster, Pa., 1820. He was graduated at West Point, 1841, and entered the artillery; served in the Mexican war and on the frontier; in 1861 took command of a brigade of the Pennsylvania reserve corps, and led them in McClellan's peninsular campaign in 1862 until he was taken prisoner at Glendale, June 30. Encountering the van of the confederate army at Gettysburg, he had already selected the ground for the impending battle, when at the opening of the fight he was killed by a rifle-shot, July 1, 1863. A monument was erected to him at Gettysburg, and a bronze equestrian statue of him by Rogers stands in Philadelphia in front of the city hall.

Reynolds, Sir Joshua, eminent English painter, was born at Plympton, in Devonshire, 1723. He studied under Thomas Hudson, a portrait painter, and when about twenty years old began his career as a portrait-painter, at Plymouth Dock, now Devonport. On the institution of the royal academy in 1769, he became president and was knighted by George III. His works are very numerous. He was especially famous for his portraits, though his historical paintings, of which upward of sixty are catalogued, show him to have been qualified to excel in both departments of his art. He was the friend of Johnson, Burke, Goldsmith, and the most eminent literary men of his time. He died at London, 1792, and was buried in St. Paul's cathedral.

Rhees, Rush, American educator, president of University of Rochester since 1900, was born at Chicago, 1860. He was graduated at Amherst, 1883; LL. D., 1900; Hartford Theological Seminary, 1888; D. D., Colgate University, 1901. Associate professor of new testament interpretation, Newton Theological Institution, Newton Centre, Mass., 1892-94, and professor in the same, 1894-1900. Author: *The Life of Jesus of Nazareth, a Study; St. Paul's Experience as a Factor in His Theology.*

Rhodes, Cecil John, South African statesman, was born at Bishop Stortford, England, 1853. He was sent for his health to Natal, and subsequently made a fortune at the Kimberly diamond mines. He entered the Cape Colony house of assembly as member for Barkly, and in 1884 occupied a place in the Cape Colony cabinet. In 1890 he became prime-minister of Cape Colony; but even before this he had become a ruling spirit in the extension of British territory, and secured, in 1889, the charter for the British South Africa company, of which until 1896 he was managing director. This territory is now known as Rhodesia. In 1896 he resigned the Cape premiership in consequence of complications arising from the raid of Dr. Jameson, the chartered company's administrator, into the Transvaal, in aid of the Uitlanders' claims. In 1899 he was made D. C. L. at Oxford. He was a conspicuous figure during the war of 1899-1902. Died 1902, and was buried in the Matoppo hills, leaving a remarkable will which, besides making great benefactions to Cape Colony, founded rich scholarships at Oxford.

Rhodes, James Ford, American historian and essayist, was born at Cleveland, Ohio, 1848. He was educated in the public schools, at the University of New York, and the University of Chicago, but was not graduated; LL. D., Western Reserve University, 1893, Harvard, 1901, Yale, 1901, Wisconsin, 1904; Litt. D., Kenyon, 1903. He received the Loubet prize of the Berlin Academy of science in 1901. Author: *History of the United States from the Compromise of 1850,* in 7 volumes, *Historical Essays,* etc.

Ricardo (*ri-kär'dō*), **David,** British political economist, of Jewish extraction, was born in London, 1772, and entered upon a mercantile life, after having received a common school education. He gained a large fortune by commerce, obtained a seat in parliament for Portarlington, 1819, and acquired a high reputation as an economist and writer. Died, 1823.

Ricciarelli (*rēt'chä-rel'lē*), **Daniele,** known also by the name of Daniele da Volterra, Italian painter, was born at Volterra, 1509. He studied painting at Siena, and afterward repaired to Rome, where he was much indebted to the friendship of Michelangelo, who not only instructed him, but gave him designs for some of his most celebrated works. His fame rests chiefly on a series of frescoes in the church of La Trinità de' Monti, Rome; and of these the "Descent from the Cross" is well known by Toschi's admirable engraving. He died at Rome in 1566 or 1567.

Rice, Alice Hegan, American author, was born at Shelbyville, Ky., 1870, daughter of Samuel W. Hegan. She was educated at Hampton College, Louisville, and in 1902 married Cale Young Rice. Author: *Mrs. Wiggs of the Cabbage Patch; Lovey Mary; Sandy; Captain June,* etc., and a number of short magazine stories.

Richard I., surnamed Cœur de Lion, king of England from 1189 to 1199, was born at Oxford, 1157. He was the third son and successor of Henry II. He spent his early years in Poitou and Aquitaine, in 1190 joined his forces with Philip Augustus of France in the third crusade; captured Cyprus, and won great renown in the holy land, particularly by his defeat of Saladin. After shipwreck on the coast, on his way home, he was captured by the archduke of Austria, and handed over to the emperor Henry VI. in 1193. He was ransomed at a heavy price by his subjects, and landed in England in 1194. He died of an arrow wound at the siege of Chalus in 1199.

Richard II., king of England, was born at Bordeaux, France, in 1367. He was the son of Edward the Black Prince, and the grandson of Edward III., whom he succeeded. Being only eleven years old at his accession, a council of regency was appointed to govern the kingdom during his minority. Quarrels with his uncles, with the commons, and with his parliaments, on behalf of worthless favorites with whom he was surrounded, fill up the years of Richard's reign. The noted John of Gaunt, duke of Lancaster, and Thomas, duke of Gloucester, tried to bend their royal nephew to their own purposes. He resisted them successfully; but the murder of Gloucester, who was arrested near London, and slain at Calais in 1397, fixes an indelible stain upon his memory. Two years afterward he was defeated and deposed by his cousin, Henry of Bolingbroke, duke of Hereford, who succeeded him. He is believed to have been murdered in Pontefract castle, Yorkshire, in the following year.

Richard III., king of England 1483-85, surnamed Crookback, was born at Fotheringay castle, 1452, youngest son of Richard, duke of York, a brother of Edward IV., and uncle of Edward V., whom he murdered. Scarcely had he placed himself, securely as he thought, upon the throne, than a plot broke out, in which the duke of Buckingham took a leading share, in favor of Henry Tudor, earl of Richmond. The plot disastrously failed so far as Buckingham was concerned, for he was apprehended, condemned, and executed at Salisbury, 1483; but in 1485 the earl of Richmond landed at Milford Haven with a force of a few thousand men, and a few days later defeated the king in the battle of Bosworth field, in Leicestershire. In this battle Richard was killed. He was buried in Grey Friars' church, Leicester. The house of York and the Plantagenet line of kings ended with the death of Richard, who was succeeded by Henry VII., the first of the Tudor line.

Richardson, Samuel, English novelist, was born in Derbyshire, 1689. He was early apprenticed to a printer in London. It was not until he was more than fifty years of age that he published his first novel, *Pamela, or Virtue Rewarded.* In 1749 appeared his second work, *The History of Clarissa Harlowe,* which greatly increased his reputation; and in 1753 he published *The History of Sir Charles Grandison.* All his novels are in the epistolary style. He may be said to be the originator, after De Foe, of the English novel. He died in 1761.

Richelieu (*rē'shē-lyö'*), **Armand Jean Duplessis, Duc de,** celebrated French statesman and cardinal, was born of a noble family at Paris, 1585. He pursued ecclesiastical studies, and underwent the preliminary examination for his degree at the Sorbonne. In 1607 he was consecrated bishop of Lucon at Rome in the presence of Pope Paul V., and for some time devoted himself zealously to the discharge of his duties in his diocese. In 1622 he became a cardinal, and from 1624 to 1642 was the principal minister of Louis XIII. The administration of Richelieu forms an epoch in the history of France and her relations with other countries. It is memorable for several great measures, or series of measures. Of these the first and most lasting in its results was that by which the absolute authority of the sovereign was established. By a succession of vigorous and energetic, and, it must be added, not unfrequently unscrupulous measures, Richelieu succeeded in breaking down the political power and subduing the arrogant assumptions of the great families, the heads of several among which were brought to the scaffold, while not a few were condemned to life imprisonment. Another of the great enterprises of his ministry was the overthrow of the Huguenot party as a political power and a rival of the throne in France. The siege and capture of Rochelle, which he conducted in person in 1628, was followed by the submission of the other Huguenot strongholds. In the external relations of France the great object of all his measures was the overthrow of the preponderance of Austria. He died at Paris in 1642.

Richter (*rik'tĕr*), **Johann Paul Friedrich** or "Jean Paul," German humorist and sentimentalist, was born at Wunsiedel, in Bavaria, 1763. He studied at Leipzig, and began his literary career in 1783 with *The Greenland Lawsuits.* In 1789 appeared *Selections from the Papers of the Devil,* and, in 1793, *The Invisible Lodge.* This was followed by *Hesperus,* the work by which he is perhaps best known outside of Germany. He died at Bayreuth, 1825.

Ridder, Herman American journalist, was born in New York, 1851, of German parentage. He attended the New York schools, and began business at eleven as errand boy. He was an insurance agent at twenty; president, 1907, of the *New York Staats-Zeitung.* As an independent democrat he was active in Cleveland, campaigns and reform movements, especially in German-American reform union. Member of the chamber of commerce, American museum of natural history, Metropolitan museum of art; director of the associated press and treasurer of New York publishers' association.

Ridley, Nicholas English reformer, was born in Northumberland, about 1500. He was appointed bishop of Rochester in 1547, and of London in 1550; took a leading part in composing the liturgy and drawing up the thirty-nine articles; favored the attempt to place Lady Jane Grey on the throne, and was imprisoned in the Tower. He was condemned to death for heresy, and burned, with Latimer, at Oxford, 1555.

Ridpath (*rid'pȧth*), **John Clark** American historian and educator, was born in Putnam county, Indiana, 1840. He was graduated at Asbury, now De Pauw, University, 1863, and in 1869 was appointed professor of literature at Asbury, and ten years later became vice-president of that university. He was editor of *The Arena,* 1897-98. Author of an academic history and a popular history of the United States; *A Cyclopædia of Universal History,* and a compendious treatise on *The Great Races of Mankind.* Died at New York, 1900.

Rienzi (*ri-en'zē*), **Nicola Gabrini,** Italian patriot, commonly called "the last of the Roman tribunes," was born in Rome about 1313. He proved an excellent leader at first, but soon became elated by success, caused himself to be crowned with seven crowns, and lived in great splendor and extravagance. In a few months the people became tired of him, and he was obliged to escape from the city in the dress of a monk. He was afterward recalled to Rome, and was assassinated in 1354, while making a speech to the people.

Riggs, Mrs. George C. See **Wiggin, Kate Douglas.**

Riis (*rēs*), **Jacob August** American journalist, author, was born in Ribe, Denmark, 1839. He was educated at the Latin school there; came to New York, and was subsequently active in the small parks and play-grounds movement, and in tenement house and school reform. He was secretary of the New York small parks commission, 1897, and executive officer of Good Government clubs, 1896-97. Author: *How the Other Half Lives; The Children of the Poor; The Making of an American; The Battle with the Slum; Children of the Tenements;* and magazine articles on social and economic subjects. Died 1914.

Riley, James Whitcomb, American poet, writer, and lecturer, was born at Greenfield, Ind., 1853. He received a public school education M. A., Yale, 1902; Litt. D., Pennsylvania, 1904; M.L.D., Indiana, 1907. He began contributing poems to Indiana papers, 1873. For a number of years he appeared on the lecture platform throughout the country and gave readings from his works. Author: *The Old Swimmin' Hole and 'Leven other Poems; The Boss Girl and Other Sketches; Afterwhiles; Old-Fashioned Roses; Pipes o' Pan at Zekesbury; Rhymes of Childhood,* etc.

Rinehart, William Henry, American sculptor, was born in Carroll county, Md., 1825. He received a common school education, and at the age of twenty-one began his career as a marble worker in Baltimore. In 1855 he went to Italy. He completed Crawford's bronze doors for the capitol at Washington; executed a bronze statue of the late Chief-Justice Taney, under a commission from the state of Maryland, unveiled in Annapolis in 1872. He died at Rome in 1874, leaving his property as a fund for the aid of indigent students of art.

Ripley, George, American scholar and critic, was born at Greenfield, Mass., 1802. He graduated at Harvard College, 1823, and was ordained to the pastorate of a Unitarian church at Boston. This he held until 1841. In the meantime he had become one of the leading spirits in the transcendental movement, the first meeting of the club being held at his house in 1836; and on leaving the pulpit he started the Brook Farm experiment. He was co-editor of the *New American Cyclopedia*. Died, 1880.

Ripon, Bishop of. See **Carpenter, Rt. Rev. William Boyd.**

Ristori (*rēs-tō'rē*), **Adelaide,** Italian actress, was born in 1821, the child of strolling players. In America she played with Edwin Booth. Her leading parts were: Francesca da Rimini, Marie Stuart, Phædra, Lady Macbeth, Judith, etc. She retired from the stage in 1885 and died in 1906.

Ritter, Karl, German geographer, was born at Quedlinburg, Prussia, 1779. He studied at Halle, became professor of geography at Berlin in 1820, and afterward member of the academy and director of studies in the military school. With Ritter as the founder of comparative geography, began a new epoch in the history of geographical science. He died at Berlin, 1859.

Rives (*rēvz*), **Amelia,** Princess Amèlie Troubetzkoy, American novelist, was born at Richmond, Va., 1863. Her earliest production was a series of stories entitled *A Brother to Dragons*. This was followed by a sensational work called *The Quick or the Dead?* which met with considerable popularity.

Rivière (*rē'vyâr'*), **Briton,** English painter, was born in London, 1840, of Huguenot ancestry. He was graduated at Oxford in 1867, M. A., D. C. L. He had exhibited at the royal academy in 1858, and from the appearance of *The Poacher's Widow*, 1866, he has been regularly represented there and at various international exhibitions. He became A. R. A. in 1878, R. A. in 1881.

Robbia (*rō'byä*) **Lucca della,** Italian sculptor, was born at Florence, about 1400. He decorated the campanile of the cathedral at Florence; made a bronze door for the sacristy of the same; and was famous for his work in enameled terra cotta, since known as "della Robbia" ware. Died, 1482.

Robert I., king of Scotland. See **Bruce, Robert.**

Roberts, Charles George Douglas, Canadian author, was born at Douglas, N. B., Canada, 1860. He was graduated at the University of New Brunswick, 1879; was editor of the *Week*, Toronto, 1883-84; editor of the *Illustrated American*, in New York, 1897. Author: *New York Nocturnes; The Book of the Rose; The Heart of the Ancient Wood; The Kindred of the Wild; Barbara Ladd; The Prisoner of Mademoiselle; The Heart that Knows; In the Deep of the Snow; The Young Acadian*, etc.

Roberts, Frederick Sleigh, baron of Kandahar and Waterford, distinguished British general, was born at Cawnpore, India, 1832. He was educated at Eton College, at Addiscombe, and at Sandhurst; D. C. L., Oxford, LL. D., Cambridge. At the age of nineteen he joined the Bengal artillery and served through the Indian mutiny. For his heroism he received the Victoria cross. In 1868 he took part in the Abyssinian war, and was made a C. B. In the Afghan war of 1878 he commanded the Kuram field force, and in this affair he made his famous march from Kabul to Kandahar, effecting the relief of the latter place. For his great military feat in this war he was created a baronet, and earned from his soldiers the familiar sobriquet of "Little Bobs" or Bobs Bahadur. In 1892 he was raised to the peerage. In 1895 he was made field-marshal and commander of the forces in Ireland. In 1899 he proceeded to South Africa to take supreme command during the Boer war, where he invaded the Orange Free State and the Transvaal and turned the fortunes of that struggle in favor of the British. In the autumn of 1900 he returned to England to succeed Lord Wolseley as commander-in-chief of the army, retiring in 1904. He is the author of the *Rise of Wellington*, and *Forty-one Years in India*.

Roberts, Morley, English novelist and journalist, was born in London, 1857. He was educated at Owens College, served before the mast, on Australian sheep-runs, on Texan ranches, on California railways, and British Columbian saw-mills, and multiplied his experiences in the South seas, the Transvaal, Rhodesia, and Corsica. Between 1887 and 1904 he published some forty works, mostly novels.

Robertson, Frederick William, English pulpit orator and writer, was born in London, 1816. He was educated for the army at Tours and Edinburgh, but subsequently studied at Oxford, 1837-40, and devoted himself to the church. In 1842 he was settled at Cheltenham; in 1847 became incumbent of Trinity chapel, Brighton, where his earnestness, originality, and wide sympathy arrested attention, but provoked suspicion. He resigned in 1853 because his vicar had refused to confirm his nomination of a curate, and died the same year. His *Sermons* were published complete in 1870.

Robertson, William, British historian, was born in Borthwick, Midlothian, 1721. He distinguished himself in the general assembly of the church, and became leader of the moderate party. He was one of the ministers of Greyfriars church, Edinburgh, and principal of the university from 1762. He wrote *History of Scotland During the Reigns of Mary and James VI.; History of the Reign of the Emperor Charles V.;* and *History of America*. He died near Edinburgh when nearly seventy-one years old, 1793.

Roberts, William Henry, clergyman, was born at Holyhead, Wales, 1844; graduated from the College of the City of New York, 1863; and Princeton Theological Seminary, 1873; D. D., Western University of Pennsylvania, 1884, Lafayette, 1907; LL. D., Miami University, 1888. Assistant librarian of Congress, 1866-71; ordained Presbyterian minister, 1873; librarian Princeton Theological Seminary, 1878-86; professor practical theology, Lane Theological Seminary, Cincinnati, 1886-93; president Glasgow, Scotland, Pan-Presbyterian Council, 1896; president Inter-church Conference on Federation, New York, 1905; moderator Presbyterian General Assembly, 1907. Author: *History of the Presbyterian Church; The Presbyterian System; Laws Relating to Religious Corporations*, etc.

Robespierre (*rō'bes-pyâr'*), **Maximilien Marie Isidore,** noted French revolutionist, was born at Arras, France, 1758. He was elected to the national convention as head of the Paris deputies, and as recognized chief of the extreme party he was one of the main agents in procuring the execution of the king, which took place in December, 1792. A period of terror followed; Marie Antoinette and the infamous duke of Orleans were the first victims; Pètion, Danton, and Camille Desmoulins were next immolated, on a suspicion of having favored a reactionary policy; and for months, under the so-called committee of public safety, Paris became the scene of an indiscriminate quasi-judicial slaughter, in which some thousands of lives were sacrificed. A conspiracy was organized against "the tyrant," and after a scene of fierce tumult in the convention his arrest was accomplished. A rescue by the populace followed, but he lacked the courage and promptitude to turn the opportunity to account; while he hesitated his enemies acted, and in July, 1794, he closed his career on the scaffold.

Robinson, James Harvey, American historian and educator, professor of history, Columbia University, since 1895, was born at Bloomington, Ill., 1863. He was graduated at Harvard, 1887; Ph. D., Freiburg, 1890. Author: *The German Bundesrath; Petrarch, the First Modern Scholar and Man of Letters*, with H. W. Rolfe.

Robinson, William Callyhan, American educator and legal writer, dean of law school, Catholic University of America, since 1895, was born at Norwich, Conn., 1834. He was graduated at Dartmouth College, 1854; graduated in divinity, General Theological Seminary, Protestant Episcopal church, 1857; studied law, and was admitted to the bar in 1864; LL. D., Dartmouth, 1879. He practiced law at New Haven, Conn., 1865-95 judge of city court, New Haven, Conn., 1869-71; judge of court of common pleas, New Haven county, Conn., 1874-76; member of the legislature of Connecticut, 1874. Author: *Notes of Elementary Law; Elementary Law; Clavis Rerum; Law of Patents; Forensic Oratory; Elements of American Jurisprudence*. Died, 1911.

Robie, Virginia Huntington, author and editor, was born at Salmon Falls, N. H., of an old colonial family, and educated in Boston, Mass.; has specialized as a writer on furniture, ceramics and interior decoration; associate editor of *The House Beautiful*. Author of *Interior Decorations; Shamrock and Thistle; Historic Styles in Furniture;* etc.

Robson, Eleanor Elsie, American actress, was born at Wigan, Lancashire, England, daughter of Charles Robson. She was graduated at St. Peter's Academy, Satan island, New York, 1897, and made her professional debut at California theater, 1897. She played Juliet to the Romeo of Kyrle Bellew, 1903; starred in *Merely Mary Ann*, 1903-05, and headed an "all-star" cast in a special production of *She Stoops to Conquer*, at the New Amsterdam theater, New York, under Liebler and company, 1905.

Rochambeau (*rō'shäN'bō'*), **Jean Baptiste Donatien de Vimeur, Comte de,** marshal of France, was born in 1725. He served in the war of the Austrian succession; distinguished himself in the Seven Years' war, coöperated with Washington at the siege and capture of Yorktown, during the American war of independence. In 1791 he became commander of the French army of the north, but resigned in 1792, and narrowly escaped execution during the reign of terror. Died, 1807.

Rochefoucauld. See **La Rochefoucauld François Duc de.**

Rockefeller, John Davison, American capitalist and philanthropist, was born at Richford, N. Y., 1839, and moved to Cleveland, Ohio, 1853. He received a public school education; was clerk in a forwarding and commission house, and at nineteen a partner in the firm of Clark and Rockefeller, commission merchants. Subsequently the firm became Andrews, Clark and company, and engaged in the oil business. In 1865 the firm, then William Rockefeller and company, built the Standard Oil works at Cleveland, and this was consolidated with others in the Standard Oil company, 1870. Other interests were later acquired and the Standard Oil trust was formed, 1882, but dissolved, 1892. The various Standard oil companies are now operated separately, with Rockefeller at the head of the entire business. He has given a total of more than $85,000,000 to philanthropies.

Rockefeller, John Davison, Jr., capitalist, son of preceding, was born in 1877. He was graduated at Brown University, and married, in 1901, Abby Green Aldrich, daughter of Nelson W. Aldrich, United States senator from Rhode Island. He is associated with his father in his various business enterprises, and is a trustee of the University of Chicago.

Rockefeller, William, capitalist, brother of John Davison, was born at Richford, N. Y., 1841. He was educated at Owego, N. Y., and Cleveland, Ohio; was bookkeeper and late partner in produce commission trade; soon after joined his brother, John Davison, in oil business, and since 1865 has been at the head of the business in New York.

Rodin (*rō'dan'*), **Auguste,** French sculptor, was born at Paris, 1840. He studied under Barye, and began to exhibit in the salon in 1875. He has produced a number of great scriptural and symbolical groups, but is best known by his portrait busts and statues, notably the bust and the monument of Victor Hugo. He is generally acknowledged to be the greatest of living sculptors.

Rodney, George Brydges, Lord, English admiral, was born in 1719. In 1759, after twenty-eight years of active service, he was made rear admiral. In 1762 he became vice admiral, and in 1764 was made a baronet. During the Seven Years' war he accomplished the relief of Gibraltar and Minorca and defeated, near Martinique, the French fleet, under Count de Guichen; took Eustatia from the Dutch, with 250 ships and other booty. He was elevated to the peerage as Baron Rodney, and received a pension of 2,000 pounds per annum for himself and his successors. Died, 1792.

Roebling (*rōb'ling*), **John Augustus,** American civil engineer, was born in Mühlhausen, Prussia, 1805. He emigrated to the United States in 1831, and in course of years became the designer and constructor of many great public works, among them the canal aqueduct across the Allegheny river, and the Monongahela suspension bridge, both at Pittsburg; the suspension bridge at Niagara; the Ohio bridge at Cincinnati, etc. He died in 1869, having just before projected the bridge over the East river.

Roebling, Washington Augustus, American engineer, was born at Saxonburg, Pa., 1837. He was graduated at Rensselaer Polytechnic Institute, 1857; joined his father in construction of Pittsburg suspension bridge across Allegheny river. The Brooklyn bridge was undertaken by his father, but the latter's death in 1869 left the entire construction in his hands, and he directed it to completion. He is president and director of the John A. Roebling's Sons company, manufacturers of iron and steel wire and wire rope, Trenton, N. J.

Roentgen (*rünt'gen*), **Wilhelm Konrad,** eminent German scientist, distinguished investigator of physical problems, and discoverer of the "X" or Rœntgen rays, was born in the province of Düsseldorf, Prussia, 1845. In December, 1895, he communicated to the Würzburg physico-medical society his remarkable discovery of the new and powerful "X-rays," since known by his name, and in the following month he described his discovery at the celebration of the semi-centennial of the founding of the Berlin physical society. Later he demonstrated the rays in the presence of the emperor of Germany, who decorated him, and Prince Ludwig of Bavaria created him a baron. In 1901 he received the Nobel prize for physics.

Rogers, Henry Wade, American educator, dean of the law department of Yale University since 1904, was born at Holland Patent, N. Y., 1853. He was graduated at the University of Michigan, 1874; LL. D., Wesleyan University, Conn. He was admitted to the bar, 1877; was professor of law, University of Michigan, 1883-85; dean of same, 1885-90; president of Northwestern University, 1890-1901, and professor of law at Yale, 1901-03. Author: *Illinois Citations; Expert Testimony*.

Rogers, Randolph, American sculptor, was born at Waterloo, N. Y., 1825. After following mercantile pursuits for a number of years in early life, he went to Rome to study the sculptor's art. Among the works for which he is distinguished are many memorial statues in different parts of the country. Died at Rome, 1892.

Rohlfs (*rölfs*), **Anna Katharine Green.** See **Green, Anna Katharine.**

Roland (*rō'län'*), **Marie Jeanne,** wife of Jean Marie Roland de la Platiére, daughter of Pierre Gratien Philipon, was born at Paris, France, 1754. Her husband was obliged to flee from Paris, May 31, 1793, and the same night she was arrested and imprisoned in the Abbaye. Summoned before

the revolutionary tribunal in the beginning of November, she was condemned, and on the 9th was guillotined amid the shoutings of an insensate mob. Most celebrated is her apostrophe to the statue of Liberty, at the foot of which the scaffold was erected: "O Liberty, what crimes are committed in thy name!"

Rollin (*rō'lan'*), **Charles,** French historian, was born at Paris, 1661. He studied at the College of Duplessis; acquired there a knowledge of languages and philosophy, and studied theology for three years at the Sorbonne. In 1694 he was appointed rector of the University of Paris, and in 1696, coadjutor of the College of Beauvais; but was at length driven from it by the intrigues of the Jesuits. Thenceforth he gave his time wholly to literature. His principal works are: *Ancient History; Roman History;* and *Treatise on the Mode of Studying.* Died, 1741.

Romanes (*rō-mā'nēs*), **George John,** naturalist, was born at Kingston, Canada, 1848, and was graduated in 1870 from Caius College, Cambridge. While still at the university he formed a friendship with Darwin, and he powerfully re-inforced his master's arguments in his Croonian, Fullerian, and other lectures. He wrote: *Animal Intelligence; Scientific Evidences of Organic Evolution; Mental Evolution in Animals; Jelly-fish, Star-fish, and Sea-urchins; Mental Evolution in Man,* etc. Died, 1894.

Romilly (*rom'i-li*), **Sir Samuel,** English lawyer and law reformer, was born in London in 1757. In 1790 he published an able pamphlet on the French revolution; appointed solicitor-general of England in 1806. He devoted himself to mitigating the severity of the criminal law. Died 1818.

Romney (*rum'ni*), **George,** English painter, was born at Dalton, in Lancashire, 1734. After receiving some lessons from a country artist, he studied art in London in 1762; visited France in 1764, and Italy, 1773-75; and on his return to England became the rival of Reynolds as a portrait painter. He also gained distinction as a painter of historical pictures; assisted in preparing the Boydell Shakespeare gallery. Died at Kendal, 1802.

Ronsard (*rōn'sar'*), **Pierre de,** French poet, was born at the Château de la Poissonnière in Vendôme, 1524. Becoming deaf, he abandoned arms for letters, and at the Collège Coqueret studied with Du Bellay and other members of the famous Pléiade. His seven years of study bore its first fruit in his *Odes,* 1550, which excited violent oppesition from the older national school. In 1552 appeared his *Amours* and the fifth book of his *Odes,* his *Hymns* in 1555, the conclusion of the *Amours* in 1556, in 1560, *Complete Works.* He died at his priory of St. Cosme at Tours, in 1585.

Roosa, Daniel Bennett St. John, American physician, was born at Bethel, N. Y., 1838. He was graduated, M. D., University Medical College, New York, 1860, after an academic education in Boston and New York; M. A., Yale; LL. D., University of Vermont. He was assistant surgeon of 5th New York volunteers, among the three months' troops called out by President Lincoln; professor in the University of the city of New York, and University of Vermont. Author: *The Old Hospital and Other Papers; A Pocket Medical Lexicon; Treatise on the Ear; Treatise on the Eye; A Doctor's Suggestions.* Died, 1908.

Roosevelt (*rōz'velt*), **Theodore,** American soldier, writer, statesman, twenty-sixth president of the United States, was born in New York city, 1858, son of Theodore and Martha (Bulloch) Roosevelt. He entered Harvard University at eighteen, and was graduated in 1880; LL. D., Harvard, Yale, etc. The year following he began the study of law, but in the same year was elected to the New York legislature. In 1884 he was chosen a delegate to the republican national convention, and later in the year went to North Dakota, where he spent two years on a ranch, raising cattle. President Harrison appointed him a member of the United States civil service commission in 1889, in which capacity he served until 1895, when he resigned to accept the presidency of the police commission of New York city, under Mayor Strong. President McKinley appointed him assistant secretary of the navy in April, 1897, and upon the outbreak of the Spanish-American war, in 1898, he resigned the post to assist in organizing the 1st United States volunteer cavalry. In September, 1898, he was mustered out, with his regiment, at Montauk, L. I. Shortly following he was nominated for governor of New York, and elected November, 1898. Two years later he was unanimously nominated for vice-president of the United States by the republican national convention, at Philadelphia, and elected. He succeeded to the presidency September 14, 1901, upon the death of President McKinley, and at the close of the term was unanimously nominated by his party to succeed himself, and elected for the term 1904-09. He has long been an advocate of administrative, political, and social reforms, and has contributed widely to periodicals and general literature. Among his important publications are: *The Winning of the West; History of the Naval War of 1812; Hunting Trips of a Ranchman; Life of Gouverneur Morris; American Ideals and Other Essays; The Rough Riders; Life of Oliver Cromwell; The Strenuous Life.* His efforts in bringing about the treaty of peace between Japan and Russia in 1905 were important and effective; and, in 1906, he was awarded the Nobel peace prize of $40,000. He is an enthusiastic hunter of big game, and after his retirement from the presidency on March 4, 1909, he led a scientific expedition to East Africa for the purpose of adding rare faunal specimens to the Smithsonian and national museums at Washington. He was the unsuccessful candidate of the Progressive party for President in 1912.

Root (*rōōt*), **Elihu,** American statesman and lawyer, was born in Clinton, N. Y., 1845. He was graduated at Hamilton College in 1864; was graduated at the law school of New York University, 1867; LL.D., Yale, Harvard, etc. He was appointed by President Arthur United States attorney for the southern district of New York, 1883-85. On August 1, 1899, he was appointed secretary of war by President McKinley, and on March 5, 1901, was re-appointed. In August, 1903, he resigned the office of secretary of war, his resignation to take effect in January, 1904, and during 1903 he was a member of the Alaskan boundary tribunal. In 1905 President Roosevelt appointed him secretary of state, and while discharging the duties of that office he did much to unify the Pan-American countries. In 1908 he was elected United States senator from New York for the term 1909-15. He is probably the ablest lawyer at the American bar.

Root, George Frederick, American musical composer, was born at Sheffield, Mass., 1820. After studying music a year in Paris, he returned to write numerous popular songs, among which are: *Music in the Air; Battle Cry of Freedom; Just Before the Battle, Mother; Tramp, Tramp, Tramp, the Boys are Marching.* He died in 1895.

Rosa (*rō'zā*), **Salvator,** Italian painter, was born at Arenella near Naples, 1615. At Rome his social talents—he was a skillful musician, improvisatore, actor, and poet—and his princely generosity rendered him a great favorite. But he made powerful enemies by his satires, and withdrew to Florence for nine years. After that he returned to Rome, and died in 1673. Salvator owes his reputation mainly to his landscapes of wild and savage scenes, though his masterpiece is considered to be the "Conspiracy of Catiline."

Roscoe, Sir Henry Enfield, noted English chemist, was born at London, 1833. He was graduated at University College, London, and received his Ph. D. from Heidelberg University, 1853. He was professor of chemistry at Owens College, Manchester, 1857-87; member of parliament for Manchester, 1885-95; vice-chancellor of the University of London, 1896-1902; officer of the legion of honor. Author: *Lessons in Elementary Chemistry; Treatise on Chemistry; Primer of Chemistry,* etc.

Rose, John Holland, English educator and historian, was born at Bedford, 1855. He was educated at Owens College, Manchester, and at Christ's College, Cambridge; Litt. D., Cambridge. For many years he was lecturer on modern history to the Cambridge University local lectures syndicate, and to the London University's board for the extension of university teaching. Author of numerous historical works.

Rosebery, Archibald Philip Primrose, fifth Earl of, was born in 1847. He was graduated from Oxford; under-secretary for home affairs, 1881-83; lord privy seal, 1885; secretary for foreign affairs, 1886 and 1892-94; prime minister and lord president of council, 1894-95, and lord rector of Glasgow University, 1899. He retired from the leadership of the liberal party, 1896, and since then has supported Lord Salisbury; and has delivered many notable speeches on literary and social subjects. Author: *Appreciations and Addresses; Sir Robert Peel; Napoleon; The Last Phase; Oliver Cromwell,* etc.

Rosecrans, William Starke, American general, was born at Kingston, Ohio, 1819. He was trained as an engineer, and had settled down to coal-mining when the civil war broke out; joined the army in 1861; highly distinguished himself during the campaigns of 1862-63. He was afterward minister to Mexico, a member of congress, and, 1885-93, register of the United States treasury. He died near Los Angeles, Cal., 1898.

Ross, James Clark, English arctic and antarctic explorer, was born in 1800. He made five successive voyages to the Arctic regions, made himself famous by his sledge journeys, and determined the position of the north magnetic pole, 1831. He was knighted in 1844, commanded an expedition in search of Sir John Franklin in 1848, and was made rear-admiral in 1856. Died, 1862.

Ross, George William, Canadian educator, was born near Nair, Middlesex county, Ontario, 1841. He was educated at the Normal School, Toronto, and at the law department of the Albert University, LL. B., 1883; LL. D., St. Andrews, Toronto, Victoria, McMaser, and Queen's Universities. He was admitted to the bar in 1887; was member of parliament for West Middlesex, 1872-74-78-82; minister of education, 1883-99; premier and treasurer of the province of Ontario, 1899-1905, and a member of the senate of Canada since 1907.

Rossetti (*rō'set'ē*), **Dante Gabriel,** British painter and poet, was born in London in 1828. His name was first brought prominently forward by his association with Millais and Holman Hunt in the pre-Raphaelite brotherhood. As an author he is well known by his *Early Italian Poets, Ballads and Sonnets, The Blessed Damozel,* etc. He played a distinguished part in the resuscitation of Gothic art in England. Died, 1882.

Rossini (*rōs-sē'nē*), **Gioacchino Antonio,** celebrated Italian composer, was born at Pesaro, Italy, 1792. He was the son of a strolling musician. When little more than twenty-one, he produced his opera of *Tancredi,* which was performed for the first time in Venice. Three years later he produced *The Barber of Seville.* After *Guillaume Tell,* which appeared in 1829, he published only his *Stabat Mater.* He died in 1868.

Rostand (*rōs'tan'*), **Edmond,** French poet and dramatist, member of the Académie Francaise since 1901, was born at Marseilles, 1868. He was educated at the Lycée de Marseilles, and at the College Stanislas. His first successful drama was *Les Romanesques,* which was produced in 1894. It was followed by *La Princesse Lointaine; La Samaritaine; Cyrano de Bergerac; L'Aiglon,* and during the past year by the remarkable *Chantecler,* etc. His poetical works include: *Les Musardises; Pour la Grèce; Un Soir à Hernani; Les Mots;* etc. He is one of the ablest of modern dramatists.

Rothschild (*roths'child'*), the name of a celebrated Jewish family of bankers and financiers. The founder of the family, Mayer Anselm, named from his father's signboard, the "Red Shield," was born at Frankfort-on-the-Main, 1743. He was educated for a Jewish rabbi, but founded a business as a money-lender and became the financial adviser of the landgrave of Hesse. At his death, in 1812, the founder left five sons, all of whom were made barons of the Austrian empire in 1822. Mayer Anselm, 1773-1855; eldest son, Solomon, 1774-1855; Nathan, 1777-1836; Karl, 1788-1855; and Jacob, or James, 1792-1868. They negotiated many of the greatest government loans of Europe in the nineteenth century, and Nathan raised the house to be first among the banking-houses of the world. His son Lionel, 1808-79, did much for the civil and political emancipation of the Jews in Great Britain. Lionel's son, Nathan, born in 1840, succeeded to the baronetcy conferred in 1847 on his uncle Anthony, and was made Baron Rothschild in 1885. His niece Hannah (1851-90), in 1878 married the earl of Rosebery.

Rouget de Lisle (*rōō'zhe' dē lēl'*), **Claude Joseph,** French soldier and poet, was born at Lons-le-Saunier, France, 1760, and wrote the *Marseillaise* when stationed in 1792 as captain of engineers at Strassburg. In 1796 he published a volume of *Essais en Vers et en Prose.* The *Marseillaise,* by its author called *Chant de l'Armee du Rhin,* was made known in Paris by troops from Marseilles. He died at Choisy-le-Roi, near Paris, 1836.

Rousseau (*rōō'sō'*), **Jean Jacques,** French philosopher and prose writer, was born in 1712, son of a watchmaker at Geneva. In 1750 he gained a prize, offered by the academy of Dijon, for an essay attacking the influence of the arts and sciences on society. The main significance of Rousseau was as a renewer of the force of the imagination and the feelings in an artificial time. He loved nature, and praised its beauties; he broke with the arid traditions of the past, and formed a new ideal of the future with an eloquence and a warmth that had great influence on the French revolution. He wrote on education and modified its narrowing tendencies, and in literature led the way to the romantic reaction against classicism. The most famous of his productions are: *Discourse sur l'Origine et les Fondements de l' Inegalite parmi les Hommes; Julie, ou la Nouvelle Héloise; Du Contrat Social, ou Principes du Droit Politique; Emile, ou de l'Education; Les Confessions;* and *Rêveries d'un Promeneur Solitaire.* Died, 1778.

Rowe, Leo S., American economist, educator, was born at McGregor, Iowa, 1871. He was graduated from the University of Pennsylvania, 1890; LL. B., 1895; Ph. D., University of Halle; LL. D., National University of La Plata, Argentine, 1906; head professor of political science, since 1903, in the University of Pennsylvania. In 1906 he was United States delegate to the third international conference of American states, Rio Janeiro. Author: *Report of the United States Commission to Revise the Laws of Porto Rico; The United States and Porto Rico.*

Royce, Josiah, American philosophical writer, professor of the history of philosophy at Harvard since 1892, was born at Grass Valley, Cal., 1855. He was graduated at the University of California, 1875; Ph. D., Johns Hopkins, 1878; LL. D., University of Aberdeen, Scotland, 1900; LL. D., Johns Hopkins, 1902. Author: *Religious Aspect of Philosophy; The Conception of Immortality; Studies of Good and Evil; Outlines of Psychology; Herbert Spencer, An Estimate and a Review,* etc.

Rubens, Peter Paul, greatest of Flemish painters, was born probably at Siegen, in Westphalia, 1577. His parents settled in Cologne in 1578, where they remained till 1587, when Rubens' father died, and his mother removed with her family to Antwerp.

He was first placed under Verhaagt, a landscape painter; however, inclining more to historical painting, he became a pupil of Van Noort, but soon quitted his school for that of Otho Van Veen, or Venius, who then enjoyed a high reputation; and after studying four years with that painter went to Italy in 1600.

Recommended to Vincenzo Gonzago, Duke of Mantua, he was sent on a mission by the duke to Philip III. of Spain, and on that occasion painted several portraits of Spanish noblemen. He also spent considerable time at Venice and Rome making copies for the duke, and executing independent works, which added largely to his reputation. In 1608, after an absence of eight years, Rubens returened to Antwerp on account of the illness of his mother, but she died before he had accomplished the journey. He intended to return to Mantua, but was induced to remain by the Archduke Albert, governor of the Netherlands.

In 1621 he visited Paris by invitation of Maria d' Medici; and in 1625 completed the series of sketches for the pictures destined to adorn the palace of the Luxembourg. Rubens was sent by the Infanta Isabella widow of the Archduke Albert, on a diplomatic mission to Philip IV. of Spain in 1628; and in the following year on a similar mission to Charles I. of England, by whom he was knighted in 1630. He died very rich in 1640.

References.—Stevenson's *Peter Paul Rubens;* article in *North American Review* (November, 1900) by Benjamin Constant; *Early Flemish Painters*, by Sir J. A. Crowe; and *Original Unpublished Papers Illustrative of the Life of Sir Peter Paul Rubens*, by W. Noel Saintsbury.

ubinstein (*rōō'bin-stīn*), **Anton Gregor,** Russian composer and pianist, was born at Wechwotynetz, near Jassy, in Russian Bessarabia, 1829. At Berlin he studied composition under Dehn. In 1872-73 he visited America, and after 1867 he spent his time in traveling and composing. As a pianist he was the only rival, technically, that Liszt ever had, and as a composer his works are characterized by the most wonderful fertility of imagination, and many of them by a gorgeous oriental coloring. Died, 1894.

udolf, or **Rudolph I.,** founder of the Hapsburg imperial dynasty, was born at Schloss Limburg in the Breisgau, 1218, and, becoming a warm partisan of Frederick II., increased his possessions by inheritance and marriage, until he was the most powerful prince in Swabia. In 1273 the electors chose him German king. Rudolf did much to suppress the robber knights. He died at Spires in 1291.

udolf, or **Rudolph II.,** born at Vienna, 1552, eldest son of the emperor, Maximilian II., became king of Hungary in 1572; king of Bohemia, with the title "king of the Romans," in 1575; and emperor on his father's death in 1576. He died in 1612 after an inefficient reign.

uneberg (*rōō'nē-ber'ỵ'*), **Johan Ludwig,** national poet of Finland, was born at Jacobstad, 1804. He was educated at the University of Abo, where he afterward lectured. His epic idylls, *The Elk Hunters, Christmas Eve*, his epic *King Fjalar, Fänrik Stals Sagner*, etc., are the finest poems in the Swedish language, and are characterized by repose, simplicity, artistic finish, and the warmth of national life. He died in 1877.

uoff, Henry Woldmar, editor, author, was born in Germantown, Pa., 1867, and was graduated from Indiana University 1890; post-graduate student at Harvard, two years, in history, philosophy and comparative religions, and at Columbian (now George Washington) University, two years, in economics, politics and comparative jurisprudence; D. C. L., Columbian, 1901, George Washington, 1907; Litt.D., 1910. Assistant in ethnology, Chicago Exposition; formerly instructor in psychology, logic, ethics and philosophy of history, Pennsylvania State College. Auditor Oxford University, University of Berlin, and Ecole des Sciences Politiques, Paris, in comparative politics and jurisprudence, 1901-2. Associate editor, the *American Spectator, Ridgway's, and Nashville-Tennessean*, 1904-7. Member American academy of political and social science, national geographical society. Has traveled extensively in Europe, Asia and Africa. Author and editor: *Home and State; Woman in the Middle Ages; Century Book of Facts; Constitution of the Pre-Christian Family; Capitals of the World; Leaders of Men; Universal Cyclopedic Handbook; The Standard Dictionary of Facts; Masters of Achievement; The Volume Library*, etc.

upert, Prince, British general, third son of the elector palatine Frederick V., and Elizabeth, daughter of James I. of England, was born at Prague, 1619. In 1642 he returned to England, and for the next three years the "mad cavalier" was the life and soul of the royalist cause, winning many a battle by his resistless charges, to lose it as often by a too headlong pursuit. In 1645 his surrender of Bristol so irritated Charles, who in 1644 had created him duke of Cumberland and generalissimo, that he dismissed him. A court-martial, however, cleared him, and he resumed his duties only to surrender at Oxford to Fairfax in 1646. He now took service with France, but in 1648 accepted the command of that portion of the English fleet which had espoused the king's cause, and acquitted himself with all his old daring and somewhat more caution. He died in 1682.

Rush, Benjamin, American physician, was born near Philadelphia, Pa., 1745. He was graduated at Princeton in 1760, studied medicine at Edinburgh and at Paris, and became professor of chemistry in the Philadelphia Medical College. He was a founder of the Philadelphia dispensary, the first in America, and of the college of physicians, and was given several medical professorships besides the one he already held at Philadelphia. Among his medical writings are: *Medical Inquiries and Observations; Essays;* and *Diseases of the Mind.* He died at Philadelphia, 1813.

Ruskin, John, distinguished English critic and writer on art, was born in London, 1819. He studied at Christ Church, Oxford, where he gained the Newdigate prize for English poetry in 1839, and took his degree in 1842. The year following appeared the first volume of his *Modern Painters*, the primary design of which was to prove the superiority of modern landscape painters, especially Turner, to the old masters. In 1849 appeared *The Seven Lamps of Architecture*, and in 1851 to 1853 *The Stones of Venice*, both being efforts to introduce a new and loftier conception of the significance of domestic architecture. About 1860 he became deeply interested in the social problems of the age, and published *Unto this Last* and *Munera Pulveris.* Among his later works are: *Sesame and Lilies; The Ethics of the Dust; The Crown of Wild Olives;* and *Præterita*, a charming autobiography, completed in 1888. He was also selected Slade professor of fine arts at Oxford, being thrice reëlected. He was obliged to resign the post in 1884 on account of failing health. For several years prior to his death he lived in retirement at Brantwood, Coniston. Died, 1900.

Russell, Annie actress, was born in Liverpool, England, 1869, and made her first stage appearance at Montreal when seven. She afterward appeared at New York in *Pinafore*, went to South America and West Indies in varied repertory. She has since appeared as a star in *Miss Hobbs; A Royal Family; The Girl and the Judge; Mice and Men; Jimmy the Carrier; Brother Jacques; Major Barbara; Midsummer Night's Dream*, etc. She married Oswald Yorke, an English actor, 1904.

Russell, James Earl, American educator, dean of Teachers College, Columbia University, since 1898, was born at Hamden, N. Y., 1864. He was graduated at Cornell in 1887; Ph. D., Leipsig, 1894; professor of education, Teachers' College, since 1897; and Barnard professor of education, Columbia, since 1904. Author: *The Extension of University Teaching in England and America; German Higher Schools.*

Russell, John Earl, British statesman, third son of the sixth duke of Bedford, was born in 1792. He was educated at Westminster and Edinburgh; entered parliament as a whig in 1813; became an advocate of parliamentary reform; was instrumental in the repeal of the test and corporation acts in 1828, and the passing of the Catholic relief act in 1829; led the opposition, 1841-46; was prime minister, 1846-52; went as British plenipotentiary to the Vienna conference, 1855; was foreign secretary under Lord Palmerston, 1859-65; again became prime minister in 1865, but resigned on the defeat of his reform bill in 1866. Died, 1878.

Ruyter (*roi'tĕr; rī'tĕr*), **Michael Adriaanszoon de,** Dutch admiral, was born at Vlissingen in 1607, of poor parents, who sent him to sea as a cabin-boy when only eleven years old. He became a warrant officer, and in 1637 rose to be captain in the Dutch navy. After serving several years in the Indian seas he was, in 1641, made rear admiral. He had his legs shattered in an engagement off the coast of Sicily, and died of his wounds in 1676.

Ryan, Patrick John, American prelate, Roman Catholic archbishop, was born at Thurles, County Tipperary, Ireland, 1831. He was graduated at Carlow College, 1852; LL. D., University of New York and University of Pennsylvania. He was chaplain of the Gratiot state military prison and hospital, St. Louis, during the civil war; and while rector of Annunciation church, delivered lenten lectures in English at Rome, 1868, on invitation of Pope Pius IX. He was consecrated, 1872, titular bishop of Tricomia in Palestine and made coadjutor bishop of St. Louis; was promoted to archbishop, 1883, and in June, 1884, was transferred to the see of Philadelphia. Died 1911.

Ryan, Thomas Fortune, American financier, was born in Nelson county, Va., 1851. He began business life, 1868, in a Baltimore dry goods house; entered Wall street, 1870, and became a member of the New York stock exchange, 1874. He is vice-president of the Morton trust company, director of the Seaboard air line railway, American Tobacco company, Fifth Avenue trust company, Industrial trust company of Providence, and many other corporations; and purchased a controlling interest of the stock of the Equitable life assurance society of the United States in 1905.

Sachs (*zăks*), **Hans,** noted German poet, was born at Nürnberg, 1494. He was the son of a tailor, and by trade a shoemaker. He learned "the mystery of song" from a weaver. In 1568, on examining his stock for publication, he found that he had written over 6,000 pieces, among them 208 tragedies and comedies. He sank into oblivion during the seventeenth century, but his memory was revived by Goethe in the eighteenth. He died in 1576.

Sachs, Julius von, botanist, was born at Breslau 1832. In 1867 he became professor of botany at Freiburg, and in 1868 at Würzburg. There he carried on important experiments, especially as to the influence of light and heat upon plants, and the organic activities of vegetable growth. He wrote extensively on botany, and is considered the founder of experimental vegetable physiology. Died at Würzburg, 1897.

Sacy (*sá'sē'*), **Antoine Isaac, Baron Silvestre de,** French orientalist, was born at Paris, 1758. Was appointed in 1795 professor of Arabic in the school of oriental languages, and in 1806 of Persian in the College de France, besides which he held various other appointments. He founded the Asiatic society in 1822; was created a baron by Napoleon I., and entered the chamber of peers in 1832. His writings gave a stimulus to oriental research throughout Europe. He died in 1838.

Sadi-Carnot. See **Carnot.**

Sadi (*sä-dē'*), Persian poet, was born at Shirza, about 1184. He studied science and theology at Bagdad, and from there made the first of fourteen pilgrimages to Mecca. He is called the "nightingale of a thousand songs," and the catalogue of his works contains twenty-two different kinds of writing in prose and poetry, in Arabic and Persian. Died, 1291.

Sagasta (*sä-gäs'tä*), **Praxedes Mateo,** Spanish statesman, was born in 1827. He was obliged to leave the country for his share in the rising of 1856, and again, ten years later, to seek refuge in France. After the accession of Alfonso XII., he became president of the cortes, formed a liberal constitutionalist party, and having, in 1880, joined a new liberal combination, formed a coalition with Campos, which lasted until 1883. Died, 1903.

Sage, Russell, American capitalist, was born in Oneida county, New York, 1816. Educated in the public schools, he became a grocer's clerk, and established himself as a wholesale grocer in Troy, 1839. He was a member of congress, 1852-56, removed to New York in 1863, purchased a seat on the stock exchange and associated himself with Jay Gould in extensive railway operations, gaining a wide reputation by his close bargaining and successful speculation. His fortune was variously estimated at from $60,000,000 to $100,000,000. Died, 1906.

Sage, Margaret Olivia Slocum, philanthropist, was born at Syracuse, N. Y., 1828, daughter of Joseph Slocum; in 1869 married Russell Sage, at Watervliet, N. Y. She has given many millions of dollars to charitable and educational institutions.

Saint Ambrose. See **Ambrose.**

Saint Augustine. See **Augustine St.**

Saint Basil. See **Basil.**

Saint Benedict. See **Benedict.**

Saint Bernard. See **Bernard.**

Saint Clair, Arthur. American general, was born in Scotland, 1735. In 1777 he became major-general, and entered congress in 1785, of which body he was elected president two years later. In 1789 he was made governor of the Northwest territory, and two years afterward suffered a defeat with heavy loss, at the hands of the Miami Indians. Died, 1818.

Saint Columba. See **Columba.**

Sainte-Beuve (*sănt'bûv'*), **Charles Augustin,** French literary critic, was born at Boulogne-sur-Mer, 1804. In 1827 he became acquainted with Victor Hugo, whose commanding influence drew him into the romantic movement, and determined for him a literary career. In 1837 he lectured at Lausanne on Port-Royal, and these lectures contain some of his finest writings; was elected in 1845 to the academy; and three years later lectured for a session at Liege University. During 1849-69 he contributed to the *Constitutionel.* These contributions form his famous *Causeries du Lundi* and *Nouveaux Lundis*, which, for variety of human interest, critical insight, and breadth of sympathy, remain unsurpassed. He was elected a senator in 1865, and his popularity revived by his eloquent advocacy of freedom of thought. In precision, in subtlety, and in delicacy, his works, fifty-three volumes in all, stand alone in the literature of criticism. Died, 1869.

Saint Francis of Assisi. See **Francis St.**

Saint Gaudens (*sānt gô'denz*), **Augustus,** American sculptor, was born in Ireland in 1848, and was brought to the United States in infancy. During 1861-66 he was a student at Cooper institute, and at the academy of design, New York; went to Paris and studied at the Ecole des Beaux Arts under Jouffroy. He executed a number of notable works, of which the most important are: *The Puritan; Farragut; Lincoln; Peter Cooper*, New York; *Colonel R. G. Shaw*, Boston. He was awarded medals at the Paris, Buffalo and St. Louis expositions, and made an officer of the French legion of honor. Died, 1907.

Saint Jerome. See **Jerome.**

Saint Louis IX. See **Louis IX.**

Saint Paul. See **Paul.**

Saint Pierre (*săn'pâyr'*), **Jacques Henri Bernardin de,** French writer, was born in Havre, France, 1737. He is best known for his beautiful story, *Paul and Virginia*, which has been translated into many languages. He died at Eragny-sur-Oise, 1814.

Saint-Saëns (*săn'säns'*), **Charles Camille,** French composer and pianist, was born at Paris, 1835.

He wrote his first symphony at the age of sixteen, and studied at the Paris conservatoire under Benoit, Halévy, and Gounod; LL. D., Cambridge; Mus. D., Oxford. His works include the operas: *La Princesse Jaune*; *Le Timbre d'Argent*; *L'Ancêre*; the sacred drama, *Samson and Delila*. The strongest originality, sometimes becoming eccentricity, pervades his music, which is of the most modern school.

Saintsbury (*sānts'bĕr-i*), **George Edward Bateman,** English critic, was born at Southampton, 1845. He was educated at Merton College, Oxford. In 1868-76 he was a schoolmaster at Manchester, Guernsey, and Elgin, but soon after established himself as one of the most active critics of the day; in 1895 he became professor of English literature at Edinburgh. Among his books are: *Short History of French Literature*; *History of Elizabethan Literature*; *Essays in English Literature, 1780-1860*; *History of Nineteenth-Century Literature*; *History of Criticism*; *The Earlier Renaissance*; *Minor Caroline Poets*; *A History of English Prosody*, etc.

Saint Simon, Claude Henri, Comte de, French social philosopher, was born at Paris, 1760. At sixteen he entered the army, served in America, and distinguished himself. In 1817-18 he published *L'Industrie ou Discussions Politiques, Morales et Philosophiques*. The third volume is the work of Auguste Comte. The last and by far the most remarkable work of Simon is his *Nouveau Christianisme*, which contains his final and matured convictions. Died, 1825.

Saint Thomas Aquinas. See Aquinas.

Saionji (*sī'ōn-jē*), **Marquis,** Japanese statesman, was born at Kioto in 1849. At the age of eighteen he gathered volunteers and fought for the emperor in the revolution of 1868. Subsequently he became minister to Austria-Hungary and then to Germany. On his return to Japan he joined the first Ito cabinet as minister of education, a post which he again occupied in the second Ito cabinet, having been minister of foreign affairs in the interval. He assisted Ito in forming the constitutional association of 1900, and became its leader in 1903. At three difficult crises the mikado called him to be prime-minister, his last term of office being from 1906 to 1908.

Saladin (*sal'ä-din*) or **Salah-ed-Din,** celebrated sultan of Egypt, flourished between 1137 and 1193. He was one of the great conquerors of his time; and in 1187 defeated the Christians in a great battle near Tiberias, afterward storming and capturing Jerusalem. He was, however, defeated by Richard Coeur-de-Lion in 1191, and died, broken down by disease and toil, in the spring of 1193.

Salisbury (*sôlz'bĕr-i*), **Robert Arthur Talbot Gascoyne-Cecil, Marquis of,** British statesman, was born at Hatfield, 1830. He was graduated from Christ Church, Oxford, 1853, and sat in parliament for Stamford, 1853-68. In 1878 he was appointed foreign secretary, and, with Lord Beaconsfield, took a prominent part in the congress of Berlin. After the latter's death he became the principal leader of the conservatives in the house of lords, and was prime-minister in 1885-1886, 1886-1892, and 1895-1902. Died, 1903.

Sallust (*sal'ust*) or **Sallustius, Caius Crispus,** Roman historian, of equal talents and profligacy, was born at Amiternium, 86 B. C. He rose from a plebeian to a senator. Cæsar successively made him quæstor and prætor, and governor of Numidia. In the last of these offices he amassed an enormous fortune by acts of rapine. His *History of the Roman Republic* is lost, with the exception of some fragments; but his masterly *Histories of the Jugurthine War*, and the *Conspiracy of Catiline* are extant, and bear ample testimony to his genius. Died, 34 B. C.

Salmon (*sä'mun*), **George,** British mathematician and theological writer, was born in Dublin, 1819. He was graduated at Trinity College in 1839, and became a fellow in 1841, regius professor of divinity in 1866, and provost in 1888, being also F. R. S., D. D., LL. D. and D. C. L. Died, 1904.

Sampson, William Thomas, rear admiral of United States navy, was born at Palmyra, N. Y., 1840. He was graduated at Annapolis in 1861. He served six years as instructor at Annapolis, then became chief of bureau of ordinance and gained an international reputation by his work in building up the new navy. On the outbreak of the war with Spain he was appointed acting rear admiral, 1898, and placed in command of the North Atlantic squadron operating against Spain in Cuban waters. When the Spanish fleet under Cervera took refuge in the harbor of Santiago de Cuba, Sampson established a close blockade of that port, resulting in the destruction of the Spanish fleet when it attempted to escape from the harbor, July 3, 1898. At the close of the war he was made rear admiral. Died, 1902.

Sand, George, pseudonym of Amantine Lucile Aurore Dudevant, French author, was born at Paris, 1804. She was descended on her father's side from the famous Marshal Saxe, and her maiden name was Dupin. After receiving a strict conventual education, she married M. Dudevant in 1822, but separated from him in 1831. Her best known works are: *Indiana*; *Valentine*; *Rose et Blanche*; *Lelia*; *La Comtesse de Rudolstadt*; *Consuelo*; *Jacques*; *Mauprat*, etc. Died, 1876.

Sankey, Ira David, American evangelist and singer, was born at Edinburgh, Pa., 1840. He united with the Methodist Episcopal church at fifteen; became choir leader, Sunday school superintendent, and president of the Y. M. C. A. at New Castle, Pa. In 1870 he met Dwight L. Moody, and became associated with him as a solo singer in evangelistic work in the United States and abroad. He has composed many of the most popular gospel songs of his day. He lost his sight in 1903, and died in 1908.

Santa Ana (*sän'tä ä'nä*), **Antonio Lopez de,** Mexican general, was born in Jalapa, 1795. The separation of Texas from the Mexican union was vigorously but unavailingly opposed by him, but he recognized the independence of Texas, and defended Vera Cruz against the French in 1839. In 1847, war having been declared by Mexico against the United States, he took command of the Mexican forces, and when the war came to an end, he retired from Mexico. He afterward resided on Staten island, N. Y. After the death of Juarez in 1872, he returned to Mexico, where he died in 1876.

Sappho (*saf'ō*), celebrated lyric poetess of Greece, was a native, probably, of Mitylene, in Lesbos. She flourished about 600 B. C., and was a contemporary and friend of Alcæus. Except some fragments, only two of her compositions have come down to us, the *Ode to a Young Female*, and *Hymn to Venus*.

Sardou (*sär'dōō'*), **Victorien,** French dramatist, was born in Paris, 1831. He studied medicine at the College Henri IV., but subsequently turned to literature. He won a reputation by *M. Garat*, and other pieces, produced at the Déjazet theater, and was admitted to the academy in 1877. Among his best known plays are: *Les Pattes de Mouche*; *La Taverne*; *Les gens Nerveux*; *Candide*; *La Famille Benoiton*; *Theodora*; *Cléopâtra*; *Thermidor*; *Pamela*; *Robespierre*; *Dante*, etc. Died, 1908.

Sargent (*sär'jent*), **Dudley Allen,** director Hemenway gymnasium, Harvard, was born at Belfast, Me., 1849. He was graduated at Bowdoin, 1875, A. M., 1887, Sc. D., 1894; M. D., Yale, 1878. He is the inventor of the modern system of gymnasium apparatus; director of the normal school of physical training, Cambridge, Mass., and president of the American association for the promotion of physical education.

Sargent, John Singer, American artist, was born in Florence, Italy, 1856, of American parents. He was educated in Italy and Germany; studied painting at the academy of fine arts, Florence, Italy, and in Paris under Carolus Duran; removed to London in 1884, and has since resided there. R. A., 1897; officer of legion of honor. He has painted many portraits, English and American, one of recent note being that of ex-President Roosevelt, painted in 1903; also various other pictures, of which his "Japanese Dancing Girl" was awarded a grand medal at the Paris exposition, 1889.

Sarto (*sär'tō*), **Andrea del,** Italian painter, was born in Florence, Italy, 1487. He painted two series of frescoes in Florence, the best of the first series being *Nativity of the Virgin* and *Journey of the Three Kings*. The most celebrated of his single pictures are the *Last Supper*, the *Madonna with the Harpies*, and *Fathers of the Church Disputing*. He was a rapid worker, and excelled in accurate drawing. He died at Florence in 1531.

Saul, the first king of Israel, was the son of Kish, and began his reign about 1050 B. C. His victories over the Philistines were unmistakable proofs of his vigorous military capacity; but gradually there showed itself a wild perversity culminating in paroxyms of insane rage, which led him to commit frightful deeds. Nothing availed to stay his downward career, and at last he fell in a disastrous and bloody battle with the Philistines on Mount Gilboa. He was succeeded by David.

Savigny (*sä'vēn'y'e*), **Friederick Karl von,** one of the most distinguished of modern European jurists, the founder of the modern historical school of jurisprudence, was born at Frankfort-on-the-Main, 1779. He was professor of law at Landshut, 1808, and at Berlin, 1810-42. He then entered the Prussian ministry, taking charge of the revision of the law. His great works are *Das Recht des Besitzes*. Died, in 1861.

Savonarola (*sav'ō-nä-rō'lä*), **Girolamo,** Italian monk and reformer, was born at Ferrara, 1452. He became a Dominican monk in 1475, and in 1482 removed to Florence, where he became prior of St. Mark's in 1491. He headed the democratic party in Florence toward the close of the fifteenth century, and was remarkable both for his eloquence as a preacher and for his zeal as a reformer. He inveighed against the corruptions of the church, and drew down upon himself a vengeance of excommunication in 1497; was arrested at Florence in 1498 and put to death in the same year. His death preceded by but a few years the death of the Italian republic.

Saxe, Maurice, French marshal, natural son of Augustus II., elector of Saxony and king of Poland, was born at Goslar, 1696. He took a brilliant part in the siege of Philippsburg, 1734, and in the war of the Austrian succession he invaded Bohemia and took Prague by storm. In 1744, now marshal of France, he commanded the French army in Flanders, showed splendid tactical skill, and took several fortresses. For the third time, at Laffeld, 1747, he defeated Cumberland and captured Bergen-op-zoom. He then retired to his estate of Chambord, and died in 1750. His work on the art of war, *Mes Rêveries*, was published in 1751.

Say, Jean Baptiste, eminent French economist, was born at Lyons, 1767. In 1819 he became professor of industrial economy at the Conservatoire des Arts et Métiers, and in 1830 professor of political economy at the College de France. His chief work was his *Traite d'economie politique*. Say died in 1832.

Sayce (*sās*), **Archibald Henry,** English philologist, was born at Shirehampton, near Bristol, 1846. He was graduated from Queen's college, Oxford, 1869. He was deputy-professor of comparative philology, 1876-90, and from 1891 professor of Assyriology. Among his works are *Comparative Philology*; *The Science of Language*; *The Ancient Empires of the East*; *Herodotus*; *Patriarchal Palestine*; *Assyrian Grammar*; *Israel and the Surrounding Nations*; *Egyptian and Babylonian Religion*; *The Archæology of Cuneiform Inscriptions*, etc.

Scaliger (*skal'i-jĕr*), **Joseph Justus,** French scholar was born in Guienne, 1540, and educated at Bordeau. In large part, however, he educated himself, mastering Latin, Greek, Syrian, Hebrew, Persian and most of the modern European languages, and at his death in 1609 was recognized as the greatest scholar of his time. From 1793 until his death he was professor of literature at Leyden.

Schaeffer, Nathan C., American educator, state superintendent of public instruction, Pennsylvania, since 1893, was born in Berks county, Pa., 1849. Ph.D., D.D., LL.D. He was professor at Franklin and Marshall College, 1875-77, and principal of Keystone state normal school, 1877-93; president of national educational association, 1905-07.

Scheele (*shā'le*), **Carl William,** Swedish chemist, was born at Stralsund, in the Prussian province of Pomerania, 1742. Although by profession only an apothecary, and to a large extent self-taught, he made many important chemical discoveries, with which his name will always be associated. He discovered oxygen gas independently of Priestly in 1774, and in the same year discovered the element chlorine. Died, 1786.

Scheffer (*shef'ĕr*), **Ary,** French painter, was born at Dordrecht, Holland, 1795, and studied under Guérin of Paris. He first made a reputation as a painter of genre pieces, which have been popularized in France by engravings. It was not until the romantic movement reached art, however, that he began to feel conscious of his peculiar power. The influence of Goethe and Byron became conspicuous in his choice of subjects. Toward the year 1836 his art underwent its third and final phase—the religious. He also executed some remarkable portraits; among others those of Lafayette, Béranger, and Lamartine. Died, 1858.

Schelling (*shel'ing*), **Friedrich Wilhelm Joseph** German philosopher, was born in Würtemburg, 1775. He studied theology and philosophy at Tübingen and science and mathematics at Leipzig. He began as a follower in philosophy of Fichte and Hegel, with whom he ranks among German philosophers, but later was influenced by Spinoza and Boehme. The large number of his philosophical works include the *Enquiry into the Nature of Human Freedom*; *On the Possibility of Any Form of Philosophy*; *Philosophy of Nature*. He died in Switzerland, 1854.

Schiff (*shif*), **Jacob Henry,** American banker, was born at Frankfort-on-the-Main, Germany, 1847. He was educated in the schools of Frankfort; came to the United States in 1865, and settled in New York. He is senior member of the firm, of Kuhn, Loeb and Co., bankers and director of many corporations.

Schiller, von, Johann Christoph Friedrich, great German poet and dramatist, was born at Marbach, Würtemburg, 1759. In 1773 the duke of Würtemberg, who had formed a favorable opinion of Schiller, educated the boy, free of expense, at the military academy founded by him under the name of Karls-schule. In 1780 he passed as a military surgeon, but meanwhile, in 1778, had completed the first sketch of his memorable drama, *Die Räuber*, ("The Robbers"). In October, 1782, Schiller fled from the harsh service of the duke into Franconia, and lived for a year under a feigned name at Baurbach, near Meiningen, where he completed his *Fiesco* and *Cabale und Liebe*. *Don Carlos* was also sketched in outline here.

In 1783 he went to Mannheim, and was for some time closely connected with actors and theatrical life. To this period belong several of his lesser poems. With the *Cabale und Liebe* above mentioned ended the first poetic period in Schiller's career, otherwise known as the *sturm und drang* period. In 1785 he left Mannheim, and proceeded to Leipzig, where he wrote *Lied an die Freude*;

thence after a few months he went to Dresden, where he began the practice of composing during the night, which so fatally assisted in shortening his life. *Der Geister-seher* was written here, and the drama of *Don Carlos* was completed.

In 1787 he was invited to Weimar, where Goethe and he became the closest friends. Henceforth Schiller owed more to Goethe than to all other men. His *History of the Thirty Years' War* originally appeared in the *Taschenkalender für Damen.* On the occasion of the poet's marriage in 1790 with Charlotte von Lengefeld, the Duke of Meiningen made him a privy-councilor; the French republic also conferred on him the right of citizenship; and in 1802 the emperor raised him to the rank of nobility.

While staying for a year with his relatives in Würtemberg, he wrote his exquisite letters on aesthetic culture. After 1795 the finest of his lyrics and dramas were produced—as *Der Spaziergang* and the *Lied von der Glocke* (Song of the Bell), *Wallenstein, Maria Stuart, Die Jungfrau von Orlaéns, Braut von Messina* and finally his *Wilhelm Tell.* He died 1805.

References.—In English we have the famous biography by T. Carlyle, and those by Lord Lytton, James Sime, H. Nevinson, and T. Calvin. For criticism the following are of importance—E. Dowden's *Schiller's Friendship with Goethe;* F. Werner's *The Characteristics of Schiller's Dramas;* E. Fischer's *Schiller's Works illustrated by the Greatest German Artist.*

hlegel (*shlā'gel*), **August Wilhelm von,** German critic, poet, and scholar, was born at Hanover, 1767. In 1800 he published his first volume of poems; and, in company with his brother, the *Charakteristiken und Kritiken.* His most valuable and most widely popular work was his *Lectures on Dramatic Art and Literature,* originally delivered at Vienna, in the spring of 1808, and translated into most European languages. In 1818 Schlegel, now ennobled, was appointed professor of history in the University of Bonn, and devoted himself to the history of the fine arts and to philological research. He was one of the first students of Sanskrit in Germany, established a Sanskrit printing office at Bonn, and an *Indische Bibliothek.* Died, 1845.

hlegel, Karl Wilhelm Friedrich, German critic and author, brother of the preceding, was born at Hanover in 1772. He studied at Göttingen and Leipzig, and in 1797 published his first work, *The Greeks and Romans,* followed in the course of a year by his *History of Greek and Roman Poetry.* In 1808 he went to Vienna, where, in 1811, appeared his *Lectures on Modern History,* and in 1815 his *History of Ancient and Modern Literature.* Died, 1829.

hleiermacher (*shlī'ĕr-mä'ĸĕr*), **Friedrich Ernst Daniel,** German philosopher and theologian, was born at Breslau, 1768. In 1794 he became assistant clergyman at Landsberg-on-the-Warthe, where he remained for two years. The first work that won for him general celebrity was his *Discourses on Religion,* which startled Germany from its spiritual torpor. He was professor at Halle, 1804-06, and in 1810 was called to a theological chair in the new University of Berlin. In 1811 appeared his *Brief Outline of the Study of Theology;* in 1817 his *Critical Essay on the Writings of Luke;* and in 1821-22 his greatest work, *An Exhibition of the Christian Faith. According to the Principles of the Evangelical Church.* Died, 1834.

hley (*shlī*), **Winfield Scott,** American admiral, was born near Frederick, Md., 1839. He was graduated from the United States Naval Academy, 1860; served in West Gulf blockading squadron from 1861. In 1872 he was placed at the head of the department of modern languages at Annapolis. In 1884 took command of Greeley relief expedition and rescued Lieutenant Greeley and six survivors at Cape Sabine. He was placed in command of the "flying squadron" on duty in Cuban waters in war with Spain; was in immediate command at the destruction of Cervera's fleet off Santiago, July 3, 1898. Promoted to rear-admiral, August, 1898; was presented with a gold sword by the people of Pennsylvania; a silver sword by the Royal Arcanum; a gold and jeweled medal, with the thanks of the Maryland legislature. He retired at the age limit in 1901. Author: *Rescue of Greeley, Forty-five Years Under the Flag,* etc. Died, 1911.

hliemann (*slē'män*), **Heinrich,** German traveler and archæologist, was born at Mechlenburg-Schwerin, 1822. He excavated the ancient city of Troy in 1870, and in 1876 he began excavations on the site of the ancient city of Mycenæ, in Greece, and the treasures found there are now preserved at Athens. He wrote an account of his work in *Mycenæ, Tiryns, Ilios, Troja,* and other volumes. He died at Naples, 1890, and was buried at Athens.

hmidt (*schmit*), **Nathaniel,** professor of Semitic languages and literature at Cornell since 1896, was born at Hudiksvall, Sweden, 1862, and educated in the University of Stockholm, and at Berlin. He was professor of Semitic literature at Colgate, 1888-96, and has gained an international reputation as a student and critic of Semitic and biblical literature.

Schofield (*shō'fēld*), **John McAllister,** American general, was born in Gerry, N. Y., 1831. He was graduated at West Point, 1853, and was made a professor there in 1855; LL.D., Chicago University. When the civil war broke out, he entered the army as major of the 1st Missouri volunteers. He shared Sherman's southern campaign, and was in most of the battles which ended with the taking of Atlanta, when he returned to Tennessee, defeating Hood at Franklin, and was with General Thomas at the battle of Nashville. In 1868 he became secretary of war, and major-general in the regular army. Upon the death of General Sheridan, 1888, he succeeded to the command of the United States army. Previous to his retirement, he was, by act of congress, made lieutenant-general, 1895. He published a biographical narrative entitled *Forty-six Years in the Army.* Died, 1906.

Schoolcraft, Henry Rowe, American ethnologist and explorer, was born at Watervliet, N. Y., 1793. After studying at Union College, he visited the mining region west of the Mississippi, and also acted as geologist in an exploring expedition to Lake Superior and the upper Mississippi under General Cass. While Indian agent he made treaties that gave the United States 16,000,000 acres. As a member of the legislature of Michigan territory, from 1828-32, he founded its historical society. An expedition which he commanded in 1832 discovered the sources of the Mississippi. His works include narratives of his journeys: *Notes on the Iroquois; The Red Race of America; Thirty Years with the Indian Tribes;* and *The Indian in His Wigwam.* He died at Washington, D. C., 1864.

Schopenhauer (*shō'pen-hou'ĕr*), **Arthur,** German philosopher, was born at Dantzic, Germany, 1788. He studied first at Göttingen and afterward at Berlin and Jena. He then proceeded to Dresden, where he published a treatise, *Sight and Color,* which was followed three years later by his great work, *The World as Will and Idea.* Died, 1860.

Schouler (*skōō'lĕr*), **James,** American lawyer and historian, was born at Arlington, Mass., 1839. He was graduated at Harvard, 1859; LL.D., National University, 1891, Johns Hopkins, 1902. He was admitted to the Massachusetts bar, 1862, and to the supreme court of the United States, 1867; and lecturer, Johns Hopkins, Baltimore. Author: *The Law of Domestic Relations; The Law of Bailments; The Law of Personal Property.*

Schubert (*shōō'bĕrt*), **Franz Peter,** Austrian composer, was born at Vienna, 1797. His talent for composition soon revealed itself, and by 1813 his supreme gift of lyric melody showed itself in the song *The Erkling,* the *Mass in F,* etc. His output of work was remarkable for its variety and quantity, embracing some 500 songs, ten symphonies, six masses, operas, sonatas, etc.; but his fame rests on his songs, which are infused by an intensity of poetic feeling. He died in 1828.

Schumann (*shōō'män*), **Robert,** German composer, was born in Zwickau, 1810. He studied at Heidelberg, 1828-30, and then at Leipzig under Wieck. Up to 1840 nearly all his compositions had been for the piano, but he subsequently produced 138 songs, many of which have become classic. In 1850-53 he was director of music at Dusseldorf.

Schumann-Heink (*shōō'män hingk'*), **Ernestine,** née **Roessler,** German dramatic contralto, was born at Lieben, 1861. She studied at Gratz, and made her début at Dresden, 1878. In 1883 she went to Hamburg, in 1896 sang at Bayreuth. She married Heink in 1883, and Paul Schumann in 1893. She made her American début in 1898; since then she has devoted herself largely to concert work. In 1905 she bought a large estate at Montclair, N. J.

Schurman (*shōōrman*), **Jacob Gould,** American educator, president of Cornell University since 1892, was born at Freetown, Prince Edward island, 1854. He was graduated at the University of London, 1877, studied at Paris and the University of Edinburgh, 1877-78; D.Sc., Edinburgh; LL.D., Columbia University, 1892, Yale University, 1901, University of Edinburgh, 1902, and 1886-92 Sage professor of philosophy, and latter part of time dean of Sage school of philosophy, Cornell. Author: *Kantian Ethics and the Ethics of Evolution; The Ethical Import of Darwinism; Belief in God; Agnosticism and Religion; A Generation of Cornell; Report of the Philippine Commission.*

Schurz (*shōōrts*), **Carl,** American publicist, was born in Liblar, near Cologne, Germany, 1829. He was educated at the gymnasium, Cologne, and University of Bonn; LL.D., Harvard; took part in a revolutionary movement in 1848-49; joined the revolutionary army, but finally had to flee to Switzerland. Came to the United States, 1852; settled in Watertown, Wis.; United States minister to Spain, 1861; resigned to enter the Union army; appointed brigadier-general, 1862; major-general, 1863; and commanded a division at the second battle of Bull Run and at Chancellorsville, and a corps at Gettysburg. After the war he was Washington correspondent of the *New York Tribune,* 1865-66; and United States senator from Missouri, 1869-75. He was one of the organizers of the liberal party, 1872; supported Hayes, 1876; was secretary of the interior, 1877-81. Author: *Speeches; Life of Henry Clay; Abraham Lincoln, an Essay,* and an autobiography published in *McClure's Magazine,* interrupted by his death in 1906.

Schwab (*shwäb*), **Charles M.,** American capitalist, ex-president of the United States steel corporation, was born in Williamsburg, Pa., 1862. He was educated in the village school and at St. Francis College; entered service of Carnegie company as stake-driver in engineering corps of Edgar Thompson steel works; became superintendent of Homestead works and finally president of Carnegie steel company, limited. He built the new Catholic church, costing $150,000, at Loretto, Pa.; established an industrial school at Homestead, Pa., etc.

Schwanthaler (*shvän'tä-lĕr*), **Ludwig von,** German sculptor, was born at Munich, 1802. He studied under his father, and after a visit to Rome was charged by King Louis of Bavaria to execute bas-reliefs and figures for the public buildings of Munich. Among his works are the colossal statue of *Bavaria;* statues of Goethe, Jean Paul Richter, Mozart, etc. He died in 1848.

Scipio (*sip'i-ō*), **Æmilianus Publius,** surnamed Africanus Minor, was born about 185 B. C. After distinguishing himself in Spain, he proceeded to Africa to take part in the third Punic war. Here he laid siege to Carthage, took it by storm, and leveled it with the ground in 146 B. C. He was afterward sent to Spain, where he captured Numantia after a stubborn resistance, to the extension of the sway of Rome. Died 129 B. C.

Scipio, Publius Cornelius, surnamed Africanus Major, celebrated Roman general, was born about 237 B. C. In 212 B. C. he was elected ædile, and in the following year proconsul, with command of the Roman forces in Spain. He defeated Hasdrubal at Baesula, with heavy loss. In 205 B. C. he returned to Rome, where he was elected consul, and in the following year sailed from Lilybæum, in Sicily, at the head of a large army, for the invasion of Africa. His success compelled the Carthaginian senate to recall Hannibal from Italy. Peace was concluded the following year, when Scipio returned to Rome, and enjoyed a triumph. His laurels, however, did not protect him from the intrigues of his enemies in Rome. Various charges were brought against him, and he at length retired in disgust to his country seat at Liternum, where he died, 183 or 185 B. C.

Scott, Sir George Gilbert, British architect, was born at Gawcott, near Buckingham, England, 1811. He was indentured to a London architect, 1827-30, and eventually became the leading architect of the Gothic restoration in England. He was elected A.R.A. in 1855, R.A. in 1861; held the professorship of architecture at the London Academy; and was knighted in 1872. He died in 1878, and was buried in Westminster abbey.

Scott, James Brown, American lawyer and educator, was born at Kincardine, Ontario, 1866. He was graduated at Harvard, and studied international law, 1891-94; J.U.D., Heidelberg, 1894. He practiced law at Los Angeles, Cal., 1894-99; professor of law, Columbia Law School, 1903-06; professor of law, 1905-06, and of international law, 1906-11, in George Washington University. He was solicitor for the department of state, 1906-11 Author: *Cases on International Law; Cases on Quasi-contracts; Cases on Equity Jurisdiction; Cases on Equity Pleading.*

Scott, Richard William, Canadian senator and Dominion secretary of state since 1896, was born at Prescott, Canada, 1825. He was educated at Prescott, became member of parliament for Ottawa, 1857-63; speaker of the house of commons, 1871; appointed to senate, 1873; secretary of state, 1873-78; and leader of the opposition in the senate, 1879-96. He carried through parliament the school bill giving the Roman Catholics right to establish separate schools, 1863, and the Canada temperance (local option) act, 1875.

Scott, Sir Walter, Scotch novelist and poet, was born in Edinburgh, 1771. He came of the old border family. Though he matured into a man of robust health, as a child he was feeble and sickly, and was smitten with a lameness which remained with him through life. In 1783 he entered Edinburgh University, and remained there three years. In 1786 he was articled apprentice to his father, in whose office he worked as a clerk till 1792, in which year he was called to the bar.

In his profession he had fair success, and in 1797 he was married to Charlotte Margaret Carpenter, a lady of French birth and parentage. Toward the end of 1799, through the interest of his friends Lord Melville and the Duke of Buccleuch, he was made sheriff-depute of Selkirkshire, an appointment which brought him 300 pounds a year, with not very much to do for it. Meantime, in a tentative and intermittent way, his leisure had been occupied with literature, which more

and more distinctly announced itself as the main business of his life.

His first publication, a translation of Burger's ballads, *Lenore* and *The Wild Huntsman*, was issued in 1796. In 1798 appeared his translation of Goethe's drama of *Goetz von Berlichingen;* and in the year following he wrote the fine ballads, *Glenfinlas*, the *Eve of St. John*, and the *Gray Brother*. The year 1802 gave to the world the first two volumes of his *Border Minstrelsy*, which were followed in 1803 by a third and final one. This work at once won for him a prominent place among the literary men of the time. In 1804 he issued an edition of the old poem *Sir Tristram*. By the publication in 1805 of *The Lay of the Last Minstrel* Scott became at a bound the most popular author of his day.

During the next ten years besides a mass of miscellaneous work, he gave to the world the poems *Marmion*, *The Lady of the Lake*, *The Vision of Don Roderick*, *Rokeby*, *The Bridal of Triermain*, anonymously published, *The Lord of the Isles*, and *The Field of Waterloo*. In *Waverly*, which appeared without his name in 1814, he achieved the first of a new and more splendid series of triumphs. *Guy Mannering*, *The Antiquary*, *The Black Dwarf*, *Old Mortality*, *Rob Roy*, and *The Heart of Midlothian* rapidly followed, and the "Great Unknown," as he was called, became the idol of the hour.

In 1820, to set a seal upon all this distinction, a baronetcy was bestowed upon him as a special mark of the royal favor. Financial misfortune led him to redouble his efforts, and he literally wrote for money. He produced upward of twenty novels in the next ten years, and the strain was terrific. In 1830 he was smitten down with paralysis, from which he never thoroughly rallied. It was hoped that the climate of Italy might benefit him; and by the government of the day a frigate was placed at his disposal in which to proceed thither. But in Italy he pined for his home. He died at Abbotsford 1832, and was buried beside his wife in the old Abbey of Dryburgh.

References.—Lockhart's *Life* is the main source for Scott's biography. See also Hutton's *English Men of Letters;* Lang's *Sir Walter Scott;* Norgate's *Life;* and Crockett's *The Scott Country*.

Scott, William Amasa, university professor, was born at Clarkson, Monroe County, N. Y., 1862; graduated at University of Rochester, 1886; Ph. D., Johns Hopkins, 1892. Professor of history and political science, University of South Dakota, 1887-90; graduate student and instructor of history, Johns Hopkins, 1890-2; assistant professor political economy, 1892-3, associate professor, 1893-7, professor since 1897, director School of Commerce since 1900, University of Wisconsin. Author: *Repudiation of State Debts; Money and Banking*. Translator: Bohm-Bawerk's *Recent Literature on Interest*, etc.

Scott, Winfield, American general, was born near Petersburg, Va., 1786. He studied at William and Mary College, and first became a lawyer, but in 1808 entered the army as captain. In the war of 1812 he was sent to the Canadian border, where he fought at Queenstown and at Lundy's Lane. He was wounded in both the battles, having two horses shot under him at Lundy's Lane. He was made a major-general for his services. As commander-in-chief of the United States army, 1841-47, he took command of the invasion of Mexico. He captured Vera Cruz, and defeated Santa Anna at Cerro Gordo, taking Jalapa and Puebla; took the castle of Chapultepec by storm, and September 14, 1847, marched into the city of Mexico, where he commanded until the treaty of peace was signed in February, 1848. At the beginning of the civil war he was in charge of the army, but soon yielded his position to younger men. He died at West Point, 1866.

Seaman, Owen, English humorist and editor of *Punch* since 1906, was born in 1861. He was educated at Shrewsbury and at Clare College, Cambridge; was professor of literature at Durham College; of science at Newcastle-on-Tyne, 1890; and began writing for *Punch*, 1894. He was made a barrister of Inner Temple, 1897, joined the staff of *Punch* in the same year, and was assistant editor in 1902.

Seawell, Molly Elliot, American author, was born in Gloucester county, Va., 1860, daughter of John Tyler Seawell. She was educated privately, and began writing sketches and stories in 1886. In 1890 her *Little Jarvis* took a prize of $500 offered by the *Youth's Companion* for the best story for boys, and in 1895 her *Sprightly Romance of Marsac* took a prize of $3,000 offered by the *New York Herald*.

Seerley, Homer Horatio, college president, was born near Indianapolis, Indiana, 1848; graduated at the State University of Iowa, 1873, Bachelor of Didactics, 1875, M. A., 1876; LL. D., Pennsylvania College, 1898, State University of Iowa, 1901. Was teacher, 1873-5, and superintendent city schools, 1875-86, Oskaloosa; president of Iowa State Teacher's College since 1886; president department normal schools, N. E. A., 1898; etc. Author: *History and Civil Government of Iowa; The Common Schools*, etc.

Seeley, Sir John Robert, English historian, was born in London, 1834. He was educated at Christ's College, Cambridge, and was elected a fellow of his college in 1858. His *Ecce Homo* appeared anonymously in 1865, and excited an extraordinary commotion in the religious world. It was followed by *Natural Religion*, 1882. He was created a K. C. M. G. in 1894 and died, 1895.

Seligman (*sel'ig-man*), **Edwin Robert Anderson,** American economist, McVickar professor of political economy, Columbia University, since 1891, was born in New York, 1861. He was graduated at Columbia, 1879. He was adjunct professor at Columbia, 1888-91; president of the American economic association, 1902-04, and is now president of the Tenement house building company. He is editor of the *Political Science Quarterly*. Author: *Railway Tariffs; Finance Statistics of American Commonwealth; Economic Interpretation of History; Principles of Economics*, etc.

Selous (*se-lōōs'*, or *lōō*), **Frederick Courtney,** English traveler and writer, was born in London 1851, and was educated at Rugby, in Switzerland and in Germany. He first visited South Africa in 1871, and since has published *A Hunter's Wanderings in Africa; Travel and Adventure in Southeast Africa*.

Sembrich (*zem'brik*), **Marcella,** Austrian soprano, was born in 1858. She studied under Stengel, whom she afterward married, Epstein, and Rokitansky in Vienna, and made her début at Athens in 1877, in *I Puritani*. In 1879 she sang in Dresden and afterward at Vienna, Dresden, London, and New York. Besides possessing a voice of high quality, she is also an excellent actress.

Semmes (*semz*), **Raphael,** American naval officer, was born in Maryland, 1809. He served in the Mexican war, in 1861 joined the naval service of the confederate states, and was appointed to the command of the war steamer *Sumter*. He also commanded the famous *Alabama* during her destructive cruise. After the war he practiced law at Mobile, Ala.

Seneca, Lucius Annaeus, Roman stoic philosopher, was born at Corduba, Spain, about 3 B. C. On the accession of Emperor Claudius, A. D. 41, he was banished to the island of Corsica. On the marriage of Claudius to his second wife, Agrippina, Seneca was through her influence recalled, and was appointed tutor to her son Domitius, afterward the emperor Nero. Five years later his pupil ascended the throne, and Seneca became one of the chief advisers of the young emperor. All his influence failed, however, to restrain the vicious propensities of Nero; and, after the murder of Agrippina by the latter, A. D. 59, Seneca asked permission to retire from court. He now wholly avoided public life, and devoted himself to his philosophical studies; but the emperor, who both disliked and feared him, followed him into his retirement, and is said to have sought to compass his death by poison. After the conspiracy of Piso, A. D. 65, Seneca was mentioned by one of the conspirators as having shared in the plot, and without further proof, was ordered to put himself to death. He died with all the courage of a stoic, and his wife, Pompeia Paulina, attempted, though vainly, to die with him. Of Seneca's writings which have come down to us, the greater part are on moral and philosophical subjects.

Sennacherib (*se-nak'ēr-ib*), celebrated king of ancient Assyria, reigned from 705 to 681 B. C. He seems to have been the first who fixed the seat of government permanently at Nineveh, which he adorned with splendid buildings.

Septimius Severus. See **Severus.**

Sergel (*ser'gel*), **John Tobias,** eminent Swedish sculptor, was born at Stockholm, 1740. He was a pupil of L'Archevêcque, and subsequently completed his studies at Rome; rose to great eminence, and was ennobled after his return to Sweden. He died in 1814.

Servetus (*sēr-vē'tus*), **Michael,** Spanish physician and controversialist, was born in Spain, about 1511. He studied law at Saragossa and Toulouse, was graduated in medicine at Paris, and afterward studied theology at Louvain. He maintained a vigorous correspondence with Calvin, who endeavored for sixteen years to convince him of his errors; and the failure of the endeavor irritated Calvin, whose anger was doubltess increased by the trenchant styles in which Servetus replied to his arguments. Was so imprudent as to pass through Geneva, where Calvin obtained intelligence of his arrival, and gave information of it to the magistrates. He was thereupon seized, imprisoned, tried for heresy, and ultimately burned by a slow fire, 1553.

Seton (*sē'tun*), **Ernst Thompson,** artist, author, lecturer, was born at South Shields, England, 1860. He lived in the backwoods of Canada, 1866-70; on western plains, 1882-87. He was educated at Toronto Collegiate Institute and the Royal Academy, London, England, and studied art in Paris, 1890-96. He was one of the chief illustrators of *The Century Dictionary*. Author and illustrator: *Wild Animals I Have Known; The Trail of the Sandhill Stag; The Biography of a Grizzly; Krag and Johnny Bear; Two Little Savages; Monarch, the Big Bear*.

Severus (*sē-vē'rus*), **Lucius Septimius,** Roman emperor, was born near Leptis Magna in Africa, 146. He rose to be prætor in 178, and commanded of the army in Pannonia and Illyria. After the murder of Pertinax in 193, he was proclaimed emperor, marched upon Rome, utterly defeated his two rivals in 195 and 197, and between these dates made a splendid campaign in the East, and took Byzantium. To protect south Britain from the Caledonian invasions, he repaired Hadrian's wall, sometimes called after Severus, and died soon after at Eboracum (York), 211.

Sevigne (*sā'vēn'yā'*), **Madame de,** née **Marie de Rabutin Chantal,** one of the most charming of letter writers, was born at Paris, 1626. At eighteen she married the dissolute Marquis de Sévigné, who left her a widow at twenty-five. Her fame rests on her *Letters*, written chiefly to her daughter in Provence, which reflect the brightest and purest side of Parisian life, and contain the tender outpourings of her mother's heart in language of unstudied grace. She died in 1696.

Seward, William Henry, American statesman, was born in Florida, N Y., 1801. He was graduated at Union College in 1820, was admitted to the bar in 1822, and settled at Auburn, N. Y. He was elected to the state senate in 1830; was elected governor of New York in 1838, and in 1849 was elected to the United States senate, where he became the acknowledged leader of his party. In 1860 he was the most prominent candidate of the republican party for nomination for the presidency, but personal and local interests finally secured the election of Abraham Lincoln. Seward afterward accepted the important post of secretary of state, in Lincoln's cabinet, in which he guided the diplomacy of the federal government through the perils of the civil war. He resigned in 1869 on the accession of U. S. Grant. He published *Speeches and Orations*, in 4 volumes, *Life of John Quincy Adams*, and *Life of De Witt Clinton*. Died 1872.

Seymour, Sir Edward Hobart, English admiral, was born in 1840. He was educated at Radley and entered the British navy in 1852. He served through the Crimean war in the Black sea; the China war, 1857-60; operations against Chinese rebels, and in the Egyptian war of 1882, taking part in most of the naval fighting in connection with those wars. As commander he was badly wounded in action on the river Congo. He became captain in 1873, rear-admiral, 1889, and vice-admiral, 1895, and was commander-in-chief of the China station, 1898-1901.

Seymour, Horatio, American statesman, was born at Pompey, N. Y., 1810. He studied at a military school; was admitted to the bar, 1832; entered New York legislature, 1841; and was chosen speaker, 1845. He was elected governor in 1853 and 1863, and came into great prominence as one of New York's "war governors." He was Democratic candidate for President, in 1868. Died 1886.

Shaftesbury, Anthony Ashley Cooper, Earl of, British statesman, was born at Winborne, in Dorsetshire, 1621. He was educated at Exeter College, Oxford, and studied law at Lincoln's Inn. He entered parliament in 1640. He was chancellor of the exchequer in 1661, and in 1672 was created an earl and lord chancellor, but hoodwinked by Charles in the secret treaty of Dover, he went over to the opposition and lost his chancellorship. His virulent attacks on James and espousal of Monmouth's cause brought about his arrest on a charge of high treason in 1681, and although released he retired to Holland, where he died in 1683. He is the *Achitophel* of Dryden's great satire.

Shaftesbury, Anthony Ashley Cooper, seventh Earl of, English statesman and philanthropist, was born in London, 1801. He was graduated at Oxford, and entered parliament as a conservative in 1826. His name lives, by virtue of his noble and lifelong philanthropy, which took shape in numerous acts of parliament, such as the mines and collieries act of 1842, excluding women and boys under thirteen working in mines; the better treatment of lunatics act, 1845, called the *magna charta* of the insane; the factory acts, 1867, and the workshop regulation act, 1878. He died in 1885.

Shahan, Thomas Joseph, American educator, rector of the Catholic University of America since 1909, was born at Manchester, N. H., 1857. He was educated at Montreal College, Canada, 1872; American College, Rome, 1878-82; D.D., College of the Propaganda, Rome, 1882; J.U.L., Roman Seminary, 1889. He was ordained to the Roman Catholic priesthood in the cathedral of St. John Lateran, Rome, 1882; professor of church history and patrology, Catholic University of America, since 1891. Author: *The Blessed Virgin in the Catacombs; The Middle Ages; The House of God, and Other Addresses and Studies*, etc.

Shah Jehan (*shä' je-hän'*), fifth of the Mogul emperors of Delhi, was born about 1592, and succeeded his father in 1627. He was a man of great administrative ability and a skilled warrior. He founded the modern city of Delhi; built the Taj Mahal and other magnificent buildings at Agra. Died in prison in 1666, a victim to the perfidy of his usurping son, Aurungzebe.

Shakespeare, William, the chief literary glory of England, was born at Stratford-on-Avon, in Warwickshire, 1564. His father, John Shakespeare, seems to have belonged by birth to the class of yeoman. His mother, Mary Arden, was of more distinguished origin, and came of a good old Warwickshire family. Of a family of four sons and four daughters born to them, William was the third child. At the free grammar school of Stratford there can be little doubt the young Shakespeare received his entire education.

In 1582 Shakespeare, a lad of nineteen, was married to Anne Hathaway of Shottery, a girl about eight years older than himself. The children born of the marriage were a girl, and twins, a boy and a girl. The boy Hamnet died in his twelfth year.

At the age of twenty-two, Shakespeare went to London. No certain details have come down to us as to his earlier relations with the London theater. According to one tradition, he was content at first to turn a penny by holding horses at the door. According to another—which seems a natural sequence with the foregoing—we find him admitted inside on his promotion, though as yet only in the humble capacity of prompter's attendant. If at any time he was thus occupied it could have been only for a brief period, as very speedily we have note of him as a man of some importance, at once dramatist, actor, and shareholder in the Blackfriars theater.

In the year 1592 we find a contemporary and brother dramatist, Henry Chettle, apologizing to Shakespeare for an offense given, in terms most respectfully appreciatory of his excellences at once as a man and an author, and in 1698 Francis Meres, in his *Wits' Treasury*, writes of him as the "most excellent among the English for both kinds of tragedy and comedy." We have ample evidence of the unrivaled acceptance his works obtained from all classes; they brought him special marks of favor and approval from Queen Elizabeth and her successor James, and procured him the patronage and friendship of some of the most accomplished men of rank of the time, more notably, Henry Wriothesly, earl of Southampton, to whom he dedicated his *Venus and Adonis*, and *Rape of Lucrece;* and William Herbert, earl of Pembroke, to whom his *Sonnets* are addressed.

His visits to Stratford now became more and more frequent; and prior to the year 1613 he had ceased to reside in London, and finally established himself at Stratford. Of his last years there spent, further than they lapsed peacefully in honor, and the exercise of a liberal and kindly hospitality, nearly nothing is known. There is a good reason to believe that, though withdrawn from other active concernment with the stage, he still continued to write for it. His death took place on his fifty-third birthday, 1616, and he was buried in Stratford church-yard.

He was essentially a man of noble and estimable character, and was obviously of most kindly and lovable disposition; his pleasurable wit and good nature made him delightful as a companion; and it was as "gentle Will Shakespeare" that he was familiarly known to his contemporaries. The lofty eulogy of Dryden, "he was the man who, of all modern and perhaps ancient poets, had the largest and most comprehensive soul," has been generally acquiesced in. As dramatist, he is admittedly in the world without a peer; as poet, there are but one or two names in literature even to be named beside his; and dismissing his claims in either kind, we have in his works such a treasury of gnomic wisdom on all matters of human concernment as no other writer has ever left to the world.

References.—Halliwell-Philipp's *Outlines of the Life of Shakespeare;* Sidney Lee's *Life;* Hazlitt's *Characters of Shakespeare's Plays;* Ulrici's *Shakespeare's Dramatic Art;* Hudson's *Shakespeare: His Life, Art, and Characters;* Dowden's *Shakespeare, His Mind and Art;* Bayne's *Shakespeare Studies;* Swinburne's *Study of Shakespeare;* White's *Studies in Shakespeare;* Moulton's *Shakespeare as a Dramatic Artist;* Brandes' *William Shakespeare;* Smith's *Eighteenth Century Essays on Shakespeare;* Stopford Brooke's *Ten Plays of Shakespeare;* Gervinus's *Shakespeare.*

Shaler (*shā'ler*), **Nathaniel Southgate,** American scientist, author, was born in Newport, Ky., 1841. He was graduated at Lawrence Scientific School, Harvard, 1862; Sc.D., 1865; served two years as artillery officer in Union army during the civil war. Professor of palæontology, 1868-87, and afterward professor of geology, Harvard; and from 1884 to 1906 was geologist in charge of the Atlantic division of the United States geological survey. Author: *A First Book in Geology; Kentucky, a Pioneer Commonwealth; Sea and Land; The United States of America; A Study of the American Commonwealth; American Highways; Features of Coasts and Oceans; Domesticated Animals: Their Relation to Man; The Individual; Study of Life and Death;* etc. Died 1906.

Sharpless, Isaac, American educator, president of Haverford College since 1887, was born in Chester county, Pa., 1848. He was graduated at the Lawrence Scientific School, Harvard, 1873; Sc.D., University of Pennsylvania; LL.D., Swarthmore College; professor of mathematics and astronomy, 1879-84, and dean, 1884-87, of Haverford College. Author: *Astronomy; Geometry.*

Shaughnessy, Sir Thomas George, Canadian railway president, was born at Milwaukee, Wis., 1853. He received a common school education; entered the railway service in 1869, in the purchasing department of the Chicago, Milwaukee and St. Paul railroad. Vice-president and director, 1891-98, and president since 1898 of the Canadian Pacific railway. He was knighted by Queen Victoria, 1901.

Shaw, Albert, editor of the *American Review of Reviews*, was born in Shandon, Ohio, 1857. He was graduated at Iowa College, Grinnell, Ia., 1879; Ph.D., Johns Hopkins, 1884; LL.D., University of Wisconsin, 1904. He is a member of numerous learned societies, and has lectured in many Universities and colleges. Author: *Icaria—A Chapter in the History of Communism; Municipal Government in Continental Europe,* etc.

Shaw, George Bernard, British dramatist, critic, and novelist, was born in Dublin, Ireland, 1856, and went to London in 1876, where he engaged in newspaper work. He published a few novels, wrote musical critiques in the *London Star*, 1888-90, and in the *World*, 1890-94; and, in 1895, began his work as a dramatic critic, writing in the *Saturday Review*. In 1898 he published *Plays, Pleasant and Unpleasant.* Since then his chief literary work has been writing for the stage. His plays include *Man and Superman; John Bull's Other Island; Major Barbara; The Doctor's Dilemma; Cæsar and Cleopatra; Getting Married,* etc.

Shaw, Henry Wheeler, American humorist, was born in Lanesborough, Mass., 1818. In 1859 he began to write, and, in 1860, sent *An Essa on the Mul, bi Josh Billings* to a New York paper. It was reprinted in several comic journals, and extensively copied. His most successful literary venture, however, was his *Farmer's Allminax* a travesty on the *Old Farmer's Almanac.* He began to lecture in 1863, and, for twenty years previous to his death, contributed regularly to the *New York World.* Died in Monterey, Cal., 1885.

Shaw, Leslie Mortimer, American financier and lecturer, was born at Morristown, Vt., 1848. He was graduated at Cornell College, Mt. Vernon, Ia., M.S., 1874; LL.D. He was admitted to the Iowa bar in 1876, and began practice at Denison, Ia.; subsequently engaged in banking at Denison, Manilla, and Charter Oak, Ia. Was twice elected governor of Iowa, 1898-1900, 1900-02; secretary of the treasury, 1902-07, and president of the Carnegie trust company, New York, 1907-08.

Shays, Daniel, American insurgent, was born in Hopkinton, Mass., 1747. He served as ensign at the battle of Bunker Hill; attained the rank of captain in the continental army, and took a leading part in the popular movement in western Massachusetts for the redress of alleged grievances due to misgovernment. In 1786 he appeared before Springfield, Mass., at the head of 1,000 men, to prevent the session of the supreme court at that place. He died in Sparta, N. Y., 1825.

Shelley, Percy Bysshe, famous English poet, was born at Field Place, near Horsham, England, 1792. In 1808 he left school, and after two years passed at home was sent to Oxford. A pamphlet entitled *The Necessity of Atheism*, which circulated during the second year of his college course, led to his expulsion from Oxford. In 1811 he married Harriet Westbrook, daughter of a retired innkeeper, but in 1814 a separation took place between him and his wife. His second wife was Mary Godwin. In 1813 appeared his poem *Queen Mab*, which was printed only for private circulation. In 1818 he left England for Italy, and during that and the following year, chiefly while a resident at Rome, he produced what may rank as his two finest poems—the grand lyrical drama of *Prometheus Unbound* and the tragedy of *The Cenci.* His other works of chief importance are *Rosalind and Helen, The Witch of Atlas,* written in 1819; *Epipsychidion, Adonais,* on the death of Keats, and *Hellas*—all produced in 1821. He perished in 1822 by the capsizing of his boat, while sailing in the gulf of Leghorn.

Shelley, Mary Wollstonecraft Godwin, wife of the poet, was born in London in 1798, and married Shelley in 1816. In 1818 she produced a remarkable novel entitled *Frankenstein.* She likewise wrote *Rambles in Germany and Italy,* etc., and carefully edited her husband's poems. Died in London, 1851.

Shepard, Edward Morse, American lawyer and publicist, was born in New York, 1850. He was graduated at the college of the city of New York, 1869, studied law and was admitted to the bar. He was civil service commissioner of Brooklyn, 1883-85; New York state forestry commissioner, 1884-85, and democratic candidate for mayor of Greater New York, 1901. Author: *Martin Van Buren* in American statesmen series; *Memoirs of Dugdale;* and many review, magazine and other articles and addresses on political, industrial and educational topics. Died, 1911.

Shepherd, F. J., Canadian physician, professor of anatomy and dean of the medical faculty, McGill University, Montreal, was born at Cavagnol, province of Quebec, 1851. LL.D., Edinburgh and Harvard. He was demonstrator of anatomy in McGill University, 1875; president of the Montreal medico-chirurgical society, and vice-president of the international dermatological congress, 1894 and 1907. Author: *American Text-Book of Surgery; Retrospect of Surgery,* 1881-94, etc.

Sheridan, Philip Henry, American general, was born at Albany, N. Y., 1831. He was graduated at West Point in 1853. At the beginning of the civil war he was a captain in the 13th infantry, was made quartermaster of the federal army in Missouri, and rapidly passed up through the various grades to major-general in 1863 for brilliant service in the battles of Perryville and Stone river. For his decisive victory over Early at Cedar Creek—the occasion of his famous ride—he was promoted to major-general in the regular army, and received the thanks of congress. Returning to the army of the Potomac, in 1865, he was conspicuous under Grant in the operations before Petersburg, and in the final battles preceding Lee's surrender. When Sherman was made general, Sheridan was made lieutenant-general, and when Sherman was retired, a special act of congress conferred the further rank of general upon Sheridan, who became commander-in-chief of the army. He died at Nonquitt, Mass., 1888.

Sheridan, Richard Brinsley, British dramatist and politician, was born in Dublin, 1751. He was educated at Harrow, and became a student of the Middle Temple, London, though he was never called to the bar. In 1775, produced *The Rivals* successfully at Covent Garden. In 1777 he became part proprietor of Drury Lane theater, for which he produced *The School for Scandal,* and also *The Critic,* one of the wittiest farces in the language. During the whole time of Pitt's ascendancy the talents of Sheridan were displayed in combating that great statesman, by whom however, his eloquence was acknowledged, and especially his eloquence on the occasion of the Warren Hastings' trial. He died in 1816, and was buried in Westminster abbey.

Sherman, James Schoolcraft, lawyer, banker, vice-president of the United States since 1909, was born in Utica, N. Y., 1855. He was graduated from Hamilton College in 1878, and was admitted to the bar in 1880; LL.D., Hamilton, 1903. Was mayor of Utica, 1884; chairman of New York state republican convention in 1895 and again in 1900; and chairman of the national republican congressional committe, 1906-09. He was a member of congress, 1887-91, 1893-1903, and 1903-09; elected vice-president of the United States, 1908, taking his seat, March 4, 1909. Died, 1912.

Sherman, John, American statesman, brother of William Tecumseh, was born at Lancaster, Ohio, 1823. He was employed for a time at surveying, and was admitted to the bar in 1844, entering into partnership with his brother. He became an anti-slavery whig, and as such entered congress in 1855. He was reelected to congress and continued in the house until 1861, the recognized leader of the republicans. He was then United States senator, 1861-77, and 1881-97; secretary of the treasury under President Hayes, 1877-81; and secretary of state under President McKinley, 1897-98. He supported the reconstruction measures, defended the protective tariff, and took a leading part in the legislation for the restoration of specie payments, and the refunding of the national debt, and was author of the famous Sherman anti-trust law. Died at Washington, 1900.

Sherman, Roger, American statesman, was born at Newton, Mass., 1721. He was a shoemaker by trade, then a surveyor of lands, and finally a lawyer and judge; served in both the continental and the United States congresses from 1774 to 1791; was one of the committee that drafted the declaration of independence, one of the signers of it. He was United States senator 1791-93. Died 1793.

Sherman, William Tecumseh, American general, was born in Lancaster, Ohio, 1820. He was graduated at West Point in 1840, and received a commission as first lieutenant in the United States army in 1841. During the war with Mexico he was promoted to the rank of captain. In 1861, was appointed colonel of infantry. Raised to the rank of brigadier-general. He distinguished himself at the battle of Shiloh, and as major-general in the siege of Vicksburg. Raised to an independent command, he marched across the state

of Mississippi, took command of the army of Georgia, forced General Hood to evacuate Atlanta, and captured Savannah and Charleston, from which point he moved north, and, by cutting off the resources of General Lee, compelled the evacuation of Richmond, and the surrender of General Lee to General Grant, April 9, 1865. No Northern general acquired greater popularity than Sherman. He was appointed lieutenant-general in 1866, and in 1869 became general and commander-in-chief. In point of daring originality of design, fertility of resource, brilliant strategy, and untiring energy, General Grant pronounced him "the best field officer the war had produced." He retired from the command of the army of the United States, 1884. Died, 1891.

Shorey, Paul, university professor, was born at Davenport, Ia., 1857; graduated from Harvard, 1878; University of Leipzig, 1881-2, University of Bonn, 1882, American School of Classical Studies, Athens, 1882-3; Ph. D., University of Munich, 1884; LL. D., Iowa College, 1905; admitted to bar, Chicago, 1880. Professor of Greek, Bryn Mawr College, 1885-92; professor of Greek since 1892, head department since 1896, University of Chicago. Annual associate director of American School Classical Studies, Athens, 1901-2; president American Philological Association, 1910. Author: *De Platonis Idearum Doctrina; The Idea of Good in Plato's Republic; The Odes and Epodes of Horace; The Unity of Plato's Thought*, etc.

Siddons, Sarah, noted English tragic actress, was born at Brecon, 1755, daughter of Roger Kemble, manager of a company of itinerant players. In her eighteenth year she married William Siddons, an actor, and in 1775 made her first appearance in London as Portia. She appeared at Drury Lane, 1782, in the character of Isabella in *The Fatal Marriage*. In 1785 she appeared as Lady Macbeth, her greatest rôle, and in 1788 as Queen Catherine. Thenceforth her course was a continual triumph. She died in 1831. In 1783 Sir Joshua Reynolds painted her as *The Tragic Muse*.

Sidgwick, Henry, English moralist and economist, was born in Yorkshire, 1838, and educated at Trinity College, Cambridge, where he lectured from 1859 to 1875, becoming professor of moral and political philosophy in the latter year, and professor of moral philosophy in 1883. His chief works comprise *The Methods of Ethics; The Principles of Political Economy; History of Ethics*, and *The Elements of Politics*. Died, 1901.

Sidney, Sir Philip, English writer and soldier, was born in Kent, 1554. He was educated at Oxford, traveled throughout Europe, and returned to become a favorite at the court of Elizabeth, who called him "the jewel of her dominions." For her entertainment he wrote his celebrated *Arcadia* and several minor poems. Among his works are also his *Apologie for Poetrie* and *Defense of Poetrie*. He was killed at the battle of Zutphen, 1586.

Siegel, Henry, American merchant, was born in Eubigheim, Germany, 1852. He was educated in Germany, and in night school, Washington. He came to the United States in 1867; moved to Chicago in 1876, established the cloak manufacturing firm of Siegel, Hartsfeld and Company; later Siegel Brothers, and finally established Siegel, Cooper and Company, department store, Chicago.

Siemens, Ernst Werner von, German engineer and electrician, was born at Lenthe in Hanover, 1816. In 1838 he entered the Prussian artillery, and in 1844 took charge of the artillery workshops at Berlin. He developed the telegraphic system in Prussia, and discovered the insulating property of gutta-percha, and was the first to explode a submarine mine by electricity. Besides devising numerous forms of galvanometers and other electrical instruments, Siemens was one of the discoverers of the self-acting dynamo. He determined the electrical resistance of different substances, the Siemens unit being called after him. He died at Berlin in 1892.

Siemens, Sir William (Karl Wilhelm), German scientist, was born at Lenthe, Hanover, 1823, brother of the preceding. He studied at Göttingen, giving special attention to science. As manager of the house of Siemens Brothers, he was engaged in constructing telegraph lines, the steamship *Faraday* being designed by him for cable laying. He invented a water meter, a bathometer for measuring ocean depths, an electrical thermometer, and a process of hastening the growth of plants by electric light. He was president of the three principal telegraphic societies of Great Britain, and of the British association, and in 1883 was knighted. He died at London, 1883.

Sienkiewicz (*shen-kyā'vich*), **Henryk,** Polish novelist, was born at Wola Okrzejska, in Lithuania, 1846, and was educated at the University of Warsaw. In 1876 he came to the United States, and for a time, in company with Madame Modjeska, his countrywoman, he resided in California, where he designed to establish a Polish colony. He returned to Poland and in 1880 wrote a work on *Tartar Slavery*, following this, a few years later, by his masterly novel, *With Fire and Sword*. To this succeeded *The Deluge, Pan Michael, Without Dogma* and *Children of the Soil*. In 1895 appeared his masterpiece, *Quo Vadis?*—a tale of the time of Nero. His later works include *The Knights of the Cross, Monte Carlo*, etc. In 1905 he received the Nobel prize for literature.

Silliman, Benjamin, American physicist, was born at Trumbull, Conn., 1779. He was educated at Yale College, and admitted to the bar in 1802, but soon after received from the college the appointment of professor of chemistry, and held that chair over half a century. In 1818 he founded the *American Journal of Science*, better known as *Silliman's Journal*, of which he was for twenty years editor. Died, 1864.

Sieyès (*syā'yes'*), **Emmanuel Joseph,** better known as the Abbé Sieyès, French revolutionist, was born in Frejus, France, 1748. He studied for the church at Paris; during the reign of terror he withdrew into the country; but after Robespierre's downfall returned to the convention, took an active part in affairs, and became president of the national assembly in 1790. He retired with the title of count, and obtained grants of land and property to the value of at least $250,000. He was exiled at the restoration, but returned to Paris during the revolution of 1830, and died there in 1836.

Sifton, Clifford, Canadian statesman, was born in Middlesex county, Ontario. He was graduated at Victoria University, Coburg, 1880; was admitted to the Manitoba bar, 1882; practiced in Brandon; was created queen's counsel by Dominion patent, 1895. He was a member of the Manitoba legislature, 1888-96. He was first elected to the Dominion house of commons for Brandon, Manitoba, 1896, and reëlected in 1900 and 1907.

Sigel (*sē'gel*), **Franz,** American general, was born in Germany, 1824. He was in the service of the grand-duke of Baden, and became minister of war in the revolution of 1848, but was obliged to flee, and came to the United States. He entered the federal army as colonel in 1861, during the civil war, and by gallant service rose to the rank of major-general. He was register of New York city, 1871-74. Died, 1902.

Sigismund (*sij'is-mund*), emperor of Germany, was born about 1368. He was terribly defeated in an expedition against the Turks at Nicopolis in 1396. Some years later he conquered Bosnia, Herzegovina, and Servia, and became emperor of Germany in 1411. Died 1437.

Simon (*sē'môn'*), **Jules François,** French statesman and publicist, was born at Lorient, France, 1814. He was educated at Lorient and at Vannes, and in 1839 became professor of philosophy at the Sorbonne, Paris. He was then member of the corps législatif, 1863-70; minister of public instruction, 1871-73; senator and member of the French Academy, 1875, and prime minister, 1876-77. Amidst the general corruption he remained poor, supporting his family by his pen, and preserving an absolutely stainless character to the last. Died, 1896.

Simpson, Sir James Young, noted Scottish physician, was born at Bathgate, Scotland, 1811. He was graduated at the University of Edinburgh as doctor in medicine in 1832, and in 1840 was appointed to the chair of obstetrics there. In this field he introduced the use of chloroform and other anæsthetics, and made improvements in the old methods of practice. Died, 1870.

Simpson, Matthew, American Methodist Episcopal clergyman and bishop, was born in Cadiz, Ohio, 1811. He was graduated in medicine in 1833, and soon after entered the ministry in the Pittsburg conference. He was vice-president and professor in Allegheny College, 1837; president of Indiana Asbury University, 1839, and editor of the *Western Christian Advocate*, 1848. He was the author of *A Hundred Years of Methodism*, and of the *Cyclopedia of Methodism*, and was one of the most eminent pulpit orators of the nineteenth century. Died, 1884.

Sinclair, Upton, author, was born in Baltimore, 1878, and graduated from the College of the City of New York, 1897. He assisted the government in the stockyard's investigation in Chicago, and has taken a leading part in socialist movements. Author: *Springtime and Harvest; Prince Hagen, a Phantasy; Manassas; The Jungle; The Industrial Republic; The Overman*, etc.

Sinclair, William Macdonald, English prelate, archdeacon of London and canon of St. Paul's since 1889, was born at Leeds, 1850. He was graduated at Balliol College, Oxford, and became assistant minister of Quebec chapel, 1876. He was resident chaplain to the bishop of London, 1877; chaplain to the order of St. John of Jerusalem, 1900, and chaplain-in-ordinary to Queen Victoria. Author: *The Servant of Christ; Simplicity in Christ*, etc.

Sismondi (*sis-mon'dē*), **Jean Charles Leonard Simonde de,** distinguished Swiss historian of Italian descent, was born at Geneva, 1773. Before he had completed his education the pecuniary reverses of his father made it necessary for him to enter a counting-house. In 1803 appeared a work on political economy, followed by his *History of the Italian Republics*. In 1813 appeared his *Literature of Southern Europe*, and in 1819 he began his greatest work, the *History of the French*, with which he was occupied until his death, in 1842.

Sixtus IV., Pope, Francesco della Rovere, was born in a small village near Savona, Italy, 1414. He had a great reputation as a preacher throughout Italy, and became pope in 1471. Learning, and especially the improvement of the city, owe much to him. He built the Sistine chapel and the Sistine bridge across the Tiber, increased the vatican library, and patronized the great painters of his time. He died in 1484.

Sixtus V., Felice Peretti, one of the ablest of the popes, was born near Montalto, Italy, 1521. He was a professor of theology at Rimini and Siena, an eloquent preacher, vicar-general, and cardinal, and succeeded Gregory XIII. His pontificate was notable for vigorous administration. He also fixed the number of cardinals at seventy. Died, 1590.

Skeat (*skēt*), **Walter William,** English philologist, was born in London, 1835. He was graduated from Christ's College, Cambridge, 1858, became a fellow in 1860, and in 1878 professor of Anglo-Saxon; Litt.D., LL.D., Ph.D., D.C.L. He was the first director of the dialect society, established in 1873, and contributed more than any scholar of his time to a sound knowledge of Middle English and English philology generally. His works include: *Piers Plowman;* Barbour's *Bruce;* Chaucer's *Treatise on the Astrolabe*, etc.; editions of Chatterton's *Poems;* Chaucer's *Minor Poems*; his admirable *Etymological English Dictionary*; *Principles of English Etymology;* his great edition of Chaucer, in 6 volumes etc.

Skobeley (*skō'be-lyef*), **Mikhail Dimitrievich,** Russian general, was born in 1844. He fought against the Polish insurgents in 1863, and in 1875-71 was at the conquest of Khiva and Khokand. In 1881 he stormed the Turkoman stronghold Geok-Tepe. He died near Moscow, in 1882. He was an ardent Panslavist.

Slicer, Thomas Roberts, Unitarian clergyman, was born at Washington, 1847. He was educated in Baltimore; A.M., Dickinson College; D.D., Harvard. He was a Methodist Episcopal minister ten years in Maryland, Colorado and New York; entered Unitarian ministry, 1881; held pastorates in Providence, R. I., and Buffalo, N. Y.; and since 1897 has been pastor of the church of All Souls, New York.

Slidell (*sli-del'*), **John,** American lawyer and politician, was born in New York city about 1793. From 1853 to 1861, was a member of the United States senate; and in the civil war, when Louisiana seceded, he withdrew, and was appointed confederate minister to France. In company with James M. Mason, who was named minister to England, he was taken on the high seas by Captain Wilkes, of the United States navy, and both brought as prisoners to the United States, where they were confined in Fort Warren. On the demand of England, they were released, however, and proceeded on their respective missions. After the war closed, he settled in England and resided there until his death in 1871.

Sloane, William Milligan, American historian, Seth Low professor of history, Columbia, since 1896, was born at Richmond, Ohio, 1850. He graduated at Columbia, 1868; Ph.D., Leipzig, 1876; L.H.D., Columbia; professor at Princeton University, 1876-96; and editor *Princeton Review*, 1886-89. Author: *Life of James McCosh; The French War and the Revolution; Napoleon Bonaparte, a History*, 4 volumes; *French Revolution and Religious Reform*, etc.

Slocum, Henry W., American general, was born, 1827, at Delphi, N. Y. He graduated from West Point in 1852. On the outbreak of the civil war, he was commissioned colonel of the 27th New York volunteers and took part in the first battle of Bull Run, where he was wounded. In August he was made brigadier-general. He distinguished himself at the battles of Gaines' Mill, Glendale, and Malvern Hill and was promoted to major-general of volunteers. Later he was transferred with his corps to the army of the Cumberland, succeeded to the command of the 20th corps, and was the first to enter Atlanta. In Sherman's march to the sea and through the Carolinas he commanded the left wing, taking part in the actions of that campaign. After the war he took up the practice of law at Brooklyn, was elected to congress in 1870, and again in 1884. He died at Brooklyn, N. Y., 1894.

Smeaton, John, English civil engineer, was born near Leeds, England, 1724. He began his career as a maker of mathematical instruments, but continued his studies and experiments, inventing, in 1751, a machine for measuring a ship's path at sea. He was also the builder of the famous Eddystone light-house. He died, 1792.

Smiles, Samuel, Scottish writer, was born at Haddington, Scotland, 1812. He was graduated in medicine at Edinburgh, at twenty, and practiced in Haddington. He wrote *Life of George Stephenson; Self-Help*, which has had an extraordinary success, and has been translated into a score of languages; *Character; Thrift; Duty; Life and Labor; Lives of the Engineers*. He died at London, 1904.

Smith, Adam, Scottish political economist, founder of the modern science of political economy, was born at Kirkcaldy, in Fifeshire, 1723. In 1764 he accompanied the duke of Buccleuch to the continent as traveling tutor and governor, and this engagement occupied him for two years; but at the end of that time he returned to Kirkcaldy, where he lived until he was appointed a commissioner of customs in 1778, when he took up his residence in Edinburgh. In 1776 he produced his great work, *An Inquiry into the Nature and*

Causes of the Wealth of Nations, and upon this work his reputation rests. In 1787 he was elected lord rector of the University of Glasgow, and died, 1790.

Smith, Alexander, chemist, was born at Edinburgh, Scotland, 1865; graduated from the University of Edinburgh, 1886; Ph. D., University of Münich, 1889. Assistant in chemistry, University of Edinburgh, 1889-90; professor chemistry and mineralogy, Wabash College, 1890-4; assistant professor chemistry, 1894-8; associate professor, 1898-1903; professor and director of general and physical chemistry, 1903-11, University of Chicago and professor of chemistry, Columbia University, since 1911. Author: Lassar-Cohn *Laboratory Manual of Organic Chemistry; Laboratory Outline of General Chemistry; The Teaching of Chemistry and Phiysce* (with E. H. Hall); *Introduction to General Inorganic Chemistry; General Chemistry for College*, etc.

Smith, Benjamin Eli, American editor, was born in Beirut, Syria, 1857. He graduated at Amherst College, 1887; A.M., L.H.D. Editor and translator: Schwegler's *History of Philosophy; Century Cyclopædia of Names; Century Atlas;* Cicero's *De Amicitia;* Franklin's *Poor Richard's Almanac; Selections from Marcus Aurelius; Epictetus*, etc.

Smith, Charles Emory, American journalist, was born at Mansfield, Conn., 1842. He removed to Albany, N. Y., with parents, in 1849; graduated at Union College, 1861. He was actively engaged during the civil war in raising and organizing Union volunteer regiment. He was United States minister to Russia, 1890-92; postmaster-general of United States, 1898-1902. Died, 1908.

Smith, Ellison DuRant, United States senator, was born, 1866, at Lynchburg, S. C. He graduated at Wofford College, Spartanburg, S. C., in 1889; was a member of the South Carolina legislature, 1896-1900. He became a national figure on account of addresses at New Orleans, Birmingham, Dallas, and Shreveport, on the cotton industry, and was elected to the United States senate, 1909, for the term 1909-15.

Smith, Francis Hopkinson, American artist, author and engineer, was born at Baltimore, 1838. When quite young he was clerk in iron works, and was later educated as a mechanical engineer; L.H.D., Yale, 1907. He built the government sea-wall around Governor's island; another at Tompkinsville, S. I.; the Race Rock lighthouse off New London; foundation for Bartholdi statue of Liberty, etc. Author: *A Gentleman Vagabond and Some Others; Tom Grogan; Gondola Days; Venice of To-day; Caleb West; At Close Range; The Wood Fire in No. 3; The Tides of Barnegat; The Veiled Lady; The Romance of an Old-Fashioned Gentleman; Peter*, etc.

Smith, Goldwin, English author and educator, was born in Reading, England, 1823; graduated from Magdalen College, Oxford, 1845; D.C.L., Oxford, 1882; LL.D., Princeton, 1896; and was called to the English bar, 1847. He was regius professor of modern history, Oxford, 1858-66; was an active champion of the North during the American civil war; visited United States, 1864; was lecturer, 1868-71, and later honorary professor of English and constitutional history, Cornell: he resided in Toronto, Ont., 1871-1910. Author: *Irish History and Irish Character; Lectures on Modern History; Rational Religion and the Rationalistic Objections of the Bampton Lectures for 1858; Shakespeare, The Man; Commonwealth or Empire; In the Court of History; The Founder of Christendom; Lines of Religious Inquiry; My Memory of Gladstone; Labor and Capital*, etc., and numerous articles in magazines. Died 1910.

Smith, Captain John, English adventurer and colonist, founder of Virginia, was born in Lincolnshire, England, in 1580. He traveled in France and Holland, and, when on his way to join the Christian army fighting against the Turks in Hungary, was robbed by four adventurers. In 1605 he joined an expedition of three vessels and one hundred five men, to found a colony in Virginia. On one of his journeys into the country for corn he was captured by the Indians, under the chief Powhatan, and his life saved by the chief's daughter Pocahontas. On his return to Jamestown he found the colony reduced to about forty men, who were anxious to return to England but were induced by Smith to remain until others arrived. He then explored the coasts of the Chesapeake bay in two voyages, and made a map of the country. In 1614 he explored the coast of New England, and undertook the founding of a colony in New England in 1615, but his vessel was captured by a French warship, and he was carried to La Rochelle. After his escape, he wrote an account of his voyages to New England. He died in London, 1631.

Smith, John Walter, United States senator, was born at Snow Hill, Maryland, 1845. He has at present large lumber interests, and is a director in many business and financial institutions. Member of the fifty-sixth congress; governor of Maryland, 1900-04; and elected to the United States senate for the term 1909-15.

Smith, Munroe, American educator, was born in Brooklyn, N. Y., 1854. He graduated at Amherst College, 1874; Columbia Law School, 1877; J.U.D., Göttingen, 1880; LL.D., Columbia, 1904. Professor of Roman law and comparative jurisprudence, since 1891, at Columbia. Author: *Bismarck and German Unity; Selections from Cicero.*

Smith, Sydney, English clergyman and essayist, was born at Woodford, England, 1771. He graduated from Oxford, and entered the church; in 1802 resided in Edinburgh, and joined Brougham, Jeffrey, and others, in establishing the *Edinburgh Review*, of which he was the first editor. From 1831 until his death in 1845 he was a canon of St. Paul's, London. He was a universal favorite in society and distinguished for brilliant wit and his graceful and forcible English.

Smith, William Alden, lawyer, United States senator, was born at Dowagiac, Mich., 1859. Was a newsboy and messenger boy in Western Union telegraph office; appointed page in the Michigan house of representatives, 1879; studied law, and was admitted to the bar, 1883; A. M., Dartmouth, 1901; was a member of congress, 1895-1907, fifth Michigan district; and was elected United States senator, 1907 and 1913.

Smith, William Robertson, British theologian and orientalist, was born at Keig, Scotland, 1846, and graduated at Aberdeen in 1865. He afterward studied theology at Edinburgh, Bonn, and Göttingen; and in 1870 became professor of Hebrew and old testament exegesis in the Free Church college, Aberdeen. In 1881 he became associated with Professor Baynes in the editorship of the *Encyclopædia Britannica*, and in 1887 succeeded him as editor-in-chief. At Cambridge he was successively Lord Almoner's professor of Arabic in 1883, university librarian, 1886, and Adams professor of Arabic, 1889. He died at Cambridge, 1894.

Smollett, Tobias George, English novelist, was born, 1721. He was educated at the University of Glasgow, and was afterward apprenticed to a surgeon. In 1748 he produced his *Roderick Random*. In 1751 appeared *Peregrine Pickle*, a more ambitious and not less successful work; and in 1753 *Ferdinand Count Fathom*. In 1758 he published his *History of England*. Another novel appeared in 1760-61, *The Adventures of Sir Launcelott Greaves;* in 1766 two volumes of *Travels in France and Italy*; in 1771 *The Expedition of Humphrey Clinker*, the best of all his novels. Died at Leghorn, 1771.

Smoot, Reed, United States senator, banker, Mormon apostle, was born at Salt Lake city, 1862. He graduated at Brigham Young Academy, Provo, Utah, 1879. He was appointed one of the presidency of the church of Jesus Christ of Latter Day Saints, 1895, and apostle, 1900. He was elected by Utah legislature, 1903, United States senator for term 1903-09, and reëlected for the term 1909-15.

Smyth (*smith*), **Newman,** American clergyman and author, pastor of First Congregational church, New Haven, since 1882, was born in Burnswick, Maine, 1843. He graduated at Bowdoin college, 1863; D. D., New York University, 1881; Yale, 1895; pastor of Mission chapel, Providence, R. I., 1867-70; First Congregational church, Bangor, Maine, 1870-75; and of the First Presbyterian church, Quincy, Ill., 1876-82. He is a member of the Yale corporation. Author: *The Religious Feeling; a Study for Faith; Old Faiths in New Lights; Christian Ethics; The Place of Death in Evolution; Through Science to Faith*, etc.

Snorri Sturluson (*snor'rē stōōr'lōō-sun*), Icelandic poet and historian, born in 1179. Tracing his descent from the kings of Norway, he early turned his attention to the history of their doings, and made a collection of sagas entitled the *Heimskringla*, or the "Ring of the World," in which are interspersed songs of his own composing. Snorri became chief judge of Iceland, but his ambitious and intriguing character led to his assassination in 1241.

Snow, Francis Huntington, American educator, was born at Fitchburg, Mass., 1840. He graduated at Williams College, 1862; Ph. D., 1881. He was president of the faculties, 1889-90, chancellor, 1890-1901, and professor of organic evolution, systematic entomology and meteorology in the University of Kansas, since 1901.

Snyders, or **Sneyders, Francis,** Belgian artist, celebrated as an animal painter, was born at Antwerp, 1579. The best specimens of his work are contained in the galleries of Vienna, Munich, and Dresden. Died at Antwerp, 1657.

Sobieski (*sō-byes'kē*). See **John III.,** king of Poland.

Socinus (*sō-sī'nus*), **Faustus,** Italian theologian, was born at Siena, Italy, 1539; in 1574 took up his residence at Basel, where he busied himself in elaborating into a system the scattered hints and views in the writings of his uncle. In 1577 he appeared in open debate, maintaining that the Trinity was a pagan doctrine, and that Christ was a created and inferior being. The Socinians were long a powerful religious body in Poland, Hungary, and Transylvania; their peculiar catechism is known as Racovian from its place of publication, Rakow in Poland. He died near Cracow, 1604.

Socrates, celebrated Greek philosopher, was born at Athens 469 B. C. His father, Sophroniscus, was a sculptor, and he followed the same profession in the early part of his life. His physical constitution was robust to an extraordinary degree, enabling him to endure the hardest military service and to live his own chosen life of superiority to all wants above the barest necessaries of life.

He had the usual education of an Athenian citizen, which included not only readings in the Greek poets, but also the elements of arithmetic, geometry, and astronomy, as then known. As a young man, he frequented the society of the physical philosopher, Archelaus, a disciple of Anaxagoras.

Excepting in connection with his philosophical career, few circumstances of his life are known. He served as a foot-soldier at Potidæa, at Delium, and at Amphipolis, and his bravery and endurance were extolled. Somewhere about the middle period of his life he gave himself up to the career that made him famous. Deservedly styled a philosopher he neither secluded himself for study nor opened a school for the regular instruction of pupils. He disclaimed the appellation of teacher; his practice was to talk or converse.

Early in the morning he frequented the public walks, the gymnasia for bodily training, and the schools where youths were receiving instruction; he was to be seen in the market-place at the hour when it was most crowded, among the booths and tables where goods were exposed for sale. He talked with any one, young or old, rich or poor, that sought to address him, and in the hearing of all who stood by. He died 399. Socrates was not a writer, and what we know of his teaching is derived from the representations of his pupils, Xenophon (in his *Memorabilia*) and Plato (in his *Dialogues*, in the majority of which Socrates is the chief interlocutor). The relation of these two divergent representations to their original has been a problem for historical criticism.

References.—Zeller's *Socrates and the Socratic Schools;* Forbes' *Socrates;* Gildersleeve's *Essays and Studies;* Lamartine's *Homer and Socrates.*

Solomon, king of Israel, born about 1033 B. C., was the son of David and Bathsheba. By his remarkable judicial decisions and his completion of the political institutions of David, Solomon gained the respect and admiration of his people; while by the building of the temple, which gave to the Hebrew worship a magnificence it had not hitherto possessed, he bound the nation more strongly to his throne. Toward the close of his reign troubles arose and the growing discontent, coming to a head after his death, resulted in the division of the kingdom, which his feeble son Rehoboam could not prevent. The writings attributed to Solomon are *The Book of Proverbs, Ecclesiastes*, and the *Song of Solomon*, with the apocryphal book the *Wisdom of Solomon.*

Solon (*sō'lun*), famous legislator of Athens, and one of the seven sages of Greece, was born about 638 B. C., at Salamis, of an ancient family. As archon, he framed a new code of laws, and, having obtained from the citizens an oath that they would observe them for ten years, he departed from Greece, and visited Egypt and Cyprus, and, perhaps, Lydia. On his return he found the tyranny of Pisistratus established, and he withdrew to Cyprus, where he is said to have died at the age of eighty, about 559 B. C.

Solyman, or **Soliman II.,** surnamed The Magnificent, greatest of the Turkish sultans, was born about 1496, and succeeded in 1520 his father Selim I., who had carefully initiated him into the Ottoman policy. He drove the knights of St. John from Rhodes, 1522; and for three years following devoted himself to improvements in the administration. By 1541 the long and desultory contest between the Turks and the imperialists for Hungary was ended in favor of the former, who took complete possession of the country. A brilliant naval victory, 1561, over the knights of Malta and their allies, the Spaniards, and an expedition to Hungary, 1566, were the chief events of the remainder of his reign. Died, 1566.

Somerville, Mary Fairfax, Scotch scientist, was born at Jedburgh, Scotland, 1780. In 1812 she attracted attention by some experiments on the violet rays of the solar spectrum. She was granted a pension in 1835 and made a member of the royal astronomical society of England and of many foreign societies. She died at Naples, 1872.

Sonnino (*sōn-nē'nō*), **Baron Sidney,** Italian statesman, was born at Florence, 1847, and educated at the University of Pisa. In 1887 he joined the Crispi administration as under secretary for the treasury, and first as finance minister, 1893, and then as minister of the treasury, he worked a great reform in the country's finances. After Crispi's fall in 1896, he became one of the opposition leaders, and in 1906 was prime minister of Italy.

Sontag (*sōn'tăg*), **Henrietta,** German soprano singer, was born in Coblentz, Prussia, 1806. She was the favorite of the Berlin stage before

she was eighteen; soon rose to a foremost place among European vocalists. She sang for several seasons in Europe, and came to the United States in 1852. After a brilliant and successful tour she accepted a tempting offer from Mexico, where she died of cholera, 1854.

Sophocles, (*sof'o-klez*), Greek tragic poet, was born in the Attic demus or village of Colonus, B. C. 495, thirty years later than Æschylus. He received a good education, and at an early age gained the prize in music and gymnastics. He was fifteen when the battle of Salamis was fought, and for his remarkable beauty and skill in music, he was chosen to lead the chorus which sang the pæan of victory.

His first appearance as a dramatist was in 468, when, under memorable circumstances, he had Æschylus for his rival, and won the victory. Of the next twent-eight years of his life nothing is recorded; but it is known that he made poetry his vocation, and that he composed a great many plays during that period. Not one of them, however, is now extant.

The *Antigone*, the earliest of his extant tragedies, was brought out in 440, and won the prize. The number of plays attributed to him, without question, was one hundred and thirteen, of which eighty-one were probably produced after the *Antigone*. Seven only are extant, viz., *Antigone*, *Electra*, *Trachinian Women*, *King Oedipus*, *Ajax*, *Philoctetes*, and *Oedipus at Colonus*.

These exhibit his art in its maturity, and sustain the verdict of ancient and modern critics, that Sophocles carried the Greek drama to its highest perfection. He effected a complete change in the constitution of tragedy as Æschylus left it; loosening the connection between the parts of the trilogy and the satyric drama, and making them not one great poem, but four distinct ones; introducing a third actor; and for subjects selecting, not a series of heroic and mythical actions, but for each play one leading fact of real human interest and lasting significance.

Sophocles lived to be nearly ninety and in his latest years most probably wrote the *Oedipus at Colonus*, so full of sweetness and tender melancholy, and consoling hopes, which was not presented on the stage till five years after the poet's death. He died 406 B. C.

References.—Campbell *Life of Sophocles;* His translators are Web, Whitelaw, and Campbell.

Sorley, William Ritchie, British educator and philosophical writer, Knightbridge professor of moral philosophy, University of Cambridge, since 1900, was born at Selkirk, 1855. He was educated at Edinburgh, and Trinity College, Cambridge; professor of logic and philosophy at University College, Cardiff, 1888-94; and professor of moral philosophy, Aberdeen, 1894-1900. Edited: *Development of Modern Philosophy; Recent Tendencies in Ethics*, etc.

Sothern (*suth'ern*), **Edward Hugh,** actor, was born in New Orleans, 1859. He received an academic education in England; first appeared, 1879, in small part at Abbey's Park theater, New York. He first took leading rôle, Lyceum theater, New York, 1887, as Jack Hammerton in *The Highest Bidder*, and subsequently starred with his own company in *Lord Chumley; An Enemy to the King; The Adventures of Lady Ursule; The Song of the Sword; The Sunken Bell; Hamlet; Richard Lovelace; If I Were King*, etc. He is now with Julia Marlowe.

Soult (*sōōlt*), **Nicholas Jean de Dieu,** duke of Dalmatia and marshal of France, was born at Saint-Amans-la-Bastide in 1769. In 1785 he entered the army. He achieved brilliant success in the campaign against the Austrians, closed by the battle of Austerlitz. In 1809 he became commander-in-chief in Spain, gained a brilliant victory at Ocaña, and overran and subdued Andalusia; on the return from Elba he abandoned Louis XVIII., and became major-general of the imperial army. After Waterloo he rallied the army at Laon, and on July 3d, at the council of war, coincided with Carnot as to the uselessness of further resistance. He died, 1851.

Sousa (*sōō'zà*), **John Philip,** American musician, was born at Washington, 1856. He studied music, was a conductor at seventeen, and one of the first violins of Jacques Offenbach's orchestra when the latter was in the United States. He was then music director of the United States marine corps, 1880-92, and since 1892 director of Sousa's band. Composed: *Washington Post; Stars and Stripes Forever; Hands Across the Sea; The Bride-Elect; El Capitan; Three Quotations; At the King's Court; Looking Upward; The Chariot Race;* and the operas: *The Smugglers; Desire; The Queen of Hearts; El Capitan; The Free Lance*, etc. Author: *The Fifth String; Pipetown Sandy*, etc.

Southey, Robert, English poet and writer, was born, 1774, at Bristol, England. He was educated at Oxford, but left without a degree in 1794, and during the next two years traveled in Spain and Portugal. In 1804 he settled at Greta Hall, in Cumberland, where he spent the remainder of his life, happy in his family relations and his unremitting daily round of congenial, though continuous, toil. In 1813, on the death of Pye, he succeeded him as poet-laureate. His chief poetical works are *Madoc; Thalaba; The Curse of Kehama;* and *Don Roderick*. Of all his writings his *Life of Nelson* seems most likely to survive as a classic. He died, 1843.

Spargo, John, socialist author, was born at Stithians, Cornwall, England, 1876. He publicly opposed the Boer war; came to the United States, 1901, and has been active as socialistic lecturer, writer, and worker; and was one of the founders of the Prospect House social settlement, Yonkers, N. Y.

Sparks, Edwin Erle, American educator, historian, president of Pennsylvania State College since 1908, was born in Licking county, Ohio, 1860. He graduated from the Ohio State University, 1884, Ph. D., LL. D. He is a member of the American historical association; Illinois historical association; and councilor of the American institution of civics. Author: *The Men Who Made the Nation; Formative Incidents in American Diplomacy; Foundations of National Development*, etc.

Sparks, Jared, American historian, was born at Willington, Conn., 1789. He graduated at Harvard, in 1815; settled as a Unitarian minister at Baltimore, and finally became editor of the *North American Review*. He was ten years a professor at Harvard, and for four years president. His writings include *Life of John Ledyard; Life of Gouverneur Morris*. He died at Cambridge, Mass., 1866.

Speer, Robert Elliott, secretary of Presbyterian board of foreign missions since 1891, was born at Huntingdon, Pa., 1867. He graduated at Princeton, 1889; traveling secretary of the volunteer movement for foreign missions, 1889-90. Author: *The Man Christ Jesus; Studies in the Book of Acts; The Principles of Jesus; Missionary Principles and Practice; Presbyterian Foreign Missions; The Marks of a Man*, etc.

Spencer, Herbert, English philosopher, was born at Derby, 1820. He was educated by his father, a teacher of mathematics, and his uncle, a clergyman; was apprenticed as a civil engineer, and worked several years on railways. In 1842 he contributed several professional papers to the *Civil Engineer and Architect's Journal*, besides a series of letters, on the *Proper Sphere of Government*, to *The Nonconformist*. In 1848 he became sub-editor of *The Economist* and published *Social Statistics*, 1850.

About the year 1859 he projected his scheme of philosophy, based on the principle of evolution in its relation to life, mind, society, and morals. This extensive scheme was latterly completely expounded in the following works: *First Principles; Principles of Biology; Principles of Psychology;* a revised form of a work published in 1855; *Principles of Sociology;* and *Principles of Ethics*.

Portions of this great work are known under separate titles, as *Data of Ethics; Ceremonial Institutions; Political Institutions; Ecclesiastical Institutions*, etc. His other works include *Education; Essays, Scientific, Political, and Speculative; Classification of the Sciences; The Study of Sociology; Man versus the State; Facts and Comments;* and an *Autobiography*. He published also an elaborate *Descriptive Sociology* compiled by other writers, but classified and arranged by himself. He died in 1903.

References.—Spencer's *Autobiography;* Hudson's *Herbert Spencer;* Collier's *Epitome of the Synthetic Philosophy;* and Macpherson's *Herbert Spencer—the Man and His Work*.

Spenser, Edmund, English poet, was born in London, about 1552. He was of humble origin, studied at Pembroke College, Cambridge, and was brought under the notice of Queen Elizabeth by the earl of Leicester. In 1579 he published *The Shepherd's Calendar*, sounding the note of the Elizabethan outburst. Through the influence of Leicester he was then appointed chief secretary to Lord Grey de Wilton, the lord-lieutenant of Ireland; and Queen Elizabeth conferred on him an estate at Kilcolman, near Cork. It was while he was at Kilcolman that he wrote *The Faërie Queene*, his greatest work. The first part was published in 1589-90, the second part about six years later; and on the publication of the first part the queen conferred on the poet a pension of fifty pounds a year. In 1598 a rebellion broke out; the castle of Kilcolman was burned, an infant child of the poet perished in the flames, and Spenser returned to London, impoverished and broken-hearted, to die within three months after his arrival. He was buried near Chaucer in Westminster abbey.

Speyer (*spir*), **James,** American banker, was born in New York, 1861. He was one of the founders and treasurer of the Provident loan society; is trustee of the Union Trust company, Central Trust company, Girard Trust company of Philadelphia, German savings bank, Guarantee Trust company, etc.

Spinoza, (*spi-no'za*), **Benedict,** celebrated philosopher, was born at Amsterdam, 1632. He was the son of a Portuguese Jew, and was early remarkable for an ardent love of truth, and a keen and logical intellect. His first serious studies were the Bible and the Talmud. He made no secret of the doubts which grew up in his mind, and was exposed to much persecution on account of them.

He was at last excommunicated, and being driven from Amsterdam, lived for a time near Leyden, and afterward at The Hague. He devoted himself wholly to philosophy, earning such a livelihood as contented him by the trade of polishing glasses for optical instruments. His character was most estimable, and endeared him to his personal friends.

His system of philosophy has been made odious by the vulgar accusation of atheism, which is the very reverse of the truth. To his thought God is the only being, the only substance, infinite, eternal—before whom all things else have but a phenomenal existence. And his aim was to build up, on the knowledge of God as a foundation, a system of morals by a rigorously mathematical method. With more reason, Spinoza has been called the father of modern Pantheism. Spinoza has of late been more fairly judged, and both his merits and errors impartially discussed. His influence on the mind of Goethe was overpowering.

His works are: *Renati Des Cartes Principiorum Philosophiae, pars Prima et Secunda more Geometrico Demonstratae; Cogitata Metaphysica; Tractatus Theologico—Politicus; Ethica*, perhaps the most important of his treatises; *Tractatus Politicus; De Intellectus Emendatione;* and *Epistolae*. The last four form his *Opera Posthuma*. The works written in defence and refutation of the system of Spinoza are very numerous. He died 1677.

References.—Translations of the *Works* by Elwes, and of the *Ethica* and *De Intell. Emend.* by Hale White; expositions by Caird; Martineau, Pollock, Joachim, and of his ethico-political doctrine by Duff. See also Fullerton's *The Philosophy of Spinoza:* and Fullerton's *On Spinozistic Immortality*.

Spohr (*shpōr*), **Ludwig,** German composer and violinist, was born at Brunswick, 1784. In 1804 he became music director at the court of Saxe-Gotha, and held afterward for several years the office of music director of a theater in Vienna. In 1823 he became chapelmaster at the court of Hesse-Cassel. He wrote *The Violin School*, a standard book of instruction. He died, 1859.

Spooner, John Coit, American lawyer, ex-United States senator, was born at Lawrenceburg, Ind., 1843, and removed to Madison, Wis., 1859. He graduated at the University of Wisconsin, 1864; LL. D., Wisconsin, etc. He served as captain and brevet major 50th Wisconsin infantry. He was admitted to the bar, 1867; was regent of the University of Wisconsin, 1882-85; member of the Wisconsin assembly, 1872; United States senator, 1885-91, and 1897-1907; and resigned in that year to resume the practice of law at Madison, Wisconsin, and New York city.

Spurgeon, Charles Haddon, English preacher, was born at Kelvedon, 1834. In 1854 he entered upon the pastorate of the New Park Street chapel, London, where his preaching proved so attractive that in two year's time the building had to be greatly enlarged. His followers built for him the well-known London tabernacle, opened in 1861. Spurgeon continued to preach in the tabernacle every Sunday to thousands of hearers until the summer of 1891. He died in 1892.

Squair, John, Canadian educator, professor of French, University of Toronto, was born at Bowmanville, Ontario, 1850. He graduated from the University of Toronto, 1883, and has been fellow, lecturer, associate professor and professor of French in University College, Toronto, since that time; president of the higher education section of the Dominion educational association. He is joint author with W. H. Fraser of *French Grammar;* joint author with J. H. Cameron of *Exercises in French Prose*.

Stael (*stäl*), **Madame de,** or **Anne Louise Germaine de Staël-Holstein,** celebrated French writer, was born in Paris, 1766. In 1788 she published *Letters on the Works and Character of Rousseau;* and in 1793, having been compelled by the revolution to leave France, she published a defense of Marie Antoinette, then upon trial

In Italy she gathered the materials for her novel of *Corinne* and in Germany she gathered the materials for her celebrated work entitled *De l' Allemagne* a description of the habits, literature, and political tendencies of the German people, which was printed in Paris in 1810, but by the order of Bonaparte was immediately suppressed. Soon afterward she visited England, where she wrote her *Ten Years of Exile*, an impassioned denunciation of Bonaparte and his arbitrary rule. After the fall of the empire she returned to Paris, but never again interfered in politics. She died in 1817.

Stafford, Wendell Phillips, American jurist and publicist, was born at Barre, Vt., 1861. He graduated at St. Johnsbury Academy, 1880; graduated from the law department of Boston University, 1883. He was judge of the supreme court, Vermont, 1900-04; associate justice of the supreme court of the District of Columbia, since 1904; and professor of equity jurisprudence in the George Washington University. Author: *North Flowers*, poems; and a contributor of poems and articles to magazines.

Stahl (*shtäl*), **Georg Ernst,** German physician and chemist, was born at Anspach, 1660. He wrote a system of medicine *Theoria Medica vera*. His system of therapeutics corresponded with his pathological principles, and was confined mostly to bleeding and the use of mild laxatives. Died in Berlin, 1734.

Standish, Miles, early New England colonist, was born in Lancashire, England, about 1584. He served in the army in the Netherlands and sailed with the pilgrims in the *Mayflower* in 1620. On reaching Massachusetts he was chosen captain by the pilgrims, and commanded in expeditions against the savages. Died, 1656.

Stanford, Leland, American capitalist and philanthropist, was born at Watervliet, N. Y., 1824. He was one of the organizers of the Central Pacific railroad company, and entering political life was republican governor of California, 1861-63; and from 1885 to 1893 United States senator from California. Out of his large fortune he gave property to the value of $20,000,000 to found, in memory of a deceased son, a University at Palo Alto, to be known as the Leland Stanford Junior University. He died at Palo Alto, California, 1893.

Stanley, Arthur Penrhyn, English scholar and divine, was born at Alderley, England, 1815. He graduated at Oxford. From 1856 to 1863 he was professor of ecclesiastical history at Oxford, canon of Christ church, and chaplain to the bishop of London. In 1864 he succeeded Archbishop Trench as dean of Westminster. Stanley was one of the most accomplished and liberal theologians of his age, and may be regarded as the leader of the "broad church" party. His principal writings are: *The Unity of Evangelical and Apostolical Teaching; Lectures on the Eastern Church; Lectures on the Jewish Church; Historical Memorials of Westminster Abbey*, etc. Died, 1881.

Stanley, Sir Henry Morton, African explorer, was born near Denbigh, Wales, in 1840. He reached Zanzibar early in 1871; there organized a large expedition, and found Livingstone, November 10, 1871. In 1874 he set out on a second African expedition for the *Herald* and London *Daily Telegraph*. He reached Victoria Nyanza in February, 1875; was the first to circumnavigate Victoria lake, and discovered the Shimeeyu river; and reached England again in February, 1878. Near the close of 1886 Stanley, under the auspices of the Egyptian government and of English societies and individuals, undertook an expedition for the relief of Emin Pasha. He wrote *How I Found Livingstone; Through the Dark Continent; Congo and the Founding of its Free State;* and *In Darkest Africa*. He was made a D. C. L. by Oxford University in 1890. He was a member of parliament, 1895-1900, and was knighted, 1899. He died, 1904.

Stanton, Edwin McMasters, American statesman, was born in Steubenville, Ohio, in 1814. He practiced law with success in his native town until 1847, when he settled in Pittsburg, Pa. and there became leader of the bar. In 1857 he took up his abode in Washington, in 1860 was made attorney-general of the United States, and, in 1862, secretary of war; he was suspended by President Johnson, who appointed General Grant in his place *ad interim*. In May he definitely retired from the secretaryship. In December, 1869, he was appointed an associate justice of the supreme court of the United States, and died during the same month.

Stanton, Elizabeth Cady, reformer and suffragist, was born at Johnstown, N. Y., 1815. She signed the call for the first woman's rights convention, at Seneca Falls, 1848, and became president of the national woman's suffrage association there formed, retaining the office until 1893; was the author of *A History of Woman Suffrage*. Died, 1902.

Stark, John, American soldier, was born at Londonderry, N. H., 1728. At Bunker Hill he was colonel of a regiment which he had enlisted. On August 16, 1777, he fought the battle of Bennington, which brought him the thanks of congress and the rank of general; he cut off Burgoyne's retreat from Saratoga, and, after serving in Rhode Island and New Jersey, had charge in 1781 of the northern department, with headquarters at Saratoga. He died, 1822.

Starr, Frederick, anthropologist, was born at Auburn, N. Y., 1858; graduated from Lafayette College, 1882; Ph. D., 1885; Sc. D., 1907; professor of biological sciences, Coe College, 1884-5; in charge of ethnology, American Museum of Natural History, 1889-91; assistant professor anthropology, 1892-5, associate professor since 1895 and curator anthropology, Secretary Walker Museum, University of Chicago. Has done extensive anthropological work in Japan, Africa, Mexico, and other parts of the world. Author: *On the Hills; Some First Steps in Human Progress; American Indians; Indians of Southern Mexico; Strange Peoples; Readings from Modern Mexican Authors; The Truth About the Congo; In Indian Mexico*, etc.

Stead, William Thomas, English journalist and writer, was born at Embleton, England, 1849, and educated at Wakefield. He was editor of the *Northern Echo* at Darlington, 1871-80; assistant editor of the *Pall Mall Gazette* until 1889, and editor from 1883 to 1889. In 1890 he founded the English *Review of Reviews*, of which he is the present editor. Author: *Her Majesty the Queen; Satan's Invisible World; A Study of Despairing Democracy; The Conference at The Hague; The Americanization of the World*, etc. Drowned 1912.

Stedman, Edmund Clarence, American poet and critic, was born in Hartford, Conn., in 1833. He graduated at Yale, 1853; L. H. D., Columbia; LL. D., Yale. He was editor of the *Norwich Tribune*, 1852-53; *Winsted Herald*, 1854-55; on staff of *New York Tribune*, 1859-61; war correspondent for the *New York World*, 1861-63; and was a member of the New York stock exchange, 1869-1900. Author: *Poems Lyric and Idyllic; The Nature and Elements of Poetry*, etc. Editor: *A Victorian Anthology; An American Anthology*; co-editor, *History of New York Stock Exchange*, etc. Died in New York in 1908.

Steele, Sir Richard, British man of letters, was born in Dublin, 1672. He was educated at the Charterhouse with Addison, and at Oxford. In 1709 he founded the *Tatler*, a periodical published thrice a week, succeeded by *The Spectator*, a daily literary journal of a higher tone and character; He was then elected to parliament, was expelled for libel, but afterward re-instated. He died, 1729.

Steen (*stän*), **Jan,** celebrated Dutch painter, was born at Leyden, 1626. He became a pupil of Van Goyen, whose daughter Margaret he married. He died, 1679.

Stein (*shtin*), **Heinrich Friedrich Carl, Baron von,** Prussian statesman, was born at Nassau, 1757. As Superintendent of the Prussian excise he abolished the last relics of serfdom, did away with the privileges of caste, created peasant proprietors, extirpated monopolies and hindrances to free trade, promoted municipal government. Napoleon insisted upon his dismissal, and Stein withdrew, 1808, to Austria, but not before issuing his *Political Testament*. From the battle of Leipzig to the congress of Vienna he was the ruling spirit of the opposition to the emperor. He died in 1831.

Steinmetz (*shtin'mets*), **Charles Proteus,** electrician, General electric company, was born in Breslau, Germany, 1865, and educated at Breslau, Berlin, Zürich, and in Switzerland. He is the consulting engineer for the General electric company, and a leading authority in mathematics and engineering.

Stelwagon, Henry Weightman, American physician, was born at Philadelphia, 1853. He graduated at Andalusia College, Pennsylvania, 1872; has been dermatologist to Philadelphia hospital since 1888, to Northern dispensary since 1882, Howard hospital since 1885. Author: *Essentials of Diseases of the Skin; Treatise on Diseases of the Skin*.

Stephen, Sir James Fitzjames, British jurist, was born at Kensington, England, 1829. He graduated at Trinity College, Cambridge, 1852; was admitted to the bar in 1854; professor of common law at the Inns of Court, 1875-79; and judge of the high court of justice, 1879-91. On his retirement he was created a baronet. He died near Ipswich, 1894.

Stephen, Sir Leslie, English man of letters, was born at Kensington, 1832. He was educated at Eton, King's College, London, and at Trinity Hall, Cambridge, where he was fellow and tutor. He was editor of the *Cornhill Magazine*, 1871-82, and of the first twenty-six volumes of the *Dictionary of National Biography*. His works include: *History of English Thought in the Eighteenth Century; Johnson; Pope; Swift; The Science of Ethics; Life of Henry Fawcett; Studies of a Biographer*. He died in 1904.

Stephens, Alexander Hamilton, American statesman, was born in Georgia in 1812. He graduated at the University of Georgia, 1832. In 1860 he opposed the secession of his state, but in the following year was elected vice-president of the Confederate States of America. After the collapse of the latter, Stephens suffered a brief imprisonment at Fort Warren, and in 1866, after being reelected United States senator, was not allowed to take his seat. He was, however, member of the house of representatives, 1873-82, and governor of Georgia, 1882-83. In 1869 he published *A History of the War of Secession*. Died, 1883.

Stephens, Henry Morse, British historical writer and educator, was born at Edinburgh, Scotland, 1857. He graduated at Balliol College, Oxford, 1880; M. A., 1892. Lecturer on Indian history, Cambridge, England, 1892-94; and professor of history and director of University extension at University of California since 1902. Author: *History of the French Revolution; Albuquerque; Revolutionary Europe; Colonial Civil Service*, etc.

Stephenson, George, the founder of the railway system of Great Britain, and perfecter of the locomotive engine, was born in Northumberland, 1781. At the age of 14, he joined his father in his work as fireman in a colliery, where, by a close attention to all he saw, and a constant study of every piece of mechanism that came in his way, he acquired a large amount of sound practical knowledge; while by mending boots, clothes, and cleaning clocks, he was enabled to add a trifle to his weekly earnings.

In 1812 he was appointed engineer to the colliery, at a salary of $500 a year. Soon after this he built his first traveling engine to draw the wagons along the tramway, which, though clumsy and weak in power, was immensely superior to any engine then in use. The following year he constructed a second, as superior to his first as that had been to all others before it.

From this time improvement followed on improvement in rapid succession, not only in the form of the locomotive, but in the rails and in every department to which steam was applicable, till, from mere tramways, the whole beautiful system of railway locomotion, with all its complications of stations, signals, tenders, and carriages, was at last completed by the opening of the Liverpool and Manchester railway.

In 1830 that great undertaking was opened, and from that time the name of Stephenson became one of the most popular among men of science in Europe. In 1845 he retired from all railway undertakings, and devoted his time to his collieries and other sources of business, and, after having been instrumental in establishing all the foreign and home lines, he died in 1848, leaving his fortune and his fame to his only son, Robert.

References.—Smiles' *Lives of the Engineers*, and his *Life of George Stephenson;* Allen's *Biographies of Working Men;* Lewis' *Heroes of Science*.

Stephenson, Isaac, United States senator, was born near Fredericton, New Brunswick, 1829. In 1858 he moved to Marinette, where he has led an active career as lumberman, farmer, and banker; was elected to the United States senate, 1907, to fill the unexpired term of Hon. J. C. Spooner, resigned, and was reelected, 1909, for the term 1909-15.

Stepniak (*styep-nyäk'*), pseudonym of Sergius Michaelevitch Kravtchinski, Russian revolutionary leader and writer, born, 1841. Among his works were: *Underground Russia; Russia under the Tzars; Nihilism as it is; King Stork and King Log*. He was run over by a train in a London suburb, and killed, 1895.

Sternberg, George Miller, American physician, surgeon-general of the United States, 1893-1902, was born at Hartwick seminary, Otsego county, N. Y., 1838. He graduated at the College of Physicians and Surgeons, New York, 1860; LL. D., Michigan, 1894; and is a member of many medical societies and president, 1898, of the American medical association. Author: *Photo-Micrographs, and How to Make Them; Bacteria;* and many government reports, etc.

Sterne, Laurence, British novelist, was born at Clonmel, Ireland, 1713. He studied at Cambridge and became a clergyman. In 1759 he wrote the first two volumes of the *Life and Opinions of Tristram Shandy*. The rest of the work, which reached nine volumes, was written at Coxwold. *The Sentimental Journey through France and Italy*, published in 1768, was the result of a tour through those countries in 1765. He died at London, 1768.

Steuart, William Mott, statistician, was born at Corpus Christi, Texas, 1861; graduated, LL. B., Columbian (now George Washington) University, 1884, LL. M., 1885. Admitted to bar, 1884; practiced in D. C., Md., and Detroit; became connected with Census of Manufactures, 1880, chief of division, 1890 and 1900, chief statistician for manufactures, since 1903, Bureau of Census. Supervised the canvass and preparation of reports of various censuses.

Steuben, Frederic William Augustus, Baron, general in the American revolutionary army, was born at Magdeburg, Prussia, 1730. He came to America in 1778 and offered his services to Washington, who gladly accepted them during the dark days of Valley Forge. He was appointed inspector-general; remodeled the army; took part in the siege of Yorktown. Congress in 1790 voted him $2,400 yearly and a township of land near Utica, N. Y., where he died, 1794.

Stevens, John F., American civil engineer, was born at West Gardiner, Maine, 1853. He was assistant engineer Spokane Falls and Northern railway, 1889; assistant chief engineer, second vice-president, 1904-05, Chicago, Rock Island and Pacific railway company; chief engineer of Panama canal, 1905-07; chairman of isthmian canal commission, 1907; and vice-president of New York, New Haven and Hartford railroad, in charge of operation since 1907.

Stevens, Thaddeus, American statesman, was born at Peacham, Vt., 1792. He graduated in 1814 at Dartmouth College. He served in congress, 1849-53 and 1859-68, and meanwhile rose to a prominent position at the bar. He took an active part in the unsuccessful impeachment of President Johnson. Died at Washington, 1868.

Stevenson, Adlai Ewing, American lawyer and politician, was born in Kentucky, 1835. He was educated at Centre College, Kentucky; admitted to the bar of Illinois in 1859. Member of congress, 1875-77 and 1879-81. He was vice-president of the United States, 1893-97. After his term as vice-president he was appointed, 1897, a member of the commission to Europe to try to secure international bimetallism. Died 1914.

Stevenson, Robert, Scottish engineer, was born at Glasgow, 1772. In 1796 he became engineer and inspector of lighthouses, and, during his forty-seven years' tenure of that office, planned and constructed twenty-three lighthouses. He built the Britannia tubular bridge over Menai strait, Victoria tubular bridge near Montreal, etc. Died, 1850.

Stevenson, Robert Louis Balfour, British novelist and essayist, born at Edinburgh, 1850. He was educated at Edinburgh University, and in 1875 was admitted to the bar; but soon abandoned law for the profession of letters. In 1878 appeared his first book, *An Inland Voyage*, quickly followed by *Travels with a Donkey*, *Virginibus Puerisque*, *Familiar Studies*, and *Treasure Island*. As a writer of adventure and romance, he established himself permanently in the public favor with *Kidnapped*, *The Master of Ballantrae*, *Dr. Jekyll and Mr. Hyde*, etc. His versatility in letters was further revealed in his charming *A Child's Garden of Verse*, *Ballads*, *Memories and Portraits*, and *A Footnote to History*. In 1890 failing health induced him to make his home in the island of Samoa, where he died and was buried, 1894.

Stewart, Alexander Turney, American merchant and capitalist, was born at Lisburn near Belfast, Ireland, 1800. He settled in New York in 1823. He was a leader in the building of street railways and other municipal improvements. Died, 1876.

Stewart, Balfour, British physicist, was born at Edinburgh, 1828. He became director of Kew observatory, 1859, and professor of physics at Owens College, Manchester, 1870. He made his first reputation by his work on *Radiant Heat* in 1858. With Professor Tait he published *The Unseen Universe* in 1875. He died, 1887.

Stewart, Dugald, eminent Scottish philosopher and writer, was born, in 1753, at Edinburgh. In 1780 he began to receive pupils into his house, and many young noblemen, who afterward became celebrated, received their knowledge under his roof. In 1792 he published the first volume of the *Philosophy of the Human Mind*. Among his other works are: *Outlines of Moral Philosophy*; *Philosophical Essays*. He died, 1828.

Stimson, Frederic Jesup ("J. S. of Dale"), lawyer, author, was born at Dedham, Mass., 1855. He graduated at Harvard, 1876; Harvard law school, 1878; and was admitted to the New York and Boston bars; professor of comparative legislation at Harvard. Author: *Rollo's Journey to Cambridge*; *Guerndale*; *The Crime of Henry Vane*; *Handbook to the Labor Law of the United States*; *Uniform State Legislation*; *Private Gold*; *State and Federal*; and also a series of magazine articles on *The Ethics of Democracy*, etc.

Stirling, James Hutchison, Scottish philosophical writer, was born at Glasgow, 1820, and was educated at the University of Glasgow, and in France and Germany; LL. D., Edinburgh and Glasgow. He was the first appointed Gifford lecturer at the University of Edinburgh, 1888-90. Author: *The Secret of Hegel*; *The Community of Property*; *Thomas Carlyle's Counsels*; *Darwinianism*; *What is Thought?* *The Categories*, etc.

Stockton, Francis Richard, American novelist, was born at Philadelphia, 1834. He was an engraver and journalist, became assistant editor of *St. Nicholas*, and first attracted notice by his stories for children. He is now best known as author of *Rudder Grange*; *The Lady, or the Tiger?* *The Squirrel Inn*; *The Hundredth Man*; *Personally Conducted*, etc. He died at Washington, D. C., 1902.

Stoddard, Richard Henry, American poet, critic, and man of letters, was born at Hingham, Mass., 1825. His chief published volumes embrace: *The Book of the East*; *Poems*; *The Lion's Cub and Other Verse*; *The King's Bell*. He also edited *The Bric-à-Brac*, and the *Sans Souci* series. Died in New York, 1903.

Stokes, George Gabriel, British mathematician and natural philosopher, was born at Skreen, Ireland, 1819. He graduated at Cambridge in 1841; and was elected in 1849 to fill the Lucasian chair of mathematics at Cambridge. In 1854 he was appointed secretary to the Royal society, of which he became president in 1885. To mathematicians and natural philosophers he is known by a number of admirable papers in the *Cambridge Philosophical Transactions*. He was made baronet, 1889. Died at Cambridge, 1903.

Stolypin (*sto-li'pin*), **Peter Arkadievitch,** Russian prime minister, was born in 1863. He graduated at the University of St. Petersburg, in 1884. He served as marshal of the district nobility; was president of the arbitration board; justice of the peace. He was appointed vice-governor of Grodno in 1902. When Goremykin resigned in 1906, Stolypin succeeded him as premier, and was thanked by the czar for his services and appointed a member of the council of the empire, January, 1907. He suppressed the second duma. Assassinated 1911.

Stone, Lucy Blackwell, American reformer and advocate of woman's rights, was born at West Brookfield, Mass., 1818. She graduated at Oberlin College in 1847. She aided in organizing, in 1850, the first national woman's rights convention at Worcester, Mass., and was always zealous in that cause. She died at Dorchester Mass., 1893.

Stone, Melville Elijah, American journalist, general manager of the associated press, was born at Hudson, Ill., 1848; was editor of several Chicago dailies, 1871-74; and established, with a partner, the *Chicago Daily News*, in 1875. Stone's health failing in 1888, he sold out his entire interest and spent three years in Europe; has been general manager of the associated press since 1893.

Stone, William Joel, lawyer, United States senator, was born in Madison county, Kentucky, 1848. He graduated at the University of Missouri, and was admitted to bar, 1869; governor of Missouri, 1893-97; member and vice-chairman of the democratic national committee, 1896-1904; and was elected United States senator for terms 1903-09 and 1909-15.

Storey, Moorfield, American lawyer, was born at Roxbury, Mass., 1845. He graduated at Harvard, 1866; studied at the Harvard Law School; and was admitted to the bar, 1869; overseer of Harvard College, 1877-78 and since 1892; and president of the American bar association, 1896. Author: *Life of Charles Sumner*; *Politics as a Duty and as a Career*; *The American Legislature*; *A Year's Legislation*; *The Government of Cities*.

Story, Emma Eames, American operatic prima donna, was born in Shanghai, China, 1867, of American parentage. Her childhood was spent in Boston, where she studied music, and sang in choirs and concerts. She subsequently studied in Paris, and made her début at the Paris grand opera house, 1889. She has sung in regular opera seasons in London and the United States. She was made an officer of the French academy, and received an English jubilee medal.

Story, Joseph, distinguished American jurist and legal writer, was born at Marblehead, Mass., in 1779. He graduated at Harvard College in 1798; was an associate justice of the United States supreme court, 1811-45. He was professor of law at Harvard, 1829-45, and attained unusual eminence as a law lecturer and writer. Died, 1845.

Story, William Wetmore, American sculptor and poet, son of the above, was born at Salem, Mass., 1819. He graduated at Harvard University, 1838, from the law school, 1840, and was admitted to the bar. Among his publications are several poems, *Origin of the Italian Language and Literature*, *Conversations in a Studio*, etc. He executed numerous monuments, statues, and busts. Died in Italy, 1895.

Stowe, Harriet Elizabeth Beecher, was born at Litchfield, Conn., 1811. She married Professor Calvin Ellis Stowe in 1836. In 1851 she commenced in *The National Era*, an antislavery paper at Washington, D. C., a serial tale entitled *Uncle Tom's Cabin*. In 1856 she published *Dred, a Tale of the Great Dismal Swamp*, followed in 1859 by *The Minister's Wooing*, a story of New England life in the eighteenth century. In 1868-70 she was joint editor of *Hearth and Home*. She died, 1896.

Strabo (*strā'bō*), noted Greek geographer, was born at Amasia, in Pontus, about 63 B. C. He does not appear to have followed any professional calling, but to have spent his life in travel and study. He died about 21 A. D.

Stradivari (*strä'dē-vä'rē*) or **Stradivarius, Antonio,** celebrated Italian violin maker, was born at Cremona, Italy, in 1644. His instruments are known for their finish and fine tone. He was the first to finish them neatly on the inside. They are carefully preserved by those possessing them, and bring great prices, ranging from $1,000 to $15,000. He died at Cremona, 1737.

Strafford, Thomas Wentworth, Earl of, English statesman, was born in London, 1593. In 1622 he felt compelled to side with the king, and strove to put down with a firm hand all opposition to the royal authority. After the meeting of the long parliament he was impeached for high treason, and as a result was beheaded on Tower hill, 1641.

Strathcona (*strath-kō'na*), **Baron, Donald Alexander Smith,** high commissioner for Canada, 1896-1914 was born in Scotland, 1820. He was educated in Scotland; hon. LL. D., Cambridge. He was special commissioner during first rebellion in Red river settlements, 1869-70; member of parliament for Selkirk in Dominion house of commons, 1871-72, 1874, and 1878; for Montreal West, 1877-96. He was governor of the Hudson Bay company, director of the St. Paul, Minneapolis and Manitoba Railway. He was also chancellor of McGill University, and was lord rector of Aberdeen University, 1899. He was raised to the peerage in 1897. Died 1914.

Straus (*strous*), **Oscar Solomon,** American merchant, diplomat and publicist, was born at Otterberg, Germany, 1850. Graduated at Columbia University, 1871; LL. B. He practiced law, 1872-81; entered the mercantile life as a member of L. Straus and Sons, importers of pottery and glassware; was United States minister to Turkey, 1887-89, 1898-1901; appointed, 1902, by president Roosevelt, a member of the permanent court of arbitration at The Hague; and was secretary of commerce and labor, 1906-09. Author: *The Origin of Republican Form of Government in the United States*; *United States Doctrine of Citizenship*; *Our Diplomacy with Reference to our Foreign Service*, etc.

Strauss (*shtrous*), **David Friedrich,** German theologian and critic, was born at Ludwigsburg, Würtemberg, 1808. In 1835 he published the first volume of his celebrated *Leben Jesu*. In 1840-41 he published *The Christian Doctrine*, which was followed by several other works not theological, including a *Life of the Reformer Ulrich von Hutten*. Strauss's *Life of Jesus* was translated into English by George Eliot in 1846. He died, 1874.

Strauss, Johann, Austrian composer and conductor, was born at Vienna, 1825. In 1872 he conducted an orchestra of 1,000 performers at the Boston peace jubilee; he was for a time also musical director to the emperor Joseph at Vienna. His most famous waltz pieces are *Wiener Blut*, *Künstlerleben*, and *An der schönen blauen Donau*. Of his operettas, the following are best known: *Cagliostra*; *La Tsigane*; *Die Fledermaus*; *Eine Nacht in Venedig*. He died, 1899.

Strauss, Richard, German composer, conductor at the royal opera house, Berlin, was born, 1864, at Munich. From 1889 to 1894 he was chapelmaster, with Eduard Lassen, at Weimar, later conductor at the Munich opera house; and since 1898 conductor of the royal opera, Berlin. Works: *Salome*; *Tod und Verklarung*; *Don Juan*; *Till Eulenspiegel*; *Don Quixote*, etc. He was made chevalier of the legion of honor, 1907.

Strong, Augustus Hopkins, American theologian, president and professor of systematic theology at Rochester theological seminary since 1872 was born at Rochester, N. Y., 1836. He graduated at Yale, 1857; D. D.; LL. D. Author: *Systematic Theology*; *Christ in Creation and Ethical Monism*, etc.

Strong, Charles Augustus, American psychologist, educator, was born at Haverhill, Mass., 1862. He graduated at Harvard, 1885; lecturer in psychology, 1895-1903, and professor of psychology, since 1903, Columbia University. Author: *Why the Mind Has a Body*, etc.

Stryker, Melanethon Woolsey, American educator, president of Hamilton College since 1892, was born at Vernon, N. Y., 1851. He was graduated at Hamilton College, 1872; LL. D. Author: *Song of Miriam*; *Hamilton*; *Letter of James*; *Well by the Gate*, sermons, etc.

Stuart, Gilbert Charles, American portrait painter, was born at Narragansett, R. I., 1755. In 1778 he made his way to London, where his talent was recognized by Benjamin West, president of the Royal academy, who took him into his family, and whose full length portrait he painted for the national gallery. In 1792, in the fullness of his powers and fame, he returned to America, and painted portraits of Washington, Jefferson, and many of the distinguished men of the period. Died at Boston, Mass., 1828.

Stuart, James Ewell Brown, confederate cavalry general, was born in Patrick county, Virginia, 1833. When the civil war broke out, he held a captaincy in the Union army, but resigned this to enter the confederate service. He was mortally wounded at Ashland, and died, 1864, at Richmond, Va.

Stubbs, William, English historian, was born Knaresborough, England, 1825. In 1866 he was appointed professor of modern history at Oxford. He was made bishop of Chester in 1884, and changed to the see of Oxford in 1889. He has edited a large number of ancient histories and chronicles. His historical works include: *Constitutional History of England*; *The Early Plantagenets*. He died, 1901.

Stuyvesant (*stī've-sant*), **Peter,** director-general of the New Netherlands, 1647-64, and last Dutch governor of New York, was born in Holland, 1592. Forced to surrender the city of New York to the English, 1664. He died in 1682.

Suchet (*sü'she'*), **Louis Gabriel,** duke of Albufera, celebrated French marshal, was born in 1770 at Lyons. In 1808 he was appointed to the command of the French forces in the southeast of Spain, and this command he retained until the termination of the war. When Napoleon returned from Elba, he intrusted Suchet with the defense of the departments bordering on the frontier of Savoy. He died, 1826.

Sudermann (*zōō'dēr-män*), **Herman,** German dramatist and novelist, was born in Matziken, Prussia, 1857. He published a series of tales, of

which *Frau Sorge*, *Der Katzensteg*, and *Es War*, are the most impressive. The drama *Sodom's Ende* was produced in 1890, and was followed by *Die Heimath*. In 1906 *Das Blümerboot* was produced in Berlin, and *Rosen* at Vienna in 1907.

ue (*sü*), **Marie-Joseph Eugène,** French novelist, was born in Paris, 1804. In 1850 he was elected to the legislative assembly, as one of the deputies for the department of Seine. His writings extend over many volumes. His reputation as a writer rests mainly on *The Wandering Jew* and *The Mysteries of Paris*. He died in Savoy, in exile, 1857

ulla, Lucius Cornelius, Roman general and dictator, was born, 138 B. C. After holding the dictatorship for about two years, he resigned his office in 79 B. C., and retired to an estate he possessed at Puteoli, where he died in the following year.

ullivan, Sir Arthur Seymour, English composer, was born in London, 1842. He studied in London and at Leipzig, and in 1862 composed incidental music for *The Tempest; Pirates of Penzance; Patience; Iolanthe; The Mikado; The Yeomen of the Guard; The Gondoliers*, etc. He has also written cantatas, overtures, oratorios, church music, and ballads. He became a member of the legion of honor, 1878, and was knighted in 1883. Died, 1900.

ully, James, English educator and philosophical writer, late Grote professor of philosophy of mind and logic, University College, London, was born at Bridgewater, 1842. Author: *Sensation and Intuition; Pessimism; Illusions; Outlines of Psychology; Children's Ways; An Essay on Laughter*, etc.

ully, Maximilien de Bethune, Duke of, French soldier and statesman, noted minister of Henry IV., of France, was born at Rosny, near Nantes, 1560. In 1601 he was sent on a confidential mission to Queen Elizabeth of England. He was created duke of Sully in 1606, and was made marshal of France in 1634. He died at Villebon, near Charters, 1641.

ully, Thomas, American painter, was born in Lincolnshire, England, in 1783. As a portrait painter, he enjoyed great reputation, Jefferson, Lafayette, Madison, Jackson, and many other of the most illustrious personages of the time being among his sitters. Died, 1872.

umner, Charles, American statesman, was born at Boston, 1811; was graduated at Harvard, 1830; studied law, and was admitted to the bar, 1834. In 1851 he entered the United States senate as the successor of Daniel Webster, retaining his seat until his death. In the debate on the repeal of the Missouri compromise and on the contest in Kansas he took a prominent part. His speech upon this issue, delivered in 1856, under the title *The Crime against Kansas*, greatly incensed the members of congress from South Carolina, one of whom, Preston S. Brooks, on May 22d assaulted Sumner at his desk in the senate chamber. In 1871 he opposed the annexation of San Domingo to the United States. He published *White Slavery in the Barbary States; Orations and Speeches*, etc. Died in Washington, D. C., 1874.

umner, William Graham, American educator and economist, professor of political and social science at Yale 1872-1910, was born at Paterson, N. J., 1840. He graduated at Yale, 1863; LL. D. Author: *A History of American Currency; Robert Morris; The Financier and Finances of the Revolution; Folkways*, etc. Died, 1910.

utherland, George, lawyer, United States senator, was born in Buckinghamshire, England, 1862. attended the law department of the University of Michigan, 1882-83; and was admitted to the bar, 1883; was a member of congress, Utah, 1901-03; and was elected to the United States senate for the term 1905-11.

uvaroff (*sōō-vä'rōf*), **Prince Alexei,** celebrated Russian field marshal, was born in 1729, at Suskoi, in Finland. In the war against the Turks, from 1787 to 1790, he gained the battle of Rymnik, took Ismail by storm, and obtained other important advantages. When Russia joined the continental coalition, in 1799, he was placed at the head of the combined army in Italy, and, after several sanguinary battles, succeeded in wresting that country from the French. He died, 1800.

vain, Joseph, American educator, president of Swarthmore College since 1902, was born at Pendleton, Ind., 1857. He graduated at Indiana University, 1883; A. M., LL. D.; professor of mathematics in Leland Stanford Jr. University 1891-93; and president of Indiana University, 1893-1902. He is a member of the national council of education, national council of religious education, etc.

veatman, Arthur, archbishop of Toronto, and primate of Canada since 1907, was born in 1834. He was graduated at Christ's College, Cambridge; rector of Grace church, Brantford, Ontario, 1872-76; secretary of the diocesan synod, 1872-79; secretary to Canadian house of bishops, 1873-79; archdeacon of Brant and rector of Woodstock, Ontario, 1876-79; and bishop of Toronto, 1897-1907.

vedenborg (*swē'den-bôrg*), **Emanuel,** Swedish philosopher and mystic, the founder of the New church, was born in 1688, at Stockholm. In 1743 he claimed a divine commission to disclose the internal or spiritual sense of scripture by the correspondence existing between natural and spiritual things, and thereby to make known its true doctrines. He also stated that for the purpose of his mission he was intromitted as to his soul into heaven, hell, and the intermediate state between them. Of these he treats in *Heaven and Its Wonders, The Last Judgment*, and *The Earth in the Universe*. In his philosophy, which is really one with his theology, he treats of creation in his *Divine Love and Wisdom*. He died in London, 1772.

Sweet, Henry, English philologist, was born in London, 1845. He studied at King's College, London; at Heidelberg, and at Balliol College, Oxford; M. A., Ph. D., LL. D. Author and editor: editions of Old and Middle English texts; Old and Middle English readers and primers; *Student's Dictionary of Anglo-Saxon; Primer of Spoken English; History of English Sounds; Primer of Phonetics: The Practical Study of Languages*.

Swift, Jonathan, British satirist, was born in Dublin, of English parents, 1667. He was educated at Trinity College, Dublin, and then removed to London, and was admitted into the house of Sir William Temple. Before 1700 he had written the most powerful satirical work of the eighteenth century, the *Tale of a Tub*, in 1704. He then wrote papers for the *London Examiner*, *The Conduct of the Allies*, and innumerable pasquinades against the whigs, and became a formidable power in the state. His *Drapier Letters*, 1724, compelled the government to abandon a scheme for supplying Ireland with copper coinage. The triumphant author made his last visit to England in 1726, and published his *Gulliver's Travels*, the most popular of all his works. Died, 1745.

Swinburne, Algernon Charles, English poet and prose writer, was born in London, 1837. He was educated at Balliol College, Oxford. His first productions were the plays, *Queen Mother* and *Rosamond*, which were followed by two tragedies; *Poems and Ballads; A Song of Italy:* essay on *William Blake:* and *Songs before Sunrise*. His subsequent works include: *Bothwell, a Tragedy; Songs of Two Nations; Century of Roundels; A Study of Victor Hugo; Studies in Prose and Poetry: The Duke of Gardia*, etc. He died in 1909.

Sybel (*zē'bel*), **Heinrich von,** German historian, born at Düsseldorf, 1817. He studied at Berlin under Ranke; became professor of history at Bonn, 1844; and in 1875 was made director of the state archives at Berlin. Then came his great work, *Geschichte der Revolutionszeit*, 1789-95, a history of the French revolution based upon official documentary evidence. He died at Marburg, 1895.

Sydenham (*sid'en-am*), **Thomas,** English physician, was born at Winford Eagle in Dorsetshire, 1624. His last work, *Processus Integri*, in 1692, is an outline of pathology and therapeutics. Seemingly behind his age in science, he was really ahead of it in practice. He died at London, 1689.

Symonds (*si'munz*), **John Addington,** an English man of letters, was born at Bristol, England, 1840. He was graduated at Oxford. His chief writings are an *Introduction to the Study of Dante; Studies of the Greek Poets; Sketches in Italy and Greece; The Renaissance in Italy; Italian Byways; Shakespeare's Predecessors in the English Drama. The Renaissance in Italy* is his chief work. He died at Rome, 1893.

Tacitus (*tas'i-tus*), **Gaius Cornelius,** Roman historian and orator, was born about 55 A. D. In 97 he was appointed consul, succeeding T. Virginius Rufus. Tacitus became one of the most intimate friends of the younger Pliny, of whose letters eleven are addressed to him. The time of his death is unknown, but he probably survived Trajan, who died in 117. His chief works are the *Life of Agricola*, and the *Germania*, both written about 98.

Tadema, Alma. See **Alma-Tadema.**

Taft, William Howard, twenty-seventh president of the United States, was born in Cincinnati, Ohio, 1857. He was graduated at Yale, 1878, and from the law school, Cincinnati College, 1880; LL. D.; admitted to the Ohio bar, 1880; assistant prosecuting attorney, Hamilton county, Ohio, 1881-82; collector of internal revenue, first district, Ohio, 1882-83; was assistant county solicitor, Hamilton county, Ohio, 1885-87; judge of the superior court of Ohio, 1887-90; solicitor-general of the United States, 1890-92; United States circuit judge, sixth circuit, 1892-1900; president of the United States Philippine commission, 1904; first civil governor of the Philippine islands, 1901-04; secretary of war, United States, 1904-08. On November 3, 1908, he was elected president of the United States, and inaugurated March 4, 1909.

Taine, Hippolyte Adolphe, French historian and critic, was born at Vouziers, France, 1828. One of his first essays was crowned by the French academy. Among his most important works is his *History of English Literature*, a clear and valuable criticism written in brilliant style; in 1878 he was elected to membership in the French Academy. He died at Paris, 1893.

Tait, Peter Guthrie, British mathematician and physicist, was born in 1831. He was educated at Edinburgh University, and St. Peter's College, Cambridge; was elected professor of natural philosophy at Edinburgh, 1860. He resigned his chair early in 1901, and died the same year.

Takahira (*tä'kä-hē'rä*), **Kogoro,** Japanese diplomat, was born in Japan, 1854. He was educated in Tokyo, and entered the foreign office as student attaché, 1876; acting consul-general, 1888-89: counsul-general at New York, 1892; envoy extraordinary and minister plenipotentiary to Italy, 1894-95 and 1906-07, to Austria and Switzerland, 1896-99; and envoy extraordinary and minister plenipotentiary to the United States, 1900-06, and 1907-09.

Talleyrand-Périgord (*tä'le'rän'pā'rē'gōr'*), **Charles Maurice, Prince de,** was born in Paris, 1754. As bishop of Autun he was a member of the states-general which was convoked in 1789. The progress of the revolution led to his retirement to England and afterward to America; but on the fall of Robespierre he returned to Paris, and, through the influence of Madame de Staël with Barras, was appointed foreign minister. In return for his services he was made grand chamberlain, and prince of Bénévento. After the fall of Napoleon, he became for a time prime minister under Louis XVIII., but ceased to hold this position subsequent to the battle of Waterloo. Died, 1838.

Talmage, Thomas De Witt, American Presbyterian minister and orator, was born in New Jersey, 1832. He was educated at New York University. He edited for several years *The Christian at Work*, and later the *Christian Herald*, and wrote extensively. In 1889-90 he visited the holy land, and in 1894 made a tour of the world. He was pastor of the First Presbyterian church, Washington, D. C., 1895-99. Author: *Crumbs Swept Up; Marriage Ring*, etc. Died, 1902.

Tamerlane, or **Timur** (*tē-mōōr'*), oriental conqueror, was born at Sebz, near Samarkand, about 1336. His whole career was one of conquest, though he was frequently interrupted by revolts in his own dominions, and in the provinces he had brought under his rule. He was preparing for the conquest of China, but died on his march to that country, 1405.

Taney (*tô'nē*), **Roger Brooke,** American jurist, was born in Calvert county, Md., 1777. He was graduated at Dickinson College; he succeeded John Marshall as chief-justice of the United States supreme court in 1836. His most famous decision was that in the Dred Scott case, in 1857. He died at Washington, D. C., 1864.

Tarbell, Ida Minerva, American author and editor, was born in Erie county, Pa., 1857. She was graduated from Allegheny College; editor on staff, and associate editor of *McClure's Magazine*, 1894-1906, and associate editor of the *American Magazine* since 1906. Author: *Early Life of Abraham Lincoln*, with J. McCan Davis; *History of the Standard Oil Company*.

Tarkington, Newton Booth, American novelist, was born in Indianapolis, Ind., 1869. He was graduated at Princeton, 1893; A. M., 1899. Author: *The Gentleman From Indiana; Monsieur Beaucaire; The Two Vanrevels; The Conquest of Canaan; His Own People*, etc.

Tarr, Ralph Stockman, American educator, was born at Gloucester, Mass., 1864. He was graduated at Lawrence scientific school, Harvard, 1891; assistant professor of geology at Harvard. 1892-97; professor of physical geography, since 1906, Cornell University. Author: *Economic Geology of United States; Elementary Physical Geography; New Physical Geography*.

Taschereau (*tàsh'rō'*), **Sir Henri Elzear,** Canadian jurist, chief-justice of the supreme court of Canada, 1902-06, was born in 1836. He was admitted to the Quebec bar, 1857; was appointed a judge of the Quebec superior court, 1871; judge of the supreme court of Canada, 1878.

Tasso (*täs'sō*), **Torquato,** Italian poet, was born in Sorrento, 1544. In 1565 he entered the service of cardinal Luigi d'Este, and was invited to the court of his brother, Alfonso, duke of Ferrara. While there he wrote his pastoral drama, *Aminta*, and in 1575 finished his great epic, *Jerusalem Delivered*, describing the first crusade. In 1594 Pope Clement VIII. summoned him to Rome to receive a laurel crown, but he died soon after his arrival, in 1595.

Tauler (*tou'lẽr*), **Johann,** German mystic, was born at Strassburg, about 1300. He entered the Dominican order about 1318. He died at Strassburg in 1361.

Taylor, Charles H., American journalist, editor and manager of the *Boston Daily Globe* since 1873, was born in Boston, Mass., 1846; member of the Massachusetts legislature, 1872. He served during the civil war in the 38th Massachusetts regiment; was wounded at Port Hudson, La., 1863; and brigadier-general on Governor Russell's staff, 1891-93. He has long held a prominent place among American journalists and publicists.

Taylor, Hannis, American lawyer, diplomat, was born in New Bern, N. C., 1851. He was educated at the University of North Carolina; LL. D.; professor of constitutional and international law, George Washington University, 1892-98, and was special counsel for the government of the United States before the Spanish treaty claims commission, and before the Alaskan boundary commission.

Taylor, James Bayard, American author and traveler, was born at Kennett Square, Pa., 1825. In 1862-63 he was connected with the embassy at St. Petersburg, and in 1874 he was in Iceland

and Egypt. For several years he resided in Germany. He was appointed United States minister to Berlin in 1878, where he died the same year. He was an industrious worker, and wrote many volumes. Some of his best travesties are in his *Echo Club*. Among the finest of his poems are *Bedouin Song*, *The Quaker Widow*, and *The Old Pennsylvania Farmer*. His masterpiece is the translation of Goethe's *Faust*.

Taylor, James Monroe, American educator, professor of ethics and president of Vassar College since 1886, was born in Brooklyn, 1848. He was graduated at the University of Rochester, 1868; D. D.; LL. D. Author: *Psychology; New World and Old Gospel*, etc.

Taylor, Jeremy, English divine, was born in Cambridge, England, 1613. He was graduated at Cambridge. He soon afterward became chaplain to Charles I., was rector of Uppingham, 1638-42. He removed to Ireland in 1657, and, after the restoration, was made bishop of Down and Connor. His chief works are: *Holy Living; Holy Dying*. Died, 1667.

Taylor, Robert Love, lawyer, United States senator, was born in Happy Valley, Tenn, 1850; was governor, 1887-91; practiced law at Chattanooga, 1891-96; again governor, 1897-99; and United States senator, 1907-12. Died 1912.

Taylor, Zachary, American general, and twelfth president of the United States, was born in Orange county, Va., 1784. After defeating the Seminoles at Okechobee in 1837, he was given the chief command in Florida in the following year. In 1846 he was intrusted with the command of the army which entered Mexico. There he gained the battles of Palo Alto, Resaca de la Palma, and Buena Vista, and brought the campaign to a successful conclusion in 1847. In the following year he was nominated as whig candidate for the presidency, elected, and inaugurated in 1849. Died, 1850.

Tecumseh (*tē-kum'se*), famous Shawnee chief, was born on the Scioto river, Ohio, about 1775. In the war of 1812 he became an ally of the English, obtained the rank of brigadier-general in their service, and commanded the right wing in the battle of the Thames, in 1813, where he fell mortally wounded.

Tell, William, Swiss patriot, was born at Bürglen, near Altdorf, toward the close of the thirteenth century. His renown rests upon his resistance to the Austrians in 1307 and afterward. The story of Tell has been the subject of numerous poems and dramas. The most notable is the *Wilhelm Tell* of Schiller.

Temple, Sir William, English diplomat and writer, was born in London, 1628. He studied at Cambridge. His great diplomatic success was the triple alliance, in 1668, of England, Holland, and Sweden, against France. In 1677 he helped to bring about the marriage of the prince of Orange with the princess Mary. At the revolution he again refused the secretaryship, and gave the remainder of his days, after 1681, to letters and gardening. Died, 1699.

Teniers (*te-nērs'*), **David, the Younger,** celebrated Flemish painter, was born at Antwerp, 1610. He was the most popular of all the Flemish painters. He died at Brussels, 1690.

Tennyson, Alfred, English poet, was born in Somersby, Lincolnshire, England, 1809, of which parish his father was rector. He was educated at Louth grammar school, and at Cambridge University. At Cambridge he gained the chancellor's medal by a poem in blank verse entitled *Timbuctoo;* but his literary career properly dates from 1830, in which year a volume appeared of *Poems, chiefly Lyrical*. The publication, in 1842, of *Poems, by Alfred Tennyson*, in two volumes, raised him to the position of supremacy, which he continued to occupy until his death. In 1847 appeared *The Princess, a Medley*, and in 1850 *In Memoriam*. On the death of Wordsworth, in 1850, Tennyson succeeded him as poet laureate, in which capacity he issued, in 1852, his *Ode on the Death of the Duke of Wellington*. In 1855 appeared *Maud, and other Poems*. The *Idylls of the King* at once took rank as one of the noblest poems in the language. It was followed in 1864 by a volume containing *Enoch Arden; Aylmer's Field; Tithonus*, and a few other poems. He lived for the most part a retired life. In 1884 he was made an hereditary peer, with the title of Baron Tennyson. Died, 1892.

Terence (*ter'ens*) or **Terentius, Publius,** Latin comic writer, is believed to have been a native of Carthage, and to have been born about 185 B. C. By birth or purchase he became the slave of the Roman senator P. Terentius Lucanus, who educated him highly, and finally manumitted him. Six comedies are extant under the name of Terence, which are, perhaps, all he produced. He died about 159 B. C.

Terhune (*tēr-hūn'*), **Mary Virginia,** "Marion Harland," was born in Amelia county, Va., 1831. In 1854 she published *Alone*, which at once created a sensation; and in 1855 she produced *The Hidden Path*. In 1857 her *Moss-Side* appeared, and this was followed in rapid succession by *Nemesis; Husks; Husbands and Homes; Sunnybank and Christmas Holly*.

Terry, Ellen Alicia (Mrs. James Carew), English actress, was born at Coventry, England, 1848, and made her first appearance on the stage with Charles Kean's Shakespearean revivals, in 1858; reappeared on the stage in 1867 for the first time with Henry Irving. In 1864 she married the noted painter, G. F. Watts, and in 1868 E. A. Wardell. In 1878 she was again associated with Irving, with whom she continued throughout the greater part of his subsequent career. She produced Ibsen's *The Vikings* in 1903, and Shakespearean plays with her own company at the Imperial theater. In 1907 she married James Carew.

Tertullian (*tēr-tul'i-an*), **Quintus Septimius Florens,** celebrated father of the Latin church, flourished in the latter part of the second century. He was born at Carthage. When and how he was converted to Christianity we are not informed; but he was well versed in Greek and Roman literature, and was remarkable for his impassioned eloquence, which he used with great power in his *Apology for the Christian Religion*, which is his most famous work.

Tesla (*tes'lä*), **Nikola,** American electrical inventor, was born in Smiljan, Austria-Hungary, 1857. He came to the United States in 1884, and for several years was employed at Edison's laboratory, near Orange, N. J. He invented many methods and appliances for the use of electricity, among them the production of efficient light from lamps without filaments, and the production and transmission of power and intelligence without wires. In 1898 he announced the discovery of, and in 1900 patented, a method of transmitting electrical energy without wires.

Thackeray, William Makepeace, eminent English novelist, was born at Calcutta, India, 1811. His first profession was that of an artist; but he soon abandoned art for literature. He afterward contributed largely to *Punch*. In 1846-48 *Vanity Fair* appeared, and Thackeray's reputation was at once established. In 1849 *Pendennis* appeared; in 1852, *The History of Henry Esmond;* in 1855, *The Newcomes*. In 1851 he delivered and published his *Lectures on the English Humorists of the Eighteenth Century*, and in 1856 his *Lectures on the Four Georges*. Died, 1863.

Thales (*thā'lēz*), early Greek philosopher, founder of the Ionic or physical school of philosophy, and one of the seven wise men, was a native of Miletus, in Asia Minor, and flourished during the first half of the sixth century B. C. He is regarded by some as the first Greek that speculated on the constitution of the universe.

Themistocles (*thē-mis'tō-klēz*), Athenian statesman, was born at Athens, about 514 B. C., fought at Salamis, and devoted the succeeding years to the upbuilding of the Athenian navy. In 481 B. C. he was chief archon, and added greatly to the naval power of Athens. He later rebuilt the walls and fortified the Piræus. Being in danger of arrest on a charge of treason in concert with Pausanias, he fled to Asia. He lived securely in Magnesia until his death, 449 B. C.

Theocritus (*thē-ok'ri-tus*), celebrated Greek poet, flourished in the time of Ptolemy Philadelphus, 285 to 247 B. C. The compositions of Theocritus bear the name of *Idyls*, of which there are thirty extant, though the genuineness of some of them is doubtful.

Theodoric (*thē-od'ō-rik*) **the Great,** founder of the monarchy of the Ostro, or East Goths, son of Theodemir, the Ostrogothic king of Pannonia, was born about 454. He was the most powerful of the Gothic kings, with an empire embracing Italy, Sicily, and Dalmatia, besides German possessions. As a ruler he proved himself as wise as he was strong; became in after years one of the great heroes of German legend, and figures in the *Nibelungenlied*. Died, 526.

Thiers (*tyär*), **Louis Adolphe,** French statesman and historian, and president of the French republic, was born in Marseilles, 1797. Between the years 1823-27 appeared his *History of the French Revolution*, a work which stamped him as a historian of the first order. In 1871 he succeeded in effecting peace on the best terms possible under the circumstances, and, in the same year, was elected president of the new republic. In 1873 after an adverse vote of the legislative body, he resigned, and was succeeded by Marshal MacMahon. Died, 1877.

Thomas, Ambroise, French composer, was born at Metz, 1811. He studied at the Paris conservatoire, 1828-32. His first success in opera was with *La Double Echelle*, in 1837, followed by *Mina, Betty, Le Caïd, Le Songe d'une Nuit d'Ete, Le Carnaval de Venise*. He became a member of the French institute in 1851, professor of composition, 1852, director of the conservatoire, 1871, and received the grand cross of the legion of honor, 1880. Died, 1896.

Thomas, Augustus, American playwright, was born at St. Louis, Mo., 1859. He was educated in the public schools there; studied law two years. Author: *Alabama; Arizona; The Man Upstairs; The Earl of Pawtucket; Mrs. Leffingwell's Boots; The Embassy Ball; The Witching Hour*, etc.

Thomas à Becket. See **Becket, Thomas à.**

Thomas, George Henry, American general, was born in Southampton county, Va., 1816. He was graduated at West Point. He began his career in the civil war as cavalry colonel in the Shenandoah valley. In 1861 he was appointed brigadier-general of volunteers, and at Chickamauga rendered the victory a barren one for the confederates. In October, 1863, he was given the command of the army of the Cumberland, and in November captured Mission Ridge; in December he won the battle of Nashville, and received the thanks of congress. He died at San Francisco, 1870.

Thomas a Kempis. See **Kempis, Thomas a.**

Thomas, M. Carey, American educator, president of Bryn Mawr College, was born in Baltimore, Md., 1857, daughter of Dr. James Carey Thomas. She was graduated at Cornell, 1877; Ph. D.; LL.D. She was professor of English, dean, 1885-95, and since 1894 president of Bryn Mawr College. Author and editor: *Sir Gawaine and the Green Knight; Education of Women; The College*, etc.

Thompson, Ernest Seton. See **Seton, Ernest Thompson.**

Thompson, Launt, American sculptor, was born in Ireland, 1833, but was brought up in Albany, N. Y. A statue of General Winfield Scott, a colossal statue of Napoleon, and a statue of the first president of Yale, on the college grounds, are some of his larger works. He died at Middletown, N. Y., 1894.

Thompson, William Oxley, American educator, president of Ohio State University, was born at Cambridge, Ohio, 1855. He was graduated from Muskingum College, 1878; LL. D. He was ordained to the Presbyterian ministry, 1882; was president of Miami University, 1891-99, and has been president of Ohio State University since 1899.

Thomson, Elihu, American electrician, was born in Manchester, England, 1853. He was graduated from Central high school, Philadelphia, 1870; Ph. D., Tufts College. He is the inventor of electric welding, which bears his name, and many other important devices in electric lighting, power, etc.

Thomson, James, British poet, was born in Roxburgshire, Scotland, 1700. He studied six years at Edinburgh. His fame rests upon his poems, *The Seasons*, the first of which, *Winter*, appeared in 1726, followed by *Summer, Spring*, and *Autumn*. He died near Richmond, England, 1748.

Thomson, Joseph John, English physicist, professor of experimental physics at Cambridge University, England, since 1884, was born near Manchester, 1856. In 1899 he accomplished the important achievement of dividing the hydrogen atom.

Thomson, Sir William. See **Kelvin, Lord.**

Thoreau (*thō'rō, thō-rō'*), **Henry David,** American naturalist, friend of Emerson, and a member of the transcendental school of New England, was born at Concord, Mass., 1817. He was graduated at Harvard College in 1837, and became a surveyor; lived the simplest of lives, in the study of nature, and in writing. He gave an account of his experiences in perhaps his finest book, *Walden*, published in 1854. Others were *Cape Cod, The Maine Woods*, and *A Yankee in Canada*. Died at Concord, 1862.

Thorpe, Thomas Edward, English chemist, director of the government laboratories, London, was born near Manchester, 1845. He was president of the society of chemical industry, 1895. Author: *Chemical Problems; Inorganic Chemistry Quantitative Analysis; Qualitative Analysis; Joseph Priestley*.

Thorwaldsen (*tōr'wōld-sen*), **Albert Bertel,** Danish sculptor, was born at Copenhagen, 1770. He studied at the academy of Copenhagen, where he gained the first gold medal in sculpture, and was sent by that body to Rome in 1796. His masterpieces include the *Entry of Alexander into Babylon; Cupid and Psyche; the Dying Lion* at Lucerne, and busts of Byron and the Danish poet, Œhlenschläger. Died, 1814.

Thucydides (*thū-sid'i-dēz*), great Greek historian, was born at Athens, about 471 B. C. He belonged to a noble Athenian family, and was himself a person of great influence and wealth. During exile he wrote his *History of the Peloponnesian War*. Among the Romans, Sallust is believed to have taken Thucydides for his model. He died about 401 B. C.

Thurman, Allen Granbery, American statesman, was born at Lynchburg, Va., 1813. When six years old his family moved to Ohio, where he became a lawyer and was chosen a representative in the 29th congress. He served as United States senator, 1869-81, and was one of the ablest and most prominent members of that body. Died, 1895.

Thwing, Charles Franklin, university president, was born at New Sharon, Me., 1853; graduated from Harvard 1876; graduate Andover Theological Seminary, 1879; S. T. D., Chicago Theological Seminary, 1889; LL. D., Marietta, 1894, Illinois College, 1894, Waynesburg College, 1901, Washington and Jefferson, 1902. Ordained Congregational ministry, 1879; president Western Reserve University and Adelbert College since 1890. Associate editor *Bibliotheca Sacra* since 1884. Author: *American Colleges—Their Students and Work; Within College Walls; The American College in American Life; The Best Life; College Administration; The Youth's Dream of Life; God in His World; The Choice of a College; College Training and the Business Man; A History of Higher Education in America*, etc.

Ticknor, George, American author, was born at Boston, 1791. He was graduated at Dartmouth in 1819 became professor of French and Spanish in Harvard College. His *History of Spanish*

Literature was published in 1849, and at once took high rank, and was translated into Spanish, German, and French. He was one of the founders of the Boston public library. Died, 1871.

Tiffany, Charles Louis, American merchant, was born at Killingly, Conn., 1812. In 1837 he established a stationery and fancy goods store next door to A. T. Stewart's establishment. In 1847 Tiffany began the manufacture of gold jewelry; in 1850 made immense purchases of diamonds in Europe, selling them in the United States at tremendous profit. The firm later established branches in several European centers. Died, 1902.

Tiffany, Louis Comfort, American artist, was born in New York, 1848. He studied art under George Inness and Samuel Coleman, New York, and Léon Bailly, Paris, and has devoted himself chiefly to oriental scenes in oil and water colors. He discovered the formulas for making decorative glass known as "Tiffany Favrile glass."

Tilden, Samuel Jones, American statesman, was born at New Lebanon, N. Y, 1814. He was educated at Yale and New York University, and admitted to the bar in 1841. By 1868 he attacked and destroyed the "Tweed Ring" and in 1876 was Democratic candidate for president, resulting in the famous contest before the Electoral Commission. He died in 1886, leaving a great part of his large fortune to found a free library in New York city.

Tillman, Benjamin Ryan, United States senator, farmer, was born in Edgefield county, S. C., 1847. He was elected governor of South Carolina in 1890 and 1892, and has been United States senator since 1895. He is also author of the dispensary system of selling liquor under state control; was one of the leaders in securing the insertion of advanced positions in democratic platform of 1896.

Tilly, Johann Tserklaes, Count of, Belgian general, one of the great leaders of the Thirty Years' war, was born near Gembleaux, Belgium, 1559. He reorganized the Bavarian Army, and, devoted to the Catholic cause, was given command of the Catholic army at the outbreak of the Thirty Years' war. Tilly was mortally wounded, in the battle of Lech, 1632.

Tintoretto (*tēn'tō-ret'tō*), Venetian historical painter, was born in 1518. His real name was Jacopo Robusti. He rose to high reputation, and was employed by the Venetian government to paint a picture of the victory gained over the Turks in 1571. Most of his finest compositions are at Venice. He died at Venice, 1594.

Tischendorf (*tish'en-dôrf*), **Lobegott Friedrich Konstantin von,** German biblical scholar, was born at Lengenfeld in Saxony, 1815. His labors in search of the best and most ancient manuscripts of the new testament, especially those in 1844, 1853, and 1859, resulted in the discovery of the fourth century *Sinaitic Codex* at the monastery on Mount Sinai; count of the Russian empire, LL. D., D. C. L., etc. He died in Leipzig, 1874.

Tissot (*tē'sō'*), **James Joseph Jacques,** French genre painter, was born at Nantes, France, 1836. He was educated at the Ecole des Beaux Arts, in Paris, and under Lamothe and Flandrin. He made his first appearance in the Paris salon in 1859, with a number of fine water colors. He then turned his attention to his series of religious subjects illustrating the *Life of Christ.* Died, 1902.

Titchener (*tich'en-ẽr*), **Edward Bradford,** American educator, professor of psychology at Cornell since 1895, was born at Chichester, England, 1867. He was graduated at Brasenose College, Oxford, 1890; Ph. D.; D. Sc.; LL. D.; assistant professor of psychology, Cornell, 1892-95; American editor of *Mind;* associate editor of *American Journal of Psychology,* etc. Author: *An Outline of Psychology; A Primer of Psychology.*

Titian (*tish'i-an*), **or Tiziano Vecellio** (*tit-si-ä'no ve-chel'li-ō*), great Italian painter, and head of the Venetian school, was born at Pieve de Cadore, in the Carnic Alps, in 1477. He studied under Giovanni Bellini of Venice, and in 1507 was associated with the painter Giorgione in executing certain frescoes.

In 1511 he was invited to Padua, where he executed three remarkable frescoes still to be seen. In 1512 he completed the unfinished pictures of Giovanni Bellini in the Sala del Gran Consiglio at Venice, and the senate were so pleased that they gave him an important office. To this period are attributed his pictures of the *Tribute Money* and *Sacred and Profane Love.*

In 1514 he painted a portrait of Ariosto at Ferrara, and after his return to Venice, in 1516, he painted an *Assumption of the Virgin,* considered one of the finest pictures in the world. About 1528 he produced his magnificent picture, *The Death of St. Peter the Martyr*—"a picture," says Algarotti, "in which the great masters admitted they could not find a fault," unfortunately destroyed by fire in 1867.

In 1530 the Emperor Charles V. invited him to Bologna to paint his portrait and execute various other commissions. In 1532 he again painted the emperor's portrait, and he is said to have accompanied Charles to Madrid, where he received several honors. He remained, it is said, three years in Spain, in which country many of his master-pieces, such as *The Sleeping Venus, Christ in the Garden, St. Margaret and the Dragon,* are still to be found. In 1537 he painted an *Annunciation,* and in 1541 he produced *The Descent of the Holy Ghost on the Apostles, The Sacrifice of Abraham,* and *David and Goliath.* In 1543 he painted his picture of *The Virgin and San Tiziano;* and in 1545 he visited Rome, where he painted the famous group of *Pope Paul III.,* the *Cardinal Farnese,* and *Duke Ottavio Farnese.* He was patronized as warmly by Philip II. as by his father Charles V.

Of Titian's private life but little is known. He died of the plague in 1576, aged ninety-nine, having painted to the last with almost undiminished powers.

Titian excelled as much in landscape as in figure-painting, was equally great in sacred and profane subjects, in ideal heads and in portraits, in frescoes and in oils; and though others may have surpassed him in single points, none equaled him in general mastery. As a colorist he is almost unrivalled, and his pictures often reach the perfection of sensuous beauty.

References.—Crowe and Cavalcaselle's *Life and Times of Titian;* Claude Phillips' *The Early Work of Titian;* and *The Later Work of Titian;* Morelli's *Italian Painters;* Ruskin's *Modern Painters.*

Tittmann, Otto Hilgard, American scientist, was born at Belleville, Ill., 1850. He entered the United States coast and geodetic survey in 1867. United States delegate to international geodetic conference, Berlin, 1895; and superintendent since 1900 United States Coast and geodetic survey. He was appointed to represent the United States in the demarkation of the boundary between Alaska and Canada in 1899, and was United States-Alaska boundary commissioner, 1904.

Tocqueville (*tok'vil*), **Alexis Charles Henri Clerél de,** French statesman and writer, was born at Verneuil, 1805. He studied at Metz and at Paris, was admitted to the bar in 1825. He became successively a member of the academy of moral sciences and of the French academy. After 1848 he was the most formidable opponent of the socialists and extreme republicans, and as strenuously opposed Louis Napoleon. He became vice-president of the assembly in 1849, and from June to October was minister of foreign affairs. He wrote *Democracy in America.* Died 1859.

Todd, David P., astronomer, was born at Lake Ridge, N. Y., 1855; graduated from Amherst, 1875; Ph. D., Washington and Jefferson College, 1888; chief assistant on United States nautical almanac, 1878-81; professor astronomy and navigation and director of observations, Amherst College, since 1881. Astronomer in charge Lick observatory observations, transit of Venus, 1882; professor astronomy and higher mathematics, Smith College, 1882-7; astronomer in charge American eclipse expedition to Japan, 1887; chief United States scientific expedition to West Africa, 1889-90; chief Amherst eclipse expedition to Japan, 1896, to Tripoli, Barbary, 1900, to the Dutch E. Indies, 1901, and to Tripoli, 1905; chief Mars expedition to the Andes, 1907. Author: *A New Astronomy; Stars and Telescopes; Lessons in Astronomy;* etc. Designed and erected new observatories at Smith College, Northampton, 1886-7, and at Amherst College, 1903-5.

Togo (*tō'gō*), **Admiral Count Heihachiro,** Japanese admiral, was born at Kogoshima, 1847. He first came into prominence as commander of the *Naniwa,* which sank the transport *Kowshing* and forced on the war with China. He was then a rear-admiral and third in command of the fleet. At the close of January, 1904, he was selected to command the entire Japanese fleet in the hostilities against Russia. The battle of the sea of Japan was fought May 27-28, 1905, when of the Baltic fleet twenty ships were sunk, six captured, two demolished, and six disarmed and interned. Togo was made count in 1907.

Tolstoi (*tol-stoi'*), **Count Lyoff Nikolayevitch,** Russain author and social reformer, was born at Yasnaia Poliana in 1828. Studied at the University of Kazan; entered the army when twenty-three, and served in the Caucasus and at Sebastopol. Leaving the army soon after the close of the Crimean war, he devoted himself to literature. His *War and Peace,* a tale of the invasion of Russia by Napoleon in 1812, is regarded as his masterpiece; but his *Anna Karenina,* which appeared in 1876, is better appreciated. He makes "Resist not evil" the keystone of the Christian faith, and insists that the literal interpretation of the sermon on the mount is the only rule of the Christian life. In 1892 he deposited his *Memoirs and Diaries* with the curator of the Rumyanzoff museum on the condition that they should not be published until ten years after his death. He was excommunicated by the holy synod in 1901, and the same authority enjoined all true believers to refrain from celebrating his eightieth birthday in 1908. Died, 1910.

Toombs, Robert, American politician, was born in Wilkes county, Ga., 1810. From 1853 to 1861 he was a member of the United States senate. In 1861 he became secretary of state under the confederate government, but resigned to accept the commission of brigadier-general in the confederate army. After the war he lived abroad until 1867, and on his return to the South refused to take the oath of allegiance to the United States government. He died in 1885.

Toothaker, Charles Robinson, curator, was born at Philadelphia, 1873; graduate Central manual Training High School, Philadelphia, 1890; special course in zoölogy under E. D. Cope; other special courses. Mineralogist in employ of A. E. Foote, Philadelphia, 1890-7; assistant curator, 1898-1904, curator since 1904, Philadelphia museum; lecturer on commercial geography; special instructor in commercial geography, Temple University, 1907-8. Consul for Republic of Colombia in Philadelphia. Author: *Commercial Raw Materials,* etc.

Toronto, Archbishop of. See **Sweatman, Arthur.**

Torricelli (*tor'rē-chel'lē*), **Evangelista,** Italian physicist and mathematician, was born probably at Piancaldoli, in the Romagna, 1608. He is celebrated as the inventor of the barometer, and for his improvements in lenses for telescopes. He died at Florence, 1647.

Torstensson (*tôr'sten-son*), **Lennard,** count of Ortala, Swedish general, was born at the castle of Torstena, Sweden, 1603. He accompanied Adolphus to Germany in 1630, and in 1641 was appointed to the command of the Swedish army in Germany. He died in 1651.

Totleben (*tat-lye-ben*), **or Todleben, Franz Eduard Ivanovitch,** Russian general and military engineer, was born 1818. Until he was severely wounded in 1855, he conducted with skill and energy the defense of Sebastopol. During the Turkish war of 1877-78 he was called to besiege Plevna, which he took. He died in 1884, and was buried at Sebastopol. He wrote an admirable account of the defense of Sebastopol.

Tourgée (*toor-zhā'*), **Albion Winegar,** American author, was born at Williamsfield, Ohio, 1838. Moved to North Carolina, where he was prominent in the reconstruction of the state, drawing up the constitution, and aiding in the revision of the laws. For some years prior to his death in 1905 he was United States consul at Bordeaux, France, and Halifax, Canada.

Toussaint L'Ouverture (*tōō'saṅ' lōō-ver'tūr*), **François Dominique,** Haitian general, was born in 1743, son of African slaves, in San Domingo. In 1796 he was appointed by the French directory chief of the army of San Domingo. When Bonaparte sought to restore slavery in San Domingo in 1801, Toussaint resisted, but was forced to surrender, and was sent to France, where he died in prison in 1803.

Tower, Charlemagne, American capitalist and diplomat, was born in Philadelphia, Pa., 1848. He was graduated at Harvard in 1872; LL. D. He lived in Duluth, Minn., 1882-87; was president of Duluth and Iron Range railroad and managing director of Minneapolis iron company. He was United States minister to Austria-Hungary, 1897; ambassador to Russia, 1899-1902; and ambassador to Germany, 1902-08. Author: *The Marquis de La Fayette in the American Revolution.*

Toy, Crawford Howell, university professor, was born at Norfolk, Va., 1836; graduated at the University of Virginia, 1856, and studied at the University of Berlin, 1866-8; LL. D., University of North Carolina and Harvard. Professor of Hebrew, Southern Baptist Theological Seminary, Greenville, South Carolina and Louisville, Ky., 1869-79; Hancock professor of Hebrew and other Oriental languages, Harvard, 1880-1909, and Dexter lecturer on biblical literature until 1903. Author: *The Religion of Israel; Quotations in the New Testament; Judaism and Christianity; Hebrew Text and English Translation of Ezekiel; Commentary on Proverbs,* etc.

Trajan (*trā'jan*), **Marcus Ulpius Crinitus,** Roman emperor, surnamed Optimus, was born at Italica, in Spain, about 52 A. D. On the death of Nerva, 98 A. D., Trajan was invested with the imperial purple. In his civil capacity, he ruled for the welfare of his people; in his military character, he sustained the glory of Rome. The column which bears his name was raised in the Roman capital to commemorate his victories. He died 117 A. D.

Tree, Herbert Beerbohm, English actor and manager, was born in London, 1853. His first success was as the timid curate in *The Private Secretary.* He managed the Comedy theater in 1887, and produced *The Red Lamp;* and in the autumn of the same year assumed charge of the Haymarket theater. In 1897 he opened his new theater, His Majesty's, in the Haymarket. Here he has produced the greatest of his successes: *Herod; Twelfth Night; The Merry Wives of Windsor; King Richard II.; Colonel Newcome,* etc. In 1907 he produced several of Shakespeare's plays in Berlin, and was received by the emperor.

Trench, Richard Chenevix, British prelate and writer, was born at Dublin, 1807. He was graduated at Trinity College, Cambridge, 1829. During 1835-46 he published six volumes of poetry, re-issued in 1865. In 1845 he became rector of Itchenstoke; in 1847 professor of theology in King's College, London; and in 1863 archbishop of Dublin, an office which he resigned in 1884. His principal works are: *Notes on the Parables; English Past and Present; Life and Genius of Calderon; Select Glossary of English Words;* and *Lectures on Mediæval Church History.* He died in 1886, and was buried in Westminster abbey.

Trent, William Peterfield, American educator and critic, professor of English literature at Columbia University since 1900, was born at Richmond, Va., 1862. He was graduated at the University of Virginia, A. M.; LL. D. He was professor of English, 1888-1900, and dean of the academic department, 1894-1900, University of the South, and editor of the *Sewanee Review,* 1892-1900. Author: *English Culture in Virginia; Robert E. Lee; The Progress of the United States in the Century; A History of American Literature, 1607-1865; Greatness in Literature; Daniel Defoe,* etc.

Tribonian (*tri-bō'ni-an*), celebrated Byzantine jurisconsult, was born at Sida, in Pamphylia. Justinian intrusted to him the superintendence of his new code of laws. This task was begun in 530 and completed in 534. Died, 545.

Trollope, Anthony, English novelist, was born in London, 1815. He was educated at Winchester school. He produced a long series of novels, among which are: *Barchester Towers; Doctor Thorne; The Bertrams; The Claverings; Castle Richmond;* and *The Golden Lion of Granpere.* Besides these he published several volumes of travel. He also wrote the *Life of Cicero,* one of Cæsar, and sketches of Thackeray. He died in 1882.

Tromp, Martin Harpertzoon, Dutch admiral, was born at Briel, 1597. In 1652 he was worsted by an English fleet under Blake. In November he again encountered Blake in the strait of Dover, this time successfully. In June another terrific battle took place off the North Foreland, the Dutch being defeated. In the final battle with Monk, July 31, 1653, off the coast of Holland, the Dutch lost thirty men-of-war, but their greatest loss was the heroic admiral. He was buried at Delft.

Troubetzkoy (*trōō-bets'koi*), **Princess.** See **Rives, Amelia.**

Trowbridge, John Townsend, American novelist, poet, and editor, was born at Ogden, N. Y. 1827. He removed to Boston and there contributed to magazines and journals and took actively to authorship. His chief works are: *Neighbor Jackwood; The Silver Medal* series; *The Tide Mill* series; and *Start in Life* series.

Trumbull, John, American painter, was born at Lebanon, Conn., 1756. He was graduated at Harvard College, and studied art at Boston. His first American historical pictures were *Battle of Bunker Hill,* and the *Death of Montgomery.* He painted portraits of Washington and other revolutionary characters. He died at New York, 1843.

Tschaikowsky (*chī-kôf'skē*), **Peter Ilich,** musical composer, was born in the Ural mining region, 1840. In 1866 he became teacher of harmony at the Moscow conservatory. He visited America in 1891, and died at St. Petersburg in 1893. His best work is found in his *Manfred, Roméo et Juliette, The Tempest, Francesca da Rimini,* and his remarkable symphonies.

Tupper, Sir Charles, Canadian statesman, was born in Amherst, Nova Scotia, 1821. He studied medicine at Edinburgh University; practiced his profession in his native town; and was prime minister of Nova Scotia, 1864-67. In 1884 he was appointed high commissioner for Canada in London. In 1895 he represented Canada at the international railway conference in London. In 1896 he was prime minister of Canada.

Turenne (*tü'ren'*), **Henri de la Tour d'Auvergne, Vicomte de,** French general, was born in 1611. After his conquest of Roussillon, in 1642, he was made a marshal of France and given chief command on the Rhine. In the civil wars in France, the two greatest generals of the period, Condé and Turenne, were on opposite sides, and Turenne with inferior forces was uniformly victorious, finally driving Condé from France. Louis XIV. made him marshal-general of France, and only his Protestantism prevented his being appointed constable. He was killed at the battle of Sasbach, while viewing the preparations for the attack, 1675.

Turgenieff (*tōōr-gen'yef*), **Ivan Sergyevitch,** Russian novelist was born in Orel, Russia, 1818. On account of his liberal ideas he was banished for a period, but was finally allowed to return to Russia. Among his best known novels are: *Fathers and Sons; Liza; Smoke; Dimitri Rudin; Journal of a Useless Man.* Died, 1883.

Turgot (*tür'go'*), **Anne Robert Jacques,** French statesman and economist, was born in Paris, 1727. He was educated for the church, and was prior of the Sorbonne in 1749. Under Louis XVI. he was put in charge of the finances of the country, and, if his plans had been received with favor by the nobility and statesmen, France might have been spared the horrors of the revolution. Among his writings are, *Reflections upon the Formation and Distribution of Riches,* and a work on *Usury.* He died at Paris in 1781.

Turner, Joseph Mallord William, British landscape painter, was born in London, 1775. In 1799 he was elected an associate of the Royal academy, and three years afterward attained the full dignity of academician. To the exhibitions of the Royal Academy he contributed in all 259 pictures. In 1808 he commenced the publication of his famous *Liber Studiorum,* a series of engravings from original designs. Among his finest paintings are: *Dido Building Carthage; The Sun Rising in a Mist; The Slave Ship,* etc. Died, 1851.

Twain, Mark. See **Clemens, Samuel Langhorne.**

Tycho Brahe. See **Brahe.**

Tyler, John, tenth president of the United States, was born at Greenway, Va., 1790. He was graduated at William and Mary College, 1807; studied law, and was admitted to the bar. In 1825 and again in 1827 he was chosen governor of Virginia; and in 1833 was elected United States senator. From this time he acted with the whig party, being an active partisan of Henry Clay, and in 1840 was elected by that party vice-president of the United States, with Harrison as president. The death of President Harrison, a month after his inauguration, made Tyler president in 1841. The annexation of Texas in 1845, and the passing of a protective tariff law in 1842, were among the important acts of Tyler's administration. He afterward joined the confederate cause, and was a member of the confederate congress at his death, which occurred at Richmond, Va., 1862.

Tyler, Moses Coit, American educator and writer, professor of American history at Cornell University, 1881-1900, was born at Griswold, Conn., 1835, and was graduated at Yale in 1857. From 1867 to 1881 he was professor of English at the University of Michigan. In 1881 he accepted the chair of American history at Cornell. He wrote: *History of American Literature during the Colonial Period, 1606-1765; The Literary History of the American Revolution; Glimpses of England,* etc. Died, 1900.

Tylor, Edward Burnett, English anthropologist, was born at Camberwell, 1832. He was in 1883 appointed keeper of the Oxford University museum and reader in anthropology; and in 1896 was made professor of anthropology. His *Researches into the Early History of Mankind, Primitive Culture,* and *Anthropology* stand first among works of their class.

Tyndale, William, English divine, was born in Gloucestershire, about 1484. He studied at both Oxford and Cambridge. Having become impressed with the importance of giving to the English people the Bible in their own language, he devoted himself to that work in private for many years; until, in 1523, finding it no longer safe to prosecute his labors in his own country, he sailed for Hamburg, and from that port proceeded to Wittenberg. There he completed his version of the new testament, which was published at Antwerp, 1526. He then undertook a translation of the old testament, in which he was assisted by Miles Coverdale. Executed by Henry VIII. for heresy, 1536.

Tyndall, John, British physicist, was born in County Carlow, Ireland, 1820. His published lectures on *Light, Sound,* and *Heat a Mode of Motion* are well known; he also wrote on glaciers, the physics of crystals, and many essays on other subjects. He was, however, best known as a popular exponent of physical science. He died in 1893.

Uhland (*ōō'länt*), **Johann Ludwig,** German poet, was born at Tübingen, 1787, and studied at the University of his native city. He began to publish ballads and other lyrics in various periodicals, collected under the title of *Gedichte,* in 1815. It is on these and his songs, such as *Der gute Kamerad* and *Das Schloss am Meer,* that his fame rests. He died at Tübingen, 1862.

Ulfilas (*ul'fi-läs*), translator of the Bible into Gothic, was born about 311. He was made bishop in 341. Familiar with Latin, Greek, and Gothic, and accustomed to write in each of them, he rendered the whole Bible, with the exception of *Kings,* into Gothic. Died, 381.

Ulpian (*ul'pi-an*), **Domitius,** Roman jurist, born at Tyre, about 170 A. D. He was murdered by his own soldiery, 228 A. D.

Untermyer, Samuel, American lawyer, was born in Lynchburg, Va., 1858. He was educated at the college of the city of New York, and was admitted to the bar, 1879. He has since practiced in New York, and is now a member of the law firm of Guggenheimer, Untermyer and Marshall.

Urban VIII., Pope, 1623-44, the successor of Gregory XV., whose family name was Maffeo Barberini, was born at Florence in 1568. He was the founder of the celebrated College of the Propaganda, and to him Rome is indebted for many public works, including large and important additions to the vatican library. He died in 1644, and was succeeded by Innocent X.

Usher (*ush'ēr*), **James,** Irish prelate, theologian and scholar, was born 1580. In 1607 he was chosen to the chair of divinity in the University of Dublin, a post which he held for thirteen years. In 1623 he was constituted privy councilor of Ireland, and two years later was raised to the highest ecclesiastical dignity in the kingdom, the archbishopric of Armagh. He died in 1656.

Valentine, Edward Virginius, American sculptor, was born at Richmond, Va., 1838. He studied art under Couture, and Jouffroy in Paris, in Florence under Bonaiuti, and in Berlin under Kiss.

Van Alstyne, Mrs. Frances Jane. See **Crosby, Fannie.**

Van Buren, Martin, American statesman, eighth president of the United States, was born in Kinderhook, N. Y., 1782. In 1821 Van Buren entered the United States senate, and was reëlected in 1827. In 1830 he took office as secretary of state in President Jackson's cabinet, resigning the same in April of the following year; and in 1836 became the successful democratic candidate for the presidency. During his tenure of office occurred the financial crisis of 1837, and the suspension of specie payments by the banks. Died, 1862.

Vanderbilt, Cornelius, American capitalist, was born near Stapleton, Staten Island, N. Y., 1794. He early engaged in steamboat transportation between Staten Island and New York. In 1864 he withdrew his capital from shipping and invested it in railroads. In 1861 he presented the steamship *Vanderbilt* to the United States government to be used for the capture of confederate privateers, and in 1872 founded Vanderbilt University at Nashville, Tenn., to which he gave about $1,000,000.

Vanderbilt, George Washington, capitalist, was born at New Dorp, Staten Island, N. Y., 1862; presented New York College for the training of teachers, its site on Morningside Heights, adjoining site selected for Columbia College; and presented American fine arts society of New York the room in their building known as the Vanderbilt gallery.

Vanderbilt, William Kissam, capitalist, was born in Staten Island, 1849. He received an academic education, and studied several years in Geneva, Switzerland. He subsequently learned railroading and became second vice-president of the New York Central and Hudson River railroad, 1877-83; was chairman of the board of directors of the Lake Shore and Michigan Southern railway, from 1883; and officer or director in numerous railway and financial corporations.

Vanderlip, Frank Arthur, banker, president of the National city bank, New York, since 1908, was born in Aurora, Ill., 1864. He studied at the University of Illinois and University of Chicago; assistant secretary of the treasury, 1897-1901; and vice-president of National city bank, New York, 1901-08; is trustee of Carnegie foundation; member of council of New York University. Author: *Chicago Street Railways; The American Commercial Invasion of Europe,* etc.

Vanderlyn, John, American painter, was born at Kingston, N. Y., 1775. He studied painting under Gilbert Stuart. The *Landing of Columbus,* placed in the rotunda of the national capitol and engraved on the five dollar note was designed by Vanderlyn. He died at Kingston, N. Y., 1852.

Van Devanter, Willis, jurist, associate justice, United States Supreme court, was born at Marion, Ind., 1859; was educated at Indiana Asbury (now DePauw) University, 1875-8; LL. B., Cincinnati law school, 1881. Practiced law at Marion, 1881-4, Cheyenne, Wyoming, from 1884; commissioner to revise Wyoming Statutes, 1886; city attorney, 1887-8; member Territorial Legislature (chairman judiciary committee), 1888; chief justice Supreme Court of Wyoming, 1889-90; assistant attorney-general of United States (assigned to Dept. Interior), 1897-1903; United States circuit judge, 8th Judicial Circuit, 1903-10; associate justice United States Supreme court since 1910. Professor equity pleading and practice, 1898-1903, equity jurisprudence, 1902-3, Columbian (now George Washington) University.

Van Dyck, or Vandyke, Sir Anthony, Flemish painter, was born in Antwerp, 1599. In 1632 he became court painter to Charles I. of England. His *Christ on the Cross* at Antwerp is his greatest historical work, and his full-length picture of *Charles I. on Horseback,* now at Warwick castle, his best example of portraiture. Died in London in 1641.

Van Dyke, Henry Jackson, American educator and writer, was born in Germantown, Pa., in 1852. He was graduated at Princeton University in 1873, at the Princeton theological seminary in 1877; pastor of the Brick Presbyterian church, New York city, in 1883-1900. In the latter year he became professor of English literature in Princeton University. Author: *The Reality of Religion; The Gospel for an Age of Doubt; The First Christmas Tree; The Builders, and Other Poems; Ships and Havens; Fisherman's Luck; The Poetry of the Psalms; The Friendly Year; The Blue Flower; The Open Door; The Spirit of Christmas,* etc.

Van Dyke, John Charles, author, educator, art critic, was born in New Brunswick, N. J., 1856. L. H. D., Rutgers, 1899. He was admitted to the New York bar, 1877, but turned attention to literature, and since 1878 has been librarian of the Sage library, New Brunswick, N. J.; professor of history of art, Rutgers College, since 1889. Editor: *The Studio,* 1883-84; *Art Review,* 1887-88. Author: *Books and How to Use Them; Modern French Masters; Nature for Its Own Sake; The Desert; The Meaning of Pictures; Studies in Pictures,* etc.

ane, Sir Henry, English statesman, colonial governor of Massachusetts, was born in 1612; in 1635 came to America to join the Puritans in Massachusetts. The next year he was chosen governor. In 1640 he was elected to parliament and was knighted. He was always opposed to Cromwell, and, after the latter's death, was the leader of the republican party. On the restoration of the king, Charles II., Vane was arrested, tried on a charge of high treason and condemned to die, 1662.

an Hise (*van-hīs'*), **Charles Richard,** American educator, geologist, was born in Fulton, Wis., 1857. He graduated at the University of Wisconsin, 1879; Ph. D., LL. D.; professor mineralogy, 1888-90; professor geology, 1892-1903, president since 1903 of the University of Wisconsin. He is a member of many scientific societies. Author: *Principles of North American Pre-Cambrian Geology; A Treatise on Metamorphism.*

an Horne, Sir William Cornelius, Canadian railway official, was born in Will county, Illinois, 1843. Southern Minnesota, general manager, 1874-77, continuing as president to 1879; Chicago and Alton, general superintendent, 1877-79; Canadian Pacific, general manager, 1882-84, vice-president and general manager, 1884-88, president, 1888-99; and has been chairman of the board of the Canadian Pacific railway company since 1899.

asari (*vä-zä'rē*), **Giorgio,** Italian art historian, painter and architect, was born at Arezzo, 1511. His greatest service to art is his world-renowned *Lives* by which we gain our chief knowledge of the artists of the Italian renaissance.

assar, Matthew, American philanthropist and founder of Vassar College, was born in Norfolk county, England, 1792. Four years later he accompanied his father to America, and amassed a fortune. In 1861 he donated $400,000 to the institution in Poughkeepsie that became known as Vassar College. On his death, in 1868, he provided in his will for a further donation of $400,000 to Vassar.

auban (*vō'bäN'*), **Sébastien le Prestre de,** French marshal, one of the greatest of military engineers, was born in 1633, at Saint Leger de Foucheret, in Burgundy. He died in 1707. Vauban wrote various works, principally on fortification.

eblen, Thorstein, educator, author, was graduated at Carleton College, 1880; Ph. D., Yale, 1884. Now associate professor of economics at Leland Stanford Jr. University. Author of *The Theory of the Leisure Class* and *The Theory of Business Enterprise.*

edder (*ved'ĕr*), **Elihu,** American painter, was born at New York, 1836. He studied at Paris and in Italy, and made Rome his ultimate residence. His subjects are mostly ideal. He has illustrated Edward FitzGerald's *Omar Khayyám,* etc.

ega Carpio (*vā'gä kär'pyō*), **Lope Felix de,** noted Spanish dramatist, was born at Madrid, 1562. The mere list of Lope's works presents a picture of unparalleled mental activity. His first work of length was a poem, the *Angelica.* Then followed *Arcadia,* a story, and *Dragontea,* an expression of exultation in ten cantos over the death of the dragon. The more notable of his miscellaneous works are: the *Rimas; Peregrino en su Patria,* a romance; *Jerusalem Conquistada,* an epic in competition with Tasso; a collection of lighter verse, with the *Gatomaquia,* a mock-heroic; and *Dorotea,* in form a prose drama, the story of his own early love adventures. He died, 1635.

elasquez, (*vā-lä'kath*), **Diego Rodriguez de Silva y,** greatest of Spanish painters and one of the greatest of all painters, was born in Seville, 1599. He studied under Herrera, then under Pacheco, whose daughter he married, and at whose house he met Cervantes and other notables.

In 1623 Olivares, the great minister, invited him to Madrid, and persuaded the king to sit for his portrait. Velasquez then became the favorite of Philip IV.; was elected court painter, and held various offices at court. In his own country his influence was not wide; but he has become the dominating influence of schools of French, English, and American artists of to-day.

In 1623 Charles I. of England, then Prince of Wales, sat to him. In 1630, by the advice of Rubens, he visited Italy, and in Venice he studied Tintoretto. In 1648 he again went to Italy, commissioned by Philip to buy pictures in order to form a Spanish academy. While in Rome he painted the magnificent portrait of *Innocent X.* On his return he was made marshal of the court. It was in fulfilment of this office during the conference at Irun, on the 'Island of Pheasants,' that he caught the fever from which he died, 1660.

A superb colorist, an admirable draughtsman, intensely truthful in his statements, synthetic in the approach to and handling of his subject, he selected the salient characteristics of the person or scene, and eliminated all non-essentials; he had a keen sense of the unity of impression, emphasized by a carefully realized harmony of color. His best works are to be found in Madrid; but fine examples are to be seen of him in Rome, the Louvre, and the National Gallery, London. His *Venus with a Mirror* was bought by the National Gallery in 1906 for $225,000. His most famous pictures are; *The Water Carrier; Expulsion of the Moriscos; Surrender of Breda; Maids of Honor; The Topers; Forge of Vulcan;* and *Portrait of Philip IV.*

References.—Stevenson's *Velasquez;* Stirling-Maxwell's *Velasquez and his Works;* Curtis' *Velasquez and Murillo;* Bernete's *Velasquez;* and Hinde's *Days with Velasquez.*

Vendôme (*vän'dōm'*), **Louis Joseph, Duc de,** French general, was born at Paris, 1654, and saw his first service in the Dutch campaign of 1672. In 1702 he fought an undecided battle with Prince Eugene at Luzzara, then burst into the Tyrol, returning to Italy to check the united Savoyards and Austrians. The defeat at Oudenarde, 1708, cost him his command, but in 1710 he was sent to Spain to aid Philip V. His appearance turned the tide of disaster; he brought the king back to Madrid, and defeated the English at Brihuega. He died at Tinaroz, in Valencia, 1712.

Verdi (*vär'dē*), **Giuseppe,** Italian operatic composer, was born in 1813, at Rancola, in the duchy of Parma. He was a member of the Italian parliament in 1860 and senator in 1875. He was a member of many artistic societies, and was decorated by the rulers of Russia and Egypt. His works comprise a long list of popular favorites, including *Ernani, Rigoletto, Il Trovatore, La Traviata, Aïda, Othello,* etc. He died at Milan, 1901.

Verestchagin (*vye-re-shchä'gin*), **Vassili,** Russian painter, was born in 1842, at Tcherepovets, in Novgorod. In 1884 he made a journey to India, Syria, and Palestine; and produced a series of pictures of the life of Christ. He painted gigantic pictures of the execution of mutinous sepoys by English soldiers and of nihilists by the Russian authorities. He was blown up on Makaroff's flagship off Port Arthur, 1904.

Vergil, or Virgil, full name, Publius Vergilius Maro, the most distinguished epic, didactic, and pastoral poet of ancient Rome, was born at Andes (probably *Pietola*), a little village near Mantua, 70 B. C. His father possessed a farm there, which he cultivated himself, and Vergil received a good education.

He appears to have gone to Rome about 41 or 40 B. C., when his estate was lost at the time of the agrarian division. It was restored to him, however, on application to Augustus, who henceforward became his patron. He also enjoyed the patronage of Mæcenas, and was intimate with Horace. His health was delicate, and his retiring nature led him to reside for the most part outside Rome, either at Tarentum or Naples.

His *Eclogues,* a series of bucolic or pastoral poems, were written about 41-39 B. C. His *Georgics,* a poem on agriculture, was completed in B. C. 31. The *Aeneid,* an epic in twelve books on the fortunes of Æneas was probably begun about B. C. 29. It occupied the author many years and never received his finishing touches.

In B. C. 20 Vergil appears to have engaged in a tour in Greece. But Augustus, having arrived at Athens on his return from the East, Virgil determined to accompany him home. At Megara, however, he fell sick, and he died at Brundusium, B. C. 19.

His poems exhibit a remarkable command of language, and great taste and skill in the management of all the materials of poetry. He is unrivalled in beauty of versification. He was amiable and modest, free from envy and jealousy, and of irreproachable character. Mediæval legends represent him as a benevolent enchanter, in which character many stories were current regarding him in Italy.

References.—Translations have been made into English verse by Dryden, Palmer (*Bucolics*), Bowen (*Bucolics* and *Æneid*), Conington (*Æneid*), Morris (*Æneid*), and into English prose by Conington, and Mackail. See also Nettleship's *Introduction to the Study of Vergil* and *Ancient Lives of Vergil;* Sellar's *Roman Poets of the Augustan Age;* Tunison's *Master Vergil;* Boissier's *The Country of Horace and Vergil;* and Leland's *Legends of Vergil.*

Verne (*vern*), **Jules,** French author, was born at Nantes, 1828. He studied law, but turned to literature, producing his *Cinq semaines en ballon* in 1863. Among his works are: *Twenty Thousand Leagues Under the Sea; Around the World in Eighty Days; From the Earth to the Moon.* Died 1905.

Vernet (*ver'ne'*), **Emile Jean Horace,** French battle painter, was born in Paris, 1789. He studied under Moreau and Vincent, and achieved a success hitherto unequaled as a painter of battles. In 1842 he was made commander of the legion of honor, and declined the rank of baron. He died in 1863.

Veronese (*vā'rō-nā'sā*), **Paolo.** See **Cagliari, Paolo.**

Verrazano (*ver'rät-sä'nō*), **Giovanni da,** Florentine navigator, was born at Florence, Italy, about 1480, and died, probably, about 1527—being executed as a pirate, it is said, in New Castile. It was on a second voyage to the new world, in 1527, that it is alleged he was captured by Spaniards and hanged as a corsair.

Vesalius (*vē-sā'li-us*), **Andreas,** Belgian anatomist and physician, was born in Brussels in 1514. He died in 1564, in Zante, where he had been wrecked on his return from Jerusalem. His great work was *De Corporis Humani Fabrica.*

Vespasian (*ves-pā'zhi-an*), **Titus Flavius Vespasianus,** Roman emperor from 70 to 79, was born 9 A. D. In the reign of Claudius he was appointed to a military command in Britain, when he conquered the Isle of Wight. After the death of Vitellius he was proclaimed emperor by the soldiers; and the wisdom, moderation, and firmness of his reign showed the propriety of the choice. The most important events of the reign were the destruction of Jerusalem by Titus, A. D. 70, and the conquest of North Wales and the island of Anglesea by Agricola. Died, 79.

Vespucci (*ves-pōōt'chē*), **Amerigo,** Italian navigator, was born at Florence, 1451. In 1497 he embarked at Cadiz in one of a fleet of five ships commanded by Alonso de Hojeda, and after thirty-seven days' sailing reached America, coasted along the continent for several hundred leagues, and returned to Spain the same year. In 1506 he was recalled to the court of Spain, and two years afterward was appointed chief pilot, which office he retained until his death in 1512.

Vest, George Graham, American legislator, was born at Frankfort, Ky., 1830. He graduated at Centre College, Kentucky. In 1853 he removed to Missouri, where he practiced law, and became a member of the state legislature. From 1879 to 1903 he was a democratic member for Missouri in the United States senate, where he was prominent in many important debates. He died in 1904.

Viaud (*vyō*), **Louis Marie Julien,** "Pierre Loti," French writer, was born at Rochefort, 1850. He traveled extensively, and produced in 1879 his first work of importance, *Aziyadé,* a series of pictures of life on the Bosphorus. This was followed by *Le Mariage de Loti; Le Livre de la Pitie et de la Mort; Fantôme d'Orient; L'Inde sans les Anglais; Madame Prune,* etc.

Victor Emmanuel II., first king of modern Italy, was born at Turin, 1820. With the help of the French, the battles of Solferino and Magenta were fought against Austria, but the peace of Villafranca between Austria and France left Italy still distant from its hoped for unity. But Tuscany, Modena, Parma, and the Romagna voted for annexation to Sardinia, and the Prussian alliance in 1866 gave Venice to Italy. The French withdrew from Rome, and on December 31, 1870, Victor Emmanuel entered Rome and became king of a united Italy. He reigned eight years, dying at Rome, 1878.

Victoria, Alexandrina, queen of Great Britain and Ireland, empress of India, born in 1819, died in 1901; she succeeded to the throne in 1837. In 1840 she married Albert, prince of Saxe-Coburg-Gotha, who died in 1861, and by whom she had nine children. She assumed title of empress of India in 1877. The chief events of her reign were the establishment of the penny post; the repeal of the corn laws; the annexation of the Punjaub; the Crimean war, the Indian mutiny, followed by the assumption of sovereignty over India; the second and third reform bills; wars in Afghanistan, China, South Africa, and Egypt; and the Fenian and home rule agitations in Ireland. Queen Victoria was strictly impartial in the party politics of her reign, and was remarkable for her wisdom, knowledge of foreign affairs, unselfishness, and uprightness of character.

Vigny (*vēn'yē'*), **Alfred Victor, Comte de,** French poet and novelist, was born at Loches, France, 1799. In 1822 he published anonymously a small volume of verse. After 1830 he published chiefly works in prose, including *Stello; Grandeur et Servitude Militaire;* and a drama, *Chatterton.* In 1845 he was elected to the academy. He died in 1863.

Vilas (*vī'las*), **William Freeman,** American lawyer and legislator, was born at Chelsea, Vt., 1840. He graduated at the University of Wisconsin, 1858, and at the Albany law school, 1860. He was law professor, 1868-85 and 1881-85 and 1897-1905, regent of the University of Wisconsin; postmaster-general of the United States, 1885-88; secretary of the interior, 1888-89; and United States senator, 1891-97. Died 1908.

Vincent de Paul (*vaN'säN' dē pōl'*), **Saint,** French philanthropist and ecclesiastic reformer, was born in Landes in 1576. He established a foundling hospital at Paris in 1638; organized the congregation of the Missions, and instituted the order of Sisters of Charity. Died in 1660, and was canonized by Pope Clement XII. in 1737.

Vincent, John Heyl, bishop of the Methodist Episcopal church and chancellor of the Chautauqua

system, was born in Tuscaloosa, Ala., in 1832. S. T. D., Ohio Wesleyan and Harvard; LL. D. He was one of the founders, in 1874, of the Chautauqua assembly; founder, 1878, of the chautauqua literary and scientific circle, and has been its chancellor ever since; in 1900 was made resident bishop in charge of European work of Methodist Episcopal church. Author: *The Modern Sunday School; Studies in Young Life; Little Footprints in Bible Lands; Our Own Church; Outline History of England; Outline History of Greece; Family Worship for Every Day in the Year*, etc.

Vinci, (*dä vēn'che*), **Leonardo da,** Italian painter, was born at the village of Vinci, near Florence, 1452. He was the head of the Umbrian Lombard School of painting. Was educated in Florence, where he studied painting under Verrocchio. His unfinished *Adoration of the Kings* and his *Medusa's Head* belong to his Florentine period. In 1482 he settled in Milan and to his Milanese period are ascribed his most celebrated productions—the two versions of *Our Lady of the Rocks*, and *The Last Supper*. He also founded an academy of arts, for which he wrote *Notes for a Treatise on Painting*.

Owing to the French occupation of Milan, in 1499, Leonardo returned to Florence, and was commissioned, with Michelangelo, to decorate the council hall of the Signoria—paintings subsequently destroyed. The famous *Mona Lisa*, was painted in 1504. For ten years (1506-16) he spent his time between Florence, Rome, and Milan, and painted his *St. Anne* and *St. John the Baptist*. Thereafter he accompanied Francis I. to France, and died 1519 in the Château de Cloux, Amboise, 1519.

A man of extraordinary physical beauty and of physical strength, his endless invention, his curiosity in science, and his ceaseless quest after the ideal and the marvelous are reasons for the small number of pictures finished by him. Of these, the *Last Supper* is practically destroyed through his experimentation with oil methods. But he created a symbolical type of ideal female beauty, subtle, enigmatic, with the mysterious smile that has haunted and perplexed his students of succeeding generations.

References.—Brown's *The Life of Leonardo da Vinci;* Rio's *Léonard de Vinci et son Ecole;* Heaton and Black's *Léonardo da Vinci and his Works;* Houssaye's *Histoire de Léonard de Vinci;* Richter's *Literary Works of Leonardo da Vinci.*

Vinogradoff (*vē'nō-grä'dŏf*), **Paul,** Russian educator and writer, professor of jurisprudence, Oxford University, since 1903, was born at Kostroma, Russia, 1854. He resigned his chair in consequence of a conflict with bureaucratic authorities and settled in England, where he resumed his interrupted studies in English social and legal history. He was elected Corpus professor of jurisprudence in 1903. Author: *Villainage in England; Inquiries in the Social History of England; English Society in the Eleventh Century*, etc.

Virchow (*fĕr'kō*), **Rudolf,** German pathologist, was born in Prussia, 1821. He was a member of the Prussian diet, 1862-1902; of the German Reichstag, 1880-93; became leader of the liberal opposition in the Prussian diet. In 1878 he retired from public life. His master work was *Cellular Pathology*, which laid the foundation of that branch of science. Died, 1902.

Virgil. See **Vergil.**

Vittoria Colonna. See **Colonna.**

Vladimir (*vlä-dyē'mēr*) **the Great,** Russian emperor, who reigned from 980 to 1015. He added largely to the kingdom by conquest, but is best known for the introduction of Christianity into the empire. He died in 1015.

Vogt (*fōkt*), **Karl,** German naturalist, was born at Giessen, 1817. In 1849 he was made professor of geology at Geneva, and held that position to the time of his death, May 6, 1895. He wrote *Studies in Geology and Petrefactions; Essays on the Darwinian Theory.*

Volta (*vōl'tä*), **Alessandro,** Italian physicist, was born at Como, 1745. He invented the voltaic arc, electrophore, electroscope, and condenser; discovered several new properties in electricity; and was for thirty years professor of natural philosophy at Pavia.

Voltaire, (*vōl'tär*), the assumed name of François Marie Arouet, French poet, historian, and philosopher, and the most celebrated writer of the eighteenth century, was born at Châtenay, near Paris, 1694, died there 1778. His father was François Arouet, a notary, and he was destined for the legal profession, but abandoned the law for letters.

In 1718 a tragedy named *Oedipe* was brought out by him, and was a great success. It is said that this play was finished, and that two cantos of his epic the *Henriade* were written in the Bastille, where he was confined from May 1717 to April 1718, for writing certain satirical verses on the regent. It was about this time that he adopted the name of Voltaire. In 1726 he was again imprisoned in the Bastille for sending a challenge to the Chevalier Rohan, by whom he had been grossly insulted. He was liberated within a month, and went to England on the invitation of Lord Bolingbroke. Here he resided till 1729 and acquired some knowledge of English literature. His *Henriade* was completed and published by subscription in England.

After his return to France he lived chiefly at Paris till 1734. During this period he raised himself from very moderate circumstances to a condition of affluence by successful monetary speculations. From 1734 to 1749 he resided with the Marchioness de Châtelet at Cirey, in Lorraine. She died in 1749, and Voltaire then accepted the oft repeated invitations of Frederick the Great to come and live at his court at Potsdam. Here he was received with great honor, but a series of disagreements with the king ended in Voltaire's retirement from the Prussian court in 1753. He then resided for a short time at Strasburg, Colmar, and Lyons, removing at the end of 1754 to Geneva. For almost the whole of the remainder of his life he lived in Switzerland, or close to its borders.

In 1760 or 1761 he fixed his residence with his niece, Madame Denis, at Ferney, where he received a constant succession of distinguished visitors, and maintained a correspondence which included in its range most of the crowned heads of Europe. In 1778 he went to Paris, where he was received with enthusiasm by all classes. But the excitement of the occasion hastened his death.

His works embrace almost every branch of literature; poetry, the drama, romance, history, philosophy, and even science. Hatred of fanaticism and superstitution was his chief characteristic, and nearly all his works are strongly animated by a spirit of hostility to the religion of his age. He upheld theism, however, with as much zeal as he denounced Christianity and priestcraft.

Voltaire's literary fame chiefly rests on his philosophical novels: *Zadig, Candide, L'Ingénu*, etc.; his histories: *Siècle de Louis XIV., Histoire de Charles XII;* his correspondence, and more than all, perhaps, on his poetical epistles, satires,, and occasional light poems, which all exhibit wit, gaiety, vivacity, and grace. Several of his tragedies, such as *Zaire, Alzire, Merope*, and *Mahomet*, had great success in their day, but are not assigned a high place in French literature. His comedies, the best of which is *L'Enfant Prodigue*, were less successful. His *Henriade*, an epic poem, had great success, and exercised a powerful influence when it first appeared, but is not highly esteemed now.

References.—The best *Lives* are those by Desnoiresterres, James Parton, and Tallentyre. See also Morley's *Voltaire;* biographies by Hamley, Espinasse, and Lounsbury's *Shakespeare and Voltaire.*

Wade, Benjamin Franklin, American statesman, was born at Springfield, Mass., 1800. He studied law in Ohio, becoming United States senator in 1851, 1857 and 1863. He opposed all the measures proposed as compromises between the North and the South, and was influential in getting the homestead bill through congress. After the death of President Lincoln, Wade was acting vice-president of the United States. Died at Jefferson, Ohio, 1878.

Wadlin, Horace Greeley, librarian of Boston public library since 1903, was born at Wakefield, Mass., 1851; Litt. D.; began practice as an architect in Boston, 1875. He was a member of the Massachusetts house of representatives, 1884-88; supervisor of United States census, 1895-1900. Author: *Annual Statistics of Manufactures of Massachusetts*, 1886-1901; *The Decennial Census of Massachusetts for* 1895, etc.

Wagner (*väg'ner'*), **Charles,** French Protestant clergyman and essayist, was born in 1852; he settled in Paris in 1882, and aroused general interest by his effective protest against the degenerating tendencies of Parisian literature and life in *La Jeunesse, Le courage*, and *La vie simple.*

Wagner, Wilhelm Richard, the most celebrated of modern composers, was born at Leipzig 1813, died at Venice 1883. He received his education at Leipzig and Dresden. From 1834 he filled various musical engagements at Magdeburg, Riga, and Königsberg. In 1839-41 he went to Paris and London, and composed his operas *Rienzi* and the *Flying Dutchman*. The brilliant success of these operas secured him the conductorship at the royal opera of Dresden in 1843.

He joined the insurrectionary movement of 1848-49, and was compelled to exile himself. Until his return to Germany in 1864 he spent most of his time in Switzerland, Italy, Paris, and London. His *Tännhauser* and *Lohengrin* appeared in 1845 and 1850 respectively. The king of Bavaria, Louis II., become an enthusiastic and liberal patron of Wagner, and the theater at Baireuth, especially built for Wagner, was chiefly supported from the king's purse. Here his famous tetralogy *Der Ring des Nibelungen*, consisting of *Das Rheingold, Die Walküre, Siegfried*, and *Götterdämmerung*, was first performed in 1876 before an unusually brilliant and appreciative audience.

About a year before his death he produced his last creation, *Parsifal*. In 1870 he had married, as second wife, Cosima von Bülow, a daughter of the Abbé Liszt. Wagner labored to reform dramatic music according to the ideas of Gluck and Weber and gave his creations a national character by selecting his subjects from old German heroic legends. His theory was that in a perfect musical drama the three arts, poetry, music, and dramatic representation should be welded together into one well balanced whole. This theory he demonstrated with consummate ability and unsurpassed magnificence. His particular views on music are embodied in a well-known work entitled *Oper und Drama.*

References.—Perhaps the best *Life* is Julien's See also the *Lives*, in German, by Glasenapp, Pohl, Tapert, and Wolzogen; Krehbiel's *Studies in Wagnerian Drama;* Newman's *A Study Of Wagner;* Praeger's *Wagner as I Knew Him;* and Hueffer's *Richard Wagner and the Music of the Future.*

Wainwright, Richard, American naval officer, was born at Washington, D. C., 1849. He was graduated from the Naval academy in 1868; was executive officer on the battleship *Maine*, when destroyed in Havana harbor, February 15, 1898. After this he did good service at the battle of Santiago as commander of the gunboat *Gloucester;* was superintendent of the naval academy, 1900-02; became a captain in 1903.

Waite, Morrison Remick, American jurist, chief-justice of the supreme court of the United States, 1874-88, was born at Lyme, Conn., 1816. He was graduated from Yale, 1837; studied law and practiced in Ohio. He was nominated by President Grant chief-justice of the United States supreme court, 1874, and served until his death in 1888.

Walcott, Charles Doolittle, American geologist, secretary of the Smithsonian institution since 1907, was born at New York Mills, N. Y., 1850. Assistant geologist to the United States geological survey in 1879 and director of United States geological survey, 1894-1907. He is a member of many scientific societies, and author of the following: *The Trilobite; The Cambrian Faunas of North America; Pre-Cambrian Fossiliferous Formations; Correlation Papers.*

Waldersee (*väl'dĕr-zā'*), **Count Alfred von,** German general, was born in Potsdam, Prussia, 1832, and entered the German army in 1850, and was chief of the general staff in the Franco-Prussian war; succeeded Moltke as chief of staff in 1888. In 1900 he was created field-marshal, and was appointed to the chief command in China of the allied armies engaged in suppressing the Boxer disturbances. Died, 1904.

Waldstein (*wäld'stin*), **Charles,** American archæologist, was born in New York, 1856. He was educated at Columbia College and at Heidelberg. Slade professor of fine arts at Cambridge University, 1895-1901 and professor, 1895-97, American school of classical studies, Athens, Greece. Author: *Excavations at the Heraion of Argos; The Surface of Things; The Jewish Question; The Argive Heræum*, etc.

Walker, Francis Amasa, American political economist, was born at Boston, Mass., 1840. He was graduated from Amherst in 1860, took part in the civil war, and in 1865 rose to the brevet rank of brigadier-general. From 1873 to 1881 he was professor of political economy in the Sheffield scientific school at Yale, and in 1881 became president of the Massachusetts institute of technology at Boston. Author: *The Indian Question; The Wages Question; Money; Bimetallism;* and *History of the Second Army Corps.* Died, 1897.

Wallace, Alfred Russel, English naturalist and traveler, was born in Monmouthshire, England 1822. He visited South America and the Malay

archipelago, published the results of his observations on his return. Among his other works are: *Contributions to the Theory of Natural Selection; Geographical Distribution of Animals*, etc. D. 1913.

Wallace, John Findley, American civil engineer, was born at Fall River, Mass., 1852. He was educated at Monmouth College C. E. chief engineer of the Panama canal, 1904; isthmian canal commissioner, 1905; president of Electric Properties company since 1906. He is chairman of the board of directors of Westinghouse company

Wallace, Lewis, American general, diplomat, and author, was born at Brookville, Ind., 1827; entered the Union service during the civil war; became a brigadier-general in 1861, and served throughout the war. He was governor of New Mexico, 1878-81, and from 1881 to 1885 was United States minister to Turkey. Author: *Ben Hur*, etc. Died, 1905.

Wallace, O. C S., Canadian clergyman and educator, chancellor of McMaster University, Toronto, since 1895, was born at Canaan. Nova Scotia, 1856. He was graduated from Acadia University, Nova Scotia, and at Newton Theological Institution, D. D., LL. D.; called to Bloor Street Baptist church, Toronto, Canada, and entered upon his pastorate, 1891. Author: *Life of Jesus;* etc.

Wallace, Sir William, Scottish patriot, was born about 1272. He headed the rising of 1297 against the English. The next year, however, he was defeated by Edward I. at Falkirk. After being imprisoned in France he was declared an outlaw in 1304, was captured the next year, sent to London and hanged.

Wallenstein (*vāl'en-shtīn*), **Albrecht Wenzel Eusebius,** duke of Friedland, celebrated German general, was born in Bohemia, 1583. At the head of a formidable army raised by him for the service of the emperor, and paid from his own resources and from unlimited plunder, he, for several years, distinguished himself by his successes in Moravia, Bohemia, and northern Germany, and was rewarded with the dukedoms of Mecklenburgh and Friedland. He foiled Gustavus at Nuremberg, but was defeated at Lützen. At length he was accused of treason and assassinated, in 1634, by his own officers.

Walpole, Horace, English author, was born in 1717, and in 1791 succeeded to the title of earl of Orford. In 1747 he purchased the famous estate of Strawberry Hill, Twickenham. In this house he collected works of art and curiosities of every description, and likewise established a private printing-press, at which several of his own works and some others were printed. He wrote: *Anecdotes of Painting in England; The Castle of Otranto;* and subsequently, *Reminiscences of the Courts of George I. and II.* He is now remembered chiefly for his *Letters*. Died, 1797.

Walpole, Sir Robert, English statesman, was born at Houghton, England, 1676. He was graduated from Cambridge, and entered parliament in 1701. He was secretary of war, 1708; treasurer of the navy, 1709; chancellor of the exchequer, 1715-17; and prime minister, 1721-42. He was one of the first to urge the establishment of a sinking fund for the purpose of reducing the national debt. He was an enemy of war, and a strong supporter of the Protestant succession. On his retirement in 1742 he was created earl of Orford. Died, 1745.

Walsh, Blanche, American actress, was born in New York, 1873. She made her dramatic début as Olivia in *Twelfth Night*, with Marie Wainwright, Chicago, 1889; in 1906 married W. M. Travers, actor.

Walter, Thomas Ustick, American architect, was born in Philadelphia, Pa., 1804. In 1848 his design for the extension of the capitol at Washington, D. C., was adopted. While in Washington he also designed the extensions of the patent office, treasury, and post-office buildings, the dome of the capitol, and the government hospital for the insane. He died in Philadelphia, Pa., 1887.

Walton, Clifford Stevens, American lawyer, was born at Chardon, Ohio, 1861. He is an authority on Spanish jurisprudence, and has served as attorney for or against the United States on several international law commissions. Author: *The Civil Law in Spain and Spanish America*.

Walton, Isaak, English writer, was born at Stafford, England, 1593. He is chiefly remembered as the author of *The Compleat Angler, or The Contemplative Man's Recreation*, which was published in 1655. He was a linendraper in the city of London, first in Cornhill, and afterward in Fleet street. He was also the author of a *Life of Dr. Donne; Life of Richard Hooker; Life of George Herbert*. He died in 1683.

Wanamaker, John, American merchant, was born at Philadelphia, Pa., 1838. He was educated in the public schools until 1852; established, 1861, with Nathan Brown, clothing house of Wanamaker and Brown, Philadelphia; established, 1876, department store in Philadelphia, and a similar business in New York in 1896, in succession to the business of A. T. Stewart, now among the largest in the country; was postmaster-general of the United States, 1889-93.

"Ward, Artemus." See **Browne, Charles Farrar.**

Ward, Elizabeth Stuart Phelps. See **Phelps-Ward, Elizabeth Stuart.**

Ward, Mrs. Humphry (Mary Augusta Arnold), English novelist, and writer, was born at Hobart, in Tasmania, 1851, daughter, Thomas Arnold second son of Dr. Arnold of Rugby. She began early to contribute to *Macmillan's Magazine*. The translation of Amiel's *Journal Intime*, prepared the way for the spiritual romance of *Robert Elsmere*, in 1888. Since then she has published: *The History of David Grieve; Marcella; The Marriage of William Ashe; Fenwick's Career; Diana Mallory*, etc.

Ward, John Quincy Adams, American sculptor, was born at Urbana, Ohio, 1830. Since 1861 his home has been in New York. His *Indian Hunter, A Private of the Seventh Regiment*, and *Shakespeare* are in Central park, New York; his colossal statue of Washington is on the steps of the sub-treasury building in Wall street. Died 1910.

Warfield, David, American actor, was born at San Francisco, 1866. He went to New York in 1890; played in Casino theater and Weber and Field's music hall, 1895-98; was starred by David Belasco in *The Auctioneer, The Music Master, A Grand Army Man*.

Warner, Charles Dudley, American author, was born at Plainfield, Mass., 1829. He was graduated at Hamilton College, 1851. In 1884 he became coëditor of *Harper's Magazine*, in which his papers on the South, Mexico, and the great West appeared. In 1873 he wrote with "Mark Twain" *The Gilded Age*. His other works include: *My Summer in a Garden, Being a Boy*, etc. He died 1900.

Warren, Francis Emroy, United States senator, was born in Hinsdale, Mass., 1844; enlisted in 1862 in the 49th Massachusetts regiment of infantry, and served as private and non-commissioned officer; early in 1868 he moved to Wyoming; was appointed governor of Wyoming by President Arthur in 1885. He was elected to the United States senate in 1890, and reëlected in 1895, 1901, 1907, and 1913.

Warren, Henry White, senior bishop of the Methodist Episcopal church, was born at Williamsburg, Mass., 1831; graduated from Wesleyan University, Conn., 1853; D. D., Dickinson; LL. D., Ohio Wesleyan. Ordained M. E. ministry, 1855; pastor Worcester, Mass., 1855-7, Boston, 1857-61, Lynn, 1861-3, Westfield 1863-5, Cambridge, 1865-8, Charlestown, 1868-71, Philadelphia, 1871-4, Brooklyn, 1874-7, Philadelphia, 1877-80; elected bishop, 1880. Member Massachusetts House of Representatives, 1863. Author of *Sights and Insights; Studies of the Stars; Recreations in Astronomy; The Bible in the World's Education; Among the Forces*, etc.; Died, 1912.

Warren, Joseph, American soldier, was born at Roxbury, Mass., 1741. He was graduated at Harvard in 1759, and became a physician in Boston, 1764. In 1774 he was a member and president of the Massachusetts congress, and chairman of the committee of public safety. He had much to do with the success at Lexington, and in 1775 was commissioned major-general; he went to Bunker Hill as a volunteer, refusing to take the chief command offered to him by both Prescott and Putnam. As he was leaving the field he was killed by a ball in the forehead, 1775.

Warren, Samuel, English novelist, was born in Denbighshire, 1807. He was recorder of Hull, 1854-74; conservative member of parliament for Midhurst, 1856-59. He is chiefly remembered by his *Passage from the Diary of a Late Physician*, and *Ten Thousand a Year*. Died, 1877.

Warren, Winslow, American lawyer, was born at Plymouth, Mass., 1838. He was graduated at Harvard, 1858, at Harvard law school, 1860; was admitted to the bar and engaged in practice in Boston, 1860. He is a director of the Columbian National life insurance company; ex-president of the Bunker Hill monument association; overseer of Harvard College since 1899.

Warwick, Richard Neville, Earl of, surnamed the "king-maker," was born about 1428. After joining the Yorkists in the commencement of the calamitous war of the Roses, and taking King Henry VI. prisoner, Warwick, after his victory of Towton, placed Edward, duke of York, on the throne as Edward IV. He was killed in the battle of Barnet, 1471.

Washington, Booker Taliaferro, principal of Tuskegee Normal and Industrial Institute since 1881, was born near Hale's Ford, Va., about 1859, the son of a mulatto slave and a white man. He was graduated from Hampton Institute, Virginia, 1875; A. M., Harvard, 1896; LL. D., Dartmouth, 1901. He was a teacher at Hampton institute until elected by the state authorities head of Tuskegee Institute. Author: *Sowing and Reaping; Up From Slavery; Future of the American Negro; Character Building; Story of My Life and Work; Working With Hands; Tuskegee and Its People*, etc.

Washington, George, hero of American independence, and first president of the United States, was born in Westmoreland county, Virginia, 1732; died at Mount Vernon, 1799. He was the great-grandson of John Washington, an Englishman, who emigrated in 1657; and the son of Augustine Washington, a substantial farmer, being the eldest of a second family.

His education was limited to the elementary subjects, but he acquired a fair knowledge of mathematics and surveying, chiefly by self-study, and when his widowed mother prevailed upon him to abandon the idea of entering the British navy, he adopted surveying as a profession.

His military career commenced at the age of nineteen, when he was appointed adjutant-general of Virginia militia; and before long he showed in operations against the French that he united in an eminent degree the qualities belonging to a successful commander, though in 1754, when in command of his regiment, he had to capitulate to a superior French force. In 1755 he accompanied General Braddock as a volunteer, and was almost the only officer who returned safe from the disastrous expedition. In 1758 he took an important part in the expedition that captured Fort Du Quesne, where Pittsburg now stands.

In the meantime extensive estates and plantations at Mount Vernon had come into his possession through the death of his half-brother. To these possessions he added largely by marrying in 1759, Mrs. Martha Custis, a wealthy young widow. He also sat for some years in the Virginia assembly.

Shortly after the outbreak of the war of independence Washington was elected commander-in-chief of the American forces and hastened to the camp. His career henceforth is part of American history. He was compelled by superior forces at times to retreat, and reduced to the most desperate straits by disaffection, lack of men and supplies, and even cabals against his authority; but by his mildness, calm courage, prudence, firmness, and perseverance he brought the war, with the aid of powerful allies, to a successful termination. After the independence of the thirteen colonies was achieved, he retired from the army to Mount Vernon, which he had, during the eight years of war, but once visited. He refused to accept pay, but kept a minute account of his personal expenses, which were reimbursed by Congress.

In 1784 he crossed the Alleghanies to see his lands in West Virginia, and planned the James river and Potomac canals. The shares voted him by the state he gave to endow Washington college, at Lexington, Virginia, and for a university. The early federation of states having failed to give an efficient government, Washington proposed conventions for commercial purposes, which led to the convention of 1787, of which he was a member. This body formed the present federal constitution, considered by him as the only alternative to anarchy and civil war.

Under this constitution he was chosen president, and inaugurated at New York April 30, 1789. At the second presidential election in 1792 he desired to retire, but yielded to the solicitations of the people, and served for four years longer. In 1796 he positively declined a reëlection, and on March 4, 1797, returned to Mount Vernon for the quiet of home life. In 1798, when war was threatened with France, the illustrious chief yielded to the demands of his country, and accepted the post of commanding general of the United States forces with the rank of lieutenant-general, but a treaty of peace rendered his services unnecessary, and he again returned to his Mt. Vernon home.

On December 12, 1799, he was exposed in the saddle for several hours to cold and snow, and attacked with acute laryngitis, sunk rapidly, and died December 14. His last words were characteristic. He said: "I die hard, but am not afraid to go." After some instructions to his secretary about his burial he became easier, felt his own pulse, and, died without a struggle. He was mourned by the whole nation, and amply deserved the immortal epitaph: "First in peace, first in war, and first in the hearts of his countrymen."

References.—The most important biographies of Washington are those of Marshall, Ramsay, Irving, and Lodge. Editions of his collected writings have been issued by Sparks, and W. C. Ford. See also Guizot's *Character and Influence of Washington;* and Parker's *Historic Americans*.

Watson, John, Canadian educator and writer, was born at Glasgow, Scotland, 1847. He was graduated at Glasgow University, M. A., 1872; LL. D., 1880; has been professor of logic, metaphysics, and ethics in Queen's University, Kingston, since 1872. Author: *Kant and his English Critics; Comte, Mill, and Spencer; Hedonistic Theories; The Philosophical Basis of Religion*, etc.

Watson, John. See **Maclaren, Ian.**

Watson, Thomas E., American lawyer and politician, was born in Georgia, 1856. He was a member of the Georgia legislature, 1882-83; member of congress, 1891-93; began the publication of *Tom Watson's Magazine*, in New York, 1905. Author: *The Story of France; Life of Napoleon*, etc.

Watson, William, English poet, was born at Burley-in-Whartedale, 1858; honorary LL. D., Aberdeen, 1904. His early poems were published in the *Liverpool Argus* in 1875, and his first book, *The Prince's Quest*, appeared in 1880. Since then have appeared: *Epigrams of Art, Life, and Nature; Odes, and other Poems; The Purple East; Ode on the Coronation of King Edward VII.; For England*; etc.

Watt, James, Scotch engineer and, generally accredited inventor of the steam engine, was born at Greenock, 1736; and died at his seat of Heathfield, Staffordshire, 1819. His father was a merchant and magistrate of Greenock, and James received a good education there. Having determined to adopt the trade of mathematical-instrument maker, he went to London in 1754, for instruction, but ill-health compelled him to return after a year's apprenticeship. Shortly after he endeavored to establish himself in Glasgow, was appointed in 1757 mathematical-instrument maker to the university, and resided within its walls till 1763.

From this time till 1774 he acted as a civil engineer—made surveys for canals and harbors, and some of his plans were afterward carried out. It was during this period that he gave shape to his chief improvements on the steam-engine. In order to produce the improved machine he associated himself (1775) in business with Mathew Boulton—the firm of Boulton and Watt having their engine works at Soho, Birmingham. He retired from business in 1800.

Watt was a fellow of the Royal societies of London and Edinburgh, and member of the national institute of France. He was twice married, and was survived by one son, who carried on the establishment at Soho in partnership with a son of Mr. Boulton's. Besides improving the steam engine, Watt invented or improved a variety of mechanical appliances, including a letter-copying press. Was an ardent student of chemistry, and it was long maintained on his behalf that he discovered the composition of water. He was a man of high mental powers generally, and possessed a wide and varied knowledge of literature and science.

References.—Smiles' *Lives of Boulton and Watt;* Muirhead's *Mechanical Inventions of James Watt;* Thurston's *The Growth of the Steam Engine;* and Pemberton's *James Watt.*

Watterson, Henry, American journalist and orator, was born at Washington, D. C., 1840. He served with distinction in the confederate army as chief of scouts under General Joseph E. Johnston. He subsequently settled at Louisville, Ky., where he founded and has since edited the *Courier-Journal*, which he has made one of the foremost democrat newspapers. At Chicago, in 1893, he delivered the dedicatory oration at the opening of the World's Columbian exposition. He has published a *History of the Spanish-American War; Oddities of Southern Life and Character; Abraham Lincoln*, etc.

Watts, George Frederick, English artist, sculptor, portrait painter, and delineator of historical subjects, was born at London, 1820. He first exhibited at the Royal academy in 1837, and gained a reputation for the size, artistic excellence, and beauty of coloring of his pictures. His chief exhibits included: *Caractacus; Cymbeline; Fata Morgana; Life's Allusions; Sir Galahad.* Died, 1904.

Watts, Isaac, English hymn writer and theologian, was born at Southampton, England, 1674. His theological works were numerous, and his treatise on *Logic* had a considerable reputation. His reputation has been chiefly perpetuated by his well known hymns. Died, 1748.

Wayne, Anthony, famous general in the war of the revolution, was born in Pennsylvania, 1745. Led the attack at Germantown; captured supplies for the distressed at Valley Forge; achieved a brilliant victory in the storming of Stony Point, 1779. His courage and skill saved Lafayette in Virginia, 1780. By his dash and audacity he acquired the sobriquet of "Mad Anthony." He became major-general and commander-in-chief in 1792. Died, 1796.

Weber (*vā'bĕr*), **Karl Maria von,** German composer, was born at Eutin near Lübeck, 1786, of a famed musical family. His first great production was *Der Freischütz*, which established his fame, and was followed by *Oberon*, his masterpiece; *Das Waldmädchen*, etc. Died, 1826.

Webster, Arthur Gordon, American physicist, professor of physics, Clark University, was born 1863. He was graduated at Harvard, 1885. He is a member of many scientific associations, and author of: *A Mathematical Treatise on the Theory of Electricity and Magnetism;* and many papers on physics.

Webster, Daniel, great American statesmen and orator, was born at Salisbury, New Hampshire, 1782. Daniel was the second son of Ebenezer Webster, a small farmer and justice of the county court. He entered Dartmouth College in 1797, and taught school in winter to pay his expenses. He graduated in 1801, and in 1804, went to Boston, and entered the law office of Mr. Gore. In 1805 he was admitted to the Boston bar, passed one year in the practice of his profession at Boscawen, and, on the death of his father, established himself at Portsmouth, N. H., and married in 1808.

Having engaged in politics as a member of the federalist party, he was elected to congress, where he immediately took rank with the foremost men of the country. He took his seat in the special session of May, 1813, and on June 10, delivered his maiden speech on the repeal of the Berlin and Milan decrees. This, and his mastery of the question of currency and finance, secured him a high position. At the close of the session, however, Webster removed to Boston, where, during a period of seven years, he devoted himself exclusively to the practice of his profession, and occupied a preëminent position as a counsellor and advocate.

In 1822, he was a member of the Massachusetts constitutional convention; and on Deccember 22, 1822, he pronounced at Plymouth, on the anniversary of the landing of the Pilgrims, the first of that remarkable series of discourses, or orations, which put him in the first rank among American orators. In 1825, he delivered an oration at the laying of the corner stone of the Bunker Hill monument; in 1843, one on its completion. In 1826, he pronounced the eulogy of John Adams and Thomas Jefferson, two fathers and presidents of the American republic, who died on the same semi-century anniversary of the declaration of independence; and in 1851, a partriotic discourse on the laying of the corner stone for the extension of the capitol at Washington.

In 1822, he was elected to Congress from Boston, and distinguished himself by his speeches on the holy alliance, and the Greek revolution, and his labors in the revision of the criminal laws of the United States. In 1826, he was chosen United States senator; and in 1830, rose to the height of his forensic renown, in a speech of two days, in the debate with Mr. Hayne, of South Carolina, on the right of "nullification." Webster and Clay were the leaders of the opposition during the administration of Jackson and Van Buren.

In 1841, he became secretary of state under President Harrison; remained in the administration of President Tyler until 1843; and was a third time secretary of state in 1850, in the cabinet of Mr. Fillmore. On various occasions Webster had been an unsuccessful candidate for the presidency. He aspired again to that position in 1852, but his advocacy of compromises on the slavery question had given offense to the abolitionists, and the choice of the convention assembled at Baltimore fell upon General Scott. The great orator died a few months after, October 24, 1852.

Webster's figure was commanding; his countenance was remarkable even in repose, but when animated by the excitement of debate, it "spake no less audibly than his words." His gestures were vehement, without being undignified; and his voice was unrivalled in power, in clearness, and in modulated variety of tone.

References.—The *Writings and Speeches of Daniel Webster* have been published in 18 volumes, and his *Works* in 6 volumes. See also Curtis' *Life of Daniel Webster;* Harvey's *Reminiscences of Daniel Webster;* Lodge's *Daniel Webster;* McMaster's *Daniel Webster;* Wheeler's *Daniel Webster, the Expounder of the Constitution.*

Webster, John, English dramatist, was born about 1580. He collaborated with a number of writers of the period, and then produced the tragedy of *The White Devil*, one of his two great masterpieces, about 1610; and about 1616 his famous *Duchess of Malfy.* He died about 1625.

Webster, Noah, author and philologist, was born at Hartford, Conn., 1758, and was educated at Yale College; admitted to the bar in 1781. While employed in teaching at Goshen, N. Y., he prepared his *Grammatical Institutes of the English Language.* In 1807 he published *A Philosophical and Practical Grammar of the English Language*, and commenced his American *Dictionary of the English Language;* but finding difficulties in etymology, he devoted ten years to its study, and prepared a *Synopsis of Words in Twenty Languages;* then began his dictionary anew, and in seven years completed it. Died in New Haven, Conn., 1843.

Weed, Thurlow, American journalist, was born at Cairo, N. Y., 1797. He served as a volunteer in the war of 1812. In 1865 he moved to New York city and became editor of the *New York Times*, and afterward of the *Commercial Advertiser.* In 1861-62 he was sent to Europe on a special mission by President Lincoln. Died at New York in 1882.

Weir (*wēr*), **Robert Walter,** American painter, was born at New Rochelle, N. Y., 1803. After studying in Italy several years he was made professor of drawing at West Point, N. Y., where he remained for forty-two years. His best known works are: *The Landing of Henry Hudson; Columbus before the Council of Salamanca.* He died at New York in 1889.

Weismann (*vis'mān*), **August,** German biologist, was born at Frankfort, 1834. He contends that natural selection is the dominant factor in evolution. He has published, besides the Romanes lectures of 1894, *The Evolution Theory*, and works on kindred problems.

Welch, William Henry, American physician and pathologist, professor of pathology at Johns Hopkins, was born at Norfolk, Conn., 1850. He was graduated from Yale in 1870; M. D.; LL. D.; professor of pathology, Johns Hopkins, since 1884; and pathologist to the Johns Hopkins hospital since 1889. He is the author of *General Pathology of Fever.*

Wellington, Arthur Wellesley, Duke of, celebrated British general, was born at Dangan Castle, Ireland, 1769; entered the army as ensign in 1787, and became lieutenant-colonel in 1793. It was in the Mahratta war of 1803 that he won his first fame. In 1814 he was created marquis of Douro and duke of Wellington. He was then appointed commander of the British forces on the continent of Europe, and from Vienna joined the army at Brussels. The battles of Ligny and Quatre Bras were succeeded on June 18, 1815, by the great battle of Waterloo. Here the grand and decisive blow was struck, and the power of Napoleon was finally crushed. At the coronation of George IV., in 1821, he officiated as lord high constable of England. In 1827 he succeeded the duke of York as commander-in-chief of the British army, and from 1828 to 1830 was prime minister. Died, at Walmer Castle, in 1852.

Wells, Carolyn, author, was born at Rahway, N. J., daughter of William E. Wells, and has been engaged in literary work since 1895. Author: *At the Sign of the Sphinx; The Gordon Elopement; Marjorie's Vacation; Rainy Day Diversions*, etc.

Wells, David Ames, American economist, was born at Springfield, Mass, 1828. He was graduated from Williams College. Among his published works are text-books on *Science of Common Things; Recent Economic Changes; The Principles of Taxation; Our Merchant Marine.* Died at Norwich, Conn., 1898.

Wells, Herbert George, English novelist, was born at Bromley, Kent, 1866. He was graduated at the Royal college of science, 1888. Author: *The Time Machine; The Stolen Bacillus and Other Stories; The Invisible Man; The Food of the Gods; In the Days of the Comet; The War in the Air.*

Wendell, Barrett, American educator, writer, and critic, professor of English at Harvard since 1898, was born at Boston, 1855. He was graduated at Harvard, 1877; professor since 1898, and lecturer at the Sorbonne and other French Universities, 1904-05. Author: *English Composition; Life of Cotton Mather; Stelligeri and Other Essays Concerning America; The Temper of the Seventeenth Century in English Literature; History of Literature in America; The France of To-day*, etc.

Wenley, Robert Mark, American educator, head of philosophical department, University of Michigan, since 1896, was born at Edinburgh, Scotland, 1861. He was graduated at the University of Glasgow, M. A., 1884; Ph. D., Sc. D., LL. D. Author: *Socrates and Christ; Aspects of Pessimism;* co-editor *Dictionary of Philosophy*, etc. Joint editor: *The Psychological Review.*

Werner (*ver'nĕr*), **Abraham Gottlob,** German mineralogist and geologist, was born at Wehrau, in upper Lusatia, 1750. In 1792 he was appointed councilor of mines in Saxony, and his lectures soon extended his reputation throughout Europe. In his mineralogical system minerals were distinguished and arranged chiefly according to their external characters. He died at Dresden in 1817.

Wesley, Charles, English hymn writer, was born at Epworth, England, 1708, and was associated with his brother John in the whole Methodist movement. He is the author of a great number of hymns, many of which are among the best and most admired in the English language. He died in 1788.

Wesley, John, English divine, who, with Whitefield, founded Methodism, was born at Epworth, 1703. In 1730, while at Oxford University, he and his brother, with a few other students, formed themselves into a society for the purpose of mutual edification in religious exercises. So singular an association excited considerable notice, and, among other names bestowed upon the members, that of *Methodists* was applied to them. Wesley with some others, chiefly Moravians, came to Georgia in 1735, but the strictness of discipline which he attempted to introduce proved very distasteful to the colonists. After a residence of less than two years in America, he returned to England, preaching to open air meetings, and gathered many followers. He built spacious meeting houses in London, Bristol, and other places.

For some time he was associated with George Whitefield; but, differences arising on account of the doctrine of election, which was zealously espoused and preached by the latter, they separated, and the Methodists were denominated according to their respective leaders.

Wesley was indefatigable in his labors, and was almost continually engaged in traveling over England, Wales, Scotland, and Ireland. No man ever labored more zealously or continuously in the cause which he had undertaken. Every moment of his life was devoted to the organization of the great sect of Methodists, and he preserved his influence over it to the last. His preaching was extemporaneous, but not vehement. He dwelt much upon practical religion, though he taught his followers to seek inspiration of the Holy Spirit, and to aspire to a state of sinless perfection. Died in London 1791.

References.—Perhaps Wesley's best single treatises were his *Notes on the Old and New Testaments*, and his *Doctrine of Original Sin*. His complete *Works*, with a *Life* by T. Beecham, and preface by J. J. Jackson, has been published in 15 volumes. *Lives* of John Wesley have been written by Southey, Tyerman, Wedgwood, Telford, Overton, Snell, and Winchester. See also *Wesley and his Century*, by Dr. Fitchett.

West, Benjamin, American painter, was born at Springfield, Pa., 1738. He began to paint at seven years of age, worked in Philadelphia and New York, studied in Italy, 1760-63, and settled in England in the latter year. Among his best paintings are: *The Death of Wolfe; Christ Healing the Sick; Death on the Pale Horse*, etc. Died in London in 1820.

Westcott, Brooke Foss, English prelate, writer, and biblical scholar, was born near Birmingham in 1825; regius professor of divinity at Cambridge and in 1890 was appointed bishop of Durham. His writings embrace: *History of the Canon of the New Testament; The Gospel of Life; Social Aspects of Christianity; Characteristics of the Gospel Miracles; The New Testament in the Original Greek*. Died, 1901.

Westinghouse, George, American inventor and manufacturer, was born in New York in 1846. In 1868 invented and successfully introduced the Westinghouse air-brake, which he has since greatly improved. He was the pioneer in introducing alternating current machinery in America; built the great generators at Niagara Falls and those for elevated railway and rapid transit system in New York.

Weyman (*wi'man*), **Stanley John,** English novelist, was born at Ludlow, 1855. In 1890 he published *The House of the Wolf*, followed by *Francis Cludde;* and in 1893 made himself famous by *A Gentleman of France*.

Wheatstone, Sir Charles, English physicist and electrician, was born at Gloucester, England, 1802. Invented the telegraph thermometer and barometer; secured first patent for an electric telegraph; and an apparatus for conveying instructions to engineers and steersmen on board large steam-vessels. He is well known for the Wheatstone bridge. Died, 1875.

Wheeler, Benjamin Ide, American educator and philologist, president of the University of California since 1899, was born at Randolph, Mass., 1854. He was graduated at Brown University 1875; Ph. D., LL. D., Harvard, 1900; professor of Greek, 1888, at Cornell. Author: *The Greek Noun-Accent; Analogy in Language; Organization of Higher Education in the United States*.

Wheeler, Joseph, American general was born in Augusta, Ga., 1836. He was graduated at the United States military academy in 1859; served in the cavalry until the outbreak of the civil war, when he entered the confederate army, in which he was later commissioned major-general and senior commander of cavalry; was made major-general of volunteers during the Spanish-American war in 1898; appointed brigadier-general in the United States army, 1900, and was retired in September. Died, 1906.

Whipple, Edwin Percy, American author, was born at Gloucester, Mass., 1819. In 1872 he became literary editor of the *Boston Globe;* in 1877 wrote for the *North American Review*. His publications include: *Essays and Reviews; Literature of the Age of Elizabeth*, etc.

Whistler, James Abbott McNeill, noted American painter, was born in Lowell, Mass., 1834. He entered the United States military academy but was dismissed; studied drawing and painting in Paris, France, and in 1863 settled in London, England. He gained celebrity as an etcher. His paintings include many portraits, among which are: *The White Girl; Portrait of My Mother; Nocturne in Blue and Gold*. Died in London, 1903.

White, Andrew Dickson, American diplomatist and educator, was born in Homer, N. Y., 1832. He was graduated at Yale in 1853. He was appointed, by President Hayes, minister to Berlin, 1879-81; by President Harrison, minister to St. Petersburg, and continued under President Cleveland, 1892-94; appointed member of the Venezuelan commission, 1896-97; ambassador to Berlin under President McKinley, 1897-1902; and was president of the American delegation to the international peace congress at The Hague in 1899. His best known works are: *Warfare of Science with Theology; Studies in General History*.

White, Edward Douglas, American jurist, was born in the parish of Lafourche, La., 1845. He was educated at Mount St. Mary's College, Maryland, and at the Jesuit College in New Orleans. During the civil war he served in the confederate army. United States senator in 1891-94; he was appointed associate justice of the United States supreme court in 1894 and chief justice, 1910.

White, Horace, American journalist, was born in Colebrook, N. H., 1834. He was graduated at Beloit College, Wis., 1853; from 1883 to 1903 was connected with the *New York Evening Post*, as president of the company, edito ial writer, and editor-in-chief. Author: *Money and Banking Illustrated by American History; The Roman History of Appian*, etc.

White, James William, American physician and surgeon, was born in Philadelphia, Pa., 1850. He was graduated at the University of Pennsylvania, M. D., Ph. D., LL. D. He was resident physician of Philadelphia hospital, 1873; is now John Rhea Barton professor of surgery, University of Pennsylvania. Joint author: *American Text Book of Surgery*.

White, Richard Grant, American author and critic, was born in New York city, 1821. He was educated at the college of the city of New York. The result of his studies and writings on music and art was a volume on *Christian Art*. His other works include: *National Hymns; Poetry of the Civil War; Life of Shakespeare; Studies in Shakespeare*, etc. He died, 1885.

White, Stewart Edward, author, was born in Grand Rapids, Mich., 1873; Ph. B., University of Michigan, 1895. He is a frequent contributor to magazines, and author of *The Westerners; The Blazed Trail; The Forest; Blazed Trail Stories; The Pass; Camp and Trail*.

White, William Allen, American journalist and author, owner and editor of the Emporia *Daily and Weekly Gazette*, was born 1868. Author: *The Real Issue, and Other Stories; Stratagems and Spoils; A Certain Rich Man*, etc.

Whitefield, George, one of the founders of Methodism, was born at Gloucester, England, 1714. He was educated at Oxford. One of his most famous missionary journeys was that which he made to Scotland in 1741. He made a number of visits to America, several of which lasted for two or three years. He died at Newburyport, near Boston, 1770.

Whitman, Walt, American poet, was born in 1819 at Westhills, L. I. He learned the printing trade, taught school on Long Island, and wrote for newspapers and magazines. Later he became a newspaper publisher for a year; in 1846, he became for one year editor of the *Brooklyn Eagle*. Meanwhile he traveled widely in the United States and Canada. In 1855 appeared his first collection of *Leaves of Grass*. Later he produced his *Democratic Vistas, Two Rivulets*, and *Specimen Days and Collect*. He died at Camden, N. J., 1892.

Whitney, Eli, American inventor, was born in Westborough, Mass., 1765. In 1792 he was graduated at Yale; invented the cotton gin, 1796, but owing to litigation growing out of the claims of fraudulent imitators, and despairing of obtaining his rights in the South, Whitney went to New Haven, Conn., 1798, near which city he became engaged in the manufacture of firearms. He died at New Haven, 1825.

Whitney, Josiah Dwight, American geologist, was born at Northampton, Mass., 1819. He was graduated at Yale in 1839; in 1865 was made professor at Harvard. He wrote extensively on geological topics, and died in 1896.

Whitney, William Dwight, American philologist, was born at Northampton, Mass., 1827. In 1854 he became professor of Sanskrit at Yale, and in 1870 also of comparative philology. He waged war with Max-Müller on fundamental questions of the science of language. Among his works were: *Material and Form in Language, Life and Growth of Language; Mixture in Language*, etc. He was editor-in-chief of the *Century Dictionary*. Died at New Haven, 1894.

Whittier, John Greenleaf, American poet, was born of Quaker parents at Haverhill, Mass., 1807. In his younger days he worked on his father's farm and learned the shoemaking trade. He carried on the farm himself for five years, and in 1835-36 was a member of the legislature of Massachusetts and always remained an ardent abolitionist. Among the numerous volumes of poetry which he published from time to time are: *Moll Pitcher; The Voices of Freedom; The Chapel of the Hermits; Snow Bound; In War-Time; Hazel Blossoms; The King's Missive; Poems of Nature*, etc. He is best known for his poems, *Barbara Frietchie, The Barefoot Boy, Maud Muller*, and *The Pipes at Lucknow*. Died, 1892.

Wickersham, George Woodward, American lawyer, attorney-general of the United States, 1909-13, was born in Pittsburg, Pa., 1858. He was graduated at the University of Pennsylvania 1880; removed to New York city, and in 1883 entered the law firm of Strong and Cadwalader; was admitted, four years later, to partnership in the firm, which connection he terminated upon becoming attorney-general.

Wieland (*vē'lant*), **Christoph Martin,** noted German poet, was born at Oberholzheim, near Biberach, 1733. His views on the subject of love are most fully and worthily expounded in the didactic poem *Musarion*, a work of singular grace and harmony of treatment. At Weimar in 1772 he wrote *The Choice of Hercules*. Died, 1813.

Wiggin, Kate Douglas, American author, was born in Philadelphia, Pa., 1857. She was graduated at Abbott Academy, Andover, Mass., 1878, and married Samuel Wiggin in 1880 and George C. Riggs in 1895. Author: *The Birds' Christmas Carol; The Story of Patsy; Polly Oliver's Problem; The Village Watch Tower; The Diary of a Goose Girl; Rebecca; The Affair at the Inn*.

Wilberforce, William, English statesman and philanthropist, was born at Hull, England, 1759. He was educated at St. John's College, Cambridge. He entered parliament as the representative of his native town. In 1789 he first proposed in the house of commons the abolition of the slave trade, and, with the aid of Charles James Fox, this measure was carried in 1806. Died 1833 and was buried in Westminster abbey.

Wilcox, Ella Wheeler, American poet and writer, was born near Madison, Wis., 1855, and was educated at the State University in that city. For many years she has been on the staff of the *New York American*.

Wilde, Oscar Fingall O'Flahertie Wills, Irish author and dramatist, was born at Dublin, Ireland, 1856. Educated at Trinity College, Dublin, and at Oxford. While yet in college he became a leading exponent of the aesthetic movement, and in 1882 he toured the U. S., lecturing on this subject. By 1890 had become widely known as writer and dramatist. His chief prose work *The Picture of Dorian Gray* and a volume of essays, *Intentions*. Among his plays are: *Duchess of Padua; Lady Windermere's Fan; A Woman of No Importance; The Ideal Husband;* and *Importance of Being in Earnest*. His play *Salome* was produced by Bernhardt in Paris in 1894. Other books include *Ballad of Reading Gaol* and *De Profundis*, the former written while he was serving a prison sentence after conviction for immoral practices. Died, 1900.

Wiley, Harvey Washington, chemist, was born at Kent, Ind., 1844; graduated at Hanover College, 1867; M. D., Indiana Medical College; B. S., Harvard, 1873; Ph. D., Hanover, 1876; LL. D., 1898; professor of chemistry, Purdue University and state chemist of Indiana, 1874-83; chief chemist, United States Department of Agriculture, 1883-1910; professor agricultural chemistry, George Washington University, since 1899; consulting professor Brooklyn Polytechnic Institute 1905. Author: *Principles and Practice of Agricultural Chemistry* (3 volumes); *Foods and Their Adulterations*; sixty government bulletins and two-hundred and twenty-five scientific papers, etc.

Wilhelmina (*vil'hel-mē'nä*), **Helène Pauline Marie,** queen of the Netherlands, was born at The Hague, Holland, 1880. She succeeded to the throne of the Netherlands on the death of her father in 1890, though she only came of legal age in 1898, when she was inaugurated as queen. In 1901 she married Prince Henry, youngest son of the late grand duke of Mecklenburg-Schwerin.

Willard, Edward Smith, actor, was born at Brighton, England, 1853. His first appearance on the stage was at the Theater Royal, Weymouth, England, 1869, in the *Lady of Lyons*. Has toured the United States in *David Garrick, Tom Pinch, Professor's Love Story*, etc.

Willard, Emma C., American educator, born at Berlin, Conn., 1787. In 1808 she married Dr. John Willard. In 1830 she traveled in Europe, and by her efforts a school for the training of

native women teachers was founded in Greece. Among her books are: *History of the United States; Universal History in Perspective.* Died, 1870.

Willard, Frances Elizabeth, temperance reformer, was born at Churchville, N. Y., 1839. After some years spent in teaching, she became professor of æsthetics in the Northwestern University, and was made dean of the Woman's College in 1871. She began her active temperance work, in 1874, as secretary of the National Woman's Christian temperance union; in 1879 was made president of that organization, and held the office until her death. She died in New York, 1898.

Willcox, Walter Francis, American educator and statistician, was born at Reading, Mass., 1861. He was graduated at Amherst, 1884; Ph. D.; LL. D.; is now professor of political economy and statistics, Cornell; statistical expert for war department upon censuses of Cuba and Porto Rico, 1899-1900. Author: *The Divorce Problem—a Study in Statistics*, and numerous census bulletins.

William I., commonly called the Conqueror, was born in Normandy, 1027. He laid claim to the sovereignty of England on the death of Edward the Confessor. In 1066 he landed at Pevensey, in Sussex, defeated Harold II. at the battle of Hastings; and was crowned king of England in Westminister abbey on the Christmas day following. The Channel islands, being part of William's duchy of Normandy, became attached to England on his accession. He died at the abbey of St. Gervais, 1087.

William III., king of England, 1689-1702 was born at The Hague, 1650. In 1678, being then stadtholder of Holland, he went to England, and married Mary, eldest daughter of the duke of York, afterward James II. In 1688 he landed with a Dutch army at Torbay, in Devonshire, and was soon after invited by a convention parliament to accept the throne, which James had vacated. In 1690 he defeated James at the battle of the Boyne He died at Kensington palace in 1702.

William IV., king of Great Britain and Ireland, third son of George III., was born in 1765. By the death of the Duke of York, 1827, he became heir-presumptive to the throne, to which he succeeded on the death of his brother, George IV., in June, 1830. The great event of the reign of William IV. was the passing of the reform bill. He died in 1837, and was succeeded by his niece, Queen Victoria.

William I., Friedrich Ludwig Wilhelm, king of Prussia and emperor of Germany, was born in 1797, second son of Frederick William III. of Prussia. In 1857, the king having become incapacitated for business, William was commissioned to act as regent, a commission which was renewed from time to time until his permanent installation in 1858. In 1861 he ascended the throne, and became the head of the North German confederation in 1867. He found in Bismarck an able minister who could rule without a parliamentary majority. At Ems, in July, 1870, the memorable interviews between William and the French ambassador, Benedetti, took place, which resulted in the Franco-Prussian war of 1870-71. William commanded at the decisive battle of Gravelotte and at Sedan. In 1871 he was proclaimed emperor o. Germany in the palace of the French kings at Versailles. He died in 1888.

William II., Friedrich Wilhelm Viktor Albrecht, king of Prussia and emperor of Germany, was born in 1859, eldest son of Frederick III. and Victoria, princess royal of England. He succeeded his father in 1888. Since his accession he has taken much interest in social questions, and the strong initiative which he adopted in political affairs brought about the dismissal of Prince Bismarck in 1890. His independence, ability, and aggressiveness have placed Germany in the foremost rank of the enlightened world powers.

William I., Frederik Willem, first king of the Netherlands, grand duke of Luxemburg, was born in 1772. In 1815 he was declared king as William I., under a limited constitution. The Belgians having established their independence with the aid of France in 1830-32, he was obliged to acknowledge it in 1839. Died in 1843.

William I., called the Silent, prince of Orange and count of Nassau, founder of the Dutch republic, was born in Dillenburg, 1533. He opposed the persecution of the Protestants, and refused to permit it in the provinces of which he was stadtholder. In 1576 the five provinces which had all along held to Spain joined the states-general at Ghent, and formed a league under William. William formed in 1579 a league between Holland, Zealand, Utrecht, Friesland, Gelderland, Gronigen, and Overyssel, which was the foundation, of the Dutch republic. Two years later the united provinces declared themselves independent. William twice refused to become the ruler of the new country, and was assassinated at Delft, 1584.

Williams, George Fred, American lawyer, was born in Dedham, Mass., 1852. He was graduated at Dartmouth College, 1872. He edited *Williams' Citations of Massachusetts Cases* and volumes 10 to 17 *Annual Digest of the United States.* He was a member of the Massachusetts legislature in 1889, member of congress, 1891-93.

Williams, John Sharp, American legislator and publicist, was born in Memphis, Tenn., 1854. He studied law at the University of Virginia and in Memphis, Tenn., and was admitted to the Tennessee bar, 1877. He was temporary chairman of the St. Louis convention, 1904; member of congress from 5th Mississippi district, 1893-1903; United States senator from Mississippi, since 1911.

Williams, Roger, English colonist and founder of Rhode Island, was born probably in London, about 1604. He emigrated to New England in 1631. On account of his religious opinions, he was ordered to leave the colony in 1635, and in 1636 founded Providence. He was the first president of the colony established by himself; and the uniform justice and kindness with which he treated the native Indians is frequently referred to in the records of the time. Died, 1683.

Williston, Samuel, lawyer, and legal educator, was born at Cambridge, Mass., 1861; graduated from Harvard, 1882; LL.B., 1888; LL.D., 1910. In practice at Boston, since 1888; assistant professor of law, 1890-5, professor, 1895-1903, Weld professor since 1903, acting dean, 1909, Harvard Law School. Lecturer, Law School, University of Chicago, 1902-3, University of California, 1909. Author: *The Law of Sales.* Editor: *Parsons on Contracts*, eighth edition; *Cases on Contracts; Cases on Sales; Stephen on Pleading; Cases on Bankruptcy; Cases on Contracts; Wald's Pollock on Contracts*, etc.

Wilson, Henry, American statesman, was born in Farmington, N. H, 1812, of poor parents. He was elected to the Massachusetts legislature by the whig party in 1840, and largely contributed to the formation of the free-soil party in 1848. In 1855 he succeeded Edward Everett as United States senator, and became one of the leaders of the republican party. In 1872 he was elected vice-president of the United States. Died, 1875.

Wilson, James, United States secretary of agriculture, 1897-1913, was born in Ayrshire, Scotland, 1835. He came to the United States in 1852; member of congress, 1873-77, and 1883-85. He received the degree LL.D. from the University of Wisconsin, 1904.

Wilson, Thomas Woodrow, twenty-eighth president of the United States, educator, publicist, historian, was born in Staunton, Va., Dec. 28, 1856, son of Rev. Joseph R. and Jessie (Woodrow) Wilson. He was graduated from Princeton University, 1879; from the University of Virginia Law School, 1882; and Ph.D., Johns Hopkins, 1886. He received the degree of LL.D. from Tulane, Johns Hopkins, Harvard, University of Pennsylvania, and other universities, and that of Litt.D. from Yale. On June 24, 1885, he married Helen Louise Axson of Savannah, Ga., and has three daughters, Margaret, Jessie, and Eleanor. During 1882-83 he practiced law at Atlanta, Ga.; 1885-88, was professor of history and political economy at Bryn Mawr College, Pa.; 1888-90, professor of same subject at Wesleyan University, Conn.; 1890-1902, professor of Jurisprudence and politics, and 1902-10, president of Princeton University. During the latter year he was elected governor of New Jersey, for the term 1911-14, and, after a notable contest, was nominated as the Democratic candidate for president of the United States, at Baltimore, on July 2, 1912. At the succeeding presidential election, he was elected president over William H. Taft, republican, and Theodore Roosevelt, progressive, by the largest electoral plurality ever accorded any presidential candidate. He was inaugurated March 4, 1913, and shortly following called congress in special session to consider tariff and other reforms. His high ideals and recognized achievements as an educator, student of affairs, administrator, and leader of public thought brought him strong support and a bestowal of confidence that is rarely accorded even the occupant of the presidential chair. He is author of *Congressional Government*, a Study in American Politics; *The State*: Elements of Historical and Practical Politics; *Division and Reunion*, 1829-1889; *An Old Master and Other Political Essays; Mere Literature and Other Essays; George Washington;* and *History of the American People.*

Wilson, William Bauchop, secretary of labor, farmer, was born at Blantyre, Scotland, April 2, 1862; came to this country with his parents in 1870 and settled at Arnot, Tioga County, Pa. In 1871, he began working in the coal mines; in 1873, became half member of the Mine Workers' Union; has taken an active part in trade-union affairs from early manhood; was international secretary-treasurer of the United Mine Workers of America, 1900 until 1908. He was a member of Congress, 1907-13.

Winsor (*win'zĕr*), **Justin,** American historian and librarian, was born at Boston, Mass., 1831. He studied at Harvard and Heidelberg, was superintendent of the Boston library, 1868-77, passing then to the librarianship of Harvard. His chief publications embrace: *The Readers' Handbook of the American Revolution; Narrative and Critical History of America.* Died at Cambridge, Mass., 1897.

Winthrop, John, governor of Massachusetts colony, was born at Groton, Suffolk, England, 1858; was chosen governor by the Massachusesit Bay company in 1629. The next year he came over; bringing with him 900 emigrants. His *Journal* is one of the most important sources of early American history. He died at Boston, 1649.

Wirt, William, American lawyer, was born at Bladensburg, Md., 1772. He was admitted to the bar in 1792, and settled to practice in Virginia; and in 1817 became attorney-general of the United States. He died in 1834.

Wiseman, Nicholas Patrick Stephen, English cardinal and Roman Catholic archbishop of Westminster, was born at Seville, Spain, 1802. He was subsequently appointed vice-rector of the English College, and professor of oriental languages in the University of the Sapienza. In 1828 he published his *Horæ Syriacæ*, was named president of St. Mary's College of Oscott. In 1850 he was named archbishop of the see of Westminster, and at the same time created cardinal. He wrote *Influence of Words on Thought and Civilization; The Real Presence*, etc. He died in London, 1865.

Wister, Owen, American author, was born in Philadelphia, Pa., 1860. He was graduated from Harvard, 1882; from Harvard law school, 1888; was admitted to the Philadelphia bar, 1889. He engaged in literary work, 1891. Author: *The Dragon of Wantley: His Tail; U. S. Grant, a Biography; The Virginian; Philosophy 4*; and much prose and verse in magazines.

Witte (*vit'ĕ*), **Count Sergei Yulievitch,** Russian statesman, of German origin, was born at Tiflis, 1849. He was educated at Odessa. He was called to St. Petersburg for employment there in 1879, and appointed in 1886 director of the Russian southwest railways. In 1903 he was removed from the ministry of finance and made president of the committee of ministers. He was one of the Russian plenipotentiaries in the negotiations for peace with Japan in 1905, and was afterward made a count and appointed president of the new ministry.

Wolfe, Charles, British clergyman and poet, was born at Dublin, 1791. In 1814 he took his B. A. at Dublin. His *Burial of Sir John Moore*, in 1817, won for itself a secure place in the heart of the British nation. He died in 1823.

Wolfe, James, English general, was born at Westerham, in Kent, England, 1727. In the effort to drive the French out of Canada, Pitt, in 1759, gave the charge of the invading army to Wolfe, who had been made major-general. The story of his attack on Quebec, how he scaled the cliffs with his army by night, and died in the moment of victory is well known. He died in 1759.

Wolseley (*wŏŏlz'lĭ*), **Garnet Joseph, Viscount,** English field-marshal, was born in County Dublin, Ireland, 1833; was governor of Natal. He commanded the Egyptian expedition, 1882; Gordon relief expedition, 1884; and while commanding in Ireland was made field-marshal in 1894, and commander-in-chief, 1895. He retired in 1906. Died 1913.

Wolsey (*wŏŏl'zĭ*), **Thomas,** English statesman and cardinal, was born at Ipswich, about 1475. On the accession of Henry VIII. he became the king's almoner, and obtained several other preferments. In 1515 he was consecrated archbishop of York, and was about the same time appointed lord chancellor and prime minister and cardinal. From this time he was one of the foremost men in Europe, and, as his revenues were immense, his pride and ostentation were carried to the greatest height. In 1530 he was arrested on a charge of high treason, and was ordered to be conveyed to London for trial. He reached Leicester abbey, and died there a few days afterward, in 1530.

Woodhull, John Francis, university professor, was born at Westport, N. Y., 1857; graduated from Yale, 1880; Ph. D., Columbia, 1899; professor natural science, N. Y. State Normal School, 1887; professor physical science, Teachers College (Columbia), since 1889. Author: *Simple Experiments for the School Room; First Course in Science; Chemical Experiments, a Laboratory Manual; Physical Experiments, a Laboratory Manual; Physics, a Text-book; Simple Experiments in Chemistry*, etc.

Wood, Leonard, army officer, was born at Winchester, N. H., 1860. He was graduated from the Harvard medical school, 1884; LL. D., Harvard. He became assistant surgeon in the United States army in 1886, captain in 1891; major-general, December, 7, 1898; brigadier-general, United States regular army, 1901; major-general, 1903; commander of Philippines division, 1906; now commander of the department of the East.

Woodberry, George Edward, American author and critic, was born at Beverly, Mass., 1855. He was graduated at Harvard in 1877. He was professor of English at Nebraska University, 1877-78, 1880-82, and professor of comparative literature, Columbia, 1891-1904. Author: *History of Wood Engraving; Edgar Allen Poe; Nathaniel Hawthorne; America in Literature; Ralph Waldo Emerson; The Appreciation of Literature; Great Writers.*

Woodward, Calvin Milton, educator, was born at Fitchburg, Mass., 1837; graduated from Harvard, 1860; Ph. D., 1883, LL. D., 1905, Washington University; LL. D., University of Wisconsin, 1908. Professor descriptive geometry, 1870-1, dean School of Engraving, 1871-96, dean School of Engraving and Architecture, 1901-10; professor mathematics and applied mechanics since 1871.

Washington University. Originator and director after organization, 1879, of St. Louis Manual training school. Author: *The Manual Training School; Manual Training in Education*, etc. D.1914.

Woodward, Robert Simpson, American physicist and educator, was born at Rochester, Mich., 1849. He was graduated at the University of Michigan, C. E., Ph. D.; LL. D.; Sc. D; assistant United States coast and geodetic survey in 1890-93; professor of mechanics and mathematical physics, 1893-1905, and dean of the school of pure science, 1895-1905, Columbia, and director of the Carnegie Institution of Washington since 1905.

Woolley, Mary E., American educator, president of Mt. Holyoke College since 1900, was born at South Norwalk, Conn., 1863. She was graduated at Wheaton seminary, 1884; Litt. D., L. H. D., Amherst, 1900. She was head of the department of biblical history and literature of Wellesley College, 1895-1900.

Woolman, John, American Quaker preacher, was born at Northampton, N. J., 1720. He was a farmer's son, and was for some time a tailor. He spoke and wrote against slavery, and published *The Journal of the Life and Travels of John Woolman in the Service of the Gospel.* He died at York on a visit to England, 1772.

Woolsey, Theodore Dwight, American scholar, was born at New York city, 1801. He was graduated at Yale in 1820, studied at Princeton, and for three years in Germany; from 1846 to 1871 was the president of Yale. He was an authority on questions of international law. Among his works are: *Introduction to the Study of International Law; Divorce and Divorce Legislation*, etc.

Worcester (*wōōs'tĕr*), **Joseph Emerson,** American lexicographer, was born at Bedford, N. H., 1784. He taught at Salem, Mass., and then turned to authorship. His works were gazetteers, manuals of geography and history, etc. He abridged Webster's *Dictionary* in 1829; printed his own *English Dictionary* in 1830, and quarto *Dictionary of the English Language*, 1860. He died in 1865.

Wordsworth, William, celebrated English poet, was born at Cockermouth, Cumberland, 1770, and died, 1850. In 1787 he was sent to St. John's college, Cambridge. He left the university after taking his degree, but without having otherwise distinguished himself, and lived aimlessly in London and elsewhere.

He crossed to France in 1791, and exhibited vehement sympathy with the revolution, remaining in France for nearly a year. After his return, disregarding all entreaties to enter upon a professional career, he published his *Evening Walk* and *Descriptive Sketches* (1793.) Two years afterwards he received a legacy of 900 pounds from Raisley Calvert, a friend whom he had nursed in his last illness. With this sum and the consecrated helpfulness of his sister Dorothy he contrived to keep house for eight years, while he gave himself to poetic effort as his high "office upon earth."

For the first two years they lived at Racedown in Dorset, where the poet among other experiments began his tragedy of *The Borderers*. In this retreat they were visited by Coleridge, who had already recognized an original poetic genius in the author of *Descriptive Sketches*. Coleridge was at this time living at Nether Stowey, in Somerset, and during this visit he induced the Wordsworths to go into residence at Alfoxden, in his immediate neighborhood. Here the two poets held daily intercourse, and after a year they published *Lyrical Ballads* in literary copartnership. Although this volume was received with almost complete public indifference, yet Wordsworth felt that he had found his mission, and after a winter spent in Germany, he and his sister settled at Grasmere in 1799, where he proposed to write a great philosophical poem on man, nature, and society.

Thenceforth his life was marked by few incidents. Those worth noting are his marriage in 1802 with his cousin Mary Hutchinson; a removal from Grasmere to Allan Bank in 1808; his appointment in 1813 to an inspectorship of stamps, and his removal to Rydal Mount; several journeys into Scotland and to the continent; his acceptance of a D. C. L. degree conferred upon him in 1839 by the University of Oxford; and his accession in 1843 to the laureateship on the death of Southey.

Wordsworth's great philosophic poem, which, in his own phrase, was to be the Gothic cathedral of his labor, received only a fragmentary accomplishment in *The Prelude*, *The Excursion*, and *The Recluse*. Yet enough was achieved in his smaller poems to justify his own conception of himself as a "dedicated spirit," and to set him apart among the greatest of England's poets.

References.—The principal *Lives* are those of Christopher Wordsworth; F. W. H. Myers, J. M. Sutherland, Elizabeth Wordsworth, and Professor Knight. See also Knight's *English Lake District;* and *Through the Wordsworth Country;* Stopford Brooke's *Theology in the English Poets;* Hudson's *Studies in Wordsworth;* Masson's *Wordsworth, Shelley*, etc. J. R. Tutin's *Wordsworth Dictionary of Persons and Places;* and Raleigh's *Wordsworth.*

Wren, Sir Christopher, noted English architect, was born at Knoyle, in Wiltshire, 1632. He was graduated at Oxford, and in 1657 left Oxford for London, where he became Gresham professor of astronomy. Wren was the architect of the new St. Paul's cathedral. Besides numerous other churches, he built the Royal Exchange, London; customhouse, London; Temple Bar; Greenwich hospital; Buckingham palace; Marlborough house; the towers at the west front of Westminster abbey, etc. In 1672 he was knighted and in 1680 was elected president of the royal society. Died, 1723.

Wright, Carroll Davidson, economist, statistician, was born in Dunbarton, N. H., 1840. He served in the civil war from private to colonel; was admitted to the New Hampshire bar in 1867; United States commissioner of labor, 1885-1902; and also, 1893-97, completed the eleventh United States census; was president of Clark College, Worcester, Mass., 1902-09. He was appointed by President Roosevelt a member and recorder of the United States anthracite strike commission, 1902. Author: *The Factory System of the United States; Outline of Practical Sociology.* Died, 1909.

Wright, Orville, American aëronaut and inventor, was born at Dayton, Ohio, 1871; since 1903, with his brother Wilbur, has devoted his attention mainly to the invention and improvement of the aëroplane flying machine.

Wright, Wilbur, aëronaut, brother of Orville, was born near Millville, Ind., 1867. From 1903, with his brother Orville, he devoted his time to the heavier-than-air flying machine, patented by the Wright Brothers in leading countries of the world. Died, 1912.

Wundt (*vōōnt*), **Wilhelm Max,** German physiologist and psychologist, was born at Neckarau in Baden, Germany, 1832. He studied at Tübingen, Heidelberg, and Berlin; in 1875 became professor of physiology at Leipzig. He is distinguished in the field of experimental psychology, and has written on the nerves and the senses, the relations of physiology and psychology, logic, etc.

Wu Ting-Fang (*wōō'ting'fäng'*), Chinese diplomat, was born at Hsin-hui district, Kwangtung, China; LL. D., University of Pennsylvania, 1900; was appointed by the imperial government codirector in the railway bureau, constructing railways in north China; assisted in negotiating, at Peking, the Chino-Japanese treaty of commerce and navigation, ratified in 1896; was minister of China to the United States, Spain, and Peru, 1897-1902; and reappointed to the United States in 1907.

Wycliffe (*wik'lif*), **John,** English religious reformer, was born at Wycliffe, near Richmond, in Yorkshire, about 1320. He is frequently called "the morning star of the reformation." His last years were spent as rector of Lutterworth, in Leicestershire, where, a short time before his death, in 1384, he completed his translation of the Bible. He also wrote a large number of tracts in exposition or defense of the doctrines he preached.

Xavier (*zav'i-ĕr*), **St. Francis,** Jesuit missionary, styled usually the "apostle of the Indies," was born in 1506, of a noble family, in the north of Spain. He visited Malacca, the Banda islands, Amboyna, the Moluccas, and Ceylon, where he converted the king of Kandy. The mission he next founded in Japan flourished for a hundred years. He died, 1552, soon after reaching the island of Sanchian near Canton. His body was ultimately buried in Goa. He was canonized in 1622.

Xenophon (*zen'ō-fon*), Greek historian, philosopher, and military commander, born at Athens, about 434 B. C. He was a pupil and friend of Socrates; joined the expedition of Cyrus against his brother Artaxerxes, and on its failure conducted the ten thousand Greeks. His principal works are the *Anabasis*, an account of the expedition of Cyrus and his own conduct of the retreat; the *Memorabilia*, an account of the life and teaching and in defense of his master Socrates. He died about 355 B. C.

Xerxes (*zûrk'zēz*), king of Persia, son of Darius I., whom he succeeded on the throne in 485 B. C., was born about 519 B. C. In 481 he attempted to subdue Greece both by sea and land; checked for a time at Thermopylæ by Leonidas and his five hundred; advanced to Athens to see his fleet destroyed at Salamis by Themistocles; was assassinated in 465 by Artabanus, the captain of his bodyguard.

Ximenes (*zi-mē'nēz*), **Francis de Cisneros,** Spanish cardinal and statesman, was born at Torrelaguna, in Castile, in 1437. His reputation for piety and learning led Queen Isabella to choose him, in 1492, for her confessor. As confessor Ximenes was the guiding spirit of Spanish affairs. In 1506-07 he was provisional regent of Castile, and was regent of Spain, 1516-17. He died near Aranda de Duoro, 1517.

Yale, Elihu, English colonial official, was born at or near Boston, Mass., 1648. When four years old he was taken to England by his father, and never returned to America. Yale College received his name in the charter of 1745. Previously the building and, before that, the school at Saybrook had been called by the name. He died in England, 1721, and is buried at Wrexham, Wales.

Yamagata (*yä'mä-gä'tä*), **Aritomo,** Japanese field-marshal, president of the privy council of Japan, was born at Choshu, 1838; commanded first army in the China-Japan war; was prime minister, 1889; became field-marshal, 1898; chief of general staff, 1904; and was created prince, 1907.

Yancey (*yan'si*), **William Lowndes,** American politician and lawyer, was born in Georgia, 1814; was greatly instrumental in bringing about the civil war. Died near Montgomery, Ala., 1863.

Youmans (*yōō'mans*), **Edward L.,** American scientist, was born at Coeymans, N. Y., 1821. Although suffering for some years from almost total blindness, he pursued his studies in physics and chemistry with marked zeal and proficiency, his sister conducting experiments for him. In 1872 he established and until his death edited *The Popular Science Monthly.* Died at New York, 1887.

Young, Brigham, at one time head of the Mormon church, was born at Whittingham, Vt., 1801. In 1832, having become a convert to Mormonism, he was made an elder of the church, and began to preach at the Mormon settlement at Kirtland, Ohio. After the death of Joseph Smith, at Nauvoo, Ill., in 1844, Young was chosen president of the Mormon body. In 1852 he proclaimed polygamy, which had been condemned by the Mormon church, and in 1856, after having been territorial governor of Utah for several years, he was removed from office by President Buchanan. Died, 1877.

Young, Edward, English poet, was born at Upham rectory near Bishops Waltham, 1683. He was educated at All Souls, Oxford, and in 1730 became rector of Welwyn, in Hertfordshire. His chief poetical work is *Night Thoughts.* He also wrote *Love of Fame, the Universal Passion;* the dramas, *Busiris, The Revenge*, etc. He died in 1765.

Young, Ella Flagg, American educator, was born at Buffalo, N. Y., 1845, daughter of Theodore Flagg. She was graduated at the Chicago high school and Chicago Normal School; Ph. D., University of Chicago; has been engaged in teaching since 1862. She was professor of education, University of Chicago, 1899-1905; principal of the Chicago Normal School, 1905-08; and superintendent of the Chicago public schools since 1908.

Younghusband, Sir Francis Edward, English soldier, explorer, and writer, was born at Murree, India, 1863. He traveled in Manchuria, 1886; from Peking to India *via* Chinese Turkestan, 1887; on the Pamirs and in Hunza, 1889; and was British commissioner to Tibet, 1903-04. In the latter year he headed the expedition which forced its way into Lhassa, sacred city of Tibet. Author: *Heart of a Continent.*

Zahm (*tsäm*), **John Augustine,** provincial of order of Holy Cross in United States since 1897, was born at New Lexington, Ohio, 1851; is now president of the board of trustees, Notre Dame University. He is a member of numerous scientific societies and has lectured widely on scientific and allied topics. Author: *Evolution and Dogma; Scientific Theory and Catholic Doctrine; Science and the Church*, etc.

Zangwill (*sang'wil*), **Israel,** British man of letters, was born in London, 1864. He received the degree of B. A. from London University; has written many novels, essays, poems, and plays; has lectured in Great Britain and Ireland, Jerusalem, Holland, and the United States, and is president of the international Jewish territorial organization or Zionist movement. Author: *The Premier and the Painter; Merely Mary Ann; The Master; They that Walk in Darkness; Blind Children*, verse; *Ghetto Comedies*, etc. Plays: *Six Persons; Children of the Ghetto; Nurse Marjorie; The Melting Pot*, etc.

Zeno, founder of the stoic philosophy, was born at Citium, in Cyprus, the date of his birth and death both being uncertain. He flourished in the early part of the third century B. C., and was a contemporary of Epicurus. The Athenians honored Zeno's memory with a golden crown and a public burial, and his countrymen erected a monumental pillar in his honor. He is supposed to have died about 264 B. C.

Zeno, Greek philosopher of Elea, in Italy, was born about 490 B. C. He was a favorite disciple of Parmenides, visited Athens, and the illustrious Pericles was one of his pupils. He devoted his great powers of argumentation to enforce the doctrines first broached by Xenophanes, and more systematically developed by Parmenides.

Zenobia (*ze-nō'bi-ä*), **Septimia,** queen of Palmyra 267 A. D., succeeded her husband Odenathus. Aurelian marched against her with a large army, and after defeating her in several battles besieged her in Palmyra. She attempted to escape by flight, but was captured and brought to Rome to

adorn the triumph of her conqueror. She was a woman of great courage, high spirit, and remarkable beauty.

Zimmern, Helen, British author, translator, and critic, was born in Hamburg, Germany, in 1846, and was taken to England in 1850. She resided in England until 1887, when she removed to Italy, where she has since lived. Author: *Precious Stones; Told by the Waves; Half-Hours With Famous Novelists; Tales From the Edda; The Italy of the Italians*, etc.

Zinzendorf (*tsin'tsen-dôrf*), **Nicolaus Ludwig, Count von,** founder of the Moravian brethren, was born at Dresden, 1700. He accidentally met a wandering carpenter named Christian David, a member of the old sect of Moravian brethren, who described the persecutions to which the sect was exposed; and Zinzendorf invited him and his friends to settle on his estate. They accepted the proposal, and the colony received the name of "Herrnhut." In 1737, at the request of King Frederick William I. of Prussia, he was ordained bishop of the Moravians. In 1741 he went to America and founded the celebrated Moravian colony at Bethlehem, Pa. Died, 1760.

Ziska (*zis'kä*), or **Zizka** (*zhish'kä*), **Ján,** leader of the Hussites, was born at Trocznov, Bohemia, about 1360. He was an adherent of the Hussite doctrine. Died, 1424.

Zola (*zō'lä;* Fr. *zō-lä'*), **Emile,** French novelist, was born at Paris, 1840. He was educated at the Lycée St. Louis. His first important venture in fiction was *Les Mysterès de Marseille.* Soon after this he formed with Flaubert, Daudet, and the Goncourts the naturalistic school of fiction. The fruit in part of this was the series known as *Les Rougon-Macquart Family.* His latest work, written in exile, occasioned by his courageous advocacy of the famous Dreyfus case, is entitled *Fecondité.* He was a knight of the French legion of honor. He died in 1902.

Zoroaster (Old Persian *Zarathustra*, later Per. *Zerdusht*), was one of the great religious teachers of the east, the founder of the Persian religion, now known as Zoroastrianism. He has been represented by eminent authorities as purely mythical, but it seems more reasonable to believe that he was a real, historical personage. If this view be accepted he was probably a native of the east of Iran, but there is great uncertanty as to the time in which he appeared as a religious teacher. He is supposed by some to have been a contemporary of Moses, by others his date is assigned to the tenth century before Christ.

His doctrines are to be found in the Parsee scriptures called the *Zend-Avesta*, and the *Gôthâs*, which is the oldest part of that work, are declared to contain his authentic utterances. The fundamental idea of his doctrine was the existence, since the beginning, of a spirit of good, Ahurô Mazdaô (Ormuzd), and a spirit of evil, Angrô Mainyush (Ahriman). These two are in perpetual conflict, and the soul of man is the great object of the war. Ormuzd created man free, so that if he allows himself to fall under the sway of Ahriman he is held to be justly punishable. When he dies his good and evil deeds will be weighed against each other, and accordingly as the balance is struck he will be sent to heaven or to hell. If they are exactly equal, the soul passes into an intermediate state, and remains there until the day of judgment. Ormuzd is to triumph ultimately, and then there will be one undivided kingdom of God in heaven and on earth.

The religion of Zoroaster, when it became that of Iran, was expounded by a widely spread priesthood, and these provided for it a ritual and ceremonial. Minutely elaborated laws for the purification of soul and body were laid down. They included a prohibition of the burning or the burying of the dead bodies of believers, which, by the Parsees in Bombay and elsewhere, are still left to be devoured by vultures.

References.—Jackson's *Zoroaster, the Prophet of Ancient Iran;* Windischmann's *Zoroastrische Studien;* and *Die Iranische Religion;* Max Müeller's series of translations of books of the orient, especially the *Zend-Avesta.*

Zwingli (*tsving'lē*), **Ulrich,** Swiss reformer, was born at Wildhaus, 1484. In 1519 he was appointed to the cathedral at Zürich, having previously opposed the sale of indulgences by Sansom. Attempts were made to prohibit his preaching, but the reformation grew at Zürich. In 1529 Zwingli met Luther and Melanchthon at Marburg, but two years later he fell in the battle of Kappel in the war with Berne. Died, 1531.

HALL OF FAME FOR GREAT AMERICANS

The building known by the above title stands on University Heights, New York, and is affiliated with New York University. It was erected from a fund of $350,000 given for that purpose by an unknown donor. The structure is a semicircular colonnade connecting the Hall of Philosophy with the Hall of Languages, containing 150 panels for inscriptions and six compartments for mementoes of those persons whose names are inscribed upon the panels.

The terms of the gift prescribed that fifty panels were to be filled in 1900, and five at the close of each half decade thereafter. Only names of native Americans who have been deceased at least ten years may be chosen. Later provisions included suitable commemoration of great Americans of foreign birth, as well as a hall of fame for women.

In 1900 nominations were invited from the public, and submitted to a committee of 100 distinguished citizens for designation. The action of that committee, and subsequent committees, resulted in the choice of the following persons:

Name	Where Born	Dates of Birth and Death	Educated	Vocation
John Adams	Quincy, Mass.	1735–1826	Harvard	Statesman.
John Quincy Adams	Quincy, Mass.	1767–1848	Harvard	Statesman.
Louis J. R. Agassiz	Switzerland	1807–1873	University of Munich	Naturalist.
John James Audubon	nr. New Orleans, La.	1780–1851	In France	Ornithologist.
George Bancroft	nr. Worcester, Mass.	1800–1891	Harvard	Historian.
Henry Ward Beecher	Litchfield, Conn.	1813–1887	Amherst	Preacher, Orator.
Phillips Brooks	Boston, Mass.	1835–1893	Harvard	Preacher.
William Cullen Bryant	Cumington, Mass.	1794–1878	Williams College	Poet.
William Ellery Channing	Newport, R. I.	1780–1842	Harvard	Preacher, Essayist.
Henry Clay	Hanover Co., Va.	1777–1852	Elementary	Statesman.
James Fenimore Cooper	Burlington, N. J.	1789–1851	Yale	Novelist.
Peter Cooper	New York City	1791–1883	Elementary	Philanthropist.
Jonathan Edwards	Windsor, Conn.	1703–1758	Yale	Theologian, Preacher.
Ralph Waldo Emerson	Boston, Mass.	1803–1882	Harvard	Essayist, Philosopher.
David Glasgoe Farragut	nr. Knoxville, Tenn.	1801–1870	United States Navy	Admiral.
Benjamin Franklin	Boston, Mass.	1706–1790	Elementary	Statesman, Writer.
Robert Fulton	Little Britain, Pa.	1765–1815	Polytechnic	Inventor
Ulysses Simpson Grant	Point Pleasant, Ohio	1822–1885	West Point	Soldier, Statesman.
Asa Gray	Paris, N. Y.	1810–1888	Fairfield College	Botanist.
Alexander Hamilton	Nevis Island, W. I.	1757–1804	Columbia	Statesman.
Nathaniel Hawthorne	Salem, Mass.	1804–1864	Bowdoin College	Novelist.
Oliver Wendell Holmes	Cambridge, Mass.	1809–1894	Harvard	Poet, Physician.
Washington Irving	New York City	1783–1859	Academic and Legal	Novelist, Diplomat.
Andrew Jackson	North Carolina	1767–1845	Elementary	Soldier, Statesman.
Thomas Jefferson	Shadwell, Va.	1743–1826	William and Mary	Statesman.
John Paul Jones	Arbigland, Scotland	1747–1792	Elementary and Naval	Naval Officer.
James Kent	Philippi, N. Y.	1763–1847	Yale	Lawyer, Jurist.
Robert Edward Lee	Westmoreland Co., Va.	1807–1870	West Point	Soldier.
Abraham Lincoln	Hardin Co., Ky.	1809–1865	Self-educated	Statesman.
Henry Wadsworth Longfellow	Portland, Me.	1807–1882	Bowdoin College	Poet.
James Russell Lowell	Boston, Mass.	1819–1891	Harvard	Poet, Diplomat.
Mary Lyon	Buckland, Mass.	1797–1849	Academic, Private	Educator.
James Madison	King George Co., Va.	1751–1836	Princeton	Statesman.
Horace Mann	Franklin, Mass.	1796–1859	Brown University	Educator.
John Marshall	Fauquier Co., Va.	1753–1835	Privately	Jurist.
Maria Mitchell	Nantucket, Mass.	1818–1889	Privately	Astronomer.
Samuel Finley Breese Morse	Charlestown, Mass.	1791–1872	Yale	Inventor, Artist.
John Lothrop Motley	Dorchester, Mass.	1814–1877	Harvard	Historian, Diplomat.
George Peabody	South Danvers, Mass.	1795–1869	Self-educated	Merchant, Philanthropist.
Edgar Allan Poe	Boston, Mass.	1809–1849	West Point	Poet, Romancer.
William Tecumseh Sherman	Lancaster, Ohio	1820–1891	West Point	Soldier.
Joseph Story	Marblehead, Mass.	1779–1845	Harvard	Jurist, Law Writer.
Harriet Beecher Stowe	Litchfield, Conn.	1811–1896	Litchfield Academy	Novelist.
Gilbert Stuart	Narragansett, R. I.	1755–1828	London, with West	Portrait Painter.
George Washington	Westmoreland Co., Va.	1732–1799	Academic	Soldier, Statesman.
Daniel Webster	Salisbury, N. H.	1782–1852	Dartmouth College	Orator, Statesman.
Eli Whitney	Westboro, Mass.	1765–1825	Yale	Inventor.
John Greenleaf Whittier	Haverhill, Mass.	1807–1892	Haverhill Academy	Poet.
Emma Willard	Berlin, Conn.	1787–1870	Hartford Academy	Educator.
Frances Elizabeth Willard	Churchville, N. Y.	1839–1898	Northwestern Female College	Temperance Reformer.
Roger Williams	London, Eng.	1604(?)–1683	Cambridge, Eng.	Religious Reformer.

MULTIPLEX DICTIONARY

Giving the definition, pronunciation, synonyms and antonyms of the words occurring in our common speech. Containing also the following valuable features: Proper syllabication, parts of speech, capitalization, words most often mispronounced, and a copious vocabulary of geographical, personal and curious names, with their pronunciation, origin and meaning. The cognates in other languages of personal names are also given.

KEY TO THE VOWEL SOUNDS

ä, as in farm, father; *à*, as in ask, fast; *a*, as in at, fat; *ā*, as in day, fate; *â*, as in care, fare; a, as in final; *e*, as in met, set; *ē*, as in me, see; *ē̇*, as in her, ermine; *i*, as in pin, sin; *ī*, as in pine, line; *o*, as in not, got; *ō*, as in note, old; *ȯ*, as in for, fought; *ȯ*, as in sole, only; *ȯ̇*, as in fog, orange; *ȯ*, sound cannot be exactly represented in English. The English sound of *u* in *burn* and *burnt* is perhaps the nearest equivalent to *ȯ*; *oo*, as in cook, look; *ōō*, as in coon, moon; *u*, as in cup, luck; *ü*, as in use, amuse; *û*, as in fur, urge; *ů* sound cannot be exactly represented in English. The English sound of *u* in *luke* and *duke* resembles the original sound of *ů*. The letter N represents the nasal tone of the preceding vowel, as in *encore* (*äN-kōr'*).

ABBREVIATIONS

Arab., Arabic or Arabian; A.-S., Anglo-Saxon; Boh., Bohemian; Eng., English; Fr., French; Gael., Gaelic; Ger., German; Gr., Greek; Heb., Hebrew; Hind., Hindustani; Hung., Hungarian; Ind., Indian; It., Italian; Lat., Latin; M. H. G., Middle High German; N. H. G., North High German; Nor., Norwegian; O. E., Old English; O. F. or O. Fr., Old French; O. G., Old German; O. H. G., Old High German; Pers., Persian; Port., Portuguese; Russ., Russian; Sp., Spanish; Sw., Swedish; Teut., Teutonic; Turk., Turkish.

NOTE.—Groups of synonyms are indicated thus: **Syn.** ABANDON; the word in brackets *following the groups* refers to the key word of related groups: words in brackets following *definitions* refer to the key words of the respective groups of synonyms. The *key word* is the *first word* in each group of synonyms. Words often mispronounced are marked thus: ★**Aaron;** ★**abdomen.**

A, a (*ā* or *à*), *indef. art.* (contraction of *an*) one; any; used before words beginning with a consonant or the sound of *h*.

★**Aaron** (*ār'un* or *ā'run*). From the Hebrew *'Aharon*, perhaps the same as *hārōn*, "a mountaineer"; Arab., *Haroon* or *Harun;* Fr., *Aaron;* Ger., *Aaron* or *Aron;* It., *Aronne;* Lat., *Aaron;* Port., *Aarao;* Sp., *Aron.*

ab-a-ca (*ab'à-kà*), *n.* manila hemp.

ab-a-cist (*ab'à-sist*), *n.* a calculator; accountant.

a-back (*à-bak'*), *adv.* backward; pressed back against the mast; said of sails; taken by surprise.

ab-a-cus (*ab'à-kus*), *n.* a contrivance of beads or balls strung upon rods used for arithmetical computation.

a-ban-don (*à-ban'dun*), *v. t.* to give up; desert or forsake utterly: *n.* unrestraint.

Syn. ABANDON, abdicate, desert, forego, forsake, give up, leave, quit, relinquish, renounce, resign, surrender. A sinking ship is *abandoned;* a king *abdicates* his throne; a soldier *deserts;* we *forego* pleasures; a reformed man *forsakes* his evil ways; the miner *relinquishes* his claim; the monk *renounces* the world; his very name is *resigned* to oblivion. [See *leave.*]

Ant. ADOPT, claim, keep, maintain, pursue, support, vindicate.

a-ban-doned (*à-ban'dund*), *adj.* given up entirely; shamelessly profligate.

Syn. ABANDONED, depraved, dissolute, forsaken, hardened, profligate, reprobate, unprincipled, vicious, vile. We speak of *depraved* beings; *dissolute* men; the *forsaken* child; the *hardened* criminal; the *profligate* son; the *reprobate* gamester; the *unprincipled* politician; the *vicious* classes of our large cities; the *vile* wretches that plot crime. [See *corrupt, profligate, addicted.*]

Ant. CARED FOR, controlled, holy, virtuous.

a-ban-don-ment (*à-ban'dun-ment*), *n.* the act of abandoning; the state of being abandoned.

a-base (*à-bās'*), *v. t.* to humble or degrade; dishonor.

Syn. ABASE, bring low, debase, degrade, disgrace, dishonor, humble, mortify, reduce, shame. These words are usually applied to *persons* only. *Debase* and *reduce*, however, have other applications. The penitent man *humbles* himself; the vicious man *disgraces* himself; metal may be *debased;* weight may be *reduced.* [See *dishonor.*]

Ant. ADVANCE, dignify, honor, raise.

a-base-ment (*à-bās'ment*), *n.* the act of abasing or humiliating.

a-bash (*à-bash'*), *v. t.* to put to confusion; to make ashamed by consciousness of guilt or error.

Syn. ABASH, confuse, confound. To *abash* is to abase thoroughly in spirit; it expresses more than *confound*, and confound more than *confuse.* A haughty man is *abashed* when he is humbled; a modest person is *confused* in the presence of superiors; the ways of Providence *confound* us. [See *embarrass.*]

Ant. ANIMATE, embolden, reassure.

a-bat-a-ble (*à-bāt'à-bl*), *adj.* that may be abated.

a-bate (*à-bāt'*), *v. t.* to lessen; suppress: *v. i.* to decrease; moderate; subside.

Syn. ABATE, decline, decrease, diminish, lessen, recede, sink, slacken, subside, wane. With the exception of *decrease* these words are used in a transitive and an intransitive sense. A commotion *subsides;* storms *abate;* evils may *lessen;* sorrow *diminishes.* [See *abridge.*]

Ant. ANIMATE, augment, foment, rage.

a-bate-ment (*à-bāt'ment*), *n.* the act of abating; the state of being abated; diminution. [DEDUCTION.]

a-bat-toir (*à-bàt-twär'*), *n.* a public slaughterhouse.

abb (*ab*), *n.* the yarn of the warp in weaving.

ab-ba-cy (*ab'bà-si*), *n.* the office and jurisdiction of an abbot.

ab-bé (*àb-bā'*), *n.* an ecclesiastic devoted to literature.

ab-bess (*ab'bes*), *n.* the lady superior of a convent or nunnery.

ab-bey (*ab'bi*), *n.* [*pl.* abbeys (*-biz*)], an establishment for religious devotees of either sex.

ab-bot (*ab'but*), *n.* the superior or head of an abbey.

ab-bre-vi-ate (*ab-brē'vi-āt*), *v. t.* to shorten, as by contraction of a word or the omission of words in a sentence; reduce a quantity to its lowest terms.

Syn. ABBREVIATE, contract, reduce, shorten. A long word is *abbreviated;* a stream in time of drought is *contracted;* the course of study is *shortened;* the size of the army is *reduced.* [See *abridge.*]

Ant. AMPLIFY, enlarge, lengthen.

ab-bre-vi-a-tion (*ab-brē-vi-ā'shun*), *n.* shortening or abbreviating; as, M. D. for doctor of medicine.

ab-di-cant (*ab'di-kant*), *adj.* renouncing; abdicating: *n.* one who renounces or abdicates.

ab-di-cate (*ab'di-kāt*), *v. t.* to renounce; relinquish the crown in favor of a successor. [ABANDON.]

ab-di-ca-tion (*ab-di-kā'shun*), *n.* the act of relinquishment or resignation.

★**ab-do-men** (*ab-dō'men*, not *ab'dō-men*), *n.* the belly; the cavity containing the digestive apparatus or viscera.

ab-dom-i-nal (*ab-dom'i-nal*), *adj.* pertaining to the abdomen.

ab-duct (*ab-dukt'*), *v. t.* to carry off by stealth or force; kidnap.

Syn. ABDUCT, abstract, carry off, deprive, kidnap, seize. Money may be unlawfully *abstracted;* the child was *abducted* or *kidnaped;* criminals are *deprived* of liberty; we *seize* opportunities. [See *abstract.*]

Ant. RESTORATION, restitution, replacement.

ab-duc-tion (*ab-duk'shun*), *n.* the act of abducting or kidnaping.

ab-duc-tor (*ab-duk'tēr*), *n.* one who, or that which, abducts; a muscle moving certain parts.

a-beam (*à-bēm'*), *adv.* at right angles to the keel of a ship.

a-bed (*à-bed'*), *adv.* in bed; to bed.

Abel (*ā'bl*). From the Hebrew *Hebhel*, which St. Jerome translates "vanity" or "vapor." Gesenius renders the name "breath," and says the son of Adam was probably so called from the shortness of his life. Arab., *Habeel* or *Habil;* Fr., *Abel;* Lat., *Abel.*

★**Aberdeen** (*ab-ēr-dēn'*, not *ab'ēr-dēn*). The ancient orthography of this name was *Aberdon*, from *aber*, the mouth, and *Don*, the name of the river upon whose banks the city is built.

★**ab-er-rant** (*ab-ēr'rant*), *adj.* departing from the usual path, type, or standard.

ab-er-ra-tion (*ab-ēr-rā'shun*), *n.* the act of departing from the usual path, type, or standard; mental derangement; the unequal refraction of rays of light from a lens so that they do not converge to a single point.

a-bet (*à-bet'*), *v. t.* to encourage; to aid or assist in the performance of an act, usually criminal.

Syn. ABET, advocate, aid, assist, back, connive at, countenance, egg on, foment, second, set on, support, sustain. The bad official *abets* crime and *sanctions* law-breaking; *advocates* less restraint, *backs* gamblers, *foments* trouble, *supports* questionable policies, and *aids* his faction.

Ant. DETER, disapprove, frustrate, forbid.

a-bet-ment (*à-bet'ment*), *n.* the act of abetting or instigating to action or crime.

a-bet-ter or **abettor** (*à-bet'tēr*), *n.* one who aids or abets in the commission of a crime. [ACCOMPLICE, ACCESSORY.]

a-bey-ance (*à-bā'ans*), *n.* state of being held, kept back, or held over; a state of suspension.

ab-hor (*ab-hôr'*), *v. t.* to hate, loathe, execrate, abominate; be strongly averse to.

Syn. ABHOR, abominate, detest, loathe. These terms equally denote a sentiment of aversion. We *abhor* what is base and ungenerous; we *detest* hypocrisy; we *abominate* profanation and open impiety; we *loathe* food when we are sick. [See *hate.*]

Ant. ADMIRE, crave, esteem, love.

ab-hor-rence (*ab-hor'rens*), *n.* detestation; extreme hatred. [ANTIPATHY, ABOMINATION.]

a-bide (*à-bīd'*), *v. t.* to await, endure, tolerate: *v. i.* to dwell, reside, continue.

Syn. ABIDE, sojourn, dwell, live, reside, inhabit. *Abide* is to make a partial stay. *Sojourn* signifies to pass the day—that is, a certain portion of one's time—in a place. *Dwell* implies a stay in a place by way of residence, which is expressed in common discourse by the word *live.* *Reside* conveys the full idea of a settlement. *Inhabit* signifies to have or occupy for a permanency. The length of stay implied in these terms is marked by a certain gradation. *Abide* denotes the shortest stay; to *sojourn* is of longer continuance; *dwell* comprehends the idea of perpetuity in a given place, but *reside* and *inhabit* are partial and local. [See *permanent.*]

Ant. AVOID, depart, move, reject, resist.

ab-i-gail (*ab'i-gāl*), *n.* a waiting-maid, so called from Abigail, "thine handmaid."

a-bil-i-ty (*à-bil'i-ti*), *n.* power to perform; skill to achieve; capability for carrying out; capacity to devise, receive, retain, or make use of.

Syn. ABILITY, capacity, capability, efficiency, faculty, talent. *Ability* comprehends the power of doing in general, without specifying the quality or degree; *capacity* is a particular kind of ability. *Ability* respects action, *capacity* respects thought. *Ability* always supposes something able to be done; it may vary in degree and quality with times, persons, and circumstances. *Faculty* is a gift of nature directed to a certain end, and following a certain rule. *Talent* imitates but does not originate. [See *power, acquirement.*]

Ant. FEEBLENESS, incapability, inefficiency.

ab-ject (*ab'jekt*), *adj.* worthless; mean; low; despicable; in a sunken or degraded condition.

ab-jec-tion (*ab-jek'shun*), *n.* the act of being cast down; cast away; degradation.

ab-ju-ra-tion (*ab-jū-rā'shun*), *n.* an oath of renunciation, as of allegiance; the act of renouncing.
ab-jure (*ab-jūr'*), *v. t* to renounce upon oath; forswear allegiance to; repudiate or recant.
ab-la-tive (*ab'lā-tiv*), *n.* one of the cases of Latin nouns, expressing chiefly separation and instrumentality.
a-blaze (*ā-blāz'*), *adv.* or *adj.* on fire; well alight; in a blaze; eager; inflamed with desire; resplendent.
a-ble (*ā'bl*), *adj.* possessed of power, means, or ability; qualified, competent.
a-ble-bod-ied (*-bod'id*) *adj.* possessed of physical strength; capable or efficient for duty.
a-bloom (*ā-blōōm'*), *adv.* and *adj.* in bloom.
ab-lu-ent (*ab'lū-ent*), *adj.* cleansing: *n.* that which cleanses; a substance which purifies the blood.
ab-lu-tion (*ab-lū'shun*), *n.* a washing or cleansing of the body by water; moral purification.
ab-lu-tion-a-ry (*ab-lū'shun-ā-ri*), *adj.* pertaining to cleansing. [reject.
ab-ne-gate (*ab'nē-gāt*), *v. t.* to refuse or deny; to
ab-nor-mal (*ab-nôr'mal*), *adj.* irregular; deformed; unnatural; departing from a type or standard.
ab-nor-mal-i-ty (*ab-nôr-mal'i-ti*), *n.* [*pl.* abnormalities (*-tiz*)], the state or condition of being abnormal or irregular.
a-board (*ā-bôrd'*), *adv.* on or within a vessel: *prep.* into a ship.
a-bode (*ā-bōd'*), *n.* a place of continued residence.
a-bol-ish (*ā-bol'ish*), *v. t.* do away with; put an end to.

Syn. ABOLISH, abrogate, annul, cancel, countermand, do away with, end, make void, nullify, quash, repeal, revoke, vacate. This group conveys the idea of *extinction*. Anything which is entirely done away with, so that it is as if it had never been, may be said to be abolished. The law was *abolished*, or it may have been *abrogated;* a contract may be annulled; obligations are *canceled;* orders are *countermanded;* the day is *ended;* legislation is *nullified;* an indictment is *quashed;* a legislative act is *repealed;* an edict is *revoked;* an order of court is *vacated*. [See *abate, destroy, abandon.*]

Ant. AUTHORIZE, continue, promote, restore, revive, sustain.

ab-o-li-tion (*ab-ō-lish'un*), *n.* the act of abolishing; the state of being abolished.
Abolitionists. A term denoting the antislavery party in the United States, which appeared soon after the founding of *The Liberator* by William Lloyd Garrison in 1831.
a-bom-i-na-ble (*ā-bom'i-nā-bl*), *adj.* hateful; odious; offensive; unclean.
a-bom-i-nate (*ā-bom'i-nāt*), *v. t.* to abhor; regard with feelings of disgust or hatred. [ABHOR.]
a-bom-i-na-tion (*ā-bom-i-nā'shun*), *n.* excessive hatred; the act of abominating.

Syn. ABOMINATION, abhorrence, abuse, annoyance, aversion, crime, curse, detestation, disgust, evil, execration, hatred, horror, iniquity, nuisance, offense, plague, shame. *Abomination* signifies something very much disliked, or that deserves to be. Appetizing food may be an object of *aversion* and *disgust* to the sick; vile food would be an *abomination; abomination* is used of such crimes as are especially brutal, shameful, or revolting; theft is an *offense;* infanticide is an *abomination*. [See *antipathy.*]

ab-o-rig-i-nal (*ab-ō-rij'i-nal*), *adj.* original; primitive; existing from the beginning.
★**ab-o-rig-i-nes** (*ab-ō-rij'i-nēz*), *n. pl.* the first or primitive inhabitants of a country.
a-bor-tion (*ā-bôr'shun*), *n.* untimely birth; miscarriage.
a-bor-tive (*ā-bôr'tiv*), *adj.* born imperfect; arrested in development; without issue or result.
a-bound (*ā-bound'*), *v. i.* to have in plenty or abundance.
a-bout (*ā-bout'*), *adv.* around; on every side; circuitously; near to; intending: *prep.* concerned in.
a-bove (*ā-buv'*), *adv.* overhead; in heaven; before; besides: *prep.* superior; in excess of.
a-bove-board (*ā-buv'bôrd*), *adj.* and *adv.* in open sight; without trickery.
ab-rade (*ab-rād'*), *v. t.* to wear or rub away; to remove as by friction or abrasion; to corrode.
ab-ra-sion (*ab-rā'zhun*), *n.* the act of wearing or rubbing away; a chafe.
a-breast (*ā-brest'*), *adv.* side by side; in line with; opposite to; at the same level.
a-bridge (*ā-brij'*), *v. t.* to curtail, shorten, condense, epitomize.
a-bridg-ment (*ā-brij'ment*), *n.* the state of being contracted or curtailed; an epitome.

Syn. ABRIDGMENT, compendium, epitome, digest, summary, abstract. The first four terms are applied to a distinct work, the two latter to parts of a work. An *abridgment* is the reduction of a work into a smaller compass. A *compendium* is a general and concise view of any science, as geography or astronomy. An *epitome* is a compressed view of all the substantial parts of a thing, or, in other words, the whole of any matter brought into a small compass. A *digest* is any materials digested in order. A *summary* comprehends the heads and subdivisions of a work. An *abstract* includes a brief but comprehensive view of any particular proceeding. It is necessary to make abstracts of deeds or judicial proceedings.

a-broad (*ā-brawd'*), *adv.* widely; expansively; beyond the limits of house or country; wide of the mark
ab-ro-gate (*ab'rō-gāt*), *v. t.* to abolish, annul, or repeal by authority. [ABOLISH.]
ab-rupt (*ab-rupt'*), *adj.* broken; terminating suddenly; steep; precipitous; rough; unceremonious.
Ab-sa-lom (*ab'sā-lom*). From the Heb. *Abshalom*, signifying "father of peace"; from *abh*, "father," and *shalom*. Fr., *Absalon*.
ab-scess (*ab'ses*), *n.* [*pl.* abscesses (*-ez*)], a collection of morbid matter or pus in the tissues of the body.
ab-scis-sion (*ab-sizh'un*), *n.* the act of severance; the breaking off in a sentence.
ab-scond (*ab-skond'*), *v. i.* to flee or retire in haste from the place of one's residence or post of duty.
ab-sence (*ab'sens*), *n.* the state of being absent; the period of being absent.
ab-sent (*ab'sent*), *adj.* not present; away; wanting; regardless; abstracted. [ABSTRACTED.]
ab-sent (*ab-sent'*), *v. t.* to retire or keep away from.
ab-sen-tee (*ab-sen-tē'*), *n.* one who is absent or absents himself purposely from home or duty.
★**ab-sinthe** (Eng. *ab'sinth*, Fr. *ab-sant'*), *n.* a bitter aromatic liquor compounded of brandy and wormwood.
ab-so-lute (*ab'sō-lūt*), *adj.* free as to condition; perfect in itself; unlimited in power.

Syn. ABSOLUTE, despotic, arbitrary, tyrannical. Absolute power is independent of and superior to all other power; an *absolute* monarch is uncontrolled, not only by men, but things. When this absolute power is assigned to any one according to the constitution of a government, it is *despotic*. Despotic power is something less than absolute power; a prince is absolute of himself; he is despotic by the consent of others. With *arbitrariness* is associated the idea of caprice and selfishness. With *tyranny* is associated the idea of oppression and injustice.

Ant. ACCOUNTABLE, dependent, limited, submissive, yielding.

ab-so-lu-tion (*ab-sō-lū'shun*), *n.* the act of absolving from the consequences of sin.
ab-so-lu-tism (*ab'sō-lū-tizm*), *n.* the state of being absolute.
ab-so-lu-tist (*ab'sō-lū-tist*), *n.* a supporter or advocate of despotic or absolute government.
ab-solve (*ab-solv'*), *v. t.* to release or set free; clear of crime or guilt; to forgive or remit.

Syn. ABSOLVE, acquit, clear, discharge, exculpate, exempt, exonerate, forgive, free, liberate, pardon, release, set free. To *absolve* is to *set free* from any bond. One may be *absolved* from a promise by a breach of faith on the part of one to whom the promise was made. To *absolve* from sins is formally to remit their condemnation and penalty, regarded as a bond upon the soul. To *acquit* of sin or crime is to *free* from the accusation of it; the innocent are rightfully *acquitted;* the guilty may be mercifully *absolved*. [See *forgive.*]

Ant. ACCUSE, blame, condemn, impeach, to hold guilty.

ab-sorb (*ab-sôrb'*), *v. t.* to drink in; imbibe; suck or swallow up; engross or engage wholly.

Syn. ABSORB, consume, drink in, drink up, engross, exhaust, imbibe, suck up, swallow, swallow up, take in, take up. Wood *absorbs* moisture, iron *absorbs* heat; fuel is *consumed* in the fire, food in the body. A great talker *engrosses* the conversation. A credulous person *swallows* the most preposterous statements. [See *abstracted.*]

Ant. CAST OUT, disgorge, emit, radiate, vomit.

ab-sorb-ent (*ab-sôrb'ent*), *adj.* absorbing: *n.* that which has the capacity for absorbing.
ab-sorp-tion (*ab-sôrp'shun*), *n.* the act or process of absorbing.
ab-stain (*ab-stān'*), *v. t.* to forbear; refrain; hold aloof; keep away from.
★**ab-ste-mi-ous** (*ab-stē'mi-us*, not *ab-stem'i-us*), *adj.* moderate and sparing in the use of food and drink.
ab-ster-gent (*ab-stēr'jent*), *adj.* possessing cleansing or purging properties: *n.* that which cleanses or purges.
ab-sti-nence (*ab'sti-nens*), *n.* the act or practice of abstaining; self-denial. [indulgence.
ab-sti-nent (*ab'sti-nent*), *adj.* refraining from
ab-stract (*ab-strakt'*), *v. t.* to take or draw away; separate; purloin or steal; epitomize.

Syn. ABSTRACT, separate, distinguish. We *abstract* what we wish to regard particularly and individually; we *separate* what we wish not to be united; we *distinguish* what we wish not to confound. The mind performs the office of *abstraction* for itself; *separating* and *distinguishing* are exerted on external objects. Arrangement, place, time, and circumstances serve to *separate;* the ideas formed of things, the outward marks attached to them, the qualities attributed to them, serve to *distinguish*. [See *abduct.*]

Ant. ADD, append, combine, restore.

ab-stract (*ab'strakt*), *n.* an epitome; a summary, or abstract, comprising the essence or principal parts of a larger work: *adj.* considered or conceived apart from its concrete or material nature. [ABRIDGMENT.]
ab-stract-ed (*ab-strakt'ed*), *p. adj.* separated; disjoined; refined; abstruse; mentally absent.

Syn. ABSTRACTED, absent, absent-minded, absorbed, inattentive, indifferent, listless, oblivious, preoccupied, thoughtless. *Absorbed, abstracted,* and *preoccupied* refer to the cause, in mental action, *absent* or *absent-minded* to the effect; a man *absorbed* in one thing will appear *absent* in others; one *preoccupied* may seem *listless* and *thoughtless*, but the really *listless* and *thoughtless* have not mental energy to be *preoccupied;* an *absent-minded* man is *oblivious* of ordinary matters; a *preoccupied* one is intensely busy in thought. [See *abstract.*]

Ant. ALERT, prompt, thoughtful, wide-awake.

ab-strac-tion (*ab-strak'shun*), *n.* the act of separating or drawing away. [ner.
★**ab-stract-ly** (*ab'strakt-li*), *adv.* in an abstract man-
ab-stra-hent (*ab'strā-hent*), *adj.* abstract.
★**ab-struse** (*ab-strūs'*, not *ab-strōōs'*), *adj.* obscure; hidden. [OBSCURE, MYSTERIOUS.]
ab-surd (*ab-sērd'*), *adj.* contrary to reason or sense.

Syn. ABSURD, anomalous, chimerical, erroneous, false, foolish, inconclusive, incorrect, irrational, ludicrous, monstrous, nonsensical, paradoxical, preposterous, ridiculous, senseless, stupid, unreasonable, wild. Anything is *absurd* which is contrary to the first principles of reasoning; anything *paradoxical* appears at first thought contradictory or *absurd*, while it may be really true; *irrational* is that which is clearly contrary to sound reason, *foolish* when contrary to practical good sense, *silly* when petty and contemptible in its folly, *erroneous* when containing error that vitiates the result, *unreasonable* when there seems a perverse bias or an intent to go wrong. *Monstrous* and *prepesterous* refer to what is overwhelmingly *absurd*. The *ridiculous* or the *nonsensical* is worthy only to be laughed at. [See *incongruous, irrational.*]

Ant. DEMONSTRABLE, established, logical, sagacious, sound, true, wise.

ab-surd-i-ty (*ab-sērd'i-ti*), *n.* [*pl.* absurdities (*-tiz*)], the state of being absurd; that which is absurd.
a-bun-dance (*ā-bun'dans*), *n.* in great plenty; an overflowing quantity; affluence.
a-bun-dant (*ā-bun'dant*), *adj.* plentiful; fully sufficient; abounding.
a-buse (*ā-būz'*), *v. t.* to use ill; treat rudely or wrongfully; to defile or violate.

Syn. ABUSE, aggrieve, damage, defame, defile, disparage, harm, impose on or upon, injure, malign, maltreat, misuse, molest, oppress, persecute, pervert, prostitute, rail at, ravish, reproach, revile, ruin, slander, victimize, vilify, violate, vituperate, wrong. Everything is *abused* which receives any sort of *injury;* it is *disused* if not used at all, *misused* if turned to a wrong use. It is possible to *abuse* a man without *harming* him, as when the criminal *vituperates* the judge; or to *harm* a man without *abusing* him, as when the witness tells the truth about the criminal. *Defame, malign, rail at, revile, slander, vilify,* and *vituperate* are used always in a bad sense. One may be justly *reproached*. To *impose on* or to *victimize* any one is to *injure* him by *abusing* his confidence. To *persecute* is to *ill-treat* for opinion's sake; to *oppress* is generally for political or pecuniary motives. A dissolute youth *misemploys* his time, *misuses* his money and opportunities, *harms* his associates, *perverts* his talents, *wrongs* his parents, *ruins* himself. [See *abomination.*]

Ant. APPLAUD, cherish, consider, favor, praise, protect, respect, uphold.

a-buse (*ā-būs'*), *n.* ill-treatment; the excessive or injudicious use of anything; insult; violation.
a-bu-sive (*ā-bū'siv*), *adj.* practicing or containing abuse.
a-but (*ā-but'*), *v. i.* [*p. t.* and *p. p.* abutted, *p. pr.* abutting], to border upon (used with *on, upon, against*). [ADJACENT.]
a-but-ment (*ā-but'ment*), *n.* that which borders, or abuts, upon something else.
a-buzz (*ā-buz'*), *adv.* filled with buzzing sounds.
a-bysm (*ā-bizm'*), *n.* an abyss; a gulf.
a-bys-mal (*ā-biz'mal*), *adj.* pertaining to an abyss; bottomless.
a-byss (*ā-bis'*), *n.* a bottomless gulf; that which is unfathomable; hell.
★**Ab-ys-sin-i-a** (*ab-is-sin'i-ā*). A country of Africa, named from the rivers *Abai* and *Hawash*, or, according to Bruce, from *habesch*, "mixed."
ac-a-dem-ic (*ak-ā-dem'ik*) or **academical** (*'i-kal*), *adj.* belonging or appertaining to a college or university
ac-a-de-mi-cian (*ak-ā-dē-mish'an*), *n.* a member of an academy or society for promoting the arts, sciences, and literature.
a-cad-e-my (*ā-kad'ē-mi*), *n.* a private school or seminary for the teaching of the higher branches of education.
★**A-ca-di-a** (*ā-kā'di-ā*) or **Acadie** (*ā-kā-dē'*). The name originally given to Nova Scotia, but now only the poetical designation.
a-can-thus (*ā-kan'thus*), *n.* a plant having sharp-toothed leaves; ornamentation used in the capitals of the Corinthian and Composite orders.
ac-cede (*ak-sēd'*), *v. i.* to come or attain to; to agree or yield to. [AGREE.]
ac-cel-er-ate (*ak-sel'ēr-āt*), *v. t.* to hasten; to cause to move or progress faster. [HASTEN.]
ac-cel-er-a-tion (*ak-sel-ēr-ā'shun*), *n.* the act of accelerating; the state of being accelerated.
ac-cent (*ak'sent*), *n.* the stress laid by the voice upon a particular syllable or word, so as to render it more prominent than the rest; the emphasis placed upon certain notes of a bar of music: *v. t.* to ex-

press the accent, or note the vocal division of a word by stress or modulation of the voice.

ac-cen-tu-al (*ak-sen'tū-al*), *adj.* belonging to accent; rhythmical.

ac-cen-tu-ate (*ak-sen'tū-āt*), *v. t.* to speak, pronounce or mark with an accent.

ac-cept (*ak-sept'*), *v. t.* to take or receive with approbation; entertain; agree to.

ac-cept-a-ble (*ak-sept'ă-bl*), *adj.* to be accepted; pleasing; agreeable.

Syn. ACCEPTABLE, grateful, welcome. *Acceptable* signifies worthy to be accepted. *Grateful*, pleasing, signifies altogether pleasing; it is that which recommends itself. The *acceptable* is a relative good; the *grateful* is positive; the former depends upon our external condition, the latter on our feelings and taste; *welcome* signifies come well or in season for us. It refers to whatever happens according to our wishes. It is a *grateful* task to be the bearer of *welcome* intelligence to our friends.

ac-cept-ance (*ak-sept'ans*), *n.* the act of accepting; the fact of being accepted.

ac-cep-ta-tion (*ak-sep-tā'shun*), *n.* the act of accepting, or state of being accepted or acceptable.

★**ac-cess** (*ak-ses'* or *ak'ses*), *n.* admittance or approach to a person or place; means of approach or admission.

ac-cess-i-ble (*ak-ses'i-bl*), *adj.* capable of being approached; easy of access; attainable.

ac-ces-sion (*ak-sesh'un*), *n.* a coming to, as by succession or by right; entrance or attainment.

ac-ces-so-ry (*ak-ses'ō-ri*), *adj.* aiding; contributing to some result or effect: *n.* [*pl.* accessories (*-riz*)], one who aids in the commission of a felony.

Syn. ACCESSORY, abetter or abettor, accomplice, ally, assistant, associate, attendant, coadjutor, colleague, companion, confederate, follower, henchman, partner, retainer. In law, an *abettor* is always present, either actively or constructively, at the commission of the crime; an *accessory* never. An *accomplice* is usually a principal; an *accessory* never. If present, though only to stand outside and keep watch against surprise, one is an *abettor*, and not an *accessory*. An *accessory* implies a principal, and can not be convicted until after the conviction of the principal; the *accomplice* or *abettor* can be convicted as a principal. Members of Congress from the same state are *colleagues*; an *associate* is a person of equal or nearly equal rank; an *assistant* to a physician is a medical student who shares in the treatment and care of patients; his *attendant* is one who rolls bandages; *follower*, *henchman*, *retainer*, are persons especially devoted to a chief; *partner* denotes almost exclusively a business connection. [See *auxiliary*.]

Ant. ANTAGONIST, commander, foe, leader, opponent, principal, rival.

ac-ci-dent (*ak'si-dent*), *n.* an event which is unexpected, or the cause of which was unforeseen.

Syn. ACCIDENT, adventure, calamity, casualty, chance, disaster, fortuity, hap, hazard, incident, misadventure, misfortune, mishap, possibility. An *adventure* is that which may turn out ill, a *misadventure* that which does turn out ill; a slight disturbing *accident* is a *mishap*; an *accident* is that which happens without any one's direct intention; a *chance* that which happens without any known cause; an *incident* is subordinate to the main purpose, or design; the slaughter of men is an *incident* of battle; unexpected defeat, the *fortune* of war. Since the unintended is often the undesirable, *accident* tends to signify some *calamity* or *disaster*, unless the contrary is expressed, as when we say a fortunate or happy *accident*. [See *event*.]

Ant. APPOINTMENT, calculation, decree, fate, foreordination, law, plan, preparation.

ac-ci-den-tal (*ak-si-den'tal*), *adj.* happening by chance or unexpectedly; fortuitous; nonessential: *n.* that which happens unexpectedly.

ac-claim (*ak-klām'*), *v. i.* to shout applause: *n.* a shout of joy or praise; acclamation.

ac-cla-ma-tion (*ak-klā-mā'shun*), *n.* a shout of applause, or other demonstration of hearty approval.

★**ac-cli-mate** (*ak-klī'māt*, not *ak'klim-āt*), *v. t.* to accustom a person to a foreign climate.

ac-cli-ma-tion (*ak-klī-mā'shun*), *n.* the process of acclimatizing.

ac-com-mo-date (*ak-kom'mō-dāt*), *v. t.* to adapt or make fit or suitable; adjust, settle.

ac-com-mo-da-tion (*ak-kom-mō-dā'shun*), *n.* the act of accommodating; or the state of being accommodated.

ac-com-mo-da-tive (*ak-kom'mō-dā-tiv*), *adj.* disposed or tending to accommodate.

★**ac-com-pa-ni-ment** (*ak-kum'pā-ni-ment*, not *ak-kump'nim-ent*), *n.* something which is added to or attends the original or principal thing.

ac-com-pa-nist (*ak-kum'pā-nist*), *n.* one who plays an accompaniment.

ac-com-pa-ny (*ak-kum'pā-ni*), *v. t.* to keep company with; escort; join in movement or action.

ac-com-plice (*ak-kom'plis*), *n.* an associate or companion in crime. [ACCESSORY.]

ac-com-plish (*ak-kom'plish*), *v. t.* to bring to completion, or to an issue; fulfill.

Syn. ACCOMPLISH, achieve, effect, execute. To *accomplish* an object signifies more than simply to *effect* a purpose, both as to the thing aimed at and the means employed in bringing it about. Extraordinary means are requisite for *accomplishing*, and ordinary means for *effecting*. To *accomplish* is properly said of that which a person sets before himself; but to *effect*, *execute*, and *achieve* do not relate to the views of a person acting, but to the thing brought about. What is *executed* is complicated in its nature, as to *execute* a design or project; what is *achieved* is grand, as to *achieve* an enterprise.

Ant. CEASE, fail, leave, neglect, rest.

ac-com-plish-ment (*ak-kom'plish-ment*), *n.* the completion of an act or undertaking; fulfillment. [QUALIFICATION.]

ac-cord (*ak-kôrd'*), *v. t.* and *v. i.* to be in agreement with; reconcile; agree; give; grant; concede.

ac-cord-ant (*ak-kôrd'ant*), *n.* the state of being in harmony or accord. [CONSONANT.]

ac-cord-ing (*ak-kôrd'ing*), *p. adj.* agreeing, harmonious: *adv.* in accordance (*with*) or agreeably (*to*).

ac-cor-di-on (*ak-kôr'dī-un*), *n.* a small wind instrument, having keys and metallic reeds.

ac-cost (*ak-kost'*), *v. t.* to draw near, or come face to face with; speak to; salute: *n.* the act of accosting; manner. [ADDRESS.]

★**ac-couche-ment** (*ak-kōōsh'mäN*), *n.* delivery in childbed; parturition; a lying-in.

ac-count (*ak-kount'*), *v. t.* to reckon or hold to be; compute; count; *v. i.* to assign an explanation: *n.* reckoning; a financial statement or memorandum.

ac-count-a-ble (*ak-kount'ă-bl*), *adj.* answerable; responsible; liable to be called to account.

ac-count-an-cy (*ak-kount'an-si*), *n.* the art or practice of an accountant.

ac-count-ant (*ak-kount'ant*), *n.* one skilled in the keeping or examination of accounts.

★**ac-cou-ter** (*ak-kōō'tĕr*, not *ak-kow'tĕr*), *v. t.* to dress; equip; to array in military dress.

ac-cred-it (*ak-kred'it*), *v. t.* to give credit to; have confidence in; authorize.

ac-crete (*ak-krēt'*), *v. i.* to adhere; be added: *v. t.* to cause to grow or unite.

ac-cre-tion (*ak-krē'shun*), *n.* increase by natural growth; the addition of external parts.

ac-cre-tive (*ak-krē'tiv*), *adj.* adding to or increasing by growth.

★**ac-crue** (*ak-krū'*, not *ak'krōō*), *v. i.* to come to happen or result to naturally as an increment, as of profit or loss.

ac-cru-er (*ak-krū'ĕr*), *n.* the act of accretion.

ac-cu-mu-late (*ak-kū'mū-lāt*), *v. t.* to collect or bring together; amass; heap up. [HEAP.]

ac-cu-mu-la-tion (*ak-kū-mū-lā'shun*), *n.* the act of accumulating or amassing.

ac-cu-mu-la-tive (*ak-kū'mū-lā-tiv*), *adj.* tending to accumulate.

ac-cu-mu-la-tive judg-ment (*juj'ment*), a second judgment which takes effect against a person after the first sentence has expired.

ac-cu-mu-la-tor (*ak-kū'mū-lā-tĕr*), *n.* one who, or that which, accumulates; an apparatus for equalizing pressure.

ac-cu-ra-cy (*ak'kū-rā-si*), *n.* the quality of being accurate; exactness or correctness.

★**ac-cu-rate** (*ak'kū-rāt*, not *ak'kĕr-it*), *adj.* in exact conformity with the truth. [CORRECT.]

ac-curs-ed (*ak-kĕrs'ed*) **or ac-curst** (*ak-kĕrst'*), *p. adj.* under or subject to a curse.

ac-cu-sa-tion (*ak-kū-zā'shun*), *n.* a charge or imputation of wrongdoing. [COMPLAINT.]

ac-cu-sa-tive (*ak-kū'zā-tiv*), *adj.* accusing: *n.* the objective case.

ac-cuse (*ak-kūz'*), *v. t.* to charge with guilt or blame.

Syn. ACCUSE, charge, impeach, arraign. The idea of asserting something to the prejudice of another is common to these terms; but *accuse* is said of acts, *charge* of moral qualities constituting the character; we *accuse* a person of murder; we *charge* him with dishonesty. High officials are *impeached*; criminals are *arraigned*.

ac-cus-er (*ak-kūz'ĕr*), *n.* one who accuses; one who formally charges an offense against another.

ac-cus-tom (*ak-kus'tum*), *v. t.* to habituate or familiarize by custom or use. [ADDICTED.]

ace (*ās*), *n.* [*pl.* aces (*-ez*)], a unit; in playing cards or dice, a card or die marked with a single pip.

A-ceph-a-la (*ā-sef'ā-lā*), *n. pl.* a term applied to all bivalves, as the oyster, having no distinct head.

ace-point (*ās'point*), the single mark of the ace card and of the die marked with one spot.

a-cer-bi-ty (*ā-sĕr'bi-ti*), *n.* [*pl.* acerbities (*-tiz*)], sourness; sharpness. [ACRIMONY.]

★**ac-et-an-i-lide** (*as-et-an'i-lid* or *-līd*), *n.* a pungent white powder, formed by the action of acetyl chloride on aniline.

ac-e-tate (*as'ē-tāt*), *n.* a salt of acetic acid.

★**a-ce-tic acid** (*ā-sē'tik* or *ā-set'ik as'id*), a clear liquid, with a strong acid taste and peculiar sharp smell.

a-cet-i-fy (*ā-set'i-fī*), *v. t.* [*p. t.* and *p. p.* acetified, *p. pr.* acetifying], to turn into vinegar; make acetose.

ac-e-tin (*as'ē-tin*), *n.* a combination of acetic acid with glycerine.

ac-e-tone (*as'ē-tōn*), *n.* a clear volatile liquid, composed of carbon, hydrogen, and oxygen.

ac-e-tose (*as'ē-tōs*) **or a-ce-tous** (*ā-sē'tus*), *adj.* of the nature of vinegar; sour; causing acetification.

★**a-cet-y-lene** (*ā-set'i-lēn*), *n.* a brilliant illuminating gas.

ache (*āk*), *n.* pain, more or less continuous: *v. i.* to suffer, or be in pain.

a-chiev-a-ble (*ā-chēv'ā-bl*), *adj.* possible to achieve; capable of being performed.

a-chieve (*ā-chēv'*), *v. t.* to perform, carry out, accomplish. [ACCOMPLISH.]

a-chieve-ment (*ā-chēv'ment*), *n.* the act of achieving; accomplishment.

ach-ing (*āk'ing*), *p. adj.* enduring or causing pain; painful: *adv.* with aching; painfully. [ation.

ach-ro-mat-ic (*ak-rō-mat'ik*), *adj.* free from color-

a-chro-ma-tize (*ā-krō'mā-tīz*), *v. t.* to deprive of the power of transmitting color; to render achromatic.

ac-id (*as'id*), *adj.* sour and sharp or biting to the taste, as vinegar: *n.* anything sour.

a-cid-i-fi-ca-tion (*ā-sid-i-fi-kā'shun*), *n.* the process of acidifying.

a-cid-i-fy (*ā-sid'i-fī*), *v. t.* [*p. t.* and *p. p.* acidified, *p. pr.* acidifying], to make acid.

a-cid-i-ty (*ā-sid'i-ti*), *n.* the quality of being acid or sour.

a-cid-u-late (*ā-sid'ū-lāt*), *v. t.* to render slightly acid.

★**ac-i-er-age** (*as'i-ĕr-āj*), *n.* the term given to the process of electrically depositing iron on an engraved copper plate.

ac-i-form (*as'i-fôrm*), *adj.* needle-shaped.

ac-i-na-ceous (*as-i-nā'shus*), *adj.* consisting of, or full of, kernels, as the grape, mulberry, etc.

ac-knowl-edge (*ak-nol'ej*), *v. t.* [*p. t.* and *p. p.* acknowledged, *p. pr.* acknowledging], to admit or own to be true.

ac-knowl-edg-ment (*ak-nol'ej-ment*), *n.* the act of acknowledging; the admission or recognition of a truth.

ac-me (*ak'mē*), *n.* the highest point; the utmost reach; the crisis of a disease.

ac-ne (*ak'nē*), *n.* a pustular eruption of the body.

a-cock (*ā-kok'*), *adv.* in a cocked or turned up manner.

a-col-o-gy (*ā-kol'ō-ji*), *n.* the science of remedies.

★**ac-o-lyte** (*ak'ō-līt*), or **acolyth** (*ak'ō-lith* or *-lith*), *n.* the highest of the minor orders in the Roman Catholic church.

ac-o-nite (*ak'ō-nīt*), *n.* the plant wolfsbane or monkshood; the drug prepared from the plant.

a-con-i-tine (*ā-kon'i-tin* or *-tīn*), *n.* the narcotic drug prepared from the roots and leaves of several species of aconite.

★**a-corn** (*ā'kĕrn*), *n.* the fruit of the oak.

a-cou-me-ter (*ā-kou'mē-tĕr* or *ā-kōō'mē-tĕr*) *n.* an instrument to test the power of hearing.

★**a-cous-tic** (*ā-kous'tik* or *ā-kōōs'tik*), *adj.* belonging to the science of sound: *n.* a remedy for deafness.

a-cous-tics (*ā-kous'tiks* or *ā-kōōs'tiks*), *n. pl.* the science of sound.

ac-quaint (*ak-kwānt'*), *v. t.* to familiarize or make one's self conversant with; furnish information.

ac-quaint-ance (*ak-kwānt'ans*), *n.* the state of being acquainted with a person or subject.

Syn. ACQUAINTANCE, association, companionship, experience, familiarity, fellowship, friendship, intimacy, knowledge. *Acquaintance* between persons supposes that each knows the other; there may be *association* in business without *intimacy* or *friendship*. *Friendship* includes *acquaintance* with some degree of *intimacy*, and ordinarily *companionship*; *fellowship* involves not merely *acquaintance* and *companionship*, but sympathy as well. [See *love*.]

Ant. IGNORANCE, ignoring, unfamiliarity.

ac-quaint-ed (*ak-kwānt'ed*), *p. adj.* having personal knowledge; familiar with; well known. [KNOW.]

ac-qui-esce (*ak-kwi-es'*), *v. i.* to agree; comply passively; assent (followed usually by *in*). [AGREE.]

ac-qui-es-cence (*ak-kwi-es'ens*), *n.* the act of submitting; silent assent.

ac-quire (*ak-kwīr'*), *v. t.* to gain or obtain possession of.

ac-quire-ment (*ak-kwīr'ment*), *n.* the act of acquiring; that which is acquired.

ac-qui-si-tion (*ak-kwi-zish'un*), *n.* the act of acquiring.

ac-quit (*ak-kwit'*), *v. t.* [*p. t.* and *p. p.* acquitted, *p. pr.* acquitting], to release; set free. [ABSOLVE.]

ac-quit-tal (*ak-kwit'tal*), *n.* the act of releasing or acquitting; the state of being acquitted.

ac-quit-tance (*ak-kwit'tans*), *n.* a discharge or release from debt or other liability.

a-cre (*ā'kĕr*), *n.* a superficial measure of land containing 4,840 square yards.

ac-rid (*ak'rid*), *adj.* sharp or biting to the taste; pungent; irritating; stinging.

ac-ri-mo-ni-ous (*ak-ri-mō'ni-us*), *adj.* bitter; caustic; stinging.

ac-ri-mo-ny (*ak'ri-mō-ni*), *n.* sharpness of temper.

Syn. ACRIMONY, acerbity, asperity, bitterness, malignity, severity, sharpness, unkindness, virulence. *Acrimony* in speech or temper springs from settled character or deeply rooted feeling of aversion or unkindness. One might speak with momentary *asperity* to a child, but not with *acrimony*; *acerbity* is *sharpness*, with a touch of *bitterness*; *asperity* denotes distinct irritation or vexation; in speech *asperity* is often manifested by the tone of voice; *malignity* is the extreme of settled ill-intent; *virulence* is an envenomed hostility. *Virulence* makes language seem as if exuding poison. *Virulence* is outspoken; *malignity* may be covered with smooth and courteous phrase. We say intense *virulence*, deep

malignity. Severity carries ordinarily the implication, true or false, of justice. [See *anger; enmity.*]

Ant. AMIABILITY, gentleness, mildness.

ac-ro-bat (*ak'rō-bat*), *n.* a performer on the tight-rope; one who practices tumbling.

ac-ro-lith (*ak'rō-lith*), *n.* a sculptured figure, the head and extremities of which are of stone and the rest of wood.

★**a-crop-o-lis** (*ȧ-krop'ō-lis*), *n.* the highest part or citadel of a Grecian city.

a-cross (*ȧ-krôs'*), *adv.* and *prep.* from side to side.

a-cros-tic (*ȧ-kros'tik*), *n.* a composition, usually in verse, in which the first or last letters of the lines, or other letters taken in order, form a motto, phrase, name, or word.

act (*akt*), *n.* an action; process of doing; a decree, edict, or enactment; the judgment of a court.

ac-tin-i-um (*ak-tin'i-um*), *n.* a recently discovered radio-active element.

ac-tin-oid (*ak'tin-oid*), *adj.* having the form of rays; resembling a starfish.

ac-tion (*ak'shun*), *n.* the state of being active, as opposed to rest; the effect of one body upon another (used in *sing.*).

Syn. ACTION, gesture, gesticulation, posture, attitude. All these terms are applied to the state of the body; the three former indicating a state of motion; the two latter a state of rest. *Action* respects the movements of the body in general; *gesture* is an action indicative of some particular state of mind; *gesticulation* is a species of artificial *gesture.* Raising the arm is an *action*; bowing is a *gesture.* Actions may be ungraceful; gestures indecent. *Posture* and *attitude* both imply a mode of placing the body, but the *posture* is either natural or assumed; the *attitude* is always assumed or represented. We assume a sitting *posture* or an *attitude* of prayer.

ac-tion-a-ble (*ak'shun-ȧ-bl*), *adj.* giving grounds for an action at law.

ac-tive (*ak'tiv*), *adj.* endowed with or exercising the power or quality of action; constantly active.

Syn. ACTIVE, agile, alert, brisk, bustling, busy, diligent, energetic, expeditious, industrious, lively, mobile, nimble, officious, prompt, quick, ready, sprightly, spry, supple, vigorous. Both quickness and constancy of action are implied in *active;* in the former sense it is allied with *agile, alert, brisk,* etc.; in the latter with *busy, diligent, industrious.* The *restless* are *active* from inability to keep quiet; their activity may be without purpose, or out of all proportion to the purpose contemplated. The *officious* are undesirably *active* in the affairs of others.

Ant. DULL, idle, inert, lazy, slow, sluggish, stupid.

ac-tor (*ak'tĕr*), *n.* one who acts or performs; a stage-player.

ac-tress (*ak'tres*), *n.* a female actor.

ac-tu-al (*ak'tū-al*), *adj.* real; existing; present.

ac-tu-al-i-ty (*ak-tū-al'i-ti*), *n.* [*pl.* actualities (*-tiz*)], the state of being real or actual.

ac-tu-a-ry (*ak'tū-ȧ-ri*), *n.* [*pl.* actuaries (*-riz*)], a registrar or clerk of a court.

ac-tu-ate (*ak'tū-ȧt*), *v. t.* to move or incite to action.

a-cu-le-ate (*ȧ-kū'lē-ȧt*), *adj.* having sharp points; prickly.

★**a-cu-men** (*ȧ-kū'men*, not *ȧk'ū-men*), *n.* quickness of perception; penetration; discrimination.

a-cu-mi-nate (*ȧ-kū'mi-nȧt*), *adj.* ending in a sharp point.

a-cute (*ȧ-kūt'*), *adj.* sharp-pointed; intellectually sharp; quick of perception; severe, as pain.

Syn. ACUTE, keen, shrewd. In the natural sense, a fitness to pierce is predominant in the word *acute,* and that of cutting, or a fitness for cutting, in the word *keen.* The *shrewd* man exposes follies. Arguments may be *acute,* reproaches *keen,* and replies or retorts *shrewd.* A *shrewd* understanding is rather quicker in discovering new truths than in distinguishing truth from falsehood. [See *sharp.*]

Ada (*ȧ'dȧ*). According to some, this name has been corrupted from *Adama,* feminine of Adam. Others derive it from the name *Ead,* which is from A.-S. *ead,* "happy"; or from the name *Eadith.* Littleton gives *Eada* (Saxon), *Auda, Ada,* and *Idonea,* which he translates, "fit," "meet," "proper"; also "pious," "honest," "rich."

ad-age (*ad'āj*), *n.* an ancient proverb or pithy saying.

Adam (*ad'am*). From the Hebrew *Adham,* signifying "man"; literally, "earthy," "red earth." Rudolph, however, says the name in Ethiopic means "to be fair," "beautiful." Arab., *Adam;* Danish, *Adam;* Dutch, *Adam;* Fr., *Adam;* Ger., *Adam;* It., *Adamo;* Lat., *Adamus;* Port., *Adão* (ȧ-dowN'); Sp., *Adan.*

ad-a-mant (*ad'ȧ-mant*), *n.* a substance of extreme hardness; the diamond; *adj.* formed of adamant.

★**ad-a-man-tine** (*ad-ȧ-man'tin*, not *ad-ȧ-man'tēn*), *adj.* made of adamant; impenetrable.

a-dapt (*ȧ-dapt'*), *v. t.* to make to correspond; fit by alteration or adaptation.

a-dapt-a-bil-i-ty (*ȧ-dapt-ȧ-bil'i-ti*), *n.* the quality of being adaptable.

ad-ap-ta-tion (*ad-ap-tā'shun*), *n.* the act of adjusting or adapting; the state of being adapted.

add (*ad*), *v. t.* to join, unite, sum up; increase; affix.

Syn. ADD, adjoin, affix, amplify, annex, append, attach, augment, cast up, enlarge, extend, increase, join on, make up, subjoin, sum up. To *add* is to *increase* by *adjoining* or *uniting;* to *augment* is to *increase* by any means; but we rather *enlarge* a house, a farm, or an empire; *extend* influence or dominion; *augment* riches, power or influence; *attach* or *annex* a building; *affix* a seal or a signature; a speaker or writer may *amplify* a subject, or may *append* or *subjoin* certain remarks; we *add up* and *make up* an account.

Ant. DEDUCT, diminish, lessen, remove.

ad-den-dum (*ad-den'dum*), *n.* [*pl.* addenda (*'dȧ*)], an appendix.

ad-der (*ad'ĕr*), *n.* the popular name for the viper.

ad-dict (*ad-dikt'*), *v. t.* to devote or give one's self up to: *adj.* addicted, devoted or abandoned to.

Syn. ADDICTED, abandoned, accustomed, attached, devoted, disposed, given, habituated, inclined, prone, wedded. *Abandoned* relates to one who has surrendered to wickedness; *addicted* may be used in a good, but more frequently is used in a bad sense, as, *addicted* to study, *addicted* to drink; *devoted* is used chiefly in the good sense, as, a mother's *devoted* affection; one may be *accustomed* to labor, *attached* to his profession, *devoted* to his religion, *given* to study or to gluttony, *inclined* to luxury, one may become *habituated* to poverty, *wedded* to science or to art. *Prone* is used only in a bad sense, as, our hearts are *prone* to evil.

Ant. AVERSE, disinclined, unaccustomed.

ad-di-tion (*ad-dish'un*), *n.* the act or process of adding together; increase; the result of addition.

ad-dle (*ad'l*), *adj.* rotten; *v. t.* to make corrupt or putrid, as eggs: *v. i.* to become addled.

ad-dle-head-ed (*ad-l-hed'ed*), or **ad-dle-pa-ted** (*ad-l-pā'ted*), *adj.* stupid; weak-brained; muddled.

★**ad-dress** (*ad-dres'*, not *ad'dres*), *v. t.* to straighten; to bring into line; to arrange, redress, as wrongs, etc.; *n.* a speech, delivered or written.

Syn. ADDRESS, accost, apostrophize, appeal, approach, court, greet, hail, salute, speak to, woo. *Address* is slightly more formal than *accost* or *greet;* one may *address* another at considerable length or in writing, he *accosts* orally and briefly; to *accost* is to speak first, to friend or stranger; *greet* is not so distinctly limited, since one may return another's *greeting; greet* and *hail* may imply but a passing word; *greeting* may be altogether silent; to *hail* is to *greet* in a loud-voiced and commonly hearty and joyous way; to *salute* is to *greet* with special token of respect, as a soldier his commander; to *apostrophize* is to solemnly *address* some person or personified attribute; a poet may *apostrophize* virtue, beauty, love, or even the deity; to *appeal* is strictly to call for some form of help or support. [See *direction.*]

Ant. AVOID, ignore, overlook, shun.

ad-duce (*ad-dūs'*), *v. t.* to bring forward or cite in proof or substantiation. [ALLEGE.]

ad-du-ci-ble (*ad-dū'si-bl*), *adj.* capable of being adduced.

★**Adela** (*ad'ē-lȧ*). A female name Latinized from Old German *edel,* "noble," "noble descent or lineage."

Adelaide (*ad'ē-lȧd*). From the Old German male name *Adalheid* (in Middle High German *Adalhait;* North High German *Adelheid*), signifying "a noble person."

ad-e-noid (*ad'ē-noid*), *n.* a tumor affecting a gland.

★**a-dept** (*ȧ-dept'*, not *ȧd'ept*), *adj.* well skilled.

ad-e-qua-cy (*ad'ē-kwȧ-si*), *n.* sufficiency for a particular purpose.

ad-e-quate (*ad'ē-kwȧt*), *adj.* equal to requirement or occasion; fully sufficient. [PROPORTIONATE.]

ad-here (*ad-hēr'*), *v. i.* to stick fast, become firmly attached to.

ad-her-ence (*ad-hēr'ens*), *n.* the act or state of adhering.

ad-her-ent (*ad-hēr'ent*), *adj.* adhering; sticking. [FOLLOWER.]

ad-he-sion (*ad-hē'zhun*), *n.* the state or act of adhering.

★**a-dieu** (*ȧ-dū'*, French *ȧd-yö'*), *n.* [*pl.* adieus, adieux (*ȧ-dūz'*)], good wishes at parting. [FAREWELL.]

Adirondack (*ad-i-ron'dak*). Mountains in New York and village in Warren county of the same state. Indian word compounded from *doran,* "a people who eat bark," and *dak,* "trees," with the French article *la* prefixed.

ad-it (*ad'it*), *n.* an entrance or passage; an entrance to a mine more or less horizontal.

ad-ja-cent (*ad-jā'sent*), *adj.* near; close to.

Syn. ADJACENT, abutting, adjoining, attached, beside, bordering, close, contiguous, near, neighboring, next, nigh. *Adjacent* farms may not be connected; if *adjoining,* they meet at the boundary line; *contiguous* may be used for either *adjacent* or *adjoining; abutting* refers to the end of one building or estate; buildings may be *adjacent* or *adjoining* that are not *attached; near* is a relative word, places being called *near* upon the railroad which would elsewhere be deemed remote; *neighboring* always implies proximity; *next* views some object as the nearest of several or many.

ad-jec-ti-val (*ad-jek-ti'val*), *adj.* of the nature of an adjective.

ad-jec-tive (*ad'jek-tiv*), *n.* a word used with a substantive or noun to express a quality or attribute of the thing named. [EPITHET.]

ad-join (*ad-join'*), *v. t.* to unite or join: *v. i.* to lie next to. [ADJACENT, ADD.]

ad-journ (*ad-jĕrn'*), *v. t.* to put off to another day.

ad-journ-ment (*ad-jĕrn'ment*), *n.* the act of adjourning; the postponement of a meeting.

ad-judge (*ad-juj'*), *v. t.* to determine in a controversy.

ad-ju-di-cate (*ad-jū'di-kȧt*), *v. t.* to try and determine a case, as a court.

ad-ju-di-ca-tion (*ad-jū'di-kā'shun*), *n.* the act of determining judicially; a judicial sentence.

ad-ju-di-ca-tor (*ad-jū'di-kā-tĕr*), *n.* one who adjudicates.

ad-junct (*ad'jungkt*), *n.* something added to another thing, but not an essential part of it.

ad-ju-ra-tion (*ad-jū-rā'shun*), *n.* the solemn charging on oath.

ad-jure (*ad-jūr'*), *v. t.* to command on oath under pain of a penalty; to charge solemnly.

ad-just (*ad-just'*), *v. t.* to fit, or make exact; to make correspondent; to make accurate.

ad-just-ment (*ad-just'ment*), *n.* the act of adjusting.

ad-ju-tan-cy (*ad'jū-tan-si*), *n.* the office of an adjutant.

ad-ju-tant (*ad'jū-tant*), *n.* a regimental staff officer who assists the commanding officer.

ad-ju-tant gen-er-al (*jen'ĕr-al*), [*pl.* adjutants general], the chief staff officer of an army.

ad-meas-ure (*ad-mezh'ūr*), *v. t.* to measure dimensions; apportion.

ad-min-is-ter (*ad-min'is-tĕr*), *v. t.* to manage as chief agent or minister, as a king or president.

ad-min-is-tra-tion (*ad-min-is-trā'shun*), *n.* the act of administering, as government, justice, or medicine. [GOVERNMENT.]

ad-min-is-tra-tive (*ad-min'is-trā-tiv*), *adj.* pertaining to administration.

★**ad-min-is-tra-tor** (*ad-min-is-trā'tĕr*), *n.* one who administers affairs.

ad-min-is-tra-trix (*ad-min-is-trā'triks*), *n.* a female administrator.

★**ad-mi-ra-ble** (*ad'mi-rȧ-bl*, not *ad-mī'rȧ-bl*), *adj.* worthy of admiration; excellent.

ad-mi-ral (*ad'mi-ral*), *n.* the chief commander of a fleet.

Ad-mi-ral-ty (*ad'mi-ral-ti*), *n.* [*pl.* admiralities (*-tiz*)], the department of the English government having authority over naval affairs.

ad-mi-ra-tion (*ad-mi-rā'shun*), *n.* wonder excited by beauty or excellence.

ad-mire (*ad-mīr'*), *v. t.* to regard with strong approval.

Syn. ADMIRE, adore, applaud, approve, delight in, enjoy, esteem, extol, honor, love, respect, revere, venerate, wonder. *Admire* expresses a delight and approval, in which the element of wonder unconsciously mingles; we *admire* beauty in nature and art, *delight in* the innocent happiness of children, *enjoy* books or society; *approve* what is excellent, *applaud* heroic deeds; *esteem* the good, *love* our friends; *honor* and *respect* noble character, *revere* and *venerate* it in the aged; *extol* the goodness and *adore* the majesty of God.

Ant. ABHOR, despise, dislike, execrate, hate, ridicule, scorn.

ad-mis-si-ble (*ad-mis'i-bl*), *adj.* worthy of being admitted.

ad-mis-sion (*ad-mish'un*), *n.* the power or permission to enter.

ad-mit (*ad-mit'*), *v. t.* [*p. t.* and *p. p.* admitted, *p. pr.* admitting], to permit to enter.

Syn. ADMIT, allow, permit, suffer, tolerate. We *admit* by simply not refusing or preventing; we *allow* by positively granting or complying with; we *admit* that which concerns ourselves, or is done toward ourselves; we *allow* that which is for the convenience of others, or what they wish to do; what is *suffered* may be burdensome to the *sufferer,* if not morally wrong; what is *tolerated* is bad in itself, and *suffered* only because it cannot be prevented; no earthly power can *permit* that which divine law prohibits. [See *consent.*]

ad-mit-tance (*ad-mit'tans*), *n.* the power or permission to enter.

ad-mix (*ad-miks'*), *v. t.* to mix with something else.

ad-mix-ture (*ad-miks'tūr*), *n.* a compound of substances mixed together.

ad-mon-ish (*ad-mon'ish*), *v. t.* to reprove gently; warn; instruct.

ad-mo-ni-tion (*ad-mō-nish'un*), *n.* friendly reproof or warning.

ad-mon-i-to-ry (*ad-mon'i-tō-ri*), *adj.* conveying reproof or warning.

ad-nate (*ad'nȧt*), *adj.* with organic cohesion of unlike parts.

a-do (*ȧ-dōō'*), *n.* bustle; trouble.

★**a-do-be** (*ȧ-dō'bȧ*) *n.* unburnt brick dried in the sun, used for building in Central America and Mexico.

ad-o-les-cence (*ad-ō-les'ens*), *n.* the period of life between puberty and maturity; youth.

ad-o-les-cent (*ad-ō-les'ent*), *adj.* growing to maturity.

Adolphus (*ȧ-dol'fus*). The same as the Old German name *Atalphus,* which Wachter renders "helper of happiness," from *ōd,* "happiness," and *hulf,* "help" or "helper." It is commonly defined as "noble wolf." Danish, *Adolf;* Dutch, *Adolf;* Fr., *Adolphe;* Ger., *Adolf* or *Adolph;* It., *Adolfo;* Lat., *Adolphus;* Sp., *Adolfo;* Sw., *Adolf.*

a-dopt (*ȧ-dopt'*), *v. t.* to choose or take to one's self, as a child, an opinion, or a course of action.

a-dop-tion (*ȧ-dop'shun*), *n.* the act of adopting; the state of being adopted.

a-dor-a-ble (*ȧ-dōr'ȧ-bl*), *adj.* worthy of worship.
ad-o-ra-tion (*ad-ō-rā'shun*), *n.* act of worship.
a-dore (*ȧ-dōr'*), *v. t.* to pay divine honors to; honor highly; love intensely. [ADMIRE.]
a-dorn (*ȧ-dôrn'*), *v. t.* to beautify; dignify; ornament; embellish. [tion.
a-dorn-ment (*ȧ-dôrn'ment*), *n.* ornament; decora-
ad-re-nal-in (*ad-rē'nal-in*), *n.* a hemostatic astringent principle of the suprarenal gland; the most powerful astringent known.
★**Adrian** (*ā'dri-an*) or **Hadrian** (*hā'dri-an*). From the German name *Adrias*, so called from the capital of the Prætutii, on the coast of the Adriatic, where the family of the Emperor Adrian, according to his own account, had its rise. Danish, *Adrian;* Dutch, *Adriaan;* Fr., *Adrien;* It., *Adriano;* Lat., *Adrianus;* Port., *Adriano;* Sp., *Adrian.*
a-drift (*ȧ-drift'*), *adj.* and *adv.* floating at random.
a-droit (*ȧ-droit'*), *adj.* exhibiting skill; dexterous. [CLEVER.]
ad-u-la-tion (*ad-ū-lā'shun*), *n.* interested praise; flattery.
★**a-dult** (*ȧ-dult'*, not *ad'ult*), *adj.* grown up to full age, size, and strength. [admixture.
a-dul-ter-ate (*ȧ-dul'tĕr-āt*), *v. t.* to corrupt by baser
a-dul-ter-a-tion (*ȧ-dul'tĕr-ā'shun*), *n.* the debasing by admixture; deterioration.
a-dul-ter-y (*ȧ-dul'tĕr-i*), *n.* [*pl.* adulteries (*-iz*)], violation of the marriage bed.
ad-um-brate (*ad-um'brāt*), *v. t.* to shadow forth.
ad-vance (*ad-vȧns'*), *v. i.* to go forward: *v. t.* to further; to make a payment of beforehand: *n.* a moving forward. [ALLEGE.]
ad-vance-ment (*ad-vȧns'ment*), *n.* furtherance; progress; promotion.
ad-van-tage (*ad-vȧn'tāj*), *n.* a state of advance or forwardness; a benefit.
ad-van-ta-geous (*ad-van-tā'jus*), *adj.* of advantage; beneficial.
ad-vent (*ad'vent*), *n.* a coming or arrival.
Advent, *n.* the period including the four Sundays before Christmas.
ad-ven-ti-tious (*ad-ven-tish'us*), *adj.* happening by chance; casual; fortuitous.
ad-ven-tu-al (*ad-ven'tū-al*), *adj.* relating to the season of Advent.
★**ad-ven-ture** (*ad-ven'tūr*), *n.* an event the issue of which is determined by chance. [ACCIDENT.]
ad-ven-ture-some (*ad-ven'tūr-sum*), or **adventurous** (*ad-ven'tūr-us*), *adj.* inclined to incur risk. [ENTERPRISING, FOOLHARDY.]
ad-verb (*ad'vĕrb*), *n.* a word used to modify the sense of a verb or adjective.
ad-ver-bi-al (*ad-vĕr'bi-al*), *adj.* of the nature of an adverb.
ad-ver-sa-ry (*ad'vĕr-sā-ri*), *n.* [*pl.* adversaries (*-riz*)], an opponent.
★**ad-verse** (*ad'vĕrs*), *adj.* opposed to. [verse.
ad-ver-si-ty (*ad-vĕr'si-ti*), *n.* a state of things ad-
ad-vert (*ad-vĕrt'*), *v. i.* to turn one's attention to; refer.
ad-vert-ence (*ad-vĕrt'ens*), *n.* attention.
ad-vert-en-cy (*ad-vĕrt'en-si*), *n.* the habit of being attentive.
ad-vert-ent (*ad-vĕrt'ent*), *adj.* attentive.
★**ad-ver-tise** (*ad-vĕr-tīz'*), *v. t.* to turn the attention of others to. [ANNOUNCE.]
★**ad-ver-tise-ment** (*ad-vĕr'tiz-ment* or *ad-vĕr-tīz'-ment*), *n.* a notice in a public print.
ad-vice (*ad-vīs'*), *n.* an opinion given for the practical direction of conduct. [INFORMATION.]
ad-vis-a-bil-i-ty (*ad-vīz-ȧ-bil'i-ti*), *n.* the quality of being advisable.
ad-vis-a-ble (*ad-vīz'ȧ-bl*), *adj.* fit to be advised.
ad-vise (*ad-vīz'*), *v. t.* to offer an opinion to; counsel.
ad-vised (*ad-vīzd'*), *p. adj.* acting with caution.
ad-vis-ed-ly (*ad-vīz'ed-li*), *adv.* with advice.
ad-vi-so-ry (*ad-vī'zō-ri*), *adj.* having power to advise.
ad-vo-ca-cy (*ad'vō-kȧ-si*), *n.* the act of pleading for.
ad-vo-cate (*ad'vō-kāt*), *n.* one called to the aid of another. [ABET.] [supporter.
ad-vo-ca-tor (*ad'vō-kā-tĕr*), *n.* an advocate; a
ad-y-na-mi-a (*ad-i-nā'mi-ȧ*), *n.* great debility; physical weakness.
adz or **adze** (*adz*), *n.* a cutting tool having a curved blade at right angles to the handle. *adz-plane,* a tool for molding and rabbeting.
æ-o-li-an harp (*ē-ō'li-an hȧrp*), a stringed instrument, the wires of which are set in motion by air. [tion.
★**æ-on** or **eon** (*ē'on*), *n.* a period of immense dura-
★**a-ĕr-ate** (*ā'ĕr-āt*, not *ā-rē'āt*), *v. i.* to combine or charge with carbonic-acid gas, or with air.
a-ĕr-a-ted bread (*ā'ĕr-ā-ted bred*), bread raised by charging the dough with carbonic-acid gas.
a-ĕr-a-tion (*ā-ĕr-ā'shun*), *n.* the act of aërating.
★**a-ē-ri-al** (*ā-ē'ri-al*), *adj.* belonging to the air.
ae-rie (*ē'ri*), *n.* an eagle's nest; a brood of eagles or hawks.
★**a-ĕr-i-fi-ca-tion** (*ā-ĕr-i-fi-kā'shun*), *n.* the state of being made aëriform.
a-ĕr-i-form (*ā'ĕr-i-fôrm*), *adj.* having the form of air; gaseous.
a-ĕr-i-fy (*ā'ĕr-i-fī*), *v. t.* [*p. t.* and *p. p.* aërified, *p. pr.* aërifying], to infuse or combine with air.
a-ĕr-o-cyst (*ā'ĕr-ō-sist*), *n.* one of the air bladders of algæ.
a-ĕr-o-drome (*ā'ĕr-ō-drōm*), *n.* a mechanism for gliding on the air; a place for testing flying machines.
a-ĕr-o-dy-nam-ics (*ā-ĕr-ō-di-nam'iks*), *n.* the science which treats of air in motion.
a-ĕr-o-gram (*ā'ĕr-ō-gram*), *n.* a wireless telegraph message.
a-ĕr-o-lite (*ā'ĕr-ō-līt*), *n.* a meteorite.
★**a-ĕr-om-e-ter** (*ā-ĕr-om'ē-tĕr*), *n.* an instrument for weighing the air.
a-ĕr-o-mo-tor (*ā-ĕr-ō-mō'tĕr*), *n.* a flying machine driven through the air by a motor; a motor designed for use on an aëroplane.
★**a-ĕr-o-naut** (*ā'ĕr-ō-nawt*), *n.* an aërial navigator.
a-ĕr-o-phone (*ā'ĕr-ō-fōn*), *n.* an instrument invented by Edison for increasing the intensity of sound.
a-ĕr-o-phyte (*ā'ĕr-ō-fīt*), *n.* an air plant; a parasitical plant.
a-ĕr-o-plane (*ā'ĕr-ō-plān*), *n.* a flying machine, kept afloat by the force of its motor and the air.
a-ĕr-o-stat (*ā'ĕr-ō-stat*), *n.* a balloon; a flying machine.
a-ĕr-o-stat-ics (*ā-ĕr-ō-stat'iks*), *n.* the science which treats of the equilibrium of bodies sustained in air.
æs-the-si-om-e-ter (*es-thē-si-om'ē-tĕr*), *n.* an instrument for determining sensibility of touch.
æs-thet-ic or **esthetic** (*es-thet'ik*), *adj.* pertaining to æsthetics.
æs-thet-ics or **esthetics** (*es-thet'iks*), *n.* the science or theory of the beautiful.
a-far (*ȧ-fär'*), *adv.* at, to, or from, a distance.
af-fa-ble (*af'fȧ-bl*), *adj.* easy to be addressed; courteous.
af-fair (*af-fär'*), *n.* that which is done, or is to be done; business.
af-fect (*af-fekt'*), *v. t.* to produce an effect upon. [MOVING.]
af-fec-ta-tion (*af-fek-tā'shun*), *n.* the assuming a manner which is not one's own. [PRETENSE.]
af-fec-tion (*af-fek'shun*), *n.* having the feelings affected; inclination; attachment; fondness. [LOVE.]
af-fec-tion-ate (*af-fek'shun-āt*), *adj.* having affection; kind.
★**af-fer-ent** (*af'fĕr-ent*, not *af-fĕr'ent*), *adj.* conveying inward or to a part.
af-fi-ance (*af-fi'ȧns*), *n.* trust; a marriage-contract: *v. t.* to betroth.
af-fi-da-vit (*af-fi-dā'vit*), *n.* a sworn statement in writing. [TESTIMONY.]
af-fil-i-ate (*af-fil'i-āt*), *v. t.* to assign a child to its father; *v. i.* to be intimately connected or associated (followed by *with*).
af-fin-i-ty (*af-fin'i-ti*), *n.* [*pl.* affinities (*-tiz*)], nearness of kin.
af-firm (*af-fĕrm'*), *v. t.* to confirm, as a judgment: *v. i.* to assert strongly. [ALLEGE.]
af-fir-ma-tion (*af-fĕr-mā'shun*), *n.* an averment. [TESTIMONY.]
af-firm-a-tive (*af-fĕrm'ȧ-tiv*), *n.* that which affirms: *adj.* affirming or asserting.
af-fix (*af-fix'*), *v. t.* to fix to; attach; *n.* a letter or syllable added to end of a word. [ADD.]
af-fla-tus (*af-flā'tus*), *n.* a breath or blast of wind; inspiration.
af-flict (*af-flikt'*), *v. t.* to cause prolonged pain to body or mind; to distress.
af-flic-tion (*af-flik'shun*), *n.* prolonged pain of body or mind; state of distress.
Syn. AFFLICTION, grief, sorrow. *Affliction* lies deeper in the soul than *grief.* It is too deep to be vehement. Continued sickness of our friends will cause *affliction;* the failure of our favorite schemes will occasion *grief;* our own mistake will cause *sorrow.* [See *grief.*]
af-flu-ence (*af'flū-ens*), *n.* an abundant supply, as of thoughts, words, riches; wealth.
★**af-flu-ent** (*af'flū-ent*, not *af-flōō'ent*), *n.* a tributary stream: *adj.* abundant.
af-flux (*af'fluks*), *n.* an increase; an influx.
af-ford (*af-fôrd'*), *v. t.* to supply; produce; yield; be capable of bearing the expense of.
af-fray (*af-frā'*), *n.* the fighting of two or more persons in a public place. [FEUD.]
af-fright (*af-frīt'*), *v. t.* to frighten; terrify; alarm; confuse.
af-front (*af-frunt'*), *v. t.* to offend; to insult.
af-ghan (*af'gan*, not *af'kan*), *n.* a crocheted or knitted woolen blanket or carriage robe.
Afghan, *adj.* pertaining to Afghanistan: *n.* a native of Afghanistan.
a-field (*ȧ-fild'*), *adv.* to, in, or on, the field; astray.
a-flame (*ȧ-flām'*), *adj.* and *adv.* in flames; ablaze.
a-float (*ȧ-flōt'*), *adj.* and *adv.* floating; in circulation.
a-foot (*ȧ-foot'*), *adv.* on foot; astir.
a-fraid (*ȧ-frād'*), *adj.* frightened.
a-fresh (*ȧ-fresh'*), *adv.* again; anew.
Af-ri-can (*af-ri'kan*), *adj.* pertaining to Africa.
aft (*ȧft*), *adj.* and *adv.* toward the stern.
af-ter (*ȧf'tĕr*), *adj.* next, subsequent, later: *prep.* behind in place: *adv.* behind; subsequent in time or place.
af-ter-clap (*-klap*), *n.* an untoward event happening after an affair is supposed to be at an end.
af-ter damp (*damp*), the carbonic-acid gas found in coal mines after an explosion of fire damp.
af-ter-math (*-maṫh*), *n.* a second mowing, rowen.
af-ter-noon (*-nōōn'*), *n.* the part of the day between noon and evening.
af-ter-ward (*-wĕrd*), or **afterwards** (*-wĕrdz*), *adv.* at a later time; subsequently.
a-gain (*ȧ-gen'*), *adv.* a second time; in return; further; anew.
★**a-gainst** (*ȧ-genst'*, not *ā-gānst'*), *prep.* opposite to; in opposition to; contrary to one's inclinations.
★**a-gape** (*ȧ-gāp'* or *ȧ-gāp'*), *adj.* and *adv.* gaping; with the mouth wide open.
ag-ate (*ag'āt*), *n.* a precious stone, a variety of chalcedony; Scotch pebble.
age (*āj*), *n.* a particular period of time in life or in history; time. [TIME.]
aged (*ā'jed*), **old.** [ELDERLY.]
a-gen-cy (*ā'jen-si*), *n.* that which makes action.
a-gent (*ā'jent*), *n.* one who acts, especially for another; an active power or cause. [MINISTER.]
ag-glom-er-ate (*ag-glom'ĕr-āt*), *v. t.* to gather into a heap; accumulate.
ag-glom-er-a-tion (*ag-glom-ĕr-ā'shun*), *n.* a heap.
ag-glu-ti-nate (*ag-glū ti-nāt*), *v. t.* to glue together: *adj.* glued together.
ag-glu-ti-na-tion (*ag-glū-ti-nā'shun*), *n.* the act or condition of being united or joined together.
★**ag-gran-dize** (*ag'gran-dīz*), *v. t.* to make great or greater in power.
ag-gran-dize-ment (*ag-gran'diz-ment*), *n.* exaltation; advancement.
ag-gra-vate (*ag'grȧ-vāt*), *v. t.* to add to a load; intensify.
Syn. AGGRAVATE, irritate, provoke, exasperate, tantalize. The crime of robbery is *aggravated* by any circumstances of cruelty; whatever comes across the feelings *irritates;* whatever awakens anger *provokes;* whatever heightens this anger extraordinarily *exasperates;* whatever raises hopes in order to frustrate them *tantalizes.*
ag-gra-va-tion (*ag-grȧ-vā'shun*), *n.* the act of making worse.
ag-gre-gate (*ag'grē-gāt*), *v. t.* to collect or bring together; gather into a mass or body; accumulate, *adj.* formed into a mass or total.
ag-gre-ga-tion (*ag'grē-gā'shun*), *n.* a collection or particulars.
ag-gres-sion (*ag-gresh'un*), *n.* unprovoked attack.
ag-gres-sive (*ag-gres'iv*), *adj.* unjustly attacking.
ag-gres-sor (*ag-gres'ĕr*), *n.* one who attacks.
ag-grieve (*ag-grēv'*), *v. t.* to bear heavily upon oppress. [ABUSE.]
a-ghast (*ȧ-gȧst'*), *adj.* struck with sudden astonishment, or terror.
ag-ile (*aj'il*), *adj.* easily moving about; active in body; nimble. [ACTIVE.]
ag-i-tate (*aj'i-tāt*), *v. t.* to stir violently.
ag-i-ta-tion (*aj-i-tā'shun*), *n.* the act of agitating; excitement; discussion.
ag-i-ta-tor (*aj'i-tā-tĕr*), *n.* one who starts or keeps up a political or other agitation.
a-glow (*ȧ-glō'*), *adj.* and *adv.* in a glow; glowing.
Agnes (*ag-nes* or *ag'nez*). From the Greek *agnos,* "chaste." Danish, *Agnes* or *Agnete;* Dutch, *Agnes;* Fr., *Agnes;* Ger., *Agnes;* It., *Agnese;* Lat., *Agnes.*
★**ag-nos-tic** (*ag-nos'tik*), *n.* one who denies that man possesses any knowledge of the ultimate nature of things.
a-go (*ȧ-gō'*), *adv.* in past time; since (as, "long ago," "some time ago").
a-gog (*ȧ-gog'*), *adj.* and *adv.* in agitation or expectation; eager.
a-go-ing (*ȧ-gō'ing*), *adv.* on the going; in motion.
ag-o-nis-tics (*ag-ō-nis'tiks*), *n.* the science of athletic combats.
ag-o-nize (*ag'ō-nīz*), *v. i.* to suffer anguish; make convulsive efforts.
ag-o-ny (*ag'ō-ni*), *n.* [*pl.* agonies (*-niz*)], extreme pain; anguish. [DISTRESS.]
Agra (*ȧ'grȧ*) or **Akberabad.** A city of India, founded by Akber. Name derived from *abad,* a dwelling or town, generally connected with the name of its founder; hence, "town of Akber."
a-gra-ri-an (*ȧ-grā'ri-an*), *adj.* relating to land, or to land tenure.
a-gra-ri-an-ism (*ȧ-grā'ri-an-ism*), *n.* the principle of a uniform division of land.
a-gree (*ȧ-grē'*), *v. i.* to harmonize physically, mentally, or morally; to accord.
Syn. AGREE, accede, consent, comply, acquiesce. To *agree* is the general term, meaning to fall in with. We *accede* by becoming a party to a thing; those who *accede* are on equal terms; one objects to that to which one does not *accede;* we *consent* to a thing by authorizing it; we *comply* with a thing by allowing it; those who *consent* or *comply* are not on equal terms with those in whose favor the consent is given or compliance made; *consenting* is an act of authority, *complying* an act of good-nature or weakness; to *acquiesce* is quietly to admit.
a-gree-a-bil-i-ty (*ȧ-grē-ȧ-bil'i-ti*), *n.* agreeableness.
a-gree-a-ble (*ȧ-grē'ȧ-bl*), *adj.* pleasing to the mind or senses. [CONFORMABLE, PLEASANT.]
a-gree-ment (*ȧ-grē'ment*), *n.* harmony of opinions or feelings.
ag-ri-cul-ture (*ag'ri-kul-tūr*), *n.* the science and art of cultivating fields by the plow.
a-grin (*ȧ-grin'*), *adj.* and *adv.* in the act or state of grinning.
a-ground (*ȧ-ground'*), *adj.* and *adv.* on the ground; the situation of a ship whose bottom touches the ground.
a-gue (*ā'gū*), *n.* an intermittent fever; the cold fit of an intermittent fever.
ah (*ȧ*), *interj.* an exclamation expressive of sudden emotion.
a-head (*ȧ-hed'*), *adv.* in the front; forward.
a-heap (*ȧ-hēp'*), *adv.* in a heap.
a-hem (*ȧ-hem'*), *interj.* an exclamation to call attention.

a-hoy (*ȧ-hoi'*), *interj.* a term used in hailing a vessel.
a-hull (*ȧ-hul'*), *adv.* with sails furled and helm lashed alee.
aid (*ād*), *v. t.* to assist; support; *n.* help; assistance. [HELP, ABET.]
★**aid-de-camp** (*ād'du-kăn*), *n.* [*pl.* aids-de-camp (*ādz*)], an officer who assists a general.
★**ai-gret** (*ā'gret*) or **aigrette** (*ā-gret'*), *n.* the small white heron; a plume arranged in imitation of the feathers of the heron.
ail (*āl*), *v. t.* [*p. t.* and *p. p.* ailed, *p. pr.* ailing], to give or cause pain: *v. i.* to feel pain; be afflicted with pain.
★**Ailean** or **Aileen** (*ā-lēn'*). An Irish female name. Some translate it "light." If so, it may be a form of *Helen*; but it is more probably from the Erse *ail*, "noble," "beautiful"; or from *aille*, "handsome," "fair"; or corrupted from *ailgean*, "noble offspring."
★**ail-ment** (*āl'ment*, not *āl'munt*), *n.* a slight disorder of the body; sickness.
aim (*ām*), *v. i.* [*p. t.* and *p. p.* aimed, *p. pr.* aiming], to endeavor after; direct at something; seek. [ENDEAVOR.]
air (*ār*), *v. t.* to expose to the air; dry, as clothes; to exhibit ostentatiously: *n.* the fluid which we breathe. [PRETENSE.]
air gas (*gas*), an illuminating gas made from air.
air gun (*gun*), a gun discharged by the elastic force of compressed air.
air-i-ness (*ār'i-nes*), *n.* the state of being airy; gayety.
air-ing (*ār'ing*), *n.* a walk, ride, or drive in the open air. [*bee line.*
air line (*līn*), a straight line. Also called a
air plant (*plant*), a plant which derives its nourishment from the air.
air pump (*pump*), a machine for exhausting the air from a receiver. [steering apparatus.
air-ship (*ār'ship*), *n.* a balloon with motor and
air-y (*ār'i*), *adj.* exposed to, or composed of, air; breezy; unsubstantial; gay.
★**aisle** (*īl*), *n.* wing of a building; passage in a church.
★**Aix-la-Chapelle** (*āks-lȧ-shȧ-pel'*) or **Aachen** (*ä'ken*). A city of Rhine province, Prussia, Germany, celebrated for its mineral springs, and for the chapel erected over the tomb of Charlemagne.
a-jar (*ȧ-jär'*), *adj.* and *adv.* slightly turned or opened, as a door; out of harmony.
a-jog (*ȧ-jog'*), *adv.* on the jog; jogging.
a-kim-bo (*ȧ-kim'bō*), *adv.* with the hands on the hips and the elbows turned outward.
a-kin (*ȧ-kin'*), *adj.* and *adv.* of kin; related by blood; allied by nature.
Akron (*ak'ron*). City in Summit county, Ohio, which occupies the highest ground in the northern part of the state, and several other places named for the same reason.
Alabama (*al-ȧ-bȧ'mȧ*). State of the Union and a river of that state, named from an Indian tribe. There are several explanations of the meaning of the word. Gatchet gives "burnt clearing." Others say it means "Here we rest." Haines, in his *American Indian*, gives "thicket clearers."
al-a-bas-ter (*al'ȧ-bas-tĕr*), *n.* a white, marble-like mineral; a box made of alabaster.
a-lack (*ȧ-lak'*), *interj.* an exclamation expressive of blame, sorrow, or surprise.
a-lac-ri-ty (*ȧ-lak'ri-ti*), *n.* eager readiness; joyous activity; briskness.
★**Alameda** (*ȧ-lȧ-mā'dȧ*). County and city in California; town in Bernalillo county, New Mexico; and post office in Clarke county, Alabama, named from the cottonwood trees growing in the vicinity. A Spanish word, meaning "grove of poplar trees."
★**Alamo** (*ȧ'lȧ-mō*). Post office in Contra Costa county, California, and many other places named from the old fort in Texas, which was so called from a grove of cottonwood trees.
al-a-mode (*al-ȧ-mōd'*), *adv.* in the fashion: *adj.* fashionable: *n.* a thin, light, glossy, black silk.
Alan (*al'an*). Some derive this name from Old French *alan*, *allan*, "a hunting dog," originally from the country of the *Alani* or *Alauni*, a warlike people of European Sarmatia.
★**Alaric** (*al'ar-ik*, not *al-ar'ik*). From the Gothic, *alareiks*, "noble ruler." Danish, *Alarick*; Fr., *Alaric*; Ger., *Alarich*; It., *Alarico*; Lat., *Alaricus*; Sp., *Alarico*.
a-larm (*ȧ-lärm'*), *v. t.* to arouse to a sense of danger; strike with apprehension of danger.
a-las (*ȧ-lȧs'*), *interj.* an exclamation expressive of unhappiness.
Alaska (*ȧ-las'kȧ*). Territory of the United States. An Indian word, meaning "great country." It was encountered by Russian explorers as *Al-ay-es-ka* the name having since changed through *Aliaska*, *Alaksa*, *Alashka*, to its present form.
Albany (*awl'bȧ-ni*). County and city in New York, named in honor of the duke of York (from his second title, *Albany*), afterward James II. of England; *Albany*, derived from his Scotch title, originally the same as *Alban*, the Celtic name of Scotland.
al-ba-tross (*al'bȧ-tros*), *n.* a sea bird allied to the petrel, inhabiting the Pacific and Southern oceans.
al-be-it (*awl-bē'it*), *conj.* although; even though; notwithstanding.
Albemarle (*al'bē-mȧrl*) **sound, N. C.** After the duke of Albemarle.
al-bum (*al'bum*), *n.* a blank book in which to insert autographs, photographs, stamps, etc.
★**al-bu-men** (*al-bū'men*, not *al'bū-men*), *n.* the white of an egg.
al-bu-men-ize (*al-bū'men-īz*), *v. t.* in photography, to coat (paper) with an albuminous solution.
★**al-bu-min** (*al-bū'min*), *n.* a variant of *albumen*.
★**Albuquerque** (Sp. *äl-boō-kĕr'kā*), **New Mexico.** Named by the Spaniards, from *Albuquerque*, a town in Spain, near the frontier of Portugal, which took its name from Alphonso d'Albuquerque.
★**Alcazar** (*al-kȧ'zär*). From the Arabic, *al gaer*, "the castle." The palace of the Moorish kings, and, later, of Spanish royalty at Seville.
al-che-mist (*al'kē-mist*), *n.* one who studies or practices alchemy.
al-che-my (*al'kē-mi*), *n.* the professed art of transmuting the baser metals into gold. [wine.
al-co-hol (*al'kō-hol*), *n.* pure or rectified spirits of
al-co-hol-ism (*al'kō-hol-izm*), *n.* a diseased condition produced by alcohol.
★**Al-co-ran** (*al'kō-ran* or *al-kō-rän'*), *n.* the Koran: the Mohammedan bible.
al-cove (*al-kōv'*), *n.* a recess in a room or a garden; a bower.
al-der (*awl'dĕr*), *n.* a genus of plants growing in moist land and related to the birch.
al-der-man (*awl'dĕr-man*), *n.* [*pl.* aldermen (*-men*)], in cities and boroughs a magistrate next in dignity to the mayor.
ale (*āl*), *n.* a liquor made from an infusion of malt by fermentation.
a-lee (*ȧ-lē'*), *adv.* and *adj.* on the lee or sheltered side of the ship; the opposite of *aweather*.
a-lert (*ȧ-lĕrt'*), *adj.* on the watch; active: *n.* an alarm; a sudden attack. [ACTIVE.]
★**Aleutian** (*ȧ-lū'shi-an*, not *ȧ-lū'shan*). Islands in the Pacific Ocean. A derivation of the Russian word *aleaut*, meaning "bald rock," later appearing in the name applied to the river *Olutora* on the coast of Kamchatka, the people near the mouth of the stream being called *Olutorsky*.
Alexander. From the Greek name *Alexandros*, "helper of men." Dutch, *Alexander*; Fr., *Alexandre*; Ger., *Alexander*; It., *Alessandro*; Lat., *Alexander*; Sp., *Alejandro* or *Alexandro*.
Alexandria. An Egyptian city named after Alexander the Great.
al-ex-an-drine (*al-eks-an'drin*), *n.* a kind of heroic verse of six iambic feet, or twelve syllables.
★**Alexis** (*a-leks'is*). From the Greek name *Alexis*, "help," "defense;" Fr., *Alexis*; Russ., *Alexei*.
Alfred. This name is usually translated "all peace." Neidinger derives the first syllable of the Anglo-Saxon name Alfred, Aelfred, from the word *alp*, *alf*, *elf*, "strong," "powerful." The name is rather from *alf-rad*, "help in counsel." Danish *Alfred*; Dutch, *Alfred*; Fr., *Alfred*; Ger., *Alfred*; It., *Alfredo*; Lat., *Alfredus*; Sp., *Alfredo*.
★**al-gæ** (*al'jē*), *n. pl.* one of the great divisions of cryptogamic plants, including seaweeds and kindred fresh-water plants.
★**al-ge-bra** (*al'jē-brȧ*, not *al'jē-brā*), *n.* the science of calculation by general symbols.
★**al-ge-bra-ic** (*al-jē-brā'ik*) or **al-ge-bra-i-cal** (*'i-kal*), *adj.* occurring in or dealing with algebra.
★**Algernon** (*al'jĕr-nun*). From *als* (aux) *gernons*; was originally given in the twelfth century to those who, contrary to the fashion of the time, wore their whiskers. Roquefort renders the Old French, *gernon*, *grenon*, *guernon*, *ghernon*, "*poil de la barbe*, *moustache*"; from Med. L. *granus*, *greno*; the latter is no doubt from L. *crinis*, "hair of the head."
Algiers (*al-jērz'*). From the Arabic, *al jezair*, "the peninsula." Seaport of northern Africa.
★**Alhambra** (*al-ham'brȧ*). From the Arabic, *al-hamra'u*, "red." A great citadel and palace founded in the thirteenth century above the city of Granada, Spain, by the Moorish kings.
★**a-li-as** (*ā'li-as*, not *al'i-as*), *adv.* otherwise (named): *n.* [*pl.* aliases (*-ez*)], an assumed name.
al-i-bi (*a'li-bī*), *n.* the plea of having been elsewhere when the alleged act was committed.
Alice (*al'is*). From the Teutonic, meaning "noble" or "noble cheer." Danish, *Else*; Dutch, *Elsie*; Fr., *Alice*; Lat., *Alicia*; Sw., *Elsa*.
★**al-ien** (*āl'yen*, not *ā'li-en*), *adj.* belonging to another: *n.* a foreign-born resident of a country.
al-ien-ate (*āl'yen-āt*), *v. t.* to estrange, as the affections; transfer to another, as property.
al-ien-a-tion (*āl-yen-ā'shun*), *n.* estrangement.
a-light (*ȧ-lit'*), *v. i.* to dismount; to descend and settle; to come upon accidentally.
a-lign (*ȧ-lin'*), same as *aline*.
a-lign-ment (*ȧ-lin'ment*), same as *alinement*.
a-like (*ȧ-lik'*), *adj.* like one another. [EQUAL.]
★**al-i-ment** (*al'i-ment*, not *ā'lim-ent*), *n.* food; the necessaries of life generally.
al-i-men-tal (*al-i-men'tal*), *adj.* having the quality of nourishing.
al-i-men-ta-ry (*al-i-men'tȧ-ri*), *adj.* pertaining to food; nutritious.
al-i-men-ta-ry ca-nal (*kȧ-nal'*), the great duct which conveys food to the stomach and carries off solid excreta.
al-i-men-ta-tion (*al-i-men-tā'shun*), *n.* the act of giving nourishment.
al-i-mon-y (*al'i-mōn-i*), *n.* means of living; an allowance made by decree of court to a wife out of her husband's estate on separation.
a-line (*ȧ-lin'*), *v. t.* to lay out or adjust by a line: *v. i.* to form or fall into a line.
Alison (*al'i-son*). A Scottish female name, which in old parish registers is spelled *Alisone*. It is of French origin, and the same as *Alizon*. Roquefort gives *Alizon*, *Alieite*, *Ailexe*, *Aileye*, *Auly*, as female diminutives of *Alexis*.
a-live (*ȧ-līv'*), *adj.* having life; in a state of action; sprightly; sensitive; thronged.
al-ka-hest (*al'kȧ-hest*), *n.* the pretended universal solvent of the alchemists.
al-ka-li (*al'kȧ-lī* or *-li*), *n.* [*pl.* alkalis or alkalies], one of a class of caustic bases, as soda, potash, etc.
★**al-ka-line** (*al'kȧ-līn* or *-lin*), *adj.* pertaining to, or having the properties of, an alkali.
al-ka-loid (*al'kȧ-loid*), *n.* a body or substance containing alkaline properties.
al-ka-net (*al'kȧ-net*), *n.* a plant the root of which yields the rich red dye of commerce.
all (*awl*), *adj.* the whole quantity of, as substance, duration, extent, amount, or degree.
Al-lah (*äl'lȧ*), *n.* the Arabic name for the supreme being, in use among the Mohammedans.
al-lay (*al-lā'*), *v. t.* to quiet or calm; assuage; appease.
Syn. ALLAY, appease, assuage, mitigate, soothe. All these terms indicate a lessening of something painful. In a physical sense an irritating pain is *allayed*; a wounded part is *soothed* by affording ease and comfort. Extreme heat or thirst is *allayed*; extreme hunger is *appeased*; a punishment or sentence is *mitigated*. In a moral sense one *allays* what is fervid and vehement; one *soothes* what is distressed or irritated; one *appeases* what is tumultuous and boisterous; one *mitigates* the pain of others, or what is rigorous and severe; one *assuages* grief or affliction.
★**Allee Verte** (*äl-lā' vĕrt*). A double avenue of limes beginning at the western end of the Boulevard d'Anvers in Brussels and extending along the bank of the Willebroeck canal.
al-le-ga-tion (*al-lē-gā'shun*), *n.* the act of alleging.
al-lege (*al-lej'*), *v. t.* to produce or adduce as argument.
Syn. ALLEGE, adduce, advance, affirm, assert, asseverate, assign, aver, cite, claim, declare, introduce, maintain, offer, plead, produce, say, state. To *allege* is to state as true or capable of proof, without proving; to *adduce* is to bring forth the evidence of what has been *alleged*; to *produce* is to bring forward, as, for instance, papers or persons; *adduce* is not used of persons; of them we say *introduce* or *produce*; when an *alleged* criminal is brought to trial, the counsel *advance* a theory, *adduce* evidence in its support, *produce* documents and witnesses, *cite* precedents, *assign* reasons, *introduce* suggestions, *offer* pleas. The accused may *assert* his innocence.
★**Allegheny** (*al'ē-gā-ni*), **Allegheny, Allegany.** County, city, and river in Pennsylvania, counties in Maryland, New York, North Carolina, West Virginia, and mountains in eastern United States. An Indian word, the origin of which is in dispute.
★**al-le-giance** (*al-lē'jans* or *al-lē'ji-ans*), *n.* the tie or obligation of a subject to his sovereign or government.
al-le-gor-ic (*al-lē-gor'ik*) or **al-le-gor-i-cal** (*'i-kal*), *adj.* pertaining to, consisting of, or in the nature of, allegory; figurative.
al-le-go-ry (*al'lē-gō-ri*), *n.* [*pl.* allegories (*-riz*)], a figurative manner of treating a subject by the use of other terms analogous in properties or circumstances. [FICTION.]
Allen. According to some, this is the same name as *Allan* and *Alan*. Lower shows that it is found written *Allayne*. It is a probable corruption of the name *Alwine*.
Allentown. City in Lehigh county, Pennsylvania, and borough in Monmouth county, New Jersey, named for William Allen of Pennsylvania, at one time chief justice of the province.
al-le-vi-ate (*al-lē'vi-āt*), *v. t.* to lighten; lessen; make easier; mitigate.
al-ley (*al'li*), *n.* [*pl.* alleys (*'liz*)], a passage; a way (generally narrow); a lane.
All-hal-lows (*awl-hal'lōz*), *n. pl.* All Saints' day, celebrated on the first of November.
al-li-ance (*al-lī'ȧns*), *n.* the state of being allied.
al-li-ga-tion (*al-li-gā'shun*), *n.* a rule for ascertaining the value or price of a compound.
al-li-ga-tor (*al'li-gā-tĕr*), *n.* the American crocodile.
al-lit-er-a-tion (*al-lit-ĕr-ā'shun*), *n.* the repetition of the same initial letter in closely succeeding words.
al-lit-er-a-tive (*al-lit'ĕr-ā-tiv*), *adj.* pertaining to, or characterized by, alliteration.
al-lo-cate (*al'lō-kāt*), *v. t.* to assign or allot; distribute.
al-lo-cu-tion (*al-lō-kū'shun*), *n.* an address of a formal nature.
★**al-lo-path** (*al'lō-path*) or **al-lop-a-thist** (*al-lop'ȧ-thist*, not *al'lō-path-ist*), *n.* one who favors or practices allopathy.
★**al-lop-a-thy** (*al-lop'ȧ-thi*), *n.* a method of treating disease by inducing an action opposite to the disease it is sought to cure.
al-lot (*al-lot'*), *v. t.* [*p. t.* and *p. p.* allotted, *p. pr.* allotting], to distribute or divide, as by lot.
al-lot-ro-py (*al-lot'rō-pi*), *n.* the capability shown by certain chemical elements to assume different forms.
al-low (*al-lou'*), *v. t.* to grant, yield; admit; deduct. [CONSENT, ADMIT.]
al-low-ance (*al-lou'ȧns*), *n.* the act of allowing; admission; concession.
al-loy (*al-loi'*), *v. t.* to combine; to form a compound: *n.* a compound or fusion of two or more metals.

all one (*awl wun*), *adj.* and *n.* in effect the same; quite the same.
all-round (*-round*), *adj.* versatile.
all sorts (*sôrts*), remnants of various liquors blended together.
All Souls' day (*sôlz dā*), the day, celebrated second of November by the Roman Catholic church, in honor of the departed.
all-spice (*awl'spīs*), *n.* the fruit or berry of the pimento.
all told (*awl tōld*), *adv.* all counted.
al-lude (*al-lūd'*), *v. t.* to compare: *v. i.* refer or make an allusion indirectly (with *to*).
Syn. ALLUDE, hint, refer, suggest. To *allude* is not so direct as to *refer*, but it is more clear and positive than either *hint* or *suggest*. We *allude* to a circumstance by introducing something collaterally allied to it; we *refer* to an event by expressly introducing it into our discourse; we *hint* at a person's intentions by darkly insinuating what may possibly happen; we *suggest* an idea by some poetical expression relative to it.
Ant. ALLEGE, assert, prove.
al-lure (*al-lūr'*), *v. t.* to tempt by the offer of something good, real, or apparent; entice. [ATTRACT, PERSUADE.]
al-lu-sion (*al-lū'zhun*), *n.* a casual reference; a comparison or reference by symbol or metaphor.
al-lu-vi-um (*al-lū'vi-um*), *n.* [*pl.* alluvia (*-ä*)], a deposit of mingled sand and clay.
al-ly (*al-lī'*), *v. t.* [*p. t.* and *p. p.* allied, *p. pr.* allying], to unite. [ACCESSORY.]
Alma (*al'mä*). At the time of the war between England and Russia this name was introduced in the west of England, so christened after the battle of the *Alma*.
Almack's (*awl'maks*). This well-known place of assembly in King street, St. James', London, was built by one MacCall, a tavern-keeper, in 1759.
al-ma-nac (*awl'mä-nak*), *n.* a yearbook or calendar giving the order of the days of the week and month, and astronomical data.
al-might-y (*awl-mīt'i*), *adj.* possessing all power; omnipotent.
★**alm-ond** (*ä'mund*, not *al'mund*), *n.* the kernel of the fruit of the almond-tree.
al-mon-er (*al'mun-ĕr*), *n.* one who dispenses or distributes alms or charity.
al-mon-ry (*al'mun-ri*), *n.* [*pl.* almonries (*-riz*)], the residence of the almoner.
al-most (*awl'mōst*), *adv.* nearly; very nearly.
alms (*ämz*), *n. sing.* [used sometimes as *n. pl.*], the act of relieving by charitable aid.
alms-house (*'hous*), *n.* a house endowed by private or public charity and appropriated to the use of the poor.
al-oes (*al'ōz*), *n.* a drug, the inspissated juice of several species of aloe.
a-loft (*ä-lôft'*), *adv.* on high; far above the earth.
a-lone (*ä-lōn'*), *adj.* and *adv.* without or apart from another.
a-long (*ä-lông'*), *prep.* and *adv.* by the length of; lengthwise.
a-long-shore-man (*-shōr-man*), *n.* [*pl.* -men], a laborer employed at docks.
a-long-side (*'sīd*), *adv.* by the side; side by side.
Alonzo (*ä-lon'zō*) or **Alonso.** See *Alphonso*.
a-loof (*ä-lōōf'*), *adv.* at a moderate distance but within sight.
a-loud (*ä-loud'*), *adv.* with raised voice; loudly.
★**al-pac-a** (*al-pak'ä*, not *al-ä-pak'ä*), *n.* a mammal, closely allied to the llama.
al-pen-glow (*al'pen-glō*), *n.* a peculiar purple glow on the snow on the Alps seen just before sunrise and after sunset.
al-pen-horn (*-hôrn*), *n.* a long and nearly straight horn used by the mountaineers of the Alps.
al-pen-stock (*-stok*), *n.* a stout staff, furnished with an iron spike, used by mountain climbers.
al-pha-bet (*al'fä-bet*), *n.* the letters of a language.
Alphonso (*al-fon'sō, al-fon'zō*), or **Alonzo.** From the Teutonic, meaning "battle eager." Danish, *Alfons;* Fr., *Alphonse;* It., *Alfonso;* Lat., *Alphonsus;* Port., *Affonso;* Sp., *Alfonso* or *Alonso*.
Alps. The word *alp*, or *alb*, is Celtic, and signifies "white." Its application to the white tops of the mountains of the Alps is a natural one.
al-read-y (*awl-red'i*), *adj.* quite ready; fully prepared.
al-so (*awl'sō*), *adv.* and *conj.* wholly so; in addition to.
★**Altai** (*äl-tī'*, not *al'ti*). A mountain, or range, in central Asia, rich in the precious metals; *Al-tai* (for *Altagh*) is the Tartaric form of the name. Hence the name *Altaic* which is applied to languages of the Mongol-Turkic class.
al-tar (*awl'tĕr*), *n.* a raised place for the offering of sacrifices or burning of incense.
al-ter (*awl'tĕr*), *v. t.* to effect some change in.
al-ter-a-tion (*awl-tĕr-ä'shun*), *n.* the act of altering or changing.
al-ter-a-tive (*awl'tĕr-ä-tiv*), *adj.* producing change.
al-ter-cate (*awl'tĕr-kāt*), *v. i.* to contend in words.
al-ter-ca-tion (*awl-tĕr-kā'shun*), *n.* the act of wrangling. [DIFFERENCE.]
★**al-ter-nate** (*al'tĕr-nāt* or *al-ĭ'tĕr'nāt*), *v. t.* to perform by turns: *v. i.* to take place by turns (followed by *with*): *adj.* (*al-tĕr'nāt*), succeeding each other by turns. [SUCCESSIVE.]
al-ter-na-tion (*al-tĕr-nā'shun*), *n.* the act of alternating, or state of being alternate.
★**al-ter-na-tive** (*al-tĕr'nä-tiv*), *adj.* giving the choice of two things.
Syn. ALTERNATIVE, choice, election, option, pick, preference, resource. A *choice* may be among many things; an *alternative* is a *choice* between two things; *option* is the right or privilege of choosing; *choice* may be either the right to choose, the act of choosing, or the thing chosen. Ability and readiness to meet difficult situations indicate *resources*. *Pick* and *election* imply objects placed before one, with freedom and power to choose, as, there were horses of several colors from which I could take my *pick*. A *choice*, *pick*, *election*, or *preference* is that which suits one best; an *alternative* is that to which one is restricted; a *resource*, that to which one is glad to betake him.
Ant. COMPULSION, necessity.
al-though (*awl-thō'*), *conj.* granting that; though; even if; notwithstanding.
al-ti-tude (*al'ti-tūd*), *n.* space extended upward; height.
al-ti-tu-di-nal (*al-ti-tū'di-nal*), *adj.* of or pertaining to height.
al-to (*al'tō*), *adj.* high: *n.* the contralto.
al-to-geth-er (*awl-tōō-geth'ĕr*), *adv.* wholly.
Altoona (*al-tōō'nä*). City in Blair county, Pennsylvania, so named because of its high situation in the Alleghany mountains, and town in Polk county, Iowa, situated on the highest point between the Des Moines and Mississippi rivers. A derivative of the Latin word *altus*, "high."
★**al-tru-ism** (*al'trōō-izm*), *n.* the principles inculcated by Comte, and involving the sacrifice of self in the interests of others: opposed to *egoism*.
al-tru-ist (*al'trōō-ist*), *n.* one who advocates or practices altruism.
al-um (*al'um*), *n.* a double sulphate formed of aluminium and some other element.
a-lu-mi-na (*ä-lū'mi-nä*), *n.* the single oxide of aluminium, the most abundant of the earths.
★**al-u-min-i-um** (*al-ū-min'i-um*) or **a-lu-mi-num** (*ä-lū'mi-num*), *n.* a bluish-white, light metal.
a-lum-na (*ä-lum'nä*), *n.* [*pl.* alumnæ ('*nē*)], a female graduate or pupil of a university or college.
a-lum-nus (*ä-lum'nus*), *n.* [*pl.* alumni (*-nī*)], the graduate of a school, college, or university.
Alvin (*al'vin*). Means "winning all." Dutch, *Alewijn;* Fr., *Alain;* Ger., *Alwin;* It., *Alvino;* Lat., *Alwinus;* Sp., *Aluino*.
al-ways (*awl'wāz*), *adv.* constantly.
★**Amadeus** (*am-ä-dē'us*). Translated a "lover of God." Fr., *Amadée;* Ger., *Amadeus;* It., *Amedeo;* Lat., *Amadeus;* Sp., *Amadeo*.
a-main (*ä-mān'*), *adv.* with force or violence; suddenly; at once.
a-mal-gam (*ä-mal'gam*), *n.* any metallic mixture or alloy of which mercury is the chief constituent.
a-mal-ga-mate (*ä-mal'gä-māt*), *v. t.* to alloy mercury with another metal.
a-mal-ga-ma-tion (*ä-mal-gä-mā'shun*), *n.* the act or process of compounding mercury with another metal.
Amanda (*ä-man'dä*). A feminine name from the Latin *amanda*, "to be loved"; *i. e.*, "worthy of being loved." It is also found as a masculine name in the parish registers of Nottingham, England.
a-man-u-en-sis (*ä-man-ū-en'sis*), *n.* [*pl.* amanuenses ('*sēz*)], one who is employed to write at the dictation or direction of another; a secretary.
am-a-ranth (*am'ä-ranth*), *n.* an imaginary flower said by poets to be unfading.
a-mass (*ä-mäs'*), *v. t.* to collect into a heap. [HEAP.]
★**am-a-teur** (*am'ä-tūr*, Fr. *ä-mä-tōr'*), *n.* one who cultivates an art or pursues a study from love or attachment, without reference to gain or emolument.
am-a-tive (*am'ä-tiv*), *adj.* amorous; full of love.
am-a-to-ri-al (*am-ä-tō'ri-al*), *adj.* pertaining to love; amatory.
am-a-to-ry (*am'ä-tō-ri*), *adj.* relating to, or expressive of, love.
am-au-ro-sis (*am-aw-rō'sis*), *n.* loss or decay of sight.
a-maze (*ä-māz'*), *v. t.* to confound or stun with fear.
am-bas-sa-dor (*am-bas'ä-dĕr*), *n.* an accredited representative of a sovereign or state at the court of another.
Syn. AMBASSADOR, envoy, plenipotentiary, deputy. *Ambassadors*, *envoys*, and *plenipotentiaries* speak and act in the name of their sovereigns. An *ambassador* is invested with the highest authority, acting in all cases as the representative; the *envoy* appears simply as an authorized minister acting for another, but not always representing him; the *plenipotentiary* is a species of envoy used on the occasion of concluding peace or making treaties; *deputies* are not deputed by sovereigns, although they may be deputed to sovereigns; they have no power to act or speak but in the name of some subordinate community or particular body. The functions of the three first belong to the minister, those of the latter to the agent.
am-ber (*am'bĕr*), *n.* a yellowish fossil resin found on the shores of the Baltic.
★**am-ber-gris** (*am'bĕr-grēs*, not *am'bĕr-gris*), *n.* a morbid secretion from the intestines of the sperm-whale, usually found floating in tropical seas.
am-bi-dex-trous (*am-bi-deks'trus*), *adj.* able to use both hands alike; unusually clever.
am-bi-ent (*am'bi-ent*), *adj.* surrounding; investing.
am-bi-gu-i-ty (*am-bi-gū'i-ti*), *n.* [*pl.* ambiguities (*-tiz*)], double or dubious signification.
am-big-u-ous (*am-big'ū-us*), *adj.* doubtful. [EQUIVOCAL, OBSCURE.]
am-bi-tion (*am-bish'un*), *n.* a seeking for preferment.
am-bi-tious (*am-bish'us*), *adj.* having ambition.
am-ble (*am'bl*), *v. i.* to move with a peculiar pace, as a horse, by lifting the two feet on one side together.
am-bly-o-pi-a (*am-bli-ō'pi-ä*) or **amblyopy** (*am'-bli-ō-pi*), *n.* dimness of vision.
Ambrose (*am'brōz*). From the Latin name *Ambrosius*, meaning "immortal," "divine," "godlike." Danish, *Ambrosius;* Dutch, *Ambrosius;* Fr., *Ambroise;* Ger., *Ambrosius* or *Ambros;* It., *Ambrogio;* Sp., *Ambrosio*.
am-bro-sia (*am-brō'zhä* or *'zhi-ä*), *n.* anything exquisitely pleasing to taste or smell. [delicious.
am-bro-sial (*am-brō'zhal* or *'zhi-al*), *adj.* divinely
am-bu-lance (*am'bū-lans*), *n.* a field hospital; a vehicle for the sick or wounded.
am-bu-la-tion (*am-bū-lā'shun*), *n.* the act of walking about.
am-bus-cade (*am-bus-kād'*), *n.* a strategic disposition of troops in ambush. [surprise.
am-bush (*am'boosh*), *n.* a lying in wait to attack by
★**a-meer** (*ä-mēr'*), *n.* a prince; governor.
Amelia (*ä-mē'li-ä*). From *Aemylia*, name of a noble family in Rome; also the name of a vestal who rekindled the fire of Vesta, which had been extinguished, by putting her veil over it. The name means "gentle," "engaging," "courteous." Danish, *Amalie;* Fr., *Amélie;* Ger., *Amalie;* Sp., *Amelia*.
★**a-mel-io-rate** (*ä-mēl'yō-rāt*, not *ä-mē'li-ō-rāt*), *v. t.* to make better.
a-mel-io-ra-tion (*ä-mēl-yō-rā'shun*), *n.* the making or growing better.
a-men (*ä-men'* or *ä-men'*), *adv.* verily: *interj.* so be it.
a-me-na-bil-i-ty (*ä-mē-nä-bil'i-ti*) or **amenableness** (*ä-mē'nä-bl-nes*), *n.* tractableness; responsibility.
★**a-me-na-ble** (*ä-mē'nä-bl*, not *ä-men'ä-bl*), *adj.* easy to lead.
a-mend (*ä-mend'*), *v. t.* to free from fault.
Syn. AMEND, correct, emend, improve, mend, better. *Amend*, *emend*, and *correct* are all applied to works of the understanding, with this distinction, that *amend* signifies to remove faults or defects generally, either by adding, taking away, or altering, as to *amend* a law; to *emend* is to remove particular faults in any literary work by the alteration of letters or single words; to *correct* is to remove gross faults; *mend* is employed in respect to any work in the sense of putting that right which either is or has become faulty; to *improve* is said either of persons or things which are made better; as to *improve* the mind, morals, etc.; to *better* is mostly applied to the outward condition on familiar occasions.
a-mend-ment (*ä-mend'ment*), *n.* the removal of faults; the alteration of a bill.
a-mends (*ä-mendz'*), *n. pl.* compensation for loss. [COMPENSATION.]
a-men-i-ty (*ä-men'i-ti*), *n.* [*pl.* amenities (*-tiz*)], pleasantness, as of climate or demeanor; geniality.
a-merce (*ä-mĕrs'*), *v. t.* to punish by arbitrary fine.
America. From Amerigo Vespucci, sometimes spelled Vespucius, who landed on the western continent south of the equator in 1497. His name was given to this country by a German geographer, Martin Waldseemüller, who published an account of the four voyages of Vespucci at Frankfort, Germany, in 1507.
A-mer-i-can (*ä-mer'i-kan*), *adj.* belonging to, or characteristic of, America.
A-mer-i-can-ism (*ä-mer'i-kan-izm*), *n.* a form of expression peculiar to the United States.
am-e-thyst (*am'ĕ-thist*), *n.* a violet-purple variety of quartz or rock crystal.
Amherst (*am'ĕrst*). County in Virginia, and town in Hillsboro county, New Hampshire, and Hampshire county, Massachusetts.
a-mi-a-bil-i-ty (*ä-mi-ä-bil'i-ti*), *n.* amiableness.
a-mi-a-ble (*ä'mi-ä-bl*), *adj.* friendly.
am-i-ca-ble (*am'i-kä-bl*), *adj.* friendly; peaceable.
a-mid (*ä-mid'*) or **amidst** (*-midst'*), *prep.* in the middle of; among.
a-miss (*ä-mis'*), *adj.* wrong; faulty: *adv.* wrongly.
am-i-ty (*am'i-ti*), *n.* friendly relations; friendship.
am-mo-ni-a (*am-mō'ni-ä*), *n.* a transparent, pungent, volatile gas.
am-mu-ni-tion (*am-mū-nish'un*), *n.* powder, balls, etc., used in charging firearms of all kinds.
am-ne-si-a (*am-nē'si-ä*), *n.* loss of memory.
am-nes-ty (*am'nes-ti*), *n.* an act of oblivion for political offenses; a general pardon.
★**a-mœ-ba** (*ä-mē'bä*), *n.* [*pl.* amœbas ('*bäz*), amœbæ ('*bē*)], a genus of microscopic organisms.
★**a-mong** (*ä-mung'*) or **amongst** (*-mungst'*), *prep.* and *adv.* mixed with; surrounded by; amidst.
am-o-rous (*am'ō-rus*), *adj.* fond of the opposite sex; loving.
a-mor-phous (*ä-môr'fus*), *adj.* formless.
a-mor-tize (*ä-môr'tiz*), *v. t.* to sell and convey to a corporation having perpetual succession.
Amos (*ä'mus*). From the Hebrew, signifying a "burden." Fr., *Amos*.
a-mount (*ä-mount'*), *v. i.* to mount up to; be equivalent or equal to.
am-phib-i-ous (*am-fib'i-us*), *adj.* having the power of living both on land and in water.
am-phi-brach (*am'fi-brak*), *n.* a foot of three syllables, the middle long, the first and last short.

am-phi-the-a-ter, -tre (*am-fi-thē'ȧ-tĕr*), *n.* a double theater; a theater with seats all around the arena; a circus.

am-ple (*am'pl*), *adj.* full; large; abundant.

am-pli-fi-ca-tion (*am-pli-fi-kā'shun*), *n.* the act of amplifying.

am-pli-fy (*am'pli-fī*), *v. t.* [*p. t.* and *p. p.* amplified, *p. pr.* amplifying], to make large. [ADD.]

am-pu-tate (*am'pū-tāt*), *v. t.* to lop off in pruning.

am-pu-ta-tion (*am-pū-tā'shun*), *n.* the operation of cutting off a limb.

a-muck (*ȧ-muk'*), *adj.* or *adv.* (used only in the phrase, to run amuck), running about armed, in a state of frenzy.

am-u-let (*am'ū-let*), *n.* a charm worn to protect against evil; a talisman.

a-muse (*ȧ-mūz'*), *v. t.* to occupy the attention of pleasantly.

Amy (*ā'mi*). Some derive this name from the French *aimée*, "beloved"; others from *amie*, "a friend." It is found Latinized both *Amata* and *Amicia*. Danish, *Amalie*; Fr., *Aimée*; It., *Amata*.

Anabella. A feminine name formed from *Hannibal*.

★**an-ach-ro-nism** (*an-ak'rō-nizm*), *n.* an error in the order of time.

an-a-con-da (*an-ȧ-kon'dȧ*), *n.* the specific name of a large South American boa.

★**a-næ-mi-a** or **anemia** (*ȧ-nē'mi-ȧ*), *n.* deficiency or low condition of the blood.

★**an-æs-the-si-a** or **anesthesia** (*an-es-thē'si-ȧ* or *'zhi-ȧ*), *n.* a condition of insensibility to pain.

an-æs-thet-ic. See *anesthetic.* [relief.

an-a-glyph (*an'ȧ-glif*), *n.* a work of art carved in

an-a-glyp-to-graph (*an-ȧ-glip'tō-grȧf*), *n.* an instrument by which a medallion engraving of any object in relief can be made.

★**an-a-gram** (*an'ȧ-gram*), *n.* a word or a sentence constructed out of another by the transposition of the letters contained in the second.

a-nal (*ā'nal*), *adj.* relating to the anus.

an-a-lect (*ȧn'ȧ-lekt*), *n.* [*pl.* analects (*-lekts*) or analecta (*-lek'tȧ*)], a passage or extract from a published work.

an-al-ge-si-a (*an-al-jē'si-ȧ*), *n.* insensibility to pain in any part of the body.

a-nal-o-gism (*ȧ-nal'ō-jizm*), *n.* a reasoning from the cause to the effect.

★**a-nal-o-gous** (*ȧ-nal'ō-gus*), *adj.* possessing points of analogy.

an-a-logue (*an'ȧ-log*), *n.* an object which bears analogy to something else.

★**a-nal-o-gy** (*ȧ-nal'ō-jȧ*), *n.* [*pl.* analogies (*-jiz*)], agreement, resemblance, or correspondence in relations between different objects.

a-nal-y-sis (*ȧ-nal'i-sis*), *n.* [*pl.* analyses (*-sēz*)], the resolution of a compound into its constituent parts.

an-a-lyt-ic (*an-ȧ-lit'ik*), or **an-a-lyt-i-cal** (*'i-kal*), *adj.* relating to, or characterized by, the method of analysis.

an-a-lyze (*an'ȧ-līz*), *v. t.* to separate or resolve.

an-a-pest or **anapæst** (*an'ȧ-pest*), *n.* a foot comprising two short syllables and one long syllable.

an-a-plas-ty (*an'ȧ-plas-ti*), *n.* the repairing of wounds by the transplantation of adjacent healthy tissue.

★**an-arch-ist** (*an'ȧrk-ist*), *n.* one who supports or promotes a scheme for anarchy.

★**an-arch-y** (*an'ȧrk-i*), *n.* nonexistence or incapability of governmental rule.

a-nath-e-ma (*ȧ-nath'ē-mȧ*), *n.* [*pl.* anathemas (*-mȧz*)], the curse accompanying excommunication.

a-nath-e-ma-tize (*ȧ-nath'ē-mȧ-tīz*), *v. t.* to pronounce a decree of excommunication against.

an-a-tom-i-cal (*an-ȧ-tom'i-kal*), *adj.* relating to, or according to, the laws of anatomy.

a-nat-o-mism (*ȧ-nat'ō-mizm*), *n.* anatomical analysis or structure.

★**a-nat-o-mist** (*ȧ-nat'ō-mist*), *n.* one possessing a knowledge of anatomy derived from dissection.

a-nat-o-my (*ȧ-nat'ō-mi*), *n.* [*pl.* anatomies (*-miz*)], separation by dissection of the various parts of a body.

an-ces-tor (*an'ses-tĕr*), *n.* a forefather or progenitor. [FOREFATHER.]

an-ces-try (*an'ses-tri*), *n.* the line of one's descent traced from a period more or less remote.

★**an-chor** (*ang'kĕr*), *n.* an iron implement of varying form, used to secure a floating vessel to the bottom.

an-chor-age (*ang'kĕr-ij*), *n.* a suitable or customary place for the anchoring of vessels.

an-chor-et (*ang'kōr-et*) or **anchorite** (*-it*), *n.* one who voluntarily secludes himself from society and lives a solitary life.

an-chor ice (*ang'kĕr īs*), ground ice.

★**an-cho-vy** (*an-chō'vi*, not *an'chō-vi*), *n.* [*pl.* anchovies (*'viz*)], a diminutive fish abounding in the Mediterranean.

★**an-cient** (*ān'shent*), *adj.* of or pertaining to the early history of the world; of past times or remote ages. [ANTIQUE, OBSOLETE.]

an-cil-la-ry (*an'sil-lȧ-ri*), *adj.* attended upon; accessory; subservient.

★**Andalusia** (*an-dȧ-lōō'shi-ȧ*). Now a captaincy-general in southern Spain, comprising the modern provinces Almeria, Jaen, Granada, Cordova, Malaga, Seville, Cadiz, and Huelva.

★**Andes** (*an'dēz*). Properly *Cordilleras de los Andes*, "the chain of the Andes," is a name of uncertain meaning Garcilasso de la Vega says that it was derived from the Anti tribe near Cuzco. It has also been referred to a Peruvian word *anta*, "copper." Another proposed etymology is from *anta*, a "tapir," of which the Portuguese plural would be *antas*, so that the *Cordilleras de los Antas* would mean the "mountains of the tapirs."

and-i-rons (*and'i-ûrnz*), *n. pl.* metal standards used for open fires, to support the logs; firedogs.

Andrew. From the Greek *Andreas*, meaning "manly," "brave," "courageous." Danish, *Andreas*; Dutch, *Andries*; Fr., *André*; Ger., *Andreas*; It., *Andrea*; Lat., *Andreas*; Port., *Andre*; Sp., *Andres*.

an-drog-y-nous (*an-droj'i-nus*), *adj.* combining both sexes.

★**Androscoggin** (*an-dros-kog'gin*). River in Maine and New Hampshire, and county in Maine.

an-ec-dote (*an'ek-dōt*), *n.* a brief narrative of an entertaining character.

an-e-lec-tric (*an-ē-lek'trik*), *adj.* without the properties of electricity.

an-e-lec-trode (*an-ē-lek'trōd*), *n.* the positive pole of a galvanic battery.

a-ne-mi-a. See *anæmia.*

★**a-nem-o-ne** (*ȧ-nem'ō-nē*), *n.* [*pl.* anemones (*-nēz*)], the windflower or wood anemone.

an-e-roid (*an'ē-roid*), *n.* a barometer shaped like a watch.

an-es-the-si-a. See *anæsthesia.*

an-es-thet-ic or **anæsthetic** (*an-es-thet'ik*), *adj.* pertaining to loss of the sense of feeling.

an-es-the-tize (*an-es'thē-tīz*), *v. t.* to bring under the influence of an anæsthetic.

an-eu-rism (*an'ū-rizm*), *n.* a local swelling or dilatation of an artery.

a-new (*ȧ-nū'*), *adv.* afresh; over again.

an-gel (*ān'jel*), *n.* a messenger of God.

Angela (*an'jē-lȧ*). A feminine name of Italian origin, derived from *angelo*, "an angel."

an-gel-ic (*an-jel'ik*) or **an-gel-i-cal** (*'i-kal*), *adj.* belonging to or resembling an angel.

Angelica (*an-jel'i-kȧ*). Translated *angelic*. Fr., *Angelique*; Ger., *Angelica*; It., *Angelica*.

★**Angelo, Sant'** (*sȧn-tȧn'jō-lō*), **Castle of.** The remodeled mausoleum of Hadrian in Rome.

an-ger (*ang'gĕr*), *n.* excessive emotion or passion aroused by a sense of injury or wrong; wrath.

Syn. ANGER, resentment, wrath, ire, indignation, rage, fury. *Anger* is a sudden sentiment of displeasure; *resentment* is a continued anger; *wrath* is a heightened sentiment of anger which is poetically expressed by the word *ire*; *indignation* is a sentiment awakened by the unworthy and atrocious conduct of others; *rage* is a vehement ebullition of anger; and *fury* is an excess of rage. [See *displeasure.*]

Ant. CHARITY, forbearance, leniency, love, peace, self-control.

an-gi-ol-o-gy (*an-ji-ol'ō-ji*), *n.* that branch of anatomy which treats of the blood vessels and lymphatics.

an-gle (*ang'gl*), *n.* the inclosed space near the point where two lines meet.

an-gle (*ang'gl*), *v. i.* to fish with a hook and line.

an-gler (*ang'glĕr*), *n.* one who fishes with rod and line.

★**an-gli-can** (*ang'gli-kan*), *adj.* pertaining to England as a nation.

★**an-gli-cism** (*ang'gli-sizm*), *n.* a principle or mannerism peculiar to England. [English.

an-gli-cize (*ang'gli-sīz*), *v. t.* to make or to render into

★**An-glo - A-mer-i-can** (*ang-glō-ȧ-mer'i-kan*), *adj.* pertaining to England and the United States conjointly.

An-glo - Sax-on (*-saks'un*), *adj.* pertaining to the Saxon settlers in England prior to the Conquest, or to their language.

an-go-ra (*an-gō'rȧ*), *n.* cloth made from angora wool.

an-go-ra cat (*kat*), a cat of the domestic kind with long, handsome hair.

an-go-ra wool (*wool*), the coat of the angora goat.

an-gos-tu-ra bark (*ang-gos-tōō'rȧ bȧrk*), a bitter aromatic bark.

an-gry (*ang'gri*), *adj.* inflamed with anger; provoked.

an-guish (*ang'gwish*), *n.* intense pain or grief. [DISTRESS, ANXIETY.]

an-gu-lar (*ang'gu-lĕr*), *adj.* possessing an angle or angles.

an-gus-tate (*an-gus'tāt*), *adj.* narrow at the base and expanded at the top.

an-hy-drous (*an-hī'drus*), *adj.* without water.

an-i-line (*an'i-lin*), *n.* a base used in the formation of many rich dyes obtained from coal tar.

★**an-i-mad-ver-sion** (*an-i-mad-vĕr'shun*), *n.* reproof; censure.

an-i-mad-vert (*an-i-mad-vĕrt'*), *v. i.* to criticise; to censure.

an-i-mal (*an'i-mal*), *n.* an organized living body, sentient, mobile, and locomotive.

an-i-mal-ism (*an'i-mal-izm*), *n.* the state of being animal.

an-i-mal mag-net-ism (*an'i-mal mag'net-izm*), magnetism inherent in animals.

an-i-mate (*an'i-māt*), *v. t.* to impart life to; to inspire with energy or action. [EAGER.]

an-i-ma-tion (*an-i-mā'shun*), *n.* the act of giving life or spirit.

an-i-mos-i-ty (*an-i-mos'i-ti*), *n.* hostility; hatred; active enmity. [ENMITY, FEUD.]

an-i-mus (*an'i-mus*), *n.* a hostile spirit or purpose.

an-ise (*an'is*), *n.* the common name for a plant (indigenous in Egypt) yielding the aniseed of commerce.

an-kle (*ang'kl*), *n.* the joint or articulation connecting the foot with the leg.

an-klet (*ang'klet*), *n.* an ornament or support for the ankle.

an-ky-lo-sis (*ang'ki-lō-sis*), *n.* the joining or consolidation of parts formerly or normally separate by means of bony growth.

Anna or **Anne.** Same origin as *Hannah*. Dan., *Anna*; Dutch, *Anna*; Fr., *Anne*; Ger., *Anne*; It., *Anna*; Lat., *Anna*.

an-nal-ist (*an'nal-ist*), *n.* a compiler of annals.

an-nals (*an'nalz*), *n. pl.* a description, history, or chronicle issued from time to time.

an-neal (*an-nēl'*), *v. t.* to heat or fix by heat.

an-nex (*an-neks'*), *v. t.* to add or affix at the end: *n.* (*an-neks'* or *an'neks*), that which is added; an addition. [ADD.]

an-nex-a-tion (*an-neks-ā'shun*), *n.* the act of annexing.

an-ni-hi-late (*an-nī'hi-lāt*), *v. t.* to reduce to nothing.

an-ni-hi-la-tion (*an-nī-hi-lā'shun*), *n.* the act of annihilating.

an-ni-ver-sa-ry (*an-ni-vĕr'sȧ-ri*), *n* [*pl.* anniversaries (*-riz*)], the recurrence in each year of the date of an event.

an-no-tate (*an'nō-tāt*), *v. t.* to mark or note.

an-no-ta-tion (*an-nō-tā'shun*), *n.* the act of noting or commenting upon.

an-nounce (*an-nouns'*), *v. t.* to proclaim or make known formally or in a public manner.

Syn. ANNOUNCE, advertise, circulate, communicate, declare, enunciate, give notice, give out, herald, make known, notify, proclaim, promulgate, propound, publish, report, reveal, say, spread abroad, state, tell. We *announce* that which has occurred or which is to occur; *advertise* our business; *communicate* our intentions; *enunciate* our views; *notify* an individual, *give notice* to the public; *declare* war; *proclaim* peace; *propound* a question or an argument, *promulgate* views; *report* an interview; *reveal* a secret; *herald* the coming of some great event; *publish* books or magazines. [See *speak.*]

Ant. BURY, conceal, suppress, withhold.

an-nounce-ment (*an-nouns'ment*), *n.* the act of announcing.

an-noy (*an-noi'*), *v. t.* [*p. t.* and *p. p.* annoyed (*-noid'*), *p. pr.* annoying], to vex or trouble by repeated acts; harass or discompose by petty injury or opposition. [INCONVENIENCE.]

an-noy-ance (*an-noi'ȧns*), *n.* the act of annoying or causing vexation. [ABOMINATION.]

an-nu-al (*an'ū-al*), *adj.* once in twelve months; yearly; of or belonging to a year.

an-nu-i-tant (*an-nū'i-tant*), *n.* one who is in receipt of, or is entitled to receive, an annuity.

an-nu-i-ty (*an-nū'i-ti*), *n.* [*pl.* annuities (*-tiz*)], the payment of a sum of money by periodical or yearly installments.

an-nul (*an-nul'*), *v. t.* [*p. t.* and *p. p.* annulled, *p. pr.* annulling], to make void, abolish, or obliterate. [ABOLISH.]

an-nu-lar (*an'ū-lĕr*), *adj.* ring-like.

an-nu-let (*an'ū-let*), *n.* a little ring.

an-nul-ment (*an-nul'ment*), *n.* the act of reducing to nothing.

an-nun-ci-a-tion (*an-nun-si-ā'shun*), *n.* the act of annunciating.

★**Annunciation,** *n.* the church festival (Lady-day, March 25) commemorating the intimation of the Incarnation made by the angel Gabriel to the Virgin Mary.

an-nun-ci-a-tor (*an-nun'shi-ā-tĕr*), *n.* a signaling apparatus; an indicator.

an-ode (*an'ōd*), *n.* the path of the electric current from the positive to the negative pole.

an-o-dyne (*an'ō-dīn*), *adj.* assuaging pain: *n.* a drug which relieves pain.

a-noint (*ȧ-noint'*), *v. t.* to pour oil upon, in a religious ceremony.

★**a-nom-a-lous** (*ȧ-nom'ȧ-lus*), *adj.* deviating from the common order; abnormal. [ABSURD.]

a-nom-a-ly (*ȧ-nom'ȧ-li*), *n.* deviation from the natural order.

a-non (*ȧ-non'*), *adv.* soon; straightway; again.

an-o-nym-i-ty (*an-ō-nim'i-ti*), *n.* the state of being anonymous.

a-non-y-mous (*ȧ-non'i-mus*), *adj.* bearing no author's name; nameless.

an-oth-er (*an-uth'ĕr*), *adj.* and *pron.* one more; not the same.

Anselm (*an'selm*). From the Teutonic, meaning "divine helmet," hence "a defender." Dutch, *Anselmus*; Fr., *Anselme*; Ger., *Anselm*; It., *Anselmo*; Lat., *Anselmus*; Sp., *Anselmo*.

an-swer (*an'sĕr*), *v. t.* to swear in opposition to; to reply to a charge.

Syn. ANSWER, reply, rejoinder, response. An *answer* is given to a question; a *reply* is made to an assertion; a *rejoinder* is made to a reply; a *response* is made in accordance with the words of another. We *answer* either for the purpose of affirmation, information or contradiction; we always *reply*, or *rejoin*, in order to explain or confute; *responses* are made by way of assent or confirmation.

Ant. CHARGE, question.

an-swer-a-ble (*an'sĕr-ȧ-bl*), *adj.* liable to give answer; responsible. [CORRESPOND.]

ant (*ȧnt*), *n.* a small social insect of the hymenoptera.

ant-ac-id (*ant-as'id*), *adj.* counteracting acidity.
an-tag-o-nism (*an-tag'ō-nizm*), *n.* the active opposition of two opponents or opposing forces. [ANTIPATHY.]
an-tag-o-nist (*an-tag'ō-nist*), *n.* a competitor.
an-tag-o-nize (*an-tag'ō-nīz*), *v. t.* to oppose; hinder.
★**ant-arc-tic** (*ant-ärk'tik*, not *ant-är'tik*), *adj.* opposite to arctic; pertaining to the south polar regions; southern.
Antarctic Ocean. Denotes the ocean *anti*, "against" or "opposite to" the Arctic Ocean.
ant-bear (*ant'-bär*), *n.* the name sometimes given (from its likeness to a bear) to the great ant-eater of South America.
ant-eat-er (*ant'-ēt-ĕr*), *n.* the name applied to a group of quadrupeds which feed upon ants.
an-te-cede (*an-tē-sēd'*), *v. t.* to precede or go before in time or space.
an-te-ced-ence (*an-tē-sēd'ens*), or **antecedency** (*'en-si*), *n.* precedence.
★**an-te-ced-ent** (*an-tē-sēd'ent*), *adj.* preceding: *n.* the substantive or noun to which a relative or other pronoun refers; *pl.* the previous events of a person's life.
an-te-cham-ber (*an'tē-chām-bĕr*), *n.* an apartment next the principal room.
an-te-date (*an'tē-dāt*), *v. t.* to carry back to an earlier period.
an-te-di-lu-vi-an (*an-tē-di-lū'vi-an*), *adj.* of or pertaining to the world before the flood.
an-te-lope (*an'tē-lōp*), *n.* the name given to numerous species of deer-like ruminants, intermediate between the deer and the goat.
an-te-me-rid-i-an (*an-tē-mē-rid'i-an*), *adj.* preceding noon.
ant-e-met-ic (*ant-ē-met'ik*), *adj.* allaying vomiting.
an-ten-na (*an-ten'nä*), *n.* [*pl.* antennæ (*'nē*)], the jointed horns or feelers upon the heads of insects and crustacea.
★**an-te-pe-nult** (*an-tē-pē'nult*) or **antepenultima** (*an-tē-pē-nult'i-mä*), *n.* the last syllable but two of a word.
an-te-pran-di-al (*an-tē-pran'di-al*), *adj.* before dinner.
an-te-ri-or (*an-tē-ri-ĕr*), *adj.* more to the front; former.
an-te-room (*an'tē-rōōm*), *n.* a room before, or forming an entrance to, another.
ant-hel-ion (*ant-hēl'yun* or *-hē'li-on*), *n.* [*pl.* anthelia (*'yä* or *'li-ä*)], a halo or a colored ring or rings, opposite the sun, formed around the shadow of the head of the observer, as projected on a cloud or moist surface.
an-them (*an'them*), *n.* a composition from the Scriptures or liturgy set to sacred music.
an-ther (*an'thĕr*), *n.* the summit of the stamen of a flower, containing the pollen or fertilizing dust.
an-tho-log-ic-al (*an-thō-loj'i-kal*), *adj.* pertaining to anthology.
an-thol-o-gist (*an-thol'ō-jist*), *n.* one who compiles an anthology.
★**an-thol-o-gy** (*an-thol'ō-ji*), *n.* a collection of choice poems.
an-thra-cite (*an'thrä-sīt*), *n.* a nonbituminous coal which burns without smoke.
an-thrax (*an'thraks*), *n.* [*pl.* anthraces (*'thrä-sēz*)], a carbuncle, or malignant boil.
★**An-thro-poid-e-a** (*an-thro-poid'ē-ä*), *n. pl.* a suborder of primate mammals, including man, the apes, and monkeys.
an-thro-po-log-ic-al (*an-thrō-pō-loj'i-kal*), *adj.* pertaining to anthropology.
★**an-thro-pol-o-gist** (*an-thrō-pol'ō-jist*), *n.* a student of anthropology.
an-thro-pol-o-gy (*an-thrō-pol'ō-ji*), *n.* the science of man.
an-thro-pom-e-try (*an-thrō-pom'ē-tri*), *n.* the measurement of the human body.
★**an-thro-po-mor-phism** (*an-thrō-pō-môr'fizm*), *n.* the ascription of a human form and attributes to the deity.
an-tic (*an'tik*), *adj.* grotesque: *n.* a clown.
An-ti-christ (*an'ti-krist*), *n.* an opponent of Christ, especially the great personal opponent expected to appear before the end of the world.
an-tic-i-pant (*an-tis'i-pant*), *adj.* that which operates beforehand.
an-tic-i-pate (*an-tis'i-pāt*), *v. t.* to take beforehand; use in advance; look for as certain.
Syn. ANTICIPATE, apprehend, expect, forecast, foretaste, hope, look forward to. *Anticipate* is allied with *prevent* and *expect;* as, a boy *expects* to grow to manhood. We *hope* for that which we desire and *expect; apprehend* what we both *expect* and fear; *anticipate* that which we *expect* both with confidence and pleasure. [See *abide, prevent.*]
Ant. DESPAIR OF, doubt, fear, remember.
an-tic-i-pa-tion (*an-tis-i-pā'shun*), *n.* the act of taking beforehand; expectation.
an-tic-i-pa-tive (*an-tis'i-pā-tiv*), or **anticipatory** (*-pā-tō-ri*), *adj.* taking beforehand; anticipating.
an-ti-cli-max (*an-ti-klī'maks*), *n.* a ludicrous descent in thought and expression; bathos.
an-ti-cy-clone (*an-ti-sī'klōn*), *n.* a meteorological condition in which the ordinary features of a cyclone are reversed.
an-ti-do-tal (*an'ti-dō-tal*), *adj.* of the nature or quality of an antidote.
an-ti-dote (*an'ti-dōt*), *n.* a substance which acts medicinally as a counteractive to the effects of poison or disease.
an-ti-fat (*an'ti-fat*), *adj.* available for preventing or reducing fatness.
an-ti-mo-ni-al (*an-ti-mō'ni-al*), *adj.* pertaining to antimony.
an-ti-mo-nite (*an'ti-mō-nīt*), *n.* native sulphide of antimony.
an-ti-mo-ny (*an'ti-mō-ni*), *n.* a white lustrous metal.
an-ti-no-mi-an-ism (*an-ti-nō'mi-an-izm*), *n.* the tenets of the Antinomian sect.
an-tin-o-my (*an-tin'ō-mi*), *n.* [*pl.* antinomies (*-miz*)], the opposition of one law or part of a law to another.
★**an-tip-a-thy** (*an-tip'ä-thi*), *n.* [*pl.* antipathies (*-thiz*)], natural aversion.
Syn. ANTIPATHY, abhorrence, antagonism, aversion, detestation, disgust, dislike, distaste, hatred, hostility, opposition, repugnance, repulsion. *Antipathy* is an instinctive recoil from connection or association with a person or thing; *antagonism* results from the necessity of circumstances; *opposition* springs from conflicting views or interests; *abhorrence* and *detestation* may result from religious and moral training;| *distaste* and *disgust* may be acquired; *aversion* is a deep and permanent *dislike;* a natural *antipathy* may give rise to *opposition* which may result in *hatred* and *hostility.* [See *acrimony, anger, enmity, hate.*]
Ant. AFFINITY, agreement, congeniality, harmony, sympathy.
★**an-ti-phlo-gis-tic** (*an-ti-flō-jis'tik*), *adj.* efficacious in counteracting fever or inflammation.
an-ti-phon (*an'ti-fon*), or **antiphone** (*-fōn*), *n.* a chant or hymn rendered alternately by two choirs.
an-tiph-o-nal (*an-tif'ō-nal*), *adj.* characterized by antiphony or responsive singing.
an-tiph-o-na-ry (*an-tif'ō-nā-ri*), *n.* [*pl.* antiphonaries (*-riz*)], a book of responses used in the services.
an-tiph-o-ny (*an-tif'ō-ni*), *n.* [*pl.* antiphonies (*-niz*)], the alternate or responsive rendering of psalms or canticles by a dual choir.
an-tiph-ra-sis (*an-tif'rä-sis*), *n.* the employment of a word, or words, in a sense contrary to its, or their, true meaning.
★**an-ti-pode** (*an'ti-pōd*), *n.* [*pl.* antipodes (*an'ti-pōdz*)], one who resides on the opposite side of the earth.
★**an-tip-o-des** (*an-tip'ō-dēz*), *n. pl.* two portions of the earth's surface which are exactly opposite to each other; the direct opposite of a person or thing.
★**an-ti-py-rine** (*an-ti-pī'rin*), *n.* a drug, obtained from coal tar, employed for the relief of neuralgia.
an-ti-qua-ri-an (*an-ti-kwā'ri-an*), *adj.* pertaining to antiquaries or to antiquity: *n.* an antiquary.
an-ti-qua-ri-an-ism (*an-ti-kwā'ri-an-izm*), *n.* the attachment to what is old or antiquated.
an-ti-qua-ry (*an'ti-kwā-ri*), *n.* one who is attached to ancient things and is learned in their history.
an-ti-qua-ted (*an'ti-kwā-ted*), *p. adj.* grown old. [ANTIQUE, OBSOLETE.]
★**an-tique** (*an-tēk'*), *adj.* of or belonging to a former age; ancient.
Syn. ANTIQUE, ancient, antiquated, old-fashioned, quaint, superannuated. *Antique* refers to *ancient, antiquated* to discarded style. We speak of *antique* architecture, and *antiquated* customs; an *old-fashioned* fireplace; a *quaint* gambrel-roofed house; a *superannuated* person, incapacitated by reason of age.
Ant. FASHIONABLE, modern, new, stylish.
an-tiq-ui-ty (*an-tik'wi-ti*), *n.* [*pl.* antiquities (*-tiz*)], great age; ancientness; early ages.
an-ti-scor-bu-tic (*an-ti-skôr-bū'tik*), *adj.* and *n.* counteracting or a remedy for scurvy.
an-ti-Sem-it-ism (*an-ti-sem'it-izm*), *n.* antagonism to the Jewish race.
an-ti-sep-sis (*an-ti-sep'sis*), *n.* the exclusion of bacteria from wounds, etc., by the use of antiseptics.
an-ti-sep-tic (*an-ti-sep'tik*), *adj.* destructive to the germs of disease or putrefaction. [slavery.
an-ti-sla-ver-y (*an-ti-slā'vĕr-i*), *adj.* opposed to
an-tis-tro-phe (*an-tis'trō-fē*), *n.* in the ancient Greek chorus, the alternating part immediately following the strophe.
★**an-tith-e-sis** (*an-tith'ē-sis*), *n.* [*pl.* antitheses (*-sēz*)], opposition; contrast.
an-ti-thet-ic (*an-ti-thet'ik*), or **an-ti-thet-i-cal** (*'i-kal*), *adj.* pertaining to antithesis.
★**an-ti-tox-in** (*an-ti-toks'in*), *n.* a serum used hypodermically as a preventive of, or cure for, diphtheria.
an-ti-trade (*an'ti-trād*), *n.* a tropical wind blowing steadily in an opposite direction to the trade wind. [type.
an-ti-type (*an'ti-tīp*), *n.* that prefigured by the
an-ti-zy-mot-ic (*an-ti-zi-mot'ik*), *adj.* preventing fermentation.
ant-ler (*ant'lĕr*), *n.* an individual branch of a stag's horn.
ant-li-on (*ant'-li-un*), *n.* a neuropterous insect whose larva constructs a pitfall for ants and other insects.
Antony (*an'tō-nē*), **Anthony.** From Latin *Antonius*, meaning "inestimable." According to Littleton, the Antonian family were descended from *Antius*, son of Hercules. Danish, *Anton;* Dutch, *Anton, Antoon,* or *Antonius;* Fr., *Antoine;* Ger., *Anton;* It., *Antonio;* Port., *Antonio;* Sp., *Antonio;* Sw., *Anton.*
★**an-to-nym** (*an'tō-nim*), *n.* a word opposed to another in meaning.
an-trum (*an'trum*), *n.* a sinus or cavity in a body.
★**Antwerp** (*ant'wĕrp*). From *andoverpum*, "at the wharf"; *werf*, a dam or wharf; literally, "what is thrown up"—*werfen.* A seaport of Belgium.
a-nus (*ā'nus*), *n.* the terminal portion of the rectum.
an-vil (*an'vil*), *n.* an iron block used for the hammering and shaping of metals.
anx-i-e-ty (*ang-zī'ē-ti*), *n.* [*pl.* anxieties (*-tiz*)], a condition of mental uneasiness arising from fear or solicitude.
Syn. ANXIETY, anguish, apprehension, care, concern, disturbance, dread, fear, foreboding, fretfulness, fretting, misgiving, perplexity, solicitude, trouble, worry. *Anxiety*| is a choking *disquiet,* akin to *anguish; anxiety* is mental; *anguish* may be mental or physical; *anxiety* refers to some future event, always suggesting hopeful possibility, and thus differing from *apprehension, fear, dread, foreboding, terror,* all of which may be full of despair. *Worry* is more petty, restless, and manifest *anxiety,* communicated to all around. *Solicitude* is a milder *anxiety. Fretting* or *fretfulness* is weak complaint. *Perplexity* often involves *anxiety,* but may be quite free from it. [See *distress.*]
Ant. APATHY, assurance, calmness, confidence, ease, tranquillity.
anx-ious (*ängk'shus*), *adj.* deeply concerned; very solicitous; apprehensive. [EAGER.]
an-y (*en'i*), *adj.* and *pron.* one, indeterminately, unlimited; some, an indefinite number, quantity.
★**a-or-ta** (*ā-ôr'tä*), *n.* [*pl.* aortæ (*-tē*)], the chief artery or main trunk of the arterial system. [speedily.
a-pace (*ä-pās'*), *adv.* quickly; at a quick pace;
a-pa-che (*ä-pä'chä*), *n.* one of a band of lawless persons who frequent the streets, as of Paris, at night and prey upon the pedestrians; a nocturnal prowler.
★**Apalachee** (*ap-ä-lach'ē*) **bay, Fla.** Variously spelled *Apahlahche, Apeolatei, Palaxy, Palatcy;* the prefix is supposed to be Spanish, and the word in full is said to mean "the men."
★**Apalachicola** (*ap-ä-lach-i-kō'lä*) **river, Fla.** From an Indian town *Apalatchiokli,* "those on the other side."
a-part (*ä-pärt'*), *adv.* separately; aside; asunder.
a-part-m[illegible] (*ä-pärt'ment*), *n. pl.* a set or suite of two or [illegible]ms of a house set apart as lodgings. [LOD[illegible]
ap-a-t[illegible] [illegible]*tik*), or **ap-a-thet-i-cal** ('*i-*[illegible]ling or emotion.
ap-a-[illegible] [illegible]hies (*-thiz*)], lack of fe[illegible]n. [STUPIDITY.]
ap-a[illegible] [illegible]e phosphate of li[illegible]
ape[illegible] [illegible]ecth the same i[illegible]
a-p[illegible] [illegible] position.
★**[illegible]** [illegible] the name [illegible]ly. The [illegible]denoted [illegible]*Peninus* [illegible]ially [illegible]re.
a[illegible]
a[illegible]
a[illegible]
a[illegible]
A[illegible]

by acknowledging ourselves guilty of it; we *defend* ourselves against a charge by proving its fallacy; we *justify* our conduct against any imputation by proving that it was blameless; we *exculpate* ourselves from all blame by proving that we took no part in the transaction. *Excuse* and *plea* are not grounded on any idea of innocence; a *plea* is frequently an idle or unfounded *excuse*, a frivolous attempt to lessen displeasure; we *excuse* ourselves for a neglect by alleging indisposition.

★**ap-o-logue** (*ap'ō-log*, not *ap'ō-lōg*), *n.* a moral fable; a fiction or allegory. [FICTION.]

a-pol-o-gy (*ȧ-pol'ō-ji*), *n.* [*pl.* apologies (*-jiz*)], a vindication or excuse.

ap-o-phthegm. See *apothegm.*

ap-o-plec-tic (*ap-ō-plek'tik*), or **ap-o-plec-ti-cal** (*'ti-kal*), *adj.* pertaining to, or of the nature of, apoplexy; afflicted with apoplexy.

ap-o-plex-y (*ap'ō-pleks-i*), *n.* the sudden loss of consciousness and motive power.

a-port (*ȧ-pōrt'*), *adv.* on or toward the port or left side of a ship.

a-pos-ta-sy (*ȧ-pos'tȧ-si*), *n.* [*pl.* apostasies (*-siz*)], the forsaking or abandonment of what one has hitherto professed or adhered to.

a-pos-tate (*ȧ-pos'tāt*), *n.* one who has forsaken or apostatized his faith or party.

a-pos-ta-tize (*ȧ-pos'tȧ-tīz*), *v. i.* to abandon one's faith, church, or party.

★**a-pos-tle** (*ȧ-pos'l*), *n.* one charged with a high mission; one of the twelve persons specially selected by Christ to propagate his gospel.

a-pos-tles' creed (*krēd*), the shortest of the three creeds, so named as containing a summary of apostolical doctrine.

ap-os-tol-ic (*ap-os-tol'ik*) or **ap-os-tol-ic-al** (*'i-kal*), *adj.* of or pertaining to an apostle or apostles, and their age, doctrine, or practice; papal.

ap-os-tol-i-cal suc-ces-sion (*suk-sesh'un*), the regular and uninterrupted transmission of ministerial authority by bishops from the apostles.

a-pos-tro-phe (*ȧ-pos'trō-fē*), *n.* a breaking off in a speech to address directly a person or persons who may or may not be present.

a-pos-tro-phize (*ȧ-pos'trō-fīz*), *v. t.* to address by apostrophe; omit a letter or letters; mark an omission by the sign ('). [ADDRESS.]

a-poth-e-ca-ry (*ȧ-poth'ē-kā-ri*), *n.* [*pl.* apothecaries (*-riz*)], one who prepares and dispenses medicines and drugs for profit.

a-poth-e-ca-ries' weight (*wāt*), [illegible] the weight used for dispensing drugs, and [illegible]prising the pound (12 oz.), the ounce ([illegible]), the dram (3 scruples), the scruple (2[illegible]), the grain.

ap-o-them (*ap'ō-them*[illegible]) [illegible]ing a wholesome [illegible]mbodying

★**ap-o-the-o-sis** [illegible] *n.* [*pl.* apothe[illegible] *-sis*),

★**Ap-pa-la-ch**[illegible] *chi-an*) **mo**[illegible] *ā-lā'-*[illegible] or the an[illegible] river, Soto in F[illegible] De

ap-pall (*a*[illegible] *pr.* appall[illegible]

★**ap-p**[illegible] *n.* *sing*[illegible]

[illegible] *t.* [illegible] to [illegible] le [illegible] y [illegible] s [illegible] o [illegible] o [illegible] i [illegible] i [illegible] y [illegible] ny

ap-pen-dix (*ap-pen'diks*), *n.* [*pl.* appendixes (*-ez*) and appendices (*'di-sēz*)], that which is added as supplemental.

ap-per-tain (*ap-pēr-tān'*), *v. i.* to belong or pertain to.

ap-pe-tite (*ap'pē-tit*), *n.* the desire for gratification of some want, craving, or passion.

ap-pe-ti-zer (*ap'pē-ti-zēr*), *n.* something that excites or whets the appetite.

Appian way. The *Via Appia* of ancient Rome, most famous of Roman highways. It ran from Rome to Brundisium (Brindisi), and is probably the first great Roman road which was formally undertaken as a public work.

ap-plaud (*ap-plawd'*), *v. t.* to praise. [ADMIRE.]

ap-plause (*ap-plawz'*), *n.* the expression of approval by clapping.

ap-ple (*ap'pl*), *n.* the round, fleshy fruit of the apple tree.

ap-pli-ance (*ap-plī'ans*), *n.* the act of applying.

ap-pli-ca-ble (*ap'pli-kȧ-bl*), *adj.* capable of being applied.

ap-pli-cant (*ap'pli-kant*), *n.* one who applies.

ap-pli-ca-tion (*ap-pli-kā'shun*), *n.* the act of applying, putting to, or on.

★**ap-pli-qué** (*ȧ-plē-kā'*), *n.* a method of ornamentation in dress or upholstery.

ap-ply (*ap-plī'*), *v. t.* [*p. t.* and *p. p.* applied, *p. pr.* applying], to place one to another; lay on; put into practice.

ap-point (*ap-point'*), *v. t.* to fix; settle; found; make fast. [CONSTITUTE.]

ap-point-ment (*ap-point'ment*), *n.* the act of appointing; the assigning to an office or trust.

★**Appomattox** (*ap-pō-mat'oks*). River and county in Virginia.

ap-por-tion (*ap-pōr'shun*), *v. t.* to assign by equal or proportionate division.

ap-por-tion-ment (*ap-pōr'shun-ment*), *n.* the act of apportioning.

★**ap-po-site** (*ap'pō-zit*), *adj.* proper; fit, pertinent.

ap-po-si-tion (*ap-pō-zish'un*), *n.* the act of adding to; the placing of a second noun in the same case in juxtaposition to the first, which it characterizes or explains.

ap-prais-al (*ap-prāz'al*), *n.* the act of appraising.

ap-praise (*ap-prāz'*), *v. t.* to set a price upon; value.

ap-pre-ci-a-ble (*ap-prē'shi-ȧ-bl*), *adj.* capable of being appreciated.

ap-pre-ci-ate (*ap-prē'shi-āt*), *v. t.* to value; estimate.

ap-pre-ci-a-tion (*ap-prē-shi-ā'shun*), *n.* the just valuation of worth or merit.

ap-pre-ci-a-tive (*ap-prē'shi-ā-tiv*), *adj.* exhibiting appreciation.

ap-pre-hend (*ap-prē-hend'*), *v. t.* to take or lay hold of; seize; *v. i.* to form a conception.

Syn. APPREHEND, conceive, suppose, imagine. To *apprehend* is simply to take an idea into the mind; thus we may *apprehend* any object that we hear or see; to *conceive* is to form an idea in the mind, as to *conceive* the idea of doing anything, to *conceive* a design. What one *supposes* may admit of a doubt, it is frequently only conjectural; what one *imagines* may be altogether improbable or impossible, or may be too improbable to admit of being believed. [ANTICIPATE.]

ap-pre-hen-sion (*ap-prē-hen'shun*), *n.* the act of seizure or laying hold of; arrest; anticipation of evil. [ANXIETY.]

ap-pre-hen-sive (*ap-prē-hen'siv*). *adj.* suspicious; perceptive.

ap-pren-tice (*ap-pren'tis*), *n.* one bound or articled to learn some trade or craft.

ap-prize (*ap-prīz'*), *v. t.* to give notice to; inform.

ap-proach (*ap-prōch'*), *v. i.* to draw or grow near; *n.* the act of drawing near. [ADDRESS.]

ap-pro-bate (*ap'prō-bāt*), *v. t.* to express approval of; license or sanction.

ap-pro-ba-tion (*ap-prō-bā'shun*), *n.* the act of approving; commendation. [ASSENT.]

ap-pro-pri-a-ble (*ap-prō'pri-ȧ-bl*), *adj.* capable of appropriation.

ap-pro-pri-ate (*ap-prō'pri-āt*), *v. t.* to take to one's self, in exclusion of others.

ap-pro-pri-a-tion (*ap-prō-pri-ā'shun*), *n.* the act of assigning to one's self.

ap-prov-al (*ap-prōōv'al*), *n.* approbation; sanction.

ap-prove (*ap-prōōv'*), *v. t.* to prove, test, or demonstrate; be pleased or satisfied with. [ADMIRE.]

★**ap-prox-i-mate** (*ap-proks'i-māt*), *v. t.* to bring or carry near; cause to approach.

ap-prox-i-mate-ly (*ap-proks'i-māt-li*), *adv.* very nearly, but not absolutely.

ap-prox-i-ma-tion (*ap-proks-i-mā'shun*), *n.* the act of approximating.

ap-pulse (*ap-puls'*), or **appulsion** (*-pul'shun*), *n.* a coming toward.

ap-pur-te-nance (*ap-pūr'tē-nans*), *n.* that which belongs or relates to something else.

★**a-pri-cot** (*ā'pri-kot*, not *ap'ri-kot*) *n.* the fruit of a tree allied to the plum.

A-pril (*ā'pril*). From *aperio*, "I open," this being the month in which the buds shoot forth.

April fool, one who is imposed upon or deceived in a jocular manner on April 1st, or All Fools' day.

a-pron (*ā'pērn*), *n.* a portion of cloth, leather, or other material, worn as a protective or ornamental covering to the front of the person.

apse (*aps*), *n.* [*pl.* apses (*'ez*)], a polygonal or semicircular recess terminating the choir or other portion of a church.

apt (*apt*), *adj.* suitable; pertinent; appropriate. [FIT, READY.]

ap-ti-tude (*ap'ti-tūd*), *n.* capacity for anything.

★**a-qua** (*ā'kwȧ*), *n.* a term used in pharmacy in the abbreviated form of *aq.*, and denoting water.

★**a-qua am-mo-ni-æ** (*am-mō'ni-ē*), water containing an infusion of ammonia gas.

★**a-qua for-tis** (*fôr'tis*), (strong water) impure nitric acid.

★**a-qua-ma-rine** (*ā-kwȧ-mȧ-rēn'*), *n.* a pale bluish-green variety of beryl.

★**a-qua re-gi-a** (*ā'kwȧ rē'ji-ȧ*), (royal water) a mixture of nitric and hydrochloric acids, capable of dissolving gold.

★**a-qua-ri-um** (*ȧ-kwā'ri-um*, not *ā-kwā'ri-um*), *n.* [*pl.* aquariums (*-umz*) and aquaria (*-ȧ*)], a tank or globe for the keeping and cultivation of aquatic plants and animals.

a-quat-ic (*ȧ-kwat'ik*), *adj.* pertaining to water.

a-quat-int (*ā'kwȧ-tint*), *n.* a species of etching resembling a water-color drawing in india ink or in sepia.

★**a-qua vi-tæ** (*ā'kwȧ vī'tē*), (water of life) unrectified alcohol; brandy and other ardent spirits.

★**aq-ue-duct** (*ak'wē-dukt*, not *ak'wē-duk*), *n.* a structure in the form of a conduit or artificial channel for conducting water from a source.

★**a-que-ous** (*ā'kwē-us*, not *ak'wē-us*), *adj.* of the nature of, or abounding in, water.

aq-ui-line (*ak'wi-lin* or *-līn*) *adj.* belonging to, or resembling, an eagle.

★**Ar-ab** (*ar'ab*), *n.* a native of Arabia; a desert dweller.

Arabella (*ar-ȧ-bel'lȧ*). Corrupted from the old name, *Orragel*, *Oraglee*, meaning a "fair altar." Dutch, *Arabella;* Fr., *Arabelle;* Ger., *Arabelle;* It., *Arabella;* Lat., *Arabella.*

ar-a-besque (*ar-ȧ-besk'*), *n.* the style of Arabic decorative art which consists of the painting, inlaying, or carving in low relief of figures of plants, fruits, flowers, and foliage, variously combined or fantastically grouped.

Arabia (*ȧ-rā'bi-ȧ*). The country of the Arabs, "men of the desert."

★**Ar-a-bic nu-mer-als** (*ar'ȧ-bik nū'mēr-alz*), the figures 0, 1, 2, 3, etc., of Indian origin, used by the Arabs, and introduced into Europe in the twelfth century.

ar-a-ble (*ar'ȧ-bl*), *adj.* fit for the plow.

ar-bi-ter (*ār'bi-tēr*), *n.* an umpire or judge.

ar-bit-ra-ment (*ār-bit'rȧ-ment*), *n.* the decision of arbitrators.

ar-bi-tra-ri-ly (*ār-bi-trā'ri-li*), *adv.* in a capricious manner.

ar-bi-tra-ry (*ār'bi-trā-ri*), *adj.* depending on the will of the arbiter; imperious. [ABSOLUTE.]

ar-bi-trate (*ār'bi-trāt*), *v. i.* and *v. t.* to act as arbiter; to settle, as a dispute.

ar-bi-tra-tion (*ār-bi-trā'shun*), *n.* the settlement of a dispute by an umpire.

ar-bi-tra-tor (*ār'bi-trā-tēr*), *n.* an umpire.

ar-bor (*ār'bēr*), *n.* a bower; a shaded nook or walk.

Ar-bor day (*ār'bēr dā*). A day legally set apart in certain states for planting trees.

★**ar-bo-re-tum** (*ār-bō-rē'tum*), *n.* [*pl.* arboreta (*-tȧ*) and arboretums (*-tumz*)], a place in which rare trees are cultivated and exhibited.

ar-bor-i-cul-ture (*ār-bor-i-kul'tūr*), *n.* the cultivation of trees.

★**ar-bor vi-tæ** (*ār'bēr vī'tē*), an evergreen tree extensively cultivated in gardens, etc.

arc (*ārk*), *n.* a curved line or any part of a curve forming the segment of a circle.

ar-cade (*ār-kād'*), *n.* an arched gallery, or promenade, lined with shops.

ar-ca-di-an (*ār-kā'di-an*), *adj.* rurally simple.

ar-ca-num (*ār-kā'num*), *n.* [*pl.* arcana (*'nȧ*)], a secret; a mystery.

★**Arc de Triomphe de l'Etoile** (*ārk du trē-ôнf' du lā-twȧl'*). Meaning, "triumphal arch of the star." The largest triumphal arch in existence, at the head of the Champs Elysées, Paris.

arch (*ārch*), *n.* a structure of brick or masonry, the component wedge-shaped parts of which follow a curved line; any curvature having the form of an arch.

ar-chæ-o-log-ic (*ār-kē-ō-loj'ik*) or **ar-chæ-o-log-i-cal** (*'i-kal*), *adj.* pertaining to the study of antiquities.

★**ar-chæ-ol-o-gist** or **archeologist** (*ār-kē-ol'ō-jist*), *n.* one versed in the study of ancient things; an antiquary.

ar-chæ-ol-o-gy or **archeology** (*ār-kē-ol'ō-ji*), *n.* the science of antiquities.

ar-cha-ic (*ār-kā'ik*) or **ar-cha-i-cal** (*'i-kal*), *adj.* old-fashioned; antiquated. [OBSOLETE.] [use.

ar-cha-ism (*ār'kā-izm*), *n.* antiquity of style or

arch-an-gel (*ārk-ān'jel*), *n.* an angel of the highest order.

Archangel. City of Russia, named in honor of the archangel Michael.

★**arch-bish-op** (*ārch-bish'up*, not *arch'bish-up*), *n.* a chief bishop, one who supervises the bishops in his province.

arch-dea-con (*ārch-dē'kn*), *n.* a dignitary ranking next below a bishop.

arch-duch-ess (*ārch-duch'es*), *n.* the wife of an archduke; a daughter of the emperor of Austria.

arch-duch-y (*ārch-duch'i*), *n.* [*pl.* archduchies (*'iz*)], the territory or rank of an archduke.

arch-duke (*ārch-dūk'*), *n.* a prince of the imperial house of Austria.

arch-en-e-my (*ärch-en'ē-mi*), *n.* a principal enemy.
arch-er (*ärch'ĕr*), *n.* a bowman.
arch-er-y (*ärch'ĕr-i*), *n.* the art or skill of one who uses the bow and arrow.
★**ar-che-type** (*är'kē-tīp*, not *är'chē-tīp*), *n.* the original type or pattern upon or after which a thing is made.
Archibald (*är'chi-bald*). From the Old German name *Ercheneals, Erchanpald*; from *erchanbald*, "bold in work or activity." Fr., *Archambaud*; Lat., *Archibaldus*. [arched work.
arch-ing (*ärch'ing*), *adj.* curving like an arch; *n.*
★**ar-chi-pe-lag-ic** (*är-ki-pē-laj'ik*), *adj.* pertaining to a collection of islands with the sea dividing them.
★**ar-chi-pel-a-go** (*är-ki-pel'ä-gō*, not *är-chi-pel'ä-gō*), *n.* [*pl.* archipelagoes or -gos (*-gōz*)], any sea or body of salt water interspersed with numerous islands.
★**ar-chi-tect** (*är'ki-tekt*, not *är'chi-tekt*), *n.* one versed in the art of building and the various styles of architecture.
★**ar-chi-tec-tu-ral** (*är-ki-tek'tū-ral*), *adj.* pertaining to the art of building.
★**ar-chi-tec-ture** (*är'ki-tek-tūr*), *n.* the science or art of building.
★**ar-chi-trave** (*är'ki-trāv*, not *är'chi-trāv*), *n.* the lowest division of an entablature, or that part which rests immediately on the column.
ar-chive (*är'kīv*), *n.* [*pl.* archives (*'kīvz*)], a record preserved as evidence; *pl.* the place where public or state records are kept.
arch-ly (*ärch'li*), *adv.* roguishly; waggishly; coyly.
arch-ness (*'nes*), *n.* shyness; coyness.
Arch of Constantine (*kon'stan-tīn*). An arch in Rome built 312 A. D., in honor of Constantine's triumph over Maxentius.
Arch of Septimius Severus. An arch in the Roman forum, dedicated 203 A. D., in commemoration of victories over the Parthians.
Arch of Titus. An arch in Rome, built in commemoration of the taking of Jerusalem.
Arch of Trajan. Arch over the Appian way at Benevento, Italy, dedicated 114 A. D., and one of the finest of ancient arches.
arc lamp (*ärk lamp*), a lamp having a luminous bridge or arc.
arc light (*līt*), a light produced by a current of electricity passing between two carbon points.
★**arc-tic** (*ärk'tik*, not *är'tik*). The word *arctic* is derived from the Greek name for the constellation of the Bear, *Arctos*, and means "near Arctos"; *i. e.*, "in the extreme north."
arc-tic cir-cle (*sĕr'kl*), an imaginary circle parallel to the equator and distant 23° 28′ from the north pole.
ar-dent (*är'dent*), *adj.* hot; burning; fiery; warm. [HOT, EAGER.]
ar-dor (*är'dĕr*), *n.* heat in a physical sense; warmth of affection or passion. [FERVOR, ZEAL.]
ar-du-ous (*är'dū-us*), *adj.* steep; hard to climb; difficult.
★**a-re-a** (*ā'rē-ä*, not *ā-rē'ä*), *n.* [*pl.* areas (*-äz*)], any plane surface having bounds, whether natural or artificial, as the floor of a hall, etc.
a-re-na (*ä-rē'nä*), *n.* [*pl.* arenas (*'näz*)], the central inclosed space of a Roman amphitheater.
★**Areopagus** (*ar-ē-op'ä-gus*). From the Greek *Areios pagos*, "Martial hill"; *i. e.*, "hill of Mars." A low, rocky hill at Athens continuing westward in line with the Acropolis, from which it is separated by a depression of ground.
ar-gand lamp (*är'gand lamp*), a lamp having a hollow circular wick to permit the passage of air inside and outside the flame.
ar-gent (*är'jent*), *n.* the silver of a coat of arms.
Argentina (*är-jen-tē'nä*). Now the Argentine Republic, South America.
ar-gil (*är'jil*), *n.* potter's clay or earth.
ar-gol (*är'gol*), *n.* crude tartar, from which cream of tartar is prepared.
ar-gon (*är'gun*), *n.* an element associated with nitrogen, and forming one of the constituents of the air.
★**ar-go-naut** (*är'gō-nawt*), *n.* a cephalopod commonly known as the paper nautilus.
★**ar-go-sy** (*är'gō-si*), *n.* [*pl.* argosies (*-siz*)], a large, richly freighted merchant vessel.
ar-gue (*är'gū*), *v. i.* to show or offer reasons in support of, or in opposition to, a proposition.
ar-gu-ment (*är'gū-ment*), *n.* that which is advanced in support or proof with a view to persuade.
ar-gu-men-ta-tion (*är-gū-men-tā'shun*), *n.* the act of arguing.
★**ar-gu-men-ta-tive** (*är-gū-men'tä-tiv*), *adj.* consisting of, or exhibiting, a process of reasoning.
ar-gus-eyed (*är'gus-id*), *adj.* watchful; vigilant.
★**a-ri-a** (*ä'ri-ä* or *ä'ri-ä*), *n.* an air; a melody or tune for single voice with accompaniment.
★**A-ri-an** (*ä'ri-an*), *adj.* pertaining to the doctrines of the Arian sect.
ar-id (*ar'id*), *adj.* dry; parched up; barren.
a-rid-i-ty (*ä-rid'i-ti*), or **aridness** (*ar'id-nes*), *n.* the state of being dry.
a-right (*ä-rīt'*), *adv.* rightly; in a right way or form.
a-rise (*ä-rīz'*), *v. i.* [*p. t.* arose, *p. p.* arisen, *p. pr.* arising], to mount up or ascend; to come into view.
ar-is-toc-ra-cy (*ar-is-tok'rä-si*), *n.* [*pl.* aristocracies (*-siz*)], the nobility or chief persons in a state.
a-ris-to-crat (*ä-ris'tō-krat* or *ar'is-tō-krat*), *n.* a personage of rank and noble birth; a person who possesses traits supposed to characterize the nobility.
ar-is-to-crat-ic (*ar-is-tō-krat'ik*) or **aristocrat-i-cal** (*'i-kal*), *adj.* pertaining to, or consisting in, a government of the nobles.
a-rith-me-tic (*ä-rith'mē-tik*), *n.* the science of numbers.
ar-ith-met-i-cal (*ar-ith-met'i-kal*), *adj.* of or pertaining to arithmetic.
Arizona (*ar-i-zō'nä*). Generally accepted that the name is derived from an Indian word meaning "arid zone or desert"; but Mowry claims that the name is Aztec, from *arizuma*, signifying "silver bearing." State of the Union.
ark (*ärk*), *n.* the repository of the Covenant, or tables of the Law, in the Jewish tabernacle; the vessel in which Noah and his family were preserved during the deluge.
★**Arkansas** (*är'kan-saw*, not *är-kan'zas*). River, state, county, and town in said state, and city in Cowley county, Kansas. Marquette and other French explorers wrote the word *Alkansas* and [*Akamsca*, from the Indian tribe.
★**Arles** (*ärlz*, Fr., *ärl*). A city in the department of Bouches-du-Rhone, France, situated on the left bank of the eastern arm of the Rhone near its mouth.
Arlington house. A mansion on the heights opposite Washington, District of Columbia, in the midst of the national cemetery.
arm (*ärm*), *n.* the limb of the human body which extends from the shoulder to the hand; the branch of a tree, an inlet of the sea, etc.
arm (*ärm*), *n.* a weapon; a branch of the military service; *v. t.* to furnish or equip with weapons of offense or defense.
ar-ma-da (*är-mä'dä*), *n.* a fleet of armed vessels.
ar-ma-ment (*är'mä-ment*), *n.* a body of forces equipped for war, either military or naval.
ar-ma-ture (*är'mä-tūr*), *n.* armor; that which serves as a means of defense; a piece of soft iron connecting the poles of a magnet.
arm-chair (*ärm'chär*), *n.* a chair furnished with supports for the elbows.
ar-mis-tice (*är'mis-tis*), *n.* a temporary cessation of hostilities; a truce.
arm-let (*ärm'let*), *n.* a bracelet, or piece of armor for the arm.
ar-mor (*är'mĕr*), *n.* defensive arms; protective covering for the body in battle.
ar-mor-clad (*-klad*), *adj.* iron-clad, as a war vessel protected by steel plating.
ar-mor-er (*är'mĕr-ĕr*), *n.* formerly a maker of arms or armor.
ar-mo-ri-al (*är-mō'ri-al*), *adj.* pertaining to armor or to the arms or escutcheon of a family.
ar-mo-ry (*är'mō-ri*), *n.* [*pl* -ries, (*-riz*)], a place for arms or the assembly of soldiers.
ar-mo-zeen or **armozine** (*är-mō-zēn'*), *n.* a thick plain silk, generally black, used for clerical robes.
arm-pit (*ärm'pit*), *n.* the cavity beneath the shoulder.
arms (*ärmz*), *n. pl.* weapons of offense or defense; the military service.
ar-my (*är'mi*), *n.* [*pl.* armies (*'miz*)], a body of men trained and equipped for war.
ar-ni-ca (*är'ni-kä*), *n.* a genus of perennial herbs; from the roots or flowers of a species of this herb a valuable external remedy for bruises is made.
Arnold. Bailey says the name in Saxon, *Arnhold*, signifies "faithful to his honor"; Lower says the surname *Arnulfe* is the same as *Arnold*, in mediæval records sometimes Latinized *Ernulphus*, which might be translated both "help in war" and "helping lord," all doubtless from *ern-walt*, "powerful lord." Fr., *Arnaud*; Ger., *Arnold*; It., *Arnaldo*; Lat., *Arnoldus* or *Arnaldus*.
★**a-ro-ma** (*ä-rō'mä*), *n.* [*pl.* aromas (*'mäz*)], perfume; fragrance.
★**ar-o-mat-ic** (*ar-ō-mat'ik*) or **ar-o-mat-i-cal** (*'i-kal*), *adj.* giving out aroma.
★**Aroostook** (*ä-rōō'stook*). River and county in Maine. An Indian word meaning "good river," or "clear of obstruction."
a-round (*ä-round'*), *adv.* in a circle; on every side; roundabout.
a-rou-sal (*ä-rou'zal*), *n.* the act of awakening.
a-rouse (*ä-rouz'*), *v. t.* to excite or stir to action.
ar-raign (*ar-rān'*), *v. t.* to summon as a prisoner at the bar of a court to answer to a charge. [ACCUSE.]
ar-raign-ment (*ar-rān'ment*), *n.* an accusation.
ar-range (*ar-rānj'*), *v. t.* to put in proper order or sequence; classify. [DISPOSE.]
ar-range-ment (*ar-rānj'ment*), *n.* the act of putting in proper form or order; that which is ordered or disposed.
ar-rant (*ar'rant*), *adj.* notorious; unmitigated.
ar-ras (*ar'ras*), *n.* tapestry.
ar-ray (*ar-rā'*), *n.* order; the grouping or arrangement of a body of men as drawn up for battle; *v. t.* [*p. t.* and *p. p.* -ed, *p. pr.* -ing], to place or dispose in order; marshal; deck or dress.
ar-rear (*ar-rēr'*), *n.* the state of being behind-hand.
ar-rear-age (*ar-rēr'āj*), *n.* the state or condition of being in arrears.
ar-rest (*ar-rest'*), *v. t.* to stop or stay; check or hinder the action or motion of; seize, take, or apprehend by legal authority. [OBSTRUCT.]
ar-ri-val (*ar-ri'val*), *n.* the act of coming to a place.
ar-rive (*ar-rīv'*), *v. i.* to come to or reach.
ar-ro-gance (*ar'rō-gans*), *n.* an undue degree of self-importance; an exorbitant claim to dignity. [HAUGHTINESS, PRIDE.]
ar-ro-gant (*ar'rō-gant*), *adj.* making exorbitant claims to dignity or estimation.
ar-ro-gate (*ar'rō-gāt*), *v. t.* to assume or lay claim to unduly, or with presumptuous pride.
ar-row (*ar'rō*), *n.* a slender, pointed missile weapon, usually feathered and barbed, made to be shot from a bow. [arrow.
ar-row-head (*-hed*), *n.* the head or barb of an
ar-se-nal (*är'sē-nal*), *n.* a magazine for the storage of arms and military stores.
ar-se-nic (*är'sē-nik*), *n.* an element of steel-gray color and brilliant luster, and exceedingly brittle.
ar-se-ni-ous (*är-sē'ni-us*), *adj.* pertaining to or containing arsenic.
ar-son (*är'sn*), *n.* the malicious firing of any building, agricultural produce, ship, etc.
art (*ärt*), *n.* the employment of means to the accomplishment of some end; the skillful adaptation and application to some purpose or use of knowledge acquired from nature. [BUSINESS.]
ar-te-ri-al (*är-tē'ri-al*), *adj.* pertaining to an artery or the arteries; contained in an artery.
ar-te-ri-al-ize (*är-tē'ri-al-īz*), *v. t.* to convert venous blood into arterial blood.
ar-ter-y (*är'tĕr-i*), *n.* [*pl.* arteries (*-iz*)], one of a system of tubes or vessels which convey the blood from the heart to all parts of the body.
ar-te-sian well (*är-tē'zhan wel*), a well formed by boring, often to great depth.
art-ful (*ärt'ful*), *adj.* cunning; crafty.
★**Ar-tha-bas-ka** (*är-thä-bäs'kä*) **lake, Me.** Indian word, meaning "swampy."
Arthur. Armstrong derives this name from Gael. *ard*, "an eminent person"; literally, "high," "lofty," "exalted," "noble," "eminent," "excellent," "proud"; others derive it from *arth*, "a bear." Fr., *Arthur* or *Artus*; It., *Arturo*; Lat., *Arthurus*.
ar-ti-choke (*är'ti-chōk*), *n.* a plant with thistle-like foliage, and bearing large terminal flower-heads.
ar-ti-cle (*är'ti-kl*), *n.* a distinct portion or member; a single clause, item, or particular, as in a formal agreement or treaty; a concise statement; a prose composition, complete, in itself, in a newspaper.
★**ar-tic-u-late** (*är-tik'ū-lāt*), *v. t.* to joint; unite by means of a joint; to form words; utter in distinct syllables. [UTTER, SPEAK.]
ar-tic-u-la-tion (*är-tik-ū-lā'shun*), *n.* the act of jointing; the act of speaking distinctly.
★**ar-ti-fice** (*är'ti-fis*), *n.* an artful or crafty device, an ingenious expedient.
★**ar-ti-fi-cial** (*är-ti-fish'al*), *adj.* made or contrived by art; produced by human skill or labor.
★**ar-ti-fi-ci-al-i-ty** (*-fish-i-al'i-ti*) or **ar-ti-fi-cial-ness** (*-fish'al-nes*), *n.* the quality of being unreal or unnatural.
ar-ti-fi-cial-ly (*-fish'al-li*), *adv.* by human skill or contrivance.
ar-til-ler-y (*är-til'lĕr-i*), *n.* cannon; great guns; ordnance of all kinds. [trade.
ar-ti-san (*är'ti-zan*), *n.* one skilled in any art or
ar-tist (*är'tist*), *n.* one skilled in any branch of high art.
ar-tis-tic (*är-tis'tik*) or **ar-tis-tic-al** (*'ti-kal*), *adj.* pertaining to art or to artists; characterized by æsthetic feeling.
art-less (*ärt'les*), *adj.* lacking art; unskillful.
Ar-yan (*är'yan*), *n.* the race of mankind from which the white people of Europe and southern Asia have descended.
as (*as*), *n.* [*pl.* asses (*as'ez*)], a Roman weight equivalent to the libra or pound.
as-a-fet-i-da or **as-a-fœt-i-da** (*as-ä-fet'i-dä*), *n.* a fetid sap obtained from the roots of several large umbelliferous plants.
★**A-sa-ka-sa** (*ä-sä-kä'sä*) **pagoda.** A picturesque Buddhist tower in Tokio, Japan.
★**as-bes-tos** (*as-bes'tos*) or **asbestus** (*'tus*), *n.* a fibrous variety of hornblende, possessing the property of being incombustible.
as-cend (*as-send'*), *v. i.* to take an upward direction; mount; go up; rise.
as-cend-ant (*as-send'ant*) or **ascendent** (*'ent*), *adj.* rising; superior; predominant; above the horizon.
as-cend-en-cy (*as-send'en-si*) or **ascendancy** (*'an-si*), *n.* a governing or controlling power or influence; domination.
as-cen-sion (*as-sen'shun*), *n.* the act of moving upward; a rising.
As-cen-sion day (*dā*), a movable feast to commemorate Christ's ascension into heaven.
Ascension island. Was so named because discovered by the Portuguese on Ascension day, 1501. An island in the Atlantic belonging to Great Britain.
as-cent (*as-sent'*), *n.* the act of rising; an upward movement.
as-cer-tain (*as-sĕr-tān'*), *v. t.* to make certain.
★**as-cet-ic** (*as-set'ik*), *adj.* exceedingly rigid in the exercise of religious duties and mortification of worldly desires.
as-cribe (*as-krīb'*), *v. t.* to attribute, impute, or refer; assign.
as-crip-tion (*as-krip'shun*), *n.* the act of attributing or imputing.
a-sep-tic (*ä-sep'tik*), *adv.* free from the germs of disease or putrefaction.
a-sex-u-al (*ä-seks'ū-al*), *adj.* not sexual; produced by other than sexual processes.
ash (*ash*), *n.* the name popularly applied to trees of the genus Fraxinus.

ash (*ash*), *n.* [*pl.* ashes (*'ez*)], the residue of plant or animal substance remaining after subjection to red heat [BODY.]

a-shamed (*ȧ-shāmd'*), *p. adj.* affected or touched by shame.

ash-en (*ash'n*), *adj.* pertaining to the ash-tree; made of ash; of the color of ashes; pale.

Ashley river, S. C. From Sir Anthony Ashley Cooper. Indian name of the stream *Kiauah.*

Asia (*ā'shi-ȧ*). From the Sanskrit *ushas*, signifying "land of the dawn."

Asia Minor. Lesser Asia.

ask (*ȧsk*), *v. t.* to request; seek to obtain by words.

Syn. ASK, inquire, interrogate, question. We perform all these actions in order to get information; but we *ask* for general purposes of convenience; we *inquire* from motives of curiosity; we *question* and *interrogate* from motives of discretion. Indifferent people *ask* of each other whatever they wish to know; learners *inquire* the reasons for things which are new to them; masters *question* their servants, or parents their children, when they wish to ascertain the real state of any case; magistrates *interrogate* criminals when the latter are brought before them.

a-skance (*ȧ-skans'*) or **a-skant** (*ȧ-skant'*), *adv.* sideways; obliquely; awry.

a-skew (*ȧ-skū'*), *adv.* obliquely; awry.

asp (*ȧsp*), *n.* a small venomous snake of Egypt.

as-par-a-gus (*as-par'ȧ-gus*), *n.* a plant having tender edible shoots.

as-pect (*as'pekt*), *n.* visual or mental appearance; look; mien; air; outlook or prospect.

as-pen (*as'pen*), *n.* a species of poplar whose leaves have the property of trembling in the slightest breeze.

as-per-i-ty (*as-per'i-ti*), *n.* [*pl.* asperities (*-tiz*)], roughness of surface; bitterness of taste or temper. [ACRIMONY.]

as-per-sion (*as-pēr'shun*), *n.* a sprinkling, as of dust or water; slander.

★**as-phalt** (*as-falt'*, not *as'falt*), *n.* a compact, brittle variety of native bitumen, employed for the purpose of paving, roofing and cementing.

as-pho-del (*as'fō-del*), *n.* the name of several plants of the lilaceous genus Asphodelus.

★**as-phyx-i-a** (*as-fiks'i-ȧ*) or **as-phyx-y** (*ȧs-fiks'i*), *n.* the condition of lifelessness occasioned by suspension or interruption of respiration.

as-phyx-i-ate (*as-fiks'i-āt*), *v. t.* to suffocate.

★**as-pir-ant** (*as-pīr'ant*), *adj.* aspiring; ambitious: *n.* one who seeks to attain.

as-pi-rate (*as'pi-rāt*), *v. t.* to pronounce with a full breathing; to prefix the sound of the letter *h.*

as-pi-ra-tion (*as-pi-rā'shun*), *n.* the act of aspirating; an aspirated sound; a breath; ambition.

as-pire (*as-pīr'*), *v. i.* to seek after or desire with longing.

ass (*ȧs*), *n.* a quadruped of the genus Equus, allied to the horse.

as-sa-fœt-i-da. See *asafetida.*

as-sail (*as-sāl'*), *v. t.* to fall upon or attack with vehemence.

★**as-sail-ant** (*as-sāl'ant*), *adj.* assaulting; attacking.

as-sas-sin (*as-sas'sin*), *n.* one who slays treacherously or by covert assault.

as-sas-si-nate (*as-sas'si-nāt*), *v. t.* to kill, or attempt to kill, by secret or treacherous means.

as-sault (*as-sawlt'*), *n.* an attack with violence by physical means; an onslaught.

as-say (*as-sā'*), *n.* the act or process of determining by analysis the quantity or proportion of any one or more metals in a metallic compound.

★**as-say-er** (*as-sā'ēr*), *n.* one who assays.

as-sem-blage (*as-sem'blāj*), *n.* the act of assembling.

as-sem-ble (*as-sem'bl*). *v. t.* to collect or gather together in one place or body.

as-sem-bly (*as-sem'bli*), *n.* [*pl.* assemblies (*-bliz*)], a collection or company of persons brought together in one place.

as-sem-bly-man (*-man*), *n.* a member of a legislative assembly.

as-sent (*as-sent'*), *v. i.* to admit as true; concede.

Syn. ASSENT, consent, approbation, concurrence. *Assent* respects matters of judgment; *consent* respects matters of conduct. We *assent* to what we admit to be true; we *consent* to what we allow to be done. *Approbation* is a species of *assent*, *concurrence* of *consent*. To approve is not merely to *assent* to a thing as right, but to determine upon it positively to be so; *concurrence* is properly the *consent* of many. *Assent* is given by equals or inferiors; *consent* by superiors; *approbation* by equals or superiors; *concurrence* by equals.

as-sert (*as-sērt'*), *v. t.* to maintain; declare positively, or with assurance.

Syn. ASSERT, maintain, vindicate. We *assert* anything to be true; we *maintain* it by adducing proofs, facts, or arguments; we *vindicate* our own conduct or that of another when it is called in question. [See *allege.*]

Ant. DENY, imply, insinuate, suppose.

as-ser-tion (*as-sēr'shun*), *n.* the act of asserting.

as-sert-ive (*as-sērt'iv*), *adj.* positive; dogmatical.

as-sess (*as-ses'*), *v. t.* to fix or determine, as damages.

as-sess-or (*as-ses'sēr*), *n.* one appointed to assess property or persons for taxation.

★**as-sets** (*as'sets*), *n. pl.* the property or effects of an insolvent debtor; the entire property of a trader or company of traders.

as-sev-er-ate (*as-sev'ēr-āt*), *v. t.* to affirm or aver positively, or with solemnity. [ALLEGE.]

as-sib-i-late (*as-sib'i-lāt*), *v. t.* to pronounce with a hissing sound; to alter to a sibilant.

as-si-du-i-ty (*as-si-dū'i-ti*), *n.* [*pl.* assiduities (*-tiz*)], close application or unremitting attention to.

as-sid-u-ous (*as-sid'ū-us*), *adj.* constant in application.

as-sign (*as-sīn'*), *v. t.* to appoint, mark out, apportion, make over; fix; designate for a specific purpose. [ALLEGE, COMMIT.]

as-sig-na-tion (*as-sig-nā'shun*), *n.* the act of assigning; an appointment to meet.

★**as-sign-ee** (*as-si-nē'*, not *as-sī'nē*), *n.* one to whom an assignment of anything is made.

as-sign-ment (*as-sīn'ment*), *n.* a setting apart, allotment, or appointment.

as-sign-or (*as-si-nôr'*), *n.* one who assigns or transfers an interest.

as-sim-i-late (*as-sim'i-lāt*), *v. t.* to bring to conformity or agreement with something else.

as-sist (*as-sist'*), *v. t.* to help; aid; give support to. [HELP, ABET.]

as-sist-ance (*as-sist'ans*), *n.* help; furtherance.

as-sist-ant (*as-sist'ant*), *adj.* helping; lending aid. [ACCESSORY.]

★**as-size** (*as-sīz'*), *n.* [*pl.* assizes (*-sīz'ez*)], a court or session of justice for the trial by jury of civil or criminal cases.

as-so-ci-ate (*as-sō'shi-āt*), *v. t.* to unite; join with; connect; accompany, as a companion: *n.* a companion; a confederate; an ally. [ACCESSORY.]

as-so-ci-a-tion (*as-sō-si-ā'shun*), *n.* the act of associating or state of being associated; union. [ACQUAINTANCE, CLASS.]

★**as-so-nance** (*as'sō-nans*), *n.* resemblance of sound.

★**as-so-nant** (*as'sō-nant*), *adj.* having resemblance of sound.

as-sort (*as-sôrt'*), *v. t.* to divide or separate into lots according to arrangement.

as-sort-ment (*as-sôrt'ment*), *n.* the act of assorting.

★**as-suage** (*as-swāj'*), *v. t.* to soften; mitigate. [ALLAY.]

as-sume (*as-sūm'*), *v. t.* to take to; to take in or into; take upon one's self; arrogate.

as-sump-tion (*as-sump'shun*), *n.* the act of assuming. [PRETENSE, PRIDE.]

as-sur-ance (*ȧ-shūr'ans*), *n.* the act of assuring.

as-sure (*ȧ-shūr'*), *v. t.* to make sure or certain; to inspire confidence by declaration or promise.

as-sured (*ȧ-shūrd'*), *p. adj.* made certain; guaranteed; self-possessed; insured: *n.* a person insured.

as-sur-ed-ly (*-li*), *adv.* certainly; with assurance.

As-syr-i-an (*as-sir'i-an*), *adj.* pertaining to Assyria or to its inhabitants.

as-ter (*as'tēr*), *n.* a genus of flowering plants with rosette-shaped flowers; any plant of the genus aster.

as-te-ri-al (*as-tē'ri-al*), *adj.* connected with, or related to, the stars.

as-ter-isk (*as'tēr-isk*), *n.* the mark (*) used in printing as a reference to a marginal passage or footnote appended to the text, or to indicate letters or words omitted (* * *).

a-stern (*ȧ-stērn'*), *adj.* and *adv.* at or toward the hinder part of a ship.

as-ter-oid (*as'tēr-oid*), *adj.* star-like; star-shaped.

asth-ma (*as'mȧ, az'mȧ* or *ast'mȧ*), *n.* respiratory disease, chronically recurrent and attended by difficulty of breathing.

a-stig-ma-tism (*ȧ-stig'mȧ-tizm*), or **a-stig-mism** (*'mizm*), *n.* a defect in the structure of the eye.

a-stir (*ȧ-stēr'*), *adv.* or *adj.* on the move; active.

as-ton-ish (*as-ton'ish*), *v. t.* to strike with sudden wonder.

as-ton-ish-ment (*as-ton'ish-ment*), *n.* the state of being astonished.

as-tound (*as-tound'*), *v. t.* to strike with amazement.

★**as-tra-khan** (*as'trȧ-kan*), *n.* the skins of young lambs with curly wool, obtained from Astrakhan.

as-tral (*as'tral*), *adj.* pertaining to the stars; starry.

a-stray (*ȧ-strā'*), *adv.* out of the right way.

a-stride (*ȧ-strīd'*), *adv.* with the legs wide apart.

as-trin-gent (*as-trin'jent*), *adj.* binding; contracting, opposed to laxative.

as-tro-labe (*as'trō-lāb*), *n.* an instrument formerly employed for taking the altitude of the sun or stars.

as-trol-o-ger (*as-trol'ō-jēr*), *n.* one who professes to forecast events by means of the stars.

as-trol-o-gy (*as-trol'ō-ji*), *n.* predestination by the stars.

as-tron-o-mer (*as-tron'ō-mer*), *n.* one who studies, or is versed in, astronomy.

as-tro-nom-ic (*as-trō-nom'ik*) or **as-tro-nom-i-cal** (*'i-kal*), *adj.* pertaining to astronomy, or according to astronomical laws.

as-tron-o-my (*as-tron'ō-mi*), *n.* the study of the heavenly bodies.

as-tro-pho-tog-ra-phy (*as-trō-fō-tog'rȧ-fi*), *n.* photography applied to the delineation of the heavenly bodies.

as-tro-phys-i-cal (*as-trō-fiz'i-kal*), *adj.* pertaining to the physical structure of the stars.

as-tute (*as-tūt'*), *adj.* shrewd; keenly penetrating; sagacious; cunning; crafty.

a-sun-der (*ȧ-sun'dēr*), *adv.* apart; separately.

a-sy-lum (*ȧ-si'lum*), *n.* [*pl.* asylums (*'lumz*)], an institution for the care or relief of the aged, destitute, or afflicted.

★**as-ym-met-ri-cal** (*as-im-met'ri-kal*), *adj.* not symmetrical.

at-a-vism (*at'ȧ-vizm*), *n.* the reversion, or tendency to revert, to the ancestral type of a species.

★**a-tax-i-a** (*ȧ-taks'i-ȧ*), or **a-tax-y** (*'i*), *n.* irregularities in the functions of the body.

a-the-ism (*ā'thē-izm*), *n.* disbelief in the existence of God.

a-the-ist (*ā'thē-ist*), *n.* one who disbelieves or denies the existence of God.

ath-e-ne-um, ath-e-næ-um (*ath-e-nē'um*), *n.* [*pl.* atheneums (*'umz*) and athenæa (*'ȧ*)], an institution, club, or building devoted to study.

Athens (*ath'enz*). A name of doubtful etymology; cannot be separated from that of Athene, the tutelary goddess of the city. Athens is either the city of Athene, as the Athenians believed, or Athene may be the goddess of Athens, or both names may be independent formations from the same root. The capital of Greece.

a-thirst (*ȧ-thērst'*), *adj.* in want of drink.

ath-lete (*ath'lēt*), *n.* a competitor for a prize in public games; one possessed of great physical strength.

ath-let-ic (*ath-let'ik*), *adj.* pertaining to athletes, or their performances.

ath-let-ics (*ath-let'iks*), *n. pl.* any system of athletic training by gymnastic exercises or outdoor sports.

Athol (*ath'ol*). Town in Worcester county, Massachusetts, said to have been named for James Murray, second duke of Athol.

a-thwart (*ȧ-thwart'*), *prep.* across; from side to side.

Atlanta (*at-lan'tȧ*), **Ga.** Originally, Marthasville. Atlanta was suggested by the late Edgar Thomson of Philadelphia, owing to its geographical position, immediately on the dividing ridge, separating the gulf and Atlantic waters.

Atlantic Ocean. Was known to the Greeks by the name of *Atlantikos pelagos*, from the Isle of Atlantes.

at-las (*at'las*), *n.* [*pl.* atlases (*-ez*)], a collection of maps in a volume.

at-mol-o-gy (*at-mol'ō-ji*), *n.* the science of aqueous vapor.

at-mom-e-ter (*at-mom'ē-tēr*), *n.* an instrument for measuring the rate and amount of evaporation from a moist surface.

at-mos-phere (*at'mos-fēr*), *n.* the aëriform fluid surrounding the earth, composed of a mechanical mixture of 79 parts by volume of nitrogen with 21 parts of oxygen, and a trace of carbonic acid and argon.

at-mos-pher-ic (*at-mos-fēr'ik*), or **at-mos-pher-i-cal** (*'i-kal*), *adj.* pertaining to, or resembling, the atmosphere.

at-mos-pher-ic pres-sure (*presh'ēr*), the pressure exerted in every direction upon a body by the atmosphere; equivalent to 14⅔ lbs. on the sq. in.

a-toll (*ȧ-tol'*), *n.* a coral island having the form of an outer ring of coral surrounding a basin or lagoon.

at-om (*at'um*), *n.* an ultimate indivisible particle of matter.

a-tom-ic (*a-tom'ik*) or **a-tom-i-cal** (*'i-kal*), *adj.* pertaining to, or consisting of, atoms.

at-om-i-zer (*at'um-ī-zēr*), *n.* an instrument constructed to reduce a liquid to spray.

a-tone (*ȧ-tōn'*), *v. i.* [*p. t.* and *p. p.* atoned, *p. pr.* atoning], to make reparation or amends.

a-tone-ment (*ȧ-tōn'ment*), *n.* reparation or satisfaction; the recompense for sin typified by the sufferings and death of Christ.

a-tro-cious (*ȧ-trō'shus*), *adj.* wicked in the highest degree; extremely criminal or cruel. [HEINOUS.]

a-troc-i-ty (*ȧ-tros'i-ti*), *n.* [*pl.* atrocities (*-tiz*)], enormous wickedness.

★**at-ro-phy** (*at'rō-fi*), *n.* a wasting, or diminution in bulk, of the body: *v. i.* [*p. t.* and *p. p.* atrophied, *p. pr.* atrophying], to waste away; to dwindle.

at-tach (*at-tach'*), *v. t.* to fasten, or fix, to or on. [ADD, ADJACENT, ADDICTED.]

at-tach-ment (*at-tach'ment*), *n.* the act of attaching. [LOVE.]

at-tack (*at-tak'*), *v. t.* to assault; fall upon with force; assail with intent to overcome or to damage: *n.* the act of attacking in any sense of the word. [IMPUGN.]

at-tain (*at-tān'*), *v. t.* to achieve; gain; compass.

at-tain-der (*at-tān'dēr*), *n.* the act of attainting, or the state of being attainted.

at-tain-ment (*at-tān'ment*), *n.* the act of attaining.

at-taint (*at-tānt'*), *v. t.* to taint; corrupt.

at-tempt (*at-tempt'*), *v. t.* to make an effort to accomplish; try; endeavor to perform.

at-tend (*at-tend'*), *v. t.* [*p. t.* and *p. p.* attended, *p. pr.* attending], to wait upon; accompany or be present with.

at-ten-dance (*at-ten'dans*), *n.* the act of attending; waiting on; presence.

at-ten-dant (*at-ten'dant*), *n.* one who attends in service of another. [ACCESSORY.]

at-ten-tion (*at-ten'shun*), *n.* the act of applying the mind to anything; consideration or regard for any person or thing. [HEED.]

at-ten-tive (*at-ten'tiv*), *adj.* heedful.

at-ten-u-ate (*at-ten'ū-āt*), *v. t.* to make thin or slender; weaken or reduce; thin out by dilution; rarefy.

at-test (*at-test'*), *v. t.* to bear witness to; certify as being genuine or true.

at-tic (*at'tik*), *n.* an uppermost room in a house immediately beneath the roof; a garret.
At-tic (*at'tik*), *adj.* pertaining to Attica, in Greece; classical; elegant.
★**at-tire** (*at-tīr'*), *v. t.* to dress; clothe; array; adorn: *n.* dress; clothes; habit.
at-ti-tude (*at'ti-tūd*), *n.* bodily position or posture. [ACTION.]
★**at-tor-ney** (*at-tĕr'ni*), *n.* one legally qualified to act for another in the transaction of business.
at-tract (*at-trakt'*), *v. t.* to draw to or toward.
Syn. ATTRACT, allure, invite, engage. That is *attractive* which draws the thoughts toward itself; that is *alluring* which awakens desires; that is *inviting* which offers persuasion; that is *engaging* which takes possession of the mind.
at-trac-tion (*at-trak'shun*), *n.* the power or act of attracting. [LOVE.]
at-tract-ive (*at-trakt'iv*), *adj.* having the power or tendency to attract. [PLEASANT.]
at-trib-u-ta-ble (*at-trib'ū-tà-bl*), *adj.* capable of being attributed.
at-trib-ute (*at-trib'ūt*), *v. t.* to ascribe, impute, assign.
at-tri-tion (*at-trish'un*), *n.* the act of wearing by rubbing.
at-tune (*at-tūn'*), *v. t.* to put in tune.
Aubrey (*aw'brī*). A name derived from the Old German name *Amalric*, signifying "powerful without a blot," or "rich in chastity." *Amalric* has been corrupted to *Alberic*, whence *Aubrey*.
au-burn (*aw'bĕrn*), *adj.* reddish-brown.
auc-tion (*awk'shun*), *n.* a public sale of property or effects.
auc-tion-eer (*awk-shun-ēr'*), *n.* one licensed to sell property or goods by public auction.
au-da-cious (*aw-dā'shus*), *adj.* bold; daring; spirited.
au-dac-i-ty (*aw-das'i-ti*), *n.* [*pl.* audacities (*-tiz*)], boldness; daring; spirit.
au-di-ble (*aw'di-bl*), *adj.* capable of being heard.
au-di-bly (*-bli*), *adv.* so as to be heard.
★**au-di-ence** (*aw'di-ens*), *n.* the act of hearing; admittance to a hearing or formal interview.
au-dit (*aw'dit*), *n.* official examination and verification of claims or accounts.
au-di-tor (*aw'di-tĕr*) *n.* a person appointed to examine and verify accounts and claims.
au-di-to-ri-um (*aw-di-tō'ri-um*), *n.* [*pl.* auditoriums (*-umz*) and auditoria (*-à*)], the space in a theater or other public building assigned to the audience.
au-di-to-ry (*aw'di-tō-ri*), *adj.* pertaining to hearing, or to the sense or organs of hearing.
Audrey or **Audrie** (*aw'drī*). A feminine name corrupted from *Ethelredra*.
au-ger (*aw'gĕr*), *n.* a tool for boring holes.
aught (*awt*), *n.* anything; any part.
★**aug-ment** (*awg-ment'*), *v. t.* to increase; to enlarge in size or extent. [ADD.]
★**aug-men-ta-tion** (*awg-men-tā'shun*), *n.* increase; the increase in time-value of the notes of a theme; the period of increase in a fever before the crisis is reached
au-gur (*aw'gĕr*), *n.* one who officially predicted events by the observation and interpretation of natural signs or omens.
Syn. AUGUR, presage, forebode, betoken, portend. *Augur* signifies either to serve or make use of as an augury; to *forebode*, and *presage*, is to form a conclusion in one's own mind; to *betoken* or *portend* is to serve as a sign. Persons or things *augur;* persons only *forebode* or *presage;* things only *betoken* or *portend*. *Auguring* is a calculation of some future event, in which the imagination seems to be as much concerned as the understanding; *presaging* is rather a conclusion or deduction of what may be from what is; it lies in the understanding more than in the imagination; *foreboding* lies altogether in the imagination. Things are said to *betoken* which present natural signs; those are said to *portend* which present extraordinary or supernatural signs.
au-gust (*aw-gust'*), *adj.* grand; invested with grandeur and dignity.
August. Named by Augustus Cæsar after himself. Before this the month was known in Rome as *Sextilis*. In Gallia, however, and in other remote parts of the empire, the ancient name for this month was *Faust*, or *Aust;* *i. e.*, "harvest."
Augusta (*aw-gus'tà*). The feminine form of Augustus, meaning "venerable." Danish, *Auguste;* Dutch, *Auguste;* Fr., *Auguste;* Ger., *Auguste* or *Augusta;* It., *Augusta;* Lat. *Augusta*.
Augusta, Me. Given in 1737, after the name of the English Princess Augusta Charlotte, eldest granddaughter of George II. The Indian name of the locality was *Cushnoc*.
Augustin. See *Augustine*.
Augustine (*ô-gus'tin, ŏ'gus-tin*). From the Latin *augustus*, "venerable." Dutch, *Augustinus*, or *Augustijn;* Fr., *Augustin;* It., *Augustino;* Lat., *Augustinus;* Port., *Agostinho;* Sp., *Augustin*.
auk (*awk*), *n.* the name given to the members of a family of arctic diving birds.
aunt (*ānt*), *n.* the sister of one's father or mother.
au-re-ate (*aw'rē-āt*), *adj.* golden; gilded.
Aurelia (*aw-rē'li-à*). A feminine name derived from that of *Aurelia*, mother of Cæsar, formed from *Aurelius*, name of a Roman emperor.
au-re-o-la (*aw-rē'ō-là*) or **au-re-ole** (*aw'rē-ōl*), *n.* a halo, radiance, or luminous cloud encircling the figures of Christ, the Virgin, and the saints.
★**au-ri-cle** (*aw'ri-kl*), *n.* the external ear.
au-ric-u-lar (*aw-rik'ū-lĕr*), *adj.* pertaining to the ear or to the sense of hearing.
au-ri-form (*aw'ri-fôrm*), *adj.* ear-shaped.
★**au-ro-ra** (*aw-rō'rà*), *n.* [*pl.* auroras (*'ràz*) and auroræ (*'rē*)], the rising light of the morning; the dawn or dayspring.
Aurora. A feminine name from Latin *aurora*, "the dawn."
★**au-ro-ra bo-re-a-lis** (*bō-rē-ā'lis*), the northern lights.
au-rous (*aw'rus*), *adj.* pertaining to gold.
aus-cul-ta-tion (*aws-kul-tā'shun*), *n.* a method of detecting chest disease by observing the sounds arising in the part.
aus-pice (*aws'pis*), *n.* [*pl.* auspices (*'pi-sez*)], an omen drawn from birds.
aus-pi-cious (*aws-pish'us*), *adj.* having promise of success or happiness.
aus-tere (*aws-tĕr'*), *adj.* sour; harsh; rough to the taste; severe.
aus-ter-i-ty (*aws-ter'i-ti*), *n.* severity of manner or life.
★**Austerlitz** (*aws'tĕr-lits*). The east town of the river Littawa in Austro-Hungary; *ost*, "the east."
Austin. Corrupted from *Augustin*.
Austin. County and city in Travis county, Texas, and town in Lonoke county, Arkansas, named for Stephen Fuller Austin, the first man to establish a permanent American colony in Texas (1844).
Australasia (*aws-tral-ā'shi-à*). Meaning, "southern Asia," derived from the Latin *australis*, "southern."
Australia (*aws-trā'li-à*). Meaning, "the south." The first indication of Australia on any map is in a small map of the world which forms the vignette to a Dutch work, *Journuel vande Nassauche Vloot*, under Admiral v'Hermitte, in 1623-4-5-6. The place indicated is to the west of Cape Carpentaria of the present map, and is marked "*Land eendracht*."
Austria (*aws'tri-à*). From the German, *österreich*, "the eastern empire," in contradistinction to the western empire, founded by Charlemagne.
au-then-tic (*aw-then'tik*), or **au-then-ti-cal** (*'ti-kal*), *adj.* genuine; original; duly authorized; true.
au-then-ti-cate (*aw-then'ti-kāt*), *v. t.* to make authentic.
au-then-tic-i-ty (*aw-then-tis'i-ti*), *n.* the quality of being authentic.
au-thor (*aw'thĕr*), *n.* the beginner or prime mover of anything. [WRITER.]
au-thor-i-ta-tive (*aw-thor'i-tà-tiv*), *adj.* having due authority.
au-thor-i-ty (*aw-thor'i-ti*), *n.* [*pl.* authorities (*-tiz*)], power or right to act or command; dominion.
au-thor-ize (*aw'thĕr-iz*), *v. t.* to vest with authority. [COMMISSION.]
au-to (*aw'tō*), *n.* an abbreviation in common use for automobile.
★**au-to-bi-o-graph-ic** (*aw-tō-bī-ō-graf'ik*) or **au-to-bi-o-graph-i-cal** (*'i-kal*), *adj.* pertaining to autobiography.
★**au-to-bi-og-ra-phy** (*aw-tō-bī-og'rà-fi*), *n.* [*pl.* autobiographies (*-fiz*)], a biography, account, or character sketch of a person written by himself.
au-toc-ra-cy (*aw-tok'rà-si*), *n.* [*pl.* autocracies (*-siz*)], absolute, uncontrolled authority.
au-to-crat (*aw'tō-krat*), *n.* an absolute prince or sovereign.
au-to-crat-ic (*aw-tō-krat'ik*) or **au-to-crat-i-cal** (*'i-kal*), *adj.* pertaining to autocracy; absolute.
au-to-graph (*aw'tō-gràf*), *n.* a person's own handwriting; an original manuscript or signature.
au-tog-ra-phy (*aw-tog'rà-fi*), *n.* the science or study of autographs.
au-to-hyp-no-sis (*aw-tō-hip-nō'sis*), *n.* the state or condition of self-hypnotism.
au-to-mat-ic (*aw-tō-mat'ik*) or **au-to-mat-i-cal** (*'i-kal*), *adj.* having the power of self-motion or self-action.
au-tom-a-ton (*aw-tom'à-ton*), *n.* [*pl.* automatons (*-tonz*), and automata (*-tà*)], that which possesses the power of spontaneous movement without consciousness.
★**au-to-mo-bile** (*aw-tō-mō'bil*, Fr. *aw-tō-mō-bēl'*), *n.* a vehicle moved by a source of power within itself; a motor-carriage.
au-to-mo-bil-ist (*aw-tō-mō'bil-ist*), *n.* one who uses and controls an automobile; a chauffeur.
au-to-nom-ic (*aw-tō-nom'ik*), or **au-ton-o-mous** (*-ton'ō-mus*), *adj.* pertaining to autonomy.
au-ton-o-my (*aw-ton'ō-mi*), *n.* [*pl.* autonomies (*-miz*)], the power or right of self-government; the state of political independence.
★**au-top-sy** (*aw'top-si*), *n.* a post-mortem examination.
au-to-sug-gest-i-bil-i-ty (*aw-tō-sug-jest-i-bil'i-ti*), *n.* the state or quality of being autosuggestive; ability to hypnotize one's self.
au-to-sug-gest-ive (*aw-tō-sug-jest'iv*), *adj.* fitted or tending to stimulate thought of itself; pertaining to, or characteristic of, autosuggestion.
au-to-tox-ic (*aw-tō-toks'ik*), *adj.* self-poisoning.
au-to-truck (*aw'tō-truk*), *n.* a self-moving truck; motor-truck.
au-to-type (*aw'tō-tip*), *n.* a facsimile.
au-to-ty-pog-ra-phy (*aw-tō-ti-pog'rà-fi*), *n.* a kind of nature printing.
au-tumn (*aw'tum*), *n.* the season between summer and winter.
au-tum-nal (*aw-tum'nal*), *adj.* belonging or peculiar to autumn.
★**aux-il-i-a-ry** (*awgz-il'yà-ri*), *adj.* helping; aiding; assisting; subsidiary.
a-vail (*à-vāl'*), *v. i.* to be of use, value, or service.
a-vail-a-bil-i-ty (*à-vāl'à-bil-i-ti*), *n.* the state or quality of being available.
av-a-lanche (*av'à-lanch*), *n.* the sudden descent of a mass of compact snow or ice from the higher parts of a mountain.
av-a-rice (*av'à-ris*), *n.* an inordinate or insatiable desire of gain.
av-a-ri-cious (*av-à-rish'us*), *adj.* impelled by avarice.
av-a-tar (*av-à-tär'*), or **av-a-ta-ra** (*-tä'rà*), *n.* the descent of a deity to earth in an incarnate form.
a-vaunt (*à-vawnt'* or *à-vänt'*), *interj.* begone!
a-venge (*à-venj'*), *v. t.* to exact punishment or satisfaction for wrong or injury done to one's self or another.
Syn. AVENGE, punish, retaliate, revenge, vindicate, visit. To *avenge* is to *visit* punishment, in order to *vindicate* the righteous; to *revenge* is to inflict harm or suffering upon another through personal anger and resentment; *avenge* is unselfish; *revenge* is selfish; to *retaliate* may be necessary for self-defense.
★**Aventine** (*av'en-tīn*) **hill.** One of the seven hills of ancient Rome.
av-e-nue (*av'e-nū*), *n.* a way or means of approach to a place; a passageway; drive.
a-ver (*à-vĕr'*), *v. t.* [*p. t.* and *p. p.* averred, *p. pr.* averring], to affirm positively. [ALLEGE.]
av-er-age (*av'er-āj*), *v. t.* to find the mean, as of unequal sums or quantities.
a-verse (*à-vĕrs'*), *adj.* unwilling; unfavorable.
a-ver-sion (*à-vĕr'shun*), *n.* opposition or repugnance of mind. [ANTIPATHY, ABOMINATION.]
a-vert (*à-vĕrt'*), *v. t.* to turn aside or away.
A-ves-ta (*à-ves'tà*), *n.* the sacred writings attributed to Zoroaster.
★**a-vi-a-ry** (*ā'vi-ā-ri*), *n.* [*pl.* aviaries (*-riz*)], a house, large cage, or inclosure for the keeping of birds.
★**a-vi-a-tion** (*ā'vi-ā-shun*), *n.* the art of flying.
★**a-vi-a-tor** (*ā'vi-ā-tĕr*), *n.* one who operates an aëroplane.
a-vid-i-ty (*à-vid'i-ti*), *n.* greediness; eagerness.
av-o-ca-tion (*av-ō-kā'shun*), *n.* a subordinate or occasional occupation.
a-void (*à-void'*), *v. t.* to keep away; to shun.
a-void-ance (*à-void'ans*), *n.* the act of annulling or making void.
★**av-oir-du-pois** (*av-ĕr-dū-poiz'*), *n.* a system of weights in which one pound contains 16 ounces.
a-vouch (*à-vouch'*), *v. t.* to affirm openly; maintain.
a-vow (*à-vou'*), *v. t.* to declare openly; acknowledge.
a-vow-al (*à-vou'al*), *n.* an open declaration.
a-wait (*à-wāt'*), *v. t.* to wait for; look for or expect.
a-wake (*à-wāk'*), *v. t.* [*p. t.* and *p. p.* awoke, awaked, *p. pr.* awaking], to arouse from sleep: *adj.* not sleeping; roused from sleep or inactivity.
a-wak-en (*à-wāk'en*), *v. t.* to rouse from sleep.
Syn. AWAKEN, excite, provoke, rouse, stir up. We *awaken* by a simple effort; we *excite* by repeated efforts or forcible means; we *provoke* by words, looks, or actions. The tender feelings are *awakened;* affections, or the passions in general, are *excited;* the angry passions are commonly *provoked;* we are *roused* from an extraordinary state by extraordinary means; we are *stirred up* from an ordinary to an extraordinary state.
a-ward (*à-ward'*), *v. t.* to adjudge; assign by judicial sentence, or arbitration.
a-ware (*à-wär'*), *adj.* on guard; watchful; apprised.
a-way (*à-wā'*), *adj.* absent; at a distance; out of.
awe (*aw*), *n.* reverential fear; the feeling or emotion inspired by the contemplation of something sublime.
aw-ful (*aw'ful*), *adj.* inspiring or impressing with profound fear.
aw-ful-ly (*-li*), *adv.* in an awful manner.
awk. See *auk*.
awk-ward (*awk'wĕrd*), *adj.* wanting dexterity; unskillful.
awl (*awl*), *n.* a pointed instrument for piercing.
awn (*awn*), *n.* the beard or bristle-like appendage of the outer glume of wheat.
awn-ing (*awn'ing*), *n.* a covering of canvas or other cloth stretched upon a frame and used as a shelter.
a-wry (*à-ri'*), *adj.* or *adv.* turned or twisted toward one side.
ax or **axe** (*aks*), *n.* a tool or instrument of steel, used for the hewing of timber and chopping of wood.
ax-il (*ak'sil*), *n.* the angle formed by the upper side of an organ or branch with the stem or trunk to which it is attached.
ax-ile (*ak'sil*), *adj.* pertaining to the axis.
★**ax-i-om** (*aks'i-um*), *n.* an indisputable self-evident truth.
ax-i-o-mat-ic (*aks-i-ō-mat'ik*) or **ax-i-o-mat-i-cal** (*'i-kal*), *adj.* pertaining to, or of the nature of, an axiom.
ax-is (*aks'is*), *n.* [*pl.* axes (*'ēz*)], the straight line, real or imaginary, passing through a body, upon or around which such body revolves, or is supposed to revolve.
ax-le (*aks'l*), *n.* the spindle which is inserted in the hub of a wheel, and on which the wheel revolves.
ax-le box (*boks*), a bushing in the hub of a wheel through which the axle passes.

ax-le tree (*aks'l trē*), a bar connecting the opposite wheels of a carriage.

aye (*ā*), *adv.* always; forever; continually.

aye or **ay** (*ā* or *ī*), *adv.* or *interj.* yes; yea; even so.

Ayr-shire (*ăr'shĭr*), *n.* a fine breed of cattle from the country of Ayr, Scotland.

a-za-le-a (*ȧ-zā'lē-ȧ*), *n.* [*pl.* azaleas (*-ȧz*)], a genus of plants belonging to the rhododendron tribe, and remarkable for their flowers.

★**Aztec** (*az'tek*). Village in San Juan county, New Mexico, named for one of the native tribes of Mexico. The word is said to mean "place of the heron." Other interpretations give "white" or "shallow land where vapors arise." Humboldt gives "land of flamingoes." The word *azcalt* means "ant," but Bushmann says that this word has no connection with the name of the tribe.

az-ure (*azh'ŭr* or *ā'zhŭr*), *adj.* like the blue of the sky; cerulean; *n.* the clear blue of the sky.

B

baa (*bȧ*), *v. i.* to cry, as a sheep; bleat; *n.* the cry or bleating of a sheep.

★**Baalbec** (*bāl'bek* or *bāl-bek'*), **Baalbek, Baalbak.** An ancient city of Syria, situated on the slope of Anti-Libanus, thirty-four miles northwest of Damascus. It is the Greek Heliopolis, "city of the sun," famous for its ruins.

bab-ble (*bab'bl*), *v. i.* to utter indistinct or imperfect sounds; prattle; talk childishly.

babe (*bāb*), *n.* [*pl.* babes (*bābz*)], an infant or young child of either sex.

ba-boon (*bȧ-bōōn'*), *n.* the popular name of a large division of monkeys which inhabit Africa and Arabia.

ba-by (*bā'bi*), *n.* [*pl.* babies (*'biz*)], an infant of either sex; a small child.

baby farm (*bā'bi färm*), a place where young children are put out for nursing.

ba-by-ish (*bā'bi-ish*), *adj.* childish.

Bab-y-lo-ni-an (*bab-i-lō'ni-an*), *adj.* pertaining to Babylonia; magnificent; luxurious. Also *Babylonish.*

★**bac-ca-lau-re-ate** (*bak-ȧ-law'rē-āt*), *n.* the degree of bachelor of arts, science, etc.; *adj.* pertaining to the degree of bachelor.

★**bac-ca-rat** (*bak-kȧ-rä'*), *n.* a French card game played between a banker and an unlimited number of bettors with one or more packs of cards.

bac-cha-nal (*bak'kȧ-nal*) or **bac-cha-na-li-an** (*bak-kȧ-nā'li-an*), *adj.* indulging in or characterized by drunken revelry.

bach-e-lor (*bach'ē-lĕr*), *n.* one who has taken the lowest university degree in any faculty; an unmarried man.

bach-e-lor's but-tons (*bach'ē-lĕrz but'unz*), the name popularly given to several flowering plants whose blossoms somewhat resemble buttons.

★**bac-il-la-ry** (*bas'il-lā-ri*), *adj.* consisting of bacilli.

★**ba-cil-lus** (*bȧ-sil'lus*), *n.* [*pl.* bacilli (*'li*)], a genus of microscopic vegetable organisms with rod-like, jointed bodies or filaments in constant movement, present in many ferments, active in all stages of putrefaction, and associated with the earliest stages of malignant or zymotic disease.

back or **bac** (*bak*), *n.* a flat-bottomed ferryboat.

back (*bak*), *n.* the hinder part of the body in man, or in other animals the upper portion; the whole region of the spine, extending from the base of the neck to the buttocks; the dorsal region of a fish: *v. t.* to furnish with a back or backing; get upon the back of or mount; second or support; bet. [ABET.]

back-bite (*bak'bīt*), *v. t.* [*p. t.* backbit, *p. p.* backbit and backbitten, *p. pr.* backbiting], to slander or speak evil of in absence.

back-bone (*bak'bōn*), *n.* the bone of the back; the vertebral column of animals.

backer (*bak'ĕr*), *n.* one who sustains or abets another.

back-gam-mon (*bak'gam-un*), *n.* a game played by two persons upon a table or board made for the purpose.

back-ground (*bak'ground*), *n.* ground in the rear; the distant portion of a landscape.

back-hand (*bak'hand*), *n.* writing which slopes backward or to the left.

back-hand-ed (*bak'hand-ed*), *adj.* with the hand turned backward; unfair; indirect.

back-ing (*bak'ing*), *n.* something placed behind to support or strengthen.

★**back-slide** (*bak-slīd'*), *v. i.* [*p. t.* backslid, backslided, *p. p.* backslid, backslidden, backslided, *p. pr.* backsliding], to slide back; apostatize.

back-stair (*bak'stär*) or **back-stairs** (*'stärz*), *n.* stairs in the back part of a house.

back-ward (*bak'wĕrd*), *adj.* directed to the back or rear; unwilling; reluctant.

back-ward or **back-wards** (*'wĕrdz*), *adv.* with the back foremost; toward the back.

back-wa-ter (*bak'waw-tĕr*), *n.* water caused to flow backward by obstruction of its course.

back-woods (*bak'woodz*), *n. pl.* forests or partially cleared land situated far from the centers of population.

ba-con (*bā'kn*), *n.* hog's flesh salted or pickled and dried, usually in smoke.

★**bac-te-ri-a** (*bak-tē'ri-ȧ*), *n. pl.* of bacterium.

bac-te-ri-o-log-ic-al (*bak-tē-ri-ō-loj'i-kal*), *adj.* of or pertaining to bacteriology.

bac-te-ri-ol-o-gist (*bak-tē-ri-ol'ō-jist*), *n.* a student of bacteriology.

★**bac-te-ri-ol-o-gy** (*bak-tē-ri-ol'ō-ji*), *n.* the scientific investigation or study of bacteria.

★**bac-te-ri-um** (*bak-tē'ri-um*), *n.* [*pl.* bacteria (*-ȧ*)], a microscopic vegetable organism varying in form.

bad (*bad*), *adj.* [*compar.* worse, *superl.* worst], the opposite of good; evil; ill; wicked; depraved.

badge (*baj*), *n.* a mark, sign, or token, or cognizance to denote occupation, allegiance.

badg-er (*baj'ĕr*), *n.* a plantigrade carnivorous mammal, of nocturnal habits: *v. t.* to worry or annoy.

★**bad-i-nage** (*bad'i-näj'* or *bȧ-dē-näzh'*), *n.* light or playful raillery or banter.

bad-ly (*bad'li*), *adv.* wickedly; grievously; unskillfully; defectively; ill.

Baffin (*baf'fin*) **land.** In the Arctic Ocean, named for the famous arctic navigator who discovered it.

baf-fle (*baf'l*), *v. t.* to elude or circumvent by artifice.

bag (*bag*), *n.* a sack; a pouch; a wallet; a receptacle for holding anything: *v. t.* to inclose in a bag.

★**bag-a-telle** (*bag-ȧ-tel'*), *n.* a game played on a nine-holed board, baized and cushioned.

bag-gage (*bag'gaj*), *n.* the tents, clothing, utensils, etc., of an army; the trunks, bags, and other impedimenta or baggage of a traveler.

bag-ging (*bag'ging*), *n.* the act of putting into bags; coarse cloth or other material used for bags.

bag-gy (*bag'gi*), *adj.* having a loose or flabby appearance.

★**bagn-io** (*ban'yō*, not *bag'ni-ō*), *n.* a bath-house; a brothel.

bag-pipe (*bag'pīp*), *n.* a Scottish musical instrument, of shrill tone, consisting of a leathern wind bag from which air is forced by the performer's elbow into pipes.

bail (*bāl*), *v. t.* to set free or liberate from arrest on security for reappearance.

bail (*bāl*), *v. t.* to free from water by dipping; to lade out with a bucket or other utensil.

bai-liff (*bā'lif*), *n.* a sheriff's officer who serves processes.

bait (*bāt*), *v. t.* to harass or provoke, as by the setting on of dogs.

baize (*bāz*), *n.* a coarse woolen stuff, with a nap on one side.

bake (*bāk*), *v. t.* to cook or prepare food by subjection to dry heat in a closed place.

bak-er (*bāk'ĕr*), *n.* one whose business is to make bread, biscuit, etc.

bak-er-y (*bāk'ĕr-i*), *n.* [*pl.* bakeries (*-iz*)], a place used for bread-making; a baker's shop.

bak-ing (*bāk-ing*), *n.* the quantity of anything baked at the same time; a batch.

bal-ance (*bal'ans*) *n.* an instrument for determining the weight of bodies; a pair of scales; a steel-yard: *v. t.* to weigh; compare; bring to a state of equipoise; keep in equilibrium; poise; equal or make equal; counterbalance; adjust or settle. [POISE.]

bal-an-cer (*bal'an-sĕr*), *n.* one who, or that which, keeps anything in equilibrium.

bal-co-nied (*bal'kō-nid*), *adj.* having a projecting exterior platform or interior gallery.

bal-co-ny (*bal'kō-ni*), *n.* [*pl.* balconies (*-niz*)], a platform or gallery projecting from the wall of a building, inclosed by a balustrade or parapet.

bald (*bawld*), *adj.* without the natural or usual covering on the head or summit.

bal-der-dash (*bawl'dĕr-dash*), *n.* a nonsensical jumble of words; silly talk or writing; a worthless mixture.

bald-head (*bawld'hed*), *n.* a man bald on the head.

bal-dric or **bal-drick** (*bawl'drik*), *n.* a broad belt, often richly ornamented, worn around the waist, or over one shoulder and across the breast.

Baldwin. From the Teutonic, probably meaning a "bold winner," or "powerful warrior"; by other authorities, "prince friend"; Danish, *Balduin;* Dutch, *Boudewijn;* Fr., *Baudouin;* Ger., *Balduin;* It. *Baldovino;* Lat., *Balduinus.*

bale (*bāl*), *n.* a large bundle or package of goods: *v. t.* to make up into a bale or bales.

bale (*bāl*), *n.* woe; calamity; mischief.

★**Balearic** (*bal-ē-ar'ik*) **Islands.** From the Greek *ballein,* "to throw"; so called because their inhabitants were skillful in the use of the sling. A group of islands in the Mediterranean.

bale-fire (*bāl'fīr*), *n.* a beacon or signal fire; a bonfire; a funeral pyre.

bale-ful (*bāl'ful*), *adj.* replete with deadly or malign influence.

balk or **baulk** (*bawk*), *n.* a strip or ridge of land left unplowed; a thick, heavy piece of timber: *v. t.* to thwart, check, or disappoint.

★**Balkan** (*bawl-kan'*). From *bāla,* "high," "high ridge"; also called Mount Hæmus, meaning "the snowy mount"; *hima,* "snow"; *balkh,* "high town." A mountain system in southeastern Europe.

ball (*bawl*), *n.* a round body; any mass resembling a sphere; a dance. [for singing.

bal-lad (*bal'lad*), *n.* a short narrative poem, adapted

bal-last (*bal'last*), *n.* weighty material carried by a ship to insure stability.

ball-bearing (*bawl'bâr-ing*), *n.* a bearing containing loose balls of metal to reduce friction.

bal-let (*bal'lā* or *bāl'let*), *n.* a theatrical representation in which a story is told, and actions, characters, and passions represented by gestures, accompanied by music and dancing.

bal-loon (*bal-lōōn'*), *n.* a large bag of prepared silk or other material, which, when inflated by hydrogen gas or heated air, ascends and floats in the atmosphere.

bal-loon jib (*bal-lōōn' jib*), a triangular sail used by yachts in a slight breeze.

bal-lot (*bal'lot*), *n.* a ball, ticket, or paper by which a vote is registered.

★**Ballston Spa** (*bawl'stun spȧ*). Village in Saratoga county, New York. Named for Rev. Eliphalet Ball, an early settler, the "spa" being added in reference to the medicinal springs resembling the celebrated watering places in Belgium.

balm (*bäm*), *n.* the oily aromatic exudation of certain trees or shrubs, used for healing or soothing.

balm of gil-e-ad (*ov gil'ē-ȧd*), the name of various kinds of fragrant resins.

balm-y (*bäm'i*), *adj.* having the qualities of balm.

★**bal-sam** (*bawl'sam*), *n.* an oily, aromatic, resinous substance obtained from certain trees or shrubs, and used medicinally or in perfumery.

★**Balthasar** (*bal'tȧ-zär*). The Greek form of Belshazzar, "king protector"; Fr., *Balthazar* or *Balthasar;* It., *Baldassare;* Lat., *Balthasar;* Sp., *Baltasar.*

Baltic Sea. Denotes, in accordance with the Swedish *balt,* "a strait," "a sea full of balts, or straits." An arm of the Atlantic.

★**Baltimore** (*bawl'ti-mōr*). County and city in Maryland, and town in Windsor county, Vermont, named for the proprietor of a large tract of land in Maryland, Cecil Calvert, Lord Baltimore, who settled the province in 1635.

bal-us-ter (*bal'us-tĕr*), *n.* a small column or pilaster to support the rail of a parapet or balustrade.

bal-us-trade (*bal'us-trȧd*), *n.* a series of small columns or pilasters, surmounted by a top rail or coping, serving as a parapet or protective railing.

bam-boo (*bam-bōō'*), *n.* the name of certain tropical grasses having thick-jointed stems of exceeding hardness, and attaining to a height of from 20 to 120 ft.

bam-boo-zle (*bam-bōō'zl*), *v. t.* to hoax.

ban (*ban*), *n.* in feudal times a public proclamation; excommunication; curse. [BANISH.]

★**ba-na-na** (*bȧ-nȧ'nȧ*, not *ban-an'ȧ*), *n.* a tropical herbaceous plant.

Banbury (*ban'bĕr-i*). A town in Oxfordshire, England, situated on the Cherwell twenty-two miles north of Oxford.

band (*band*), *n.* that which binds together; that which connects; body of soldiers; a company of musicians forming an orchestra.

band-age (*band'aj*), *n.* a roller of cotton or other material used in dressing and binding up wounds.

ban-da-la (*ban-dä'lȧ*), *n.* manila white rope.

ban-dan-na or **ban-dan-a** (*ban-dan'ȧ*), *n.* a large silk or cotton handkerchief.

band-box (*band'boks*), *n.* a light box of pasteboard etc., for holding bonnets.

ban-deau (*ban-dō'*), *n.* [*pl.* bandeaux (*-dōz'*)], a ribbon worn over the forehead.

band-ed (*band'ed*), *p. adj.* allied; confederated having bands.

ban-dit (*ban'dit*), *n.* [*pl.* bandits (*'dits*) and banditti (*-dit'ti*)], an outlaw; a brigand.

ban-do-leer (*ban-dō-lēr'*), *n.* a broad leather belt worn over the shoulder and across the breast, for holding ammunition.

band-saw (*band'saw*), *n.* an endless steel saw running on pulleys.

ban-dy (*ban'di*), *v. t.* [*p. t.* and *p. p.* bandied, *p. pr.* bandying], to throw or beat to and fro, as a ball in play; toss from one to another.

ban-dy (*ban'di*), *n.* a kind of cart or buggy used in India, drawn by oxen. [destruction

bane (*bān*), *n.* that which causes death, ruin, or

bane-ful (*bān'ful*), *adj.* poisonous; pernicious.

bang (*bang*), *v. t.* to beat, as with a club or cudgel thump; handle roughly; produce a loud sound by or from (as to *bang* the door).

bang (*bang*), *n.* [*pl.* bangs], hair cut straight across the forehead so as to form a fringe.

★**Bangor** (*ban'gŏr*), **Me.** Named by Rev. Seth Noble from a well-known psalm tune of that name. Previously the section was known as Sunbury; the Indian name, *Con,* or *Kenduskeag.*

ban-ian or **ban-yan** (*ban'yan* or *ban-yan'*) *n.* a Hindu trader or merchant; a Bengali native who manages money affairs for Europeans; a loose gown for men, like that worn by the Hindus.

banian tree (*trē*), the Indian fig tree, which spreads over a large area by sending down shoots from its branches; these take root and become new trunks.

ban-ish (*ban'ish*), *v. t.* to condemn to exile.

Syn. BANISH, ban, discharge, dislodge, dismiss, drive out, eject, evict, exile, expatriate, expel, ostraeize, oust. One may be *banished, exiled,* or *expatriated* from a country; but *expatriated* or *exiled* only from his own; one may *expatriate* or *exile* himself; he is *banished* by others; one may *banish* disturbing thoughts; care may *banish* sleep; to *expel* is to *drive out* with violence or rudeness.

Ant. HONOR, retain, sustain.

ban-ish-ment (*ban'ish-ment*), *n.* the act of expelling or driving away.

ban-is-ter or **bannister** (*ban'is-tĕr*), *n.* corrupt forms of *balustĕr.*

ban-jo (*ban'jō*), *n.* a musical instrument, of from five to nine strings, having a neck like a guitar, and a circular body covered in front with tightly stretched parchment.

ank (*bangk*), *n.* a heap, mound, or ridge of earth; a steep acclivity; an elevation; an establishment for the custody, loan, exchange, or issue of money.

ank-er (*bangk'ĕr*), *n.* one who keeps a bank; a vessel employed in the cod-fishery on the banks of Newfoundland; the stone bench on which masons cut and square their work; a ditcher.

ank-rupt (*bangk'rupt*), *n.* a person legally declared to be unable to discharge his liabilities.

ank-rupt-cy (*bangk'rupt-si*), *n.* the state of being legally insolvent. [INSOLVENCY.]

anks land. So called in compliment to Sir Joseph Banks, the eminent naturalist and president of the Royal Society of Great Britain.

an-ner (*ban'nĕr*), *n.* an ensign, standard, or flag of a country, state, or order.

an-nock (*ban'nuk*), *n.* a thick cake made of oatmeal.

anns (*banz*), *n. pl.* the proclamation in church of an intended marriage.

★**ban-quet** (*bang'kwet*, not *ban'kwet*), *n.* a sumptuous entertainment or feast.

an-tam (*ban'tam*), *n.* a diminutive breed of domestic fowl.

an-ter (*ban'tĕr*), *v. t.* to rail at good-humoredly.

ap-tism (*bap'tizm*), *n.* the application of water by an authorized administrator, in the name of the Holy Trinity, to a person, by sprinkling, affusion, or immersion, constituting the sacrament or rite by which he is initiated into the visible church of Christ.

ap-tis-mal (*bap-tiz'mal*), *adj.* pertaining to the ceremonial application of water.

ap-tist (*bap'tist*). From the Greek, meaning a "baptizer"; Fr., *Baptiste;* Ger., *Baptist;* It., *Battista;* Lat., *Baptista;* Port., *Baptista;* Sp., *Bautista.* *n.* one of a Christian denomination who baptize adult believers only, and who maintain the necessity for immersion.

ap-tis-ter-y (*bap'tis-tĕr-i*) or **bap-tis-try** (*-tri*), *n.* [*pl.* baptisteries (*-iz*), -tries (*-triz*)], a building or portion of a building in which the rite of baptism is administered.

ap-tize (*bap-tīz'*), *v. t.* to administer the rite of baptism.

ar (*bär*), *n.* a piece of wood, metal, or other solid matter; a bank of sand, gravel, etc., obstructing navigation at the entrance to a harbor or mouth of a river; the railing inclosing the space occupied by counsel in courts of justice; the place in court where prisoners are stationed for trial or sentence; the members of the legal profession collectively; *v. t.* [*p. t.* and *p. p.* barred, *p. pr.* barring], to fasten with a bar; to hinder; obstruct; exclude. [OBSTRUCT.]

arb (*bärb*), *n.* the sharp point projecting backward from the extremity of an arrow, fish-hook, etc.

★**Barbados** (*bär-bā'dōz*). From the Latin *barba*, "a beard," in allusion to the beardlike streamers of moss always hanging from the branches of the trees. An island of British West Indies.

arbara (*bär'bā-rā*). From the Greek, meaning "foreign, strange"; Dutch, *Barbara;* Fr., *Barbe;* Ger., *Barbara;* It., *Barbara;* Lat., *Barbara.*

ar-ba-ri-an (*bär'bā'ri-an*), *n.* a foreigner; a man in a rude, savage state.

ar-bar-ic (*bär-bar'ik*), *adj.* pertaining to or characteristic of savage or uncivilized people.

ar-ba-rism (*bär'bā-rizm*), *n.* an offense against purity of style or language; an uncivilized state or condition.

ar-bar-i-ty (*bär-bar'i-ti*), *n.* [*pl.* barbarities (*-tiz*)], the state of being uncivilized; savageness; cruelty.

ar-ba-rous (*bär'bā-rus*), *adj.* uncivilized. [CRUEL.]

★**Barbary** (*bär'bā-ri*). The land of the Berbers.

ar-be-cue (*bär'bē-kū*), *n.* a social or political entertainment at which animals are roasted whole, with appropriate surroundings.

ar-ber (*bär'bĕr*), *n.* one whose occupation is to shave the beard and cut and dress the hair.

★**Barberini** (*bär-bā-rē'nē*) **palace.** A palace in Rome, near the Quirinal, begun by Urban VIII., whose name was Carlo Barberini, and finished in 1640.

★**Barcelona** (*bär-sē-lō'nā*). Named from Hamilcar Barca, who founded it. A seaport of Spain.

ard (*bärd*), *n.* a poet and singer.

ard or **barde** (*bärd*), *n.* one of the ornaments and housings of a horse.

are (*bär*), *adj.* naked; with the head uncovered.

Syn. BARE, scanty, destitute. *Bare* respects what serves for ourselves; *scanty* that which is provided by others. A subsistence is *bare;* a supply is *scanty; destitute* is said generally of whatever one wants. One is *destitute* of friends, of resources, or of comforts.

Ant. CLOTHED, covered.

are-faced (*bär'fāst*), *adj.* with the face uncovered. [GLARING.]

★**bar-gain** (*bär'gen*, not *bär'gun*), *n.* an agreement between two or more parties with reference to the sale or transfer of property. [BUY.]

arge (*bärj*), *n.* a flat-bottomed vessel.

ar Harbor. A village in Hancock county, Mount Desert Island, Me., so named from a sandy bar.

aring (*bā'ring*, *bär'ing*) **island.** Discovered by Captain Penny, received the name of Sir Francis Baring, first lord of the British admiralty.

ar-i-tone. See *barytone.*

★**ba-ri-um** (*bā'ri-um*), *n.* one of the elementary metals.

bark (*bärk*), *v. i.* to utter a sharp, short sound, as the cry of a dog; to cough: *n.* the sound or cry emitted by dogs.

bark, *n.* the exterior layer or rind of woody stems or trunks; Peruvian bark.

bark or **barque** (*bärk*), *n.* a three-masted vessel having the fore and main mast square-rigged, and the mizzenmast fore-and-aft rigged.

bar-kan-tine or **bar-ken-tine** (*bär'kan-tēn*), *n.* a three-masted vessel having the foremast square-rigged, and the main and mizzen mast fore-and-aft or schooner rigged.

bark-ing (*bärk'ing*), *n.* a sharp sound like that of a dog; coughing: *n.* the process of stripping bark from trees; the process of tanning leather and of dyeing with bark.

bar-ley (*bär'li*), *n.* the grain grown and used chiefly or malting.

bar-ley-corn (*bär'li-kôrn*), *n.* a grain of barley.

barm (*bärm*), *n.* the foam rising upon beer or other malt liquors when fermenting.

barm-y (*bärm'i*), *adj.* containing or consisting of yeast; frothy.

barn (*bärn*), *n.* a covered building for the storage of grain or other farm produce; a stable for cattle or horses.

Barnabas (*bär'na-bas*) or **Barnaby** (*bär'na-bi*). From the Hebrew *Bar Nebah*, which some translate "son of exhortation," or "son of consolation." It rather means "son of prophecy," from *barnebuah.* Danish, *Barnabas;* Dutch, *Barnabas;* Fr., *Barnabe;* Ger., *Barnabas;* It., *Barnaba;* Lat., *Barnabas;* Sp., *Bernabe.*

bar-na-cle (*bär'nā-kl*), *n.* a cirriped crustacean, found adhering in groups or clusters to rocks or to the bottoms of ships, etc.

★**ba-rom-e-ter** (*bā-rom'ē-tĕr*), *n.* an instrument for measuring the weight or pressure of the atmosphere.

bar-on (*bar'un*), *n.* the title of an English peer of the lowest rank, next below a viscount; formerly the title of the judges of the court of exchequer.

ba-ro-ni-al (*bā-rō'ni-al*), *adj.* pertaining to a baron or a barony.

bar-o-scope (*bar'ō-skōp*), *n.* an instrument for indicating variations in the pressure of the atmosphere without actual measurement of its weight.

★**ba-rouche** (*bā-rōōsh'*), *n.* a roomy four-wheeled carriage with a folding or falling top.

bar-rack (*bar'rak*), *n.* a large building, or series of buildings, for the lodgment of soldiers.

bar-ra-try (*bar'rā-tri*), *n.* the practice of vexatiously inciting and encouraging to lawsuits or litigation; the committal by a ship's master, officer, or mariner, of an act of fraud, or breach of duty, whereby the owners, freighters, or insurers of the vessel are defrauded or injured.

★**bar-rel** (*bar'rel*, not *bar'rul*), *n.* a vessel or cask.

bar-rel, *v. t.* [*p. t.* and *p. p.* barreled, *p. pr.* barreling], to put or pack in a barrel.

bar-ren (*bar'ren*), *adj.* incapable of producing its kind.

bar-ri-cade (*bar-ri-kād'*), *n.* a fortification constructed in haste of such materials as are nearest to hand. [OBSTRUCT.]

bar-ri-er (*bar'ri-ĕr*), *n.* anything which hinders or obstructs; an obstacle to progress.

bar-ris-ter (*bar'ris-tĕr*), *n.* a member of the legal profession qualified to plead at the bar.

bar-row (*bar'rō*), *n.* a frame covered with boards, and furnished with handles at both ends, or with a pair of wheels and handles or shafts at one end; a hand-barrow.

Barrow island. In Arctic Ocean, discovered by Captain Penny, in 1850, named for John Barrow, son of Sir John Barrow, the eminent British statesman.

Barrow's strait. In Arctic Ocean, so called by Captain Penny, in compliment to John Barrow.

bar-ter (*bär'tĕr*), *v. i.* to traffic or trade by exchanging one commodity for another. [CHANGE.]

★**Bartholomew** (*bär-thol'ō-mū*). From the Hebrew *Bartolomai*, which, according to some, means "son of Ptolemy," but it translates rather "son of Tolmai." Danish, *Bartholomæus;* Dutch, *Bartholomeus;* Fr., *Barthelemi;* Ger., *Bartholomaus;* It., *Bartolommeo;* Lat., *Bartholomæus;* Port., *Bartholomeu;* Russ., *Varfolomei;* Sp., *Bartolome;* Sw., *Bartholomaus.*

ba-ry-ta (*bā-ri'tā*), *n.* the oxide of barium.

★**bar-y-tone** or **bar-i-tone** (*bar'i-tōn*), *adj.* intermediate between bass and tenor, as a male voice or instrument.

ba-salt (*bā-sawlt'* or *bas'awlt*), *n.* an igneous rock of greenish black color.

base (*bās*), *adj.* worthless; spurious; of mean spirit.

base, *n.* the part of a thing on which it rests; a foundation or groundwork; that which combines with an acid to form a salt.

base-ball (*bās'bawl*), *n.* a game of ball played by nine on a side; ball used in playing baseball.

base-man (*bās'man*), *n.* [*pl.* basemen (*'men*)], a player in baseball placed at the first, second, and third bases respectively.

base-ment (*bās'ment*), *n.* the lowest part of a structure; the lowest story of a building.

bash-ful (*bash'ful*), *adj.* easily disconcerted; modest to excess; diffident; shy. [MODEST.]

★**Basil** (*bā'sil*, not *bā'zil*). From the Greek, *basileios*, meaning "kingly." Danish, *Basilius;* Dutch, *Basilius;* Fr., *Basile;* Ger., *Basilius;* It., *Basilio;* Lat., *Basilius;* Russ., *Vasilii;* Sw., *Basilius.*

★**ba-sil-i-ca** (*bā-zil'i-kā*, not *bā-sil'i-kā*), *n.* [*pl.* basilicas (*-kāz*)], in ancient Rome, a public hall of rectangular shape used for judicial assemblies; a magnificent church, chapel, or cathedral.

bas-i-lisk (*baz'i-lisk*), *n.* a fabulous creature, variously conceived as a kind of serpent; a crested lizard.

ba-sin (*bā'sn*), *n.* a circular vessel for holding water or other liquid.

ba-sis (*bā'sis*), *n.* [*pl.* bases (*'sēz*)], a foundation; the groundwork or fundamental principle of anything. [FOUNDATION.]

bask (*bask*), *v. i.* to lie in warmth; be exposed to genial heat.

bas-ket (*bas'ket*), *n.* a vessel made of rushes, or other flexible material.

basque (*bask*), *n.* a kind of a woman's jacket with a short skirt.

Basque, *adj.* of or pertaining to the Basque race or language.

★**Basque provinces.** The provinces of Vizcaya, Guipuzcoa, and Alava, in Spain, united to Castile in the thirteenth and fourteenth centuries. From *bassoco*, "a mountaineer"; or, according to Humboldt, from *basoa*, "a forest."

bas-re-lief (*bä-rē-lēf'*), *n.* low relief.

bass (*bas*), *n.* the American lime tree.

bass (*bās*), *adj.* low; deep; grave: *n.* the lowest part in the harmony of a musical composition.

bass or **basse** (*bas*), *n.* the name of various edible fishes allied to the perch.

★**bas-soon** (*bas-sōōn'*), *n.* an instrument of the reed kind.

bast (*bast*), *n.* the tough inner fibrous bark of various trees, especially of the lime.

bas-tard (*bas'tĕrd*), *n.* a child begotten and born out of wedlock.

bas-tar-dy (*bas'tĕr-di*), *n.* the state of being illegitimate, or born out of lawful wedlock.

baste (*bāst*), *v. t.* to beat with a stick; to drip or pour melted fat or butter on meat while roasting.

★**Bastille** (*bas-tēl'*), **The.** An old castle in Paris used as a state prison, demolished by the populace in 1789.

bas-ti-na-do (*bas-ti-nā'dō*), *n.* an oriental mode of punishment, consisting in beating an offender upon the soles of his feet with a stick or rod.

★**bas-tion** (*bas'chun*), *n.* an earthwork faced with brick or stone, projecting from the angles of a rampart.

bat (*bat*), *n.* a heavy stick or club; the flattened club used in cricket or similar games; a batsman.

bat (*bat*), *n.* an insectivorous mammal furnished with wings formed by a membrane stretched between the elongated fingers, legs, and tail.

batch (*bach*), *n.* a quantity of anything produced at one operation; a group or collection of similar things.

bate (*bāt*), *v. t.* to lessen or reduce; deduct.

bath (*bäth*), *n.* [*pl.* baths (*bäthz*)], the act of washing or immersing the body in water; a medium through which heat is applied to a body.

Bath, Me. Name adopted February 17, 1781, from Bath, England.

bathe (*bāth*), *v. t.* to subject to a bath.

ba-thos (*bā'thos*), *n.* a ludicrous descent from the elevated to the commonplace in writing or speech.

Baths of Caracalla (*kar-ā-kal'ā*). Baths in ancient Rome, begun by Severus, 206 A. D. Named for the Emperor "Caracalla," a nickname for Marcus Aurelius Antoninus.

ba-thym-e-try (*bā-thim'ē-tri*), *n.* the art of sounding or of measuring sea depths.

ba-tiste (*bā-tēst'*), *n.* a kind of cambric.

★**bat-on** (*bat'un*, Fr. *bā-tôn'*), *n.* a staff or truncheon used as a weapon, or as a mark or badge of office.

★**Baton Rouge** (*bat'un rōōzh*, Fr. *bā-tôn' rōōzh*). City in East Baton Rouge parish, Louisiana. It is a French name, meaning "red staff" or "stick," given because of a tall cypress tree which stood upon the spot where it was first settled. Still another theory ascribes the name to the fact that a massacre by the Indians took place upon the spot upon the arrival of the first settlers.

bat-tal-ion (*bat-tal'yun*), *n.* a body of infantry usually forming a division of a regiment.

bat-ten (*bat'tn*), *v. t.* to make fat by plenteous living; fertilize or enrich: *v. i.* to grow or become fat.

bat-ten, *n.* a strip of wood used to fasten the edges of a tarpaulin to the deck of a ship: *v. t.* to fasten or form with battens.

bat-ter (*bat'tĕr*), *v. t.* to strike with heavy, repeated blows, so as to bruise.

bat-ter, *n.* a mixture of several ingredients, as flour, eggs, etc., beaten together.

bat-ter-y (*bat'tĕr-i*), *n.* [*pl.* batteries (*-iz*)], the act of battering or beating; a body of cannon, with its complement of officers, men, and equipments.

bat-tle (*bat'tl*), *n.* a fight or encounter between opposing forces; a combat.

bat-tle-ment (*bat'tl-ment*), *n.* an indented parapet, consisting of alternate solids and openings.

bau-ble (*baw'bl*), *n.* a trifling piece of finery; anything showy or gay.

Bavaria (*bā-vā'ri-ā*). The country of the Boarii, a tribe related to the Boii.

bawd-ry (*bawd'ri*), *n.* obscenity; lewdness.

bawl (*bawl*), *v. i.* to cry out with a loud, full, and sustained sound. [CALL.]

bay (*bā*), *v. i.* to bark as a dog, with a deep sound, as hounds in the chase.

bay (*bā*), *adj.* red or reddish, approaching to chestnut (applied to horses); *n.* a horse of such color.

bay (*bā*), *n.* a recess in the shore of a sea or lake; the expanse of water between two capes or headlands.

★**Bayeux** (*bā-yō'*). Named from the *Bajoccas*, a Celtic tribe, the name meaning "great conquerors."

Bayeux tapestry. A strip of linen 231 feet long and twenty inches wide, preserved in the Library at Bayeux, France, embroidered with episodes of the Norman conquest of England from the visit of Harold to the Norman court until his death at Senlac, each with its title in Latin.

bay-o-net (*bā'ō-net*), *n.* a short, dagger-like instrument constructed to fix onto the barrel of a rifle.

★**bay-ou** (*bī'ōō* or *bī'ō*), *n.* [*pl.* bayous (*'ōōz*)], in the southern United States, an inlet from a gulf, lake or river.

★**Bayreuth** (*bī'rūth*. Ger. *bī'roit*), **Baireuth.** A former German burggraviate and principality, now in the northern part of Bavaria.

Bayreuth festival. A musical festival held at Bayreuth.

bay win-dow (*bā' win'dō*), the window or windows forming a bay or recess in a room, and extending outward from the wall, usually of a rectangular, semicircular, or polygonal shape.

ba-zaar or **ba-zar** (*bā-zär'*), *n.* in the east, a market-place or exchange.

bdel-lium (*del'yum*), *n.* an aromatic gum resin brought from Africa.

beach (*bēch*), *n.* [*pl.* beaches (*'ez*)], the portion of the shore of the sea or of a lake which is washed by the waves; the strand.

bea-con (*bē'kn*), *n.* a signal of warning or guidance, on sea or land.

Beacon hill. An eminence in Boston, Mass., which has become famous in history. The old beacon, shown in all the early plans of the town, which gave the name to Beacon hill, was erected in 1634-1635, to alarm the country in case of invasion. It stood near the present state-house, the exact spot being the southeast corner of the reservoir formerly standing on Temple street.

Beacon street. A street in Boston, Mass.

bead (*bēd*), *n.* a little perforated ball of any suitable material, intended to be strung with others.

bea-dle (*bē'dl*), *n.* a messenger or crier of a court.

bea-gle (*bē'gl*), *n.* a small hound, formerly used for hunting hares.

beak (*bēk*), *n.* the bill of a bird; the horny jaws or mandibles of other animals.

beak-er (*bēk'ēr*), *n.* a large drinking cup or vessel with a wide mouth.

beam (*bēm*), *n.* a long piece of timber or iron used horizontally or vertically in the framework of a building.

beam-y (*bēm'i*), *adj.* emitting rays of light resembling a beam.

bean (*bēn*), *n.* the smooth, kidney-shaped seed of many leguminous plants.

bear (*bâr*), *v. t.* [*p. t.* bore, bare, *p. p.* borne, *p. pr.* bearing], to support, hold up; carry or convey; suffer or endure; be answerable for; possess, wear; *v. i.* to be fruitful; to bear.

Syn. BEAR, yield. *Bear* conveys the idea of creating within itself; *yield*, that of giving from itself. Animals *bear* their young; inanimate objects *yield* their produce.

Ant. BARREN.

bear *n.* a plantigrade carnivorous mammal, belonging to the genus Ursus, the three best known species of which are the brown or black bear of Europe, the grizzly bear of North America, and the polar bear of the arctic regions.

beard (*bērd*), *n.* the hair that grows on the chin.

bear-ing (*bâr'ing*), *n.* the act of enduring with patience; carriage; behavior; mutual relation of the parts of a whole.

bear-ish (*bâr'ish*), *adj.* resembling a bear in qualities; rude; surly.

beast (*bēst*), *n.* any four-footed animal.

beat (*bēt*), *v. t.* [*p. t.* beat, *p. p.* beaten, beat, *p. pr.* beating], to strike with repeated blows; thrash; knock; pound or break; flatten or spread by blows; *n.* a recurring stroke; a pulsation; a throb; a footfall.

Syn. BEAT, defeat, overpower, rout, overthrow. A general is *beaten* in important engagements; he is *defeated* and may be *routed* in partial attacks; he is *overpowered* by numbers, and *overthrown* in set engagements.

beat-en work (*wērk*), metal shaped by being beaten on an anvil.

be-a-tif-ic (*bē-ā-tif'ik*), *adj.* having power to bless or render perfectly happy; blissful.

be-at-i-fi-ca-tion (*bē-at-i-fi-kā'shun*), *n.* the act of blessing or the state of being blessed.

be-at-i-fy (*bē-at'i-fī*), *v. t.* [*p. t.* and *p. p.* beatified, *p. pr.* beatifying], to make happy.

be-at-i-tude (*bē-at'i-tūd*), *n.* felicity of the highest kind; consummate bliss.

Beatrice (*bē'ā-tris*, Fr. *bā-ā-trēs'*), **Beatrix** (*bē'ā-triks*). Feminine names formed from Latin *beatus*, "blessed, happy." Danish, *Beatrix;* Dutch, *Beatrix;* Fr., *Beatrice;* Ger., *Beatrix*, or *Beatrice;* It., *Beatrice;* Lat., *Beatrix;* Sp., *Beatriz;* Sw., *Beatrix.*

beau (*bō*), *n.* [*pl.* beaus or beaux (*bōz*)], a ladies' man or suitor.

★**Beaufort** (*bū'fûrt*), **S. C.** In honor of Henry, duke of Beaufort.

beau-te-ous (*bū'tē-us*), *adj.* possessing beauty.

beau-ti-ful (*bū'ti-ful*), *adj.* possessing qualities which charm and delight the senses; lovely.

beau-ti-fy (*bū'ti-fī*), *v. t.* [*p. t.* and *p. p.* beautified, *p. pr.* beautifying], to make or render beautiful.

beau-ty (*bū'ti*), *n.* [*pl.* beauties (*-tiz*)], assemblage of graces or properties which command the approbation of the senses.

bea-ver (*bē'vēr*), *n.* a rodent quadruped of amphibious habits, and valued for its fur.

bea-ver, *n.* that portion of armor which served to protect the lower part of the face, and could be raised or depressed.

be-calm (*bē-kām'*), *v. t.* to make calm or still.

beck (*bek*), *n.* a nod, or other significant gesture.

beck-et (*bek'et*), *n.* a contrivance in ships to confine small spars or loose ropes, etc.

beck-on (*bek'n*), *v. i.* to make a signal to another by a motion of the head or hand.

be-cloud. See *cloud.*

be-come (*bē-kum'*), *v. i.* [*p. t.* became, *p. p.* become, *p. pr.* becoming], to pass from one state to another; come or grow to be.

be-com-ing (*bē-kum'ing*), *p. adj.* fit; suitable; seemly; proper; appropriate; befitting.

★**becque-rel rays** (*bek-rel' rāz*), radio-active energy manifested by radium.

bed (*bed*), *n.* an article of domestic furniture upon or within which one rests or sleeps; a layer or stratum of rock; a mass or heap of anything esembling a bed: *v. t.* [*p. t.* and *p. p.* bedded, *p. pr.* bedding], to furnish with a bed; plant, as flowers.

bed-bug (*bed'bug*), *n.* a flat-bodied, reddish-colored insect infesting furniture, etc.

bed-ding (*bed'ding*), *n.* a bed and its furniture.

be-dev-il (*bē-dev'l*), *v. t.* [*p. t.* and *p. p.* bedeviled, *p. pr.* bedeviling], to throw into disorder or confusion.

be-dev-il-ment (*bē-dev'l-ment*), *n.* the state of being vexatiously and bewilderingly disordered.

be-dew (*bē-dū'*), *v. t.* to moisten with dew.

be-diz-en (*bē-diz'n* and *-dī'zn*), *v. t.* to deck or adorn.

bed-lam (*bed'lam*), *n.* a madhouse.

bed-lam-ite (*bed'lam-īt*), *n.* a madman.

★**Bed-ou-in** (*bed'oo-ēn* or *bed'oo-in*, not *bed'win*), *n.* a nomadic Arab or tent-dweller of Arabia, Syria, and northern Africa: *adj.* nomad.

bed-pan (*bed'pan*), *n.* a warming pan.

bed-rid (*bed'rid*) or **bedridden** (*'rid-n*), *adj.* confined to bed by age or infirmity.

bee (*bē*), *n.* a hymenopterous insect of the genus Apis; the hive or honey-bee kept in hives for the sake of its honey and wax.

beech (*bēch*), *n.* [*pl.* beeches (*'ez*)], a tree of the genus Fagus.

beech-en (*bēch'en*), *adj.* pertaining to, or made of the wood or bark of the beech.

beef (*bēf*), *n.* the flesh of an ox, bull, or cow, when killed.

bee-hive (*bē'hīv*), *n.* a box or other covering for a swarm of bees.

bee line (*bē' līn*), the straight course pursued by a bee returning laden to the hive; hence the most direct way from one point to another.

beer (*bēr*), *n.* a fermented alcoholic liquor made from any farinaceous grain, but generally from malted barley.

beet (*bēt*), *n.* a biennial plant, cultivated for its edible, succulent root.

bee-tle (*bē'tl*), *n.* a heavy wooden mallet employed for driving wedges; any insect belonging to the order of Coleoptera, having four wings.

bee-tle (*bē'tl*), *v. i.* to be prominent, jut out, overhang, as a cliff.

bee-tling (*bē'tling*), *adj.* standing out; overhanging.

be-fall or **be-fal** (*be-fawl'*), *v. t.* [*p. t.* befell, *p. p.* befallen, *p. pr.* befalling], to happen or occur to.

be-fit (*bē-fit'*), *v. t.* [*p. t.* and *p. p.* befitted, *p. pr.* befitting], to suit; to be suitable; to become.

be-fore (*bē-fōr'*), *prep.* in front of; preceding in space, time, or rank; in presence or sight of.

be-fore-hand (*bē-fōr'hand*), *adv.* in advance.

be-friend (*bē-frend'*), *v. t.* to act as a friend to; aid or shield; assist.

beg (*beg*), *v. t.* and *v. i.* [*p. t.* and *p. p.* begged, *p. pr.* begging], to ask or supplicate in charity.

Syn. BEG, beseech, solicit, entreat, supplicate, implore, crave. To *beg* denotes a state of want; to *beseech*, *entreat*, and *solicit*, a state of urgent necessity; *supplicate*, and *implore*, a state of abject distress; *crave*, the lowest state of physical want. One *begs* with importunity; *beseeches* with earnestness; *entreats* by the force of reasoning and strong representation; one *solicits* by virtue of one's interest; *supplicates* by an humble address; *implores* by every mark of dejection and humiliation.

be-get (*be-get'*), *v. t.* [*p. t.* begot, begat, *p. p.* begotten, begot, *p. pr.* begetting], to procreate, as a father or sire.

beg-gar (*beg'gēr*), *n.* one who entreats or supplicates with humility; one who makes it his business to beg or ask for alms.

beg-gar-ly (*beg'gēr-li*), *adj.* like, or in the conditio of, a beggar; poor; mean; contemptible.

beg-gar-y (*beg'gēr-i*), *n.* the state of a begga extreme poverty; beggars collectively.

be-gin (*bē-gin'*), *v. i.* [*p. t.* began, *p. p.* begun, *p. p* beginning], to commence existence.

be-gin-ner (*be-gin'nēr*), *n.* one who begins or orig nates.

be-gin-ning (*be-gin'ning*), *n.* the first cause; origi the initial stage of anything.

be-gone (*be-gôn*), *interj.* go away; depart.

★**be-go-ni-a** (*bē-gō'ni-ā*), *n.* a genus of tropic plants, cultivated for their ornamental leave

be-grudge. See *grudge.*

be-guile (*bē-gīl'*), *v. t.* to impose upon or delude b guile; deceive.

be-guile-ment (*be-gīl'ment*), *n.* the act of beguilin the state of being beguiled.

be-gum (*bē'gum*), *n.* in the East Indies, a princes or lady of high rank.

be-half (*bē-hâf'*), *n.* advantage; favor; suppor defense; stead.

be-have (*bē-hāv'*), *v. t.* to conduct, comport, demea or acquit.

be-hav-ior (*bē-hāv'yēr*), *n.* manner of behavin

be-head (*bē-hed'*), *v. t.* to cut off the head of.

be-hest (*bē-hest'*), *n.* a command; precept.

be-hind (*bē-hīnd'*), *prep.* at the back of; in the res of; remaining after; inferior to.

be-hind-hand (*bē-hīnd'hand*), *adv.* or *adj.* in a stat of backwardness; late; in arrear.

be-hold (*bē-hōld'*), *v. t.* [*p. t.* and *p. p.* beheld, *p. p* beholding], to fix the eyes upon; have in sigh

be-hold-en (*bē-hōld'n*), *p. adj.* indebted; obliged bound in gratitude.

be-hoof (*bē-hōōf'*), *n.* advantage; interest; profit use; behalf.

be-hoove or **be-hove** (*bē-hōōv'*), *v. t.* to be mee necessary, or fit for.

★**Behring** (*bē'ring*, Dan. *bā'ring*) **strait, Alaska** Named by Captain Cook, in memory of Iva Ivanovitch or Vitus Behring (who wrote it *Berin* or *Bereng; Behring*, a German corruption), Russian navigator, its discoverer, in 1728.

be-ing (*bē'ing*), *n.* existence, as opposed to no existence.

be-la-bor (*bē-lā'bēr*), *v. t.* to beat soundly.

be-late (*bē-lāt'*), *v. t.* to make late, or retard.

be-lay (*bē-lā'*), *v. t.* to make fast, as with a rope.

belch (*belch*), *v. t.* to eject with force or violenc

be-lea-guer (*bē-lē'gēr*), *v. t.* to besiege; surroun with an army so as to preclude escape.

bel-fry (*bel'fri*), *n.* a bell tower.

Belgium (*bel'ji-um*). Literally, the land of th Belgæ. A kingdom of Europe.

Bel-gra-vi-an (*bel-grā'vi-an*), *adj.* belonging t Belgravia, a fashionable quarter of London.

be-lie (*bē-lī'*), *v. t.* to calumniate; slander by lie

be-lief (*bē-lēf'*), *n.* assent to anything proposed c declared, and its acceptance as fact.

be-liev-a-ble (*bē-lēv'ā-bl*), *adj.* capable of bein accepted as truth; credible.

be-lieve (*bē-lēv'*), *v. t.* to accept as true, upo the ground of authority. [THINK.]

be-liev-er (*bē-lēv'ēr*), *n.* one who accepts as trut something not actually demonstrated.

be-like (*bē-lik'*), *adv.* probably.

Belinda (*bē-lin'dā*). A feminine name. It may b from Italian *Bella Linda*, or corrupted from *bellin* a diminutive of *bello*, "beautiful."

be-lit-tle (*bē-lit'tl*), *v. t.* to lower or depreciate.

bell (*bel*), *v. i.* to bellow, as deer in rutting tim

bell (*bel*), *n.* a hollow metallic vessel, usually cup shaped, and giving forth a clear, ringing soun when struck.

Bella (*bel'lā*). An abbreviation of both *Isabella* an *Arabella.*

★**bel-la-don-na** (*bel-lā-don'nā*), *n.* the deadly night shade, a poisonous plant used as medicine.

belle (*bel*), *n.* a young and handsome lady.

★**Belle isle** (*bel īl'*). French for "beautiful island.

belles-let-tres (*bel-let'tēr*), *n. pl.* polite or elegan literature; light literature.

★**Bellevue** (*bel-vū'*). A noted castle near Cassel i Germany.

bel-li-cose (*bel'li-kōs*), *adj.* pugnacious.

bel-lig-er-ence (*bel-lij'ēr-ens*), or **bel-lig-er-en-c** (*-en-si*), *n.* the act or state of warfare.

bel-lig-er-ent (*bel-lij'ēr-ent*), *n.* a power recog nized as carrying on war; a person engage in fighting.

bel-low (*bel'lō*), *v. i.* to utter a full resonant sound as a bull; bawl or vociferate. [CALL.]

bel-lows (*bel'lōz*), *n. sing.* and *pl.* an instrumen for producing a current of air.

bell-weth-er (*bel'weth-ēr*), *n.* a wether or shee which leads the flock with a bell on his neck.

bel-ly (*bel'li*), *n.* [*pl.* bellies (*'liz*)], that part of th human body which extends from the breast t the thighs, and contains the bowels.

be-long (*bē-lông'*), *v. i.* to be the property (of); g along with; be a part (of); be appendant (to).

be-long-ing (*bē-lông'ing*), *n.* that which belong to one (generally used in the *pl.*)

★**Beloochistan** (*bel-ōō-chis-tān'*) or **Baluchistan** From the Persian, meaning "the country of th Beloooches, or Baluches," a people of Asia.

be-low (*bē-lō'*), *prep.* under in place; beneath; no so high; inferior to in rank or excellence.

belt (*belt*), *n.* a girdle or band used to encircle th waist; anything resembling a belt.

elt-ed cruis-er (*belt'd krōō'zĕr*), a quick-sailing ship, having a broad band of armor plating.
elt-ing (*belt'ing*), *n.* belts collectively.
Belvedere (*bel-vē-dēr'* or *bel'vē-dĕr*). A portion of the Vatican palace at Rome. The word is from the Italian, meaning "fair view."
e-mire (*bē-mīr'*), *v. t.* to soil by passing through mire.
e-moan (*bē-mōn'*), *v. t.* to lament; bewail.
ench (*bench*), *n.* [*pl.* benches (*'ez*)], a long seat; the seat where judges sit in court.
end (*bend*), *v. t.* to curve or make crooked; move or deflect out of a straight line. [TURN, LEAN.]
end-er (*bend'ĕr*), *n.* one who, or that which, bends.
e-neath (*bē-nēth'*), *prep.* lower in place, with reference to something above.
en-e-dict (*ben'ē-dikt*), *n.* a newly married man.
enedict or **Bennet** (*ben'net*). From the Latin *Benedictus*, "blessed"; Danish, *Benedict;* Dutch, *Benedictus;* Fr., *Benoit;* Ger., *Benedict;* It., *Benedetto;* Sp., *Benito*, or *Benedicto;* Sw., *Bengt.*
en-e-dic-tion (*ben-ē-dik'shun*), *n.* the act of blessing; a blessing or expression of kind wishes.
en-e-fac-tion (*ben-ē-fak'shun*), *n.* the act of conferring a benefit.
en-e-fac-tor (*ben-ē-fak'tĕr*), *n.* one who confers a benefit.
en-e-fice (*ben'ē-fis*), *n.* an ecclesiastical living; the revenue to maintain it. [LIVING.]
e-nef-i-cence (*bē-nef'i-sens*), *n.* active goodness.
e-nef-i-cent (*bē-nef'i-sent*), *adj.* characterized by benevolence.
Syn. BENEFICENT, bountiful or bounteous, generous, liberal, munificent. The sincere well-wisher to fellow-creatures is *beneficent* according to his means; he is *bountiful* in providing for the comfort and happiness of others; he is *munificent* in dispensing favors; he is *generous* in imparting his property; he is *liberal* in all he does. *Beneficence* and *bounty* are characteristics of the deity as well as of his creatures.
en-e-fi-cial (*ben-ē-fish'al*), *adj.* contributing to a valuable end.
en-e-fi-ci-a-ry (*ben-ē-fish'i-ā'ri*), *adj.* holding office under another, connected with the receipt of benefits or profits.
en-e-fit (*ben'ē-fit*), *n.* an act of kindness; a favor conferred.
e-nev-o-lence (*bē-nev'ō-lens*), *n.* the disposition to do good; philanthropy. [MERCY.]
e-nev-o-lent (*bē-nev'ō-lent*), *adj.* kind; charitable; philanthropic. [HUMANE.]
en-gal light (*ben-gawl' lit*), a firework, used also for signaling at sea, giving a steady bright blue light.
e-night (*bē-nīt'*), *v. t.* to enshroud in darkness.
be-nign (*bē-nin'*), *adj.* of kind or gentle disposition.
e-nig-nant (*bē-nig'nant*, not *bē-ni'nant*), *adj.* kind; gracious. [HUMANE.]
e-nig-ni-ty (*bē-nig'ni-ti*), *n.* [*pl.* benignities (*-tiz*)], kindness of nature; graciousness. [MERCY.]
en-i-son (*ben'i-zn*), *n.* a blessing.
enjamin. From the Hebrew, *Binyamiyn*, which, according to the Samaritan Pentateuch, means "son of days"; *i. e.*, "son of old age." Fuerstius translates it "lucky son." The name means, literally, "son of the right hand"; figuratively, "son of good fortune." Danish, *Benjamin;* Fr., *Benjamin;* Ger., *Benjamin;* It., *Beniamino;* Lat., *Benjaminus.*
ennet. See *Benedict.*
ennett. This occurs frequently as a feminine name in the registers of Kent, England.
ennington. Town in Hillsboro county, New Hampshire, and county, township, and town in Vermont, named for Governor Benning Wentworth of New Hampshire, who gave grants for the original town, in 1748.
ent (*bent*), *adj.* curved; crooked; strongly inclined.
en-zene (*ben'zēn*), *n.* a volatile, highly inflammable liquid, obtained commercially by distillation from coal tar.
en-zine (*ben-zēn'*), *n.* a liquid compounded of the volatile hydrocarbons of petroleum, and obtained by distillation.
ben-zoin or **benzoine** (*ben-zoin'*), *n.* the resinous juice of gum benjamin.
e-queath (*bē-kwēth'*), *v. t.* to give or leave by will. [DEVISE.]
e-quest (*bē-kwest'*), *n.* the act of leaving by will.
e-reave (*bē-rēv'*), *v. t.* [*p. t.* and *p. p.* bereaved, bereft, *p. pr.* bereaving], to deprive; make destitute.
e-reave-ment (*be-rēv'ment*), *n.* the act of bereaving; the state of being bereaved.
Berenice (*ber-ē-nī'sē*) or **Bernice** (*bĕr'nis*). From the Latin, "bringing victory." Ger., *Berenike;* It., *Berenice.*
eriah (*bē-ri'ä*). The Hebrew *B'riyah*, Simonis translates "in calamitate," *i. e.*, "born in calamity"; Jones, "a calamity in his house"; and Tregelles, "gift."
erkshire (*bĕrk'shir*). This is derived from *barruc*, "a polled or pollard oak," and *scyre*, "a shire"; from the shiremotes of that county being anciently held in the shade of a large polled oak tree.
erkshire. County in Massachusetts, named for Berkshire, England.
erlin (*bĕr'lin*, Ger. *ber-lēn'*). The capital of Prussia. The meaning of the name has been much discussed; it is probably Wendish, from *berle*, "uncultivated ground."
er-mu-da grass (*bĕr-mū'dä grăs'*), a valuable variety of pasture grass.
Bermudas (*bĕr-mū'dăs*). Named for the discoverer, Juan Bermudez, in 1522. One of a group of islands in the North Atlantic.
★**Berne** (*bern*, Ger. *bĕrn*). A Swiss canton which takes its name from its chief town, which grew up around a castle built in 1192, by Duke Berchtold V. of Zahringen. The name *Berne* appears in 1224 on a seal of the town. Not improbably, Berchtold gave the place the name of Berne in memory of Dietrich of Berne (Verona), a favorite hero of Alemannic poetry.
ber-ret-ta (*bĕr-ret'tä*), *n.* a red ecclesiastical cap.
ber-ry (*bĕr'ri*), *n.* [*pl.* berries (*'riz*)], any small pulpy or succulent fruit, as the strawberry, etc.
berth (*bĕrth*), *n.* ample or adequate sea room; a station which a ship occupies at anchorage or port; a room in a vessel set apart for officers or seamen.
ber-tha (*bĕr'thä*), *n.* a kind of lady's cape.
Bertha. From the Old German name, *Berta*, "bright or famous"; Dutch, *Bertha;* Fr., *Berthe;* Ger., *Bertha;* It., *Berta;* Lat., *Bertha;* Sw., *Bertha.*
Bertram (*bĕr'tram*). The Old German name, from *brecht-ram*, "renowned for strength." Fr., *Bertrand;* Ger., *Bertram.*
★**Berwick** (Eng. *ber'ik*, U. S. *bĕr'wick*). This is a contraction of *Aberwick*, the meaning of which is a town (*wick*) at the mouth (*aber*) of a river.
ber-yl (*ber'il*), *n.* a mineral of varying colors, commonly green or greenish-blue.
be-seech (*bē-sēch'*), *v. t.* [*p. t.* and *p. p.* besought, *p. pr.* beseeching], to entreat; supplicate. [BEG.]
be-seem (*bē-sēm'*), *v. i.* and *v. t.* to be suitable or seemly.
be-set (*be-set'*), *v. t.* [*p. t.* and *p. p.* beset, *p. pr.* besetting], to set or stud.
be-set-ting (*bē-set'ting*), *adj.* habitually attacking or coming upon.
be-shrew (*bē-shrōō'*), *v. t.* to wish a curse to; execrate.
be-side (*bē-sīd'*), *prep.* at the side of; near. [ADJACENT.]
be-sides (*bē-sīdz'*), *adv.* more than that; in addition.
be-siege (*bē-sēj'*), *v. t.* to encompass with armed forces.
be-slob-ber (*bē-slob'bĕr*), *v. t.* to smear with anything running from the mouth.
be-smirch (*bē-smĕrch'*), *v. t.* to soil; discolor.
be-som (*bē'zum*), *n.* a brush of twigs for sweeping.
be-sot (*bē-sot'*), *v. t.* [*p. t.* and *p. p.* besotted, *p. pr.* besotting], to bestialize, as with drink.
be-span-gle (*bē-spang'gl*), *v. t.* to adorn with spangles.
be-speak (*bē-spēk'*), *v. t.* [*p. t.* bespoke, *p. pr.* bespeaking], to speak for beforehand.
bes-se-mer steel (*bes'sē-mĕr stēl*), steel made by forcing atmospheric air into cast iron while in a molten state.
Bessie. Corrupted from *Elizabeth.*
best (*best*), *adj.* having the highest degree of goodness or excellence; of the first quality or standing; most desirable, suitable, advantageous.
be-stead (*bē-sted'*), *v. t.* to profit; to accommodate.
★**bes-tial** (*bes'chal*), *adj.* belonging to a beast; animal.
bes-tial-i-ty (*bes-chal'i-ti*), *n.* the qualities or nature of a beast.
bes-tial-ly (*bes'chal-li*), *adv.* in a beast-like manner.
be-stir (*bē-stĕr'*), *v. t.* [*p. t.* and *p. p.* bestirred, *p. pr.* bestirring], to put into brisk or vigorous action.
best man (*best' man*), the groomsman or principal attendant on a bridegroom.
be-stow (*bē-stō'*), *v. t.* to give. [GIVE, CONFER.]
be-stow-ment (*bē-stō'ment*) or **be-stow-al** (*'al*), *n.* the act of giving or conferring; that which is given.
bet (*bet*), *v. t.* [*p. t.* and *p. p.* bet and betted, *p. pr.* betting], to stake or pledge on the event of a future contingency.
be-take (*bē-tāk'*), *v. t.* [*p. t.* betook, *p. p.* betaken, *p. pr.* betaking], to have recourse to; repair.
beth-el (*beth'el*), *n.* a hallowed spot.
be-think (*bē-think'*), *v. t.* and *v. i.* [*p. t.* and *p. p.* bethought, *p. pr.* bethinking], to call to mind.
be-tide (*bē-tīd'*), *v. t.* to happen to; befall.
be-times (*bē'tīmz'*), *adv.* in good season or time.
be-to-ken (*bē-tō'kn*), *v. t.* to indicate by signs. [AUGUR.]
bet-o-ny (*bet'ō-ni*), *n.* a common name for a woodland plant, with purple flowers.
be-tray (*bē-trā'*), *v. t.* to deliver into the hands of an enemy by treachery; violate by fraud or unfaithfulness.
be-tray-al (*bē-trā'al*), *n.* the act of betraying.
★**be-troth** (*bē-trōth'* or *bē-trōth'*), *v. t.* to contract to give any one in marriage.
★**be-troth-al** (*bē-trōth'al* or *bē-trō'thal*) or **be-trothment** (*'ment*), *n.* the act of engaging to marry.
bet-ter (*bet'tĕr*), *adj.* having good qualities in a greater degree than another; preferable or more suitable; *adv.* [used as *compar.* of well], in a superior or more excellent manner; more correctly or thoroughly. [AMEND.]
bet-ting (*bet'ting*), *n.* the act of making bets.
be-tween (*bē-twēn'*), *prep.* in the space or interval which separates.
be-twixt (*bē-twikst'*), *prep.* between; in the space which separates.
bev-el (*bev'el*), *v. t.* [*p. t.* and *p. p.* beveled (*'eld*), *p. pr.* beveling], to cut to a bevel angle; *v. i.* to slant or incline off to a bevel angle; *adj.* sloping.
bev-er-age (*bev'ĕr-āj*), *n.* drink of any description.
bev-y (*bev'i*), *n.* a flock of birds; a company.
be-wail (*bē-wāl'*), *v. t.* to mourn or weep aloud for.
be-ware (*bē-wār'*), *v. i.* to be on one's guard.
be-wil-der (*bē-wil'dĕr*), *v. t.* to lead into perplexity or confusion; puzzle.
be-wil-der-ment (*bē-wil'dĕr-ment*), *n.* the state of being greatly puzzled or perplexed.
be-witch (*bē-wich'*), *v. t.* to cast a spell over; subject to witchcraft.
★**bey** (*bā*), *n.* a governor of a province or district in the Turkish dominions.
be-yond (*bē-yond'*), *prep.* on the farther side of; before; past; out of reach of; later than.
bez-el (*bez'el*), *n.* the part of a finger ring which surrounds and holds fast the stone.
bi-an-nu-al (*bī-an'ū-al*), *adj.* occurring twice a year; semiannual.
★**bi-as** (*bī'ăs*), *n.* [*pl.* biases (*-ez*)], a cut oblique to the texture of the fabric; oblique; slanting; prejudice; a leaning of the mind. [PREJUDICE.]
bi-au-ric-u-late (*bī-aw-rik'ū-lāt*), *adj.* having two auricles, as the heart of the higher vertebrates.
bib (*bib*), *n.* a piece of cloth placed under an infant's chin to protect its clothes.
Bi-ble (*bī'bl*), *n.* the writings of the Old and New Testament.
Bib-li-cal (*bib'li-kal*), *adj.* of or pertaining to the Bible; scriptural.
bib-li-og-ra-pher (*bib-li-og'rä-fĕr*), *n.* one who is versed in bibliography
bib-li-og-ra-phy (*bib-li-og'rä-fi*), *n.* the science or description of books.
bib-li-ol-o-gy (*bib-li-ol'ō-jĭ*), *n.* an account of books; biblical literature; bibliography.
bib-li-o-ma-ni-a (*bib-li-ō-mā'ni-ä*), *n.* a mania for acquiring rare and curious books.
bib-li-o-ma-ni-ac (*bib-li-ō-mā'ni-ak*), *n.* one who has a mania for acquiring books.
★**bib-li-o-phile** (*bib'li-ō-fīl*), *n.* a lover of books.
bib-li-o-the-ca (*bib-li-ō-thē'kä*), *n.* a library.
★**Bibliothèque Nationale** (*bē-blē-ō-tāk' năs-yŏn-năl'*). That is, "national library," the great French library, the largest in the world.
bib-u-lous (*bib'ū-lus*), *adj.* readily absorbing or imbibing fluids.
bi-cam-er-al (*bī-kam'ĕr-al*), *adj.* pertaining to or consisting of two legislative chambers.
bi-cen-te-na-ry (*bī-sen'tē-nā-ri*), *n.* the two hundredth anniversary of an event.
bi-ceps (*bī'seps*), *n.* the large flexor muscle of the arm and thigh.
bi-cip-i-tal (*bī-sip'i-tal*, or **bicipitous** (*-tus*), *adj.* having two heads.
bick-er (*bik'ĕr*), *v. i.* to engage in petty altercation.
bi-con-cave (*bī-kon'kāv*), *adj.* hollow on both sides.
bi-cus-pid (*bī-kus'pid*) or **bicuspidate** (*-āt*), *adj.* having two points or prominences.
★**bi-cy-cle** (*bī'si-kl*, not *bī'sī-kl*), *n.* a vehicle for human propulsion, the machine being propelled by the feet by means of treadles attached to cranks or levers.
bid (*bid*), *v. t.* [*p. t.* bade (*bad*) or bid, *p. p.* bidden, bid, *p. pr.* bidding], to make an offer of; propose as a price; offer for; invite; request; ask.
bid-ding (*bid'ding*), *n.* an order; command; proclamation; the act of offering a price at auction.
bid-dy (*bid'di*), *n.* a fowl or chicken.
bide (*bid*), *v. i.* [*p. t.* and *p. p.* bided, *p. pr.* biding], inhabit; reside: *v. t.* to endure; suffer; wait for.
bi-en-ni-al (*bī-en'ni-al*), *adj.* happening once in two years; continuing or existing for two years.
bi-en-ni-al-ly (*-li*), *adv.* once in two years.
bier (*bēr*), *n.* a frame or carriage on which a corpse is placed, or conveyed to the grave.
bi-fur-ca-tion (*bī-fĕr-kā'shun*), *n.* a forking or division into two branches.
big (*big*), *adj.* [*compar.* bigger, *superl.* biggest], of great bulk or magnitude; grown up; pregnant. [GREAT.]
big-a-mist (*big'ä-mist*), *n.* one guilty of bigamy.
big-a-mous (*big'ä-mus*), *adj.* pertaining to and involving bigamy.
big-a-my (*big'ä-mi*), *n.* the offense of contracting a second marriage during the existence of a former marriage.
bight (*bīt*), *n.* a loop or bend of a rope; an open bay of the sea.
big-ot (*big'ot*), *n.* one who is unreasonably and blindly attached to a particular creed.
big-ot-ed (*big'ot-ed*), *adj.* characterized by bigotry.
big-ot-ry (*big'ot-ri*), *n.* [*pl.* bigotries (*-riz*)], the state or condition of a narrow-minded, intolerant person.
Big Sandy river, Ky. From its extensive sand bars, came the Indian names *Tatteroi*, *Chatteroi*, and *Chatterwha.* Known to the Miamis as *Wepeoconecepewe*, and to the Delawares as *Sikeacepe*, "Salt river."
★**bi-jou** (*bē-zhōō'*), *n.* [*pl.* bijoux (*-zhōōz*)], a jewel; any small and elegantly finished article.
bi-lat-er-al (*bi-lat'ĕr-al*), *adj.* pertaining to, or having, two sides.
bi-lat-er-al-ly (*-li*), *adv.* in a two-sided manner; on both sides.
bil-ber-ry (*bil'bĕr-ri*), *n.* [*pl.* bilberries (*-riz*)], the berry from a shrub of the whortleberry family.
bile (*bīl*), *n.* a yellowish-green bitter fluid secreted by the liver from the blood; ill-humor.
bilge (*bilj*), *n.* the bulging part of a cask; the broadest part of a ship's bottom.
bilge wa-ter (*bilj' waw-tĕr*), water which accumulates in the bilge of a ship.

bilge ways (*bilj' wāz*), the timbers supporting the cradle of a vessel, which upholds it.

bil-ia-ry (*bil'yā-ri*), *adj.* pertaining to the bile; conveying the bile.

bil-ious (*bil'yus*), *adj.* pertaining to the bile.

bil-ious-ness (*-nes*), *n.* the state of being bilious, having bile in excess.

bilk (*bilk*), *v. t.* to spoil the score of an opponent at cribbage; deceive or defraud.

bill (*bil*), *n.* the beak of a bird: *v. i.* to join bills, as doves; caress; *v. t.* to enter or publish in a bill or poster.

bill, *n.* a kind of hatchet with a blade hook-shaped toward the point.

bill, *n.* an account for goods sold, services rendered, or work done.

bill bro-ker (*bil' brō-kĕr*), one who negotiates the discount of bills of exchange.

bil-let (*bil'let*), *n.* a small paper in writing; a note or short letter.

bil-let, *n.* a small stick or log of wood, as for fuel.

bill-hook (*bil'hook*), *n.* a small kind of hatchet with a hooked point.

bil-liards (*bil'yĕrdz*), *n.* a game played on a rectangular, cloth-covered slate table, 12 ft. x 6 ft. in size, with ivory balls and a cue.

bil-lings-gate (*bil'lingz-gāt*), *n.* coarse or profane language; virulent abuse.

bil-lion (*bil'yun*), *n.* in the United States one thousand millions (1,000,000,000); in England a million millions (1,000,000,000,000).

bill of en-try (*en'tri*), a written account of goods entered at the custom-house.

bill of ex-change (*eks-chānj'*), a written order from one person or house (the drawer) to another (the acceptor) to pay to the person designated a certain sum.

bill of health (*helth*), a certificate given to the master of a vessel, specifying the state of the health of a ship's company or passengers at the time of her clearing a port.

bill of lad-ing (*lād'ing*), a document specifying the goods shipped on board a vessel, and signed by the master of such ship, acknowledging the receipt of the goods, and undertaking their safe conveyal to the consignee.

bill of mor-tal-i-ty (*môr-tal'i-ti*), the official return of the deaths (also births) occurring in a particular district within a certain period.

bill of sale (*sāl*), a formal instrument for the transfer of goods and chattels.

bil-lon (*bil'lon*, Fr. *bē-yōn'*), *n.* an alloy of gold and silver.

bil-lot (*bil'lot*), *n.* bullion in the mass or bar.

bil-low (*bil'lō*), *n.* a great wave of the sea. [WAVE.]

bil-ly goat (*bil'li gōt*), a male goat.

★**bi-me-tal-lic** (*bī-mē-tal'lik*), *adj.* pertaining to two metals.

★**bi-met-al-lism** (*bī-met'al-lizm*), *n.* the legalized adoption of two metals in the currency of a country.

bi-month-ly (*bī-munth'li*), *adj.* occurring once in two months.

bin (*bin*), *n.* a receptacle for any commodity.

bind (*bīnd*), *v. t.* [*p. t.* and *p. p.* bound, *p. pr.* binding], to confine or make fast with a cord or band; confine or restrain by physical force; unite by bonds of affection, loyalty, or duty: *v. i.* to tie up; confine by hgature or band.

bind-ing (*bīnd'ing*), *n.* the act of making fast; a bandage.

bin-na-cle (*bin'nȧ-kl*), *n.* a turret-shaped box containing a ship's compass.

★**Binnenhof** (*bin'nen-hōf*). Originally, the palace of Count William of Holland, at the Hague.

bin-o-cle (*bin'ō-kl* or *bī'no-kl*), *n.* a field or opera glass with two eye tubes.

★**bin-oc-u-lar** (*bin-ok'ū-lĕr* or *bī-nok'*), *adj.* having two eyes; pertaining to, or suited to, the use of both eyes.

★**bi-no-mi-al** (*bī-nō'mi-al*), *n.* an expression or quantity consisting of two terms connected by the sign plus (+) or minus (—).

bi-no-mi-al the-o-rem (*thē'ō-rem*), the celebrated theorem of Sir Isaac Newton, which expresses the law of formation of any power of a binomial.

★**bi-o-gen-e-sis** (*bī-ō-jen'ē-sis*) or **bi-og-e-ny** (*-oj'-ē-ni*), *n.* the doctrine that living organisms can proceed only from, or be generated by, living parents or germs; the science of life development.

★**bi-o-graph** (*bī'ō-grȧf*), *n.* a device for projecting seemingly animated pictures upon a screen.

bi-og-ra-pher (*bī-og'rȧ-fĕr*), *n.* one who writes the history of a particular person's life.

★**bi-og-ra-phy** (*bī-og'rȧ-fi*), *n.* [*pl.* biographies (*-fiz*)], the history of the life of a particular person.

bi-o-log-ic (*bī-ō-loj'ik*) or **bi-o-log-i-cal** (*'i-kal*), *adj.* pertaining to the science of life.

bi-o-log-i-cal-ly (*-li*), *adv.* in accordance with the principles of biology.

bi-ol-o-gist (*bī-ol' ō-jist*), *n.* one who studies, or is skilled in, the science of living forms.

★**bi-ol-o-gy** (*bī-ol' ō-ji*, not *bi-ol' ō-ji*), *n.* the science of life in different forms.

bi-par-tite (*bī-pär'tīt*), *adj.* divided into two parts.

bi-par-ti-tion (*bī-pär-tish'un*), *n.* the act of dividing into two parts; the state of being so divided.

bi-ped (*bī'ped*), *adj.* having two feet: *n.* a two-footed animal.

bi-plane (*bī'plān*), *n.* a form of aëroplane consisting of two planes arranged one above the other; distinguished from monoplane and triplane.

birch (*bĕrch*), *n.* [*pl.* birches (*'ez*)], a tree or shrub belonging to the genus Betula.

birch-en (*bĕrch'en*), *adj.* pertaining to, or consisting of, birch.

bird (*bĕrd*), *n.* a warm-blooded feathered vertebrate, furnished with wings.

bird-lime (*bĕrd'līm*), *n.* a viscous substance prepared from holly bark, and used for entangling small birds in bird snaring.

bird's-eye (*bĕrdz'i*), *adj.* seen from above, or at a glance, as by a flying bird; hence general, not minute or detailed.

bi-ret-ta (*bi-ret'tȧ*), *n.* a head-dress for men, of different shapes and colors.

★**Birmingham** (*bĕr'ming-am*). Probably a patronymic from the Boerings; *ham*, a home or family residence; literally "a place of shelter," from *heiman*, "to cover." Hence, originally, "Boering's home."

birth (*bĕrth*), *n.* the act of coming into life; the fact of being born.

birth rate (*rāt*), the increase of population as shown by the percentage of births registered.

birth right (*'rīt*), any right or privilege to which a person is entitled by birth

Biscay (*bis'kā*). Takes its name from the Spanish province of Biscaya or Viscaya, meaning the land of the Basques or Vasks.

bis-cuit (*bis'kit*), *n.* a kind of unraised bread, shaped in flat cakes and baked hard and dry.

bi-sect (*bī-sekt'*), *v. t.* to cut or divide into two equal parts.

★**bi-sex-u-al** (*bī-seks'ū-al*), *adj.* combining the organs of both sexes in one individual; hermaphrodite.

bish-op (*bish'up*), *n.* one of the highest orders of the Episcopal church; below the rank of an archbishop, but above that of a priest.

bish-op-ric (*bish'up-rik*), *n.* the office, dignity, or jurisdiction of a bishop; a diocese.

bish-op's staff (*bish'ups stȧf*), a crosier.

★**bisk** or **bisque** (*bisk*), *n.* soup or broth composed of several kinds of meat or fish boiled together.

★**Bismarck** (*biz'märk*). City in St. Francois county, Missouri, city in Burleigh county, North Dakota (capital of state), and many other places, named for Prince Otto von Bismarck of Germany.

bis-muth (*biz'muth*), *n.* one of the elements.

★**bi-son** (*bī'son*), *n.* the aurochs, or European bison, still preserved in Lithuania; the American bison, which is now nearly extinct.

★**bisque** (*bisk*), *n.* an unglazed white porcelain, used for statuettes, etc.

bi-sul-phate (*bī-sul'fāt*), *n.* a salt of sulphuric acid.

bi-sul-phite (*bī-sul'fīt*), *n.* a salt of sulphurous acid, half the hydrogen of which is replaced by the base.

bit (*bit*), *n.* a tool for boring; the metal mouthpiece of a bridle; the part of a key which enters the lock and acts on the bolts and tumblers.

bitch (*bich*), *n.* the female of the dog, or of other canine animals.

bite (*bīt*), *v. i.* [*p. t.* bit, *p. p.* bitten, bit, *p. pr.* biting], to seize, grip, cut, or crush with the teeth; sting, as an insect; cause smarting pain to: *n.* the act of seizing with the teeth; a wound made by the teeth, or by a sting.

bit-ing-ly (*'ing-li*), *adv.* in a sarcastic manner.

bitt (*bit*), *n.* a post of wood or iron to which cables are made fast.

bit-ter (*bit'tĕr*), *adj.* having a sharp taste; acrid. [ACRIMONY, FEUD.]

bit-tern (*bit'tĕrn*), *n.* a wading bird of the heron family.

bit-ters (*bit'tĕrz*), *n. pl.* liquor in which herbs or roots are steeped.

bi-tu-men (*bi-tū'men*), *n.* mineral pitch.

bi-valve (*bī'valv*), *adj.* having two valves or shells united by a ligament.

★**biv-ouac** (*biv'wak* or *biv'oo-ak*), *n.* an encampment of soldiers in the open air, without tents.

bi-week-ly (*bī-wēk'li*), *adj.* occurring or appearing every two weeks; fortnightly.

★**bi-zarre** (*bē-zär'*), *adj.* odd in manner or appearance.

blab (*blab*), *v. t.* [*p. t.* and *p. p.* blabbed, *p. pr.* blabbing], to tell thoughtlessly: *v. i.* to talk indiscreetly.

black (*blak*), *adj.* destitute of light; of the darkest hue; opposed to white; enveloped in darkness.

black art, necromancy, magic.

black-ball (*blak'bawl*), *v. t.* to reject or exclude (as a candidate) by placing black balls in the ballot box.

black-ber-ry (*blak'ber-ri*), *n.* the fruit of several species of bramble.

black-bird (*blak'bĕrd*), *n.* an English song bird, a species of thrush.

black cur-rant (*blak' kur'rent*), the well-known garden bush, and its fruit.

black-en (*blak'n*), *v. i.* to grow black or dark: *v. t.* to make black; defame; asperse.

black fri-ar (*blak' fri-ĕr*), a friar of the Dominican order.

black-guard (*blag'gärd*, not *blak'gärd*), *n.* a man of low character,

black-guard-ism (*blag'gärd-izm*), *n.* the conduct or language of a blackguard.

black hole (*blak' hōl*), a dungeon or dark cell in a prison; a place of confinement for soldiers.

black-ing (*blak'ing*), *n.* a preparation for imparting a shining black polish to boots.

black-jack (*blak'-jak*), *n.* a large leathern vessel or drinking cup of old times.

black-leg (*blak'leg*), *n.* one who endeavors to obtain money by cheating at races or cards.

black let-ter (*blak' let-tĕr*), the old English or Gothic letter employed in the early manuscripts and the first printed books.

black-list (*blak'list*), *n.* a list of persons who are deemed to be deserving of punishment.

black-mail (*blak'māl*), *n.* a tax anciently paid in money, corn, or cattle, in the north of England, and in Scotland, to the agents of robbers, to secure protection from pillage; hence extortion by means of intimidation.

Black Sea. An inland sea of southeastern Europe, probably so named because it abounds with black rocks. Another explanation is that it is so called from its frequent storms and fogs.

black-smith (*blak'smith*), *n.* a smith who works in iron and makes iron utensils, horseshoes, etc.

Blackstone river, R. I. In memory of William Blackstone, an Episcopal minister, the first white settler of Rhode Island. Indian name of stream *Kehetuck*, "great river," changed afterward to *Pawtucket*, meaning "the forks," from *Pochatuck*, "a branch."

black-thorn (*blak'thôrn*), *n.* the sloe; a stick cut from the stem of the sloe.

blad-der (*blad'dĕr*), *n.* a thin, elastic, membranous bag in animals, in which a fluid is collected.

blade (*blād*), *n.* the leaf of a grass; the young stalk or spire of a grass; the broad, expanded part of a leaf; the cutting part of an instrument.

★**Blaise** (*blāz*). In France the name of the saint is found written *Blaise*, and in Germany *Blaes*. In Latin it occurs as *Blasius* and *Blavius*. It seems to be the same as the Roman name *Blæsus*, which Statius renders "lisper." Danish, *Blæsius*; Dutch, *Blasius*; Fr., *Blaise*; Ger., *Blasius*; It., *Biagio*; Lat., *Blasius*; Sp., *Blas*; Sw., *Blasius*.

blam-a-ble (*blām'ȧ-bl*), *adj.* worthy of being blamed.

blame (*blām*), *v. t.* to censure; reproach: *n.* an imputation of a fault; censure.

Syn. BLAME, censure, condemn, reprove, reproach, upbraid. To *blame* is simply to ascribe a fault to; to *censure* is to express disapprobation; the former is less personal than the latter. The thing more than the person is *blamed;* the person more than the thing is *censured*. A person may be *blamed* for his good nature, and *censured* for his negligence; *reprove* is even more personal than *censure*. A *reproof* passes from one individual to another, or to a certain number of individuals; *reproaching* and *upbraiding* are as much the acts of individuals as *reproving*, but the former denote the expression of personal feelings, and may be just or unjust; the latter is presumed to be divested of all personal feeling. [See *condemn*.]

Ant. APPROVE, commend, praise. [lustrous.

blanch (*blānch*), *v. t.* to take the color out; make

★**blanc-mange** (*blȧ-mȧnzh'*), *n.* a white jelly.

bland (*bland*), *adj.* mild; soft; gentle.

blan-dish-ment (*blan'dish-ment*), *n.* winning expressions or actions; artful caresses.

blank (*blangk*), *adj.* confounded; confused; dejected; empty; free from writing or printing; without result; absolute; complete.

blan-ket (*blang'ket*), *n.* a soft, loosely woven woolen cloth for a bed or as a covering.

blank verse (*vĕrs*), unrhymed verse.

blare (*blär*), *v. i.* to bellow; to give forth a loud sound like a trumpet.

blar-ney (*blär'ni*), *n.* soft, wheedling speech; flattery: *v. t.* [*p. t.* and *p. p.* blarneyed, *p. pr.* blarneying], to influence or talk over by soft words.

blar-ney stone, *n.* a stone in the wall of Blarney castle, Cork, Ireland.

bla-sé (*blȧ-zā'*), *adj.* exhausted by excess of pleasure.

★**blas-pheme** (*blas-fēm'* not *blas'fēm*), *v. t.* to speak irreverently of God or sacred things; mock; revile.

blas-phe-mous (*blas'fē-mus*), *adj.* uttering, containing, or exhibiting blasphemy; profane.

blas-phe-my (*blas'fē-mi*), *n* [*pl.* blasphemies (*-miz*)], impious, profane, or mocking speech concerning God or sacred things.

blast (*blȧst*), *n.* a violent or sudden gust of wind; a forcible stream of air from an orifice; any sudden pernicious influence upon plants or animals. [BREEZE.]

blaze (*blāz*), *n.* a body of flame; brilliant sunlight; a sudden bursting out; active display; a white mark cut on a tree to serve as a guide.

bla-zon (*blā'zn*), *n.* a coat of arms; a description of armorial bearings; ostentatious display.

bleach (*blēch*), *v. t.* to make white by removing color.

bleak (*blēk*), *adj.* exposed to wind and cold; desolate; unsheltered; cheerless; piercing.

blear (*blēr*), *adj.* sore or dim from a watery discharge (said of the eyes).

bleat (*blēt*), *v. i.* to cry as, or like, a sheep: *n.* a cry, as of a sheep.

bleed (*blēd*), *v. i.* [*p. t.* and *p. p.* bled, *p. pr* bleeding], to emit or lose blood; to shed one's blood.

blem-ish (*blem'ish*), *v. t.* to injure; stain; mar; tarnish; defame: *n.* any defect or deformity.

Syn. BLEMISH, stain, spot, speck, flaw, defect, fault. Whatever takes off from the seemliness of appearance is a *blemish*. In works of art the slightest dimness of color, or want of proportion, is a *blemish*. A *stain* or *spot* sufficiently characterizes itself, as that which is superfluous and out of its place; a *speck* is a small *spot*; and a *flaw*, which is confined to hard substances,

mostly consists of a *faulty* indenture on the outer surface. A *blemish* tarnishes; a *stain* spoils; a *spot*, *speck*, or *flaw* disfigures; *defect* consists in the want of some specific property in an object; *fault* conveys the idea not only of something wrong, but also of its relation to the author. There is a *blemish* in fine china; a *defect* in the springs of a clock; and a *fault* in the contrivance.

blench (*blench*), *v. i.* to start back; flinch; quail.

blend (*blend*), *v. t.* to mix together, so that the things mixed cannot be separated or individually distinguished. [MIX.]

blende (*blend*), *n.* native sulphide of zinc.

★**Blenheim** (*blen'im*, not *blen'him*) **palace.** A mansion at Woodstock, Oxfordshire, England, built by Vanbrugh at national cost, 1705-16, for the first duke of Marlborough.

bless (*bles*), *v. t.* [*p. t.* and *p. p.* blessed and blest, *p. pr.* blessing], to consecrate. [HOLY.]

bless-ed-ness (*bles'ed-nes*), *n.* the state of being blessed; happiness; heavenly joys.

bless-ing (*bles'ing*), *n.* an invocation of happiness on another; a benediction. [MERCY.]

blight (*blīt*), *n.* a disease in plants, which causes them to wither partly or wholly.

blind (*blīnd*), *adj.* destitute of the sense of sight; without light, morally or intellectually; not discriminating; inconsiderate; hidden.

blind-fold (*blīnd'fōld*), *adj.* having the eyes covered so as to be unable to see.

blind-ness (*'nes*), *n.* want of sight; want of discernment; ignorance; heedlessness.

blink (*blingk*), *v. i.* to wink with or as with the eye; twinkle; to get a glimpse; glimmer: *v. t.* to evade or shut one's eyes to; shirk.

blink-er (*blingk'ĕr*), *n.* one who blinks; a leather flap placed one on each side of a horse's bridle to prevent him from seeing any object except in front.

bliss (*blis*), *n.* the highest degree of happiness.

blis-ter (*blis'tĕr*), *n.* a vesicle or pustule on the skin containing watery matter or serum.

blithe (*blīth*), *adj.* gay; joyous; glad; mirthful; sprightly.

bliz-zard (*bliz'zĕrd*), *n.* a furious gale of wind, usually accompanied with fine, blinding snow.

bloat (*blōt*), *v. t.* to cure or dry in smoke.

bloat *v. t.* to cause to swell; make turgid or swollen.

block (*blok*) *n.* any unshaped solid mass of matter, as of wood, stone, etc.: *v. t.* to obstruct so as to hinder the passage of persons or things; stop up; obstruct.

block-ade (*blok-ād'*) *n.* the shutting up of a place, as a port, by hostile ships or troops.

block-age (*blok'āj*), *n.* an obstruction.

block-head (*blok'hed*), *n.* a stupid fellow.

block-house (*blok'hous*), *n.* an edifice constructed of heavy timber, and furnished with loopholes for musketry.

block sys-tem (*blok' sis-tem*), a system of working railway traffic by which the line is divided into short sections, no train being allowed to leave a section until the next section is signaled clear.

blond or **blonde** (*blond*), *adj.* of a fair color; light colored.

blood (*blud*), *n.* the fluid which circulates in the arteries and veins of an animal.

blood-ed, *adj.* of the best stock or breed.

blood-hound (*blud'hound*), *n.* a breed of large dogs remarkable for their acuteness of smell.

blood-i-ly (*blud'i-li*), *adv.* in a bloody manner; relentlessly; cruelly.

blood-i-ness (*-nes*), *n.* the state of being bloody; disposition to shed blood.

blood-stone (*blud'stōn*), *n.* a dark green variety of quartz spotted with red jasper.

blood-y (*blud'i*), *adj.* pertaining to, containing, or resembling blood; blood-stained; cruel; murderous.

bloom (*blōōm*), *n.* a blossom; the flower of a plant; the blossoming of flowers; a state or period of health and growth, promising higher perfection, or exhibiting freshness and beauty.

bloom-er (*blōōm'ĕr*), *n.* a costume for women sought to be introduced by a Mrs. Bloomer, of New York, in 1849-50, and consisting of a short skirt, loose trousers, fastened round the ankle.

blos-som (*blos'sum*), *n.* the flower of a plant; the state of flowering; bloom.

blot (*blot*), *n.* a spot or stain; an obliteration or erasure; a blemish; disgrace: *v. t.* [*p. t.* and *p. p.* blotted, *p. pr.* blotting], to spot or stain; mar.

Syn. BLOT OUT, expunge, rase or erase, efface, cancel, obliterate. Letters are *blotted out*, so that they cannot be seen again; they are *expunged*, so as to signify that they cannot stand for anything; they are *erased*, so that the space may be reoccupied with writing; *efface* does not designate either the manner or the object; inscriptions on stone may be *effaced* by rubbing them off so as not to be visible; *cancel* is principally confined to written or printed characters; they are *canceled* by striking through them with the pen; letters are *obliterated* which are in any way made illegible.

Ant. APPROVE, enforce, record, write.

blotch (*bloch*), *n.* a large, irregular spot; a clumsy daub; an eruption, or pustule.

★**blouse** (*blooz*, Fr. *blooz*), *n.* a light, loose overgarment.

blow (*blō*), *n.* a mass of blossoms; the state or condition of flowering: *v. i.* [*p. t.* blew, *p. p.* blown, *p. pr.* blowing], to blossom; flower.

blow (*blō*), *n.* a stroke with the hand or with a weapon; a knock.

blow *v. i.* [*p. t.* blew, *p. p.* blown, *p. pr.* blowing], to form or make a current of air; pant; breathe quickly: *n.* a blowing; a blast; a gale of wind; an egg deposited by a fly; the spouting of a whale.

blow-fly (*blō'fli*), *n.* any species of fly which deposits its eggs upon animal food products.

blow-pipe (*blō'pip*), *n.* a long tube of cane or reed used by South American Indians and the Dyaks of Borneo to discharge arrows by force of the breath; a tube through which a current of air or gas is driven upon a flame.

blow-y (*blō'i*), *adj.* windy; breezy.

blub-ber (*blub'bĕr*), *v. i.* to weep violently, or so as to disfigure the face.

blu-cher (*blū'kĕr*), *n.* a strong half boot.

bludg-eon (*bluj'un*), *n.* a short, heavy stick, sometimes loaded, used as a weapon.

blue (*blū*), *adj.* of the color of the clear sky; azure; low-spirited; dismal; severe.

blue-bell (*'bel*), *n.* the wild hyacinth; the harebell of Scotland.

blue-blood (*'blud*), *n.* aristocratic lineage.

blue-book (*'book*), *n.* a governmental official report, etc.; so called from the blue paper covers.

Blue Grotto. A celebrated cavern on the shore of Capri, an island of Italy.

blue-jacket (*blū'jak-et*), *n.* a sailor.

blue-stock-ing (*blū'stok-ing*), *n.* a woman of literary tastes or occupation.

bluff (*bluf*), *adj.* having a broad, flattened front; rising steeply or boldly; *n.* a high, steep bank; a cliff or headland with a broad, steep face: *v. t.* to deceive, or gain an advantage over.

blu-ing (*blū'ing*), *n.* the process of imparting a blue tint; the indigo, etc., used by washerwomen.

blu-ish (*blū'ish*), *adj* somewhat blue.

blun-der (*blun'dĕr*), *v. i.* to make a gross mistake. [ERROR.]

blun-der-buss (*blun'dĕr-bus*), *n.* a short gun or firearm with a large bore, now obsolete.

blun-der-ing-ly (*blun'dĕr-ing-li*), *adv.* in a blundering manner.

blunt (*blunt*), *adj.* having a thick or rounded edge or point; not sharp; dull in understanding; abrupt.

blur (*blĕr*), *v. t.* [*p. t.* and *p. p.* blurred, *p. pr.* blurring], to dim; sully; stain; blemish.

blurt (*blĕrt*), *v. t.* to speak inadvertently; divulge unadvisedly (usually with *out*).

blush (*blush*), *v. i.* to become red in the face, as from shame or confusion.

blus-ter (*blus'tĕr*), *v. i.* to be windy and boisterous, as the weather.

blus-ter-ous (*blus'tĕr-us*), **blus-trous** (*'trus*), or **blus-ter-y** (*'tĕr-i*), *adj.* noisy; tumultuous; rough.

★**bo-a** (*bō'ā*), *n.* [*pl.* boas (*'āz*)], a huge serpent of South America; a long fur tippet.

bo-a con-stric-tor (*bō'ā kon-strik'tĕr*), a reptile remarkable for its length, and power of destroying its prey by constriction.

boar (*bōr*), *n.* the male of swine; the wild hog, or wild boar.

board (*bōrd*), *n.* a piece of timber sawed thin, and of considerable length and breadth compared with the thickness; a table for food; provision; entertainment.

board-ing (*bōrd'ing*), *n.* light timber collectively; a covering of boards; the act of supplying, or state of being supplied with, food and lodging.

boar-ish (*bōr'ish*), *adj.* swinish; brutal; cruel.

boast (*bōst*), *v. i.* to brag; to speak of one's self or belongings in assertive and bombastic terms. [GLORY.]

boast, *v. t.* to dress (stone) with a broad chisel and mallet.

boast-ful (*bōst'fūl*), *adj.* given to boasting.

boat (*bōt*) *n.* a small open vessel usually moved by oars, but often by a sail.

★**boat-swain** (*bōt'swān* or *bō'sn*), *n.* a petty officer of a ship who has charge of the rigging, etc.

bob (*bob*), *v. t.* [*p. t.* and *p. p.* bobbed, *p. pr.* bobbing], to impart a short jerking motion to; to cut short: *v. i.* to have a short jerking motion; move or play to and fro, or up and down.

bob-bin (*bob'bin*), *n.* one of the pins or small cylinders of wood used to carry and steady the threads in pillow lace making.

★**bob-o-link** (*bob'ō-lingk*), *n.* an American song bird.

bob-stay (*bob'stā*), *n.* one of two or more ropes or chains to hold the bowsprit down.

bob-tail (*bob'tāl*), *n.* a short tail, or a tail cut short; the rabble (rag, tag and bobtail).

bode (*bōd*), *v. t.* to portend; be an omen of: *v. i.* to augur; presage.

bod-ice (*bod'is*), *n.* a close-fitting waist.

bod-i-ly (*bod'i-li*), *adj.* not mental; corporeal. [PHYSICAL.]

bod-kin (*bod'kin*), *n.* a pointed instrument for piercing holes.

★**Bodleian** (*bod'lē-an*) **library.** A library of Oxford University, England, which was originally established in 1445, and reëstablished by Sir Thomas Bodley in 1597-1602.

bod-y (*bod'i*), *n.* [*pl.* bodies (*'iz*)], the material organized substance of an animal, as distinguished from the soul, spirit, or vital principle.

Syn. BODY, ashes, carcass, clay, corpse, dust, form, frame, remains, system, trunk. *Body* denotes the structure considered as a whole; *form* looks upon it as a thing of shape and outline; *frame* regards it as supported by its framework; *system* views it as an assemblage of many related and harmonious organs. *Body*, *form*, *frame*, and *system* may be either dead or living; *clay* and *dust* are sometimes figuratively so used; *corpse* and *remains* are used only of the dead; *carcass* applies only to the *body* of an animal.

Ant. MIND, soul, spirit.

bod-y col-or (*bod'i kul'ĕr*), a pigment possessing body or consistence.

★**Bœ-o-tian** (*bē-ō'shan*), *adj.* pertaining to Bœotia, in central Greece.

★**Boer** (*bōōr*, not *bōr*). Applied to Dutch inhabitants of the country districts of the Cape of Good Hope, is the German name for farmers and agriculturists.

bog (*bog*), *v. t.* [*p. t.* and *p. p.* bogged, *p. pr.* bogging], to sink or submerge in a bog or quagmire: *v. i.* to sink or stick in a bog.

bo-gus (*bō'gus*), *adj.* counterfeit; spurious.

bo-gy or **bo-gey** (*bō'gi*), *n.* [*pl.* bogies, bogeys (*'giz*)], a hobgoblin; a specter.

bo-hea (*bō-hē'*), *n.* a kind of black tea.

Bohemia (*bō-hē'mi-ā*). Once the country of the Boii, expelled in the time of Augustus by the Marcomanni. Now part of Austria-Hungary.

bo-he-mi-an (*bō-hē'mi-an*), *n.* a person who disregards social conventionalities.

boil (*boil*), *v. i.* to be in a state of ebullition through the action of heat.

boil, *n.* an inflamed and painful suppurating tumor.

boil-er (*boil'ĕr*), *n.* one who boils; a vessel in which anything is boiled.

★**Bois de Boulogne** (*bwä du bōō-lōn'yu*). A park in Paris reached by the Champs Élysées, the avenue of the Grande Armée, or the avenue of the Bois de Boulogne.

★**Bois de Vincennes** (*bwä du van-sen'*). A public park in Paris larger than the Bois de Boulogne.

★**Boise** (*boi'zā*), **Idaho.** From the river on which it was located, the latter having been named by the French *Rivière Boisé*, "woody river."

bois-ter-ous (*bois'tĕr-us*), *adj.* violent; rough; stormy; turbulent; noisy. [VIOLENT.]

★**Bokhara** (*bō-kä'rä*). The treasury of sciences, or "town of learning"; the chief town in a state of the same name in central Asia.

bold (*bōld*), *adj.* courageous; venturesome; planned or executed with courage and spirit.

Syn. BOLD, fearless, intrepid, undaunted. *Boldness* is a positive characteristic of the spirit; *fearlessness* is a negative state of the mind, that is, simply an absence of fear. A person may be *bold* through *fearlessness*, but he may be *fearless* without being *bold;* he may be *fearless* where there is no apprehension of danger or no cause for apprehension, but he is *bold* only when he is conscious or apprehensive of danger, and prepared to encounter it. A man is *intrepid* who has no fear where the most *fearless* might tremble; he is *undaunted* whose spirit is unabated by that which would make the stoutest heart yield.

Ant. COWARDLY, dastardly, fearful.

bole (*bōl*), *n.* the trunk or stem of a tree.

Bolivia (*bō-liv'i-ä*, Sp. *bō-lē'vē-ä*). A republic of South America. So named in memory of Gen. Simon Bolivar.

★**boll** (*bōl*), *n.* the pod or capsule of a plant, as of flax: *v. i.* to form a boll or seed vessel; go to seed.

★**Bologna** (*bō-lōn'yä*, not *bō-lō'nä*), **Italy.** Named from the Boii, anciently *Felsina*, later *Bononia*.

bol-ster (*bōl'stĕr*), *n.* a long pillow or cushion used to support the head.

bolt (*bōlt*), *n.* a short, thick arrow with a blunt head; a thunderbolt; a discharge of lightning; a stout metallic pin or rod used for holding objects together; a sliding catch for securing a door.

bolt (*bōlt*), *v. t.* to sift or separate the coarser from the finer particles.

bomb (*bom* or *bum*), *n.* a hollow iron ball or shell filled with an explosive material, fired from a mortar and usually exploded by a fuse.

bom-bard (*bom-bärd'*), *v. t.* to attack with cannon.

bom-bard-ment (*bom-bärd'ment*), *n.* a continuous attack with shot and shell.

★**bom-bast** (*bom'bast* or *bum'bast*), *n.* originally cotton or other soft material used for stuffing garments.

★**Bombay** (*bom-bā'*). Named after an Indian goddess *Bombe*, but translated by the Portuguese into *Bom bahia*, "good bay." A seaport of India.

★**bom-ba-zine** (*bum-bä-zēn'* or *bom-*), *n.* a twilled fabric, of which the warp is silk, the weft worsted.

bo-nan-za (*bō-nan'zä*), *n.* a rich vein of ore; hence, anything which is a mine of wealth.

★**bon-bon** (*bôn'bôn*), *n.* a sugar-plum; any confection of sugar; a Christmas cracker.

bond (*bond*), *n.* anything that binds, fastens, or confines; a ligament: *pl.* fetters; imprisonment; captivity: hence, a cause of union; duty; obligation; an instrument under seal by which a person binds himself, his heirs, etc.

bone (*bōn*), *n.* the ossified tissue forming the skeleton of most vertebrate animals; one of the parts or pieces of an animal skeleton.

bone-black (*bōn'blak*), *n.* animal charcoal.

bon-fire (*bon'fir*), *n.* any large fire made in the open.

★**Boniface** (*bon'i-fās*). From the Latin *Bonifacius*, name of several popes; this, in turn, from *benefacio*, "to do good," hence, a "well-doer." Danish, *Bonifacius;* Dutch, *Bonifacius;* Fr., *Boniface;* Ger., *Bonifaz* or *Bonifacius;* It., *Bonifacio;* Lat., *Bonifacius;* Sw., *Bonifacius*.

bon-net (*bon'net*), *n.* a soft woolen cap worn by men in Scotland; a woman's head covering, varying according to fashion.

★**bon-ny** (*bon'ni*), *adj.* handsome; beautiful; pretty; gay; blithe. [Written also *bonnie.*]

bo-nus (*bō'nus*), *n.* [*pl.* bonuses (*-ez*)], a sum given or paid, over and above what is required or actually payable.

boo (*bōō*), *interj.* an expression of aversion or contempt: *n.* hooting.

boo-by (*bōō'bi*), *n.* a dunce; a stupid fellow.

boo-dle (*bōō'dl*), *n.* money paid for votes, or undue political influence.

book (*book*), *n.* a collection of sheets of paper and other material, blank, written, or printed, bound together.

book-ing of-fice (*book'ing of'fis*), in England, an office where passenger tickets are sold. [study.

book-ish (*book'ish*), *adj.* given to reading; fond of

book-keep-ing (*book'kēp-ing*), *n.* the art of recording pecuniary or business transactions in a regular and systematic manner.

book-let (*book'let*), *n.* a little book.

book-mak-er (*book'māk-ēr*), *n.* one who writes and publishes books; a compiler.

book-worm (*book'wĕrm*), *n.* the larva or grub of various species of insects which infest and injure books; a person closely addicted to study.

boom (*bōōm*), *n.* a long pole or spar run out to extend the foot of certain sails; a strong chain, cable, or line of spars bound together, extended across a river or harbor to exclude an enemy's ships.

★**boom-er-ang** (*bōōm'ĕr-ang*), *n.* a missile weapon used by the Australian aborigines, consisting of a piece of flat, curved wood, which, when thrown by the hand in a certain manner, describes a series of curves, and finally returns to the thrower.

boon (*bōōn*), *n.* a benefit; a gift; a privilege; a favor: *adj.* convivial.

boor (*bōōr*), *n.* a rustic; a peasant.

boor-ish (*bōōr'ish*), *adj.* like a boor; clownish.

boose. See *booze.*

boost (*bōōst*), *v. t.* to lift by pushing from behind.

boot (*bōōt*), *n.* that which is thrown in as an inducement to a bargain.

boot, *v. t.* to profit; to advantage.

boot, *n.* a leather covering for the feet and the lower part of the leg.

booth (*bōōth*), *n.* a temporary structure.

boot-less (*bōōt'les*), *adv.* without advantage.

boots (*bōōts*), *n.* the servant in a hotel who cleans the boots of the guests. [war.

boo-ty (*bōō'ti*), *n.* [*pl.* booties (*'tiz*)], spoil taken in

Syn. BOOTY, spoil, prey. *Booty* and *spoil* are used as military terms in attacks on an enemy, *prey* in cases of particular violence. The soldier gets his *booty;* the combatant his *spoils;* the carnivorous animal his *prey. Booty* respects what is of personal service to the captor; *spoils* whatever serves to designate his triumph; *prey* includes whatever gratifies the appetite and is to be consumed.

booze (*bōōz*), *n.* liquor: *v. i.* to drink deeply.

bo-rac-ic (*bō-ras'ik*), *adj.* pertaining to, or produced from, borax.

bo-rac-ic [ac-id (*as'id*), a compound of boron with oxygen and hydrogen.

bo-rax (*bō'raks*), *n.* a salt compounded of boracic acid and soda.

bor-deaux (*bôr-dō'*), *n.* red and white wines produced in the district of Bordeaux, France.

Bordeaux. Literally means "the margin of the water."

bor-der (*bôr'dĕr*), *n.* the outer part or edge of anything; a margin; brink; boundary; frontier. [ADJACENT.]

bore (*bôr*), *v. t.* to pierce or drill a hole in; form by piercing or drilling; to force (as a passage) with effort; weary by tedious repetition.

bore, *n.* a tidal wave which breaks in the estuaries of some rivers.

bore-dom (*bôr'dum*), *n.* ennui; the realm of bores; bores collectively.

★**Borghese** (*bôr-gā'zā*) **palace.** A famous Roman palace, seat of the Borghese family, and noted for its art collections.

★**Borgne** (*bôrn'y*) **lake, La.** French word, meaning "blind of one eye," or "one-eyed." Application has never been explained.

bo-ride (*bō'rid*), *n.* a compound of boron with a metallic base.

★**Borneo** (*bôr'nē-ō*). Comes from the Malay *Bruneï,* once the name of the largest city on the island, and changed by the Portuguese to *Borneo.* Largest of the East Indian islands

bor-nite (*bôr'nit*), *n.* a valuable ore of copper.

★**bo-ro-glyc-er-ide** (*bō-rō-glis'ĕr-id* or *-id*), *n.* an antiseptic containing boric acid, glycerine, etc.

bo-ron (*bō'ron*), *n.* a nonmetallic element occurring abundantly in borax.

bor-ough (*bur'ō*), *n.* a corporate town.

bor-row (*bor'rō*), *v. t.* to obtain (a thing) on loan.

bort (*bôrt*), *n.* imperfect or inferior diamonds.

★**bos-cage** or **bos-kage** (*bos'kāj*), *n.* ground covered with trees and shrubs; woods; thickets; a wooded landscape.

bosh (*bosh*), *n.* absurd or empty talk.

bos-ket (*bos'ket*), *n.* a grove; a thicket.

bos-ky (*bos'ki*), *adj.* woody; bushy.

★**Bosnia** (*boz'ni-ä*, not *bos'ni-ä*). The country of southeastern Europe traversed by the river Bosna.

bos-om (*booz um*), *n.* the breast; clothing covering the breast; the affections or passions.

★**Bosporus** (*bos'pō-rus*). A Greek term, composed of *bous,* "a cow," and *poros,* "a ford," alluding to the legend that, after Io was transformed into a cow, she forded this strait.

boss (*bos*), *n.* [*pl.* bosses (*'ez*)], a protuberant part; a stud or knob.

boss (*bos*), *n.* a master, superintendent; foreman.

★**Boston** (*bôs'tun,* not *bos'ton* nor *bôs'ton*). City in Massachusetts. By some authorities the name is said to have been given in honor of John Cotton, vicar of St. Bodolph's church in Boston, Lincolnshire, England, and one of the first clergymen in the American Boston. Others say it was named before the arrival of John Cotton, in honor of three prominent colonists from Boston, England.

bo-tan-ic (*bō-tan'ik*), or **bo-tan-i-cal** (*'i-kal*), *adj.* skilled in a knowledge of plants.

★**bot-a-nist** (*bot'ä-nist*), *n.* one who studies or is skilled in a knowledge of plants.

bot-a-nize (*bot'ä-nīz*), *v. i.* to seek after plants for the purpose of studying them.

★**bot-a-ny** (*bot'ä-ni*), *n.* the science of plants.

Botany bay. So called by Captain Cook from the great variety of plants which he found growing on its shores when exploring it in the year 1770.

botch (*boch*), *v. t.* to mend or patch in a clumsy manner.

both (*bōth*), *adj.* and *pron.* the one and the other; the two.

both-er (*both'ĕr*), *v. t.* to annoy; tease; worry.

both-er-a-tion (*both-ĕr-ā'shun*), *n.* the act of bothering, or state of being bothered.

both-er-some (*both'ĕr-sum*), *adj.* troublesome.

bot-tle (*bot'tl*), *n.* a hollow vessel, usually with a narrow neck, made of glass or earthenware, for holding liquids.

bot-tle-hold-er (*bot'l-hōld'ĕr*), *n.* one who waits upon a pugilist in a prize fight.

bot-tom (*bot'tum*), *n.* the deepest part of anything; the base; foundation; root; the ground under any body of water; the buttocks.

bot-tom lands (*bot'tum lands*), rich, flat alluvial soil on the river banks of the western states.

bot-tom-ry (*bot'tum-ri*), *n.* the act of borrowing money on the security of a ship.

★**bou-doir** (*bōō'dwôr,* Fr. *bōō-dwär'*), *n.* a small room, elegantly furnished, for a lady's private use.

bough (*bou*), *n.* an arm or branch of a tree.

★**bou-illon** (*bōō'yôn* or *bōōl-yôn'*), *n.* a clear soup produced from boiling meat.

boul-der (*bōl'dĕr*), *n.* a large stone worn or rounded by the action of water.

★**bou-le-vard** (*bōō'lē-vär* or *bōō'lē-värd*), *n.* a broad street in or around a city.

bounce (*bouns*), *v. t.* to cause to bound; to eject summarily; to bully: *v. i.* to strike against anything so as to rebound.

bound (*bound*), *n.* a limit; confine; extent; boundary: *pl.* territory within certain boundaries: *v. t.* to limit.

Syn. BOUND, limit, confine, circumscribe, restrict. *Bound* applies to the natural or political divisions of the earth; countries are *bounded* by mountains and seas; *limit* applies to any artificial boundary, as landmarks in fields serve to show the *limits* of one man's ground from another. To *confine* is to bring the *limits* close together, to part off one space absolutely from another; in this manner we *confine* a garden by means of walls. To *circumscribe* is literally to surround; in this manner a circle may *circumscribe* a square; to *restrict* is to exercise a strong degree of control; a person is *restricted* by his physician to a certain portion of food in a day.

Ant. BROADEN, enlarge, extend.

bound (*bound*), *v. i.* to jump or spring suddenly or in succession; leap; rebound.

bound (*bound*), *adj.* ready to go; destined.

bound-a-ry (*bound'ä-ri*), *n.* [*pl.* boundaries (*-riz*)], the extent or limit of anything.

bound-less (*bound'les*), *adj.* without bound.

Syn. BOUNDLESS, unbounded, unlimited, infinite. The ocean is a *boundless* object so long as no bounds to it have been discovered; desires are often *unbounded* which ought always to be bounded; power is sometimes *unlimited* which would be better limited; nothing is *infinite* but that Being from whom all finite beings proceed.

Ant. FINITE, limited, restricted.

boun-te-ous (*boun'tē-us*), *adj.* giving freely; liberal in gifts; munificent. [BENEFICENT.]

boun-ti-ful (*boun'ti-ful*), *adj.* liberal in bestowing gifts or favors; generous; ample. [BENEFICENT.]

boun-ty (*boun'ti*), *n.* [*pl.* bounties (*t'iz*)], liberality in bestowing gifts or favors; generosity.

★**bou-quet** (*bōō-kā',* not *bō-kā'*), *n.* a nosegay; a perfume or aroma characteristic of some wines.

★**bour-geois** (*bōōr-zhwä'*), *n.* a French citizen of the mercantile class; a shopkeeper.

★**bour-geoi-sie** (*bōōr-zhwä-zē'*), *n.* the French middle class.

bourn (*bôrn*), *n.* a stream; a rivulet.

★**bourse** (*bōōrs*), *n.* a stock exchange for the transaction of business.

bout (*bout*), *n.* a turn or bend; a going and returning.

bo-vine (*bō'vīn*), *adj.* of or pertaining to cows or oxen.

bow (*bou*), *n.* the forepart or prow of a ship.

bow (*bou*), *v. t.* to bend; make curved or crooked; bend or incline, as the head or body in token of respect.

bow (*bō*), *n.* a weapon for discharging arrows; anything curved.

bow-el (*bou'el*), *n.* one of the intestines of an animal.

bow-er (*bou'ĕr*), *n.* a shelter constructed of boughs or twining plants; an arbor.

bow-er (*bou'ĕr*), *n.* an anchor carried at the bow of a ship.

bow-er-y (*bou'ĕr-i*), *adj.* like a bower; shady.

bow-er-y (*bou'ĕr-i*), *n.* [*pl.* boweries (*-iz*)], a country retreat; farm or plantation with its buildings.

bowl (*bōl*), *n.* a circular, hollow vessel for holding liquids.

bowl (*bōl*), *n.* a ball of wood used in the games of bowls, and skittles.

bowse (*bouz*), *v. i.* to pull or haul hard.

★**bow-sprit** (*bō'sprit*), *n.* a large boom or spar running out from the stem of a ship.

bow-string (*bō'string*), *n.* string of a bow; string used by the Turks for strangling offenders.

box (*boks*), *n.* an evergreen shrub or small tree, yielding a hard, close-grained wood.

box (*boks*), *n.* [*pl.* boxes (*'ez*)], a case for holding anything: *v. t.* to inclose in a box; confine.

box (*boks*), *n.* a blow on the head with the fist, or on the ear with the open hand.

box-ing glove (*boks'ing gluv*), a padded glove.

box met-al (*boks' met-al*), an antifriction alloy used for journal boxes, shafting, etc.

boy (*boi*), *n.* a male child; a young lad.

★**boy-cott** (*boi'kot*), *v. t.* to combine against a person so as to ostracize.

boy-hood (*boi'hood*), *n.* the state of being a boy.

boy-ish (*boi'ish*), *adj.* pertaining to a boy or boyhood; childish; puerile.

brace (*brās*), *n.* that which holds anything tightly or supports it firmly; a prop; a bandage; a pair; a rope reeved through a block at the end of a yard, by which the yard is swung from the deck; *v. t.* to bind or tie closely; strain up; strengthen; furnish with supports.

brace-let (*brās'let*), *n.* an ornamental band or ring for the wrist.

brack-en (*brak'en*), *n.* the brake or fern.

brack-et (*brak'et*), *n.* a supporting piece projecting from a wall; one of the inclosing marks in printing: *v. t.* to furnish with or inclose within brackets.

brack-ish (*brak'ish*), *adj.* saltish.

bract (*brackt*), *n.* a modified leaf growing from the flower stem.

brad (*brad*), *n.* a slender nail, having a projection on one side: *v. t.* [*p. t.* and *p. p.* bradded, *p. pr.* bradding], to nail or secure with brads.

brag (*brag*), *v. i.* [*p. t.* and *p. p.* bragged, *p. pr.* bragging], to boast; speak vainglorious.

brag-ga-do-cio (*brag-ä-dō'shō*), *n.* a boaster; a braggart; empty boasting.

brag-gart (*brag'gĕrt*), *n.* a boaster: *adj.* boastful.

brag-ger (*brag'gĕr*), *n.* one who brags.

brah-ma (*brä'mä*), *n.* a useful variety of large domestic fowl.

Brahman or **Brahmin** (*brä'man* or *brä'min*), *n.* [*pl.* Brahmans or Brahmins (*'manz* or *'minz*)], a member of the Hindu priestly caste.

★**Brahmanism** or **Brahminism** (*brä'man-izm* or *brä'min-izm*), *n.* the religion or doctrines of the Brahmans.

★**Brahmapootra** or **Bramaputra** (*brä-mä-pōō'trä*). River of India, the name being of Sanskrit origin, meaning "the offspring of Brahma," or "Brahma's son."

braid (*brād*), *v. t.* to weave or intertwine; plait: *n.* a plaited band.

brain (*brān*), *n.* the soft, whitish, convoluted mass occupying the cranium of a vertebrate; the understanding.

★**brain storm** (*stôrm*), a state of cerebral excitement.

brain wave (*wāv*), a telepathic vibration by which it is supposed a thought is conveyed from one mind to another.

brain-y (*brān'i*), *adj.* possessed of brains; acute.

★**braise** (*brāz*), *v. t.* to stew (as meat) in a covered vessel.

brait (*brāt*), *n.* a rough diamond.

brake (*brāk*), *n.* an instrument or machine to break flax; an extended handle, by which a number of men can unite in working a pump; a mechanical device for checking the motion of a vehicle or machine.

brake (*brāk*), *n.* a place overgrown with bracken, brushwood, etc.; the common fern.

bram-ble (*bram'bl*), *n.* the English blackberry; any prickly bush or shrub.

bram-bly (*bram'bli*), *adj.* full of brambles.

bran (*bran*), *n.* the husks of wheat, rye, etc., separated from the flour by bolting.

branch (*branch*), *n.* [*pl.* branches (*'ez*)], a shoot or limb from a main bough; an offshoot; any member or part of a body or system; a department.

brand (*brand*), *n.* a burning piece of wood; any form of trade-mark; hence, quality or kind: *v. t.* to mark by burning with a hot iron.

bran-dish (*bran'dish*), *v. t.* to move, wave, or shake, as a raised weapon.

bran-dy (*bran'di*), *n.* [*pl.* brandies (*'diz*)], an ardent alcoholic liquor distilled from wine or the husks of grapes.

Brandywine river, Pa. Called by the first settlers, the Swedes, *Fish-kiln,* "Fish creek." Its present name is ascribed by tradition to the loss of a Dutch vessel laden with brandy, or *brand-wijn.* A celebrated battle was fought there, which

accounts for the name being given to eight places in the country.

brash (*brash*), *adj.* brittle, as wood. [*Colloq., U. S.*]

brash (*brash*), *n.* broken, loose, and angular fragments of rock underlying alluvial deposits.

brass (*brăs*), *n.* [*pl.* brasses (*'ez*)], an alloy of copper and zinc.

brass-y (*brăs'i*), *adj.* pertaining to, or resembling, brass; impudent; brazen.

brat (*brat*), *n.* a child (used contemptuously).

brat-tish-ing (*brat'tish-ing*), *n.* ornamental open-work; cresting.

★**bra-va-do** (*brä-vä'dō*), *n.* [*pl.* bravadoes (*'dōz*)], arrogant menace; defiance.

brave (*brāv*), *adj.* bold; courageous; intrepid; making a fine show: *n.* an Indian warrior.

Syn. BRAVE, gallant. *Gallantry* is extraordinary bravery or bravery on extraordinary occasions; the *brave* man goes willingly where he is commanded; the *gallant* man leads on with vigor to the attack. *Bravery* is common to vast numbers and whole nations; *gallantry* is peculiar to individuals or particular bodies.

Ant. FEAR, cringe, shrink, tremble.

brav-er-y (*brāv'ĕr-i*), *n.* the quality of being brave.

Syn. BRAVERY, courage, valor. *Bravery* lies in the blood; *courage* lies in the mind; the latter depends on the reason, the former on the physical temperament; the first is a species of instinct, the second a virtue; a man is *brave* in proportion as he is without thought; he has *courage* in proportion as he reasons or reflects. *Valor* is a higher quality than either *bravery* or *courage*, and seems to partake of the characteristics of both; it combines the fire of *bravery* with the determination and firmness of *courage*. [See *courage*.]

Ant. FEAR, pusillanimity, cowardice.

bra-vo (*brä'vō*), *interj.* well done! good! *n.* a cheer.

bra-vu-ra (*brä-vōō'rä*), *n.* an air of florid, brilliant style, adapted to display the skill of the performer, or the range and flexibility of a singer's voice.

brawl (*brawl*), *v. i.* to quarrel noisily and outrageously. [FEUD.]

brawn (*brawn*), *n.* full, strong muscles; boar's flesh, especially when collared and otherwise prepared.

brawn-y (*brawn'i*), *adj.* muscular; tough.

bray (*brā*), *v. t.* [*p. t.* and *p. p.* brayed, *p. pr.* braying], to pound or beat fine or small.

braze (*brāz*), *v. t.* to solder with brass; cover or ornament with brass.

bra-zen (*brā'zn*), *adj.* made of brass; pertaining to brass.

bra-zier (*brā'zhĕr*), *n.* an open pan for burning charcoal.

★**Brazil** (*brä-zil'*, Port. *bra-zēl'*). Named, on account of the color of its dye-woods, from *braza*, "a live coal." A republic of South America.

bra-zil nut (*brä-zil' nut*), *n.* the seed of a tree of tropical America.

★**Brazos** (*brä'zōs*) **river, Tex.** As named by the Spaniards *Brazos de Dios*, "arm of God." The Spaniards established a mission on its banks some thirty miles from the mouth of the San Saba, and, the guard having been called away, the Indians descended on the mission, completely destroying it. When the soldiery returned, their loss was quickly discovered, and, searching for a solution, they found in the river many of the dead bodies of the depredators, still floating in its eddies; as they could discern no marks of violence, they pronounced it a retributive miracle done by the "arm of God."

breach (*brēch*), *n.* the act of breaking; the violation of a law, contract, or any other engagement.

Syn. BREACH, break, gap, chasm. A *breach* and a *gap* are the consequence of a violent removal, which destroys the connection; a *break* and a *chasm* may arise from the absence of that which would form a connection. A *breach* in a wall is made by means of cannon; *gaps* in fences are commonly the effect of some violent effort to pass through; a *break* is made in a page of printing by leaving off in the middle of a line; a *chasm* is left in writing when any words in the sentence are omitted. [See *break*.]

bread (*bred*), *n.* food made from ground grain; food in general.

bread-fruit (*'frōōt*), *n.* the fruit of a tree growing in the Pacific islands.

bread-stuff (*'stuf*), *n.* grain, flour, or meal from which bread is made.

breadth (*bredth*), *n.* the measure of any surface from side to side.

break (*brāk*), *v. t.* [*p. t.* broke, *p. p.* broken, *p. pr.* breaking], to separate with violence; interrupt: *n.* a breach; rupture; an interruption.

Syn. BREAK, burst, crack, split. To *break* does not specify any particular manner or form of action; what is *broken* may be *broken* in two or more pieces, *broken* short or lengthwise, and the like; to *burst* is to break suddenly and with violence, frequently also with noise. To *crack* and *split* are modes of breaking lengthwise; the former in application to hard or brittle objects, as clay, or the things made of clay; the latter in application to wood. [See *breach*.]

Ant. ATTACH, bind, join, mend, unite.

break-age (*brāk'äj*), *n.* the act of breaking; allowance for accidental fracture.

break-down (*brāk'doun*), *n.* a collapse; failure.

break-er (*brāk'ĕr*), *n.* one who, or that which, breaks. [WAVE.]

break-fast (*brek'fast*), *n.* the first meal in the day.

break-wa-ter (*'waw-tĕr*), *n.* any structure to break the force of the waves.

bream (*brēm*), *n.* a broad-shaped fresh-water fish; sunfish; marine fishes of different varieties.

breast (*brest*), *n.* the fore part of the body between the neck and the abdomen.

breast-plate (*'plāt*), *n.* a portion of armor covering the front of the body.

breast-work (*'wĕrk*), *n.* a hastily constructed work, thrown up breast-high for defense.

★**breath** (*breth*), *n.* the air inhaled and exhaled in respiration; life; the power or capacity to breathe.

★**breathe** (*brēth*), *v. i.* to inhale air and expel it from the lungs; live; take breath.

breath-ing (*brēth'ing*), *n.* respiration; air in gentle motion.

breech (*brēch*), *n.* the buttocks; the hinder part of anything.

breech-es (*brich'ez*), *n. pl.* a garment worn by men, covering the legs.

breech-ing (*brich'ing*), *n.* the harness which passes round a horse's breech.

breed (*brēd*), *v. t.* [*p. t.* and *p. p.* bred, *p. pr.* breeding], to procreate; hatch; train. [EDUCATION.]

breeze (*brēz*), *n.* a gentle gale; a fresh, soft wind.

Syn. BREEZE, gale, blast, gust, storm, tempest, hurricane. A *breeze* is gentle; a *gale* is brisk, but steady; we have *breezes* in a calm summer's day; the mariner has favorable *gales*, which keep the sails on the stretch. A *blast* is impetuous; the exhalations of a trumpet, the breath of bellows, are *blasts*. A *gust* is sudden and vehement; *storm*, *tempest*, and *hurricane* include other particulars besides wind. A *storm* throws the whole atmosphere into commotion; it is a war of the elements, in which wind, rain, hail, and the like conspire to disturb the heavens. *Tempest* is a species of *storm* which has also thunder and lightning to add to the confusion. *Hurricane* is a species of *storm* which exceeds all the rest in violence and duration.

Ant. CALM, lull, quiet.

breeze (*brēz*), *n.* house sweepings.

★**Brenner** (*bren'nĕr*) **pass.** The lowest pass over the main chain of the Alps. It is situated in the Tyrol about twenty-five miles south of Innsbruck.

★**breth-ren** (*breth'ren*, not *breth'ĕrn*), *n.* plural of brother.

★**Breton** (*brit'un* or *bret'un*) **Cape.** Discovered by mariners from Brittany.

breve (*brēv*), *n.* a note of time equal to two semibreves or four minims.

★**bre-vet** (*brē-vet'*), *n.* a commission to an officer in the army conferring a higher rank, but without increase of pay.

★**bre-vi-a-ry** (*brē'vi-ä-ri*), *n.* [*pl.* breviaries (*-riz*)], a book containing the daily prayers.

brev-i-ty (*brev'i-ti*), *n.* [*pl.* brevities (*-tiz*)], shortness.

brew (*brōō*), *v. t.* to make liquors from malt; plot: *n.* the action, process, or product of brewing.

brew-er-y (*brōō'ĕr-i*), *n.* a brewhouse.

★**Brian** (*bri'an*) or **Briant.** Names derived from the Irish name *Brian*, which has been rendered "warrior of great strength."

bribe (*brib*), *n.* a gift or consideration given or promised with the object of corrupting or unduly influencing the judgment of the recipient.

brib-er-y (*brib'ĕr-i*), *n.* [*pl.* briberies (*-iz*)], the act or practice of bribing.

★**bric-a-brac** (*brik'-ä-brak*), *n.* antique articles of virtu; fancy ware.

brick (*brik*), *n.* a block of clay dried in the sun or burned in a kiln; a jolly, good-natured fellow.

brick-kiln (*'kil*), *n.* a kiln or furnace in which bricks are baked or burnt.

brid-al (*brid'al*), *n.* a marriage; nuptials: *adj.* pertaining to a bride, or wedding.

bride (*brid*), *n.* a woman newly married, or about to be married.

bride-groom (*'grōōm*), *n.* a man newly married or about to be married.

brides-maid (*bridz'mād*), *n.* a female friend who attends on a bride at her wedding.

bride-well (*brid'wel*), *n.* a house of correction for the confinement of disorderly persons.

bridge (*brij*), *n.* a structure of iron, stone, or wood, spanning a river, road, valley, etc.

★**Bridget** (*brij'et*). Mr. Arthur derives this feminine name from Gaelic *brighid*, "fiery dart" or "shining bright"; the Gaelic word signifies also a hostage; Armstrong renders *brighide* "a hostage." Celtic, "strength." Danish, *Birgitte;* Dutch, *Brigetta;* Fr., *Brigitte;* Ger., *Brigitta;* It., *Brigida* or *Brigita;* Lat., *Brigida;* Sp., *Brigida*.

bri-dle (*bri'dl*), *n.* the headstall, bit and reins by which a horse is controlled; a restraint.

brief (*brēf*), *adj.* short; concise; contracted; narrow: *n.* an epitome; an abridged statement. [SHORT.]

bri-er (*bri'ĕr*), *n.* a thorny plant or shrub.

bri-er root (*rōōt*), *n.* the root of two species of smilax, used in the manufacture of tobacco pipes.

brig (*brig*), *n.* a two-masted, square-rigged vessel.

bri-gade (*bri-gād'*), *n.* a subdivision of an army: *v. t.* to form into a brigade or brigades.

brig-a-dier (*brig-ä-dēr'*), *n.* a general officer commanding a brigade. [Also *brigadier general*.]

★**brig-and** (*brig'and*, not *brig-and'*), *n.* a robber; a member of a gang of freebooters; a bandit.

brig-and-age (*brig'and-äj*), *n.* the life and practices of a brigand; organized robbery.

brig-an-tine (*brig'an-tīn*), *n.* a small two-masted square-rigged vessel like a brig, except that she has no square mainsail.

bright (*brit*), *adj.* brilliant; shining; illustrious; witty; clever; lively. [CLEAR.]

bright-en (*brit'n*), *v. i.* to grow bright; clear up: *v. t.* to make bright or luminous; make cheerful.

Brighton (*bri'tun*). Formerly Brighthelmstoen, from a personal name. A city and watering-place in Sussex, England, on the English channel. It is the leading seaside resort in Great Britain.

Bright's dis-ease (*brīts' diz-ēz'*), *n.* a form of kidney disease characterized by the presence of albumin in the urine.

brill (*bril*), *n.* a flatfish resembling the turbot; prill.

bril-lian-cy (*bril'yan-si*), *n.* splendor. [RADIANCE.]

bril-liant (*bril'yant*), *adj.* sparkling; distinguished: *n.* a diamond, cut to exhibit its refracting qualities.

brim (*brim*), *n.* the edge of anything: *v. t.* [*p. t.* and *p. p.* brimmed, *p. pr.* brimming], to fill to the brim.

brim-ful (*brim'ful*), *adj.* overflowing.

brim-stone (*brim'stōn*), *n.* sulphur: *adj.* made of brimstone; of the color of sulphur.

brine (*brin*), *n.* salt water; pickle; the ocean; tears: *v. t.* to steep in brine.

bring (*bring*), *v. t.* [*p. t.* and *p. p.* brought, *p. pr.* bringing], to fetch or convey.

Syn. BRING, fetch, carry. To *bring* is simply to take with one's self from the place where one is; to *fetch* is to go first to a place and then bring a thing; to *fetch*, therefore, is a species of *bringing;* whatever is near at hand is *brought;* whatever is at a distance must be *fetched;* to *carry* respects always a motion directly from the place or at a distance from the place; he *carries* a parcel from home.

brink (*bringk*), *n.* the edge; verge.

brisk (*brisk*), *adj.* lively; active; swift; vivacious; effervescing vigorously; sparkling. [ACTIVE.]

bris-ket (*bris'ket*), *n.* that part of an animal's breast where the ribs join the breastbone.

★**bris-tle** (*bris'l*, not *brist'l*), *n.* a short, stiff, coarse hair, especially upon the back and sides of swine.

bris-tly (*bris'li*), *adj.* covered with bristles.

bris-tol board (*bris'tul bōrd*), *n.* a thick, smooth, white pasteboard.

bris-tol pa-per (*pā'pĕr*), *n.* a kind of stout drawing paper.

Bristol, R. I. From the town of same name in England. Derived from Anglo-Saxon words *bris*, "bright," and *stol*, "place."

bris-tol stone (*stōn*), *n.* a transparent rock crystal. Called, when polished, bristol diamond.

Britain (*brit'n*). From *brith*, meaning "to paint." The British poets called it *Inis gwyn*, "white island," which answers to the Roman name *Albion*. It was known to the Phenns as *Barat-Anac*, or "the land of tin," as far back as the year 1037 B. C. Five hundred years afterward it was alluded to by the Romans under the name of Britannia, which subsequently became Britain.

Brit-ish (*brit'ish*), *adj.* of or pertaining to Great Britain or its inhabitants.

British Columbia. The only portion of North America that retains the name of the discoverer of the new world, with the exception of the District of Columbia.

British museum. A celebrated museum at Bloomsbury, London, founded in 1753.

Brit-on (*brit'un*), *n.* a native of Great Britain.

★**Brittany** (*brit'tä-ni*). In French, *Bretagne*, an old province in the northwest of France. It was originally called *Armorica*, a Celtic name meaning the "land by the sea."

brit-tle (*brit'l*), *adj.* apt to break; not tough. [FRAGILE.]

broach (*brōch*), *n.* an awl; spike; skewer; a kind of boring bit or drill; a stonecutter's chisel.

broad (*brawd*), *adj.* [*comp.* broader, *superl.* broadest], wide; ample; vast; liberal. [LARGE.]

broad ar-row (*ar'ō*), *n.* a British government mark to distinguish its property.

broad-cloth (*'klawth*), *n.* a fine woolen cloth with a smooth finished surface.

broad-en (*brawd'n*), *v. i.* to grow broad: *v. t.* to make broad or comprehensive.

Broad river, N. C. and **S. C.** The Indian name given by the Catawbas was *Eswan Huppeday*, or "Line River," because it was the established line between the Cherokee and Catawba tribes.

broad-side (*brawd'sīd*), *n.* a simultaneous volley from one side of a warship.

broad-sword (*'sōrd*), *n.* a cutting sword with a broad blade.

Broadway. The principal business street of New York, extending from Bowling Green northward to Central Park.

bro-cade (*brō-kād'*), *n.* a silk stuff variegated with gold and silver flowers, etc.

broch (*brok*), *n.* a prehistoric roofless round tower, with massive walls of unhewn stone, found on the Orkney and Shetland islands and near the mainland.

bro-chure (*brō-shōōr'*), *n.* a pamphlet dealing with a subject of passing interest.

★**Brocken** (*brok'en*) or **Blocksberg** (*bloks'bĕrg*). The chief summit of the Harz mountains, and the highest mountain in northern Germany, situated in the province of Saxony, Prussia. It is the Roman *Mons Bructerus*.

★**brogue** (*brōg*), *n.* a coarse, rough shoe; a dialectic pronunciation.

broil (*broil*), *v. t.* to cook upon a gridiron; *v. i.* to be subjected to great heat; *n.* a noisy quarrel. [QUARREL, FEUD.]

bro-ken (*brō'kn*), *p. adj.* not entire; in pieces; rough; hilly; bankrupt; crushed; infirm; imperfect.

bro-ker (*brō'kĕr*), *n.* one who acts as agent or middleman for another.

bro-ker-age (*brō'kĕr-āj*), *n.* the business of a broker; his fee or commission.

bro-ma (*brō'mȧ*), *n.* aliment; a light preparation of cocoa.

bro-mic ac-id (*brō'mĭk as'ĭd*), a compound of bromine and oxygen.

★**bro-mide** (*brō'mīd* or *'mĭd*), *n.* a compound of bromine.

★**bro-mine** (*brō'min* or *'mĭn*), *n.* a nonmetallic element related to chlorine and iodine.

bron-chi-a (*brong'kĭ-ȧ*), *n. pl.* the bronchial tubes.

bron-chit-ic (*brong-kĭt'ĭk*), *adj.* of or pertaining to bronchitis.

★**bron-chi-tis** (*bron-kī'tĭs*), *n.* an inflammation of the mucous lining of the bronchial tubes.

★**bron-cho** (*brong'kō*), *n.* a native, a Mexican or Californian horse of small size.

bron-cho-pneu-mo-ni-a (*brong-kō-nū-mō'nĭ-ȧ*), *n.* inflammation of the lungs and bronchi.

bron-chus (*brong'kus*), *n.* [*pl.* bronchi (*'kī*)], one of the two principal branches of the windpipe.

Bronxville (*brongks'vĭl*). Village in Westchester county, New York. Named for Jonas or Jacob Bronck, an early settler.

bronze (*bronz*), *n.* an alloy of copper and tin; a work of art cast or wrought in bronze.

brooch (*brōch*), *n.* an ornamental dress clasp.

brood (*brōōd*), *n.* offspring; the young birds hatched at one time; *v. i.* to linger over sorrowfully.

brook (*brook*), *n.* a small stream.

brook (*brook*), *v. t.* to bear; put up with.

Brooklyn (*brook'lĭn*). City in New York, corruption of the Dutch name *Breukelen*, from a village in the province of Utrecht, Holland. The name signifies "broken-up land," or "marshy land."

broom (*brōōm*), *n.* a shrub, bearing large yellow flowers; a besom or brush.

broth (*broth*), *n.* a kind of thin soup.

broth-el (*broth'el*), *n.* a house of ill fame.

broth-er (*bruth'ĕr*), *n.* [*pl.* brothers (*'ĕrz*) and brethren (*breth'ren*)], a male person who has the same father and mother with another person; one closely united by a common interest with another.

broth-er ger-man (*-jĕr'mȧn*), a brother on both the father's and the mother's side.

broth-er-hood (*-hood*), *n.* the state or quality of being a brother; a fraternity.

broth-er-in-law (*-in-law*), *n.* the brother of one's husband or wife; sister's husband.

★**brough-am** (*brōō'ȧm* or *brōōm*), *n.* a close four-wheeled carriage for one or two horses.

brow (*brou*), *n.* the arch of hair over the eye; the forehead; the edge of a steep place.

brow-beat (*brou'bēt*), *v. t.* [*p. t.* browbeat, *p. p.* browbeaten, *p. pr.* browbeating], to bully.

brown (*broun*), *adj.* of a dusky or dark color: *n.* a dark color, inclined to red or yellow.

brown-ie (*broun'ĭ*), *n.* a beneficent spirit supposed to haunt old farmhouses. [*Scotch.*]

browse (*brouz*), *v. t.* to feed on; pasture on; graze: said of cattle, deer, etc.

★**Brüges** (*brü'jez*, Fr. *brüzh*). In Belgium, "a city with many bridges"; *brücke*, "a bridge."

bru-in (*brōō'ĭn*), *n.* a bear, in popular tales.

bruise (*brōōz*), *n.* an injury to the flesh of an animal or to a plant or other body, caused by a blow.

bruit (*brōōt*), *n.* report; rumor; fame: *v. t.* to report; noise abroad.

bru-nette (*brōō-net'*), *n.* a woman with a dark complexion, usually with dark hair and eyes.

brunt (*brunt*), *n.* a violent shock; a furious onslaught; a strong, brief and sudden effort.

brush (*brush*), *n.* a thicket of small trees; an instrument composed of bristles, etc.

brusque (*brusk*), *adj.* abrupt in manner.

★**Brussels** (*brus'selz*), Fr. **Bruxelles.** Meaning "the seat or site on the marsh"; *broek*, "a marsh," and *selĭ*, "a house." The capital of Belgium.

Brus-sels car-pet (*kär'pet*), a strong kind of woolen carpet.

Brus-sels lace (*lās*), various kinds of expensive lace made originally at Brussels.

Brus-sels sprouts (*sproutz*), a variety of the common cabbage.

bru-tal (*brōō'tal*), *adj.* pertaining to or resembling a brute; savage. [CRUEL.]

bru-tal-i-ty (*brōō-tal'ĭ-tĭ*), *n.* the quality of being brutal; pitiless cruelty.

brute (*brōōt*), *adj.* without reason or intelligence; uncivilized: *n.* a beast; a brutal person.

bru-tish (*brōō'tĭsh*), *adj.* pertaining to, or resembling, a brute; savage; sensuous.

bub-ble (*bub'l*), *n.* a small bladder of water or other fluid filled with air or gas; anything unreal.

★**buc-ca-neer** (*buk-kȧ-nēr'*), *n.* a pirate; a sea robber: *v. i.* acting the part of a buccaneer.

buc-ci-na-tor (*buk-sĭ-nā'tĕr*), *n.* a muscle of the cheek called the trumpeter's muscle.

★**Bucharest** or **Bukharest** (*bū-kȧ-rest'*). From an Albanian word *bucurie*, "pleasure, joy"; hence, "the city of enjoyment." Capital of Roumania.

buck (*buk*), *v. t.* to break or pulverize, as ore.

buck, *n.* the male of the fallow-deer, goat, rabbit, etc.; a gay fellow; a male Indian or negro.

buck-et (*buk'et*), *n.* a vessel for drawing or holding water; the scoop of a dredging machine.

buck-et shop (*shop*), an office for gambling in stocks, grain, etc., in small amounts.

buck-eye (*buk'ĭ*), *n.* a name of the American horse chestnut.

buck-hound (*'hound*), *n.* a staghound.

★**Buckingham** (*buk'ĭng-ȧm*). A tribe name, "the dwelling among beeches"; *buche*, "the beech tree"; *ham*, "a home or family dwelling."

Buckingham palace. The London residence of the sovereign, situated at the western end of St. James' park.

buck-jumper (*'jump-ĕr*), *n.* a vicious untrained horse that endeavors to throw the rider.

buc-kle (*buk'l*), *n.* a metal clasp consisting of a frame with movable tongue or catch.

buck-le (*buk'l*), *n.* a bend, or kink, as in a blade; a curl of hair; the condition of being curled, as hair.

buc-kler (*buk'lĕr*), *n.* a kind of ancient shield.

★**buck-ram** (*buk'rȧm*), *n.* coarse linen cloth stiffened with dressing: *adj.* made of, or resembling, buckram.

buck-shot (*'shot*), *n.* shot of a large size.

buck-wheat (*'hwēt*), *n.* a plant cultivated for its seeds, which are ground into meal and used for food.

bu-col-ic (*bū-kol'ĭk*), *adj.* pastoral: *n.* a pastoral poem.

bud (*bud*), *v. t.* [*p. t.* and *p. p.* budded, *p. pr.* budding], to graft: *v. i.* begin to grow: *n.* the undeveloped stage of a branch, leaf, or flower.

★**Buda** (*bōō'dȧ*). In Hungary; took its name from *Buda*, the brother of Attila, as well as *Bud-var* and *Bud-falva*, meaning "Buda's fort and village"; *buda*, "a hut or dwelling."

★**Bud-dhist** (*bōōd'ĭst*), *n.* one who accepts the doctrines of Buddhism: *adj.* pertaining to Buddha or Buddhism.

budge (*buj*), *v. i.* to move from one's position.

budg-et (*buj'et*), *n.* a bag with its contents, hence a stock or store.

bud-let (*bud'let*), *n.* a small bud.

★**Buenos Ayres** or **Aires** (*bō'nus ā'rĭz* or *ȧrz*). Meaning "good breezes"; *buen*, "good." The capital of the Argentine Republic.

buff (*buf*), *n.* a thick leather prepared from the skin of the ox, etc.; a light yellow.

buf-fa-lo (*buf'ȧ-lō*), *n.* [*pl.* buffaloes (*-lōz*)], a ruminant mammal of the ox family.

Buffalo. A city in New York, named from the stream Buffalo creek, on which it is located, the stream receiving its name from the frequent visits of the American bison to a salt spring which welled up near its mouth, "where the buffalo drinks." Indian name of the locality *Teosahwa* or *Teshuway*, "the place of the basswood," also *sisilichanne*, "waters sought by the buffaloes."

buf-fa-lo bird (*bĕrd*), a bird which perches on the buffalo to catch parasites.

buf-fer (*buf'ĕr*), *n.* any contrivance which serves to deaden the concussion caused by the impact of two bodies.

buf-fet (*buf'et*), *n.* a blow with the hand: *v. t.* to strike with the hand; box; beat; contend against.

buf-fet (*boo-fā'*), *n.* a cupboard or sideboard; a counter for refreshments.

buf-foon (*buf-ōōn'*), *n.* one who amuses others by low jests, antics, odd gestures, etc. [FOOL.]

buf-foon-er-y (*buf-ōōn'ĕr-ĭ*), *n.* [*pl.* buffooneries (*-iz*)], the arts and practices of a buffoon.

bug (*bug*), *n.* name in England for the bedbug; an insect.

bug-a-boo (*bug-ȧ-bōō'*), *n.* a bugbear.

bug-bear (*bug'bâr*), *n.* a frightful object; a vain terror.

bug-gy (*bug'ĭ*), *n.* a light four-wheeled carriage drawn by one horse. [instrument.

bu-gle (*bū'gl*), *n.* a hunting horn; a military wind-

bu-gle (*bū'gl*), *n.* an elongated glass bead.

build (*bild*), *v. t.* [*p. t.* and *p. p.* built, builded, *p. pr.* building], to construct; erect, as a house: *v. i.* to construct an edifice; depend, base, or reckon.

build-ing (*bild'ĭng*), *n.* the act of constructing, raising, or establishing; an edifice.

bulb (*bulb*), *n.* an onion-shaped root; a kind of leaf bud; any protuberance or expansion on a stem or tube.

★**Bulgaria** (*bōōl-gā'rĭ-ȧ*, not *bul-gā'rĭ-ȧ*). On the Danube, and comprising part of ancient Mœsia.

bulge (*bulj*), *n.* the bilge or widest part of a cask; a bending outward: *v. i.* to jut out.

bulk (*bulk*), *n.* magnitude or size.

bulk-head (*'hed*), *n.* a partition in a vessel which separates apartments on the same deck.

bulk-y (*bulk'ĭ*), *adj.* of great size or bulk.

Syn. BULKY, massive. Whatever is *bulky* has a prominence of figure; what is *massive* has compactness of matter.

bull (*bool*), *n.* the male of any bovine mammal; the male of various large animals.

bull (*bool*), *n.* a papal letter, edict, or rescript, having a leaden seal (*bulla*) affixed to it.

bull (*bool*), *n.* a ludicrous inconsistency in language.

bul-let (*bool'let*), *n.* a small ball or projectile.

bul-le-tin (*bool'lē-tĭn*), *n.* an official report; a periodical publication.

bull-fight (*bool'fīt*), *n.* a combat between armed men and a bull.

bull-finch (*bool'finch*), *n.* a common European song bird.

bull-head (*bool'hed*), *n.* a broad-headed, scaleless fish of North America; catfish.

★**bul-lion** (*bool'yun*), *n.* uncoined gold or silver; foreign coin.

bul-lock (*bool'luk*), *n.* an ox or castrated bull; a full-grown steer.

bull's-eye (*boolz'ĭ*), *n.* a boss of glass; the center of a target.

bull ter-ri-er (*bool' ter'ĭ-ĕr*), a cross-breed between the bulldog and the terrier.

bull-y (*bool'ĭ*), *n.* [*pl.* bullies (*'iz*)], one who domineers by insolence or threats.

bul-rush (*bool'rush*), *n.* a rushlike aquatic plant.

★**bul-wark** (*bool'wĕrk*), *n.* a rampart; a fortification; the sides of a ship above the upper deck.

bum-ble-bee (*bum'bl-bē*), *n.* a large bee.

bum-mer (*bum'ĕr*), *n.* a loafing fellow who sponges on others. [*Slang, U. S.*]

bump (*bump*), *n.* a shock from a blow; a swelling, protuberance.

bump-er (*bump'ĕr*), *n.* an overflowing cup.

bump-kin (*bump'kĭn*), *n.* an awkward, clumsy rustic; a country lout.

bump-tious (*bump'shus*), *adj.* self-assertive.

bun (*bun*), *n.* a small, light cake.

bunch (*bunch*), *n.* a cluster; a collection of things of the same kind growing or fastened together.

★**bun-combe** or **bun-kum** (*bung'kum*), *n.* idle or showy speech, especially if intended to secure votes.

bun-dle (*bun'dl*), *n.* a number of things bound together; a roll or package; two reams of printing or brown paper

bung (*bung*), *n.* a large cork for stopping the hole in a cask.

★**bun-ga-low** (*bung'gȧ-lō*), *n.* a single-storied house, lightly built, and generally surrounded by a veranda.

bun-gle (*bung'gl*), *v. i.* to work in a clumsy, awkward manner: *v. t.* to botch; manage awkwardly.

bun-ion (*bun'yun*), *n.* a swelling on the foot.

bunk (*bungk*), *n.* a box or recess serving for a sleeping berth in a vessel, sleeping car, etc.

bun-ker (*bung'kĕr*), *n.* a large bin or receptacle; a sandhole on golf links.

bun-ko or **bun-co** (*bung'kō*), *n.* a confidence game.

bunt (*bunt*), *n.* the middle part or belly of a sail: *v. i.* to swell out.

bunt (*bunt*), *n.* a species of fungus which affects the ear of cereals, filling the grains with a fetid dust.

bunt-ing (*bunt'ĭng*), *n.* a bird allied to the finches and the sparrows.

★**buoy** (*bwoĭ* or *boĭ*), *n.* a floating body moored at a certain place to indicate the position of something beneath the water; a life buoy.

buoy-an-cy (*'an-sĭ*), *n.* relative lightness; elasticity of spirits.

buoy-ant (*'ant*), *adj.* having the quality of floating in a fluid.

bur (*bĕr*), *n.* the rough, prickly seed case of certain plants.

bur-den (*bĕr'dn*), *n.* that which is borne or carried; a load; something grievous, wearisome, or oppressive. [WEIGHT.]

bur-dock (*bĕr'dok*), *n.* a large wayside weed with rough, broad leaves.

★**bu-reau** (*bū'rō* or *bū-rō'*), *n.* [*pl.* bureaus or bureaux (*'rōz*)], a desk or writing table furnished with drawers; an office; a governmental department.

bu-reau-cra-cy (*bū-rō'krȧ-sĭ*), *n.* the system of centralized government by means of bureaus or departments.

bu-reau-crat (*bū'rō-krat*), *n.* an advocate or supporter of bureaucracy.

burg (*bûrg*), *n.* a borough.

bur-gess (*bûr'jes*), *n.* an inhabitant of a borough or walled town, or one who possesses a tenement therein.

bur-gher (*bûr'gĕr*), *n.* a citizen or freeman of a burg or borough.

bur-glar (*bûr'glĕr*), *n.* one who breaks into a house at night with intent to commit a felony.

bur-gla-ry (*bûr'glȧ-rĭ*), *n.* the act or crime of breaking into a house at night with intent to commit a felony.

★**bur-gun-dy** (*bûr'gun-dĭ*, not *bûr-gun'dĭ*), *n.* a wine, red and white, made in Burgundy in France.

bur-i-al (*ber'ĭ-al*), *n.* the act of burying.

Syn. BURIAL, interment, sepulture. We *bury* in order to conceal; *interment* and *sepulture* are accompanied with religious ceremonies. *Bury* is confined to no object or place; *interment* may be used when a body is deposited in a vault; *sepulture* is an abstract term confined to particular cases, as in speaking of the rites and privileges of *sepulture*.

bur-lap (*bûr'lap*), *n.* a coarse fabric made of jute or hemp.

★**bur-lesque** (*bûr-lesk'*, not *bûr'lesk*), *adj.* tending to excite laughter by extravagant contrast or caricature.

Burlington house, Old. A house standing between Bond and Sackville streets, London, named for Lord Burlington, by whom it was built.

bur-ly (*bûr'lĭ*), *adj.* bulky; large; corpulent.

★**Burmese** (*bûr'mēz* or *'mēs*), *adj.* pertaining to Burma.

burn (*bûrn*), *v. t.* [*p. t.* burnt and burned, *p. pr.* burning], to consume or injure with fire; reduce to ashes; scorch: *v. i.* to be on fire; suffer from excess of heat. [HOT, EAGER.]

burn (*bûrn*), *n.* a rivulet; a brook.

burn-er (*bûrn'ĕr*), *n.* one who burns or sets fire to anything.

bur-nish (*bûr'nĭsh*), *v. t.* polish by friction.

bur-row (*bur'rō*), *n.* a hole in the ground: *v. i.* to excavate; work a way into or under something.

★**bur-sar** (*bûr'sĕr*), *n.* the treasurer of a college.

burst (*bûrst*), *v. i.* [*p. t.* and *p. p.* burst, *p. pr.* bursting], to rend or break open with violence; yield to internal force or pressure: *n.* a violent or sudden breaking forth. [BREAK.]

bur-y (*ber'i*), *v. t.* [*p. t.* and *p. p.* buried, *p. pr.* burying], to deposit and cover in a grave or tomb.

bus (*bus*), *n.* a shortened form of omnibus.

bush (*boosh*), *n.* a thick shrub; a forest region; wild, uncleared country.

bush-el (*boosh'el*), *n.* a dry measure containing eight gallons or four pecks.

bush-whacker (*boosh'hwak-ĕr*), *n.* one accustomed to beat about through bushes; a guerrilla.

bush-y (*boosh'i*), *adj.* thick and spreading like a bush; overgrown with shrubs.

★**busi-ness** (*biz'nes*, not *bis'i-nes*), *n.* employment; trade; profession; something to be transacted.

Syn. BUSINESS, art, profession, trade. Buying and selling of merchandise is inseparable from *trade;* but the exercise of one's knowledge and experience for purposes of gain constitutes a *business;* when learning or particular skill is required, it is a *profession;* and when there is a particular exercise of art, it is an *art.*

Ant. LEISURE, pastime, pleasure.

bus-kin (*bus'kin*), *n.* a high shoe (*cothurnus*) worn by ancient actors in tragedy.

bust (*bust*), *n.* the chest or thorax; the head, shoulders, and breast of a person.

bus-tard (*bus'tĕrd*), *n.* a bird of the genus Otis.

★**bus-tle** (*bus'l*, not *bust'l*), *v. i.* to be busy, with a certain amount of noise.

Syn. BUSTLE, tumult, uproar. *Bustle* has most of hurry in it; *tumult* most of disorder and confusion; *uproar* most of noise; the hurried movements of one, or many, cause a *bustle;* the disorderly struggles of many constitute a *tumult;* the loud elevation of many opposing voices produces an *uproar; uproar* is the consequence either of general anger or mirth. [See *active.*]

Ant. CALM, peace, quiet.

bus-y (*biz'i*), *adj.* earnestly or closely employed. [ACTIVE.]

bus-y-bod-y (*biz'i-bod-i*), *n.* [*pl.* busybodies (*-iz*)], a meddling, officious person.

butch-er (*booch'ĕr*), *n.* one who slaughters animals for food.

butch-er-y (*booch'ĕr-i*), *n.* the business of slaughtering cattle; barbarous murder. [CARNAGE.]

but-ler (*but'lĕr*), *n.* a manservant in a household who has the care of the plate, wines, etc.

butt (*but*), *n.* a push or thrust delivered by the head of an animal; a thrust in fencing; the extremity of a thing; the thicker end of anything.

butte (*bût* or *boot*), *n.* an abrupt isolated hill or ridge.

Butte. City in Montana, named for a bare butte overlooking the place.

but-ter (*but'ĕr*), *n.* an oily, unctuous substance obtained from cream or milk by churning.

but-ter-cup (*-kup*), *n.* a plant bearing yellow, cup-shaped flowers.

but-ter-fly (*but'ĕr-flī*), *n.* [*pl.* butterflies (*-flīz*)], a general name for any species of diurnal lepidopterous insects.

★**but-ter-ine** (*but'ĕr-in*), *n.* an imitation butter.

but-ter-milk (*but'ĕr-milk*), *n.* milk separated from the cream in butter-making.

but-ter-nut (*but'er-nut*), *n.* the fruit of a North American tree allied to the walnut.

but-ter-y (*but'ĕr-i*), *n.* [*pl.* butteries (*-iz*)], an apartment in which provisions, wines, etc., are kept.

but-tock (*but'ok*), *n.* the rump or protuberant hinder part of a man or animal.

but-ton (*but'n*), *n.* any small rounded object used to secure different parts of a garment, or attached for ornament; something resembling a button.

but-ton-wood (*-wood*), *n.* the plane tree.

but-tress (*but'res*), *n.* masonry or brickwork built on to an outside wall to afford support.

bux-om (*buks'um*), *adj.* cheerful; jolly; robust; plump and comely.

buy (*bī*), *v. t.* [*p. t.* and *p. p.* bought, *p. pr.* buying], to acquire by paying an agreed price; purchase; bribe.

Syn. BUY, purchase, bargain, cheapen. *Buy* may always be substituted for *purchase* without impropriety, but *purchase* would be sometimes ridiculous in the familiar application of *buy;* the necessaries of life are *bought;* luxuries are *purchased;* to *cheapen* is not only to lower the price asked, but to deal in such things as are cheap.

Ant. SELL.

buzz (*buz*), *n.* a continuous humming noise, as of bees.

buz-zard (*buz'ĕrd*), *n.* the name of several species of hawks; a stupid, dull fellow.

Buzzard's bay, Mass. Waters discovered by Gosnold, May 21, 1602, and by him named "Bay of Hope." Indian name *Manomet.*

buzz saw (*buz' saw*), a circular saw.

by-law (*bī'-law*), *n.* a private law or statute framed by a corporate body; a secondary law.

by-word (*bī'wĕrd*), *n.* a proverb; nickname; an object of derision.

★**Byzantine** (*bi-zan'tin* or *biz'an-tin*), *adj.* of or pertaining to Byzantium (Constantinople), the ancient capital of the eastern Roman empire.

C

cab (*kab*), *n.* a public carriage with two or four wheels, drawn by one horse.

★**ca-bal** (*ka-bal'*), *n.* a secret combination for carrying out some specific design. [MYSTERIOUS.]

cab-a-ret (*ka'ba-rē'*), originally a French drinking house; now generally applied to drinking places offering some sort of theatrical entertainment.

cab-bage (*kab'āj*), *n.* a well-known vegetable; the terminal head of palm trees.

cab-in (*kab'in*), *n.* a small hut, cottage, or room; a room in a ship for officers or passengers.

cab-i-net (*kab'i-net*), *n.* a small room; a piece of furniture to hold objects of virtu.

cab-i-net pic-ture (*pik'tūr*), a valuable picture of small dimensions.

ca-ble (*kā'bl*), *n.* a large, strong rope or chain.

ca-ble-gram (*kā'bl-gram*), *n.* a message sent by a submarine cable.

ca-boose (*ka-bōōs'*), *n.* a ship's galley or kitchen; the trainmen's car attached to a freight train.

★**ca-ca-o** (*ka-kā'ō* or *kā'kō*), *n.* a small evergreen tree of South America and the West Indies.

★**cache** (*kash*), *n.* a place of concealment for food for future use.

cach-in-na-tion (*kak-i-nā'shun*), *n.* loud or unrestrained laughter.

cac-kle (*kak'l*), *v. i.* to cry like a hen or goose.

cac-tus (*kak'tus*), *n.* [*pl.* cactuses (*-ez*) and cacti (*'ī*)], a spiny, fleshy plant with showy flowers.

cad (*kad*), *n.* a vulgar, ill-bred fellow; an omnibus conductor.

★**ca-da-ver** (*ka-dā'vĕr*, not *ca-dav'ĕr*), *n.* a dead body; a corpse.

ca-dav-er-ous (*ka-dav'ĕr-us*), *adj.* resembling a corpse.

cad-die (*kad'i*), *n.* a lad who carries a golf player's clubs.

cad-dy (*kad'i*), *n.* [*pl.* caddies (*'iz*)], a small box for keeping tea.

ca-dence (*kā'dens*), *n.* a fall of, or a rhythmical modulation of, the voice in reading or speaking.

ca-den-za (*ka-den'za*), *n.* a vocal or instrumental flourish.

ca-det (*ka-det'*), *n.* a younger son; student in a naval or military academy.

ca-di (*kā'di*), *n.* Mohammedan judge.

★**Cadillac** (*ka'di-lak*, Fr. *kā-dēl-yäk'*). City in Wexford county, Michigan, named for La Motte (or La Mothe) Cadillac.

★**Cadiz** (*kā'diz*, not *kā-diz'*, Sp., *kā'thĕth*). From *qadr*, meaning "an inclosure, a city, or fortified place," and *kir*, "a wall." A city of Spain.

★**Cæsar** (*sē'zĕr*). Some translate this name "hairy"; Schlegel says from Sanskrit *kesa*, "adorned with hair." It is more probable, however, of Persian origin, and comes from the Persian *sar*, "head, highest, greatest, chief." Danish, *Cæsar;* Fr., *César;* Ger., *Casar* or *Cæsar;* It., *Cesare;* Lat., *Cæsar;* Sp., *Cesar.* Name of first Roman emperor, and title of successors.

Cæ-sa-ri-an (*sē-zā'ri-an*), *adj.* pertaining to Cæsar.

Cæ-sa-ri-an op-er-a-tion (*op-ĕr-ā'shun*), a delivery of a fœtus by cutting through the walls of the abdomen.

cage (*kāj*), *n.* a box or inclosure furnished with metal bars for confining birds, or other animals.

★**ca-ique** (*ka-ēk'*), *n.* a skiff or light rowing boat used on the Bosporus.

★**cairn** (*kārn*), *n.* a conical heap of stones erected as a monument.

★**Cairo** (*kī'rō*, not *kā'rō*), a corruption of the Arabic *Alkâhirah*, "the victorious"; so called because *Kâhir* (Mars), the planet of victory, was visible on the night when the city was founded. A city in Egypt.

★**Cairo** (*kā'rō*, not *kī'rō*), **Ill.** A locally fancied adoption from the Egyptian city Cairo, as it has a similar location, namely, at the mouth of a large river.

★**cais-son** (*kā'son*), *n.* an ammunition wagon or chest; a box filled with explosives for firing a mine.

cai-tiff (*kā'tif*), *n.* a despicable or cowardly wretch: *adj.* despicable; vile; cowardly.

ca-jole (*ka-jōl'*), *v. t.* to coax or deceive by flattery; wheedle; cheat.

cake (*kāk*), *n.* a small mass of dough, sweetened and baked; a compressed or solidified mass of any substance, especially if thin or flat.

cal-a-boose (*kal-a-bōōs'*), *n.* a jail; a lockup.

ca-lam-i-tous (*ka-lam'i-tus*), *adj.* producing, or resulting from, calamity.

ca-lam-i-ty (*ka-lam'i-ti*), *n.* [*pl.* calamities (*-tiz*)], any cause that produces evil.

Syn. CALAMITY, disaster, misfortune, mischance, mishap. A *calamity* is a great *disaster* or *misfortune;* a *misfortune* a great *mischance* or *mishap;* whatever is attended with destruction is a *calamity;* whatever occasions mischief to the person, defeats or interrupts plans, is a *disaster;* whatever is accompanied with a loss of property, or the deprivation of health, is a *misfortune;* whatever diminishes the beauty or utility of objects is a *mischance* or *mishap.* [See *accident.*]

Ant. GOOD FORTUNE, luck.

ca-lash (*ka-lash'*), *n.* a light carriage with low wheels and a folding adjustable top.

cal-ci-fy (*kal'si-fī*), *v. t.* [*p. t.* and *p. p.* calcified, *p. pr.* calcifying], to convert into lime.

cal-ci-mine (*kal'si-mīn*), *n.* white or tinted wash for walls or ceilings.

cal-ci-na-tion (*kal-si-nā'shun*), *n.* the act or process of reducing to powder by heat.

★**cal-cine** (*kal'sīn* or *kal-sīn'*), *v. t.* to reduce a substance to powder by heat.

cal-ci-um (*kal'si-um*), *n.* the metallic base of lime.

cal-cu-late (*kal'kū-lāt*), *v. t.* to compute.

Syn. CALCULATE, reckon, compute, count. To *calculate* denotes any numerical operation in general, but is particularly applicable to the abstract science of figures; the astronomer *calculates* the motions of the heavenly bodies; the mathematician makes algebraic *calculations;* to *reckon* is to enumerate and set down things in detail; *reckoning* is applicable to the ordinary business of life; tradesmen keep their accounts by *reckoning;* children learn to *reckon* by various simple processes. *Calculation* is therefore the science, *reckoning* the practical art, of enumerating. To *compute* is to come at the result by *calculation;* we *count* one by one; we *count* the minutes. [See *estimate.*]

cal-cu-la-tion (*kal-kū-lā'shun*), *n.* the art of reckoning by numbers.

cal-cu-la-tor (*kal'kū-lā-tĕr*), *n.* one who, or a machine that, computes or reckons.

★**cal-cu-lus** (*kal'kū-lus*), *n.* [*pl.* calculi (*-lī*)], one of the higher branches of mathematics; the differential calculus.

Calcutta (*kal-kut'ta*). Called *Kalkatta* in early annals. The name is supposed to be a corruption of the Indian *Kali-Kata*, the "dwelling or sacred place of Kali," the wife of Siva. A city of India.

cal-dron (*kawl'drun*), *n.* a large kettle or boiler.

Caleb (*kā'leb*). From the Hebrew *kalebh*, "a dog."

cal-en-dar (*kal'en-dĕr*), *n.* a register of the days, weeks, and months of the year, etc.

calf (*kaf*), *n.* [*pl.* calves (*kavz*)], the young of the cow, or of the bovine family, also of some other mammals.

cal-i-ber (*kal'i-bĕr*), *n.* the diameter of a cylindrical body; mental capacity.

cal-i-co (*kal'i-kō*), *n.* [*pl.* calicoes (*-kōz*)], white or unprinted cotton cloth; also with figured pattern.

California (*kal-i-fôr'ni-a*). Most authorities derive it from the two Spanish words, *caliente fornalia* (*i. e.*, "hot furnace"), given by Cortes in the year 1535 to the peninsula now known as Old or Lower California, of which he was the discoverer, on account of its hot climate. A state of the Union.

California, Gulf of. Variously called *Mar de Cortez* and *Mar Bermejo* by the Spaniards—the former in honor of Hernando Cortes; the latter meaning "bright reddish color," literally, "red sea," for its resemblance in color to the Red Sea.

cal-i-pers (*kal'i-pĕrz*), *n. pl.* compasses for measuring the diameters of bodies or the bore of tubes.

★**ca-liph** (*kā'lif*), *n.* a title of the successors of Mohammed. [Also *calif.*]

★**cal-is-then-ics** (*kal-is-then'iks*), *n. pl.* the art of promoting health by physical exercise.

calk (*kawk*), *v. t.* to copy (a drawing) by covering the back with chalk or lead, and tracing over the lines with a style for transfer.

calk (*kawk*), *n.* that part of a horseshoe which projects downward to prevent slipping; an instrument with sharp points worn on the sole of a boot or shoe: *v. t.* to furnish with calks.

calk or **caulk** (*kawk*), *v. t.* to drive oakum into the seams of (a ship), smearing with pitch.

call (*kawl*), *v. t.* to summon from, or invite to, any place: *n.* a summons or invitation; a request or command; a short visit.

Syn. CALL, bawl, bellow, clamor, cry, ejaculate, exclaim, roar, scream, shout, shriek, vociferate, yell. To *call* is to send out the voice in order to attract another's attention; a man *calls* his dog; to *shout* is to *call* or *exclaim* with the fullest volume of sustained voice; to *scream* is to utter a shriller cry; to *shriek* or to *yell* refers to that which is louder and wilder still; in *screaming, shrieking,* or *yelling* there is often no attempt at articulation; to *bawl* is to utter senseless, noisy cries; *bellow* and *roar* are applied to the utterances of animals; *clamor* is noisy iteration; *vociferate* is commonly applied to loud and excited speech; we may *exclaim* by mere interjections; to *ejaculate* is to give out utterances of joy, regret, and especially of appeal, petition, prayer. [See *name.*]

Ant. STILL, hearken, hush, listen.

cal-lig-ra-phy (*kal-lig'rā-fi*), *n.* elegant or beautiful writing.

call-ing (*kawl'ing*), *n.* the act of summoning; a summons or invitation.

cal-lous (*kal'us*), *adj.* hardened, insensible.

cal-low (*kal'ō*), *adj.* unfledged.

cal-lus (*kal'us*), *n.* [*pl.* calli (*-ī*)], the hardening of the skin from pressure; repair material exuded by broken bone.

calm (*käm*), *adj.* tranquil; still; undisturbed.

Syn. CALM, composed, cool, dispassionate, imperturbable, peaceful, placid, quiet, sedate, serene, smooth, still, tranquil. *Calm* is free from disturbance or agitation; we speak of a *calm* sea, a *placid* lake, a *serene* sky, a *still* night, a *quiet* day, a *quiet* home; one is *cool* if he scarcely feels the tendency to excitement; *composed* who has subdued excited feeling; *collected* when he has every thought or feeling at command. We speak of a *tranquil* mind, a *placid* disposition, a *serene* spirit. [See *composed, peace.*]

Ant. AGITATED, excited, passionate, wild.

★**cal-o-mel** (*kal'ō-mel*), *n.* mercurous chloride.

★**ca-lor-ic** (*ka-lor'ik*, not *ka-lō'rik*), *adj.* pertaining to heat.

★**cal-o-rie** (*kal'ō-rī*), *n.* the unit of heat (metric system) to express the amount of heat required to raise one kilogram of water from 0° to 1° centigrade.

cal-o-rim-e-ter (*kal-ō-rim'ē-tĕr*), *n.* an apparatus for measuring heat produced or given off by a body.
cal-o-rim-e-try (*kal-ō-rim'ē-tri*), *n.* the art or process of determining the amount of heat contained in, or given off by, bodies.
★**Calton** (*kawl'ton*) **hill.** A height in the north-eastern part of Edinburgh.
★**Calumet** (*kal'ū-met*). River in Illinois and Indiana, county in Wisconsin, town in Indiana, and several other places in the country. From the French *calumet*, pipe (*calumet de paix*, pipe of peace); *chalrumeau*, corn pipe, pipe, reed. The "*calumet*," or "pipe of peace," was used by the Indians to ratify treaties.
ca-lum-ni-ate (*kà-lum'ni-āt*), *v. t.* to accuse falsely and maliciously: *v. i.* to utter calumnies.
ca-lum-ni-a-tion (*kà-lum-ni-ā'shun*), *n.* the act of calumniating.
cal-um-ny (*kal'um-ni*), *n.* [*pl.* calumnies (*-niz*)], a false accusation; a slander.
Calvary (*kal'và-ri*), *n.* the place where Christ was crucified.
calve (*kăv*), *v. i.* to bring forth a calf.
Cal-vin-ism (*kal'vin-izm*), *n.* the doctrines of John Calvin, the French theologian and reformer, especially those relating to predestination and election.
Cal-vin-ist (*kal'vin-ist*), *n.* one who holds the doctrines of Calvin.
★**ca-lyx** (*kā'liks*, not *kal'iks*), *n.* [*pl.* calyxes (*kā'liks-ez*), Lat. *pl.* calyces (*kal'i-sēz*)], the outer envelope of a flower.
cam (*kam*), *n.* a projecting part of a wheel or other moving piece of machinery for imparting an eccentric or alternating motion.
cam-ber (*kam'bĕr*), *n.* a convexity on an upper surface; a concavity on an under surface.
★**Cambria** (*kam'bri-à*). The original name for Wales, so called on account of the Cymri, or Kimri.
★**cam-bric** (*kām'brik*), *n.* a very fine thin linen.
cam-bric mus-lin (*muz'lin*), a fine cotton imitation of cambric.
Cambridge (*kām'brij*). City in Middlesex county, Massachusetts, so named for the English university town, after the general court decided to establish a college there. The English name is usually supposed to mean "the bridge over the river Cam."
Camden (*kam'den*), **N. J.** In honor of the noted English statesman, Earl of Camden (Cambden).
cam-el (*kam'el*), *n.* a large ruminant quadruped, of which there are two species, the Arabian camel or dromedary, with a single hump, and the Bactrian camel, with two humps.
★**Camellia** (*kà-mel'i-à* or *kà-mēl'yà*), *n.* an Asiatic genus of small shrubs.
cam-e-o (*kam'ē-ō*), *n.* a precious stone or shell on which figures are engraved in relief.
cam-e-ra (*kam'ē-rà*), *n.* [*pl.* cameras (*-ràz*)], a camera obscura.
★**Camilla** (*kà-mil'là*). The feminine of *Camillus*. Fr., *Camille;* It., *Camilla;* Lat., *Camilla*.
★**Camillus** (*kà-mil'lus*). Some translate this name "attendant at a sacrifice." The Roman name was probably corrupted from the Arabic *Kasen-El*, signifying "oracle of God."
camp (*kamp*), *n.* the ground occupied by an army at rest; an encampment.
★**Campagna di Roma** (*kàm-pān'yà dē rō'mà*). A large plain in Italy, surrounding Rome, between the Mediterranean and Sabine and Alban mountains.
cam-paign (*kam-pān'*), *n.* an open tract of land; the period during which an army carries on active operations in the field.
cam-pa-ni-le (*kàm-pà-nē'lā*), *n.* [*pl.* campaniles (*'lāz*)], a bell-tower.
★**Campanile** (*kàm-pà-nē'lā*) **of Giotto.** A famous tower near the Duomo, at Florence, Italy, begun by the architect Giotto, in 1334, and after his death, in 1336, continued by Andrea Pisano.
cam-phine (*kam-fēn'* or *kam'fin*), *n.* rectified oil of turpentine.
cam-phor (*kam'fĕr*), *n.* a volatile, aromatic, whitish resin.
camp meet-ing (*kamp' mēt'ing*), an outdoor religious gathering.
camp-stool (*'stōōl*), *n.* a folding stool or seat.
can (*kan*), *v. i.* [*p. t.* could], am able.
Syn. CAN, may. *Can* denotes possibility, *may* liberty and probability. He who has sound limbs *can* walk; but he *may* not walk in places which are prohibited.
can (*kan*), *n.* a metal vessel of small size, for holding liquids or preserving solids.
★**Canaan** (*kā'nan* or *kà'nà-an*). The "Land of Canaan" is interpreted to mean "lowland," from Semitic *kana*, "to humble," "subdue"; generally, in the Old Testament, the country west of the Jordan and the Dead Sea, extending to the Mediterranean.
Canada (*kan'à-dà*). Called *La Nouvelle France* by the French settlers, is probably the native word *kanata*, which means "a collection of huts or wigwams."
ca-nal (*kà-nal'*), *n.* an artificial navigable waterway.
★**Canandaigua** (*kan-an-dā'gwà*). Lake town in Ontario county, New York, and village in Lenawee county, Michigan. An Indian word, the derivatior of which is in dispute. Morgan defines it as "a place selected for settlement," a "chosen spot"; Haines, "a town set off."
ca-nard (*kà-nàrd'*, Fr. *kà-nār'*), *n.* an absurd story or report.
ca-na-ry (*kà-nā'ri*), *n.* a light wine; a small singing bird with yellow plumage.
can-can (*kan'kan*), *n.* a vivacious and indelicate French dance.
can-cel (*kan'sel*), *v. t.* [*p. t.* and *p. p.* canceled, *p. pr.* canceling], to deface writing by drawing lines across it; annul. [ABOLISH, BLOT.]
can-cer (*kan's ĕr*), *n.* a genus of crustaceans, the crab; a malignant tumor or growth.
can-cer-ate (*kan's ĕr-āt*), *v. i.* to grow into a cancer.
can-cer-ous (*kan's ĕr-us*), *adj.* like a cancer; affected with cancer.
★**can-de-la-brum** (*kan-dē-lā'brum*, not *kan-dē-là'brum*), *n.* [*pl.* candelabra (*'brà*)], a lamp-stand.
★**Candia** (*kan'di-à*). From the Arabic *Khandae*, "the island of trenches." The island of Crete.
can-did (*kan'did*), *adj.* honest; outspoken; sincere; free from undue bias; open; fair.
Syn. CANDID, aboveboard, fair, frank, honest, impartial, ingenuous, innocent, open, simple, straightforward, transparent, truthful. *Fair* is applied to the conduct; *candid* is not; as, *fair* treatment, a *fair* field and no favor. He is *frank* who states the truth fearlessly; *honest* and *ingenuous* express contempt for deceit; *artless*, *simple*, imply the goodness which comes from guileless simplicity; *open* expresses unstudied truthfulness or defiant recklessness; as, *open* admiration, *open* robbery. We speak of *transparent* integrity or *transparent* fraud. *Sincere* applies to the feelings which underlie one's words. [See *fair*, *frank*, *ingenuous*.]
Ant. DECEITFUL, treacherous.
can-di-date (*kan'di-dāt*), *n.* one who offers himself, or is proposed by others, to fill some office.
can-di-da-ture (*kan'di-dà-tūr*), *n.* the state of being a candidate.
can-died (*kan'did*), *p. adj.* preserved or incrusted with sugar.
can-dle (*kan'dl*), *n.* a cylindrical body of tallow, wax, or other fatty material, inclosing a wick of cotton.
★**Can-dle-mas** (*kan'dl-mas*), *n.* the feast of the Purification of the Virgin Mary (Feb. 2).
can-dle pow-er (*pou'ĕr*), the illuminating power of a candle taken as a unit in determining the luminosity of any flame.
can-dor (*kan'dĕr*), *n.* openness; frankness.
can-dy (*kan'di*), *n.* a solid confection of sugar.
cane (*kān*), *n.* the stem of certain palms, grasses, and other plants, as the bamboo.
cane-brake (*'brāk*), *n.* a thicket of canes.
ca-nine (*kà-nīn'*), *adj.* pertaining to dogs; having the nature or qualities of a dog.
can-is-ter (*kan'is-tĕr*), *n.* a metal box or case for tea, coffee, etc.; a case containing shot which explodes when fired from a gun.
can-ker (*kang'kĕr*), *n.* a cancerous or ulcerous disease.
can-ker-ous (*kang'kĕr-us*), *adj.* corroding.
canned (*kand*), *adj.* preserved in tins.
can-nel coal (*kan'el kōl*), a hard bituminous coal.
can-ner-y (*kan'ĕr-i*), *n.* [*pl.* canneries (*-iz*)], an establishment for preserving meat, fish, etc.
can-ni-bal (*kan'i-bal*), *n.* a human being who eats human flesh.
can-ni-bal-ism (*kan'i-bal-izm*), *n.* the act or practice of eating human flesh by human beings.
can-non (*kan'un*), *n.* [*pl.* cannons (*'unz*), or cannon (collectively)], a large gun.
can-non-ade (*kan-un-ād'*), *n.* the act of discharging cannon against a town, fort, etc.
can-non-eer (*kan-un-ēr'*), *n.* an artilleryman.
can-non-eer-ing (*kan-un-ēr'ing*), *n.* the act or art of using the cannon.
can-not (*kan'ot*) [*can* and *not*], to be unable.
can-ny or **can-nie** (*kan'i*), *adj.* shrewd; knowing; cautious; wary; artful.
ca-noe (*kà-nōō'*), *n.* [*pl.* canoes (*-nōōz'*)], a light boat of bark, hide, or the hollow trunk of a tree; any light boat propelled by paddles.
ca-noe-ist (*kà-nōō'ist*), *n.* one who paddles a canoe.
★**can-on** (*kan'un*), *n.* a law or rule in general; a law or rule regarding doctrine or discipline enacted by a council and confirmed.
★**ca-ñon** (*kà-nyōn'*) or **canyon** (*kan'yun*), *n.* a deep gorge having more or less perpendicular sides.
can-on-ize (*kan'un-īz*), *v. t.* to enroll in the catalogue or canon of the saints.
can-on law (*law*), rules or laws relating to faith, morals, and discipline that regulate church government.
can-o-py (*kan'ō-pi*), *n.* [*pl.* canopies (*-piz*)], a covering fixed above a bed, or suspended over a throne or dais.
cant (*kant*), *v. i.* to speak in a whining voice, or with an affected or hypocritical tone: *n.* a whining manner of speech; the speech affected by those soliciting alms; the words and phrases characteristic of a certain party, sect, etc.
can't (*kānt*), a colloquial contraction of *can-not*.
can-ta-lev-er (*kan'tà-lev-ĕr*). Same as *cantilever*.
can-ta-loupe (*kan'tà-lōōp*), *n.* a variety of muskmelon of delicate flavor.
can-tan-ker-ous (*kan-tang'kĕr-us*), *adj.* ill-tempered; cross-grained; contentious.
can-ta-ta (*kàn-tä'tà*), *n.* a short choral composition in the manner of an oratorio.
can-teen (*kan-tēn'*), *n.* a kind of shop in barracks or camp where liquors and provisions are sold; a vessel used by soldiers for carrying water or liquor when on the march.
can-ter (*kan'tĕr*), *n.* an easy gallop.
Canterbury (*kan'tĕr-ber-i*). A corruption of the Anglo-Saxon *Cantwarabyrig*, "the forts or strongholds of the Cantwere, or men of Cant" (Kent).
can-ti-cle (*kan'ti-kl*), *n.* a song; one of the non-metrical hymns of the Bible arranged for chanting in church service.
★**can-ti-lev-er** (*kan'ti-lev-ĕr*), *n.* one of two arms projecting from opposite banks and joined over a stream to form a bridge.
can-to (*kan'tō*), *n.* [*pl.* cantos (*'tōz*)], one of the chief divisions of a poem of some length.
can-ton (*kan'tun*), *n.* a district or division of a territory; one of the Swiss federal states.
can-ton-ment (*kan-tun'ment*), *n.* a town or village, or part of one, allotted to a body of troops.
can-vas (*kan'vas*), *n.* a coarse, heavy cloth of hemp or flax, used for tents, sails, etc.
can-vas-back (*-bak*), *n.* a North American duck.
can-vass (*kan'vas*), *v. t.* to examine; sift; discuss; solicit votes or opinions.
can-yon (*kan'yun*). Same as *canon*.
★**caout-chouc** (*kōō'chōōk*), *n.* an elastic gummy substance obtained from the milky juice of several tropical trees.
cap (*kap*), *n.* a covering for the head, usually without a brim; anything resembling a cap.
ca-pa-bil-i-ty (*kā-pà-bil'i-ti*), *n.* the quality of being capable. [ABILITY.]
ca-pa-ble (*kā'pà-bl*), *adj.* receptive; susceptible; having power, skill.
ca-pa-cious (*kà-pā'shus*), *adj.* roomy; spacious.
ca-pa-cious-ness (*-ness*), *n.* the power of holding or receiving. [CAPACITY.]
ca-pac-i-tate (*kà-pas'i-tāt*), *v. t.* to make capable; enable; qualify.
ca-pac-i-ty (*kà-pas'i-ti*), *n.* [*pl.* capacities (*-tiz*)], the power of receiving or containing; the power of containing a certain quantity.
Syn. CAPACITY, capaciousness. *Capacity* is an indefinite term designating the property of being fit to hold or receive, as applied to bodies generally; but *capaciousness* denotes a fullness of this property as belonging to a particular object in a great degree. Measuring the *capacity* of vessels belongs to the science of mensuration; the *capaciousness* of a room is to be observed by the eye. [See *ability*.]
★**ca-par-i-son** (*kà-par'i-sun*), *n.* an ornamental covering for a horse; harness or trappings collectively, especially when decorative.
cape (*kāp*), *n.* a covering for the shoulders, worn separately or attached; a headland.
Cape Colony. A British colony in South Africa, so called after the parent settlement at Cape Town, which dates from the year 1826. The Cape region, settled by the Dutch in 1652, passed in 1806 into British possession.
Cape Fear River, N. C. Was originally named by the English *Charles river*. Afterward the name of *Cape Fair river* was adopted from the Atlantic cape of that name, the stream being located by navigators as "coming in back of *Cape Fair*." Subsequently corrupted to *Fear*.
Cape Horn. The southernmost point of South America was called *Cape Hoorn* by Schouten, who first rounded it in 1616, in honor of his birthplace, *Hoorn*, in the Netherlands.
Cape May, Va. The most southern point of New Jersey. Here is located the Cap May lighthouse.
Cape of Good Hope. Discovered by Barthclomew de Diaz in 1486; was so named (*Cabo de Boa Esperance*) by John II., king of Portugal.
ca-per (*kā'pĕr*), *v. i.* to skip; jump: *n.* a frolicsome leap or spring; a skip; a prank.
★**cap-il-la-ry** (*kap'il-ā-ri* or *kà-pil'à-ri*), *adj.* resembling a hair; minute; slender; possessing a very small bore: *n.* an extremely fine tube or blood vessel.
cap-il-la-ry at-trac-tion (*at-trak'shun*), the power possessed by solid bodies of elevating or depressing fluids, especially that of capillary tubes of drawing up fluids.
cap-i-tal (*kap'i-tal*), *adj.* affecting the head or life; principal, good, excellent; *n.* the chief city or town in a kingdom or state.
cap-i-tal (*kap'i-tal*), *n.* the sum invested in any particular business; stock in trade; stock or resources of any kind, moral or physical.
cap-i-tal-ist (*kap'i-tal-ist*), *n.* one who has capital.
cap-i-tal-i-za-tion (*kap-i-tal-i-zā'shun*), *n.* the act of capitalizing.
cap-i-tal-ize (*kap'i-tal-iz*), *v. t.* to convert into capital.
cap-i-tal-ly (*-li*), *adv.* in a manner involving the forfeiture of life; in an excellent manner.
Capitol (*kap'i-tol*), *n.* the temple of Jupiter at Rome, situated on the southwest summit of the Capitoline hill; the building occupied by the United States Congress at Washington; the statehouse of a state.
★**Capitoline** (*kap'i-tō-līn*, not *kap'i-tō-lēn*) **hill, The.** One of the seven hills of ancient Rome, northwest of the Palatine, on the left bank of the Tiber, on which the Capitol was erected.
Capitoline museum (*mū-zē'um*). A famous museum of antiquities in Rome.
ca-pit-u-late (*kà-pit'ū-lāt*), *v. i.* to surrender to an enemy on conditions agreed upon.
ca-pit-u-la-tion (*kà-pit-ū-lā'shun*), *n.* the act of capitulating.
★**ca-pon** (*kā'pn* or *kā'pun*), *n.* a castrated cock.
★**Capri** (*kà'prē*). Signifies "the island of goats," being derived from the Latin *caper*, a he goat.

cap-ric (*kap'rik*), *adj.* pertaining to capric acid.
cap-ric ac-id (*as'id*), a fatty acid occurring in small quantities in butter, cocoanut oil, etc., united with glycerine.
★**ca-price** (*kä-prēs'*), *n.* a sudden impulse of the mind; a whim; a freak.
★**ca-pri-cious** (*kä-prish'us*), *adj.* characterized by caprice; unsteady; fickle. [FANCIFUL.]
cap-si-cum (*kap'si-kum*), *n.* a genus of plants, the pods of several species of which are used as a condiment.
cap-size (*kap-sīz'*), *v. i.* to be overturned; upset; *v. t.* to turn over or upset; (*kap'sīz*), *n.* an upset or overturn.
cap-stan (*kap'stan*), *n.* an upright drum or cylinder revolving upon a spindle, worked by bars or levers.
cap-su-lar (*kap'sū-lēr*), *adj.* pertaining to, or of the nature of, a capsule.
cap-sule (*kap'sūl*), *n.* a metallic seal or cover for a bottle; a small envelope of gelatine inclosing a nauseous or acrid drug.
cap-tain (*kap'tin*), *n.* one who has command of or authority over, others; a chief; a commander.
cap-tain-cy (*kap'tin-si*), *n.* the rank, post, or commission of a captain.
cap-tion (*kap'shun*), *n.* a heading; arrest by judicial process.
★**cap-tious** (*kap'shus*), *adj.* ready to catch at faults or take offense; quibbling; sophistical.
Syn. CAPTIOUS, cross, peevish, petulant. *Captious* marks a readiness to be offended, *cross* indicates a readiness to offend or come across the wishes of others; *peevish* expresses a strong degree of crossness; *fretful* a complaining impatience; *petulant* a quick or sudden impatience. *Captiousness* is the consequence of misplaced pride; *crossness* of ill-humor; *peevishness* of a painful irritability; *petulance* is either the result of a naturally hasty temper or of a sudden irritability. [See *perverse.*]
cap-ti-vate (*kap'ti-vāt*), *v. t.* to enslave or hold captive by beauty or excellence.
cap-tive (*kap'tiv*), *adj.* made prisoner; held in bondage; fascinated.
cap-tiv-i-ty (*kap-tiv'i-ti*), *n.* the state of being held in bondage or confinement.
cap-tor (*kap'tēr*), *n.* one who captures or takes any person or thing by force or stratagem.
cap-ture (*kap'tūr*), *n.* the act of seizing or taking, as a prisoner or a prize.
Syn. CAPTURE, seizure, prize. A *capture* is made by force of arms; a *seizure* by direct and personal force; *prize* relates only to the thing taken, and its value to the captor.
★**cap-u-chin** (*kap-ū-shēn'*, not *kap'ū-chin*), *n.* a Franciscan monk of the mendicant order.
car (*kär*), *n.* a small wheeled vehicle, especially of two wheels, for one horse; a railway carriage; a chariot.
car-a-mel (*kar'ä-mel*), *n.* burnt sugar, for coloring spirits, gravies, etc.; a kind of confectionery, etc.
car-at (*kar'at*), *n.* the weight of 3.2 grains Troy, used for weighing precious stones and pearls.
car-a-van (*kar'ä-van* or *kar-ä-van'*), *n.* a company of travelers, merchants, or pilgrims, associated together for mutual security.
★**car-a-van-sa-ry** (*kar-ä-van'sä-ri*), *n.* [*pl.* caravansaries (*-riz*)], in the East, a kind of inn consisting of a large unfurnished building surrounding a spacious court, where caravans rest at night.
car-a-vel (*kar'ä-vel*), *n.* a name given to several kinds of ships; the sixteenth century caravel was small; a Portuguese vessel of 100 or 150 tons burden.
car-a-way (*kar'ä-wā*), *n.* a biennial plant with aromatic and pungent seeds.
★**car-bine** (*kär'bin* or *kär-bīn'*, not *kär'bēn*), *n.* a short, light rifle or musket, especially one adapted to the use of cavalry.
car-bi-neer (*kär-bi-nēr'*), *n.* a soldier armed with a carbine.
car-bo-hy-drate (*kär-bō-hī'drāt*), *n.* one of a group of organic compounds of carbon, hydrogen, and oxygen.
car-bol-ic (*kär-bol'ik*), *adj.* pertaining to, or derived from, coal tar and other sources.
car-bol-ic ac-id (*as'id*), an acid obtained from coal tar by distillation.
car-bon (*kär'bon*), *n.* an elementary substance found in all organic compounds, and in nature in two distinct forms, as the diamond and graphite.
car-bon-ic (*kär-bon'ik*), *adj.* pertaining to, or obtained from, carbon.
car-bon-ic ac-id (*as'id*), *n.* contains two parts hydrogen, one carbon, three oxygen; usually signifies carbon dioxide, one part carbon, two parts oxygen.
car-bon-ize (*kär'bon-iz*), *v. t.* to convert into a residue of carbon by combustion.
car-bon light (*līt*), a brilliant light produced by passing an electric current through carbon points.
car-bon point (*point*), the rod of an arc lamp.
car-boy (*kär'boi*), *n.* a large globular bottle of glass, protected by a basket work.
car-bun-cle (*kär'bung-kl*), *n.* a beautiful gem of a deep red color.
car-bun-cu-lar (*kär-bung'kū-lēr*), *adj.* pertaining to, or resembling, a carbuncle.
car-bu-ret (*kär'bū-ret*), *n.* a carbide.
car-bu-ret-ed or **car-bu-ret-ted** (*kär'bū-ret-ed*), *p. adj.* combined with carbon in the manner of a carbide.
★**car-bu-ret-or** (*kär'bū-ret-ēr*), *n.* an apparatus used to increase illuminating power.
car-cass or **car-case** (*kär'kas*), *n.* [*pl.* carcasses (*-ez*)], the dead body of an animal; a corpse; the decaying remains of a bulky thing. [BODY.]
card (*kärd*), *n.* a printed piece of pasteboard used for various social or business purposes: *v. t.* to comb or open, as wool, cotton, etc., with a card.
car-di-ac (*kär'di-ak*), *adj.* pertaining to the heart.
car-di-gan jack-et (*kär'di-gan jak'et*), a knitted wool jacket or waistcoat.
car-di-nal (*kär'di-nal*), *adj.* chief; preëminent; fundamental.
car-di-nal (*kär'di-nal*), *n.* an ecclesiastical prince, ranking in dignity next to the pope.
car-di-nal num-bers (*num'berz*), the numbers *one, two, three,* etc., in distinction from *first, second, third,* etc., which are called *ordinal numbers.*
car-di-nal points (*pointz*), north, south, east, and west.
car-di-nal signs (*sīnz*), Aries, Libra, Cancer, and Capricorn.
car-di-nal vir-tues (*vēr'tūz*), among the ancients, prudence, justice, temperance, and fortitude.
car-di-nal winds (*windz*), winds which blow from due north, south, east, and west.
care (*kär*), *n.* concern; solicitude; anxiety.
Syn. CARE, charge, management. *Care* will include both *charge* and *management,* but, in the strict sense, it comprehends personal labor; *charge* involves responsibility; *management* includes regulation and order. A gardener has the *care* of a garden; a nurse has the *charge* of children; a steward has the *management* of a farm. [See *anxiety, heed.*]
Ant. DISREGARD, neglect, recklessness.
ca-reen (*kä-rēn'*), *v. i.* to incline on one side, as a ship under press of sail.
ca-reer (*kä-rēr'*), *n.* a run at full speed; general course of action in an occupation or calling.
care-ful (*kär'ful*), *adj.* full of care; anxious.
Syn. CAREFUL, cautious, provident. *Careful,* or full of care, is the general term; to be *cautious* is to be *careful* in guarding against danger; to be *provident* is to be *careful* in preventing straits and difficulties. The term *careful* is applied for the most part to present matters, but *provident* only to that which is future. One is *careful* of his money, but *provident* toward a time of need. [See *cautious.*]
Ant. HEEDLESS, rash, reckless.
ca-ress (*kä-res'*), *n.* an act or expression of affection.
★**ca-ret** (*kā'ret* or *kar'et*), *n.* a mark (ʌ) used in writing, or in correcting proofs, to indicate the place where something is omitted or is to be added.
car-go (*kär'gō*), *n.* [*pl.* cargoes (*'gōz*)], the lading or freight of a ship.
★**Carib** (*kar'ib*) or **Caribbee** (*'ib-ē*), *n.* a native of the Caribbee islands.
★**Caribbean** (*kar-ib-ē'an*, not *kar-ib'ē-an*) **Sea.** Washes the territory of the Caribs, whose name means "cruel men." An arm of the Atlantic.
car-i-bou (*kar'i-bōō*), *n.* the North American reindeer.
car-i-ca-ture (*kar'i-kä-tūr*), *n.* a pictorial or descriptive representation, in which defects or peculiarities are exaggerated to a ludicrous degree.
car-i-ca-tur-ist (*kar'i-kä-tūr-ist*), *n.* one who represents others in caricature.
ca-ri-es (*kā'ri-ēz*), *n.* decay of bones, teeth, or vegetable tissue.
car-il-lon (*kar'il-lon*), *n.* a chime of bells diatonically tuned, and played by hand or machinery.
cark (*kärk*), *v. i.* to be anxious or concerned: *v. t.* to vex; load with care or grief.
car-lock (*kär'lok*), *n.* a kind of isinglass made of the sturgeon's bladder, and used in clarifying wine.
car-min-a-tive (*kär-min'ä-tiv*), *n.* a medicine which expels wind and relieves colic.
car-mine (*kär'min* or *'min*), *n.* the essential coloring principle of cochineal.
car-nage (*kär'näj*), *n.* slaughter; great destruction of life by violence; massacre.
Syn. CARNAGE, slaughter, massacre, butchery. *Carnage* respects the number of dead bodies in consequence of any impetuous attack from a powerful enemy; *slaughter* respects the act of taking away life, and the circumstances of the agent; *massacre* and *butchery* respect the circumstances of the objects who are the sufferers of the action; the latter three are said of human beings only; defenseless women and children are commonly *butchered* by the savage furies who are most active in this work of blood.
car-nal (*kär'nal*), *adj.* pertaining to the body, its passions and its appetites.
car-na-tion (*kär-nā'shun*), *n.* a light rose pink; flesh color.
car-ni-fi-ca-tion (*kär-ni-fi-kā'shun*), *n.* process of turning to flesh, or to substance resembling flesh.
car-ni-val (*kär'ni-val*), *n.* the season of rejoicing before Lent; merrymaking; riotous excess.
car-niv-o-rous (*kär-niv'ō-rus*), *adj.* eating or feeding on flesh.
car-ol (*kar'ul*), *n.* a song of joy or praise, especially one in honor of the Nativity.
Carolina (*kar-ō-lī'nä*). Name given to two states, North and South Carolina. Near the middle of the sixteenth century, Jean Ribault visited the region and named it Carolina in honor of his king, Charles IX. of France.
Caroline (*kar'ō-lin* or *-lin*). From *Carolus,* from root of *Charles.* Danish *Caroline;* Dutch, *Carolina;* Fr., *Caroline;* Ger., *Caroline* or *Karoline;* It. *Carolina;* Lat., *Carolina;* Sw., *Karolina.*
Caroline Islands. A great archipelago of the Pacific, discovered by Lopez de Villalobos in 1543, and named after Charles V., emperor of Germany.
★**ca-rot-id** (*kä-rot'id*, not *kä-rō'tid*), *n.* one of the two principal arteries on either side of the neck.
carp (*kärp*), *v. i.* to cavil or find fault. [CENSURE.]
carp (*kärp*), *n.* a fresh-water fish.
car-pal (*kär'pal*), *adj.* pertaining to the carpus or wrist.
★**Carpathian** (*kär-pā'thi-an*). The range of mountains north of Hungary. The name is derived from *Krapat* or *Karpa,* the local name of the main chain, which is explained by the Slavonic root *chrb,* signifying a "ridge" or "range of hills."
car-pen-ter (*kär'pen-tēr*), *n.* an artificer in timber.
car-pen-try (*kär'pen-trē*), *n.* the art of cutting, framing and joining timber.
car-pet (*kär'pet*), *n.* a thick woven or felted fabric, used for covering floors or stairs.
★**Carrara** (*kä-rä'rä*). A town in the province of Massa-e-Carrara, Italy. *Carrara marble,* for statuary, is taken from quarries in its environs.
car-riage (*kar'ij*), *n.* the act of carrying or transporting; cost of conveyance; manner of carrying one's self.
Syn. CARRIAGE, gait, walk. *Carriage* is here the most general term; it respects the manner of carrying the body, whether in a state of motion or rest; *gait* is the mode of carrying the limbs and body whenever we move: *walk* is the manner of carrying the body when we move forward to walk.
Carrie, Caddie. Feminine names corrupted from *Caroline.*
car-ri-er (*kar'i-ēr*), *n.* one who, or that which, carries or conveys; one whose business is to carry.
car-ri-er pig-eon (*pij'un*), a variety of pigeon trained to convey letters, etc.
car-ri-on (*kar'i-un*), *n.* dead or putrefying flesh; filth; garbage.
car-ron-ade (*kar-un-ād'*), *n.* a short cannon of large bore for close range, formerly used in the navy.
car-ron oil (*kar'un oil*), linseed-oil and lime-water; used as a liniment for burns.
car-rot (*kar'ut*), *n.* a well-known plant with an edible root; the root itself.
car-ry (*kar'i*), *v. t.* to convey from one point to another; bear; have on one's person; convey by force. [BRING.]
Carson City, Nev. Named in honor of Christopher Carson, or, as more widely known "Kit" Carson, the noted frontiersman and hunter.
cart (*kärt*), *n.* a vehicle for conveyance of heavy goods.
car-tel (*kär-tel'* or *kär'tel*), *n.* an agreement between hostile states regarding the exchange of prisoners.
Carthage (*kär'thäj*). From *Kartha-hadtha,* "the new city," in opposition to Utica, "the old." A city of northern Africa.
car-ti-lage (*kär'ti-läj*), *n.* an elastic animal tissue; gristle.
car-ti-lag-i-nous (*kär-ti-laj-i-nus*), *adj.* pertaining to, or in the form of, cartilage; gristly.
car-tog-ra-pher (*kär-tog'rä-fēr*), *n.* one who make charts or maps.
car-to-graph-ic (*kär-tō-graf'ik*), **car-to-graph-ical** (*'i-kal*), *adj.* pertaining to cartography.
car-tog-ra-phy (*kär-tog'rä-fi*), *n.* the art or business of drawing charts or maps. [Also *chartography.*]
★**car-toon** (*kär-tōōn'*), *n.* a pictorial sketch dealing with a political or social subject.
car-tridge (*kär'trij*), *n.* a case of cardboard, metal, or other material, holding the charge of a firearm.
carve (*kärv*), *v. t.* to form a design; shape by cutting; cut into slices.
★**car-y-at-id** (*kar-i-at'id*), *n.* a figure of a woman in long robes, serving to support an entablature.
Casco Bay, Me. From an Italian word, meaning "crane"; hence "crane bay."
case (*kās*), *n.* a covering or receptacle; a sheath; a box with its contents.
case (*kās*), *n.* that which happens or befalls; the matters involved in a question under discussion or investigation; a certain form or instance of disease; a suit or action at law.
Syn. CASE, cause. The *case* is matter of fact; the *cause* is matter of question; a *case* involves circumstances and consequences; a *cause* involves arguments; a *case* is something to be learned; a *cause* something to be decided. [See *cause.*]
case-ment (*kās'ment*), *n.* a window-frame hinged at the side.
ca-se-ous (*kā'sē-us*), *adj.* cheesy.
cash (*kash*), *n.* money; ready money: *v. t.* to turn into, or exchange for, money. [MONEY.]
cash-book, *n.* a book in which a register is kept of money received or paid out.
cash-ier (*kash-ēr'*), *n.* one who has charge of the money, payments and receipts of a bank or firm.
cash-mere (*kash'mēr*), *n.* a soft woolen fabric for shawls, etc., originally made in Cashmere.
ca-si-no (*kä-sē'nō*), *n.* [*pl.* Eng. casinos (*'nōz*), It. casini (*'nē*)], a small country house; a room for public amusements.
cask (*kask*), *n.* a vessel composed of wooden staves, bound by iron hoops.
cas-ket (*kas'ket*), *n.* a small chest or box for jewels, etc.; a costly coffin.
Caspian (*kas'pi-an*). The European name of the great inland sea of Asia. It was so called by the Greeks from the Caspii, a tribe who in, the time of Herodotus, dwelt on its western shore.
casque (*kask*), *n.* a helt.
★**Cassandra** (*kas-san'drä*). A daughter of Priam,

king of Troy. Mr. Arthur translates this name "inflaming one with love." Gr., *Kassandre;* Fr., *Cassandre;* It., *Cassandra;* Lat., *Cassandra.*

★**cas-sa-va** (*kas'sä-vä*), *n.* a plant of tropical America and Africa, cultivated for its tuberous roots.

★**cas-sia** (*kash'ä*), *n.* a genus of leguminous plants, the leaves of several species of which constitute the drug senna.

cas-sia oil (*oil*), oil extracted from cassia bark and cassia buds.

★**cas-si-mere** (*kas'i-mēr*, not *kaz'i-mēr*), *n.* a thin twilled woolen cloth, used for men's garments.

cas-sock (*kas'uk*), *n.* a long, close-fitting vestment worn by clergymen, choristers, etc.

cas-so-wa-ry (*kas'ō-wä-ri*), *n.* [*pl.* cassowaries (*-riz*)], a large bird resembling the ostrich.

cast (*kăst*), *v. t.* [*p. t.* and *p. p.* cast, *p. pr.* casting], to throw; hurl; shed; direct or turn.

★**cas-ta-nets** (*kas'tä-nets*), *n. pl.* small spoon-shaped shells of hard wood or ivory, fastened loosely at top, and shaken with the fingers to beat time.

cast-a-way (*kăst'ä-wā*), *n.* one cast away or lost.

★**caste** (*kăst*, not *kast*), *n.* one of the artificial or hereditary divisions into which Hindus are restricted by Brahman religious law. [CLASS.]

cas-ter (*kăs'tĕr*), *n.* one who, or that which, casts; a computer; a small swiveled wheel.

cas-ti-gate (*kas'ti-gāt*), *v. t.* to correct; chastise; punish; subject to severe criticism.

cas-ti-ga-tion (*kas-ti-gā'shun*), *n.* the act of castigating.

cas-tile soap (*kas'tēl* or *kas-tēl'* *sōp*), a superior kind of refined soap, originally made at Castile, Spain.

★**Cas-til-ian** (*kas-til'yan*), *adj.* of or pertaining to Castile, Spain.

cast-ing (*kăst'ing*), *n.* the act or process of founding or molding.

cast iron or **steel** (*ī'urn* or *stēl*), iron or steel melted and run into molds.

cas-tle (*kăs'l*), *n.* a fortified residence; a fortress.

cas-trate (*kas'trāt*), *v. t.* emasculate; geld; expurgate; deprive a flower of its anthers.

cas-tra-tion (*kas-trā'shun*), *n.* the act of castrating.

cas-u-al (*kazh'ū-al*), *adj.* happening by chance; accidental. [OCCASIONAL.]

cas-u-al-ty (*kazh'ū-al-ti*), *n.* [*pl.* casualties (*-tiz*)], an accident, especially if resulting in bodily injury or death. [ACCIDENT.]

cas-u-ist-ry (*kazh'ū-is-tri*), *n.* [*pl.* casuistries (*-triz*)], the science or doctrine which deals with cases of conscience as determined by theological dogmas or ethical rules.

cat (*kat*), *n.* a carnivorous animal of the family Felidæ, especially the domesticated quadruped.

cat-boat (*'bōt*), *n.* a small boat with one sail on a mast near the bows.

cat-a-clysm (*kat'ä-klizm*), *n.* a deluge; an extensive, sweeping flood; a violent catastrophe, involving great changes of the earth's surface.

cat-block (*kat'blok*), *n.* a two or three fold iron strapped block used to cat the anchor; that is, to bring it up to the cathead, the projecting piece of timber or iron near the bow to which the anchor is secured.

★**cat-a-comb** (*kat'ä-kōm*, not *kat'ä-kōmb*), *n.* a subterraneous burial place with niches hollowed out for the dead.

cat-a-falque (*kat'ä-falk*), *n.* a temporary structure, erected usually in a church, to support a coffin.

Cat-a-lan (*kat'ä-lan*), *adj.* of or pertaining to Catalonia, a former province of Spain, or to its inhabitants or language.

cat-a-lep-sy (*kat'ä-lep-si*), *n.* a sudden suspension of sensation and volition.

cat-a-lep-tic (*kat-ä-lep'tik*), *adj.* of or pertaining to catalepsy.

cat-a-logue (*kat'ä-log*), *n.* an arranged list.

cat-a-mount (*kat'ä-mount*), *n.* the wildcat.

cat-a-pult (*kat'ä-pult*), *n.* an ancient military engine for hurling darts and stones.

cat-a-ract (*kat'ä-rakt*), *n.* a large waterfall; a furious rush or downpour of water; a disease of the eye in which the crystalline lens becomes opaque.

ca-tarrh (*kä-tär'*), *n.* an inflammatory affection of any mucous membrane, accompanied by increase of the mucus.

ca-tarrh-al (*kä-tär'al*), *adj.* pertaining to, or produced by, catarrh.

ca-tas-tro-phe (*kä-tas'trō-fē*), *n.* a great calamity or disaster.

ca-taw-ba (*kä-taw'bä*), *n.* a light red variety of American grape.

Catawba river, N. C. and **S. C.** So named from the *Catawbas*, a tribe of Indians.

Catawissa (*kat-ä-wis'sä*) **river, Pa.** From the Delaware Indian word *Cattawissa*, "getting fat."

cat-call (*kat'kawl*), *n.* a squeaking instrument used in theaters to express disapproval.

catch (*kach*), *v. t.* [*p. t.* and *p. p.* caught, *p. pr.* catching], to seize or grasp; lay hold of suddenly; intercept: *n.* the act of seizing or grasping; that which is caught or taken; gain. [LAY.]

★**catch-up** (*kach'up*, not *kech'up*), *n.* a sauce. [Also *catsup*, *ketchup.*]

cat-e-chism (*kat'ē-kizm*), *n.* an elementary manual in the principles of the Christian religion.

cat-e-chist (*kat'ē-kist*), *n.* a catechizer.

cat-e-chize (*kat'ē-kīz*), *v. t.* to instruct by means of questions and answers, and offering explanations; especially to instruct on points of Christian dogma.

cat-e-gor-i-cal (*kat-ē-gor'i-kal*), *adj.* pertaining to a category.

cat-e-gor-i-cal-ly (*-li*), *adv.* absolutely; positively.

cat-e-go-ry (*kat'ē-gō-ri*), *n.* [*pl.* categories (*-riz*)], one of the highest classes to which the objects of knowledge or thought can be reduced; condition.

ca-ter (*kā'tĕr*) *v. i.* to supply food, amusement, etc. (with *for* and *to*).

cat-er-pil-lar (*kat'ĕr-pil'ĕr*), *n.* the hairy, worm-like larva of a butterfly or lepidopterous insect.

cat-er-waul (*kat'ĕr-wawl*), *v. i.* to cry as cats at night; to utter harsh, discordant sounds.

cat-fish (*kat'fish*), *n.* a fish remarkable for its voracity; bullhead; pout.

cat-gut (*kat'gut*), *n.* a kind of cord made from the intestines of animals, usually sheep.

Catharine (*kath'ä-rin*). The real name of Catharine of Alexandria, the patron saint of girls and virgins, was Dorothea. The proper derivation of the word is from the Greek *katharos*, "pure"; and, therefore, the correct spelling of the name is *Catharine* or *Katharine.* Danish, *Catharine;* Dutch, *Catharine;* Fr., *Catherine;* Ger., *Katharine;* Gr., *Katharine;* It., *Caterina;* Lat., *Catharina;* Russ., *Ekaterina* or *Yekaterina;* Sp., *Catalina;* Sw. *Katharina.*

ca-thar-tic (*kä-thär'tik*), *adj.* purgative: *n.* a purgative medicine.

ca-the-dral (*kä-thē'dral*), *n.* the chief church of a diocese, in which is the official chair of a bishop.

cath-ode (*kath'ōd*), *n.* the negative electrical pole.

cath-o-lic (*kath'ō-lik*), *adj.* universal; general; embracing all; liberal.

Catholic, *adj.* pertaining to the church of Rome.

ca-thol-i-cism (*kä-thol'i-sizm*), *n.* the belief of, or adherence to, the Catholic church or faith.

cath-o-lic-ity (*kath-o-lis'i-ti*), *n.* the quality of being catholic.

Ca-thol-i-cize (*kä-thol'i-sīz*), *v. t.* to convert to the Roman Catholic church.

cat-nip (*kat'nip*), **cat-mint** (*kat'mint*), *n.* a strong-scented perennial herb, much liked by cats.

cat o' nine tails, a whip with nine lashes of knotted cord.

ca-top-trics (*kä-top'triks*), *n.* that branch of optics which treats of the principles of reflected light.

Catskill mountains, N. Y. Name originally applied to the river (*Kill*) by the Dutch, and transferred to the mountains; *Katskill*, "panther creek," from the numerous panthers or lynxes (cat-like) animals formerly infesting the hills. The mountains were called *Katsbergs* by the Dutch.

★**Cattaraugus** (*kat-ä-raw'gus*) **river, N. Y.** From an Iroquois Indian word, which may be translated "bad smelling shore."

cat-tle (*kat'l*), *n. pl.* live stock, especially oxen, bulls and cows.

cat-tle plague (*plāg*), rinderpest.

★**Cau-ca-si-an** (*kaw-kā'shan*, not *kaw-kā'zhan*, nor *kaw-kash'an*), *adj.* of or pertaining to the Caucasus, a mountainous range between the Black and the Caspian Seas.

cau-cus (*kaw'kus*), *n.* a preliminary meeting of representatives of a political party, to decide upon a line of policy.

cau-dal (*kaw'dal*), *adj.* pertaining to a tail.

caul (*kawl*), *n.* a net or covering for the head; the omentum.

caul-dron. See *caldron.*

cau-li-flow-er (*kaw'li-flou-ĕr*), *n.* a garden variety of cabbage with an edible flowering head.

caulk. See *calk.*

caus-al (*kawz'al*), *adj.* relating to or expressing cause; causative.

cau-sal-i-ty (*kaw-zal'i-ti*), *n.* [*pl.* causalities (*-tiz*)], the agency of a cause; the action of a cause in producing its effect.

caus-al-ly (*kawz'al-li*), *adv.* according to order of series of causes; by tracing effects to causes.

cau-sa-tion (*kaw-zā'shun*), *n.* the act of causing, or the agency by which the effect is produced.

caus-a-tive (*kawz'ä-tiv*), *adj.* that causes; expressing a cause.

cause (*kawz*), *n.* that which produces or contributes to a result; a reason; motive; principle.

Syn. CAUSE, reason, motive. *Cause* respects the order and connection of things; *reason* the movements and operations of the mind; *motives* the movements of the mind and body. *Cause* is said of all inanimate objects; *reason* and *motive* of rational agents: whatever happens in the world happens from some *cause* mediate or immediate; whatever opinions men hold, they ought to be able to assign a substantial *reason* for them; and for whatever they do, they ought to have a sufficient *motive.* The *cause* gives birth to the effect, the *reason* gives birth to the conclusion, and the *motive* gives birth to the action. [See *case.*]

Ant. DETERRENT, effect, impulse.

cause, *v. t.* to effect, bring about, make.

Syn. CAUSE, occasion, create. What is *caused* seems to follow naturally; what is *occasioned* follows incidentally, or what *occasions* may be incidental, but necessary; what is *created* receives its existence arbitrarily. A wound *causes* pain; accidents *occasion* delay; busybodies *create* mischief. [See *occasion*]

Ant. DESTROY, happen, prevent.

cause-way (*kawz'wā*), or **cau-sey** (*kaw'zi*), *n.* a raised pathway or road; a highway.

caus-tic (*kaws'tik*), *adj.* burning; hot; corrosive; sarcastic; cutting; pungent.

cau-ter-i-za-tion (*kaw-tĕr-i-zā'shun*), *n.* the act of cauterizing.

cau-ter-ize (*kaw'tĕr-īz*), *v. t.* to burn or sear with a hot iron, or with a caustic substance.

cau-tion (*kaw'shun*), *n.* heedfulness; prudence in regard to danger.

cau-tion-a-ry (*kaw'shun-ä-ri*), *adj.* containing a caution; given as a pledge or security.

cau-tious (*kaw'shus*), *adj.* exercising caution; heedful; wary; vigilant; circumspect.

Syn. CAUTIOUS, wary, circumspect. We must be *cautious* on all occasions where there is danger, but we must be *wary* where there is great danger. A tradesman must be *cautious* in his dealings with all men, but he must be *wary* when he has to deal with designing men; *circumspect* is used in reference to matters of theory or contemplation, when the mind is principally employed; a man must be *circumspect* when he transacts business of particular importance and delicacy.

Ant. CARELESS, inattentive, reckless.

cav-al-cade (*kav'al-kād*), *n.* a procession of persons chiefly on horseback.

★**cav-a-lier** (*kav-a-lēr'*), *n.* an armed horseman, especially a knight or gentleman soldier.

cav-al-ry (*kav'al-ri*), *n.* mounted troops.

★**ca-va-ti-na** (*kä-vä-tē'nä* or *kav-ä-tē'nä*), *n.* a short, simple melody.

cave (*kāv*), *n.* a large natural cavity in the earth.

★**ca-ve-at** (*kä'vē-at*, not *kav'ē-at*), *n.* a notice filed to stop procedure; bar to letters patent; warning.

cav-ern (*kav'ĕrn*), *n.* a large natural hollow under the earth.

cav-ern-ous (*kav'ĕrn-us*), *adj.* hollow like a cavern.

★**ca-viare** (*kä-vēr'*) or **cav-i-ar** (*kav'i-är*), *n.* the roes of the sturgeon.

cav-il (*kav'il*), *v. i.* to raise captious or frivolous objections. [CENSURE.]

cav-i-ty (*kav'i-ti*), *n.* [*pl.* cavities (*-tiz*)], a hollow place or part.

ca-vort (*kä-vôrt'*), *v. i.* to prance about, as a horse.

caw (*kaw*), *v. i.* to cry like a crow, rook, or raven: *n.* the cry of the crow, etc.

★**cay-enne pep-per** (*kā-en'* or *kī-en' pep'ĕr*), a kind of pepper made from the seeds and fruit of various species of the genus Capsicum.

★**Cayuga** (*kā-yōō'gä*). County, village, and lake in New York. Indian word, the derivation of which is in dispute.

Cazenovia (*kaz-ē-nō'vi-ä*). Lake and town in Madison county, New York; town named by its founder, Col. John Linkhaen, for Theophilus Cazenove, general agent of the Holland Land company.

cease (*sēs*), *v. i.* to come to an end; stop; desist (followed by *from* before a noun): *v. t.* to put a stop to; end.

Syn. CEASE, leave off, discontinue. *Cease* is used either for particular actions or general habits; *leave off* more usually and properly for particular actions; *discontinue* for general habits. A restless, spoiled child never *ceases* crying until it has obtained what it wants; a laborer *leaves off* his work at any given hour; a delicate person *discontinues* his visits when they are found not to be agreeable.

Ant. BEGIN, commence, continue, start.

★**Cecil** (*sē'sil*, *sis'il*, or *ses'il*). A masculine name derived from the Latin *Cecilius* or *Cæcilius*, a diminutive of *cæcus*, "blind," or "dim-sighted." *Cecil* is also found as a feminine name. Dutch, *Cecilius;* Lat., *Cæcilius.*

★**Cecilia** (*sē-sil'i-ä*). A baptismal name derived from *Cæcilia*, feminine of *Cæcilius.* [See *Cecil.*] Dutch, *Cecilia;* Fr., *Cécile;* It., *Cecilia;* Lat., *Cæcilia.*

ce-dar (*sē'dĕr*), *n.* the name of several evergreen trees, with fragrant wood of great durability.

cede (*sēd*), *v. t.* to give up or surrender.

ceil (*sēl*), *v. t.* to overlay or cover the inner surface of a roof.

ceil-ing (*sēl'ing*), *n.* the inner surface of the roof of an apartment.

cel-an-dine (*sel'an-dīn*), *n.* the name of a perennial plant of the poppy family.

cel-e-brate (*sel'ē-brāt*), *v. t.* to praise, extol, or honor; commemorate.

Syn. CELEBRATE, commemorate. Everything is *celebrated* which is distinguished by any marks of attention, whether present or past; but nothing is *commemorated* but what has been past. [See *famous.*]

Ant. DESPISE, forget, profane, violate.

cel-e-bra-tion (*sel-ē-brā'shun*), *n.* the act of celebrating.

ce-leb-ri-ty (*sē-leb'ri-ti*), [*pl.* celebrities (*-tiz*)], fame; renown.

ce-ler-i-ty (*sē-ler'i-ti*), *n.* rapidity; swiftness.

cel-er-y (*sel'ĕr-i*), *n.* a plant cultivated for a salad.

ce-les-tial (*sē-les'chal*), *adj.* of or pertaining to the sky or heavens; heavenly; supremely excellent.

Syn. CELESTIAL, heavenly. *Celestial* is applied mostly in the natural sense of the heavens; *heavenly* is employed more commonly in a spiritual sense. Hence, we speak of the *celestial* globe as distinguished from the terrestrial; and of the *celestial* bodies. But, on the other hand, of the *heavenly* habitation, of *heavenly* joys or bliss, of *heavenly* spirits, and the like.

Ant. EARTHLY, low, mortal, mean.

Ce-les-tial (*sē-les'chal*), *n.* an inhabitant of heaven; a native of China.

Celestial empire. Name applied to the Chinese empire, because of a belief that its early rulers were all celestial deities.
★**ce-lib-a-cy** (*sē-lib'ā-si* or *sel'i-bā-si*), *n.* the state of being unmarried.
cel-i-bate (*sel'i-bāt*), *n.* one who is unmarried.
cell (*sel*), *n.* a small room in a monastery, convent, or prison; minute elementary structure of tissues of animals and plants.
cel-lar (*sel'ēr*), *n.* a vault for storing provisions, wine, fuel, etc.
★**cel-lo** (*chel'ō*), *n.* [*pl.* cellos ('ōz), It. celli ('ē)], a contraction for violoncello.
cel-lu-loid (*sel'ū-loid*), *n.* a compound of camphor and gun cotton, resembling ivory.
celt (*selt*), *n.* an instrument or weapon of stone or metal found in the tumuli of early Celtic nations.
★**Celt-ic** (*sel'tik*) or **Keltic** (*kel'tik*), *adj.* pertaining to the Celts or Kelts.
ce-ment (*sē-ment'* or *sem'ent*), *n.* any adhesive substance which makes two bodies cohere.
cem-e-ter-y (*sem'ē-ter-i*), *n.* [*pl.* cemeteries (*-iz*)], a public burial ground.
cen-o-bite (*sen'ō-bīt*), *n.* one of a religious order living in a convent or in community.
cen-o-taph (*sen'ō-tāf*), *n.* an empty tomb.
cen-ser (*sen'sēr*), *n.* a covered cup-shaped vessel pierced with holes, in which incense is burned.
cen-sor (*sen'sor*), *n.* one of two magistrates of ancient Rome who imposed taxes and regulated the morals and manners of the community; an official appointed to examine books, manuscripts, plays, etc., to ascertain whether there is anything immoral or offensive in them.
cen-so-ri-al (*sen-sō'ri-al*), *adj.* pertaining to a censor; censorious.
cen-so-ri-ous (*sen-sō'ri-us*), *adj.* addicted to, or expressing, censure; carping; critical.
cen-sur-a-ble (*sen'shōōr-ā-bl*), *adj.* blamable.
cen-sure (*sen'shōōr*), *n.* blame; reproof; the act of finding fault.
Syn. CENSURE, carp, cavil. To *censure* respects positive errors; to *carp* and *cavil* have regard to what is trivial or imaginary; the former is employed for errors in persons; the latter for supposed defects in things. *Carping* and *caviling* are resorted to only to indulge ill-nature or self-conceit: party politicians *carp* at the measures of administration; infidels *cavil* at the evidences of Christianity, because they are determined to disbelieve. [See *blame, condemn.*]
cen-sus (*sen'sus*), *n.* an official enumeration of population, with details of sex, age, occupation, etc.
cent (*sent*), *n.* the one-hundredth part of a dollar.
cen-taur (*sen'tawr*), *n.* a fabulous being, half man and half horse.
cen-te-na-ri-an (*sen-tē-nā'ri-an*), *adj.* of or pertaining to a centenary: *n.* a person a hundred years old.
cen-te-na-ry (*sen'tē-nā-ri*), *n.* [*pl.* centenaries, (*-riz*)], the space of a hundred years.
cen-ten-ni-al (*sen-ten'i-al*), *adj.* consisting of, or enduring, a century; once in a century.
cen-ter (*sen'tēr*), *n.* the middle point of anything; the nucleus around which things are collected; a title of the leaders of certain organizations.
cen-ter-board (*-bōrd*), *n.* a keel so constructed that it may be raised within the vessel or lowered at pleasure; it is extensively used by racing craft.
cen-ter of grav-i-ty (*uv grav'i-ti*), that point of a body through which the resultant of all the forces acting upon it in consequence of the earth's attraction will pass.
cen-ti-grade (*sen'ti-grād*), *adj.* graduated or divided into a hundred degrees.
★**cen-ti-gram** or **cen-ti-gramme** (*sen'ti-gram*), *n.* a measure of weight equal to the hundredth part of a gram.
★**cen-ti-li-ter** (*sen'ti-lē-tēr* or *sen-til'i-tēr*, Fr. *sāN'-tē-lē-tēr*), *n.* a measure of capacity equal to the hundredth part of a liter.
★**cen-time** (*sāN-tēm'*), *n.* a small French coin equal to the hundredth part of a franc.
★**cen-ti-me-ter** (*sen'ti-mē-tēr*, or *sen-tim'ē-tēr*), *n.* a measure of length equal to the hundredth part of a meter.
cen-ti-ped (*sen'ti-ped*) or **cen-ti-pede** (*-pēd*), *n.* the term applied to an articulated animal with numerous feet belonging to the class Myriapoda.
cen-tral (*sen'tral*), *adj.* relating to, or situated in, the center.
cen-tral-i-za-tion (*sen-tral-i-zā'shun*), *n.* the act of bringing all local administrations under one central government.
cen-tral-ize (*sen'tral-īz*), *v. t.* to draw or bring to a center.
Central park. The principal park in New York, extending from 59th street to 110th street, and from Fifth avenue to Eighth avenue.
cen-tre (*sen'tēr*), *n.* same as *center.*
cen-tric (*sen'trik*) or **cen-tri-cal** ('*tri-kal*), *adj.* placed in the center; central.
cen-trif-u-gal (*sen-trif'ū-gal*), *adj.* tending or causing to fly off from the center; radiating from a central focus.
cen-trip-e-tal (*sen-trip'ē-tal*), *adj.* tending or causing to approach the center; opposed to centrifugal.
cen-trip-e-tal rail-way (*rāl'wā*), a railway constructed with a single rail to support the carriage.
cen-tu-ri-on (*sen-tū'ri-un*), *n.* a military officer commanding a hundred men.
cen-tu-ry (*sen'tū-ri*), *n.* [*pl.* centuries (*-riz*)], a hundred years, especially of the Christian era.
cen-tu-ry plant (*plant*), a name of the American aloe, from the supposition that it flowered once only in a hundred years.
century run, a hundred-mile run on a bicycle.
★**ce-phal-ic** (*sē-fal'ik*, not *sef'al-ik*), *adj.* pertaining to the head.
★**ce-ram-ic** (*sē-ram'ik*, not *kē-ram'ik*), *adj.* of or pertaining to pottery or the fictile arts.
ce-rate (*sē'rāt*), *n.* a thick ointment of wax, etc.
cere (*sēr*), *n.* the naked skin at the base of the bill of many birds.
cere (*sēr*), *v. t.* to cover or close with wax.
ce-re-al (*sē'rē-al*), *adj.* pertaining to, or producing, wheat or edible grain.
cer-e-bel-lum (*ser-ē-bel'um*), *n.* [*pl.* cerebella ('*ā*)], the hinder and lower part of the brain.
cer-e-bral (*ser'ē-bral*), *adj.* of or pertaining to the brain.
cer-e-bral hem-is-phere (*hem'is-fēr*), one of the two lateral halves of the cerebrum.
cer-e-bra-tion (*ser-ē-brā'shun*), *n.* the conscious or unconscious action of the brain.
cer-e-brum (*ser'ē-brum*), *n.* [*pl.* cerebra (*-brā*)], the superior and larger part of the brain.
cere-cloth (*sēr'kloth*), *n.* a cloth saturated with wax or some gummy substance, used for wrapping embalmed bodies in.
cere-ment (*sēr'ment*), *n.* a grave-cloth or shroud: *pl.* grave-clothes.
cer-e-mo-ny (*ser'ē-mō-ni*), *n.* [*pl.* ceremonies (*-niz*)], a sacred rite or observance; a prescribed rite or formality. [FORM.]
cer-iph (*ser'if*), *n.* one of the fine lines of a printing type.
ce-ri-um (*sē'ri-um*), *n.* a rare metallic element.
ce-rog-ra-phy (*sē-rog'rā-fi*), *n.* the art of writing or engraving on wax.
cer-tain (*sēr-tin*), *adj.* sure; beyond a doubt.
Syn. CERTAIN, sure, secure. *Certain* and *sure* have regard to a person's convictions; *secure* to his interests or condition: one is *certain* from actual knowledge or from a belief in others; one is *sure* from a reliance upon others; one is *secure* when free from danger. We can be *certain* of nothing future but death; we may be *sure* that God will fulfill his promises in his own way; we may be *secure* against any loss or mischief if we use proper precautions.
Ant. DUBIOUS, disputed, exposed.
cer-tain-ty (*sēr'tin-ti*), *n.* [*pl.* certainties (*-tiz*)], full assurance.
cer-tes (*sēr'tēz*), *adv.* certainly; assuredly.
cer-tif-i-cate (*sēr-tif'i-kāt*), *n.* a written testimony to the truth of any fact.
cer-ti-fi-ca-tion (*sēr-ti-fi-kā'shun*), *n.* the act of certifying.
cer-ti-fy (*sēr'ti-fī*), *v. t.* [*p. t.* and *p. p.* certified, *p. pr.* certifying], to testify to, or to make known, in writing.
★**cer-ti-o-ra-ri** (*sēr-shi-ō-rā'ri*), *n.* a writ issuing from a superior court calling for the records of an inferior court.
cer-ti-tude (*sēr'ti-tūd*), *n.* certainty; assurance.
★**Certosa** (*cher-tō'sā*). A former Carthusian monastery, at Pavia, Italy, one of the largest and most splendid existing.
ce-ru-le-an (*sē-rōō'lē-an*), *adj.* sky-colored.
ce-ru-lin (*sē'rōō-lin*), *n.* an olive-green dye.
ce-ruse (*sē'rōōs*), *n.* white lead, used as a pigment, and from which a cosmetic is prepared.
cer-vi-cal (*sēr'vi-kal*), *adj.* of or pertaining to the neck.
cer-vine (*sēr'vin*), *adj.* of or pertaining to the deer family; of a tawny or fawn color.
cess (*ses*), *v. t.* to impose a tax; assess: *n.* a rate or tax, especially the land tax.
ces-sa-tion (*ses-sā'shun*), *n.* the act of ceasing.
Syn. CESSATION, stop, rest, intermission. To *cease* respects the course of things; whatever does not go on has *ceased; stop* respects some external action or influence; *rest* is a species of *cessation* that regards labor or exertion; whatever does not move or exert itself is at *rest; intermission* is a species of *cessation* only for a time or at certain intervals. That which *ceases* or *stops* is supposed to be at an end; *rest* or *intermission* supposes a renewal. [See *hinder.*]
Ant. BEGINNING, continuance, progress.
ces-sion (*sesh'un*), *n.* a yielding up, as of territory, property, or rights.
cess-pool (*ses'pōōl*), *n.* a deep hole in the ground, or the well of a drain for the reception of filth.
ces-tus (*ses'tus*), *n.* a kind of glove used by ancient boxers, frequently loaded with lead or iron.
★**ce-ta-cean** (*sē-tā'shan*), *adj.* pertaining to the Cetacea, formerly a group of marine mammalia which included the whales.
Ce-te (*sē'tē*), *n. pl.* an order of the mammalia, containing the true whales, dolphins, etc.
★**Ceylon** (*sē-lon'* or *sil-ōn'*). Portuguese *Selen* is but a part of the original Sanskrit *Sinhalo-dwipa,* "the island of lions." Marco Polo, seemingly deriving his knowledge from Javanese sources, calls it *Seilan,* whence the Portuguese forms *Cilan* and *Ceilaon,* from the last of which the English form *Ceylon* has been obtained.
chafe (*chāf*), *v. t.* to make warm by friction; to wear away or make sore by rubbing.
chaff (*chaf*), *n.* the husk of grain, especially when separated by threshing, etc.
chaff (*chaf*), *v. t.* to banter; make game of: *v. i.* to use bantering language: *n.* banter.
chaf-finch (*chaf'inch*), *n.* a bird, so named from its feeding on grain.
chaf-ing dish (*chā'fing dish*), a small portable grate for coals.
★**cha-grin** (*shā-grin'* or *-grēn'*), *n.* vexation due to disappointment.
chain (*chān*), *n.* a connected series of links or rings fitted into one another: *v. t.* to bind with chains.
chair (*chār*), *n.* a movable seat with a back for one person; an official seat.
chair-man (*chār'man*), *n.* [*pl.* chairmen ('*men*)], the president of an assembly.
chaise (*shāz*), *n.* a light two-wheeled carriage; a carriage in general.
★**chal-ced-o-ny** (*kal-sed'ō-ni* or *kal'sē-dō-ni*), *n.* a cryptocrystalline variety of quartz, resembling diluted milk.
chal-dron (*chal'drun*), *n.* a measure for coke equal to 36 bushels (25½ cwt.).
★**chal-ice** (*chal'is*), *n.* a cup; a Eucharist cup.
chalk (*chawk*), *n.* a soft limestone rock composed of carbonate of lime; prepared chalk for drawing.
chalk-stone ('*stōn*), *n.* a chalky concretion in the joints.
chal-lenge (*chal'enj*), *n.* an invitation to a contest; a summons to fight a duel.
cham-ber (*chām'bēr*), *n.* an apartment; especially a bedroom.
cham-ber-lain (*chām'bēr-lin*), *n.* an officer who has charge of the private apartments of a sovereign or nobleman.
★**cha-me-le-on** (*kā-mē'lē-un*), *n.* an insectivorous lizard-like reptile, possessing the power of changing its color.
champ (*champ*), *v. t.* to bite with the teeth repeatedly and impatiently.
★**cham-pagne** (*sham-pān'*), *n.* a light sparkling effervescent wine.
cham-paign (*sham-pān'*), *n.* flat open country: *adj.* level; open.
★**Champ de Mars** (*shāN du märs'*). In early French institutional history, an annual political and military assembly, held in March. The time of meeting was changed to May in the eighth century, and thereafter these assemblies were called *Champs de Mai.*
cham-pi-on (*cham'pi-un*), *n.* one who defends the cause of another.
Champlain (*sham-plān'*, Fr. *shāN-plan'*), **Lake, N. Y.** For its discoverer Samuel de Champlain, in 1609. Indian name *Canaderi-Gouarante,* "mouth or door of the country." Allusion to the north entrance of the lake. In the Abenaqui tongue, called *Petawa-bouque,* "alternate land and water," alluding to its numerous islands. Iroquois name *Andiatora.*
★**Champs Elysées** (*shāN-zā-lē-zā'*). An avenue and the gardens surrounding it, in Paris, extending from the Place de la Concorde one and one fourth miles to the Place de l'Etoile, celebrated as a place of public resort.
chance (*chāns*), *n.* an unforeseen event; an accident; a possibility; opportunity; risk: *v. i.* to happen; occur without design or expectation.
Syn. CHANCE, fortune, fate. *Chance* applies to all things, personal or otherwise; *fortune* and *fate* are mostly said of that which is personal. *Chance* neither forms, orders, nor designs; *fortune* forms plans and designs, but without choice; it is said to be blind: *fate* forms plans and chains of causes; intention, knowledge, and power are attributed to it; its views are fixed, its results decisive. [See *accident, happen.*]
Ant. DESIGN, plan.
chan-cel (*chan'sel*), *n.* that part in a church where the altar stands; the sanctuary.
chan-cel-lor (*chān'sel-ēr*), *n.* a judge of a court of equity or chancery; the president or highest official of a university.
chance-med-ley (*chāns-med'li*), *n.* justifiable homicide in self-defense.
chan-cer-y (*chān'sēr-i*), *n.* originally in England, next to Parliament, the highest court of justice.
chan-de-lier (*shan-dē-lēr'*), *n.* a hanging frame with branches for lights.
chan-dler (*chān'dlēr*), *n.* a maker or vendor of candles; a dealer or merchant.
change (*chānj*), *v. t.* to alter; substitute; exchange or give an equivalent for; render acid or tainted.
Syn. CHANGE, exchange, barter, substitute. To *change* in respect to persons is to take one for another, without regard to whether they are alike or different, as a king *changes* his ministers; any person may *change* his servants: to *exchange* is to take one person in return for another who is in like condition, as prisoners are *exchanged* in time of war. In respect to things, to *change* is to take anything new or fresh, whether alike or different. Clothes may be *changed;* to *exchange* is to take one thing for another, that is, either of the same kind or equivalent in value, as to *exchange* one commodity for another. To *change* may often be the result of caprice, but to *exchange* is always an act either of discretion or necessity. To *barter* is the giving of any commodity for other commodities. To *substitute* is to put one person in the place of another, as to *substitute* one for another who has been drawn for the militia. [See *interchange.*]
Ant. CONTINUE, keep, retain.

change-a-ble (*chānj'ā-bl*), *adj.* fickle.
change-ling (*chānj'ling*), *n.* a child left in place of another; an idiot; a waverer.
chan-nel (*chan'el*), *n.* the bed of a stream; a water-course; the deepest part of a strait, bay, harbor.
chant (*chānt*), *v. t.* to sing; intone: *v. i.* make melody with the voice; go in full cry, as hounds: *n.* a song.
chan-ti-cleer (*chan'ti-klēr*), *n.* a cock.
★**cha-os** (*kā'os*), *n.* the confused matter out of which the universe was formed.
cha-ot-ic (*kā-ot'ik*), *adj.* resembling chaos.
chap (*chap*), *v. t.* [*p. t.* and *p. p.* chapped; *p. pr.* chapping], to cause to crack longitudinally.
chap (*chap*), *n.* a fellow.
★**chap** (*chop*, not *chap*), *n.* one of the jaws or its fleshy covering (usually *pl.*); the mouth of a channel.
★**cha-par-ral** (*chā-pär-rāl'*), *n.* a dense thicket.
chap-book (*chap'book*), *n.* a small book, usually of fairy tales; romances.
chap-el (*chap'el*), *n.* a subordinate place of public worship.
chap-el-ry (*chap'el-ri*), *n.* [*pl.* chapelries (*-riz*)], the district legally assigned to a chapel.
★**chap-er-on** (*chap'ēr-ōn*), *n.* a married lady who accompanies young ladies in public.
chap-lain (*chap'lin*), *n.* a clergyman who performs service in the army or navy.
chap-lain-cy (*chap'lin-si*), *n.* the office or status of a chaplain.
chap-let (*chap'let*), *n.* a wreath or garland encircling the head; a rosary.
chap-man (*chap-man*), *n.* [*pl.* chapmen (*'men*)], formerly a merchant or trader; a hawker.
chap-ter (*chap'tēr*), *n.* a division of a book; the clergy of a cathedral or collegiate church.
char (*chär*), *v. t.* [*p. t.* and *p. p.* charred; *p. pr.* charring], burn or reduce to charcoal; burn partially.
char-ac-ter (*kar'ak-tēr*), *n.* a letter, sign, or figure; distinctive qualities or traits.
Syn. CHARACTER, reputation. *Character* lies in the man; it is the mark of what he is; it shows itself on all occasions; *reputation* depends upon others; it is what they think of him.
char-ac-ter-is-tic (*kar-ak-tēr-is'tik*), *adj.* pertaining to, or indicating, the character.
char-ac-ter-is-ti-cal-ly (*'ti-kal-li*), *adv.* in a characteristic manner.
char-ac-ter-i-za-tion (*kar-ak-tēr-ī-zā'shun*), *n.* the act of characterizing.
char-ac-ter-ize (*kar'ak-tēr-īz*), *v. t.* to describe by peculiar qualities; mark or distinguish.
cha-rade (*shā-rād'*), *n.* an acted enigma.
char-coal (*chär'kōl*), *n.* wood partially burnt; impure carbon.
charge (*chärj*), *v. t.* to rush on or attack; load; fill up; impose; command or enjoin; instruct; accuse; place on the debit side: *n.* care, custody. [CARE, ACCUSE, COST.]
charge-a-ble (*chärj'ā-bl*), *adj.* liable to be charged; ratable; burdensome.
★**char-gé d'af-faires** (*shär-zhā' dăf-fär'*), [*pl.* chargés (*shär-zhā'*)], a government official who acts for an ambassador in his absence, or at a court to which no ambassador is accredited.
char-ger (*chär'jēr*), *n.* a cavalry horse; a large dish.
★**Charing Cross** (*chär'ing krŏs*). A cross in memory of Queen Eleanor, erected by Edward I., one and one-fourth miles west-southwest of St. Paul's, London. It was demolished by the Long Parliament, in 1647, and restored by the South Eastern Railway company, in 1865.
char-i-ot (*char'i-ot*), *n.* an ancient two-wheeled car for war, state processions, racing, etc.
char-i-ta-ble (*char'i-tā-bl*), *adj.* benevolent in disposition; kind and liberal. [HUMANE.]
char-i-ty (*char'i-ti*), *n.* the disposition to think well of others; liberality; alms. [LOVE.]
char-la-tan (*shär'lā-tan*), *n.* a quack.
char-la-tan-ism (*-izm*), *n.* quackery.
Charles. From the Teutonic, meaning "manly" or "noble spirited." Danish, *Carl;* Dutch, *Karel;* Fr., *Charles;* Ger., *Karl;* It., *Carlo;* Lat., *Carolus;* Sp., *Carlos;* Sw., *Karl.*
Charles Cape, Va. So named in April, 1607, by Admiral Newport, in honor of "baby" Charles, son of James I., afterward King Charles I. of England.
Charleston, S. C. In honor of Charles II. of England, original settlement being called *Charles Fort.* The name *Charleston* substituted in 1783.
Charleston, W. Va. Originally known as "Clendman's Settlement" and "The town at the mouth of the Elk." December 19, 1794, the name of *Charlestown* was fixed by the Virginia legislature, but from some cause unknown, through common consent it was changed to *Charleston.* The name *Charlestown* was given by George Clendman, its founder, in honor of his father Charles.
Charlotte (*shär'lot*). From the Teutonic, meaning "noble spirited." Danish, *Charlotte;* Dutch, *Charlotta;* Fr., *Charlotte;* Ger., *Charlotte;* It., *Carlotta;* Lat., *Caroletta;* Sp., *Carlota, Charlotta.*
Charlotte, N. C. A compliment to Princess Charlotte of Mecklenburg.
Charlottenburg (*shär-lot'ten-bōōrg*). A city in the province of Brandenburg, Prussia, named from a palace built for Charlotte, wife of Frederick I.
Charlottesville. City in Virginia, named for Charlotte Augusta, princess of Wales.
charm (*chärm*), *n.* a spell; an allurement; a trinket: *v. t.* to influence by magic; subdue. [GRACE.]
★**char-nel** (*chär'nel*), *adj.* containing flesh or dead bodies.
chart (*chärt*), *n.* a map of any part of a sea, river, etc., for the use of mariners.
char-ter (*chär'tēr*), *n.* a document bestowing certain rights and privileges.
Charterhouse. The name of the *Charterhouse,* a famous school in London, is a corruption of the word *Chartreuse,* that is, *Carthusian.* The *Charterhouse* was originally a Carthusian monastery founded in 1371, but was seized by Henry VIII.
Chartists (*chärt'ists*). A body of political reformers, chiefly workingmen, that sprang up in England about the year 1838.
★**char-treuse** (*shär-trēz'*, Fr. *shär-trōz'*), *n.* a celebrated liqueur made by the monks of La Grand Chartreuse.
char-y (*chär'i*), *adj.* cautious; sparing.
chase (*chās*), *v. t.* to pursue; capture or kill; hunt; drive away: *v. i.* to ride or hunt rapidly.
chase (*chās*), *n.* a groove; an iron frame for securing types; that part of a cannon in front of the trunnions.
chasm (*kazm*), *n.* a deep gap or opening in the earth; a void space. [BREACH.]
★**chas-sis** (*chas'is* or *shā'sē*), *n.* the frame and springs of a motor car; by extension, also, all other mechanical parts of the car, including the wheels.
chaste (*chāst*), *adj.* morally pure; modest; pure in style; refined.
chas-ten (*chā'sn*), *v. t.* to punish for the purpose of reformation; purify; refine.
Syn. CHASTEN, chastise. *Chasten* has most regard to the end, *chastise* to the means. The former is an act of deity, the latter a human action. God *chastens* his faithful people, to cleanse them from their transgressions; parents *chastise* their children, to prevent the repetition of faults.
★**chas-tise** (*chas-tīz'*, not *chas'tīz*), *v. t.* to correct by punishment; reduce to obedience. [CHASTEN.]
★**chas-tise-ment** (*chas'tiz-ment*, not *chas-tīz'ment*), *n.* punishment.
chas-ti-ty (*chas'ti-ti*), *n.* moral and sexual purity.
chas-u-ble (*chas'ū-bl*), *n.* a rich vestment worn over the alb by a celebrating priest.
chat (*chat*), *v. i.* [*p. t.* and *p. p.* chatted; *p. pr.* chatting], to talk in an easy manner. [SPEAK.]
★**cha-teau** (*shā-tō'*), *n.* [*pl.* chateaux (*-tōz'*)], a castle; a manor house or country seat.
★**Chateau de Meillant** (*shā-tō' du māyon'*). Noted chiefly on account of its architecture, is now the seat of the Duc de Mortemart at St. Amand Montrond, France.
★**chat-e-laine** (*shat'ē-lān*), *n.* a bunch of chains to which are attached trinkets, etc., worn at the waist by ladies.
Chatsworth (*chats'wĕrth*). A celebrated mansion of the duke of Devonshire in Derbyshire, England.
★**Chattahoochee** (*chat-tā-hōō'chē*) **river, Ga.** Translated "figured or painted stone," from the Indian *Chatehoche; chateo,* "stone," *hoche,* "marked" or "figured."
Chattanooga (*chat-tā-nōō'gā*). City in Hamilton county, Tennessee, and creek in Georgia. From the Cherokee Indian word, meaning "crow's nest" or "eagle's nest."
chat-tel (*chat'el*), *n.* personal property except freehold (usually in *pl.*).
chat-ter (*chat'ēr*), *v. i.* to utter sounds rapidly, as a monkey. [SPEAK.]
chat-ter-box (*chat'ēr-boks*), *n.* an incessant talker.
Chaucer's Inn, the "Tabard." This old London tavern immortalized by Chaucer as the *Tabard,* was burnt down in the great fire of 1676. Upon its restoration the name was changed to the *Talbot,* or *Dog,* which name it retained until about 1873, when it was demolished.
★**chauf-feur** (*shō-f'ēr'*), *n.* an operator of an automobile: *fem.* **chauffeuse** (*shō-fēz'*).
★**Chautauqua** (*shā-tō'kwā*, not *chā-tō'kwā*). A village and summer resort situated on Chautauqua lake, in western New York; noted as the seat, since 1874, of the Chautauqua assembly. An Indian word which has been the subject of much controversy. Webster says it is a corruption of a word which means "foggy place."
cheap (*chēp*), *adj.* purchasable for a low price; common; of small value.
cheap-en (*chēp'en*), *v. t.* to lessen the price of. [BUY.]
Cheapside (*chēp'sīd*). The central east-and-west thoroughfare of the city of London. Formerly *West Cheap* was distinguished from *East Cheap.*
cheat (*chēt*), *n.* a fraud or deception; one who cheats: *v. t.* to deceive or defraud; impose upon: *v. i.* to act as a cheat.
Syn. CHEAT, defraud, trick. One *cheats* by direct and gross falsehood or artifice; one *defrauds* by a settled plan or contrivance; one *tricks* by a sudden invention.
Ant. DEAL HONESTLY, fairly, justly.
★**Cheboygan** (*shē-boi'gan*). River, county, and city in Michigan. An Indian word, variously interpreted. Haines says it is composed of two words, *che,* "great," and *poygan,* "pipe."
check (*chek*), *n.* a restraint; a reproof; a pass, ticket, or token; a term in chess; cloth woven in squares of alternate patterns; an order or draft on a bank or banker for money. [OBSTRUCT.]
check-er (*chek'ēr*), *n.* checkerwork; one of the squares of a checkered pattern; piece with which to play checkers: *pl.* game played on a checkerboard; draughts.
check-er-board (*chek'ēr-bōrd*), *n.* board on which the game of checkers is played.
check-mate (*chek'māt*), *n.* the winning move at chess when the opponent's king cannot move out of check.
cheek (*chēk*), *n.* the side of the face beneath either eye; one of two corresponding sides.
cheep (*chēp*), *n.* a shrill noise, as that of a young chicken, or a mouse: *v. i.* to make such a noise.
cheer (*chēr*), *n.* temper or state of mind; a state of gladness or joy; a shout of applause: *v. t.* to make cheerful.
Syn. CHEER, encourage, comfort. To *cheer* regards the spirits; to *encourage* the resolution. The sad require to be *cheered;* the timid to be *encouraged.* To *cheer* and *comfort* have both regard to the spirits, but the latter differs in degree and manner. To *cheer* expresses more than to *comfort;* the former signifying to produce a lively sentiment, the latter to lessen or remove a painful one. We are *cheered* in the moments of despondency, we are *comforted* in the hour of distress. [See *encourage, comfort.*]
Ant. DISHEARTEN, dismay.
cheer-ful (*chēr'fool*), *adj.* full of good spirits.
cheer-i-ness (*chēr'i-nes*), *n.* the state of being cheery.
cheer-y (*chēr'i*), *adj.* cheerful; gay.
cheese (*chēs*), *n.* the curd or casein of milk coagulated, pressed and allowed to dry in a mold.
★**chef** (*shef*), *n.* a head or professional cook.
★**chef-d'œuvre** (*shā-dĕvr'*), *n.* [*pl.* chefs-d'œuvre (*shā-dĕvr'*)], a masterpiece.
chem-i-cal (*kem'i-kal*), *adj.* pertaining to chemistry: *n.* a chemical substance.
★**che-mise** (*shē-mēz'*), *n.* a woman's undergarment; a wall lining an earthwork.
chem-ist (*kem'ist*), *n.* one skilled in chemistry; a dealer in drugs and medicines; an analyst.
chem-is-try (*kem'is-tri*), *n.* the science which treats of the properties of elementary and compound substances and the laws which govern their molecular and atomic relations.
Chemung (*shē-mung'*) **river.** Indian word, signifying "big horn," or "horn in the water."
Chenango (*shē-nang'gō*) **river, N. Y.** From an Iroquois word, *ochenung,* "bull thistles."
che-nille (*shē-nēl'*), *n.* silk or worsted cord.
Chepstow (*chep'stō*). A town in Monmouthshire, England, situated on the Wye, thirteen miles northwest of Bristol.
★**cheque** (*chek*), *n.* an order or draft on a banker or bank, payable to the bearer; check.
cher-ish (*cher'ish*), *v. t.* to hold or esteem dear; treat with tenderness; protect and aid.
Syn. CHERISH, cheer, comfort, foster, harbor, nourish, nurse, nurture. To *cherish* is both to hold dear and to treat as dear. To *nurse* is to tend the helpless or feeble; to *nourish* is strictly to sustain and build up by food; to *nurture* combines mental and spiritual training with love and tenderness; to *foster* is to maintain and care for. [See *cheer, foster.*]
★**che-root** (*chē-rōōt'*), *n.* a kind of cigar.
cher-ry (*cher'i*), *n.* [*pl.* cherries (*'iz*)], the fruit of a tree allied to the plum.
cher-ub (*cher'ub*), *n.* [*pl.* cherubs (*'ubz*), cherubim (*'ōō-bim*)], an angel next to a seraphim.
che-ru-bic (*chē-rōō'bik*), *adj.* angelic.
★**Chesapeake** (*ches'ā-pēk*). Bay in Maryland which gives name to several places in the country. An Indian name variously explained. Heckewelder says it is corrupted from *Tschischwapeki,* which is compounded of *kitshi* "highly salted," and *peek,* "a body of standing water, a pond, a bay."
chess (*ches*), *n.* a game played by two persons with 16 pieces each on a checkered board divided into 64 squares.
chest (*chest*), *n.* a large box; the quantity such a box contains; the breast or thorax.
Chester, Caster, Cester. Places whose names terminate with any of these words were sites of castles built by the Romans in Great Britain.
chest-nut (*ches'nut*), *n.* the nut or seed of trees of the genus Castanea.
Chesuncook lake, Me. Indian, meaning "the goose place." *Chesunk,* "a goose," *auke,* "a place." *Chesunk* or *schunk* being the sound made by a wild goose when flying.
che-val-glass (*she-văl'glăs*), *n.* a large swing looking-glass.
chev-a-lier (*shev-ā-lēr'*), *n.* a knight; a horseman.
★**Cheviot** (*chev'ē-ut*), *n.* a sheep bred on the Cheviot hills; a rough cloth made from its wool.
chev-ron (*shev'ron*), *n.* a term in heraldry; the badge on the coat sleeve of a noncommissioned officer.
chew (*chōō*), *v. t.* to crush and grind with the teeth; masticate; meditate upon.
★**Cheyenne** (*shī-en'*). County in Colorado, Kansas, and Nebraska, mountain in Colorado, river in Nebraska and South Dakota, city in Laramie county, Wyoming, and several small places, named for the Indian tribe.
★**Chianti** (*kē-ăn'tē*). A group of mountains near Siena, Italy, in Tuscany. It gives name to celebrated wines.
★**chia-ro-scu-ro** (*ki-ä-rō-skōō'rō*), *n.* treatment of light and shade in painting, drawing, or engraving.
★**chic** (*shēk*), *adj.* stylish: *n.* Parisian elegance in dress; manual dexterity.

Chicago (*shi-kō'gō*). City and river in Illinois. The origin of the word is from the Indian, being a derivation by elision and French annotation from the word *Chickaugong*. Col. Samuel A. Starrow used the name in a letter to Gen. Jacob Brown, in 1816, as follows: "The river Chicago (or in English, 'Wild Onion river')." Schoolcraft in 1820 said: "Its banks produce abundantly the wild species of cepa or leek." When the word first appeared the country was inhabited by a tribe of Miamis, in whose dialect the word for skunk was *se-kaw-kwaw*.

chi-cane (*shi-kān'*), *n.* mean or unfair artifices to obscure the truth; sophistry.

chick (*chik*), *n.* the young of a bird, especially of the domestic hen; hence, a child.

★**Chickahominy** (*chik-ā-hom'i-ni*). River in Virginia, which, according to De Vere, is named from the Indian word, *Checahaminend*, "land of much grain," so called because it flows through fertile lowlands.

★**Chickamauga** (*chik-ā-mô'gā*) **river, Tenn.** From a Cherokee Indian word, meaning "river of death."

chick-en (*chik'en*), *n.* the young of a fowl, especially the domestic fowl.

chick-en pox (*poks*), a mild eruptive disease of children; varicella.

chick-weed (*chik'wēd*), *n.* a common wild plant with white blossoms.

★**Chicopee** (*chik'ō-pē*), **Mass.** An Indian word, meaning "the birch-bark place."

chic-o-ry (*chik'ō-ri*), *n.* a perennial plant with bright blue flowers and a tapering root.

chide (*chīd*), *v. t.* [*p. t.* chid, chode, *p. p.* chidden, chid, *p. pr.* chiding], to find fault with.

chief (*chēf*), *n.* a commander or leader; a head or principal person; the principal or most important part: *adj.* principal.

Syn. CHIEF, principal, main: *Chief* respects order and rank; *principal* has regard to importance and respectability; *main* to degree or quantity. We speak of a *chief* clerk; a commander-in-*chief;* the *chief* person in a city, but the *principal* people in a city; the *principal* circumstances in a narrative and the *main* object.

Ant. AUXILIARY, subaltern, subordinate, subsidiary.

chief-tain (*chēf'tin*), *n.* a captain, leader, or commander; the head of a clan or tribe. [CHIEF.]

chif-fon (*shif'fon*, Fr. *shē-fôn'*), *n.* a kind of thin gauze fabric.

chif-fo-nier (*shif-ō-nēr'*), *n.* a piece of furniture fitted with drawers and shelves.

★**chi-gnon** (*shin'yon;* Fr. *shē-nyôn'*), *n.* a roll of natural or artificial hair worn by women.

chil-blain (*chil'blān*), *n.* a sore or inflammation caused by frost or cold.

child (*chīld*), *n.* [*pl.* children (*chil'dren*)], a son or daughter; a very young person.

child-birth (*'bērth*), *n.* the act or time of bringing forth a child.

child-hood (*child'hood*), *n.* the period from infancy to puberty.

child-ish (*'ish*), *adj.* like a child; puerile.

★**Chili** (*chil'i*) or **Chile** (*chē'lā*). A Peruvian name denoting "land of snow." South American state.

chill (*chil*), *n.* a sudden coldness; the absence of heat in a substance; the hardened part of a casting: *adj.* having the sensation of cold.

★**Chillicothe** (*chil-i-koth'ē*). City in Ohio and Illinois, and town in Wapello county, Iowa, and Livingston county, Missouri, named from an Indian tribe.

★**Chillon** (*shil'on*, Fr. *shē-yôn'*). A castle in Vaud, Switzerland, at the eastern end of Lake Geneva. It covers an isolated rock on the edge of the lake, and is a very picturesque combination of semicircular and square towers and machicolated curtains grouped about a higher central tower.

chi-lo-plas-ty (*kī'lō-plas-ti*), *n.* the transplantation of healthy skin to a diseased lip.

chime (*chīm*), *n.* the musical harmony produced by striking a set of bells with hammers; a set of bells tuned to the musical scale and struck with hammers.

★**chi-me-ra** (*ki-mē'rȧ*, not *kī-mē'rȧ*), *n.* an incongruous conception of the fancy.

★**chi-mer-i-cal** (*ki-mer'i-kal*), *adj.* merely imaginary; fantastic; unreal. [ABSURD.]

chim-ney (*chim'ni*), *n.* [*pl.* chimneys (*'niz*)], a flue; vent.

★**chim-pan-zee** (*chim-pan'zē*, not *chim-pan-zē'*), *n.* a large West Indian anthropoid ape allied to the gorilla.

chin (*chin*), *n.* the part of the face below the under lip.

chi-na (*chī-nȧ*), *n.* a fine kind of porcelain: *adj.* of or from China; of, or made of, china.

China. Is a western corruption of *Tsina*, so called in honor of Tsin, the founder of the great dynasty which commenced in the third century B. C., when a knowledge of this country was first conveyed to the western nations.

chin-chil-la (*chin-chil'ȧ*), *n.* a small South American rodent with a soft, fine fur

★**chine** (*chīn*), *n.* the backbone or spine of an animal; a piece of the backbone of an animal with adjacent parts cut for cooking.

Chi-nese (*chī-nēz'*), *adj.* of or pertaining to China.

chink (*chingk*), *n.* a small fissure opening lengthwise; a narrow aperture: *v. i.* to crack; to form into or close up cracks.

chink (*chingk*), *n.* a sharp metallic or jingling sound; money.

chintz (*chints*), *n.* cotton cloth, usually glazed, printed in various colors.

chip (*chip*), *v. t.* [*p. t.* and *p. p.* chipped, *p. pr.* chipping], to cut into small pieces; bet at cards: *v. i.* to break or fly off into small pieces.

chip-munk (*chip'mungk*), *n.* a small squirrel of North America, having dark and light stripes on its back.

chip-per (*chip'ēr*), *adj.* active; pert.

★**Chippewa** (*chip'ē-wȧ, chip'ē-wā*). River in Michigan and county in Michigan, Minnesota, and Wisconsin, named from an Indian tribe.

★**chi-rog-ra-phy** (*ki-rog'rȧ-fi*, not *chir-og'rȧ-fi*), *n.* the art of writing or engrossing.

★**chi-rop-o-dist** (*ki-rop'ō-dist*), *n.* one who removes corns, bunions, etc.

chirp (*chērp*), *n.* a short shrill cheerful note: *v. i.* to utter such a note.

chis-el (*chiz'el*), *n.* an edged instrument of iron or steel for cutting wood, stone, etc.: *v. t.* [*p. t.* and *p. p.* chiseled, *p. pr.* chiseling], to cut with a chisel.

chit (*chit*), *n.* a child; a pert, forward girl.

chiv-al-rous (*shiv'al-rus*), *adj.* relating to chivalry; gallant.

chiv-al-ry (*shiv'al-ri*), *n.* the mediæval system of knighthood; knights collectively; the qualifications of a knight, as bravery, etc.

Chloe (*klō'ē*). A female name derived from the Greek, signifying a "green bud" or "germ," hence, a "young shoot," "blooming," etc. Fr., *Chloe;* Gr., *Chloe;* Lat., *Chloe.*

chlo-ral (*klō'ral*), *n.* a strong narcotic.

chlo-rate (*klō'rāt*), *n.* a salt of chloric acid.

chlo-ric (*klō'rik*), *adj.* pertaining to, or containing, chlorine.

chlo-ric ac-id (*as'id*), an acid containing hydrogen, oxygen, and chlorine.

chlo-ride (*klō'rid* or *'rīd*), *n.* a compound of chlorine with another element.

chlo-ride of lime (*ov līm*), a compound of chloride with lime, used in bleaching.

chlo-rine (*klō'rin* or *'rēn*), *n.* a greenish-yellow gas possessing great bleaching powers.

chlo-ro-form (*klō'rō-fôrm*), *n.* a volatile liquid used for producing insensibility to pain: *v. t.* to administer chloroform to.

choc-o-late (*chok'ō-lāt*), *n.* a paste made from the roasted kernels of the cacao-nut, used in making the beverage so called: *adj.* having the color of, or made of, chocolate.

choice (*chois*), *n.* the act of choosing; the thing chosen: *adj.* carefully chosen. [ALTERNATIVE.]

choir (*kwīr*), *n.* a band of singers in a church; the place where they sing.

choke (*chōk*), *v. t.* to suffocate by obstructing the windpipe; block up. [OBSTRUCT.]

choke-damp (*'damp*), *n.* carbonic acid generated in mines.

chol-er (*kol'ēr*), *n.* bile; irascibility.

chol-er-a (*kol'ēr-ȧ*), *n.* a disease with violent vomiting and purging.

choose (*chōōz*), *v. t.* [*p. t.* chose, *p. p.* chosen, *p. pr.* choosing], to take by preference; select: *v. i.* to make a choice.

Syn. CHOOSE, prefer. To *choose* is to take one thing from among others; to *prefer* is to take one thing before or rather than another.

Ant. DECLINE, reject.

Syn. CHOOSE, pick, select. We may *choose* whatever comes in our way without regard to the number of the objects to be chosen from, but we *pick* or *select* out of a number only, as to *pick* or *select* books from a library. We may *pick* one or many out of a number, but we mostly *select* a number. We *select* with even greater care than we *pick*.

Ant. CAST AWAY, leave, refuse.

chop (*chop*), *v. t.* [*p. t.* and *p. p.* chopped, *p. pr.* chopping], to cut with repeated blows; hew; mince: *v. i.* to do anything with a quick motion: *n.* the act of chopping; a piece chopped off.

chop-sticks (*chop'stiks*), *n. pl.* two small sticks used in China for eating.

chop-su-ey (*chop-sōō'i*), *n.* a dish consisting of stewed or fried chicken (or pork), rice, noodles, various vegetables, and sesame seeds, served in its own juice.

cho-ral (*kō'ral*), *adj.* of or pertaining to a choir: *n.* a simple sacred melody or hymn sung in unison. [Written also *chorale.*]

chord (*kôrd*), *n.* the string of a musical instrument; notes in harmony: *v. t.* to string, as a musical instrument.

chores (*chōrz*), *n. pl.* the daily light work of a farmyard or household.

★**chor-is-ter** (*kor'is-tēr*, not *kō'ris-tēr*), *n.* a member of a choir.

cho-rus (*kō'rus*), *n.* a number singing in concert; a band of singers and dancers in a Greek tragedy.

chow-chow (*chou'chou*), *adj.* a kind of mixed pickles.

chow-der (*chou'dēr*), *n.* a dish of fresh fish; clams stewed together with pork and biscuit, etc.

Christabel (*kris'tȧ-bel*). Not an uncommon female name. It would seem to be derived from *Cristobal*, the Spanish form of *Christopher*.

chris-ten (*kris'n*), *v. t.* to baptize in the name of the Holy Trinity; give a Christian name to.

Chris-ten-dom (*kris'n-dum*), *n.* countries whose inhabitants profess the Christian faith; Christians collectively.

Chris-tian (*kris'chȧn*), *n.* a professor of the religion of Christ: *adj.* professing the religion of Christ.

Christiania (*kris-tē-ȧ'nē-ȧ*). Named after Christian IV. of Sweden. The capital of Norway.

Chris-tian-i-ty (*kris-chan'i-ti* or *kris-chi-an'i-ti*), *n.* the precepts and doctrines taught by Christ.

Chris-tian-ize (*kris'chan-īz*), *v. t.* to convert to Christianity.

Christina (*kris-tē'nȧ*). A female name; probably derived from the Spanish name *Cristina*, from root of *Christian*. Dutch, *Christina;* Fr., *Christine;* Ger., *Christiana;* It., *Cristina.*

Christ-mas (*kris'mas*), *n.* the festival (Dec. 25) celebrating the birth of Christ.

Christmas island. In Pacific Ocean. So named because Captain Cook set foot upon it on Christmas day, 1777.

Christopher (*kris'tō-fēr*). From the Greek name *Christophoros*, signifying Christ's bearer or carrier. Danish, *Christoffer;* Dutch, *Christophorus;* Fr., *Christophe;* Ger., *Christoph;* Gr., *Christophoros;* It., *Christoforo;* Lat., *Christophorus;* Port., *Christovao;* Sp., *Christoval;* Sw., *Kristofer.*

chro-mate (*krō'māt*), *n.* a salt of chromic acid.

chro-mat-ic (*krō-mat'ik*), *adj.* relating to colors; including notes not belonging to the diatonic scale: *n.* a note affected by an accidental: *pl.* that branch of optics which treats of colors.

chro-ma-type (*krō'mȧ-tīp*), *n.* a process for obtaining a colored photographic picture.

chrome (*krōm*), *n.* chromium: *v. t.* to dye in a bath of bichromate of potash.

chro-mi-um (*krō'mi-um*), *n.* a steel-gray metal, one of the elements.

chro-mo (*krō'mō*), *n.* [*pl.* chromos (*'mōz*)], a chromo-lithograph or picture produced by chromo-lithography.

chro-mo-li-thog-ra-phy (*krō-mō-li-thog'rȧ-fi*), *n.* the art of printing in colors from stone.

chro-mo-sphere (*krō'mō-sfēr*), *n.* the rose-colored outer envelope of the sun.

chron-ic (*kron'ik*), *adj.* continuing a long time, or recurring: said of a disease.

chron-o-log-ic-al (*kron-ō-loj'i-kal*), *adj.* relating to past events in the order of time.

chro-nol-o-gy (*krō-nol'ō-ji*), *n.* [*pl.* chronologies (*-jiz*)], the science that treats of events and arranges their dates in proper sequence.

chro-nom-e-ter (*krō-nom'ē-tēr*), *n.* an instrument for measuring time with extreme accuracy.

chrys-a-lis (*kris'ȧ-lis*), *n.* the final stage through which a lepidopterous insect, or a butterfly, passes prior to its winged state.

chrys-an-the-mum (*kris-an'thē-mum*), *n.* a composite plant with large heads of showy flowers; a flower of this plant.

chub (*chub*), *n.* a fresh-water fish.

chub-bi-ness (*chub'i-nes*), *n.* plumpness.

chub-by (*chub'i*), *adj.* plump; fat and round.

chuck (*chuk*), *v. t.* to make a noise like a hen calling to her chickens: *n.* a hen's call.

chuck (*chuk*), *v. t.* to pat in a playful manner; throw smartly to a short distance: *n.* a light blow under the chin.

chuc-kle (*chuk'l*), *n.* a quiet, suppressed laugh: *v. i.* to laugh in such a manner.

chum (*chum*), *n.* one who lodges in the same apartment; an intimate friend: *v. i.* [*p. t.* and *p. p.* chummed; *p. pr.* chumming], to occupy the same room

chunk (*chungk*), *n.* a short, thick piece; a thick-set strong person or animal.

chunk-y (*chungk'i*), *adj.* short and thick.

church (*chērch*), *n.* a building set apart or consecrated for divine worship.

Church (*chērch*), *n.* the collective body of Christians; a particular body of Christians; the clergy.

Church-man (*'man*), *n.* an adherent of the established church; an Episcopalian.

church-war-den (*'wawr-dn*), *n.* in the Anglican church, one of two officers to attend to the secular affairs of the church; a long clay pipe.

churl (*chērl*), *n.* formerly one of the lowest orders of freemen; a peasant; a surly ill-bred person.

churl-ish (*'ish*), *adj.* ill-bred; niggardly.

churn (*chērn*), *n.* a vessel in which milk or cream is agitated to form butter: *v. t.* to make (butter) by agitating milk or cream.

chute (*shōōt*), *n.* an inclined trough for sending articles down; an aquatic switchback.

★**chyle** (*kīl*), *n.* a milk-like fluid separated from digested matter in the stomach, absorbed by the lacteal vessels, and assimilated into the blood.

★**chyme** (*kīm*), *n.* the pulpy mass of digested food prior to the separation of the chyle.

ci-ca-dȧ (*si-kā'dȧ*), *n.* [*pl.* cicadæ (*'dē*)], a genus of insects having the power of producing a shrill sound.

ci-ca-trix (*si-kā'triks*), *n.* [*pl.* cicatrices (*sik-ȧ-trī'sēz*)], the scar remaining after a wound has healed.

cic-a-trize (*sik'ȧ-trīz*), *v. t.* to heal (a wound) by inducing the skin to form a cicatrix.

ci-der (*sī'dēr*), *n.* the juice of apples expressed and fermented.

ci-gar (*si-gär'*), *n.* a small roll of tobacco leaf used for smoking.

cig-a-rette (*sig-ȧ-ret'*), *n.* a small cigar made of tobacco rolled in thin paper.

cil-i-a (*sil'i-ȧ*), *n. pl.* the hair of the eyelids; long minute hair-like appendages on the margins of vegetable bodies; the very minute vibratile filaments lining or covering certain organs.

Cimarron (*sē-mär-ron'*) **river, Okla.** Name of Spanish derivation, meaning "wild," "unruly."

cinch (*sinch*), *n.* a saddle girth firmly fastened in place by loop and knots; a sure grip or hold.

Cincinnati (*sin-sin-na'ti*). City in Ohio, laid out and named by Colonel Israel Ludlow, in honor of an organization of officers formed after the Revolutionary war and named in honor of Cincinnatus, the Roman patriot.

cinc-ture (*singk'tūr*), *n.* a belt or girdle worn round the waist; a raised or carved ring at the bottom and top of a pillar.

cin-der (*sin'dĕr*), *n.* any piece of body thoroughly burnt but not reduced to ashes; *pl.* volcanic scoriæ.

cin-e-mat-o-graph (*sin-ē-mat'ō-gräf*), *n.* a French device similar to the biograph.

cin-na-bar (*sin'ä-bär*), *n.* red sulphide of mercury.

cin-na-mon (*sin'ä-mun*), *n.* the inner aromatic bark of an East Indian tree: *adj.* light reddish brown.

Cintra (*sēn'trä*). A town in the district of Lisbon, Portugal, fifteen miles northwest of Lisbon. It contains the Cork convent, a Moorish castle, the palace of the Pena and the royal palace.

ci-pher (*sī'fĕr*), *n.* the symbol 0; hence, a person or anything without value or power; a secret manner of writing, or the key to it: *v. i.* to practice arithmetic: *v. t.* to express in cipher.

Circassia (*sĕr-kash'i-ä*). Named from the country of the *Tcherkes*, a Tartar tribe which settled in the neighborhood of the river Terck.

cir-cle (*sĕr'kl*), *n.* a round body; a plane figure bounded by a single curved line called its circumference, every part of which is equally distant from a point within it, called the center; a sphere or position in society; a number of persons united by a common bond: *v. t.* to encompass: *v. i.* to move in a circle; revolve. [CLASS.]

Circleville, Ohio. So named from its original location within one of the Indian mounds bearing the shape of a circle.

★**cir-cuit** (*sĕr'kit*, not *sĕr'kut*) *n.* the act of going around anything; the space inclosed in a circle; the arrangement by which an electrical current is kept up between the two poles of a battery or machine.

Syn. CIRCUIT, tour, round. A *circuit* is made for a specific end of a serious kind; a *tour* is always made for pleasure; a *round*, like a circuit, is employed in matters of business, but of an ordinary kind. [See *excursion*.]

cir-cu-i-tous (*sĕr-kū'i-tus*), *adj.* roundabout.

cir-cu-lar (*sĕr'kū-lĕr*), *adj.* round like a circle; ending in itself; intended for circulation: *n.* a printed or written letter or notice.

cir-cu-lar-ize (*sĕr'kū-lĕr-iz*), *v. t.* to make circular; send circulars to.

cir-cu-late (*sĕr'kū-lāt*), *v. t.* to cause to pass from point to point or from one person to another: *v. i.* move round and return to the same point; pass from hand to hand; be diffused or distributed; travel. [ANNOUNCE.]

cir-cu-la-tion (*sĕr-kū-lā'shun*), *n.* the act of moving round; passing or transmitting from place to place; the extent to which a thing is circulated; currency of money.

cir-cum (*sĕr'kum*), a prefix equal to *around*, forming compounds the meaning of many of which is obvious, as *circum*polar, *around* the pole, etc.

cir-cum-cise (*sĕr'kum-siz*), *v. t.* to cut off the foreskin or prepuce; purify the heart.

cir-cum-ci-sion (*sĕr'kum-sizh-un*), *n.* the act of circumcising; spiritual purification.

cir-cum-fer-ence (*sĕr-kum'fĕr-ens*), *n.* the line that bounds a circle; a periphery.

cir-cum-flex (*sĕr'kum-fleks*), *n.* a mark (^ ~ ˇ) over a vowel or syllable to denote accent or contraction: *adj.* marked with such an accent; curved or winding: *v. t.* to pronounce or mark with the circumflex.

cir-cum-lo-cu-tion (*sĕr-kum-lō-kū'shun*), *n.* a roundabout way of speaking; an indirect mode of statement.

cir-cum-nav-i-gate (*sĕr-kum-nav'i-gāt*), *v. t.* to sail round; usually round the globe.

cir-cum-nav-i-ga-tor (*sĕr-kum-nav'i-gā-tĕr*), *n.* one who circumnavigates.

cir-cum-scribe (*sĕr-kum-skrīb'*), *v. t.* to inclose within certain lines or boundaries; restrict.

Syn. CIRCUMSCRIBE, inclose. The extent of any place is drawn out to the eye by a *circumscription;* its extent is limited to a given point by an *inclosure*. A garden is *circumscribed* by any ditch, line, or posts that serve as its boundaries; it is *inclosed* by wall or fence. [See *bounds*.]

cir-cum-spect (*sĕr'kum-spekt*), *adj.* cautious; prudent; watchful on all sides. [CAUTIOUS.]

cir-cum-spec-tion (*sĕr-kum-spek'shun*), *n.* caution; watchfulness on every side; prudence.

cir-cum-stance (*sĕr'kum-stans*), *n.* something relative or appendant to a fact; an incident; *pl.* state of affairs: *v. t.* to place in a particular situation (only in *p. p.*)

Syn. CIRCUMSTANCE, incident, fact. *Incident* is what happens; *fact* is what is done; *circumstance* is not only what happens and is done but whatever is or belongs to a thing. To everything are annexed *circumstances*, either of *time*, place, age, color, or other collateral appendages which change its nature. Everything that moves and operates is exposed to *incidents;* effects are produced, results follow, and changes are brought about; these are *incidents*. [See *event*.]

cir-cum-stan-tial (*sĕr-kum-stan'shal*), *n.* something incidental and subordinate to the main subject: *pl.* incidentals: *adj.* accidental; detailed; proving indirectly.

Syn. CIRCUMSTANTIAL, particular, minute. *Circumstantial* expresses less than *particular*, and that less than *minute*. A *circumstantial* account contains all leading events; a *particular* account includes every event and movement, however trivial; a *minute* account omits nothing as to person, time, place, figure, form, and every other trivial *circumstance* connected with the events.

cir-cum-vent (*sĕr-kum-vent'*), *n.* to gain an advantage over by stratagem or deception.

cir-cum-ven-tion (*-ven'shun*), *n.* the act of circumventing; a stratagem.

cir-cus (*sĕr'kus*), *n.* [*pl.* circuses (*-ez*)], a large level oblong space for feats of horsemanship, etc., with seats for the spectators arranged in tiers; a semicircular space.

Circus Maximus (*sĕr'kus maks'i-mus*). In ancient Rome the great circus occupying the hollow between the Palatine and the Aventine hills. Under Cæsar and Augustus it was first largely built of stone, and splendidly adorned. In its final form it is said to have accommodated 385,000 spectators.

Circus of Romulus or **Maxentius.** A Roman circus built in 311 A. D., the most perfect ancient circus surviving.

cis-al-pine (*sis-al'pin*), *adj.* this side of the Alps with regard to Rome; south of the Alps.

cis-at-lan-tic (*sis-at-lan'tik*), *adj.* on this side of the Atlantic Ocean.

cis-tern (*sis'tĕrn*), *n.* a natural or artificial receptacle for storing water; a reservoir.

cit-a-del (*sit'ä-del*), *n.* a fortress.

ci-ta-tion (*sī-tā'shun*), *n.* an official summons to appear before a court, especially an ecclesiastical court; a quotation.

cite (*sit*), *v. t.* to summon officially to appear in court; quote.

Syn. CITE, quote. To *cite* is employed for persons or things; to *quote* for things only. Authors are *cited*, passages from their works are *quoted*. We *cite* only by authority; we *quote* for general purposes of convenience. [See *allege*.]

Ant. MISQUOTE.

cith-a-ra (*sith'ä-rä*), *n.* an ancient lyre.

cit-i-zen (*sit'i-zen*), *n.* a native or inhabitant of a town or city; a freeman; a member of a state or nation who enjoys political rights and privileges.

cit-rate (*sit'rāt*), *n.* a salt of citric acid.

cit-ric ac-id (*sit'rik as'id*), *n.* an acid found in the lemon and orange.

cit-ron (*sit'run*), *n.* a tree with a fruit like the lemon.

cit-y (*sit'i*), *n.* [*pl.* cities (*'iz*)], a large and important town; a corporate town.

civ-ic (*siv'ik*), *adj.* pertaining to a city.

★**civ-il** (*siv'il*, not *siv'l*) *adj.* relating to the affairs of a city or government; non-international; not military or criminal; complaisant; well-bred.

Syn. CIVIL, obliging, complaisant. *Civil* applies to words or manner as well as to the action; *obliging* to the action only. As *civil* is indefinite in its meaning, so it is indiscriminate in its application; *obliging*, on the other hand, is confined to what passes between particular persons or under particular circumstances. *Civil* and *obliging* both imply a desire to do a kindness; *complaisant* signifies the desire of receiving pleasure, which is a refined mode of doing a kindness.

Ant. BOORISH, rude, unmannerly.

ci-vil-ian (*si-vil'yan*), *n.* one engaged in the pursuits of civil life: *adj.* occupied in civil pursuits.

ci-vil-i-ty (*si-vil'i-ti*), *n.* [*pl.* civilities (*-tiz*)], good breeding; courtesy.

civ-i-li-za-tion (*siv-i-li-zā'shun*), *n.* the state of being civilized; culture; refinement. [CULTIVATION.]

civ-i-lize (*siv'i-līz*), *v. t.* to reclaim from a savage state; instruct in the arts and refinements of civilized life.

clack (*klak*), *v. i.* to make a sudden, sharp sound: *n.* a sudden, sharp sound; continual prattle.

claim (*klām*), *v. t.* to demand as a right, or by authority: *v. i.* to be entitled to anything; *n.* a demand; the thing claimed. [RIGHT, ALLEGE.]

clai-mant (*klā'mant*), *n.* one who demands anything as his right.

clair-voy-ance (*klär-voi'ans*), *n.* the power attributed to persons in a mesmeric state of seeing objects not usually perceptible.

clair-voy-ant (*'ant*), *adj.* pertaining to, or characterized by, clairvoyance: *n.* one who professes to have the power of clairvoyance.

clam (*klam*), *v. t.* [*p. t.* and *p. p.* clammed, *p. pr.* clamming], to clog with any glutinous matter: *v. i.* to be moist and cold.

clam (*klam*), *n.* an edible bivalve mollusk.

clam-bake (*'bāk*), *n.* a picnic at which baked clams form the chief dish.

clam-my (*klam'i*), *adj.* soft and sticky.

clam-or (*klam'ĕr*), *n.* a loud and continued noise; popular outcry: *v. t.* shout. [CALL.]

clam-or-ous (*klam'ĕr-us*), *adj.* vociferous.

clamp (*klamp*), *n.* anything that fastens or binds: *v. t.* to fasten or bind with clamps.

clan (*klan*), *n.* a tribe or association of families united under one chieftain, having one common ancestor, and the same surname. [CLASS.]

★**clan-des-tine** (*klan-des'tin*), *adj.* secret; private.

Syn. CLANDESTINE, secret. To do a thing *clandestinely* is to elude observation; to do a thing *secretly* is to do it without the knowledge of any one. What is *clandestine* is unallowed, which is not necessarily the case with what is *secret*.

Ant. OPEN, conspicuous, advertised.

clang (*klang*), *n.* a loud, sharp, ringing metallic sound: *v. t.* to cause to resound with a clang: *v. i.* give out a clang.

clan-gor (*klang'gĕr*), *n.* a sharp clang.

clank (*klangk*), *n.* a sharp, hard, metallic sound: *v. t.* and *v. i.* to rattle and sound, as chains.

clap (*klap*), *v. t.* and *v. i.* [*p. t.* and *p. p.* clapped, *p. pr.* clapping], to indicate approval by striking the hands together: *n.* a loud noise made by a sudden collision; applause expressed by clapping.

★**clap-board** (*klab'ŏrd*, not *klap'bōrd*), *n.* a thin, narrow board, used for the covering of the sides of frame houses.

clap-per (*klap'ĕr*), *n.* one who, or that which, claps; the tongue of a bell; the clack of a mill-hopper.

Clara (*klar'ä*). A modern form of *Clare*. Danish, *Clara;* Dutch, *Clara;* Fr., *Clara;* Ger., *Klara;* It., *Clara;* Lat., *Clara;* Sw., *Klara*.

Clare. A name probably derived from *St. Clare*, a popular saint in England, a friend of St. Francis, and foundress of all the *Poor Clares*. It is probably derived from Latin *clarus*, "bright," "fair."

clar-et (*klar'et*), *n.* a light bodied wine of a dark red color; blood: *adj.* claret-colored.

clar-i-fy (*klar'i-fi*), *v. t.* [*p. t.* and *p. p.* clarified, *p. pr.* clarifying], to make clear from impurities: *v. i.* to become clear.

★**clar-i-net** (*klar'i-net*), *n.* a keyed reed instrument of the oboe class. [Also *clarionet*.]

clar-i-on (*klar'i-un*), *n.* a kind of trumpet.

Clarissa (*klä-ris'sä*). From the French name *Clarisse* (It., *Clarice*), from root of *Clare*.

Clarksville, Tenn. So named as an honor to Gen. George Rogers Clark, a distinguished Revolutionary soldier.

clash (*klash*), *v. i.* to make a loud harsh noise by mutual collision: *v. t.* to strike violently together: *n.* the noise so produced.

clasp (*klăsp*), *v. t.* to shut or fasten together with, or as with, a clasp: *n.* a hook to hold anything close; a close embrace.

Syn. CLASP, hug, embrace. To *clasp* makes the act of inclosing another in one's arms when it is performed with the warmth of true affection; *hug* is a ludicrous sort of *clasping*, which is the consequence of ignorance or extravagant feeling; *embrace* is simply a mode of ordinary salutation.

class (*klăs*), *n.* a number of things or persons of the same status: *v. t.* to classify.

Syn. CLASS, association, caste, circle, clan, clique, club, company, coterie, grade, order, rank, set. A *class* is a number of persons or objects having common pursuits, purposes, attributes, or characteristics; membership in a *caste* is supposed to be for life; in a *class* may be very transient. *Rank* obtains among the nobility or military officers, or various *orders* of the priesthood. *Grade* implies some regular scale of valuation, as *grades* of wool, a man of inferior *grade*. A *coterie* is a small company of persons of similar tastes; *clique* is always factional; the *association* breaks up into *cliques*. A *set* is more extensive than a *clique; circle* is similar in meaning to *set*, but of wider application.

class-ic (*klăs'ik*), *adj.* of or relating to the highest class or rank in literature or art; pertaining to, or having the characteristics of, the Greek or Roman authors. [Also *classical*.] *n.* an author of the first rank whose works serve as a standard; one versed in Greek and Latin literature: *pl.* ancient Greek and Latin literature.

clas-si-fi-ca-tion (*klăs-i-fi-kā'shun*), *n.* the act of forming or dividing into classes.

clas-si-fy (*klăs'i-fi*), *v. t.* [*p. t.* and *p. p.* classified; *p. pr.* classifying], to arrange in classes; systematize.

clat-ter (*klat'ĕr*), *v. t.* to strike so as to make a clatter: *v. i.* to make a clatter: *n.* a continuous or confused noise.

Claude (*klōd*). From the Roman name *Claudius*, another form of *Clodius*, Latinized from *Clodio;* from Old German, *laut*, "celebrated," "distinguished," "illustrious."

Claudia (*klô'di-ä*). Feminine of *Claudius*. Dutch, *Claudia;* Fr., *Claudie;* It., *Claudia;* Lat., *Claudia;* Sw., *Klaudia*.

clause (*klawz*), *n.* a part of a written composition, or a sentence; a special proviso in a document.

clav-i-cle (*klav'i-kl*), *n.* the collar bone.

claw (*klaw*), *n.* a sharp hooked nail in the foot of an animal, as the cat; the whole foot of a bird; *v. t.* to tear or scratch with, or as if with, claws.

clay (*klā*), *n.* anything easily molded; soft plastic earth: *adj.* made of or like clay. [BODY.]

clean (*klēn*), *adj.* free from dirt or extraneous matter; morally or ceremonially pure: *adv.* in a clean manner; entirely: *v. t.* to render clean.

Syn. CLEAN, cleanly, pure. *Clean* expresses a freedom from dirt or soil; *cleanly* the disposition or habit of being clean. A person who keeps himself *clean* is *cleanly*. *Pure* is used in a moral sense; the heart should be *pure*.

★**clean-ly** (*klen'li*), *adj.* neat; pure: *adv.* (*klēn'li*) wholly clean. [CLEAN.]

clean-ness (*klēn'nes*), *n.* moral or physical purity; neatness.

cleanse (*klenz*), *v. t.* to make clean; purify from moral impurity or guilt.

clear (*klēr*), *adj.* bright; pure; manifest to the understanding: *v. t.* to make bright; render evident; free from obstructions

Syn. CLEAR, lucid, bright, vivid. A mere freedom from stain or dullness constitutes *clearness;* the return of light, and consequent removal of darkness, constitutes *lucidity; brightness* supposes a certain strength of light; *vividness* a freshness combined with the strength, and even a degree of brilliancy. [See *apparent, fair, absolve.*]

clear-ance (*klēr'ans*), *n.* the act of clearing.

clear-cut (*'kut*), *adj.* having a sharp, clearly defined outline, as if chiseled.

clear-ing (*klēr'ing*), *n.* the act of making clear; land cleared of timber.

clear-ly (*klēr'li*), *adv.* in a clear manner.

Syn. CLEARLY, distinctly. That is seen *clearly* of which one has a *clear* view independent of anything else; that is seen *distinctly* which is seen so as to distinguish it from other objects. We see the moon *clearly* whenever it shines, but we cannot see the spots in the moon *distinctly* without the help of glasses.

Ant. CONFUSEDLY, dimly, obscurely.

clear-ness (*klēr'nes*), *n.* the quality of being clear.

Syn. CLEARNESS, perspicuity. *Clearness* respects our ideas, and springs from the distinction of the things themselves that are discussed; *perspicuity* respects the mode of expressing the ideas, and springs from the good qualities of style.

Ant. DULLNESS, obtuseness, obscurity.

cleat (*klēt*), *n.* a thin piece of iron worn on boots; a strip of wood nailed across a board: *v. t.* to secure or strengthen with a cleat.

cleav-a-ble (*klēv'ȧ-bl*), *adj.* divisible.

cleav-age (*klēv'āj*), *n.* the act of splitting.

cleave (*klēv*), *v. i.* [*p. t.* clave, cleaved, *p. p.* cleaved, *p. pr.* cleaving], to adhere to; be attached to.

cleave (*klēv*), *v. t.* [*p. t.* cleft, clove, *p. p.* cleft, cloven, cleaved, *p. pr.* cleaving], to divide with violence.

clef (*klef*), *n.* a figure at the beginning of each staff in music to indicate the pitch of all the notes on one particular line or space.

cleft (*kleft*), *n.* a crack; crevice.

★**clem-a-tis** (*klem'ȧ-tis*, not *klē-mā'tis*), *n.* a perennial plant of the crowfoot family.

clem-en-cy (*klem'en-si*), *n.* [*pl.* clemencies (*-siz*)], compassion; remission. [MERCY.]

clem-ent (*klem'ent*), *adj.* compassionate; forgiving; gentle; forbearing.

Clement. Like the classical name Clemens, derived from the Latin *clemens*, "mild," "calm," "gentle." Danish, *Clemens;* Fr., *Clement;* Ger., *Clemens;* It., *Clemente;* Lat., *Clemens;* Sp., *Clemente.*

Clementia (*klē-men'shi-ȧ*). A female name formed from *Clement.*

Cleopatra (*klē-ō-pā'trȧ*). Found as a female name in the parish registers of Nottingham, England. So called from Cleopatra, queen of Egypt. It is derived from *kleos*, "glory," "renown," "fame," and *patria*, "one's native country," "a family"; hence, "fame of her father."

Cleopatra's Needles. A pair of Egyptian obelisks of pink granite which were transported from Heliopolis to Alexandria in the eighteenth year of Augustus. One of them was taken to London and set up on the Thames embankment, in 1878, and the other was soon after brought to New York and erected in Central park.

cler-gy (*klēr'ji*), *n.* a body of men set apart by ordination for the service of the church.

cler-gy-man (*-man*), *n.* [*pl.* clergymen (*-men*)], a minister.

cler-ic-al (*kler'i-kal*), *adj.* pertaining to the clergy; pertaining to a clerk, writer, or copyist.

clerk (*klērk*), *n.* a parish clerk; one engaged in an office to transact business generally; an assistant salesman in a store or shop: *v. i.* to act as clerk.

Cleveland, Ohio. City named in honor of General Moses Cleveland of Connecticut, who had charge of the surveying of this region.

clev-er (*klev'ēr*), *adj.* possessing skill or ability; dexterous; expert; good natured.

Syn. CLEVER, skillful, expert, dexterous, adroit. *Cleverness* is mental power employed in the ordinary concerns of life. *Skill* is both a mental and corporeal power, exerted in mechanical operations and practical sciences. A physician, a lawyer, or an artist is *skillful;* one may have a *skill* in divination, or a *skill* in painting. *Expertness* and *dexterity* require more corporeal than mental power exerted in minor arts and amusement; one is *expert* at throwing the quoit; *dexterous* in the management of horses.

clew (*klōō*), *n.* a ball of thread; a corner of a sail: *v. t.* to truss up (sails) to the yard of a ship.

click (*klik*), *v. i.* to make short sharp successive noises; *v. t.* to move with a clicking sound: *n.* a slight sharp sound.

cli-ent (*klī'ent*), *n.* one who employs a lawyer; one dependent upon another's patronage.

cli-ent-age (*klī'ent-āj*), *n.* the condition of being a client; clients collectively.

cliff (*klif*), *n.* a high steep rock or bank.

cli-mac-ter-ic (*klī-mak'tēr-ik*), *n.* a critical period in human life when some great change is supposed to take place in the constitution.

cli-mate (*klī'māt*), *n.* the temperature and meteorological conditions of a country, etc.

cli-mat-ic (*klī-mat'ik*), *adj.* relating to, or connected with, climate.

cli-ma-tize (*klī'mȧ-tīz*), *v. t.* to accustom to a new climate.

cli-max (*klī'maks*), *n.* the summit; acme.

climb (*klīm*), *v. i.* to mount or ascend, as by the hands and feet: *v. t.* to ascend laboriously: *n.* an ascent by climbing.

clime (*klīm*), *n.* a country, region, or tract.

clinch (*klinch*), *v. t.* to rivet; double up tightly, as the fingers; to hold fast: *n.* anything that holds both ways.

cling (*kling*), *v. i.* [*p. t.* and *p. p.* clung, *p. pr.* clinging], to adhere closely; hold fast by embracing.

clin-ic (*klin'ik*), *n.* a medical lecture at the bedside or in the presence of patients.

clink (*klingk*), *v. t.* to strike so as to make a slight sharp sound: *v. i.* to make a clinking noise: *n.* a slight sharp vibrating noise.

clink-er (*'ēr*), *n.* a mass of partly vitrified brick; slag.

clip (*klip*), *v. t.* [*p. t.* and *p. p.* clipped, clipt, *p. pr.* clipping], to cut with shears or scissors: *n.* the wool of a season's shearing; a spring for holding papers.

clip-per (*'ēr*), *n.* one who, or that which, clips; a sailing vessel with very sharp lines and great spread of canvas; a first-rate person or thing.

★**clique** (*klēk*, not *klik*), *n.* a group of persons united for some common purpose (usually sinister); a coterie. [CLASS.]

Cloaca Maxima (*klō-ā'kȧ maks'i-mȧ*). The chief drain of Rome, built by Tarquinius Priscus about 600 B. C. and still serving its purpose.

cloak (*klōk*), *n.* a sleeveless, loose outer garment worn by both sexes; hence, a pretext; disguise: *v. t.* to cover with, or as with, a cloak; conceal. [PRETENSE.]

clock (*klok*), *n.* a machine for measuring and indicating the divisions of time by means of hands moving over a dial plate.

clock-wise (*'wīz*), *adv.* in the direction of the rotation of the hands of a clock.

clod (*klod*), *n.* a lump of earth, turf, or clay; a bait used in eel fishing; the shoulder part of the neck-piece in beef.

clog (*klog*), *v. t.* [*p. t.* and *p. p.* clogged; *p. pr.* clogging], to load with anything that may impede motion; embarrass: *n.* a load or weight; a hindrance; a kind of wooden shoe. [OBSTRUCT.]

clois-ter (*klois'tēr*), *n.* a place of religious retirement; a monastery or nunnery: *v. t.* to confine in, or as in, a cloister or convent.

Syn. CLOISTER, convent, monastery. The proper idea of *cloister* is that of seclusion; the proper idea of *convent* is that of community; the proper idea of a *monastery* is that of solitude. One is shut up in a *cloister*, put into a *convent*, and retires to a *monastery*.

clois-tral (*klois'tral*), *adj.* pertaining to, or confined in, a cloister; secluded.

close (*klōz*), *v. t.* to shut; surround closely: *v. i.* to come together; engage in hand-to-hand conflict; grapple: *n.* end; an inclosed space: *adj.* (*klōs*) without ventilation; oppressive; minute; concise; reticent; niggardly: *adv.* near.

Syn. CLOSE, shut. To *close* signifies simply to put close together; *shut*, to stop or prevent admittance; *closing* is therefore a partial *shutting*, and *shutting* a complete *closing*. [See *end, sequel.*]

Ant. OPEN.

Syn. CLOSE, near, nigh. *Close* is more definite than *near*. Houses stand *close* to each other which are almost joined; men stand *close* when they touch each other; objects are *near* which are within sight; persons are *near* each other when they can converse together. *Near* and *nigh* are but variations of each other in etymology. [ADJACENT.]

Ant. DISTANT, far, separate.

clos-et (*kloz'et*), *n.* a small room for privacy or retirement: *adj.* private; secluded: *v. t.* to receive in a private room for confidential consultation.

clo-sure (*klō'zhūr*), *n.* the act of shutting up; that which closes; the end.

clot (*klot*), *v. i.* [*p. t.* and *p. p.* clotted, *p. pr.* clotting], to coagulate: *v. t.* to make, form into, or cover with, clots: *n.* a concrete or coagulate mass of soft or fluid matter.

cloth (*klôth*), *n.* [*pl.* cloths (*klôthz*)], a woven fabric of some fibrous material, especially wool; a table covering; the distinctive dress of any profession, especially the clerical.

clothe (*klōth*), *v. t.* to put raiment on; cover with, or as with, a garment.

clothes (*klōthz*), *n. pl.* covering for the body; dress; bedclothes.

cloth-ier (*klōth'yēr*), *n.* one who manufactures, or sells, clothes.

cloth-ing (*klōth'ing*), *n.* garments in general.

Clotilda (*klō-til'dȧ*). From the Old German *Clothildis*, name of a queen of France, signifying "distinguished and noble," or "illustrious noble" (*laut-hild*).

cloud (*kloud*), *n.* a mass of visible vapor floating in the atmosphere; the dark markings in marble or precious stones: *v. t.* to overspread with a cloud; render gloomy: *v. i.* to grow cloudy. [OBSCURE.]

cloud-burst (*'bērst*), *n.* a violent downpour of rain over a very limited area.

clough (*kluf*), *n.* a ravine in a rock or hillside; a gorge; a kind of sluice.

clout (*klout*), *n.* a piece of cloth or leather for patching; the center mark of an archery target.

clove (*klōv*), *n.* a pungent aromatic spice.

clo-ven (*klō'vn*), *p. adj.* divided into parts.

clo-ver (*klō'vēr*), *n.* a species of grass.

clown (*kloun*), *n.* a rustic; an ill-bred fellow; a professional jester or buffoon.

cloy (*kloi*), *v. t.* [*p. t.* and *p. p.* cloyed, *p. pr.* cloying], to fill to repletion; surfeit.

club (*klub*), *n.* a heavy stick; one of the suits of cards marked with trefoils; a number of persons associated for a common purpose: *v. t.* [*p. t.* and *p. p.* clubbed, *p. pr.* clubbing], to beat with a club: *v. i.* contribute to a common expense. [CLASS.]

club-foot (*'foot*), *n.* a deformed foot.

cluck (*kluk*), *v. i.* to cry or call like a hen to her chickens: *n.* a hen's call.

clue (*klōō*), *n.* a hint; a clew.

clump (*klump*), *n.* a cluster of trees, etc.; a thick sole: *v. t.* arrange in a clump: *v. i.* tread clumsily.

clum-sy (*klum'zi*), *adj.* awkward; heavy.

Cluny (*klū-nē'*), **Hotel de.** A former palace of the abbots of Cluny, situated on the Boulevard St. Michel, Paris.

clus-ter (*klus'tēr*), *n.* a number of things of the same kind growing or collected together; a bunch: *v. i.* to grow or gather into bunches; congregate.

clutch (*kluch*), *v. t.* to grasp, seize, or grip strongly: *v. i.* to snatch or seize (with *at*): *n.* a grasp; seizure: *pl.* hands; claws.

co (*kō*), a prefix meaning *with, together.*

coach (*kōch*), *n.* a large, covered, four-wheeled carriage; a tutor who prepares another for an examination or an athletic contest: *v. t.* to instruct or train.

co-ad-ju-tor (*cō-ad-jū'tēr*), *n.* One who aids another; a helper; an assistant. [ACCESSORY.]

co-ag-u-late (*kō-ag'ū-lāt*), *v. t.* to clot or curdle.

co-ag-u-la-tion (*-ū-lā'shun*), *n.* the act of coagulating; the state of being coagulated.

coal (*kōl*), *n.* mineralized vegetable matter, used as fuel: *v. t.* to furnish with coals: *v. i.* to take in coal.

co-a-lesce (*kō-ȧ-les'*), *v. t.* to grow together; combine; unite.

co-a-les-cence (*'ens*), *n.* the act of coalescing.

co-a-li-tion (*kō-ȧ-lish'un*), *n.* union in a body or mass; a combination of persons.

coal oil (*oil*), *n.* petroleum.

coal tar (*tär*), *n.* a thick opaque liquid distilled from bituminous coal, and from which many rich dye colors are obtained.

coarse (*kōrs*), *adj.* large in texture or size; not refined; rough; rude; indelicate.

Syn. COARSE, rough, rude. In the proper sense *coarse* refers to the composition and materials of bodies, as *coarse* bread, *coarse* meat, *coarse* cloth; *rough* respects the surface of bodies, as *rough* wood and *rough* skin; *rude* respects the make or fashion of things, as a *rude* bark, a *rude* utensil. *Coarse* is opposed to fine, *rough* to smooth, *rude* to polished. [See *gross.*]

Ant. CULTURED, elegant, polite, well bred.

coast (*kōst*), *n.* the margin of the land next the sea; *v. i.* to sail near or along the coast; descend an incline in a sledge, or on a bicycle without working the pedals: *v. t.* to sail close or near to.

coast-er (*'ēr*), *n.* a home-trading vessel; one who coasts on a sled.

coast-guard (*'gärd*), *n.* a member of the service for watching the sea, originally to check smuggling.

coast-wise (*'wīz*), *adv.* by, or along, the coast.

coat (*kōt*), *n.* an outer garment covering the upper part of the body; an external covering, as fur, etc.; a thin layer; an integument: *v. t.* to cover or spread over.

coat of arms (*ov ärmz*), *n.* the emblazonment of armorial bearings on an escutcheon.

coat of mail (*māl*), *n.* chain mail.

coax (*kōks*), *v. t.* to wheedle; cajole. [PERSUADE.]

cob (*kob*), *n.* the spike of Indian corn; a strong, thick-set pony: *v. t.* [*p. t.* and *p. p.* cobbed, *p. pr.* cobbing], to punish with a strap; break (ore).

co-balt (*kō'bawlt*), *n.* a steel-gray metal.

cob-ble (*kob'l*), *n.* a pebble; a round medium-sized stone: *v. t.* to mend or patch up coarsely.

cob-bler (*'lēr*), *n.* one who mends boots and shoes; a clumsy workman.

cob-web (*kob'web*), *n.* a spider's web; hence, a net or snare; old musty rubbish: *adj.* made of, or like, a cobweb; flimsy.

co-ca (*kō'kȧ*), *n.* the dried leaf of a small South American shrub: a powerful tonic.

★**co-ca-ine** (*kō'kȧ-in*), *n.* a powerful alkaloid extracted from coca leaves.

coch-i-neal (*koch'i-nēl*, *n.* a scarlet dye obtained from the dried body of an insect.

Cochituate (*kō-chit'ū-āt*), **Mass.** Indian word, meaning "land on or near falls," or "rapid streams."

coch-le-a (*kok'lē-ȧ*), *n.* [*pl.* cochleæ (*-ē*)], the spiral shaped cavity of the inner ear.

coch-le-ate (*kok'lē-āt*), *adj.* screwlike.

cock (*kok*), *n.* the male of birds, especially the domestic fowl; a small conical heap of hay.

cock (*kok*), *v. t.* to turn up or set (the hat or head) jauntily on one side; erect.

cock-ade (*-ād'*), *n.* a badge or ribbon worn on the hat.

cock-a-too (*'ȧ-tōō*), *n.* a crested bird of the parrot family.

cock-a-trice (*'ȧ-trīs*), *n.* a fabulous serpent said to have been hatched in a cock's egg, and possessing the power of killing by a glance of its eye.

cock-crow (*'krō*), *n.* early morning.

cock-er-el (*'ēr-el*), *n.* a young cock.

coc-kle (*kok'kl*), *v. t.* to contract into wrinkles.
coc-kle ('*kl*), *n.* an edible shellfish with two heart-shaped wrinkled shells; the plant corncockle or darnel; a kiln for drying hops.
cock-ney (*kok'ni*), *n.* a Londoner: traditionally one born within sound of the bells of Bow church.
cock-pit (*kok'pit*), *n.* an inclosed space for cock-fighting.
cock-roach ('*rōch*), *n.* a black beetle.
co-coa (*kō'kō*), *n.* a palm which produces the cocoa-nut. [Also *coco.*]
co-coa (*kō'kō*), *n.* the ground seeds of the cacao or chocolate tree; the beverage made from it.
co-coa-nut (*-nut*), *n.* the fruit of the cocoa palm.
co-coon (*ko-kōōn'*), *n.* the silky oblong case covering the larvæ of many spinning insects while in the chrysalis state.
cod (*kod*), *n.* the husk or pod of a seed; the scrotum; the narrow part of a trawl net.
cod (*kod*), *n.* a large edible fish found in the northern seas, and on the banks of Newfoundland.
Cod, Cape, Mass. From the fish its name implies, discovered and named by Bartholomew Gosnold, May 15, 1602. *Tamwock,* its Indian name, means "codfish."
cod-dle (*kod'l*), *v. t.* to make effeminate by pampering.
code (*kōd*), *n.* a body of classified laws or regulations; a system of signals.
codg-er (*koj'ĕr*), *n.* a miser; an old man.
cod-i-cil (*kod'i-sil*), *n.* an appendix to a will.
co-di-fy (*kō'di-fī* or *kod'i-fī*), *v. t.* [*p. t.* and *p. p.* codified, *p. pr.* codifying], to reduce to a code.
co-ef-fi-cient (*kō-ef-fish'ent*), *adj.* coöperating: *n.* in algebra, a number or known quantity prefixed as a multiplier to a variable or an unknown quantity.
co-erce (*kō-ĕrs'*), *v. t.* to restrain or constrain by force, especially legally or morally; compel.
Cœur d'Alene (*kĕr dā-lān'*). Lake and town in Kootenai county, Idaho; named from a tribe of Indians. French name, meaning "needle hearts" or "awl hearts."
co-e-val (*kō-ē'val*), *adj.* contemporaneous.
co-ex-ten-sive (*kō-eks-ten'siv*), *adj.* equally extensive.
cof-fee (*kof'ē*), *n.* the seeds of a plant which, roasted and ground, form a well-known beverage.
cof-fer (*kof'ĕr*), *n.* a chest; a kind of caisson or floating dock; a sunken panel: *pl.* a treasury: *v. t.* to inclose in a coffer.
cof-fin (*kof'in*), *n.* a case for the dead; the hollow part of a horse's hoof: *v. t.* inclosed in a coffin.
cog (*kog*), *n.* the tooth of a wheel; a trick: *v. t.* [*p. t.* and *p. p.* cogged, *p. pr.* cogging], to furnish with cogs; wheedle; to load (dice) in order to cheat.
co-gent (*kō'jent*), *adj.* forcible, convincing.
Syn. COGENT, forcible, strong. *Cogency* applies to reasons individually considered; *force* and *strength* to modes of reasoning or expression. *Cogent* reasons impel to decisive conduct; *strong* conviction is produced by *forcible* reasoning conveyed in *strong* language.
cog-i-tate (*koj'i-tāt*), *v. i.* to meditate: *v. t.* to devise or plan.
cog-nate (*kog'nāt*), *adj.* allied by blood; of the same stock, nature, or quality.
cog-ni-tion (*kog-nish'un*), *n.* knowledge.
cog-ni-zant (*kog'ni-zant* or *kon'i-zant*), *adj.* having knowledge of anything.
★**cog-no-men** (*kog-nō'men*, not *kog'nō-men*), *n.* a surname.
co-hab-it (*kō-hab'it*), *v. i.* to dwell together as husband and wife.
Cohasset (*kō-has'set*), **Mass.** Indian word, meaning "place of pines."
co-here (*kō-hēr'*), *v. i.* to stick together.
co-her-ence ('*ens*), *n.* the state or quality of cohering. [Also *coherency.*]
co-he-sion (*kō-hē'zhun*), *n.* the force that unites together molecules of the same material.
co-he-sive ('*siv*), *n.* causing to cohere.
Cohoes (*kō-hōz'*), **N. Y.** Corruption of the Iroquois word *gahaoose,* "shipwrecked canoe," having reference to the falls in the Mohawk at this place.
co-hort (*kō'hôrt*), *n.* a body of ancient Roman soldiers, the tenth part of a legion.
★**coif-fure** (*koif'ūr*, Fr. *kwä-für'*), *n.* a headdress; manner of arranging the hair.
coil (*koil*), *n.* a rope gathered into a ring; anything resembling it: *v. t.* to gather into a circular heap.
coin (*koin*), *n.* money stamped with a legal impression: *v. t.* to convert into money; invent.
co-in-cide (*kō-in-sīd'*), *v. i.* correspond exactly; occur at the same time.
co-in-ci-dence (*kō-in'si-dens*), *n.* the act of coinciding.
co-in-ci-dent (*kō-in'si-dent*), *adj.* coinciding.
coke (*kōk*), *n.* the residue of coal after the gas has been expelled: *v. t.* to convert into coke.
col-an-der (*kul'an-dĕr*), *n.* a vessel with a perforated bottom.
co-la nut (*kō'lä nut*), *n.* the large bitter seed of an African tree.
cold (*kōld*), *adj.* without heat or warmth; indifferent; *n.* the opposite of heat.
cole (*kōl*), *n.* cabbage plants in general.
cole-slaw ('*slaw*), *n.* cabbage salad.
col-ic (*kol'ik*), *n.* acute spasmodic pain in the abdomen or bowels: *adj.* pertaining to the bowels.
col-ick-y (*-i*), *adj.* pertaining to colic.
Colin (*kol'in*). From *Nicolin,* a diminutive of *Nicol,* from *Nicolas* or *Nicholas.*
col-lab-o-rate (*kol-ab'ō-rāt*), *v. i.* to work jointly, especially in literary or scientific work.
col-lapse (*kol-aps'*), *n.* sudden and complete failure: *v. i.* to break down.
col-lar (*kol'ĕr*), *n.* anything encircling the neck: *v. t.* to seize by the collar.
col-late (*kol'āt*), *v. t.* compare critically one thing with another of the same kind, as manuscripts.
col-lat-er-al (*kol-at'ĕr-al*), *adj.* side by side; auxiliary.
col-la-tion (*kol-ā'shun*), *n.* comparison; a light repast.
col-league (*kol'ēg*), *n.* an associate in the same office, employment, or commission.
Syn. COLLEAGUE, partner. *Colleague* is more noble than *partner.* Men in the highest offices are *colleagues;* tradesmen, mechanics, and subordinate persons are *partners.* Every Roman consul had a *colleague;* every workman has commonly a *partner. Colleague* is used for community of office; *partner* for community of interest. [ACCESSORY.]
Ant. OPPONENT.
col-lect (*kol'ekt*), *n.* a short comprehensive prayer.
col-lect (*kol-ekt'*), *v. t.* gather together; demand and obtain payment of: *v. i.* to meet together. [GATHER.]
col-lec-tion ('*shun*), *n.* the act of gathering together; an assemblage of works of art; a contribution to a special object.
col-lec-tor (*kol-ek't ĕr*), *n.* one who collects.
col-lege (*kol'ej*), *n.* a society of men possessing certain powers and rights, and engaged in some common pursuit, especially literary studies; the house founded for such a society.
col-le-gi-ate (*kol-ē'ji-āt*), *adj.* pertaining to, or of the nature of, a college; instituted like a college.
col-lide (*kol-īd'*), *v. i.* to come into collision.
col-lie (*kol'i*), *n.* a Scotch sheep dog.
col-lier (*kol'yĕr*), *n.* a digger of coal; a worker in a coal mine; a vessel in the coal trade.
col-li-sion (*kol-izh'un*), *n.* the act of striking two bodies violently together; concussion.
col-lo-ca-tion (*kol-ō-kā'shun*), *n.* the act of placing together; arrangement.
col-lo-qui-al (*kol-ō'kwi-al*), *adj.* used in ordinary conversation.
col-lo-qui-al-ism (*-izm*), *n.* a colloquial form of speech; slang.
col-lo-quy (*kol'ō-kwi*), *n.* [*pl.* colloquies (*-kwiz*)], a conversation; a dialogue. [CONVERSATION.]
col-lu-sion (*kol-ū'zhun*), *n.* a secret agreement for a fraudulent or evil purpose.
co-logne wa-ter (*ko-lōn' waw'tĕr*), *n.* perfume; eau de cologne.
co-lon (*kō'lon*), *n.* a mark of punctuation (:); the largest of the intestines.
colo-nel (*kĕr'nel*), *n.* the chief officer of a regiment.
co-lo-ni-al (*kō-lō'ni-al*), *adj.* pertaining to a colony.
col-o-nist (*kol'ō-nist*), *n.* an inhabitant of a colony.
col-o-ni-za-tion (*kol'ō-ni-zā'shun*), *n.* the act of colonizing, or state of being colonized.
col-o-nize (*kol'ō-nīz*), *v. t.* to settle or establish a colony in.
col-on-nade (*kol-on-ād'*), *n.* a series of columns.
col-o-ny (*kol'ō-ni*), *n.* [*pl.* colonies (*-nīz*)], a body of people from their native country who settle in another land, but are under the jurisdiction of, or connected with, the parent country.
col-or (*kul'ĕr*), *n.* the hue or appearance that a body presents to the eye; a pigment or paint; an apparent right or reason: *pl.* a military or naval flag: *v. t.* to impart a color to; make plausible. [PRETENSE.]
Colorado (*kol-ō-rä'dō*). One of the western states of the United States, so named from the river; a Spanish word, meaning "ruddy" or "red," the waters of which, when swollen by heavy rains, sweep down immense volumes of red sand, mud, and silicious pebbles. Indian name, *Pashahono.*
Colorado river, Texas. The river from which the state derives its name.
co-los-sal (*kō-los'al*), *adj.* like a colossus; gigantic.
★**col-os-se-um** (*kol-os-sē'um*), *n.* the Flavian amphitheater at ancient Rome. [Also *coliseum.*]
Colosseum or **Flavian Amphitheater.** An amphitheater in Rome, begun by Vespasian (T. Flavius Sabinus) in 72 A. D., and for 400 years the seat of gladiatorial shows.
Colossus of Rhodes. A gigantic statue in commemoration of the successful defense of Rhodes against Demetrius Poliorcetes in 304 B. C. It represented the Rhodian sun-god, Helios; was over 105 feet high, and was considered one of the seven wonders of the old world.
col-por-tage (*kol'pōr-tāj*), *n.* the system of distributing bibles, religious books, etc.
colt (*kōlt*), *n.* a young male horse.
Columbia (*kō-lum'bi-ä*). The United States. So named in honor of Christopher Columbus. [*Poetical.*] First used by Dr. Timothy Dwight in a popular song written by him.
col-um-bine (*kol'um-bīn*), *adj.* pertaining to, or like, a dove: *n.* a plant with flowers of five petals.
Columbus, Ohio. So named as a tribute to Christopher Columbus; the ground when originally selected in 1812 was for the purpose of locating homes for Canadian and Nova Scotian refugees.
★**col-umn** (*kol'um*, not *kol'yum*), *n.* a round pillar to support or adorn a building; a division of the page of a book, etc.; a formation of troops. [PILLAR.]
co-ma (*kō'mä*), *n.* insensibility; stupor.
co-ma-tose (*kō'mä-tōs* or *kom'*), *adj.* torpid; lethargic.
comb (*kōm*), *n.* a toothed instrument to separate and adjust the hair; the crest of a cock or of a wave or hill: *v. t.* to dress (the hair) with a comb.
com-bat (*kom'bat*), *v. i.* to fight; act in opposition: *v. t.* to fight with; oppose by force: *n.* a contest by force; a struggle.
Syn. COMBAT, oppose. A person's positions are *combated;* his interests or his measures are *opposed.*
Ant. AID, assist, befriend.
com-bi-na-tion (*kom-bi-nā'shun*), *n.* the union of bodies or qualities; an association of persons for a common object.
com-bine (*kom-bīn'*), *v. t.* to unite or join: *v. i.* to unite or coalesce: *n.* (*kom'bīn*) a secret combination, generally for fraudulent purposes. [CONNECT.]
com-bus-ti-ble (*kom-bus'ti-bl*), *adj.* inflammable: *n.* an inflammable substance.
com-bus-tion (*-bus'chun*), *n.* the act of burning; the state of being burnt; the union of an inflammable substance with oxygen, etc., producing light and heat.
come (*kum*), *v. i.* [*p. t.* came, *p. p.* come, *p. pr.* coming], to move toward; draw near; reach; happen; arrive at some state or condition: *v. t.* to act or play the part of.
co-me-di-an (*kō-mē'di-an*), *n.* an actor or player in comedy: *fem.* **comédienne** (*kō-mā-di-en'*).
com-e-dy (*kom'ĕ-di*), *n.* [*pl.* comedies (*-diz*)], dramatic representation of the humorous or ridiculous side of human life.
★**come-ly** (*kum'li*, not *kōm'li*) *adj.* graceful; handsome.
com-et (*kom'et*), *n.* a luminous celestial body, with an eccentric orbit, consisting, when perfect, of a nucleus, coma, and a tail.
com-fort (*kum'fĕrt*), *v. t.* to console; strengthen: *n.* a state of quiet enjoyment; consolation; a quilted bed cover.
Syn. COMFORT, pleasure. The grand feature in *comfort* is substantiality; in that of *pleasure* is warmth. *Pleasure* is quickly succeeded by pain; *comfort* is that portion of *pleasure* which seems to be the most durable sort of *pleasure. Comfort* must be sought for at home; *pleasure* is pursued abroad. [See *cheer.*]
com-fort-a-ble ('*fĕrt-ä-bl*), *adj.* imparting or enjoying comfort.
com-fort-er (*kum'fĕrt-ĕr*), *n.* one who comforts; a long woolen scarf.
com-ic (*kom'ik*) or **com-ic-al** ('*i-kal*), *adj.* exciting mirth.
com-i-ty (*kom'i-ti*), *n.* civility; politeness; acts of international courtesy.
com-ma (*kom'ä*), *n.* a punctuation point (,).
com-mand (*kom-änd'*), *v. t.* to order or charge with authority: *v. i.* to act as a commander; *n.* authority; an order; a naval or military force under the command of a particular officer.
Syn. COMMAND, order, injunction, precept. A *command* is an exercise of power or authority; it is imperative and must be obeyed. An *order* serves to direct; it is instructive and must be executed. A sovereign issues his *commands; orders* may be given by a subordinate or by a body, as *orders* of a court. *Order* is applied to the common concerns of life; *injunction* and *precept* to the moral conduct or duties of men. *Injunction* imposes a duty by virtue of the authority which enjoins; the *precept* lays down or teaches such duties as already exist. [See *class.*]
Ant. ALLOW, consent, permit.
com-mand-er ('*ĕr*), *n.* one who commands; a naval officer next below a captain.
com-mand-ment (*kom-änd'ment*), *n.* a command; a precept; a law, especially one of the decalogue.
com-mem-o-rate (*kom-em'ō-rāt*), *v. t.* to call to remembrance by a solemn act; celebrate with honor. [CELEBRATE.]
com-mem-o-ra-tion (*kom-em-ō-rā'shun*), *n.* the act of commemorating.
com-mence (*kom-ens'*), *v. i.* to come into existence; begin: *v. t.* to enter upon.
com-mence-ment ('*ment*), *n.* beginning; origin; the annual festival when degrees, etc., are conferred at colleges.
com-mend (*kom-end'*), *v. t.* to recommend as worthy of notice; praise. [LAUDABLE.]
com-men-da-tion (*kom-en-dā'shun*), *n.* the act of commending; approval.
com-men-su-ra-ble (*kom-en'sū-rä-bl*), *adj.* having, or reducible to, a common measure.
com-men-su-rate (*-en'sū-rāt*), *adj.* reducible to a common measure; equal. [PROPORTIONATE.]
com-ment (*kom'ent*), *n.* a spoken or written remark; *v. i.* (*kom-ent'*), to write notes or explanations.
com-men-ta-ry ('*en-tā-ri*), *n.* explanatory notes or annotations. [DEFINITION.]
com-merce (*kom'ĕrs*), *n.* interchange of merchandise between nations or individuals.
com-mer-cial (*kom-ĕr'shal*), *adj.* pertaining to trade or commerce; mercantile. [MERCANTILE.]
com-mer-cial-ism (*-izm*), *n.* commercial habits, methods, or principles.
com-min-gle (*kom-ing'gl*), *v. t.* and *v. i.* to mix; blend.
★**com-mis-er-ate** (*kom-iz'ĕr-āt*, not *kom-is'ĕr-āt*), *v. t.* to feel pity for; sympathize with in distress. [SYMPATHY.]

com-mis-sa-ry (*kom'is-ā-ri*), *n.* [*pl.* commissaries (*-riz*)], an official in the commissariat department.

com-mis-sion (*kom-ish'un*), *n.* a delegation of business to any one; the act of doing or committing; a trust; brokerage or allowance: *v. t.* to empower.
Syn. COMMISSION, authorize, empower. We *commission* in matters where our own will and convenience are concerned; we *authorize* in matters where our personal authority is requisite; and we *empower* in matters where the authority of the law is required.
Ant. OBJECT, prevent, refuse.

com-mit (*kom-it'*), *v. t.* [*p. t.* and *p. p.* committed, *p. pr.* committing], to give in charge or trust; perpetrate; learn by heart; send for trial, or to prison.
Syn. COMMIT, assign, confide, consign, relegate, trust. *Commit* is to give in charge, put into care or keeping; to *confide* is to *commit* especially to one's fidelity. We *assign* a duty, *confide* a secret; we *commit* thoughts to writing; *commit* a paper to the flames; *consign* goods to an agent. [See *perpetrate.*]

com-mit-tee (*-it'ē*), *n.* persons appointed to consider or manage any matter.

★**com-mo-di-ous** (*kom-ō'di-us*, not *kom-ō'jus*), *adj.* useful; convenient; roomy.
Syn. COMMODIOUS, convenient. *Commodious* is mostly applied to that which contributes to the bodily ease and comfort; *convenient* to whatever suits the purposes of men in their various transactions.
Ant. SMALL, unfit.

com-mod-i-ty (*-od'i-ti*), *n.* [*pl.* commodities (*-tiz*)], that which is useful; an article of commerce: *pl.* goods; merchandise.

com-mo-dore (*'ō-dōr*), *n.* a captain commanding a squadron.

com-mon (*kom'un*), *adj.* belonging equally to more than one; usual; inferior; *n.* a tract of open public land. [MUTUAL.]

com-mon coun-cil (*koun'sil*), the representative body of a city or municipal corporation.

com-mon law (*law*), the unwritten law of England based on immemorial usage.

com-mon-ly (*kom'un-li*), *adv.* usually, generally, ordinarily.
Syn. COMMONLY, generally, frequently, usually. What is *commonly* done is an action common to all; what is *generally* done is the action of the greatest part; what is *frequently* done is either the action of many, or an action many times repeated by the same person; what is *usually* done is done regularly by one or many.
Ant. OCCASIONALLY, seldom, singularly.

com-mon-place (*-plās*), *n.* a memorandum for ready reference; an obvious remark: *adj.* uninteresting; trite.

com-mon-sense (*-sens*), *adj.* characterized by sound practical judgment.

com-mon-wealth (*-welth*), *n.* the whole body of people in a state; a republic. [STATE.]

com-mo-tion (*kom-ō'shun*), *n.* violent agitation.

com-mu-nal-ism (*kom'ū-nal-izm*), *n.* government by communes or corporations of towns and districts.

com-mune (*kom-ūn'*), *v. i.* to take counsel; partake of the Eucharist.

com-mu-ni-ca-ble (*-ū'ni-kā-bl*), *adj.* impartible.

com-mu-ni-cate (*-kāt*), *v. t.* to impart; reveal: *v. i.* to share; partake of the Eucharist.
Syn. COMMUNICATE, impart. A thing may be *communicated* directly or indirectly, and to any number of persons; as to *communicate* intelligence by signal or otherwise. *Impart* is a direct action that passes between individuals; as to *impart* instruction. [See *announce.*]
Ant. CONCEAL, keep secret.

com-mu-ni-ca-tion (*-kā'shun*), *n.* the act of communicating; means of passing from one place to another; news.

com-mu-ni-ca-tive (*ū'ni-kā-tiv*), *adj.* unreserved.

com-mun-ion (*-ūn'yun*), *n.* intercourse; a religious body; the partaking of the Eucharist.
Syn. COMMUNION, converse. Both these terms imply a communication between minds; but the former may take place without corporeal agency, the latter never does; spirits hold *communion* with each other; people hold *converse.*

★**com-mu-nism** (*kom'ū-nizm*), *n.* the doctrine of having property in common; socialism.

com-mu-nist (*'ū-nist*), *n.* a supporter of communism; a socialist; a member of the Commune of Paris (1871).

com-mu-ni-ty (*-ū'ni-ti*), *n.* [*pl.* communities (*-tiz*)], a body of persons having common rights, interests and privileges.

com-mu-ta-tion (*-ū-tā'shun*), *n.* the act of commuting; change or exchange.

com-mute (*kom-ūt'*), *v. t.* to reduce the severity of; regulate the direction of an electric current: *v. i.* to pay in gross amount.

com-mut-er (*'er*), *n.* one who commutes or changes; one who uses a commutation ticket in traveling.

com-pact (*kom'pakt*), *n.* an agreement or covenant: *v. t.* (*kom-pakt'*), to press or pack closely; consolidate.

com-pan-ion (*kom-pan'yun*), *n.* a comrade: *adj.* attendant. [ACCESSORY.]

com-pan-ion-ship (*-ship*), *n.* fellowship. [ACQUAINTANCE.]

com-pa-ny (*kum'pā-ni*), *n.* [*pl.* companies (*-niz*)], an assemblage of people; a body of persons associated together; a firm; a subdivision of a regiment: *v. i.* associate with. [CLASS.]

★**com-pa-ra-ble** (*kom'pa-rā-bl*, not *kom-pâr'ā-bl*), *adj.* capable of being compared; of equal regard.

com-par-a-tive (*-par'ā-tiv*), *adj.* estimated by comparison; not positive: *n.* the comparative degree of grammar.

com-pare (*-pâr'*), *v. t.* to make one thing the measure of another; inflect so as to form the degrees of comparison: *v. i.* to bear a comparison.

com-par-i-son (*-par'i-sun*), *n.* the act of comparing; an illustration or simile.
Syn. COMPARISON, contrast. Likeness in the quality and difference in the degree are requisite for a *comparison;* likeness in degree and unlikeness in quality are requisite for a *contrast.*

com-part-ment (*-pārt'ment*), *n.* a division by a partition, as of a carriage, etc.; a panel.

com-pass (*kum'pas*), *v. t.* to encircle; walk around: *n.* extent; grasp; an instrument indicating the magnetic meridian: *pl.* a mathematical instrument for dividing and drawing circles.

com-pas-sion (*kom-pash'un*), *n.* sorrow for the sufferings of others; sympathy; pity. [PITY, SYMPATHY, MERCY.]

com-pas-sion-ate (*-āt*), *v. t.* to have compassion for: *adj.* sympathetic; merciful. [HUMANE.]

com-pat-i-ble (*-pat'i-bl*), *adj.* congruous; suitable.
Syn. COMPATIBLE, consistent. *Compatibility* has principally a reference to plans and measures; *consistency* to character, conduct, and station. Everything is *compatibile* with a plan which does not interrupt its prosecution; everything is *consistent* with a person's station by which it is neither degraded nor elevated.
Ant. INCONGRUOUS, irreconcilable.

com-pa-tri-ot (*-pā'tri-ot*), *n.* a fellow countryman.

com-peer (*kom-pēr'*), *n.* an equal.

com-pel (*kom-pel'*), *v. t.* [*p. t.* and *p. p.* compelled, *p. pr.* compelling], to urge irresistibly; force.
Syn. COMPEL, force, oblige, necessitate. To *compel* denotes moral rather than physical force; but to *force* is properly applied to the use of physical force or a violent degree of moral force. A man may be *compelled* to walk if he has no means of riding; he may be *forced* to go at the will of another. *Oblige* expresses only an indirect influence, which may be resisted or yielded to at discretion; we are *compelled* to do that which is repugnant to our will and our feelings; that which one is *obliged* to do may have the assent of the judgment if not of the will. We are *necessitated* by circumstances, or by anything which puts it out of our power to do otherwise.

com-pend (*kom'pend*), *n.* an abridgment.

com-pen-di-um (*'di-um*), *n.* an abridgment. [ABRIDGMENT.]

com-pen-sate (*kom'pen-sāt* or *kom-pen'sāt*), *v. t.* to recompense: *v. i.* to make compensation.

com-pen-sa-tion (*-sā'shun*), *n.* amends; recompensea set-off.
Syn.; COMPENSATION, amends, satisfaction, recompense, remuneration, requital, reward. A *compensation* is a return for a loss or damage sustained; *amends* is a return for anything that is faulty in ourselves or toward others; *satisfaction* is that which satisfies the individual requiring it; it is given for personal injuries. A *recompense* is a voluntary return for a voluntary service; it is made from a generous feeling. *Remuneration* is estimated according to the condition of the person and the dignity of the service rather than its positive worth. Authors often receive a *remuneration* for their works according to the reputation they have previously acquired, and not according to the real merit of the work. A *reward* conveys no idea of an obligation on the part of the person making it; whoever *rewards* acts optionally. When evil is returned for good, that is a bad *requital.*
Ant. CORRECTION, loss, punishment.

com-pete (*kom-pēt'*), *v. i.* to enter into competition with another.

com-pe-tence (*kom'pē-tens*), *n.* the state of being competent; sufficiency. [fied; moderate.

com-pe-tent (*-tent*), *adj.* fit; able; suitable; quali-
Syn. COMPETENT, fitted, qualified. *Competency* mostly respects the mental endowments and attainments; *fitness*, the disposition and character; *qualification*, the artificial acquirements or natural qualities.
Ant. FEEBLE, inadequate.

com-pe-ti-tion (*-tish'un*), *n.* rivalry.

com-pet-i-tive (*kom-pet'i-tiv*), *adj.* pertaining to competition; emulous.

com-pet-i-tor (*'i-tēr*), *n.* a rival.

com-pi-la-tion (*-pi-lā'shun*), *n.* the act of compiling; the thing compiled.

com-pile (*kom-pīl'*), *v. t.* to put existing materials together in fresh form.

com-pla-cence (*kom-plā'sens*), *n.* inward satisfaction. [Also *complacency.*]

com-pla-cent (*'sent*), *adj.* affable.

com-plain (*kom-plān'*), *v. i.* to express grief, pain, or resentment; charge formally.
Syn. COMPLAIN, lament, regret. *Complaint* marks most of dissatisfaction, *lamentation* most of grief; *regret* most of pain. *Complaint* is *expressed* verbally; *lamentation* either by words or signs; *regret* may be felt without being expressed. *Complaint* is made of personal grievance; *lamentation* and *regret* may be made on account of others as well as ourselves. We *complain* of our ill-health, of our inconveniences, or of troublesome circumstances; we *lament* our inability to serve another; we *regret* the absence of one whom we love. [See *deplore.*]

com-plaint (*kom-plānt'*), *n.* an accusation; an expression of grief or pain; ailment.
Syn. COMPLAINT, accusation. A *complaint* is mostly made in matters that personally affect the complainant; an *accusation* is made of matters in general, but especially those of a moral nature. A *complaint* is made for the sake of obtaining redress; an *accusation* is made for the sake of ascertaining a fact or bringing to punishment.
Ant. COMMENDATION, eulogy.

com-plai-sance (*-plā-sāns'*), *n.* courtesy.
Syn. COMPLAISANCE, deference, condescension. *Complaisance* signifies the act of complying with, or pleasing others; *deference* marks the inclination to defer, or acquiesce in the sentiments of another in preference to one's own; *condescension* marks the act of condescending from one's own height to yield to the satisfaction of others rather than rigorously to exact one's rights. The necessities and the allurements of society and of intimacy lead to *complaisance;* it makes sacrifices to the wishes, tastes, and personal feelings of others. *Complaisance* is the act of an equal; *deference* that of an inferior; *condescension* that of a superior.

★**com-plai-sant** (*'plā-zānt*), *adj.* courteous. [CIVIL.]

com-ple-ment (*'plē-ment*), *n.* full number; a complete set: *v. t.* to supply (a deficiency).

com-plete (*kom-plēt'*), *adj.* free from deficiency; entire; absolute; finished: *v. t.* to supply; finish.
Syn. COMPLETE, perfect, finished. That is *complete* which has no deficiency; that is *perfect* which has positive excellence; and that is *finished* which has no omission in it. [See *whole.*]
Ant. BLEMISHED, defective, faulty.
Syn. COMPLETE, finish, terminate. The characteristic idea of *completing* is that of making a thing altogether what it ought to be; that of *finishing*, the doing all that is intended to be done toward a thing; and that of *terminating*, simply putting an end to a thing.
Ant. BEGIN, commence.

★**com-plex** (*kom'pleks*, not *kom-pleks'*) *adj.* composed of various parts of things; composite; intricate. [OBSCURE.]

com-plex-ion (*-plek'shun*), *n.* the color of the skin, especially the face; aspect.

com-plex-ioned (*'shund*), *adj.* having a complexion.

com-plex-i-ty (*'i-ti*), *n.* the state of being complex. [Also *complexness.*]

com-pli-ance (*-plī'ans*), *n.* acquiescence.

com-pli-ant (*'ant*), *adj.* yielding.
Syn. COMPLIANT, yielding, submissive. A *compliant* person may want command of feeling; a *yielding* person may want fixedness of principle; a *submissive* person may want resolution. A too *compliant* disposition will be imposed upon by the selfish and unreasonable; a too *yielding* disposition is most unfit for commanding; a too *submissive* disposition exposes one to the exactions of tyranny. [See *humble.*]

com-pli-cate (*'pli-kāt*), *v. t.* to make intricate; *adj.* intricate; folded together. [OBSCURE.]

com-pli-ca-tion (*-kā'shun*), *n.* the act of complicating; the state of being complicated.

com-plic-i-ty (*-plis'i-ti*), *n.* partnership in crime.

com-pli-ment (*'pli-ment*), *n.* a formal act or expression of courtesy: *v. t.* to flatter; praise.

com-pli-men-ta-ry (*'tā-ri*), *adj.* conveying a compliment.

com-ply (*kom-plī'*), *v. i.* [*p. t.* and *p. p.* complied, *p. pr.* complying], to yield assent.
Syn. COMPLY, conform, yield, submit. *Compliance* is an act of the inclination; *conformity* an act of the judgment. *Compliance* is altogether optional; we *comply* with a thing or not, at pleasure. *Conformity* is binding on the conscience; it relates to matters in which there is a right and a wrong. To *yield* is to give way to another, either with one's will, judgment, or outward conduct; *submission* is the giving up of one's self altogether; it is the substitution of another's will for one's own. [See *agree.*]

com-po-nent (*kom-pō'nent*), *adj.* constituent: *n.* an elementary part of a compound.

com-port (*-pōrt'*), *v. i.* to agree; harmonize: *v. t.* to behave.

com-pose (*-pōz'*), *v. t.* to form by combination; write as an author; calm; adjust; arrange in order.
Syn. COMPOSE, settle. We *compose* that which has been disjointed and separated, by bringing it together again; we *settle* that which has been disturbed. [See *compound.*]

com-posed (*-pōzd'*), *adj.* tranquil; quiet.
Syn. COMPOSED, sedate. *Composed* is, opposite to ruffled or hurried, and is a temporary state; *sedate* is a permanent habit of the mind or body. [See *calm.*]

com-pos-ite (*-poz'it*), *adj.* compound.

com-po-si-tion (*-pō-zish'un*), *n.* the act of composing; the thing composed; a mass formed by mingling various ingredients.

com-pos-i-tor (*-poz'i-tēr*), *n.* one who sets type.

com-post (*'pōst*), *n.* a mixture of various substances for fertilizing the ground.

com-po-sure (*-pō'zhūr*), *n.* tranquillity.

com-pound (*kom-pound'*), *v. t.* to mix or combine together; settle by mutual agreement: *adj.* (*kom'-pound*), composed of two or more elements or ingredients or words: *n.* a mixture of two or more elements or ingredients.

Syn. COMPOUND, compose. *Compound* is used in the physical sense only; *compose* in the proper or the moral sense. A medicine is *compounded* of many ingredients; society is *composed* of various classes. [See *compose.*]

Ant. OBVIOUS, simple.

com-pre-hend (*kom-prē-hend'*), *v. t.* to include; grasp with the mind; conceive. [CONCEIVE.]

com-pre-hen-si-ble (*-hen'si-bl*), *adj.* intelligible.

com-pre-hen-sion (*-hen'shun*), *n.* the act of comprehending; extent of understanding. [full.

com-pre-hen-sive (*-hen'siv*), *adj.* including much;

Syn. COMPREHENSIVE, extensive. *Comprehensive* respects quantity; *extensive* regards space. A *comprehensive* view of a subject includes all branches of it; an *extensive* view of a subject enters into minute details; the *comprehensive* is associated with the concise; the *extensive* with the diffuse.

Ant. LIMITED, narrow, slight.

com-press (*kom-pres'*), *v. t.* to press together; condense: *n.* (*kom'pres*), a soft pad used in surgery to maintain pressure.

com-pres-sion (*-presh'un*), *n.* condensation.

com-prise (*-prīz'*), *v. t.* to comprehend.

Syn. COMPRISE, comprehend, embrace, contain, include. A library *comprises* a variety of books; the whole is *comprised* within a small compass; laws *comprehend* a number of cases; a discourse *embraces* a variety of topics; a society *contains* very many individuals; it *includes* none but of a certain class, or it *includes* some of every class. [See *conceive.*]

com-pro-mise (*kom'prō-mīz*), *n.* a settlement by mutual concessions: *v. t.* to settle by compromise; expose to risk.

★**comp-trol-ler** (*kon-trōl'ēr*). See *controller.*

com-pul-sion (*kom-pul'shun*), *n.* the act of compelling; force; constraint.

com-pul-so-ry (*-pul'sō-ri*), *adj.* exercising compulsion; obligatory.

com-punc-tion (*-pungk'shun*), *n.* contrition.

com-pu-ta-tion (*-pū-tā'shun*), *n.* the act or process of computing; estimate.

com-pute (*-pūt'*), *v. t.* to number; reckon. [ESTIMATE.]

com-rade (*kom'rad*), *n.* a companion.

con (*kon*), *v. t.* [*p. t.* and *p. p.* conned, *p. pr.* conning], to peruse carefully.

co-na-tive (*kō'nā-tiv* or *kon'ā-tiv*), *adj.* pertaining to voluntary agency; expressing endeavor.

con-cat-e-na-tion (*kon-kat-ē-nā'shun*), *n.* a series of things united like links.

con-cave (*kon'kāv*), *adj.* hollow and curved. [guise.

con-ceal (*kon-sēl'*), *v. t.* to hide; keep secret; dis-

Syn. CONCEAL, dissemble, disguise. To *conceal* is simply to abstain from making known what we wish to keep secret; to *dissemble* and *disguise* signify to *conceal* by assuming some false appearance. We *conceal* facts; we *dissemble* feelings; we *disguise* sentiments.

Ant. DISPLAY, be candid, be sincere.

Syn. CONCEAL, hide, secrete. *Concealing* has simply the idea of not letting come to observation; *hiding*, that of putting under cover; *secreting*, that of setting at a distance or in unfrequented places.

Ant. REVEAL, uncover.

con-cede (*-sēd'*), *v. t.* to yield; admit.

con-ceit (*-sēt'*), *n.* an idea; an overestimate of one's own abilities; a quaint fancy.

Syn. CONCEIT, fancy. *Conceit* applies only to internal objects; it is mental in the operation and the result; it is a species of invention. *Fancy* is applied to external objects, or whatever acts on the senses. Nervous people are subject to strange *conceits;* timid people *fancy* they hear sounds or see objects in the dark. [See *pride, opinionated.*]

con-ceiv-a-ble (*-sēv'ā-bl*), *adj.* imaginable.

con-ceive (*-sēv'*), *v. t.* imagine; understand; develop in the womb: *v. i.* to think; become pregnant.

Syn. CONCEIVE, understand, comprehend. *Conception* is the simplest operation of the three. When we *conceive* we may have but one idea; when we *understand* or *comprehend* we have all the ideas which the subject is capable of presenting. The builder *conceives* plans, the scholar *understands* languages. [See *apprehend.*]

Ant. FAIL OF, misapprehend.

con-cen-trate (*kon-sen'trāt*), *v. t.* to bring to a center: *adj.* reduced to a pure or dense state.

con-cen-tric (*-sen'trik*), *adj.* having a common center.

con-cept (*kon'sept*), *n.* an abstract general notion or conception.

con-cep-tion (*-sep'shun*), *n.* the impregnation of the ovum; the act or power of conceiving in the mind; an idea or notion.

Syn. CONCEPTION, notion. *Conception* is the mind's own work, what it pictures to itself from the exercise of its own powers; *notion* is the representation of objects as they are drawn from observation. *Conceptions* are the fruit of the understanding and imagination; *notions* are the result of experience and information.

Ant. PERCEPT, realization.

Conception, Cape, Cal. Named from one of the vessels belonging to Cortes' expedition.

con-cep-tu-al-ist (*kon-sep'tū-al-ist*), *n.* one who holds the theory (conceptualism) that the mind can form for itself general conceptions.

con-cern (*kon-sērn'*), *v. t.* to relate or belong to; interest or engage; make uneasy: *n.* business; affair; anxiety; a firm. [INTEREST, ANXIETY.]

con-cern-ing (*'ing*), *prep.* relating to.

con-cert (*kon-sērt'*), *v. t.* to contrive or devise together: *n.* (*kon'sērt*), a musical entertainment; coöperation; harmony, or mutual agreement.

Syn. CONCERT, contrive, manage. There is a secret understanding in *concerting;* invention in *contriving;* execution in *managing.* Measures are *concerted;* schemes are *contrived;* affairs are *managed.* [See *conduct.*]

con-cer-to (*-sēr't'ō*, It. *kon-chār'to*), *n.* [*pl.* concertos (*'tōz*)], a musical composition for a solo instrument, with an orchestral accompaniment.

con-ces-sion (*kon-sesh'un*), *n.* the act of conceding; the thing conceded.

conch (*kongk*), *n.* a marine shell.

con-cha (*kong'kā*), *n.* [*pl.* conchæ (*-kē*)], the outer ear; auricle; the dome of an apse.

con-cil-i-ate (*kon-sil'i-āt*), *v. t.* to reconcile; win or gain the affections of.

Syn. CONCILIATE, reconcile. The *conciliator* gets the good will and affections for himself; the *reconciler* unites the affections of two persons to each other.

Ant. ESTRANGE.

con-cil-i-a-to-ry (*-ā-tō-ri*), *adj.* tending to conciliate or reconcile. [Also *conciliative.*]

con-cise (*kon-sīs'*), *adj.* condensed, terse. [SHORT.]

con-cise-ness (*'nes*), *n.* brevity.

con-clave (*kon'klāv*), *n.* a private meeting, as of cardinals for the election of a pope.

con-clude (*kon-klūd'*), *v. t.* to infer; determine; settle; end: *v. i.* to draw an inference.

con-clu-sion (*-klū'zhun*), *n.* a final determination; result; end.

Syn. CONCLUSION, inference, deduction. *Conclusions* are drawn from real facts; *inferences* are drawn from the appearances of things; *deductions* only from arguments or assertions. *Conclusions* are practical; *inferences* ratiocinative; *deductions* are final.

Ant. GROUNDS, premise.

con-clu-sive (*-klū'siv*), *adj.* decisive; final.

Syn. CONCLUSIVE, decisive, convincing. *Conclusive* applies either to practical or argumentative matters; *decisive* to what is practical only; *convincing* to what is argumentative only. It is necessary to be *conclusive* when we deliberate, and *decisive* when we command; an argument is *convincing*, reasoning *conclusive.* [See *final.*]

Ant. INEFFECTIVE, sophistical, specious.

con-coct (*kon-kokt'*), *v. t.* to digest; cook; assimilate mentally; plot.

con-coc-tion (*-kok'shun*), *n.* the act of concocting; a plan or plot; a compound of various ingredients.

con-com-i-tant (*kon-kom'i-tant*), *adj.* accompanying; conjoined with: *n.* an attendant.

con-cord (*kong'kôrd*, not *kon'kôrd*), *n.* harmony; union; agreement.

Syn. CONCORD, harmony. *Concord* is generally employed for the union of wills and affections; *harmony* respects the aptitude of minds to coalesce. *Harmony* may be used in the sense of adaptation to things generally.

Ant. CONFLICT, discord, dissension.

Concord (*kong'kârd*). Town in Middlesex county, Massachusetts, so-called from the peaceful manner of its acquisition, having been purchased from the Indians.

Concord, N. H. Early English settlers named it *Rumford*, after a Benjamin Rumford; changed to *Concord* to commemorate an expression of unanimity in a land controversy.

con-cord-ance (*kon-kôrd'ans*), *n.* agreement; a dictionary of words or passages, especially of the bible, with references to the places where they occur.

con-cor-dat (*kon-kôr'dat*), *n.* a compact or agreement, especially between church and state.

con-course (*kong'kôrs*), *n.* arriving together; an assembly or crowd.

★**con-crete** (*kon'krēt*), *adj.* united in growth; not abstract: *n.* a mass formed by concretion; a compact mass of lime, sand, gravel, mortar, etc.

con-cre-tion (*kon-krē'shun*), *n.* the act of concreting; a mass formed by the union of separate particles.

con-cu-bine (*kong'kū-bīn*), *n.* a woman who lives with a man without being legally married.

con-cu-pis-cence (*kon-kū'pis-ens*), *n.* illicit sexual desire; unlawful desire.

con-cur (*kon-kēr'*), *v. i.* [*p. t.* and *p. p.* concurred, *p. pr.* concurring], to agree or unite in action or opinion; coincide. [ASSENT.]

con-cur-rent (*-kur'ent*), *adj.* acting in union or conjunction; meeting at one point.

con-cus-sion (*-kush'un*), *n.* the shock caused by two bodies coming violently together.

con-demn (*kon-dem'*), *v. t.* to pronounce guilty; censure; declare to be forfeited.

Syn. CONDEMN, blame, censure, convict, denounce, doom, reprobate, reprove, sentence. To *condemn* is to pass sentence or render judgment against. We *censure* silently; we *condemn* by open utterance. A person is *convicted* when his guilt is made clearly manifest to others; the convict is *sentenced* to imprisonment. To *denounce* is to make public or official declaration against; to *doom* is to *condemn* solemnly and consign to an evil or destructive destiny.

con-dem-na-tion (*kon-dem-nā'shun*), *n.* the act of condemning.

con-den-sa-tion (*-den-sā'shun*), *n.* compression.

con-dense (*-dens'*), *v. t.* to compress; make close or thick: *v. i.* to grow dense.

con-de-scend (*kon-dē-send'*), *v. i.* to stoop; descend; yield; deign.

con-de-scen-sion (*-dē-sen'shun*), *n.* the act of condescending; humiliation. [COMPLAISANCE.]

con-dign (*-dīn'*), *adj.* well deserved; suitable.

con-di-ment (*kon'di-ment*), *n.* a relish; seasoning.

con-di-tion (*kon-dish'un*), *n.* state; external circumstances; stipulation or terms of a contract.

Syn. CONDITION, station. *Condition* has most relation to circumstances, education, birth, and the like; *station* refers rather to the rank, occupation, or mode of life which is marked out.

con-dole (*kon-dōl'*), *v. t.* to lament: *v. i.* to express sympathy for another (with *with*).

★**con-do-lence** (*kon-dō'lens*, not *kon'dō-lens*), *n.* sympathy. [SYMPATHY.]

con-done (*kon-dōn'*), *v. t.* to pardon, especially a violation of marital duty.

con-dor (*kon'dēr*), *n.* a very large South American vulture.

con-duce (*-dūs'*), *v. i.* to tend to; contribute.

Syn. CONDUCE, contribute. To *conduce* signifies to serve the full purpose; to *contribute* signifies only to serve a secondary purpose. Exercise *conduces* to the health; it *contributes* to give vigor to the frame.

Ant. DESTROY, detract from, neglect.

con-du-cive (*-dū'siv*), *adj.* having the quality or power of conducing (with *to*).

con-duct (*kon-dukt'*), *v. t.* to guide; manage; behave: *n.* (*kon'dukt*) personal behavior or practice.

Syn. CONDUCT, manage, direct. *Conducting* requires most wisdom and knowledge; *managing* most action; *direction* most authority. A lawyer *conducts* the cause intrusted to him; a steward *manages* the mercantile concerns for his employer; a superintendent *directs* the movements of all the subordinate agents. [See *lead.*]

Ant. DEFEAT, neglect.

con-duc-tor (*-duk't'ēr*), *n.* one who, or that which, conducts; a substance which conducts or transmits certain forces.

★**con-duit** (*kon'dit* or *kun'dit*), *n.* a canal or pipe for the conveyance of water, etc.

cone (*kōn*), *n.* a geometrical solid of which the base is a circle and the summit a point; the fruit of the fir, pine, etc.

Conemaugh (*kon-ē-mô'*) **river, Pa.** Indian word, meaning "otter creek."

Coney (*kō'ni*). Island at the extremity of Long Island, New York, which is said by some to have been so named because of the numbers of rabbits there. It appears, however, to have been originally called *Congu*, which may suggest another derivation.

con-fec-tion (*kon-fek'shun*), *n.* anything conserved or compounded with sugar; a sweetmeat.

con-fec-tion-er (*-ēr*), *n.* one who prepares and sells sweetmeats, etc.

con-fec-tion-er-y (*-i*), *n.* [*pl.* confectioneries (*-iz*)], sweetmeats, cakes, preserves, etc.

con-fed-er-a-cy (*-fed'ēr-ā-si*), *n.* [*pl.* confederacies (*-siz*)], persons, states, or nations united in a league; unlawful combination.

con-fed-er-ate (*'ēr-āt*), *v. i.* to unite in a league: *adj.* united: *n.* (*-āt*) a member of a confederation; an ally; an accomplice. [ACCESSORY.]

con-fer (*kon-fēr'*), *v. t.* [*p. t.* and *p. p.* conferred, *p. pr.* conferring], to give or bestow: *v. i.* to consult together; converse.

Syn. CONFER, bestow. *Conferring* is an act of authority; *bestowing* that of charity or generosity. Princes and men in power *confer;* people in a private station *bestow.*

Ant. DEPRIVE.

con-fer-ence (*'fēr-ens*), *n.* the act of consulting together formally; an appointed meeting. [CONVERSATION.]

con-fess (*kon-fes'*), *v. t.* to admit or acknowledge; avow; grant; prove: *v. i.* to disclose the state of one's conscience to a priest and receive absolution.

con-fes-sion (*-fesh'un*), *n.* the act of confessing.

con-fes-sion-al (*-al*), *n.* an inclosed cabinet, in which a priest sits to hear confessions.

con-fes-sor (*kon-fes'ēr* or *kon'fes-ēr*), *n.* a priest who hears confessions and grants absolution.

con-fet-to (*-fet'tō*), *n.* [*pl.* confetti (*'ti*)], a sweetmeat; a plaster pellet used at carnivals.

★**con-fi-dant** (*'fi-dant*), *n.* a confidential or bosom friend. [Fem. *confidante.*]

con-fide (*kon-fīd'*), *v. i.* to have confidence in: *v. t.* to trust fully (with *to*).

Syn. CONFIDE, trust. *Confidence* is an extraordinary trust, but *trust* is always ordinary unless the term be qualified. *Confidence* involves the reliance of one upon another, but *trust* is confined to action. [See *commit.*]

con-fi-dence (*kon'fi-dens*), *n.* trust; reliance.

con-fi-dent (*-dent*), *adj.* full of confidence; positive; bold; dogmatical.

Syn. CONFIDENT, dogmatic, positive. *Confidence* implies a general reliance on one's

abilities. *Dogmatism* implies a reliance on the truth of our opinions; *positiveness* a reliance on the truth of our assertions. A *confident* man is always ready to act, as he is sure of succeeding; a *dogmatical* man is always ready to speak, as he is sure of being heard; a *positive* man is determined to maintain what he has asserted. [See *definite*.]
Ant. DIFFIDENT, unbiased.

con-fi-den-tial (*kon-fi-den'shal*), *adj.* spoken or written in confidence; trustworthy.

con-fig-u-ra-tion (*-fig-ū-rā'shun*), *n.* external form; relative position of the planets.

con-fine (*kon'fīn*), *n.* a boundary, border, or limit; a frontier (usually *pl.*): *v. t.* (*kon-fīn'*) to restrict within limits; imprison. [CONTRACTED, BOUND.]

con-fine-ment (*kon-fīn'ment*), *n.* the act of confining; childbirth.

con-firm (*kon-fĕrm'*), *v. t.* to strengthen; ratify; administer the rite of confirmation.
Syn. CONFIRM, corroborate, establish. What *confirms* serves to *confirm* the mind; what *corroborates* gives weight to the thing. An opinion or a story is *confirmed;* an evidence or the representation of a person is *corroborated; established* is applied to that which is permanent and of importance; as, to *establish* a reputation; to *establish* a trade or a government.
Ant. CANCEL, weaken.

con-fir-ma-tion (*-fĕr-mā'shun*), *n.* the act of confirming; verification. [firm.

con-firm-a-to-ry (*-fĕrm'ā-tō-ri*), *adj.* serving to con-

con-fis-cate (*kon'fis-kāt* or *kon-fis'kāt*), *v. t.* to adjudge to be forfeited; seize as thus forfeited.

con-fis-ca-tion (*-kā'shun*), *n.* thea ct of confiscating.

con-fis-ca-to-ry (*-fis'kā-tō-ri*), *adj.* characterized by, or attended with, confiscation.

con-fla-gra-tion (*-flā-grā'shun*), *n.* a great fire.

con-flict (*kon-flikt'*), *v. i.* to strike or dash together: *n.* (*kon'flikt*), a fight or struggle for the mastery.

con-flu-ence (*kon'flōō-ens*), *n.* the junction of two or more streams; an assembly.

con-flu-ent (*-ent*), *adj.* flowing or running together: *n.* a tributary river or stream.

con-form (*kon-fôrm'*), *v. t.* to make like; bring into harmony : *v. i.* to comply with. [COMPLY.]

con-form-a-ble (*'ā-bl*), *adj.* like; corresponding; compliant; in parallel order.
Syn. CONFORMABLE, agreeable, suitable. *Conformable* is employed for matters of obligation; *agreeable* for matters of choice; *suitable* for matters of propriety and discretion What is *conformable* accords with some prescribed form or given rule of others; what is *agreeable* accords with the feelings of ourselves or others; what is *suitable* accords with outward circumstances.

con-for-ma-tion (*-fôr-mā'shun*), *n.* structure; arrangement; shape.

con-form-i-ty (*-fôrm'i-ti*), *n.* compliance with established forms: resemblance.

con-found (*kon-found'*), *v. t.* to mingle; perplex; astonish; confuse; overthrow.
Syn. CONFOUND, confuse. A person *confounds* one thing with another; objects become *confused*, or a person *confuses* himself. It is a common error among ignorant people to *confound* names, and among children to have their ideas *confused* on commencing a new study. [See *abash, mix*.]
Ant. DIFFERENTIATE, discriminate, embolden, put at ease.

con-front (*kon-frunt'*), *v. t.* to stand face to face (with *with*); oppose; compare.
Syn. CONFRONT, face. *Confront* implies to set face to face; and *face* signifies to set the face toward any object. Witnesses are *confronted;* a person *faces* danger.
Ant. AVOID, shun.

con-fuse (*kon-fūz'*), *v. t.* to mingle; jumble up; render indistinct; disconcert. [CONFOUND, ABASH.]

con-fu-sion (*-fū'zhun*), *n.* the act of confusing; perplexity; loss of self-possession; disorder.
Syn. CONFUSION, disorder. *Confusion* supposes the absence of all order; *disorder* the derangement of order where it exists, or is supposed to exist.
Ant. NEATNESS, regularity.

con-fu-ta-tion (*-fū-tā'shun*), *n.* disproof.

con-fute (*kon-fūt'*), *v. t.* to prove to be false or invalid; convict of error.
Syn. CONFUTE, refute, disprove, oppugn. To *confute* respects what is argumentative; *refute* what is practical and personal; *disprove* whatever is represented or related; *oppugn* what is held or maintained. An argument is *confuted* by proving its fallacy; a charge is *refuted* by proving the innocence of the party charged; an assertion is *disproved* by proving that it is incorrect; a doctrine is *oppugned* by a course of reasoning.

con-geal (*kon-jēl'*), *v. t.* to convert from a liquid to a solid state by cold: *v. i.* to concrete by cold.

★**con-ge-ni-al** (*kon-jēn'yal*), *adj.* kindred; pleasant and sympathetic; cognate.

con-ge-ni-al-i-ty (*-ni-al'i-ti*), *n.* the state or quality of being congenial.

con-gen-i-tal (*-jen'i-tal*), *adj.* existing, or produced, at birth; constitutional.

con-gest (*kon-jest'*), *v. t.* to accumulate.

con-gest-ed (*'ed*), *p. adj.* unduly crowded; containing an unnatural accumulation of blood.

con-ges-tion (*-jest'yun*), *n.* an overcrowded condition, especially of the blood vessels.

con-glom-er-ate (*kon-glom'ĕr-āt*), *adj.* collected or clustered together: *n.* a rock composed of rounded or water-worn fragments of preëxistent rocks.

con-glu-ti-nate (*-glū'ti-nāt*), *v. t.* to glue together: *adj.* glued together; united by an adhesive substance.

con-grat-u-late (*kon-grat'ū-lāt*), *v. t.* to felicitate on account of some happy event (with *on* or *upon*). [FELICITATE.]

con-grat-u-la-tion (*-grat-ū-lā'shun*), *n.* the act of congratulating.

★**con-gre-gate** (*kong'grē-gāt*), *v. t.* to assemble; gather together: *v. i.* to come together.

con-gre-ga-tion (*-gā'shun*), *n.* an assembly, especially of persons for religious worship.

con-gre-ga-tion-al (*-al*), *adj.* pertaining to a congregation.

Con-gre-ga-tion-al-ism (*'shun-al-izm*), *n.* a democratic form of church government.

Con-gre-ga-tion-al-ist (*-al-ist*), *n.* an adherent to Congregationalism: *adj.* pertaining to Congregationalism.

con-gress (*kong'gres*), *n.* a conference; an assembly of ambassadors, etc.

Congress, *n.* the national legislature of the United States.

Con-gress-man (*-man*), *n.* a member of Congress, especially of the house of representatives.

con-gru-ence (*kong'grōō-ens*), *n.* suitability; agreement; consistency. [Also *congruency*.]

con-gru-ent (*-grōō'ent*), *adj.* suitable; agreeing.

con-gru-ous (*'grōō-us*), *adj.* accordant; fit.

con-ic (*kon'ik*), *adj.* pertaining to, or shaped like, a cone. [Also *conical*.] *n. pl.* the branch of geometry which treats of the parabola, ellipse, and hyperbola; conic sections.

con-jec-ture (*kon-jek'tūr*), *n.* a guess: *v. t.* to surmise: *v. i.* to form conjectures. [GUESS.]

con-join (*kon-join'*), *v. t.* to join together; connect or associate: *v. i.* to unite.

con-joint (*-joint'*), *adj.* united; coöperating.

con-ju-gal (*'jōō-gal*), *adj.* of or pertaining to marriage; connubial.

con-ju-gate (*kon'jōō-gāt*), *v. t.* to inflect (verbs): *adj.* combined in pairs.

con-ju-ga-tion (*-gā'shun*), *n.* the act of conjugating; the inflection of a verb; sexual union.

con-junct (*kon-jungkt'*), *adj.* conjoined.

con-junc-tion (*-jungk'shun*), *n.* union; the apparent meeting of two or more stars or planets; a word used to connect sentences or words.

con-jure (*kon-jūr'*), *v. t.* to summon in a sacred name: (*kun'jĕr*), influence by, or as if by, magic: *v. i.* to practice the arts of a conjurer.

con-jur-er (*kon'jĕr-ĕr*), *n.* one who performs tricks by sleight of hand: (*kon-jūr'ĕr*), *n.* one who solemnly enjoins.

con-nect (*kon-nekt'*), *v. t.* to bind or fasten together; *v. i.* to join.
Syn. CONNECT, combine, unite. What is *connected* and *combined* remains distinct, but what is *united* loses all individuality. Things the most dissimilar may be *connected* or *combined;* things of the same kind only can be *united*. Houses are *connected* by means of a common passage; the armies of two nations are *combined;* two armies of the same nation are *united*.
Ant. ISOLATE, separate, sever.

Connecticut (*kon-net'i-kut*). River and state. An Indian name derived from *Quonoktacut*, meaning, according to some authorities, "a river whose water is driven in waves by tides or winds." Haines says, "land on the long tidal river." Other interpretations are, "on long river," "long river," and "the long, or without end, river."

con-nec-tion or **con-nex-ion** (*kon-nek'shun*), *n.* the state of being connected; relation by marriage or blood.
Syn. CONNECTION, relation. Families are *connected* with each other by the ties of blood or marriage; persons are *connected* with each other in the way of trade or business; objects stand in a certain *relation* to each other, as persons stand in the *relation* of giver and receiver, or of debtor and creditor.
Ant. DISCONNECTION, isolation.

con-ni-vance (*-nī'vans*), *n.* the act of conniving; passive coöperation in a crime or fault; collusion.

con-nive (*kon-nīv'*), *v. i.* to close the eyes upon a fault; be in secret complicity (with *at*). [ABET.]

con-note (*kon-nōt'*), *v. t.* to designate by implication; imply as an attribute.

con-nu-bi-al (*kon-nū'bi-al*), *adj.* of or pertaining to the marriage state; nuptial.

con-quer (*kong'kĕr*), *v. t.* to gain by conquest; overcome; subdue: *v. i.* to get the victory.

con-quer-or (*kong'kĕr-ĕr*), *n.* one who conquers.
Syn. CONQUEROR, victor. A *conqueror* is always supposed to add something to his possessions; a *victor* gains nothing but the superiority. Those who take possession of other men's lands by force of arms make a *conquest;* those who excel in any trial of skill are the *victors*.

★**con-quest** (*kong'kwest*, not *kon'kwest*), *n.* the act of conquering; subjugation; victory.

Conrad (*kon'rad*). From the Old German name *Cunrad*, which Wachter translates "quick in counsel." Danish, *Conrad;* Dutch, *Könraad;* Fr., *Conrad;* Ger., *Conrad;* It., *Corrado*, or *Curado;* Lat., *Conradus;* Sw., *Konrad*.

con-science (*kon'shens*), *n.* the moral sense which determines right and wrong.

★**con-sci-en-tious** (*kon-shi-en'shus*, not *kon-si-en'shus*), *adj.* influenced or regulated by conscience; scrupulous.

con-scious (*'shus*), *adj.* aware of one's thoughts and actions; sensible. [FEEL.]

con-scious-ness (*-nes*), *n.* the knowledge of that which passes in one's own mind.

con-script (*kon-skript'*), *v. t.* to enroll for compulsory military or naval service: (*kon'skript*), *adj.* registered: *n.* one thus compulsorily enrolled.

con-se-crate (*kon'sē-krāt*), *v. t.* to set apart as sacred; dedicate to God; set apart to a sacred office: *adj.* made sacred. [DEDICATE, HOLY.]

con-sec-u-tive (*-sek'ū-tiv*), *adj.* successive.

con-sen-sus (*-sen'sus*), *n.* general agreement.

con-sent (*kon-sent'*), *n.* a yielding of the mind or will: *v. i.* to comply; yield.
Syn. CONSENT, permit, allow. As the act of an equal we *consent* to that in which we have a common interest with others; we *permit* or *allow* what is for the accommodation of others; we *allow* by abstaining to oppose; we *permit* by a direct expression of our will; contracts are formed by the *consent* of the parties who are interested; the proprietor of an estate *permits* his friends to sport on his grounds; he *allows* of a passage through his premises. [See *agree, assent, admit*.]

con-se-quence (*kon'sē-kwens*), *n.* that which naturally follows an effect.
Syn. CONSEQUENCE, effect, result, issue, event. A *consequence* is that which follows of itself, without any qualification or restriction; an *effect* is that which is produced, or which follows from the connection between the thing *effecting*, as a cause, and the thing *effected;* a *result* is general following from a whole; there may be many *consequences* from the same thing, and but one *result* only; we speak of the *issue* of a negotiation or a battle, and the *event* of a war. The fate of a nation sometimes hangs on the *issue* of a battle.
Ant. CAUSE, occasion, origin, reason, source.

con-se-quent (*-kwent*), *adj.* following as a result or natural effect (with *to*): *n.* a result or effect.

con-se-quen-tial (*-kwen'shal*), *adj.* following as the effect; self-important.

con-ser-va-tion (*-sĕr-vā'shun*), *n.* the act of preserving from decay, loss, or injury.

con-serv-a-tive (*-serv'a-tiv*), *adj.* having the tendency or power to preserve: *n.* that which preserves; one opposed to hasty changes.

con-serv-a-to-ry (*sĕrv'ā-tō-ri*), *adj.* tending to preserve: *n.* a greenhouse.

★**con-serve** (*kon-sĕrv'*), *v. t.* to preserve from injury or destruction: *n.* (*kon'sĕrv*) candied fruit.

con-sid-er (*kon-sid'ĕr*), *v. t.* to fix the mind upon; contemplate: *v. i.* to deliberate; reflect.
Syn. CONSIDER, reflect. *Consideration* is employed for practical purposes; *reflection* for matters of speculation or moral improvement. Common objects call for *consideration;* the workings of the mind itself, or objects purely spiritual, occupy *reflection*.
Ant. NEGLECT, slight.
Syn. CONSIDER, regard. There is more caution or thought in *considering;* more personal interest in *regarding*. To *consider* is to bear in mind all that prudence or propriety suggests; to *regard*, all that our wishes or interests suggest.

★**con-sid-er-ate** (*-āt*), *adj.* having regard for others; prudent; thoughtful; careful.

con-sign (*kon-sin'*), *v. t.* to deliver in a formal manner to another; yield in trust; to send, as goods. [COMMIT.]

★**con-sign-ee** (*-si-nē'*), *n.* the person to whom goods are sent; an agent or factor.

con-sist (*kon-sist'*), *v. i.* to be composed of; co-exist; subsist (with *in*).

con-sist-ent (*'ent*), *adj.* solid; not contradictory. [CONSONANT, COMPATIBLE.]

con-sole (*kon-sōl'*), *v. t.* to give comfort to; cheer in sorrow; solace.

con-sol-i-date (*-sol'i-dāt*), *v. t.* to make solid; harden; condense: *v. i.* to become solid.

con-so-nance (*kon'sō-nans*), *n.* agreement of sounds; harmony; concord.

con-so-nant (*-nant*), *adj.* harmonious; accordant: *n.* a letter other than a vowel.
Syn. CONSONANT, accordant, consistent. *Consonant* is employed in matters of representation; *accordant* in matters of opinion; *consistent* in matters of conduct. [See *compatible*.]

con-sort (*kon'sôrt*), *n.* a companion; a husband or wife; a ship accompanying another: *v. t.* and *v. i.* (*kon-sort'*) to associate; keep company (with *with*).

con-spic-u-ous (*-spik'ū-us*), *adj.* mentally or physically visible; distinguished. [DISTINGUISHED, PROMINENT.]

con-spir-a-cy (*-spir'ā-si*), *n.* [*pl.* conspiracies (*-siz*)], a plot; two or more persons engaged together for an unlawful or evil purpose.

con-spir-a-tor (*'ā-tĕr*), *n.* one who conspires.

con-spire (*kon-spīr'*), *v. i.* to concert a crime; combine for an unlawful purpose.

★**con-sta-ble** (*kun'stā-bl*, not *kon'stā-bl*), *n.* a high officer of state in mediæval courts; a policeman.

Constance (*kon'stans*). From the Latin name *Constantia*, "constancy," "steadfastness." Dutch, *Constantia;* Fr., *Constance;* It., *Costanza;* Lat., *Constantia;* Sp., *Constancia*.

con-stan-cy (*kon'stan-si*), *n.* steadiness of purpose or action.
Syn. CONSTANCY, stability, steadiness,

firmness. *Constancy* respects the affections; *stability* the opinions; *steadiness* the action, or the motives of action; *firmness* the purpose or resolution.

con-stant (*kon'stant*), *adj.* steadfast; continuous: *n.* that which is not subject to change. [CONTINUED, PERMANENT.]

Constantine (*kon'stan-tin*). From the Latin *Constantinus*, "firm, resolute." Danish, *Constantin;* Dutch, *Konstantijn;* Fr., *Constantin;* Gr., *Konstantinos;* It., *Constantino.*

Constantinople (*kon-stan-ti-nō'pl*). The Anglicised form of *Constantinopolis*, "the city of Constantine," the name given by Constantine to Byzantium.

con-stel-la-tion (*-stel-ā'shun*), *n.* a group or cluster of fixed stars designated by some name.

con-ster-na-tion (*-stĕr-nā'shun*), *n.* excessive terror, or surprise.

con-sti-pate (*kon'sti-pāt*), *v. t.* to make costive.

con-sti-pa-tion (*-pā'shun*), *n.* costiveness.

con-stit-u-en-cy (*-stit'ū-en-si*), *n.* [*pl.* constituencies (*-siz*)], the body of electors voting for a member of Congress, etc.

con-stit-u-ent (*'ū-ent*), *adj.* necessary or essential: *n.* an essential or component part; an elector.

con-sti-tute (*kon'sti-tūt*), *v. t.* to compose or make up; appoint; establish.

Syn. CONSTITUTE, appoint, depute. To *constitute* is the act of a body; to *appoint* and *depute* that of either a body or an individual. A community *constitutes* any one their leader; a monarch *appoints* his ministers; whoever is *deputed* has private and not public authority.

con-sti-tu-tion (*kon-sti-tū'shun*), *n.* the act of constituting; bodily strength; the system of fundamental laws of a nation, state or society.

con-sti-tu-tion-al (*-al*), *adj.* inherent in the constitution: *n.* walk taken to benefit the health.

con-strain (*kon-strān'*), *v. t.* to hold down or keep back by force.

con-straint (*-strānt'*), *n.* compulsion.

con-strict (*-strikt'*), *v. t.* to bind; cramp.

con-stric-tor (*-strik'tĕr*), *n.* that which contracts or compresses; a large serpent, the boa constrictor.

con-strin-gent (*-strin'jent*), *adj.* contracting or binding.

con-struct (*kon-strukt'*), *v. t.* to build; form; put together; compose.

con-struc-tion (*-struk'shun*), *n.* the act of building; that which is constructed; the syntactical arrangement of words in a sentence.

con-strue (*kon'stroō*), *v. t.* to put into proper order by syntactical rules; translate; interpret.

con-sub-stan-tial (*kon-sub-stan'shal*), *adj.* having the same substance, essence, or nature.

con-sub-stan-ti-a-tion (*-shi-ā'shun*), *n.* the doctrine that the body and blood of Christ are in a mysterious manner substantially present in the Eucharistic elements after consecration.

★**con-sul** (*kon'sul*, not *kown'sul*), *n.* the chief magistrate of the Roman republic; an officer commissioned by a government to reside in a foreign country to promote the interests of its trade, and protect its subjects.

con-su-lar (*'sū-lĕr*), *adj.* pertaining to a consul.

con-su-late (*'sū-lāt*), *n.* the office and residence of a consul.

con-sult (*kon-sult'*), *v. t.* to ask advice of; have regard to: *v. i.* to take counsel together.

Syn. CONSULT, deliberate. *Consultations* always require two persons at least; *deliberations* may be carried on either with one's self or with numbers; an individual may *consult* with one or many; assemblies commonly *deliberate.*

con-sul-ta-tion (*-sul-tā'shun*), *n.* the act of consulting.

con-sume (*kon-sūm'*), *v. t.* to destroy; waste: *v. i.* to waste away. [DESTROY, ABSORB.]

con-sum-mate (*kon'sum-āt*), *v. t.* to complete; finish: *adj.* (*kon-sum'āt*), perfect.

con-sum-mate-ly (*-sum'āt-li*), *adv.* perfectly.

con-sum-ma-tion (*-mā'shun*), *n.* completion.

Syn. CONSUMMATION, completion. Wishes are *consummated;* plans are *completed.*

con-sump-tion (*-sump'shun*), *n.* the act of consuming; pulmonary disease; phthisis. [DECAY.]

con-sump-tive (*'tiv*), *adj.* pertaining to consumption.

con-tact (*kon'takt*), *n.* touch; close union.

con-ta-gion (*kon-tā'jun*), *n.* transmission of disease by direct or indirect contact.

Syn. CONTAGION, infection. We consider *contagion* as to the manner of spreading from one body to another; we consider *infection* as to the act of its working itself into the system. Whatever acts by *contagion* acts immediately by direct personal contact; whatever acts by *infection* acts gradually and indirectly, or through the medium of a third body, as clothes, or the air when *infected.*

Ant. IMMUNITY, health.

con-ta-gious (*'jus*), *adj.* transmitted by contact.

Syn. CONTAGIOUS, epidemical, pestilential. The *contagious* applies to that which is capable of being caught, and ought not, therefore, to be touched; the *epidemical* to that which is already caught or circulated, and requires, therefore, to be stopped; the *pestilential* to that which may breed an evil, and is, therefore, to be removed; diseases are *contagious* or *epidemical;* the air or breath is *pestilential.*

con-tain (*kon-tān'*), *v. t.* to hold, as a vessel; inclose. [COMPRISE.]

con-tam-i-nate (*-tam'i-nāt*), *v. t.* to pollute.

Syn. CONTAMINATE, defile, pollute, taint, corrupt. Whatever is impure *contaminates;* what is gross and vile in the natural sense *defiles* and in the moral sense *pollutes;* what is contagious or infectious *corrupts;* and what is *corrupted* may *taint* other things.

Ant. CLEAN, clear, purify, whiten.

con-temn (*kon-tem'*), *v. t.* to despise.

Syn. CONTEMN, despise, scorn, disdain. *Contemn* signifies to pollute or render worthless, which is the cause of contempt. *Despise* signifies to look down upon, which is a strong mark of contempt; *scorn* signifies stripped of all honors and exposed to derision; *disdain* signifies to hold altogether unworthy.

Ant. ADMIRE, adore, esteem, laud.

con-tem-plate (*kon-tem'plāt*), *v. t.* to consider with continued attention.

Syn. CONTEMPLATE, meditate, muse. Different species of reflection are marked by these terms. We *contemplate* what is present or before our eyes; we *meditate* on what is past or absent. The heavens and all the works of the Creator are objects of *contemplation;* the ways of Providence are fit subjects for *meditation.* One *muses* on events or circumstances which have been just passing.

Ant. ACT, do.

★**con-tem-pla-tive** (*kon-tem'plā-tiv*, not *kon'tem-plā-tiv*), *adj.* thoughtful.

con-tem-po-ra-ne-ous (*-pō-rā'nē-us*), *adj.* contemporary.

con-tem-po-ra-ry (*'pō-rā-ri*), *adj.* existing or occurring at the same time: *n.* one living at the same time as another.

con-tempt (*kon-tempt'*), *n.* disdain; disobedience to the orders, etc., of a court.

con-tempt-i-ble (*'i-bl*), *adj.* meriting scorn.

Syn. CONTEMPTIBLE, contemptuous. *Contemptible* is applied to the thing deserving contempt; *contemptuous* to that which is expressive of contempt. A production is *contemptible;* a sneer or look is *contemptuous.*

Ant. ESTIMABLE, noble, praiseworthy.

con-temp-tu-ous (*-temp'tū-us*), *adj.* disdainful. [CONTEMPTIBLE.]

con-tend (*kon-tend'*), *v. i.* to strive in opposition; dispute or debate; assert.

Syn. CONTEND, contest, dispute. To *contend* is simply to exert a force against a force; to *contest* is to struggle together for an object; to *dispute*, according to its original meaning, applies to opinions only, and is distinguished from *contend* in that the latter signifies to maintain one's own opinion, and the former to call in question the opinion of another.

con-tent (*kon-tent'*), *adj.* satisfied: *v. t.* to satisfy; gratify: *n.* (*kon'tent*), generally plural, that which is comprised in anything.

con-ten-tion (*-ten'shun*), *n.* contest; debate. [STRIFE, DISSENSION, FEUD.]

con-ten-tious (*-ten'shus*), *adj.* causing contention.

con-tent-ment (*-tent'ment*), *n.* satisfaction, gratification.

Syn. CONTENTMENT, satisfaction. *Contentment* lies in ourselves; *satisfaction* is derived from external objects. One is *contented* when one wishes for no more; one is *satisfied* when one has obtained all one wishes; *contentment* is within the reach of the poor man, to whom it is a continual feast; but *satisfaction* has never been procured by wealth, however enormous, or ambition, however boundless. [See *compensation.*]

Ant. DISTRESS, melancholy, trouble.

con-test (*kon-test'*), *v. t.* to dispute; oppose: *v. i.* to strive: *n.* (*kon'test*) a struggle for superiority; dispute. [CONTEND, FEUD.]

con-test-ant (*-test'ant*), *n.* one who contests, especially an election or a will.

con-text (*kon'tekst*), *n.* the parts in a book or discourse immediately adjoining the sentence quoted.

con-ti-gu-i-ty (*-ti-gū'i-ti*), *n.* contact.

★**con-tig-u-ous** (*-tig'ū-us*), *adj.* adjacent. [ADJACENT.]

con-ti-nence (*kon'ti-nens*), *n.* chastity; self-restraint.

con-ti-nent (*'ti-nent*), *adj.* chaste; exercising self-restraint: *n.* a large extent of land, forming a geographical division.

con-ti-nen-tal (*-nen'tal*), *adj.* pertaining to a continent.

con-tin-gence (*kon-tin'jens*), *n.* [*pl.* contingencies (*'jen-siz*)], a chance or possible occurrence.

con-tin-gent (*'jent*), *adj.* accidental; conditional: *n.* quota of troops.

con-tin-u-al (*'ū-al*), *adj.* proceeding without interruption; incessant; constant.

Syn. CONTINUAL, perpetual, constant. What is *continual* admits of no interruption; what is *perpetual* admits of no termination. There may be an end to that which is *continued* and there may be intervals in that which is *perpetual. Constant*, like *continual*, admits of no interruption; what is *continual* may not always continue in the same state; but what is *constant* remains in the same state. [See *durable.*]

Ant. CEASING, changeable, broken, interrupted.

con-tin-u-ance (*'ū-ans*), *n.* permanence; uninterrupted succession; continuation.

Syn. CONTINUANCE, continuation, duration. The *continuance* is said of that which itself continues; the *continuation* of that which is continued by some other agency; as, the *continuance* of the rain; the *continuation* of a history, work, line, etc. Things are of long or short *duration* by comparison.

con-tin-ue (*kon-tin'ū*), *v. t.* to carry on without interruption: *v. i.* to remain; persevere.

Syn. CONTINUE, remain, stay. To *continue* is associated with a state of action; to *remain* with a state of rest; we are said to *continue* to speak, or do anything, to *remain* stationary or in a position; *stay* is a voluntary act; as, to *stay* at a friend's, or with a friend.

Ant. Go, leave, move.

Syn. CONTINUE, persevere, persist. We *continue* from habit or casualty; we *persevere* from reflection and the exercise of our judgment; we *persist* from attachment. A child *perseveres* in a new study until he has mastered it; he *persists* in making a request until he has obtained the object of his desire.

Ant. CEASE, lag, discontinue.

con-ti-nu-i-ty (*-ti-nū'i-ti*), *n.* [*pl.* continuities (*-tiz*)], uninterrupted succession or connection.

con-tin-u-ous (*-tin'ū-us*), *adj.* uninterrupted.

con-tort (*kon-tôrt'*), *v. t.* to twist.

con-tour (*kon-tōōr'*), *n.* an outline; profile.

con-tra-band (*kon'trā-band*), *adj.* prohibited from importation; illegal.

con-tract (*kon-trakt'*), *v. t.* to condense: *v. i.* to shrink up; agree upon: *n.* (*kon'trakt*) a compact; a written agreement. [ABBREVIATE.]

con-tract-ed (*kon-trak'ted*), *adj.* narrow, mean; scanty.

Syn. CONTRACTED, confined, narrow. *Contracted* signifies drawn into a smaller compass than it might otherwise be in, and *confined* signifies brought within unusually small bounds. *Narrow* denotes a quality belonging to a material body. A limb is said to be *contracted* which is drawn up by disease; a situation is *confined* which has not the necessary or usual degree of open space; a road or a room is *narrow.*

con-trac-tion (*-trak'shun*), *n.* the act of contracting; the state of being contracted; abbreviation.

con-tra-dict (*kon-tra-dikt'*), *v. t.* to assert the contrary or opposite of; gainsay; deny.

Syn. CONTRADICT, deny. One *contradicts* in direct terms by asserting something contrary; one *denies* by advancing arguments, or suggesting doubts or difficulties. These terms may, therefore, both be used in reference to disputations. We may *deny* the truth of a position by *contradicting* the assertions that are advanced in its support.

Ant. AGREE, acquiesce, admit, assent.

con-tra-dic-to-ry (*-dik'tō-ri*), *adj.* contrary.

con-tra-dis-tinc-tion (*-dis-tingk'shun*), *n.* a distinction by opposite qualities.

con-tral-to (*kon-tral'tō*), *n.* the part sung by the highest male (*counter-tenor*) or the lowest female voice (*alto*).

con-tra-ri-e-ty (*-trā-rī'ĕ-ti*), *n.* [*pl.* contrarieties (*-tiz*)], opposition.

con-tra-ry (*'trā-ri*), *adj.* opposite; perverse: *n.* a thing of opposite qualities. [PERVERSE.]

con-trast (*kon-trast'*), *v. t.* to place in contrast: *n.* (*kon'trast*) opposition or difference of qualities; dissimilitude. [COMPARISON.]

con-tra-vene (*kon-trā-vēn'*), *v. t.* to obstruct; violate.

con-trib-ute (*kon-trib'ūt*), *v. t.* to give to some common stock: *v. i.* to use one's influence. [CONDUCE.]

con-tri-bu-tion (*-tri-bū'shun*), *n.* the act of contributing; a subscription; a writing furnished to a periodical.

con-trite (*kon'rīt*), *adj.* penitent.

con-tri-tion (*-trish'un*), *n.* sorrow for sin.

con-triv-ance (*-triv'ans*), *n.* a device; apparatus; plan.

con-trive (*kon-triv'*), *v. t.* to devise; invent. [CONCERT.]

con-trol (*kon-trōl'*), *n.* a check; restraint: *v. t.* [*p. t.* and *p. p.* controlled, *p. pr.* controlling], to restrain; govern.

con-tro-ver-sial (*-trō-vĕr'shal*), *adj.* polemical.

con-tro-ver-sy (*'trō-vĕr-si*), *n.* [*pl.* controversies (*-siz*)], debate; disputation. [FEUD.]

con-tro-vert (*-trō-vĕrt'*), *v. t.* to contend against; refute.

Syn. CONTROVERT, dispute. To *controvert* has regard to speculative points; to *dispute* respects matters of fact; there is more of opposition in *controversy;* more of doubt in *disputing;* a sophist *controverts;* a skeptic *disputes.*

Ant. AGREE.

con-tu-ma-cious (*-tū-mā'shus*), *adj.* perverse. [OBSTINATE.]

con-tu-ma-cy (*'tū-mā-si*), *n.* [*pl.* contumacies (*-siz*)], obstinate or perverse opposition to lawful authority.

Syn. CONTUMACY, rebellion. The *contumacious* resist only occasionally; the *rebel* resists systematically: the *contumacious* stand only on certain points, and oppose the individual; the *rebel* sets himself up against the authority itself.

con-tu-me-ly (*'tū-mē-li*), *n.* haughty and contemptuous rudeness. [REPROACH.]

con-tuse (*kon-tūz'*), *v. t.* to wound or bruise without breaking the skin.
co-nun-drum (*kō-nun'drum*), *n.* a riddle.
con-va-lesce (*kon-vā-les'*), *v. i.* to recover strength and health after illness.
con-va-les-cence (*'ens*), *n.* gradual recovery after illness. [Also *convalescency.*]
con-vene (*kon-vēn'*), *v. i.* to meet together: *v. t.* to cause to assemble.
con-ven-ience (*-vēn'yens*), *n.* fitness; freedom from discomfort.
con-ven-ient (*'yent*), *adj.* suitable; appropriate; handy.
Syn. CONVENIENT, suitable. *Convenient* regards the circumstances of the individual; *suitable* is closely connected with moral propriety; nothing is *convenient* which does not favor one's purpose; nothing is *suitable* which does not suit the person, place, and thing. [See *commodious.*]
con-vent (*kon'vent*), *n.* a community of religious recluses; a nunnery; monastery. [CLOISTER.]
con-ven-ti-cle (*-ven'ti-kl*), *n.* an assembly for worship (usually implying schism).
con-ven-tion (*-ven'shun*), *n.* a political or ecclesiastical assembly.
con-ven-tion-al (*-al*), *adj.* sanctioned by, or growing out of, custom; based on accepted models.
con-verge (*kon-vērj'*), *v. i.* tend to one point.
con-ver-gence (*'jens*), *n.* [*pl.* convergencies (*'en-siz*)], tendency to one point.
★**con-ver-sant** (*kon'vēr-sant*, not *kon-vēr'sant*), *adj.* acquainted or familiar with; proficient.
Syn. CONVERSANT, familiar. A person is *conversant* in matters that come frequently before his notice; he is *familiar* with such as form the daily routine of his business.
Ant. IGNORANT.
con-ver-sa-tion (*-sā'shun*), *n.* informal or familiar talk.
Syn. CONVERSATION, dialogue, conference, colloquy. A *conversation* is always something actually held between two or more persons; a *dialogue* is mostly fictitious, and written as if spoken; any number of persons may take part in a *conversation*, but a *dialogue* always refers to the two persons who are expressly engaged; a *conference* is always specifically appointed and is mostly on public concerns; the *colloquy* has the same character as the *dialogue*, but is not confined to two people.
con-ver-sa-tion-ist (*-ist*), *n.* one who excels in conversation. [Also *conversationalist.*]
con-ver-sa-zi-o-ne (*kōn-vēr-sä-tsē-ō'nā*), *n.* [*pl.* conversazioni (*'nē*)], a meeting for conversation, especially on literary or scientific topics. [*Italian.*]
con-verse (*kon-vērse'*), *v. i.* to interchange thoughts; *adj.* (*kon'vērse*) reversed in order or relation; opposite: *n.* familiar talk. [SPEAK, COMMUNION.]
con-ver-sion (*kon-vēr'shun*), *n.* change from one state, or from one religion, to another.
con-vert (*kon-vērt'*), *v. t.* to transmute; change from one religion to another: *n.* (*kon'vert*) one who changes from one religion to another.
Syn. CONVERT, proselyte. *Convert* is more extensive in its sense and application than *proselyte; convert* includes every change of opinion, without respect to the subject; *proselyte* denoted changes only from one religious belief to another; *proselyte* now means a new convert to a religion, a religious sect or to some particular system or party.
con-vert-i-ble (*kon-vērt'i-bl*), *adj.* transmutable.
con-vex (*kon'veks*), *adj.* curved on the exterior surface; opposed to concave.
con-vey (*kon-vā'*), *v. t.* [*p. t.* and *p. p.* conveyed, *p. pr.* conveying], to carry or transport; communicate; transfer the title to (property).
con-vey-ance (*'ans*), *n.* the act or means of conveying; a vehicle.
con-vict (*kon-vikt'*), *v. t.* to prove guilty of a crime charged: *n.* (*kon'vikt*) a criminal sentenced to penal servitude.
Syn. CONVICT, detect. A person is *convicted* by means of evidence; he is *detected* by means of ocular demonstration. One is *convicted* of having perpetrated some evil deed; one is *detected* in the very act of committing the deed. [See *condemn, criminal.*]
con-vic-tion (*-vik'shun*), *n.* the act of convicting; strong belief.
con-vince (*kon-vins'*), *v. t.* to satisfy by evidence or argument. [PERSUADE, CONCLUSIVE.]
con-viv-i-al (*kon-viv'i-al*), *adj.* festive; jovial.
Syn. CONVIVIAL, social. The prominent idea in *convivial* is that of sensual indulgence; the prominent idea in *social* is that of enjoyment from an intercourse with society. We speak of *convivial* meetings, *convivial* enjoyments, or the *convivial* board; but *social* intercourse, *social* pleasure, *social* amusements.
con-vo-ca-tion (*kon-vō-kā'shun*), *n.* the act of convoking an assembly.
con-voke (*kon-vōk'*), *v. t.* to call or summon together; convene.
con-voy (*kon-voi'*), *v. t.* [*p. t.* and *p. p.* convoyed, *p. pr.* convoying], to accompany on the way for protection: *n.* (*kon'voi*) a protecting force accompanying ships, goods, persons, etc.; an escort.
con-vulse (*kon-vuls'*), *v. t.* to agitate violently.
con-vul-sion (*-vul'shun*), *n.* an agitation; tumult.

co-ny or **co-ney** (*ko'ni*), *n.* [*pl.* conies (*'niz*)], a rabbit.
coo (*kōō*), *v. i.* [*p. t.* and *p. p.* cooed, *p. pr.* cooing], to cry like a dove or pigeon: *n.* the sound uttered by doves and pigeons.
cook (*kook*), *v. t.* to prepare for eating by boiling, baking, or roasting: *n.* one who prepares food for the table.
cook-er-y (*'ēr-i*), *n.* [*pl.* cookeries (*-iz*)], the art or practice of cooking.
cook-y (*'i*), *n.* [*pl.* cookies (*'iz*)], a small flat sweet cake.
cool (*kōōl*), *adj.* slightly or moderately cold: *v. t.* to make cool: *v. i.* to become cool. [DISPASSIONATE, CALM.]
coon (*kōōn*), *n.* abbreviation of raccoon; slang name for a negro.
coop (*kōōp*), *n.* a cage; pen: *v. t.* to confine; inclose.
coop-er (*'ēr*), *n.* a maker of barrels, casks, etc.
co-ŏp-er-ate (*kō-op'ēr-āt*), *v. i.* to act or work jointly.
co-ŏp-er-a-tion (*-ā'shun*), *n.* the act of working jointly together.
Cooper river, S. C. Named in honor of Sir Anthony Ashley Cooper, afterward earl of Shaftesbury, one of the original charterers.
Cooperstown. Village in Otsego county, New York, named for the father of James Fenimore Cooper, the novelist.
co-ŏr-di-nate (*kō-ôr'di-nāt*), *v. t.* to place in the same order, class, etc.: *adj.* of the same rank or authority as another.
coot (*kōōt*), *n.* a short-tailed water fowl.
cop (*kop*), *v. t.* [*p. t.* and *p. p.* copped, *p. pr.* copping], to seize as a prisoner: *n.* a policeman.
cope (*kōp*), *n.* a large semicircular ecclesiastical vestment, worn by bishops and priests over the surplice.
cope (*kōp*), *v. i.* to strive or contend (followed by *with*).
Copenhagen (*kō-pen-hā'gen*). In Danish, *Kjobenhavn*, the capital of Denmark. Is first mentioned in 1027. Owing to its position it became a great resort for merchants, and was called *Kaupmanna hofn* or *Kjobmannshavn*, names translated by Saxo Grammaticus in the twelfth century as *Portus Mercatorum*, the "haven of the merchants."
cop-ing (*kō'ping*), *n.* the top masonry of a wall.
co-pi-ous (*'pi-us*), *adj.* abundant; diffusive.
cop-per (*kop'ēr*), *n.* a red, ductile metal: *v. t.* to cover with copper.
cop-per-head (*-hed*), *n.* a venomous American serpent.
copse (*kops*), *n.* a thicket of brushwood.
cop-u-la (*'ū-lä*), *n.* [*pl.* copulas (*läz*) or copulæ (*-lē*)], a word which joins the subject and predicate in a sentence or proposition.
cop-u-la-tive (*'lā-tiv*), *adj.* uniting: *n.* a copulative conjunction.
cop-y (*kop'i*), *n.* [*pl.* copies (*'iz*)], an imitation; a transcript: *v. t.* to transcribe; reproduce.
Syn. COPY, transcribe, model, pattern, specimen. To *copy* respects the matter; to *transcribe* respects simply the act of writing. What is *copied* must be taken immediately from the original, with which it must exactly correspond; what is *transcribed* may be taken from the *copy*, but not necessarily in an entire state; a *copier* should be very exact; a *transcriber* should be a good writer; a *model* is that which may be used as a guide or rule; the *pattern* regards solely the outward form or color of anything that is made or manufactured; the *specimen* is any portion of a material which serves to show the quality of that of which it forms a part. [See *example.*]
★**co-quet** (*kō-ket'*), *v. i.* [*p. t.* and *p. p.* coquetted, *p. pr.* coquetting], to flirt; trifle.
co-quet (*kō-ket'*), *n.* a vain woman who seeks to gain men's attention and admiration.
Syn. COQUET, jilt. The *coquet* makes a traffic of her own charms by seeking a multitude of admirers; the *jilt* sports with the sacred passion of love, and barters it for the gratification of any selfish propensity.
Cora. From the Greek *kore*, "a girl," "damsel."
★**cor-al** (*kor'al*, not *kō'ral*), *n.* the hard calcareous skeleton of certain marine polyps: *adj.* pertaining to coral.
cor-al-line (*'al-in*), *adj.* consisting of, or like, coral; of a color like coral: *n.* an orange-red dye stuff.
cord (*kôrd*), *n.* a twisted string; a measure of wood: *v. t.* to fasten with cord.
Cordelia (*kôr-dē'li-ä* or *kôr-dēl'yä*). According to Rev. Edward Davies, from the Celtic, *Creirdyddlydd*, "jewel of the sea." Fr., *Cordelie.*
★**cor-dial** (*kôr'jal* or *kôrd'yal*), *adj.* hearty; sincere: *n.* an aromatic and sweetened spirit. [HEARTY.]
cor-dial-i-ty (*'i-ti*), *n.* sincere, sympathetic geniality; sincerity; heartiness.
cor-don (*kôr'don*), *n.* a ribbon worn as the badge of an order; a line of military posts.
cor-du-roy (*'dū-roi*), *n.* a stout ribbed or corded cotton.
core (*kôr*), *n.* the heart or innermost part of anything, especially of fruit: *v. t.* to remove the core from.
co-re-spond-ent (*kō-re-spond'ent*), *n.* a joint respondent in a divorce suit.
Co-rin-thi-an (*kō-rin'thi-an*), *adj.* of or pertaining to Corinth, noted for its luxury and licentiousness; luxurious; denoting the Corinthian order of architecture.

cork (*kôrk*), *n.* a light elastic oak bark, variously used; a stopper for a bottle: *adj.* made of cork.
corn (*kôrn*), *n.* grain, as wheat, barley, rye, etc.; plants that yield grain; breadstuff; a horny excrescence on the toe, or foot.
cor-ne-a (*kôr'nē-ä*), *n.* the horny circular transparent membrane which forms the anterior portion of the eyeball.
Cornelia (*kôr-nē'li-ä* or *kôr-nēl'yä*). A female name formed from *Cornelius.*
Cornelius (*kôr-nē'li-us* or *kôr-nēl'yus*). Latin name, translated by some, "horn." Danish, *Cornelius;* Dutch, *Kornelis* or *Cornelis;* Fr., *Corneille;* It., *Cornelio;* Lat., *Cornelius;* Sp., *Cornelio.*
cor-ner (*kôr'nēr*), *n.* an angle; a mercantile ring to monopolize some product: *v. t.* to drive or force into some position of difficulty from which there is no escape; *corner the market*, to buy up a commodity so as to monopolize it.
★**cor-net** (*kôr'net*, not *kôr-net'*), a kind of trumpet.
cor-nice (*'nis*), *n.* the highest projection or border on a wall or column.
Corniche (*kor-nēsh'*), **The.** A celebrated coast-road along the Riviera of France and Italy from Nice to Genoa.
corn-starch (*kôrn'stärch*), *n.* starch made from meal of Indian corn, used for puddings, etc.
cor-nu-co-pi-a (*kôr-nū-kō'pi-ä*), *n.* [*pl.* cornucopiæ (*-ē*), or -as (*-äz*)], the horn of plenty, represented in sculpture as overflowing with fruit, flowers, etc.
Cornwall. A southwestern county of England. The Romans, who traded here for tin called it *Cornubia*, which name it bore until the Saxons imposed the name of *Weales* upon the British who retreated into the fastness west of the Severn and the Dee. The latter portion of the name *Cornubia* was then dropped, and the word *Wales* substituted, forming the name *Corn-Wales*, of which the present *Cornwall* is a corruption.
★**co-rol-la** (*kō-rol'ä*), *n.* the inner envelope of a flower composed of two or more petals.
cor-ol-la-ry (*kor'ol-* or *kō-rol'ä-ri*), *n.* an additional deduction or inference drawn from a demonstrated proposition.
co-ro-na (*kō-rō'nä*), *n.* [*pl.* coronæ (*'nē*)], a crown; the flat projecting part of a cornice; the upper surface of a molar tooth; a halo surrounding heavenly bodies.
cor-o-na-tion (*kor-ō-nā'shun*), *n.* the act or ceremony of crowning a sovereign.
cor-o-ner (*kor'o-nēr*), *n.* an officer who inquires into cases of sudden or accidental death.
cor-o-net (*'ō-net*), *n.* an inferior crown; an ornamental headdress.
cor-po-ral (*kôr'pō-ral*), *adj.* relating to the body; opposed to the mind: *n.* a noncommissioned officer of the lowest grade. [PHYSICAL.]
cor-po-rate (*-rāt*), *adj.* united in a body or community by legal enactment.
cor-po-ra-tion (*-rā'shun*), *n.* a body politic having a common seal, and legally authorized to act as one individual; an organization of a number of manufacturing or mercantile companies.
cor-po-re-al (*-pō'rē-al*), *adj.* having a material body; physical. [PHYSICAL.]
★**corps** (*kôr*), *n. sing. and pl.* a body, as of troops, etc.
corpse (*kôrps*), *n.* a dead body. [BODY.]
cor-pu-lence (*kôr'pū-lens*), *n.* excessive fatness of body.
cor-pu-lent (*-lent*), *adj.* bulky; fat.
Cor-pus Chris-ti (*kôr'pus kris'ti*). [Latin, the body of Christ]. A Roman Catholic festival (the first Thursday after Trinity Sunday) in honor of the Eucharist.
cor-pus-cle (*kôr'pus-l*), *n.* a minute particle.
cor-ral (*kor-ral'*), *n.* a pen for live stock.
cor-rect (*kor-rekt'*), *v. t.* to set straight; rectify: *adj.* exact; accurate.
Syn. CORRECT, accurate. What is done by the exercise of the judgment is said to be *correct;* as a *correct* style, a *correct* writer; what is done by the effort of the individual is more properly *accurate;* as, *accurate* observations, an *accurate* survey. [See *amend.*]
Ant. FAULTY, imperfect, perverted, poor.
cor-re-late (*kor-ē-lāt'*), *v. i.* to be reciprocally related.
cor-re-la-tion (*-lā'shun*), *n.* reciprocal relation; the interdependence of functions or organs.
cor-re-spond (*kor-ē-spond'*), *v. i.* to be adequate to; answer.
Syn. CORRESPOND, answerable, suitable. Things that *correspond* must be alike in size, shape, color, and every minute particular; those that *answer* must be fitted for the same purpose; those that *suit* must have nothing disproportionate or discordant. In the moral application, actions are said not to *correspond* with professions; the success of an undertaking does not *answer* the expectation; particular measures do not *suit* the purpose of individuals. [See *conformable.*]
cor-re-spond-ence (*'ens*), *n.* communication by letters.
cor-re-spond-ent (*'ent*), *adj.* agreeing with; similar.
cor-ri-dor (*kor'i-dōr*), *n.* a gallery or open passage in a building.
cor-ri-gi-ble (*kor'i-ji-bl*), *adj.* capable of being amended.
cor-rob-o-rate (*kor-rob'ō-rāt*), *v. t.* confirm; strengthen. [CONFIRM.]

cor-rob-o-ra-tive (*kor-rob'ō-rā-tiv*), *adj.* verifying; confirmative.
cor-rode (*kor-ōd'*), *v. t.* to eat away gradually.
cor-ro-sion (*kor-ō'zhun*), *n.* the act of corroding.
cor-ru-gate (*'oo-gāt*), *v. t.* to draw, or shape, into wrinkles or folds.
cor-rupt (*kor-rupt'*), *v. t.* to turn from a sound to an unsound and putrescent state. [CONTAMINATE.]
cor-rupt-i-ble (*-rupt'i-bl*), *adj.* capable of being corrupted.
cor-rup-tion (*-rup'shun*), *n.* the act of corrupting. [DEPRAVITY.]
cor-sage (*kôr'sāj*), *n.* a bodice.
cor-set (*kôr'set*), *n.* a close-fitting bodice.
Corsica (*kôr'si-ka*). A Mediterranean island. A Phenician word denoting "the wooded island."
cors-let (*kôrs'let*), *n.* light body armor.
Corso (*kôr'sō*). One of the principal streets of Rome.
★**cor-tège** (*kôr-tāzh'*), *n.* a train of attendants; procession.
cor-tes (*kôr'tes*), *n. pl.* the national and legislative assembly of Spain and Portugal.
cor-us-cate (*kor'us-kāt* or *kō-rus'*), *v. i.* to sparkle; flash.
cor-us-ca-tion (*kor-us-kā'shun*), *n.* a sudden flash or play of light.
Coshocton (*kō-shok'tun*). County and village in Ohio, named from the Indian town of *Goshocking*. The word means, according to some authorities, "habitation of owls."
★**cos-met-ic** (*koz-met'ik*, not *kos-met'ik*), *adj.* imparting or improving beauty: *n.* a wash or preparation for such a purpose.
cos-mic (*koz'mik*), *adj.* pertaining to the universe and the laws which govern it.
Cosmo (*koz'mō*). A name originating in Italy, where it became famous from being borne by the family of the Medici (Cosmo di Medici).
cos-mog-ra-phy (*-mog'rā-fi*), *n.* the science which includes geography, astronomy, and geology.
cos-mo-pol-i-tan (*-mō-pol'i-tan*), *n.* a citizen of the world.
cos-mos (*koz'mos*), *n.* the world or universe as an orderly system.
cost (*kôst*), *v. t.* to be bought for, or had at, a price: *n.* charge.
Syn. COST, expense, price, charge. The *cost* is what is to be laid out for anything; the *expense* is that which a person actually lays out; the *price* is that which a thing may fetch or which it may be worth; the *charge* is that which a person or thing is charged with; we do a thing at our own *cost*, but at another's *expense*. [See *expense*.]
Ant. INCOME, receipts.
cos-tal (*kos'tal*), *adj.* pertaining to a rib.
Costa Rica (*kos'tä rē'kä*). [Sp., literally, for "rich coast."] A republic of Central America.
cos-tive (*'tiv*), *adj.* constipated.
cos-tume (*kos'tūm*), *n.* dress in general; style of dress.
co-sy, another form of *cozy*.
cot (*kot*), *n.* a cottage; small bed.
★**cote** (*kōt*, not *kot*), *n.* a hut; a sheepfold.
co-tem-po-ra-ry, cotemporaneous, etc., same as *contemporary*, etc.
co-te-rie (*kō-te-rē'*), *n.* a clique. [CLASS.]
★**co-til-lion** (*-til'yun*), *n.* a brisk, lively dance for eight or more persons.
Cotswold (*kots'wōld*) **hills.** A range of hills in Gloucestershire, England. So named from the Anglo-Saxon *cote* and *wold*, as meaning a place where there are no growing woods.
cot-tage (*kot'āj*), *n.* a small dwelling.
cot-ton (*kot'n*), *n.* a white downy substance enveloping the seeds of the cotton plant.
cot-ton gin (*jin*), a machine for separating the seeds from cotton fiber.
couch (*kouch*), *v. t.* to place on a bed or other resting-place: *n.* a bed.
cough (*kôf*), *v. i.* to expel air from the lungs by a violent effort.
coul-ter (*kōl'tĕr*), *n.* a plowshare.
coun-cil (*koun'sil*), *n.* an assembly of persons met in consultation, or to give advice; a convocation.
Council Bluffs. City in Pottawattamie county, Iowa. [council.
coun-cil-man (*-man*), *n.* a member of a common
coun-sel (*'sel*), *n.* interchange of opinion; advice.
coun-sel-or (*-ĕr*), *n.* one who gives advice, especially legal advice.
count (*kount*), *n.* a title of nobility.
count (*kount*), *v. t.* to reckon or sum up; *v. i.* to tell off: *n.* the act of numbering. [CALCULATE.]
coun-te-nance (*koun'te-nans*), *n.* the whole form of the face.
Syn. COUNTENANCE, sanction, support. Persons are *countenanced;* things are *sanctioned;* persons or things are *supported;* persons are *countenanced* in their proceedings by the apparent approbation of others; measures are *sanctioned* by those who have due authority; measures or persons are *supported* by every means which may forward the object. [ABET.]
coun-ter (*'tĕr*), *n.* one who, or that which, counts; a shop table.
coun-ter (*'tĕr*), *adv.* contrary; adverse.
coun-ter-act (*-akt'*), *v. t.* to act in opposition to so as to defeat.
coun-ter-feit (*koun'tĕr-fit*), *v. t.* to make a copy of without authority for fraudulent purposes.
coun-ter-mand (*koun-tĕr-mänd'*), *v. t.* to revoke or annul. [ABOLISH.]
coun-ter-pane (*koun'ter-pān*), *n.* a bed coverlet.
coun-ter part (*-pärt*), *n.* a duplicate.
coun-ter-sign (*koun'tĕr-sīn*), *n.* an additional signature to a document to attest it.
count-ess (*kount'es*), *n.* the wife of an earl or count.
count-ing-house (*'ing-hous*), *n.* the room where accounts or mercantile transactions are carried on.
coun-try (*kun'tri*), *n.* [*pl.* countries (*'triz*)], a tract of land; region; rural parts. [LAND.]
coun-ty (*koun'ti*), *n.* [*pl.* counties (*'tiz*)], a definite district of a country separated from the rest for political or judicial administrative purposes.
cou-ple (*kup'l*), *n.* two of the same kind connected together; a pair; man and wife: *v. t.* to link or join together.
coup-let (*kup'let*), *n.* two successive lines of verse which rhyme together.
★**cou-pon** (*kōō'pon*), *n.* a certificate attached to transferable bonds; a section of a ticket.
cour-age (*kur'āj*), *n.* fortitude; valor.
Syn. COURAGE, fortitude, resolution. *Courage* respects action, *fortitude* respects passion; a man has *courage* to meet danger, and *fortitude* to endure pain; *resolution* simply marks the will not to recede; we require *resolution* not to yield to the first difficulties that offer. [See *bravery*.]
cour-a-geous (*-ā'jus*), *adj.* brave; bold.
cou-ri-er (*kōō'ri-ĕr*), *n.* a special messenger.
course (*kôrs*), *n.* a race; a path or track; career; direction or line of motion; regular sequence; conduct.
court (*kôrt*), *n.* a paved space surrounded by houses; a royal palace; the retinue of a sovereign: *v. t.* to pay court to; woo; flatter; solicit. [ADDRESS.]
★**cour-te-ous** (*kûr'tē-us*), *adj.* polite; obliging.
cour-te-san (*'tē-zan*), *n.* a prostitute.
cour-te-sy (*'tē-si*), *n.* [*pl.* courtesies (*-siz*)], politeness combined with kindness.
courte-sy (*kûrt'si*), *n.* [*pl.* courtesies (*-siz*)], a salutation made by bending the knees.
court-ier (*kôrt'yĕr*), *n.* one who frequents or attends court.
court-ly (*'li*), *adj.* refined; elegant.
court-mar-tial (*-mär'shal*), *n.* [*pl.* courts-martial], a court of justice composed of naval or military officers.
★**cous-in** (*kuz'n*, not *kuz'in*), *n.* the son or daughter of an uncle or aunt.
cove (*kōv*), *n.* a small sheltered inlet or creek; a fellow.
cov-e-nant (*kuv'e-nant*), *n.* a written agreement; a free promise of God's blessing.
Covent Garden theater. A theater in Bow street, Covent Garden, London, built by John Rich, the famous harlequin of Lincoln's Inn theater, in 1731.
Coventry (*kuv'en-tri*). The name of this English city is not derived from "convent," as some suppose, but from *Cune*, or *Coven*, the name of the stream on which it is built.
cov-er (*kuv'ĕr*), *v. t.* to overspread, as the top of anything, with something else
Syn. COVER, shelter, screen. *Cover* includes the idea of concealing; *shelter* comprehends that of protecting from some immediate or impending evil; *screen* includes that of warding off some trouble.
Ant. REVEAL.
cov-ert (*kuv'ĕrt*), *adj.* concealed; covered; disguised.
cov-et (*kuv'et*), *v. t.* to desire earnestly; lust after. [DESIRE.]
★**cov-et-ous** (*-us*), *adj.* inordinately desirous.
cov-ey (*kuv'i*), *n.* a hatch or brood of birds.
cow (*kou*), *n.* [*pl.* cows (*kouz*)], the mature female of the genus bos, or ox: *v. t.* to depress with fear.
cow-ard (*'ĕrd*), *n.* one without courage; a dastard; poltroon.
★**cow-ard-ice** (*-is*, not *is*), *n.* dishonorable fear.
cow-er (*kou'ĕr*), *v. i.* to crouch or sink down through fear; tremble.
cow-hide (*'hīd*), *n.* the tanned and dressed skins of cows: *adj.* made of cowhide.
cowl (*koul*), *n.* a monk's hood; a revolving cover for a chimney pot.
cow-lick (*'lik*), *n.* a tuft of hair turned up or awry on the forehead.
cox-comb (*koks'kōm*), *n.* a fop.
coy (*koi*), *adj.* bashful.
coy-o-te (*kī'ō-tē* or *ki'ōt*), *n.* the prairie wolf.
coz-en (*kuz'n*), *v. t.* to cheat.
co-zy (*kō'zi*), *adj.* warm and comfortable; snug.
crab (*krab*), *n.* a short-tailed, stalk-eyed, ten-footed crustacean.
crack (*krak*), *n.* a chink or fissure; a narrow fracture: *v. t.* and *v. i.* to burst, break, or sever: *adj.* of superior excellence. [BREAK.]
crack-er (*krak'ĕr*), *n.* a hard biscuit; a firework.
crac-kle (*krak'l*), *v. i.* to make a slight, sharp explosive noise: *n.* a noise of frequent and slight cracks.
Cracow (*krā'kō*). The town of *Krak*, duke of Poland.
cra-dle (*krā'dl*), *n.* a baby's crib or little bed; infancy: *v. t.* to rock or place in a cradle.
craft (*kräft*), *n.* manual skill; a trade; cunning.
crafts-man (*krafts'man*), *n.* [*pl.* craftsmen (*'men*)], a skilled artisan.
crag (*krag*), *n.* a steep, rugged rock.
cram (*kram*), *v. t.* [*p. t.* and *p. p.* crammed, *p. pr.* cramming], to stuff; tell lies to.
cramp (*kramp*), *n.* a rectangular piece of iron with a tightening screw at one end.
cran-ber-ry (*kran'ber-ri*), *n.* [*pl.* cranberries (*-riz*)], the marsh whortleberry.
crane (*krān*), *n.* a large wading bird with very long legs and neck; a machine for raising heavy weights.
cra-ni-al (*krā'ni-al*), *adj.* pertaining to the skull.
cra-ni-um (*'ni-um*), *n.* [*pl.* crania], the skull.
crank (*krangk*), *n.* a device for causing the rotation of an axis; a crotchety or impracticable person.
crank-y (*'i*), *adj.* full of crotchets or cranks; liable to be upset.
cran-ny (*'ni*), *n.* [*pl.* crannies (*'niz*)], a chink.
crape (*krāp*), *n.* a thin black gauze made of raw silk and gummed.
crash (*krash*), *v. t.* to clash together with violence: *v. i.* to make a loud clattering noise.
crass (*kras*), *adj.* gross; dense; obtuse.
crate (*krāt*), *n.* a wicker hamper.
cra-ter (*krā'tĕr*), *n.* the cup-shaped cavity of a volcano.
cra-vat (*krä-vat'*), *n.* a neckcloth.
crave (*krāv*), *v. t.* to ask for with humility. [BEG.]
cra-ven (*krā'vn*), *adj.* cowardly; base: *n.* a coward; recreant.
craw-fish (*kraw'fish*) or **crayfish** (*krā'*), *n.* the common name of a fresh-water lobster-like crustacean.
crawl (*krawl*), *v. i.* move slowly and with difficulty.
cray-on (*krā'un*), *n.* a kind of chalk pencil.
craze (*krāz*), *v. i.* to become demented: *n.* a passing fashion or infatuation.
creak (*krēk*), *v. i.* to make a sharp, harsh, grating sound.
cream (*krēm*), *n.* the rich, oily part of milk.
cream-er-y (*'ĕr-i*), *n.* [*pl.* creameries (*-iz*)], a place where butter and cheese are made.
cream of tar-tar (*ov tär'tĕr*), *n.* purified tartar or argol.
crease (*krēs*), *n.* a mark made by folding or doubling anything.
cre-ate (*krē-āt'*), *v. t.* to cause to come into existence. [CAUSE, MAKE.]
cre-a-tion (*-ā'shun*), *n.* the act of creating.
cre-a-tor (*'tĕr*), *n.* one who creates.
Creator, *n.* the Supreme Being.
crea-ture (*krē'tūr*), *n.* anything created, especially a living being.
★**cre-dence** (*krē'dens*, not *kred'ens*), *n.* belief; trust.
cre-den-tial (*-den'shal*), *adj.* giving a claim or title to credit: *n. pl.* letters or certificates given to a person to show he has a right.
cred-i-ble (*cred'i-bl*), *adj.* worthy of credit; probable.
cred-it (*kred'it*), *v. t.* to believe; trust; enter on the credit side of an account: *n.* belief; honor.
Syn. CREDIT, favor, influence. *Credit* rises out of esteem; *favor* out of good-will or affection; *influence* out of either credit or favor or external circumstances; *influence* is employed in directing others; weak people easily give their *credit*, or bestow their *favor*, by which an *influence* is gained over them to bend them to the will of others.
cre-du-li-ty (*crē-dū'li-ti*), *n.* ready belief.
★**cred-u-lous** (*kred'ū-lus*, not *krej'ōō-lus*), *adj.* easily imposed upon.
creed (*krēd*), *n.* a brief statement of belief. [FAITH.]
★**creek** (*krēk*, not *krik*), *n.* a small bay; cove.
creep (*krēp*), *v. i.* [*p. t.* and *p. p.* crept, *p. pr.* creeping], to move slowly along the ground.
creep-er (*'ĕr*), *n.* one who, or that which, creeps.
cre-mate (*krē'māt*), *v. t.* to reduce to ashes by heat, especially dead bodies.
cre-ma-tion (*-mā'shun*), *n.* the act of cremating.
★**cre-ma-to-ry** (*'mä-tō-ri*), *n.* [*pl.* crematories (*-riz*)], a place for burning the dead.
cre-ole (*krē'ōl*), *n.* a native of Spanish America or the West Indies: *adj.* pertaining to a creole.
cre-o-sote (*'ō-sōt*), *n.* a heavy oily liquid with a smoky smell.
cres-cent (*kres'ent*), *adj.* growing: *n.* an increasing or new moon; a figure like a new moon.
cress (*kres*), *n.* a name for various cruciferous plants.
crest (*krest*), *n.* a plume of feathers on the head of a bird, helmet, etc.; the ridge of a wave; summit of a hill.
crest-fal-len (*'fawl-n*), *adj.* dejected.
cre-ta-ceous (*krē-tā'shus*), *adj.* composed of, or like, chalk.
cre-vasse (*krā-vās'*), *n.* a deep fissure in a glacier ice.
crev-ice (*krev'is*), *n.* a crack; fissure.
crew (*krōō*), *n.* a ship or boat's company.
crib (*krib*), *n.* a rack or manger; a stall for horses or cattle; a child's bed.
crib-bage (*'āj*), *n.* a card game.
crick (*krik*), *n.* a painful stiffness of the muscles of the neck.
crick-et (*'et*), *n.* the well-known game; a chirping insect.
crime (*krīm*), *n.* a violation of the law.
Syn. CRIME, vice, sin. A *crime* is a social offense; a *vice* is a personal offense; every action which does injury to others, either individually or collectively, is a *crime;* that which does injury to ourselves is a *vice*. *Crime* consists in a violation of human laws; *vice* in a violation of the moral law; *sin* in a violation of the divine law. [See *abomination*.]
Crimea (*krī-mē'ä*). A peninsula in southern Russia named from a small town established in the peninsula by the Kimri, or Cymri.

crim-i-nal (*krim'i-nal*), *adj.* pertaining to crime.
Syn. CRIMINAL, culprit, malefactor, felon, convict. When we wish to speak in general of those whose offenses have exposed them to punishment, we denominate them *criminals;* when we consider them as already brought before a tribunal, we call them *culprits;* when we consider them as the promoters of evil rather than of good, we entitle them *malefactors;* when we consider them as offending by the grosser violations of the law, they are termed *felons;* when we consider them as already under the sentence of the law, we denominate them *convicts.*
crim-i-nal-i-ty (*-nal'i-ti*), *n.* guilt.
crim-i-nate (*'i-nāt*), *v. t.* to accuse, or declare, guilty of crime.
crim-i-nol-o-gy (*-i-nol'ō-ji*), *n.* the scientific investigation of crimes.
crimp (*krimp*), *v. t.* to bend or twist in regular undulations: *n.* formerly one who entrapped men for the English navy or army.
crim-son (*krim'zn*), *n.* a deep red color inclining to purple.
cringe (*krinj*), *v. i.* to bend or crouch from fear.
crin-kle (*kring'kl*), *v. t.* to wrinkle; corrugate: *n.* a wrinkle.
crin-o-line (*krin'ō-lin*), *n.* a hoopskirt.
crip-ple (*krip'l*), *n.* one who is lame.
Cripplegate (*krip'l-gāt*) or **Crepelgate.** An old London gate, probably built by King Alfred in 886 A. D.
cri-sis (*krī'sis*), *n.* [*pl.* crises (*-sēz*)], a turning point; a critical turn in a disease; emergency.
Cris Kingle (*kris' king'l*). Also variously spelled *Kriss Kingle,* and *Kriss Kringle,* has been corrupted from the German word, *Christ-Kindel,* meaning the "little Christ-child."
crisp (*krisp*), *adj.* wavy; curled; brittle; terse.
criss-cross (*kris'krôs*), *n.* an intersection; a child's game.
cri-te-ri-on (*kri-tē'ri-un*), *n.* [*pl.* criteria (*-ā*)], a standard, law, or rule.
Syn. CRITERION, standard. The *criterion* is employed only in matters of judgment; the *standard* is used in the ordinary concerns of life. The former serves for determining the characters and qualities of things; the latter for defining quantity and measure.
crit-ic (*krit'ik*), *n.* one skilled in criticism.
crit-ic-al (*'i-kal*), *adj.* nicely exact.
crit-i-cise (*'i-siz*), *v. t.* to examine or judge as a critic.
crit-i-cism (*'i-sizm*), *n.* the art of judging and defining the merits of a literary or artistic work.
cri-tique (*kri-tēk'*), *n.* a careful analysis.
croak (*krōk*), *v. i.* to make a sound like a raven: *n.* the low, hoarse sound of the raven or frog.
cro-chet (*krō-shā'*), *n.* a kind of knitting: *v. t.* to work in crochet.
crock (*krok*), *n.* soot on a kettle, etc.: *v. t.* to blacken with soot; smudge.
crock-er-y (*'ēr-i*), *n.* earthenware.
croc-o-dile (*'ō-dīl*), *n.* a large lizard-like amphibian reptile.
cro-cus (*krō'kus*), *n.* a genus of iridaceous plants.
crone (*krōn*), *n.* an old woman.
cro-ny (*krō'ni*), *n.* [*pl.* cronies (*'niz*)], a familiar friend.
crook (*krook*), *n.* a bend; a shepherd's hooked staff.
croon (*krōōn*), *v. i.* to utter a hollow continued moan.
crop (*krop*), *n.* the produce of the ground; a bird's craw: *v. t.* [*p. t.* and *p. p.* cropped, cropt, *p. pr.* cropping], to cut off the tops or ends of anything; reap.
cro-quet (*krō-kā'*), *n.* a lawn game.
cro-quette (*-ket'*), *n.* ball of mincemeat, fish, or fowl.
cross (*krôs*), *n.* a gibbet of wood formed of an upright and a piece placed across it: now the emblem of the Christian faith; anything resembling a cross *adj.* not parallel; fretful; perverse; untractable. [CAPTIOUS.]
cross-bill (*'bil*), *n.* a bill brought by a defendant against a plaintiff, praying for relief.
cross-bow (*'bō*), *n.* a shooting weapon.
cross-breed (*'brēd*), *n.* an animal produced by a male and female of different varieties.
cross-ex-am-i-na-tion (*-eg-zam-i-nā'shun*), *n.* the questioning of a witness by his own, or the opposing, counsel.
cross-grained (*'grānd*), *adj.* with an irregular grain or fiber.
cross-stitch (*'stich*), *n.* a stitch formed of two stitches of the same length, intersecting in the middle.
cross-tie (*'tī*), *n.* a railroad sleeper.
cross-trees (*'trēz*), *n. pl.* short pieces of timber at the upper ends of the lower and top masts.
cross-wise (*'wīz*), *adv.* across; cross-shaped.
crotch (*krock*), *n.* a hook or fork.
crotch-et (*'et*), *n.* a musical note; a whim or fancy.
★**crouch** (*krouch*, not *krōōch*), *v. i.* to stoop low; cringe.
croup (*krōōp*), *n.* the rump or buttocks of certain animals; inflammation of the trachea and larynx.
crow (*krō*), *v. i.* [*p. t.* and *p. p.* crowed, crew, *p. pr.* crowing], to make a shrill sound like a cock: *n.* a general name for birds of the genus Corvus.
crow-bar (*'bär*), *n.* an iron lever.
crowd (*kroud*), *n.* a number of persons or things collected closely together: *v. i.* to press in numbers.
crown (*kroun*), *n.* a royal headdress worn as the insignia of sovereignty: *v. t.* to invest with a crown.
Crown Point, N. Y. Alleged to be so named because scalping ("crown") parties were sent out from this place by the French and Indians.
crow's-foot (*krōz'-foot*), *n.* the ranunculus: *pl.* wrinkles under the eyes.
crow's-nest (*krōz'-nest*), *n.* a lookout, on the mainmast of a vessel.
cru-cial (*krōō'shal*), *adj.* cruciform; intersecting; severe; searching.
cru-ci-ble (*'si-bl*), *n.* a melting-pot.
cru-ci-fix (*'si-fiks*), *n.* [*pl.* crucifixes (*-ez*)], a cross with the sculptured figure of Christ.
cru-ci-fix-ion (*-si-fik'shun*), *n.* the act of crucifying.
cru-ci-fy (*'si-fī*), *v. t.* [*p. t.* and *p. p.* crucified, *p. pr.* crucifying], to put to death by nailing the hands and feet to a cross.
crude (*krōōd*), *adj.* in a natural state.
crud-i-ty (*'i-ti*), *n.* [*pl.* crudities (*-tiz*)], the state or condition of being crude.
cru-el (*krōō'el*), *adj.* disposed to give pain to others; merciless.
Syn. CRUEL, inhuman, barbarous, brutal, savage. A person is *cruel* who neglects the creature he should protect and take care of; he is *inhuman* if he withhold from him the common marks of tenderness or kindness; he is *barbarous* if he find amusement in inflicting pain; he is *brutal* or *savage* according to the circumstances of aggravation which accompany the act of torturing.
cru-el-ty (*'el-ti*), *n.* [*pl.* cruelties (*-tiz*)], inhumanity.
cru-et (*'et*), *n.* a small glass vial.
cruise (*krōōz*), *v. i.* to sail to and fro.
cruis-er (*'ēr*), *n.* a person, or ship, that cruises.
crumb (*krum*), *n.* a fragment of bread.
crum-ble (*'bl*), *v. t.* to break into crumbs.
crum-ple (*'pl*), *v. t.* to press into wrinkles; rumple.
crunch (*krunch*), *v. t.* to crush with the teeth: *v. i.* to chew audibly.
crup-per (*krup'ēr*), *n.* the buttocks of a horse; the looped leather band passing round a horse's tail.
cru-ral (*krōō'ral*), *adj.* pertaining to the leg or thigh.
cru-sade (*krōō-sād'*), *n.* a mediæval military expedition under the banner of the cross by any one of the Christian powers to recover the Holy Land.
cruse (*krōōs*), *n.* an earthen pot or dish.
crush (*krush*), *v. t.* to press between two opposite bodies; break by pressure.
crust (*krust*), *n.* a hard external coating or rind.
crus-ta-ceous (*krus-tā'shus*), *adj.* shelly.
crus-ty (*krus'ti*), *adj.* like a crust; snappish.
crutch (*kruch*), *n.* a support for cripples.
cry (*krī*), *v. i.* [*p. t.* and *p. p.* cried, *p. pr.* crying], to call aloud; proclaim: *n.* loud or passionate utterance; a party catchword or phrase.
Syn. CRY, weep. *Crying* arises from an impatience in suffering corporeal pains; *weeping* is occasioned by mental grief. [See *call.*]
cry-ing (*'ing*), *p. adj.* specially demanding notice.
crypt (*kript*), *n.* a subterranean cell or vault.
cryp-tic (*krip'tik*), *adj.* hidden; secret.
cryp-to-gram (*krip'tō-gram*), *n.* a system of writing in cipher.
cryp-tog-ra-phy (*-tog'ra-fi*), *n.* the art of writing in cipher.
crys-tal (*kris'tal*), *n.* an inorganic body having a definite geometrical form.
crys-tal-line (*'tal-lin* or *-lin*), *adj.* pertaining to, or having the form of, a crystal.
crys-tal-li-za-tion (*-li-zā'shun*), *n.* the act of crystallizing.
crys-tal-lize (*'tal-īz*), *v. t.* to cause to form crystals or a crystalline structure.
cub (*kub*), *n.* the young of certain animals, as the fox.
Cuba (*kū'ba*, Spanish *kōō'bä*). The largest island of the West Indies, discovered by Columbus in 1492, on his first voyage.
cub-by-hole (*kub'i-hōl*), *n.* a snug place.
cube (*kūb*), *n.* a regular solid body with six equal square sides or faces.
cu-beb (*kū'beb*), *n.* the small spicy berry of a species of pepper.
cu-bic (*'bik*), *adj.* having the form or properties of a cube.
cu-bit (*'bit*), *n.* an ancient measure of about 18 inches.
cuck-old (*kuk'ōld*), *n.* the husband of an adulteress.
cuck-oo (*kook'ōō*), *n.* a passerine bird with a dark plumage and curved bill.
cu-cum-ber (*kū'kum-bēr*), *n.* a creeping plant.
cud (*kud*), *n.* food brought from the first stomach of a ruminating animal back into the mouth.
cud-dle (*kud'l*), *v. t.* to embrace closely.
cudg-el (*kuj'el*), *n.* a short thick stick.
cue (*kū*), *n.* the last word of an actor's speech; the tapering rod used in billiards.
cuff (*kuf*), *n.* a blow; the ornamental fold of the sleeve of a garment at the wrist.
★**cui-rass** (*kwē-ras'*), *n.* a breastplate.
★**cui-sine** (*kwē-zēn'*), *n.* the kitchen of a hotel.
★**cu-li-na-ry** (*kū'li-nā-ri*, not *kul'in-ā-ri*), *adj.* pertaining to the kitchen.
cull (*kul*), *v. t.* to pick out.
cul-mi-nate (*'mi-nāt*), *v. i.* to reach the highest point.
cul-mi-na-tion (*-mi-nā'shun*), *n.* the attainment of the highest point.
cul-pa-bil-i-ty (*-pa-bil'i-ti*), *n.* liability to blame.
cul-pa-ble (*'pa-bl*), *adj.* deserving censure; criminal.
cul-prit (*'prit*), *n.* one arraigned before a judge. [CRIMINAL.]
cult (*kult*), *n.* a particular ritual or system of worship.
cul-ti-vate (*kul'ti-vāt*), *v. t.* to till; improve by care, labor, or study.
cul-ti-va-tion (*-vā'shun*), *n.* the act of cultivating.
Syn. CULTIVATION, culture, civilization, refinement. *Cultivation* is with more propriety applied to the thing that grows; *culture* to that in which it grows. The *cultivation* of flowers will not repay the labor unless the soil be prepared by proper *culture. Civilization* is the first stage of *cultivation; refinement* is the last; we *civilize* savages by divesting them of their rudeness; we *refine* them by the introduction of the liberal arts.
cul-tur-al (*'tūr-al*), *adj.* pertaining to culture.
cul-ture (*'tūr*), *n.* tillage; the training or refining of the moral or intellectual faculties. [CULTIVATION.]
cul-vert (*'vērt*), *n.* a drain or waterway of masonry or brickwork.
cum-ber (*kum'bēr*), *v. t.* to hinder; embarrass.
Cumberland mountains and river. In Tennessee. Name applied by Dr. Thomas Walker, an English explorer (1748), in honor of the duke of Cumberland, at that time prime minister of England.
cum-brous (*'br s*), *adj.* troublesome; vexatious.
cu-mu-la-tive (*kū'mū-lā-tiv*), *adj.* augmenting or giving force.
cu-ne-i-form (*kū-nē'i-fôrm*), *adj.* having the form of a wedge.
cun-ning (*kun'ing*), *adj.* crafty; sly; designing; subtle.
cup (*kup*), *n.* a small drinking vessel.
★**cup-board** (*kub'bērd*), *n.* a closet fitted with shelves.
cu-pid-i-ty (*kū-pid'i-ti*), *n.* covetousness.
★**cu-po-la** (*'pō-lä*, not *kū'pa-lō*), *n.* [*pl.* cupolas (*-läz*)], a spherical cup-shaped roof.
cu-pre-ous (*'prē-us*), *adj.* coppery.
cur (*kēr*), *n.* a mongrel dog.
cur-a-ble (*kūr'ä-bl*), *adj.* remediable.
cu-rate (*kū'rāt*), *n.* a clergyman who assists a vicar.
cur-a-tive (*kūr'ä-tiv*), *adj.* pertaining to the cure of diseases.
★**cu-ra-tor** (*-rā'tēr*), *n.* the superintendent of a museum.
curb (*kērb*), *v. t.* restrain; keep in subjection: *n.* that which checks, restrains.
curd (*kûrd*), *n.* the coagulated part of milk.
cur-dle (*kûr'dl*), *v. t.* to thicken into curd.
cure (*kūr*), *n.* restoration to health; the act, or art, of healing: *v. t.* to heal; preserve by salting.
Syn. CURE, heal, remedy. To *cure* is employed for what is out of order; to *heal* for that which is broken; diseases are *cured,* wounds are *healed.* To *remedy,* in the sense of applying remedies, has a moral application; an omission, a deficiency, or a mischief, requires to be *remedied.*
Ant. DIE, grow worse, relapse.
cur-few (*kûr'fū*), *n.* a bell rung at 8 p. m. as an intimation that fires were to be extinguished.
cu-ri-ous (*kū'ri-us*), *adj.* desirous to see or know something new or strange; inquisitive.
Syn. CURIOUS, inquisitive, prying. *Curiosity* is directed to all objects that can gratify the inclination, taste, or understanding; *inquisitiveness* to such things only as satisfy the understanding; a *prying* temper endeavors to get acquainted with the secrets of others. [See *rare.*]
Ant. HEEDLESS, uninterested.
curl (*kûrl*), *n.* a ringlet of hair: *v. t.* to twist into ringlets; curve.
curl-ing (*kûrl'ing*), *n.* a popular Scottish game played on the ice.
cur-mudg-eon (*kur-muj'un*), *n.* a grasping, churlish fellow.
cur-rant (*'ant*), *n.* a small variety of dried grape.
cur-ren-cy (*'en-si*), *n.* the circulating monetary medium of a nation used by authority.
cur-rent (*'ent*), *adj.* widely circulated: *n.* a flow or passing: said of fluids. [STREAM.]
cur-ric-u-lum (*-ik'ū-lum*), *n.* [*pl.* curriculums (*-lumz*)], a prescribed course of study.
Currituck sound, N. C. Named from a tribe of Indians, who lived on its shores.
cur-ry (*kur'i*), *v. t.* [*p. t.* and *p. p.* curried, *p. pr.* currying], to dress after tanning.
curse (*kûrs*), *n.* an imprecation of evil; a profane oath. [ABOMINATION.]
cur-so-ry (*kûr'sō-ri*), *adj.* hasty; superficial.
Syn. CURSORY, hasty, slight, desultory. An author will take a *cursory* view of those points which are not necessarily connected with his subject; one who takes a *hasty* view of a subject will mislead by his errors; he who takes a *slight* view will disappoint by the shallowness of his information. Between *cursory* and *desultory* there is the same difference as between running and leaping; we run in a line, but we leap from one part to another; so remarks that are *cursory* have more or less connection, but remarks that are *desultory* are without coherence.
Ant. CAREFUL, detailed, thorough, orderly, methodical.
curt (*kûrt*), *adj.* abrupt.
cur-tail (*kûr-tāl'*), *v. t.* to cut short.
cur-tain (*'tin*), *n.* a textile hanging screen which can be drawn up or set aside.
curt-sy (*kûrt'si*), *n.* [*pl.* curtsies (*'siz*)], a salutation made by bending the knees.
cur-va-ture (*kûr'vä-tūr*), *n.* a bending.
curve (*kûrv*), *n.* a bending without angles.

cur-vet (*kûr'* or *kûr-vet'*), *n.* a particular leap of a horse.
cur-vi-lin-e-al (*-vi-lin'ē-al*), or **curvilinear** (*-ár*), *adj.* consisting of, or bounded by, curved lines.
cush-ion (*koosh'un*), *n.* a pillow or soft pad.
cusp (*kusp*), *n.* the horn of a crescent; a sharp, rigid point.
cus-pi-dor (*kus'pi-dōr*), *n.* a spittoon.
cus-tard (*'tērd*), *n.* a composition of eggs, milk, etc.
cus-to-di-an (*-tō'di-an*), *n.* one who has the care of anything.
cus-to-dy (*'tō-di*), *n.* guardianship; imprisonment; security. [KEEPING.]
cus-tom (*'tum*), *n.* frequent or habitual repetition of the same act; duties on imported or exported goods.
Syn. CUSTOM, habit. *Custom* is a frequent repetition of the same act; *habit* the effect of such repetition. *Custom* supposes an act of the will; *habit* implies an involuntary movement; a custom is followed; a *habit* is acquired.
Syn. CUSTOM, fashion, manner, practice. *Custom* is authoritative; it stands in the place of law, and regulates the conduct of men in the most important concerns of life; *fashion* is arbitrary and capricious; it decides in matters of trifling import; *manners* are rational; they are the expressions of moral feelings; *practice* signifies actual doing or the thing done. [See *usage*.]
cut (*kut*), *v. t.* [*p. t.* and *p. p.* cut, *p. pr.* cutting], to cleave or separate with a sharp instrument: *v. i.* to make an incision: *n.* an incision or wound made by a sharp instrument.
cu-ta-ne-ous (*kū-tā'ne-us*), *adj.* pertaining to the skin.
cut-a-way (*kut'ä-wā*), *adj.* cut back from the waist.
cute (*kūt*), *adj.* sharp; clever.
cut-glass (*kut'glás*), *n.* flint glass cut into facets or figures.
cu-ti-cle (*kū'ti-kl*), *n.* the scarf skin.
cut-ler-y (*kut'lĕr-i*), *n.* edged or cutting instruments.
cut-let (*'let*), *n.* a slice of meat.
cut-off (*'ôf*), *n.* a short or straight road; a new shorter channel.
cut-out (*'out*), *n.* a switch-like contrivance to cut off an electric light.
cut-ter (*'ĕr*), *n.* one who cuts or hews; one who cuts out and shapes garments.
cut-throat (*'thrōt*), *n.* a murderer.
cut-ting (*'ing*), *p. adj.* dividing by an edged instrument: *n.* a piece cut off or from.
cut-tle (*kut'l*), *n.* the cuttlefish.
cut-water (*'waw-tĕr*), *n.* the fore part of a ship's prow.
Cuzco (*kōōz'kō*). A department of Peru.
cy-a-nide (*si'ä-nīd*), *n.* a compound of cyanic acid with a metal.
cy-an-o-gen (*-an'ō-jen*), *n.* a colorless poisonous gas.
★**cy-cle** (*sī'kl*, not *sik'l*), *n.* a revolution of a certain period of time; an imaginary circle in the heavens: *v. i.* [*p. t.* and *p. p.* cycled, *p. pr.* cycling], to occur, or recur, in cycles.
cyc-lic (*sik'lik* or *sī'klik*), *adj.* pertaining to, or moving in, a cycle.
cy-clone (*'klōn*), *n.* an atmospheric movement in which the wind blows spirally toward a center.
cy-clo-pæ-di-a or **cyclopedia** (*sī-klō-pē'di-ä*), *n.* a shorter form of *encyclopædia*.
cy-clo-ra-ma (*sī-klō-rä'mä*), *n.* a series of pictures extended circularly so as to appear in natural perspective to the spectator standing in the center.
cy-clo-style (*'klō-stīl*), *n.* an apparatus for producing manifold copies.
cyg-net (*sig'net*), *n.* a young swan.
cyl-in-der (*sil'in-dĕr*), *n.* a right prism, having circles for bases; a body, solid or hollow, of such form.
cy-lin-dric (*si-lin'drik*), *adj.* having the form of a cylinder.
cym-bal (*sim'bal*), *n.* one of a pair of circular disk-shaped brass plates, which when struck produce a clashing sound.
cyn-ic (*sin'ik*), *n.* a morose, surly, or sarcastic person.
cyn-ic-al (*'i-kal*), *adj.* like a cynic.
cyn-i-cism (*'i-sizm*), *n.* the temper and practice of a cynic.
cy-no-sure (*sī'nō-* or *sin'ō-shūr*), *n.* an object of general attraction.
Cynthia (*sin'thi-ä*). A name of Diana; so called from *Mount Cynthus*, where she was born.
cy-press (*sī'pres*), *n.* a coniferous tree, the emblem of mourning.
Cyprian (*sip'ri-an*). From the Latin *Cyprianus*, "of Cyprus." Dutch, *Cypriaan;* Fr., *Cyprien;* Ger., *Cyprian;* It., *Cipriano;* Port., *Cypriano;* Sp., *Cipriano*.
Cyprus (*sī'prus*). Perhaps named from the herb *kupros*, with which it abounded.
Cyril, Cyrill (*sir'il*). From the Latin name *Cyrillus*, a diminutive of *Cyrus*, meaning "little Cyrus." Danish, *Cyrillus;* Dutch, *Cyrillus;* Fr., *Crilley;* It., *Cirillo;* Lat., *Cyrillus*.
Cyrus (*sī'rus*). From Greek *kuros*, "the supreme power." Fr., *Cyrus;* Ger., *Cyrus;* Gr., *Kuros;* It., *Ciro;* Lat., *Cyrus;* Sp., *Ciro*.
cyst (*sist*), *n.* a bladder; pouch.
cy-tode (*sī'tōd*), *n.* a cell.
czar (*zär*), or **tsar** (*tsär*), *n.* the title of the Russian emperor.
★**czar-e-vitch** (*zär'ē-vich*), or **tsarevitch** (*tsär'*), *n.* the eldest son of the czar.
cza-rev-na (*zä-rev'nä*) or **tsarevna** (*tzä-rev'nä*), *n.* a Russian princess (imperial).
cza-ri-na (*zä-rē'nä*) or **tsarina** (*tsä-*), *n.* the wife of the czar.

D

dab (*dab*), *v. t.* [*p. t.* and *p. p.* dabbed, *p. pr.* dabbing], to strike or touch lightly: *n.* a gentle blow.
dab-ble (*dab'l*), *v. t.* to dip slightly and often.
dab-ster (*'stĕr*), *n.* an expert.
dace (*dās*), *n.* a small fresh-water fish.
dachs-hund (*dăks'hoōnt*), *n.* the German badger dog.
dac-tyl (*dak'til*), *n.* a poetical foot of three syllables, one long and two short.
dad-dy long-legs (*dad'i long'legz*), a name for various kinds of crane fly.
da-do (*dā'dō*), *n.* the solid block forming the body of a pedestal.
daf-fo-dil (*daf'ō-dil*), *n.* the narcissus.
daft (*daft*), *adj.* simple; silly.
dag-ger (*dag'ĕr*), *n.* a short, edged and pointed weapon.
da-go (*dā'gō*), *n.* [*pl.* dagos (*'gōz*)], a nickname for a person of Spanish, Portuguese, or Italian descent.
★**da-guerre-o-type** (*dä-ger'ō-tīp*, not *dā-ger-ē'ō-tīp*), *n.* a picture produced on a silvered plate.
dah-lia (*dal'yä*), *n.* [*pl.* dahlias (*'yäz*)], a composite plant, with large bright colored flowers.
Dahlonega (*dä-lō-nē'gä*), **Ga.** Named from the Indian, *taulawneca*, "yellow wampum," from the discovery of gold at this place.
dai-ly (*dā'li*), *n.* [*pl.* dailies (*'liz*)], a daily paper: *adj.* occurring or recurring each successive day.
Syn. DAILY, diurnal. *Daily* is applicable to whatever passes in the daytime; *diurnal* applies to what passes within or belongs to the astronomical day.
dain-ty (*dān'ti*), *n.* [*pl.* dainties (*'tiz*)], something choice or delicious; sensitive.
dai-ry (*dā'ri*), *n.* [*pl.* dairies (*'riz*)], a place where milk is kept and converted into butter and cheese.
★**da-is** (*dā'is*), *n.* a raised platform.
dai-sied (*dā'zid*), *adj.* full of, or adorned with, daisies.
dai-sy (*dā'zi*), *n.* [*pl.* daisies (*'ziz*)], a low composite herb.
Daisy. A female name, derived from the flower, whose name in Anglo-Saxon signifies "day's eye."
Dakota (*dä-kō'tä*). Two states—North and South Dakota—counties in Nebraska and Minnesota, and several small places, named for the Indian tribe.
Dakota river, Dak. Named originally from the territory.
dale (*dāl*), *n.* a vale; glen.
Dalilah. Another spelling of *Delilah*.
dal-li-ance (*dal'i-ans*), *n.* the act of dallying.
dal-ly (*dal'i*), *v. i.* [*p. t.* and *p. p.* dallied, *p. pr* dallying], to trifle away time; loiter.
dam (*dam*), *n.* a barrier across a watercourse; a female parent: *v. t.* to confine by a dam; restrain.
★**dam-age** (*dam'äj*, not *dam'ij*), *n.* injury or harm: *pl.* money recovered for loss suffered: *v. t.* to injure. [ABUSE.]
dam-ask (*'ask*), *n.* a rich silk fabric woven with elaborate patterns; a fine twilled table linen.
dame (*dām*), *n.* a title formerly used instead of mistress.
damn (*dam*), *v. t.* to sentence to punishment judicially.
dam-na-tion (*-nā'shun*), *n.* the state of being damned.
dam-num (*'num*), *n.* loss or damage.
damp (*damp*), *n.* moisture; fog: *adj.* moist. [MOISTURE.]
dam-sel (*dam'zel*), *n.* a maiden.
dance (*dāns*), *v. i.* to move with measured steps or to a musical accompaniment.
dan-de-li-on (*dan'dē-lī-un*), *n.* a biennial composite plant with large yellow flowers.
dan-der (*'dĕr*), *n.* dandruff; anger.
dan-dle (*'dl*), *v. t.* fondle.
dan-druff (*'druf*), *n.* scurf on the scalp.
dan-dy (*'di*), *n.* [*pl.* dandies (*'diz*)], a fop; coxcomb.
dan-ger (*dān'jĕr*), *n.* hazard; peril.
Syn. DANGER, peril, hazard. *Danger* signifies the chance of a loss; *peril* signifies either to go over or to perish. In all walks of life we are in *danger;* the explorer undergoes *perils*. *Hazard* respects the possibility of either good or evil. When we run the *hazard* of a battle, we may either win or lose.
dan-gle (*dang'gl*), *v. i.* to hang or swing loosely.
Daniel (*dan'yel*). From the Hebrew, *Daniyyel*, which has been translated "God's judge," one who delivers judgment in the name of the Lord. Danish, *Daniel;* Dutch, *Daniel;* Fr., *Daniel;* Ger., *Daniel;* It., *Daniele;* Lat., *Daniel;* Sp., *Daniel*.
Dantzic (*dant'sik*, German *dän'tsig*). A Prussian seaport. Name supposed to be a corruption of *Dansk-vik*, "Dane's town."
Danube (*dan'ūb*). The English name of the great river which the Germans call the *Donau* is derived from the Roman name *Danubius* or *Danuvius*.
dap-per (*dap'ĕr*), *adj.* small and active.
dap-ple (*dap'l*), *adj.* spotted; variegated.
Dardanelles (*där-dä-nelz'*). Modern name of the Hellespont is derived from two Turkish forts guarding the passage, called by the Italians, *Dardanelli*.
dare (*dār*), *v. i.* [*p. t.* dared, durst, *p. p.* dared, *p. pr.* daring], to have courage; attempt.
dar-ing (*dār'ing*), *n.* intrepidity: *adj.* fearless; bold.
dark (*därk*), *adj.* destitute of light; of a brunette complexion: *n.* darkness.
Syn. DARK, obscure, dim, mysterious. *Dark* is opposed to light; *obscure* to bright; what is *dark* is altogether hidden; what is *obscure* is not to be seen distinctly, or without an effort. *Dim* expresses a degree of darkness; any intricate affair, which involves the characters and conduct of men, may be *mysterious*. [See *obscure, mysterious*.]
dark-en (*'en*), *v. t.* to make dark.
dark-y (*'i*), *n.* [*pl.* darkies (*'iz*)], a negro.
dar-ling (*där'ling*), *n.* a favorite.
darn (*därn*), *v. t.* to mend by filling in the hole with yarn or thread.
dar-nel (*där'nel*), *n.* the popular name of a grass, *Lolium tremulentum*.
dart (*därt*), *n.* a small lance or spear: *v. i.* to move swiftly; start suddenly and run quickly.
Dar-win-i-an (*där-win'i-an*), *adj.* pertaining to Charles Darwin, the naturalist: *n.* an evolutionist.
dash (*dash*), *v. t.* to throw violently or hastily: *v. i.* to rush with violence.
das-tard (*das'tērd*), *n.* a coward.
date (*dāt*), *n.* the fruit of the date palm; the time of an epoch or transaction: *v. t.* to mark with a date. [TIME.]
da-tive (*dā'tiv*), *adj.* denoting the case of a noun, pronoun or adjective which expresses the remoter object.
da-tum (*'tum*), *n.* [*pl.* data (*'tä*)], something assumed, known, or conceded.
★**daub** (*dawb*, not *dob*), *v. t.* to cover or smear with adhesive matter.
daugh-ter (*daw'tĕr*), *n.* the female offspring.
daunt (*dänt*), *v. t.* to intimidate; dishearten. [DISMAY.]
Dauphin (*daw'fin*. French, *dō-faN'*). A title formerly borne by the eldest son of the kings of France.
David (*dā'vid*). From the Hebrew *Daviydh*, signifying "beloved." Danish *David;* Dutch, *David;* Fr., *David;* Ger., *David;* It., *Davide;* or *Davidde;* Lat., *David*.
dav-it (*dav'it*), *n.* one of a pair of f-shaped uprights projecting over the side of a vessel for suspending or lowering a boat.
da-vy (*dā'vi*), *n.* [*pl.* davies (*'viz*)], a miner's safety lamp.
daw (*daw*), *n.* a jackdaw.
daw-dle (*daw'dl*), *v. i.* to waste time.
dawn (*dawn*), *v. i.* to begin to grow light.
day (*dā*), *n.* the period of light between sunrise and sunset.
day-book (*'book*), *n.* a book in which the transactions of the day are entered.
day-break (*'brāk*), *n.* the dawn.
day-spring (*'spring*), *n.* the dawn.
daze (*dāz*), *v. t.* to dazzle: *n.* the state of being dazed.
daz-zle (*daz'l*), *v. t.* to overpower by a glare of light.
dea-con (*dē'kn*), *n.* the lowest order of the clergy in the Anglican church.
dead (*ded*), *adj.* destitute of life; inanimate.
dead cen-ter (*sen'tĕr*), that position of a crank in which the crank-axle, crank-pin, and the connecting rod are all in a straight line.
dead-en (*ded'n*), *v. t.* to diminish the acuteness, intensity, or vigor of.
dead-head (*'hed*), *n.* a person who has a free pass on railways or to places of amusement, etc.
dead let-ter (*let'ĕr*), *n.* an unclaimed letter.
dead-lock (*'lok*), *n.* a situation in which progress is impossible.
dead-ly (*'li*), *adj.* causing death.
Syn. DEADLY, mortal, fatal. *Deadly* is applied to what is productive of death; *mortal* to what terminates in or is liable to death; *fatal* applies not only to death, but to everything which may be of great mischief.
Ant. HEALTHFUL, invigorating, wholesome.
dead set (*set*), the fixed position of a dog in pointing game.
dead weight (*wāt*), the weight of the vehicle in addition to the load to be carried.
★**deaf** (*def*), *adj.* deprived of hearing.
★**deaf-en** (*def'n*), *v. t.* to make deaf.
deal (*dēl*), *n.* an indefinite quantity, degree, or extent; a division of cards to the players.
dean (*dēn*), *n.* the presiding ecclesiastical dignitary in cathedral and collegiate churches.
dear (*dēr*), *adj.* expensive; costly: *n.* a darling.
death (*deth*), *n.* extinction of life.
death-point (*deth'point*), *n.* the degree of heat or cold which destroys an animal organism.
death rate (*'rāt*), the percentage of deaths, usually reckoned per thousand.
death's-head (*deths'hed*), *n.* a skull,
Death valley. A desert region in Inyo county, eastern California, near the Nevada frontier, lying about 160 feet below the sea level.
death-watch (*deth'woch*), *n.* a vigil beside a dying person.
de-bar (*dē-bär'*), *v. t.* [*p. t.* and *p. p.* debarred, *p. pr.* debarring], to shut out; exclude.
de-bark (*dē-bärk'*), *v. i.* to disembark.
de-bar-ka-tion (*-bär-kā'shun*), *n.* the act of disembarking.
de-base (*dē-bās'*), *v. t.* to reduce from a higher to a lower state. [ABASE.]
de-ba-ta-ble (*dē-bā'tä-bl*), *adj.* admitting of question or debate.

de-bate (*dē-bāt'*), *v. t.* to contend for in words or arguments: *n.* controversy; discussion.

Syn. DEBATE, deliberate. These terms equally mark the acts of pausing or withholding the decision, whether applicable to one or many. To *debate* supposes always a contrariety of opinion; to *deliberate* supposes simply the weighing or estimating the value of the opinion that is offered.

de-bauch (*dē-bawch'*), *v. t.* to corrupt in morals or principles; seduce.

de-bauch-er-y (*de-bawch'ĕr-i*), *n.* [*pl.* debaucheries (*-iz*)], excessive intemperance.

de-bil-i-tate (*dē-bil'i-tāt*), *v. t.* to enfeeble; enervate.

de-bil-i-ty (*-bil'i-ti*), *n.* [*pl.* debilities (*-tiz*)], abnormal functional weakness.

Syn. DEBILITY, infirmity, imbecility. *Debility* is constitutional, or otherwise; *imbecility* is always constitutional; *infirmity* is accidental, and results from sickness or a decay of the frame. *Debility* may be either general or local; *infirmity* is always local; *imbecility* always general.

Ant. ROBUSTNESS, strength, vigor.

deb-it (*deb'it*), *n.* that which is owing, entered on the debtor side of a ledger.

deb-o-nair (*deb-ō-nâr'*), *adj.* of gentle manners or breeding.

Deborah (*deb'ō-rä*). From the Hebrew, *D'bhorah*, which Jerome translates "a bee," or "eloquence." Dutch, *Debora;* Fr., *Débora;* It., *Debora;* Lat., *Debora.*

de-bouch (*dē-bōōsh'*), *v. i.* to march out of a confined space into open ground.

★**dē-bris** (*dā-brē'*), *n.* fragments; broken rubbish.

debt (*det*), *n.* that which is due from one person to another.

Syn. DEBT, due. *Debt* is commonly applied to that which is owing from the person spoken of; *due* is always applied to that which is owing to the person; to pay one's *debts*, and receive one's *due*.

Ant. CREDIT.

debt-or (*'ĕr*), *n.* one who owes something to another.

★**dē-but** (*dā-bū'*, French *dü-bü'*), *n.* a first appearance in society.

★**dec-ade** (*dek'ād*, not *dē-kād'*), *n.* a group of ten; ten consecutive years.

de-ca-dence (*dē-kā'dens*), *n.* a state of decay.

dec-a-gon (*dek'ä-gon*), *n.* plane figure having ten sides.

dec-a-logue (*'ä-log*), *n.* the ten commandments.

de-camp (*dē-kamp'*), *v. i.* to depart speedily.

de-cant (*dē-kant'*), *v. t.* to pour off gently.

de-can-ter (*-kan'tĕr*), *n.* an ornamental glass bottle for holding wines.

de-cap-i-tate (*dē-kap'i-tāt*), *v. t.* to behead.

de-cay (*dē-kā'*), *v. i.* [*p. t.* and *p. p.* decayed, *p. pr.* decaying], to become impaired; rot.

Syn. DECAY, decline, consumption. What is *decayed* is fallen or gone; what *declines* leads toward a fall, or is going; *consumption* implies a rapid decay.

de-cease (*dē-sēs'*), *v. i.* to die: *n.* death.

de-celt (*dē-sēt'*), *n.* deception; falsehood, deceitful.

Syn. DECEIT, deception. A person is said to be guilty of *deceit* who has sought to deceive another for his own purposes; but *deceptions* may be practiced in a diversity of ways. *Deceitful* and *deceptive* are employed with this distinction, a person is said to be *deceitful*, and a thing *deceptive*. [See *fallacious*.]

Syn. DECEIT, fraud, guile. *Deceit* is practiced only, in private transactions; *fraud* is practiced toward bodies as well as individuals, in public as well as private. A child practices *deceit* toward its parents; *frauds* are practiced upon government; *guile* marks a strong degree of moral turpitude in the individual.

de-ceiv-a-ble (*-sēv'ä-bl*), *adj.* capable of being deceived.

de-ceive (*-sēv'*), *v. t.* to mislead or cause to err; delude.

de-ceiv-er (*'ĕr*), *n.* an impostor, cheat.

Syn. DECEIVER, impostor. A *deceiver* is any one who practices any sort of deception; but an *impostor* is a *deceiver* who studiously *deceives* by putting on a false appearance.

December, the twelfth month. From the Latin *decem*, "ten," tenth month of the Romans.

de-cem-vir (*dē-sem'vĕr*), *n.* [*pl.* decemviri (*'vi-ri*)], one of ten Roman magistrates.

de-cen-cy (*dē-sen-si*), *n.* [*pl.* decencies (*-siz*)], the state of being decent.

Syn. DECENCY, decorum. *Decency* respects a man's conduct; *decorum*, his behavior.

de-cen-ni-al (*-i'al*), *adj.* lasting for, or occurring, every ten years.

de-cent (*'sent*), *adj.* decorous; becoming.

de-cep-tion (*-sep'shun*), *n.* the act of deceiving. [DECEIT.]

de-cep-tive (*'tiv*), *adj.* tending to deceive.

de-cide (*dē-sīd'*), *v. t.* to bring to an issue or conclusion.

de-cid-ed (*'ed*), *adj.* free from ambiguity; determined.

Syn. DECIDED, determined, resolute. A man who is *decided* remains in no doubt; he who is *determined* is uninfluenced by the doubts or questions of others; he who is *resolute* is uninfluenced by the consequences. [See *obstinate*.]

de-cid-u-ous (*-sid'ū-us*), *adj.* falling off at maturity, or in season.

dec-i-mal (*des'i-mal*), *adj.* pertaining to, or based upon the number 10.

dec-i-mal place (*des'i-mal plās*), the place of a figure after the decimal point.

dec-i-mal point (*point*), *n.* a dot separating a decimal fraction from a whole number.

dec-i-mal sys-tem (*sis'tem*), *n.* a system of reckoning or measuring by 10 or powers of 10.

dec-i-mate (*des'i-māt*), *v. t.* to select by lot and put to death, or punish, every tenth man; destroy a large proportion of.

de-ci-pher (*dē-si'fĕr*), *v. t.* to read (secret writing); discover or make out the meaning of; solve; unravel.

de-ci-sion (*-sizh'un*), *n.* the act of deciding.

Syn. DECISION, judgment, sentence. A *decision* has no respect to the agent; it may be said of one or many; it may be the *decision* of the court, of the nation, of the public, of a particular body of men, or of a private individual; but a *judgment* is given in a public court, or among private individuals; a *sentence* is passed in a court of law, or at the bar of the public.

Ant. DISAGREEMENT.

de-ci-sive (*-sī'siv*), *adj.* final. [CONCLUSIVE.]

dec-i-stere (*des'i-stēr* or *-stär*), *n.* a cubic measure, one-tenth of a stere, equal to 3.532 cubic feet. [*French.*]

deck (*dek*), *v. t.* to array in finery or ornaments: *n.* the plank flooring of a ship.

de-claim (*dē-klām'*), *v. t.* to speak in a rhetorical style.

Syn. DECLAIM, inveigh. *Declaim* signifies literally to cry aloud in a set form of words. Public men and public measures are subjects for the *declaimer;* private individuals afford subjects for *inveighing* against. [See *abuse, speak*.]

dec-la-ma-tion (*dek-lä-mā'shun*), *n.* the art of declaiming.

de-clam-a-to-ry (*dē-klam'ä-tō-ri*), *adj.* pertaining to declamation.

dec-la-ra-tion (*dek-lä-rā'shun*), *n.* the act of declaring or proclaiming.

de-clar-a-tive (*dē-klar'ä-tiv*), *adj.* explanatory.

de-clar-a-to-ry (*'ä-tō-ri*), *adj.* affirmative.

de-clare (*dē-klâr'*), *v. t.* to make known; tell openly or publicly.

Syn. DECLARE, publish, proclaim. In *declaring*, the leading idea is that of speaking out that which passes in the mind; in *publishing*, the leading idea is that of making public or common; in *proclaiming*, the leading idea is that of crying aloud. Facts and opinions are *declared;* events and circumstances are *published;* the measures of government are *proclaimed*. [See *allege, speak, discover, announce*.]

Ant. CONCEAL, suppress, withhold.

de-clen-sion (*-klen'shun*), *n.* decline.

dec-li-na-tion (*dek-li-nā'shun*), *n.* the act or state of bending, or moving, downward.

de-cline (*dē-klīn'*), *v. i.* to incline from a right line: *v. t.* to refuse. [REFUSE, ABATE, DECAY.]

de-cliv-i-ty (*-kliv'i-ti*), *n.* [*pl.* declivities (*-tiz*)], a gradual descent.

de-coct (*dē-kokt'*), *v. t.* the act of boiling anything to extract its essence.

de-coc-tion (*-kok'shun*), *n.* an extract obtained by digesting in hot water.

de-com-pose (*dē-kom-pōz'*), *v. t.* to resolve into constituent elements.

de-com-po-si-tion (*-pō-zish'un*), *n.* the act of resolving into constituent elements.

dec-o-rate (*dek'ō-rāt*), *v. t.* to ornament.

dec-o-ra-tion (*-rā'shun*), *n.* the art of decorating.

Decoration day (*dā*). The day (May 30) on which the graves of those who fell in the Civil war (1861-65) are decorated.

dec-o-ra-tive (*dek'ō-rā-tiv*), *adj.* tending to decorate.

★**de-co-rous** (*dē-kō'rus* or *dek'ō-rus*), *adj.* marked by propriety.

de-co-rum (*dē-kō'rum*), *n.* propriety and decency. [DECENCY.]

de-coy (*dē-koi'*), *v. t.* [*p. t.* and *p. p.* decoyed, *p. pr.* decoying], to lead or allure into danger by artifice.

de-crease (*dē-krēs'*), *v. i.* to become less; diminish; abate. [ABATE.]

de-cree (*dē-krē'*), *n.* an ordinance, law, or edict.

Syn. DECREE, edict, proclamation. A *decree* is a more solemn and deliberative act than an *edict;* on the other hand, an *edict* is more authoritative than a *decree*. A *decree* is the decision of one or many; an *edict* speaks the will of an individual; councils and senates, as well as princes, makes *decrees;* despotic rulers issue *edicts*. An *edict* is peculiar to a despotic government; a *proclamation* is common to a monarchical and aristocratic form of government.

de-crep-it (*dē-krep'it*), *adj.* enfeebled by age, or infirmity.

de-crep-i-tate (*'i-tāt*), *v. t.* to calcine (as salt) in a strong heat.

de-crep-i-tude (*'i-tūd*), *n.* physical infirmity.

de-cre-tal (*-krē'tal*), *n.* a papal decree.

de-cry (*dē-kri'*), *v. t.* [*p. t.* and *p. p.* decried, *p. pr.* decrying], to blame clamorously.

de-cum-bent (*-kum'bent*), *adj.* lying down.

dec-u-ple (*dek'ū-pl*), *adj.* tenfold: *n.* a number repeated ten times.

de-cus-sate (*dē-kus'āt*), *v. i.* to intersect or cross at an acute angle.

ded-i-cate (*ded'i-kāt*), *v. t.* to set apart by a solemn act or religious ceremony.

Syn. DEDICATE, devote, consecrate, hallow. There is something more solemn in the act of *dedicating* than in that of *devoting;* but less so than in that of *consecrating*. To *dedicate* and *devote* may be employed in both temporal and spiritual matters; to *consecrate* and *hallow* only in the spiritual sense; we may *dedicate* or *devote* anything that is at our disposal to the service of some object; but the former is employed mostly in regard to superiors, and the latter to persons without distinction of rank. We *dedicate* a house to the service of God; or we *devote* our time to the benefit of our friends, or the relief of the poor; we may *dedicate* or *devote* ourselves to an object.

Ant. DEFILE, desecrate, withhold.

ded-i-ca-tion (*ded-i-kā'shun*), *n.* the act of dedicating.

ded-i-ca-to-ry (*ded'i-kā-tō-ri*), *adj.* pertaining to a dedication.

de-duce (*dē-dūs'*), *v. t.* to gather by reasoning; infer. [DERIVE.]

de-duct (*dē-dukt'*), *v. t.* to take away.

de-duc-tion (*-duk'shun*), *n.* the act or process of deducting.

Syn. DEDUCTION, abatement. Both these words imply a taking off from something. A person may make a *deduction* in an account for various reasons, but he makes an *abatement* in a demand when it is excessive. [See *conclusion*.]

deed (*dēd*), *n.* that which is done by a responsible agent.

deem (*dēm*), *v. t.* to think; determine. [THINK.]

deep (*dēp*), *adj.* extending far below the surface; low in situation. [OBSCURE.]

deep-laid (*'lād*), *adj.* well concerted.

deep-sea (*dēp'-sē*), *adj.* pertaining to the open sea.

deer (*dēr*), *n. sing.* and *pl.* a general name for solid-horned ruminants of the genus Cervus.

de-face (*dē-fās'*), *v. t.* to mar, disfigure, efface.

Syn. DEFACE, disfigure, deform. To *deface* is an act of destruction; it is the actual destruction of that which has before existed; to *disfigure* is either an act of destruction or an erroneous execution, which takes away the figure; to *deform* is altogether an imperfect execution, which renders the form what it should not be.

Ant. BEAUTIFY, perfect.

de-fal-ca-tion (*-fal-kā'shun*), *n.* embezzlement.

★**def-al-ca-tor** (*def'al-kā-tĕr*), *n.* an embezzler.

def-a-ma-tion (*def-ä-mā'shun*), *n.* the act of injuring one's good name.

de-fam-a-to-ry (*dē-fam'ä-tō-ri*), *adj.* containing that which is injurious to the character.

de-fame (*dē-fām'*), *v. t.* to injure or destroy the good reputation of. [ABUSE.]

de-fault (*-fawlt'*), *n.* failure or omission to do any act.

de-fault-er (*'ĕr*), *n.* one who fails to make a proper account of money.

de-fea-sance (*dē-fē'zans*), *n.* the annulment of a contract or deed.

de-feat (*dē-fēt'*), *v. t.* to overcome or vanquish; frustrate; baffle. [BEAT.]

def-e-cate (*def'ē-kāt*), *v. t.* to clarify: *v. i.* discharge from the bowels.

de-fect (*dē-fekt'*), *n.* an imperfection, moral or physical. [BLEMISH.]

de-fec-tion (*-fek'shun*), *n.* a falling away.

de-fec-tive (*'tiv*), *adj.* having a defect or flaw of any kind.

Syn. DEFECTIVE, deficient. *Defective* expresses the quality or property of having a defect; *deficient* is employed with regard to the thing itself that is wanting. A book may be *defective*, in consequence of some leaves being *deficient*. A *deficiency* is, therefore, often what constitutes a *defect*.

Ant. ADEQUATE, competent, perfect.

de-fend (*dē-fend'*), *v. t.* to guard or protect.

Syn. DEFEND, protect, vindicate. A person may be *defended* in any particular case of actual danger or difficulty; he is *protected* from what may happen as well as what does happen. *Defense* respects the evil that threatens; *protection* involves the supply of necessities and the affording comforts; to *vindicate* is a species of *defense* only in the moral sense of the word. Acts of importance are *defended;* those of trifling import are commonly *vindicated*. [See *apologize, guard*.]

Ant. BETRAY, expose, surrender.

de-fense (*dē-fens'*), *n.* the act or state of defending. [APOLOGY.]

de-fen-si-bil-i-ty (*-fen-si-bil'i-ti*), *adj.* the quality of being defensible.

de-fen-si-ble (*'si-bl*), *adj.* capable of being defended.

de-fer (*dē-fĕr'*), *v. t.* [*p. t.* and *p. p.* deferred, *p. pr.* deferring], to put off to a future time.

def-er-ence (*def'ĕr-ens*), *n.* a yielding to the opinions or wishes of another. [COMPLAISANCE.]

def-er-en-tial (*-ĕr-en'shal*), *adj.* characterized by, or expressing, deference.

de-fi-ance (*dē-fī'ans*), *n.* a challenge.

de-fi-ant (*'ant*), *adj.* characterized by defiance.

de-fi-cien-cy (*-fish'en-si*), *n.* [*pl.* deficiencies (*-siz*)], the state of being deficient.

de-fi-cient (*'ent*), *adj.* wanting; incomplete. [DEFECTIVE.]

★**def-i-cit** (*def'i-sit*, not *dē-fis'it*), *n.* a falling off, or deficiency.

de-fi-er (*dē-fī'ĕr*), *n.* one who defies.

de-file (*dē-fīl'*), *v. t.* to make foul or impure. [CONTAMINATE, ABUSE.]

de-fin-a-ble (*-fīn'ä-bl*), *adj.* capable of being defined.

de-fine (*dē-fīn'*), *v. t.* to determine the limits of.

def-i-nite (*def'i-nit*), *adj.* having fixed or distinct limits.

Syn. DEFINITE, positive. *Definite* signifies that which is *defined*, or has the limits drawn or marked out; *positive* that which is placed or fixed in a particular manner; *definite* is said of things as they present themselves or are presented to the mind; as, a *definite* idea, a *definite* proposal; *positive* is said of a person's temper of mind; a person is *positive* as to his opinions, or an assurance is *positive* which serves to make one *positive*.

Ant. VACILLATING, vague.

def-i-ni-tion (*-nish'un*), *n.* a brief description or explanation.

Syn. DEFINITION, commentary, description, explanation, exposition, interpretation, rendering, translation. *Definition* is exact, *explanation* general; a *definition* is formal, a *description* pictorial. A *definition* must include all that belongs to the object defined, and exclude all that does not; a *description* may include only some general features; an *explanation* throws light upon some point; an *exposition* undertakes a fuller statement; *interpretation* is a statement giving the doubtful or hidden meaning of that which is difficult.

Ant. OBFUSCATION.

de-fin-i-tive (*dē-fin'i-tiv*), *adj.* determining; conclusive.

def-la-grate (*def'lā-grāt*), *v. t.* to set fire to.

de-flect (*dē-flekt'*), *v. t.* to bend from a straight line.

de-flec-tive (*-flek'tiv*), *adj.* causing deflection.

de-flec-tor (*'tēr*), *n.* a plate or cone in a furnace or lamp to bring flames or gases into close contact.

de-flow-er (*dē-flou'ēr*), *v. t.* to deprive of flowers or bloom.

de-for-est (*dē-for'est*), *v. t.* to clear of forest.

de-form (*-fôrm'*) *v. t.* to render ugly. [DEFACE.]

de-form-i-ty (*'i-ti*), *n.* [*pl.* deformities (*-tiz*)], physical malformation.

de-fraud (*-frawd'*), *v. t.* to deprive of some right or interest [CHEAT.]

de-fray (*dē-frā'*), *v. t.* [*p. t.* and *p. p.* defrayed, *p. pr.* defraying], to discharge (the expense of anything).

deft (*deft*), *adj.* dexterous.

de-funct (*dē-fungkt'*), *adj.* dead.

de-fy(*-fī'*), *v. t.* [*p. t.* and *p. p.* defied, *p. pr.* defying], to challenge.

de-gen-er-a-cy (*dē-jen'ēr-ā-si*), *n.* the state of being degenerate.

de-gen-er-ate (*'ēr-āt*), *v. i.* to become inferior in goodness or quality.

deg-lu-ti-tion (*deg-lōō-tish'un*), *n.* swallowing.

deg-ra-da-tion (*deg-rā-dā'shun*), *n.* the act of degrading.

de-grade (*dē-grād'*), *v. t.* to reduce in grade or rank. [ABASE.]

de-gree (*dē-grē'*), *n.* a step or grade; the 360th part of the circumference of a circle; *third degree*, in police practice, the process of severely examining, or harshly treating, a prisoner or an accomplice of a person suspected of a crime, for the purpose of securing information concerning it.

de-i-fi-ca-tion (*dē-i-fi-kā'shun*), *n.* apotheosis.

de-i-fy (*'i-fī*), *v. t.* [*p. t.* and *p. p.* deified, *p. pr.* deifying], to make, or exalt to the rank of, a deity.

★**deign** (*dān*), *v. i.* to condescend.

de-ism (*dē'izm*), *n.* the creed of a deist.

de-ist (*'ist*), *n.* one who believes in the existence of a personal God but not in revealed religion.

de-ist-ic (*'ik*), *adj.* pertaining to deism, or deists.

de-i-ty (*'i-ti*), *n.* [*pl.* deities (*-tiz*)], a god, goddess, or person worshiped.

Syn. DEITY, divinity. *Deity* signifies a divine person; *divinity* signifies the divine essence or power.

De-i-ty, *n.* God; Jehovah.

de-ject (*dē-jekt'*), *v. t.* to depress the spirits of.

de-jec-tion (*-jek'shun*), *n.* depression of spirits.

Syn. DEJECTION, depression, melancholy. *Depression* is but a degree of *dejection;* slight circumstances may occasion a *depression;* distressing events occasion a *dejection;* the death of a near and dear relative may be expected to produce *dejection* in persons of the greatest equanimity; *melancholy* is a disease which nothing but clear views of religion can possibly correct.

Ant. DELIGHT, ecstasy, joy, pleasure.

Delaware (*del'a-wâr*). Name of state, bay and river in the eastern section of the United States first given to the bay by Capt. Samuel Argall, afterward deputy governor of Virginia, who came to this country in company with Lord de la Ware.

de-lay (*dē-lā'*), *v. t.* [*p. t.* and *p. p.* delayed, *p. pr.* delaying], to postpone.

de-lec-ta-ble (*dē-lek'tā-bl*), *adj.* pleasing; delightful.

de-lec-ta-tion (*-tā'shun*), *n.* delight; pleasure.

del-e-gate (*del'ē-gāt*), *v. t.* to send as a representative: *n.* a representative.

Syn. DELEGATE, depute, deputy. To *delegate* is applied to the power or office which is given; *depute* to the person employed. Parents *delegate* their office to the instructor; persons are *deputed* to act for others. A *delegate* is the person commissioned, who is bound to act according to his commission; the *deputy* is that person *deputed*, who acts in the place of another.

Ant. ACT, in person.

del-e-ga-tion (*-gā'shun*), *n.* the act of delegating; a person or body of persons chosen to act for others.

de-lete (*dē-lēt'*), *v. t.* to blot out; erase.

del-e-te-ri-ous (*del-ē-tē'ri-us*), *adj.* harmful.

delf (*delf*), *n.* glazed earthenware.

Delft (*delft*). This name for earthenware is derived from *Delft*, a town in Holland, where extensive potteries existed from A. D. 1300.

Delhi (*del'hē*), or **Dehli** (*dā'lē*). From the Sanskrit, *dahal*, "a quagmire," or from the Hindustani word *dil*, "an eminence."

de-lib-er-ate (*dē-lib'ēr-āt*), *v. t.* to think upon or consider: *adj.* slow. [CONSULT, DEBATE.]

de-lib-er-a-tion (*-ēr-ā'shun*), *n.* calm and careful consideration.

del-i-ca-cy (*del'i-kā-si*), *n.* [*pl.* delicacies (*-siz*)], the state or quality of being delicate.

del-i-ca-tes-sen (*-kā-tes'en*), *n. pl.* table delicacies.

de-li-cious (*dē-lish'us*), *adj.* highly pleasing to the senses.

de-light (*dē-lit'*), *v. t.* to gratify or please greatly: *n.* an extreme degree of pleasure. [ADMIRE.]

de-light-ful (*'fool*), *adj.* pleasing, charming.

Delilah (*dē-lī'lā*). From the Hebrew *D'liylah*, signifying "weak," "delicate."

de-lin-e-ate (*-lin'ē-āt*), *v. t.* to mark out with lines.

de-lin-e-a-tion (*-ē-ā'shun*), *n.* the act or art of delineating.

de-lin-quen-cy (*-ling'kwen-si*), *n.* [*pl.* delinquencies (*-siz*)], neglect of, or failure in, duty.

de-lin-quent (*'kwent*), *adj.* falling short of duty. [OFFENDER.]

del-i-quesce (*del-i-kwes'*), *v. i.* to melt and become liquid.

★**de-lir-i-ous** (*dē-lir'i-us*, not *dē-lē'ri-us*), *adj.* light-headed; insane.

de-lir-i-um (*'i-um*), *n.* excitement and aberration of the mind.

de-lir-i-um tre-mens (*trē'mens*), *n.* a disease of the brain caused by the use of intoxicating liquors.

de-liv-er (*dē-liv'ēr*), *v. t.* to set free; yield possession or control of.

Syn. DELIVER, rescue, save. One may be *delivered* from any evil, whether great or small, and in any manner; to *rescue* is to deliver from a great impending danger or immediate evil; as to *rescue* from the hands of robbers, or from the jaws of a wild beast; to *save* signifies to keep from evil. [See *speak*.]

Ant. ABANDON, desert, forsake.

de-liv-er-ance (*'ēr-ans*), *n* the act of delivering.

de-liv-er-y (*'ēr-i*), *n.* [*pl.* deliveries (*-riz*)], the act of delivering.

dell (*del*), *n.* a small secluded valley.

Del-phic (*del'fik*), *adj.* pertaining to Delphi.

del-ta (*del'tā*), *n.* [*pl.* deltas (*'taz*)], an alluvial deposit, shaped like the Greek letter △, formed at the mouth of a river.

de-lude (*dē-lūd'*), *v. t.* deceive.

★**del-uge** (*del'ūj*), *n.* a great overflowing of the land by water, especially that of the time of Noah.

de-lu-sion (*dē-lū'zhun*), *n.* the act of deluding.

de-lu-sive (*-lū'siv*), *adj.* tending to delude or deceive.

delve (*delv*), *v. t.* to open with a spade.

de-mag-net-ize (*dē-mag'net-īz*), *v. t.* to deprive of magnetic properties.

dem-a-gogue (*dem'ā-gog*), *n.* a popular orator.

de-mand (*dē-mānd'*), *v. t.* to claim as by right or authority.

Syn. DEMAND, require. We *demand* that which is owing and ought to be given; we *require* that which we wish and expect to have done. The creditor makes a *demand* on the debtor; the master *requires* a certain portion of duty from his servant.

Ant. BEG, entreat.

de-mar-ca-tion (*-mär-kā'shun*), *n.* the act of defining.

de-mean (*dē-mēn'*), *v. t.* to behave (with *self*).

de-mean-or (*'ēr*), *n.* behavior.

de-men-ti-a (*-men'shi-ā*), *n.* insanity.

★**de-mesne** (*dē-mēn'*), *n.* landed estate attached to a manor.

Demetrius (*dē-mē'tri-us*). From the Greek, *Demetrios*, "sprung from the earth;" Fr., *Demetrius;* It., *Demetrio;* Lat., *Demetrius;* Russ., *Dmitri*.

dem-i (*dem'i*), a prefix signifying *half*.

dem-i-god (*dem'i-god*), *n.* an inferior deity.

dem-i-john (*-jon*), *n.* a large glass bottle with a small neck and large body.

de-mise (*dē-mīz'*), *n.* the transfer of a right to, or of a title in, an estate through death or forfeiture; death.

de-mob-i-lize (*dē-mob'i-līz*), *v. t.* to disband or dismiss.

de-moc-ra-cy (*-mok'rā-si*), *n.* [*pl.* democracies (*-siz*)], government by the people collectively.

dem-o-crat (*dem'ō-krat*), *n.* one who advocates and upholds the principles of democracy.

Democrat, *n.* a member of the Democratic party.

dem-o-crat-ic (*-krat'ik*), or **dem-o-crat-ic-al** (*'i-kal*), *adj.* pertaining to democracy.

de-mol-ish (*dē-mol'ish*), *v. t.* to throw down.

dem-o-li-tion (*dem-ō-lish'un*), *n.* the act or process of demolishing.

de-mon (*dē'mon*), *n.* an evil spirit; devil.

de-mon-e-tize (*dē-mun'* or *dē-mon'ē-tīz*), *v. t.* to deprive of standard value.

de-mo-ni-ac (*-mō'ni-ak*), *adj.* influenced by demons.

de-mon-ism (*'mon-izm*), *n.* belief in demons.

de-mon-stra-ble (*dē-mon'strā-bl*), *adj.* capable of being demonstrated.

★**dem-on-strate** (*dem-on'* or *dē-mon'strāt*), *v. t.* to prove beyond the possibility of a doubt.

dem-on-stra-tion (*dem-on-strā'shun*), *n.* the act of demonstrating.

de-mon-stra-tive (*dē-mon'strā-tiv*), *adj.* having the power of demonstration.

dem-on-stra-tor (*dem-on-strā-tēr*), *n.* one who demonstrates.

de-mor-al-ize (*dē-mor'al-īz*), *v. t.* to corrupt, or undermine the morals of.

de-mul-cent (*-mul'sent*), *adj.* softening.

de-mur (*dē-mur'*), *v. i.* [*p. t.* and *p. p.* demurred, *p. pr.* demurring], to hesitate.

Syn. DEMUR, hesitate, pause. We *demur* from doubt or difficulty; we *hesitate* from an undecided state of mind; we *pause* from circumstances. *Demurring* is a matter of prudence; it is always grounded on some reason; *hesitating* is rather a matter of feeling, and is oftener faulty than otherwise. When a request of a dubious nature is made to us, we *hesitate* in complying with it.

Ant. ACT, continue, rush.

de-mure (*-mūr'*), *adj.* grave; sober.

de-mur-rage (*-mur'āj*), *n.* the compensation paid for the detention of a vessel in port beyond the stipulated time.

de-mur-rer (*'ēr*), *n.* an issue on a point of law.

den (*den*), *n.* the hollow cave of a wild beast.

de-na-tion-al-ize (*dē-nash'un-al-īz*), *v. t.* to deprive of national rights or character.

de-nat-u-ral-ize (*-nat'ū-ral-īz*), *v. t.* to divest of acquired rights of citizenship.

de-na-tured (*dē-nā'tūrd*), *adj.* changed in nature or character.

den-drol-o-gy (*den-drol'ō-ji*), *n.* the natural history of trees.

den-drom-e-ter (*-drom'ē-tēr*), *n.* an apparatus for taking the heights and diameters of trees.

de-ni-al (*dē-nī'al*), *n.* the act of denying.

Denis (*den'is*) or **Dionysius** (*dī-ō-nish'i-us*). From the Greek, "belonging to the wine of god." Danish, *Dionysius;* Dutch, *Dionysius;* Fr., *Denis* or *Denys;* Ger., *Dionys;* Gr., *Dionysios;* It., *Dionigio;* Lat., *Dionysius;* Sp., *Dionisio*.

den-i-zen (*den'i-zen*), *n.* an inhabitant; citizen.

Denmark (*den'märk*). Called *Dan-mörk* in the Sagas. In old Norse, *mörk* means a "forest," and, as forests commonly formed the boundaries of tribes, we obtain such words as *mearc* in Anglo-Saxon and *marca* in Old High German, meaning a "marsh land" or "boundary."

de-nom-i-nate (*dē-nom'i-nāt*), *v. t.* to designate.

de-nom-i-na-tion (*-i-nā'shun*), *n.* the act of designating.

de-nom-i-na-tion-al-ism (*-al-izm*), *n.* a sectarian or class spirit, or policy.

de-nom-i-na-tor (*'i-nā-tēr*), *n.* the expression of a fraction which gives the name or value to the unit.

de-note (*dē-nōt'*), *v. t.* to signify or identify by a visible sign.

Syn. DENOTE, signify. *Denote* is employed with regard to things and their characters; *signify* with regard to the thoughts or movements. A letter or character may be made to *denote* any number, as words are made to *signify* the intentions and wishes of the person.

Ant. IMPLY.

★**dé-noue-ment** (*dā-nōō-mäN'* or *dā-nōō'mäN*), *n.* the act of unraveling a plot.

de-nounce (*dē-nouns'*), *v. t.* to threaten or accuse publicly; censure. [CONDEMN.]

dense (*dens*), *adj.* thick; compact; intense. [THICK, OBSCURE.]

den-si-ty (*den'si-ti*), *n.* compactness.

dent (*dent*), *n.* a slight depression caused by a blow or pressure.

den-tal (*den'tal*), *adj.* pertaining to the teeth.

den-tine (*den'tin*), *n.* the hard tissue which forms the body of a tooth.

den-ti-phone (*'ti-fōn*), *n.* an audiphone.

den-tist (*'tist*), *n.* a dental surgeon.

den-tis-try (*'tis-tri*), *n.* dental surgery.

den-ti-tion (*-tish'un*), *n.* the process, or period, of cutting the teeth.

de-nude (*dē-nūd'*), *v. t.* to make bare or naked.

de-nun-ci-a-tion (*-nun-si-ā'shun*), *n.* the act of denouncing.

de-nun-ci-a-to-ry (*'shi-ā-tō-ri*), *adj.* pertaining to a denunciation.

Denver, Colo. Named after James W. Denver, ex-governor of Kansas.

de-ny (*dē-nī'*), *v. t.* to refuse to believe or admit; [contradict.]

Syn. DENY, refuse. To *deny* respects matters of fact or knowledge; to *refuse*, matters of wish or request. We *deny* what immediately relates to ourselves; we *refuse* what relates to another. [See *contradict*.]

de-o-dor-ant (*-ō'dēr-ant*), *n.* a deodorizer.

de-o-dor-ize (*'dēr-īz*), *v. t.* to disinfect.

de-part (*dē-pärt'*), *v. i.* to go or move away; leave.

de-part-ment (*'ment*), *n.* a separate room or office for business; a branch of business.

de-par-ture (*-pär'tūr*), *n.* the act of departing; deviation.

de-pend (*dē-pend'*), *v. i.* to rely for support.

de-pend-ence (*'ens*), *n.* the state of being dependent. [Also *dependency* (*-si*), *pl.* dependencies (*-siz*), a colony.]

de-pend-ent (*'ent*), *adj.* hanging down; contingent.

de-pict (*-pikt'*), *v. t.* to paint or portray. [PAINT.]

de-ple-tion (*-plē'shun*), *n.* the act of emptying.

de-plor-a-ble (*-plōr'ā-bl*), *adj.* worthy to be deplored; sad.

de-plore (*dē-plōr'*), *v. t.* to lament; grieve for.
Syn. DEPLORE, lament. *Deplore* is a much stronger expression than *lament*. The former calls forth tears from the bitterness of the heart; the latter excites a cry from the warmth of feeling. *Deploring* indicates despair; to *lament* marks only pain or distress.
de-ploy (*-ploi'*), *v. t.* and *v. i.* [*p. t.* and *p. p.* deployed, *p. pr.* deploying], to open out; extend in line.
de-pon-ent (*-pōn'ent*), *n.* a witness who makes an affidavit.
Syn. DEPONENT, evidence, witness. All these words are properly applied to judicial proceedings, where the *deponent* deposes generally to facts either in causes or otherwise; the *evidence* consists either of persons or things, which are brought before the court for the purpose of making a doubtful matter clear; the *witness* is always a person who bears witness to any fact for or against another.
de-pop-u-late (*-pop'ū-lāt*), *v. t.* to deprive of inhabitants.
de-port (*-pōrt'*), *v. t.* to carry from one country to another.
de-port-ment (*'ment*), *n.* conduct.
de-pose (*-pōz'*), *v. t.* to deprive of office.
de-pos-it (*-poz'it*), *v. t.* to put or set down; *n.* anything deposited.
Syn. DEPOSIT, pledge, security. The term *deposit* has most regard to the confidence we place in another; *pledge* has most regard to the *security* we give for ourselves; *security* is a species of *pledge*. A *security* is whatever makes a person *secure* against a loss, and in the ordinary acceptation consists of any instrument or written document which legally binds a person.
dep-o-si-tion (*dep-ō-zish'un*), *n.* the act of depositing or deposing. [TESTIMONY.]
de-pos-i-tor (*dē-poz'i-tēr*), *n.* one who deposits.
de-pos-i-to-ry (*'i-tō-ri*), *n.* [*pl.* depositories (*-riz*)], the place where anything is deposited.
de-pot (*dē'pō*, Fr. *dā-pō'*), *n.* a warehouse.
de-prave (*dē-prāv'*), *v. t.* to make bad. [ABANDON.]
de-prav-i-ty (*-prav'i-ti*), *n* the state of being depraved; depravation.
Syn. DEPRAVITY, depravation, corruption. All these terms are applied to objects which are contrary to the order of Providence, but the term *depravity* characterizes the thing as it is; the terms *depravation* and *corruption* designate the making or causing it to be so; *depravity*, therefore, excludes the idea of any cause; *depravation* always carries us to the cause or external agency; hence we may speak of *depravity* as natural, but we speak of *depravation* as the result of circumstances.
dep-re-cate (*dep'rē-kāt*), *v. t.* to pray against.
dep-re-ca-tion (*-kā'shun*), *n.* the act of deprecating.
dep-re-ca-to-ry (*dep'rē-kā-tō-ri*), *adj.* apologetic.
de-pre-ci-ate (*dē-prē'shi-āt*), *v. t.* to disparage.
de-pre-ci-a-tion (*-ā'shun*), *n.* the act of lessening the value.
dep-re-date (*dep'rē-dāt*), *v. t.* to pillage; rob.
dep-re-da-tion (*-dā'shun*), *n.* the act of depredating.
de-press (*dē-pres'*), *v. t.* to press or thrust down.
de-pres-sion (*-presh'un*), *n.* the act of depressing. [DEJECTION.]
dep-ri-va-tion (*dep-ri-vā'shun*), *n.* the act of taking away; destitution.
de-prive (*dē-priv'*), *v. t.* to take from. [ABDUCT.]
depth (*depth*), *n.* the state or degree of being deep.
Syn. DEPTH, profundity. *Depth* is indefinite in its signification; and *profundity* is a positive and considerable degree of depth. Moreover, the word *depth* is applied to objects in general; *profundity* is confined in its application to moral objects.
dep-u-ta-tion (*dep-ū-tā'shun*), *n.* the act of deputing.
de-pute (*dē-pūt'*), *v. t.* to appoint as an agent or deputy. [DELEGATE, CONSTITUTE.]
dep-u-ty (*dep'ū-ti*), *n.* [*pl.* deputies (*-tiz*)], a delegate. [DELEGATE, AMBASSADOR.]
de-rail (*dē-rāl'*), *v. t.* to cause to leave the rails.
de-range (*-rānj'*), *v. t.* to throw into confusion.
der-by (*dēr'bi*), *n.* a kind of stiff fe't hat.
der-e-lict (*der'ē-likt*), *adj.* abandoned: *n.* anything left, forsaken.
der-e-lic-tion (*-lik'shun*), *n.* omission, as of obligation or duty.
de-ride (*dē-rīd'*), *v. t.* to mock.
de-ri-sion (*-rizh'un*), *n.* the act of deriding.
de-ri-sive (*-ri'siv*), *adj.* expressing derision.
der-i-va-tion (*der-i-vā'shun*), *n.* the act of deriving.
de-riv-a-tive (*dē-riv'ā-tiv*), *adj.* derived or taken from another.
de-rive (*-rīv'*), *v. t.* to draw from an original source.
Syn. DERIVE, trace, deduce. The act of *deriving* is immediate and direct; that of *tracing* a gradual process; that of *deducing* a ratiocinative process. We discover causes and sources by *derivation;* we discover the course, progress, and commencement of things by *tracing;* we discover the grounds and reasons of things by *deduction*.
der-ma (*dēr'mā*), *n.* the true skin.
der-ma-tol-o-gy (*-tol'ō-ji*), *n.* the science which treats of the skin.
der-o-gate (*der'ō-gāt*), *v. t.* to take away.
de-rog-a-to-ry (*dē-rog'ā-tō-ri*), *adj.* tending to derogate from honor.
der-rick (*der'ik*), *n.* an apparatus for hoisting heavy weights.
Derrick or **Dirck.** A name corrupted from *Theodoric*.
der-rin-ger (*der'in-jēr*), *n.* a pocket pistol with a short barrel.
der-vish (*dēr'vish*), *n.* a Mohammedan monk.
★**des-cant** (*des'kant*), *n.* a disquisition or comment.
de-scend (*dē-send'*), *v. i.* to pass from a higher to a lower position.
de-scend-ant (*'ant*), *n.* one who is lineally descended from an ancestor.
de-scend-ent (*'ent*), *adj.* descending.
de-scen-sion (*-sen'shun*), *n.* the act of descending.
de-scent (*-sent'*), *n.* change from a higher to a lower place.
de-scribe (*-skrīb'*), *v. t.* to delineate or trace out.
de-scrip-tion (*-skrip'shun*), *n.* the act of describing. [DEFINITION.]
de-scrip-tive (*'tiv*), *adj.* tending to, or serving to; describe.
de-scry (*-skrī'*), *v. t.* to behold at a distance.
des-e-crate (*des'ē-krāt*), *v. t.* to divert from a sacred to a secular use.
de-sert (*dē-zērt'*), *v. t.* to forsake; abandon; *n.* merit.
Syn. DESERT, merit, worth. *Desert* is taken for that which is good or bad; *merit* for that which is good only. We deserve praise or blame; we *merit* a reward; *worth* is that which is absolutely valuable; it must be sought for on its own account. [See *abandon*.]
des-ert (*dez'ert*), *n.* a barren tract incapable of supporting life or vegetation. [SOLITARY.]
de-serve (*dē-zērv'*), *v. t.* to earn by service.
des-ic-cate (*des'i-kāt*), *v. t.* to dry thoroughly.
★**de-sid-er-a-tum** (*dē-sid-ēr-ā'tum*, not *dē-sid-ēr-ā'tum*), *n.* [*pl.* desiderata (*'tā*)], anything desired.
de-sign (*-zīn'*), *v. t.* to draw, mark, or plan out: *v. i.* to formulate designs: *n.* purpose.
Syn. DESIGN, purpose, intend, mean. A *design* supposes something studied and methodical, it requires reflection; a *purpose* is the thing proposed or set before the mind; an *intention* is the thing to which the mind bends or inclines. We *purpose* seriously; we *intend* vaguely; we set about that which we *purpose;* we may delay that which we have only *intended*. *Mean* differs but little from *intend*, except that it is used for matters requiring but little thought.
Ant. EFFECT, express.
de-sign (*-zīn'*), *n.* a plan; project; scheme.
des-ig-nate (*des'ig-nāt*), *v. t.* to indicate by marks, lines, or a description.
de-sign-ing (*dē-zīn'ing*), *adj.* scheming; artful.
de-sir-a-bil-i-ty (*-zīr-ā-bil'i-ti*), *n.* the state of being desirable.
de-sir-a-ble (*'ā-bl*), *adj.* pleasing; agreeable.
de-sire (*-zī r'*), *v. t.* to wish earnestly for.
Syn. DESIRE, wish, long, covet. *Desire* is imperious, it demands gratification; *wish* is less vehement, it consists of a strong inclination; *longing* is an impatient and continued species of *desire;* *coveting* is a *desire* for that which belongs to another, or what it is in his power to grant.
Ant. ABHOR, dislike, refuse, repulse.
de-sir-ous (*'us*), *adj.* full of desire. [EAGER.]
de-sist (*-sist'*), *v. i.* to cease from.
Syn. DESIST, leave off. To *desist* is voluntary or involuntary; to *leave off* voluntary. We are frequently obliged to *desist;* but we *leave off* at our option; he who annoys another must be made to *desist;* he who does not wish to offend will *leave off* when requested.
desk (*desk*), *n.* a table for reading or writing.
Des Moines (*dē-moin'*). River, county, and city in Iowa. This name is thought to have been derived from the Indian word *mikonang*, meaning "the road."
des-o-late (*des'ō-lāt*), *v. t.* to lay waste: *adj.* deserted. [SOLITARY.]
des-o-la-tion (*-lā'shun*), *n.* the act of desolating.
de-spair (*dē'spār*), *v. i.* to abandon all hope, or expectation: *v. t.* to lose hope; desperation.
Syn. DESPAIR, desperation, despondency. *Despair* is a state of mind produced by the view of external circumstances; *desperation* and *despondency* may be the fruit of the imagination. *Desperation* marks a state of vehement and impatient feeling; *despondency* is a disease of the mind.
des-patch (*des-pach'*) or **dispatch** (*dis-*), *v. t.* to send off; put to death: *n.* speedy performance. [HASTEN.]
des-per-a-do (*-pēr-ā'dō*), *n.* a man reckless of danger.
des-per-ate (*'pēr-āt*), *adj.* regardless of danger.
★**des-pic-a-ble** (*des'pik-ā-bl*, not *dē-spik'ā-bl*), *adj.* contemptible.
de-spise (*dē-spīz'*), *v. t.* to look down upon. [CONTEMN.]
de-spite (*-spīt'*), *n.* extreme contempt.
de-spond (*-spond'*), *v. i.* to be cast down in spirits.
de-spond-en-cy (*'en-si*), *n.* absence of hope. [DESPAIR.]
des-pot (*des'pot*), *n.* an absolute, irresponsible ruler.
des-pot-ic (*-pot'ik*), *adj.* absolute in power. [ABSOLUTE.]
des-pot-ism (*'pot-izm*), *n.* absolute power; tyranny.
des-sert (*dez-zērt'*), *n.* a course of fruits, sweets, etc., usually served last at dinner.
des-ti-na-tion (*des-ti-nā'shun*), *n.* purpose or end.
★**des-tine** (*des'tin*), *v. t.* to appoint to any use.
des-ti-ny (*des'ti-ni*), *n.* [*pl.* destinies (*-niz*)], fate.
Syn. DESTINY, fate, lot, doom. *Destiny* is used in regard to one's station and walk in life; *fate* in regard to what one suffers; *lot* in regard to what one gets or possesses; and *doom* is the final destiny which terminates unhappily, and depends mostly upon the will of another; *destiny* is marked out; *fate* is fixed; a *lot* is assigned; a *doom* is passed. [See *chance*.]
Ant. CHOICE, preference.
des-ti-tute (*'ti-tūt*), *adj.* without means of existence. [BARE, FORSAKEN.]
des-ti-tu-tion (*-tū'shun*), *n.* poverty.
de-stroy (*dē-stroi'*), *v. t.* to pull down; overturn.
Syn. DESTROY, consume, waste. To *destroy* is to reduce to nothing that which has been artificially raised or formed; as, to *destroy* a town or a house; to *consume* is to use up; as, to *consume* food, or to *consume* articles of manufacture. [See *subvert*.]
Ant. CHERISH, hoard, renew.
de-struc-ti-ble (*-struk'ti-bl*), *adj.* that may be destroyed.
de-struc-tion (*'shun*), *n.* the act of destroying.
Syn. DESTRUCTION, ruin. *Destruction* is an act of immediate violence; *ruin* is a gradual process; a thing is *destroyed* by some external action upon it; a thing falls to *ruin* of itself.
de-struc-tive (*'tiv*), *adj.* tending to destruction.
des-ul-to-ry (*des'ul-tō-ri*), *adj.* passing from one thing to another. [CURSORY.]
de-tach (*dē-tach'*), *v. t.* to disconnect.
de-tach-ment (*'ment*), *n.* the act of detaching; a body of troops detached from the main body.
de-tail (*dē-tāl'*), *v. t.* to relate minutely; tell off for a given duty.
de-tain (*dē-tān'*), *v. t.* to hold back. [HOLD.]
de-tect (*dē-tekt'*), *v. t.* to discover; bring to light.
Syn. DETECT, discover. *Detect* is always taken in a bad sense; *discover* in an indifferent sense. A person is *detected* in what he wishes to conceal; a person or a thing is *discovered* that has lain concealed. [See *convict*.]
Ant. OVERLOOK.
de-tec-ta-ble (*-tek'tā-bl*), *adj.* that may be detected.
de-tec-tion (*'shun*), *n.* the act of detecting or its result; discovery.
de-tec-tive (*'tiv*), *n.* one whose business it is to trace wrongdoers.
de-ten-tion (*-ten'shun*), *n.* the act of detaining or withholding.
de-ten-tive (*'tiv*), *adj.* employed in detaining.
de-ter (*dē-tēr'*), *v. t.* [*p. t.* and *p. p.* deterred, *p. pr.* deterring], to discourage, or hinder.
de-terge (*-tērj'*); *v. t.* to cleanse, as a wound.
de-te-ri-o-rate (*-tē'ri-ō-rāt*), *v. t.* to reduce to an inferior quality.
de-ter-mi-na-ble (*-tēr'mi-nā-bl*), *adj.* capable of being ascertained.
de-ter-mi-nate (*'mi-nāt*), *adj.* having definite or fixed limits.
★**de-ter-min-a-tive** (*'min-ā-tiv*), *adj.* determining; limiting.
de-ter-mine (*dē-tēr'min*), *v. i.* to decide; end.
Syn. DETERMINE, resolve. We *determine* how or what we shall do; this requires examination and choice; we *resolve* that we will do what we have *determined* upon. [See *decided*.]
Ant. DOUBT, hesitate.
de-ter-rent (*-tēr'ent*), *adj.* serving, or tending, to deter: *n.* that which deters.
de-test (*-test'*), *v. t.* to hate intensely. [HATE, ABHOR.]
de-tes-ta-tion (*dē-tes-* or *det-es-tā'shun*), *n.* extreme dislike or abhorrence. [ANTIPATHY, ABOMINATION.]
de-throne (*-thrōn'*), *v. t.* to remove from a throne.
★**det-o-nate** (*det'ō-nāt*), *v. t.* to cause to explode.
de-tour (*dē-tōor'*), *n.* a circuitous way.
de-tract (*-trakt'*), *v. t.* to draw or take away.
de-trac-tion (*-trak'shun*), *n.* depreciation; slander.
det-ri-ment (*det'ri-ment*), *n.* that which injures.
det-ri-men-tal (*-men'tal*), *adj.* injurious.
Detroit (*dē-troit'*), **Mich.** From the river or strait on which the city is built. Derived from two French words, *de troit*, "the narrows."
Deuteronomy (*dū-tēr-on'ō-mi*). From two Greek words meaning *second* and *law*. The fifth book of Moses is so named.
de-vap-o-ra-tion (*dē-vap-ō-rā'shun*), *n.* the change of vapor into water.
dev-as-tate (*dev'as-tāt*), *v. t.* to lay waste.
dev-as-ta-tion (*-tā'shun*), *n.* the act of devastating.
de-vel-op (*dē-vel'op*), *v. t.* to unfold gradually; make known in detail.
de-vel-op-ment (*-ment*), *n.* the act of developing.
de-vest (*dē-vest'*), *v. t.* to alienate or annul.
de-vi-ate (*dē'vi-āt*), *v. i.* to turn aside from a certain course.
Syn. DEVIATE, wander, swerve, stray. *Deviate* always supposes a direct path which is departed from; *wander* includes no such idea. The act of *deviating* is commonly faulty; that of *wandering* is indifferent. To *swerve* is to *deviate* from that which one holds right; to *stray* is to *wander* in the same bad sense. Men *swerve* from their duty to consult their interest; the young *stray* from the path of rectitude. [See *digress*.]
de-vi-a-tion (*-ā'shun*), *n.* the act of deviating.

de-vice (*dē-vīs'*), *n.* a contrivance; invention; a stratagem.

Devil. Many philologists declare that the name of God is derived from *Good Spirit*, shortened by long use to "good" or "god." By a similar process, Satan may have been known as *the Evil Spirit*, which shortened by usage would become *the Evil*, or *th'evil*, easily corrupted into *Devil*.

dev-il-ish (*dev'l-ish*), *adj.* diabolical; extremely wicked; infernal; excessive.

dev-il-ment (*-ment*), *n.* roguishness.

de-vi-ous (*dē'vi-us*), *adj.* rambling; circuitous.

de-vis-a-ble (*-vīs'ä-bl*), *adj.* capable of being bequeathed.

de-vise (*-vīz'*), *v. t.* to imagine; contrive; bequeath by will.

Syn. DEVISE, bequeath. In the technical sense, to *devise* is to give lands by a will duly attested according to law; to *bequeath* is to give personality after one's death by a less formal instrument.

de-vis-er (*dē-vīz'ēr*), *n.* one who devises or invents.

de-vis-or (*'ēr* or *ôr*), *n.* one who bequeaths by will.

de-void (*-void'*), *adj.* destitute of.

de-volve (*dē-volv'*), *v. t.* to transfer from one to another.

de-vote (*dē-vōt'*), *v. t.* to dedicate or consecrate. [DEDICATE, HOLY, ADDICTED.]

dev-o-tee (*dev-ō-tē'*), *n.* a votary; enthusiast.

de-vo-tion (*dē-vō'shun*), *n.* the act of devoting or consecrating; strong affection. [LOVE.]

de-vour (*dē-vour'*), *v. t.* to swallow greedily or ravenously.

de-vout (*-vout'*), *adj.* devoted to religious thoughts.

dew (*dū*), *n.* aqueous vapor condensed from the atmosphere and deposited in small drops at evening.

dew-claw (*'klaw*), *n.* the little claw behind a dog's foot.

dew-lap (*'lap*), *n.* the loose skin that hangs from the neck of an ox or cow.

dew-y (*dū'i*), *adj.* moist with dew.

Dewy or **Dewey.** A Cornish form of *David*.

dex-ter-i-ty (*deks-ter'i-ti*), *n.* mental or physical adroitness.

dex-ter-ous (*'tēr-us*), *adj.* quick, mentally or physically. [CLEVER.]

di-a-be-tes (*dī-ä-bē'tēz*), *n.* a disease characterized by a morbid and excessive discharge of urine.

di-a-bol-ic (*dī-ä-bol'ik*), or **di-a-bol-ic-al** (*'i-kal*), *adj.* devilish.

di-ab-o-lo (*dī-ab'ō-lō*) *n.* a game played by one or more persons, each of whom holds in either hand a stick connected by a cord, and endeavors by the aid of this cord to pick a reel-like top off the ground and cause it to spin continuously.

★**di-a-cous-tics** (*dī-ä-kous'* or *-kōōs'tiks*), *n. pl.* the science of refracted sounds.

di-a-crit-ic-al (*-krit'i-kal*), *adj.* serving to separate or distinguish.

di-a-crit-ic-al mark (*märk*), *n.* a mark employed to distinguish letters or sounds which resemble each other.

di-a-dem (*'ä-dem*), *n.* a crown; tiara.

di-ag-nose (*-ag-nōs'*), *v. t.* to ascertain, as a disease, by its general symptoms.

di-ag-no-sis (*-nō'sis*), *n.* [*pl.* diagnoses (*'sēz*)], scientific discrimination.

di-ag-o-nal (*-ag'ō-nal*), *adj.* extending from one angle to another.

di-a-gram (*'ä-gram*), *n.* a geometrical figure; a mechanical plan.

di-al (*dī'al*), *n.* an instrument for showing the time of the sun's shadow.

di-a-lect (*'ä-lekt*), *n.* the peculiar manner in which a language is spoken in a province or district of a country.

di-a-lec-tic (*lek'tik*), *adj.* pertaining to a dialect.

di-a-lec-ti-cian (*-tish'an*), *n.* a logician.

di-a-lec-tics (*'tiks*), *n. pl.* the art of reasoning.

di-a-logue (*'ä-log*), *n.* a conversation between two or more persons. [CONVERSATION.]

di-a-mag-net-ism (*-mag'net-izm*), *n.* the property possessed by certain bodies when under the influence of magnetism, and freely suspended, of taking a position at right angles to the magnetic meridian.

di-am-e-ter (*dī-am'ē-tēr*), *n.* the length of a line passing through the center of any object from one side to the other.

di-a-met-ric-al (*-ä-met'ri-kal*), *adj.* pertaining to a diameter; directly adverse or opposite.

di-a-mond (*dī'ä-mund*), *n.* a gem of extreme hardness and refractive power.

Diana (*dī-an'ä*) or **Dian** (*dī'an*). So called after *Diana*, goddess of hunting, the same as *Luna*, "the moon." Danish, *Diana;* Fr., *Diane;* Ger., *Diana;* Gr., *Artemis;* It., *Diana;* Lat., *Diana*.

di-a-phā-son (*dī-ä-pā'zon*), *n.* the entire compass of a voice or instrument.

di-a-per (*'ä-pēr*), *n.* linen cloth woven in geometric patterns.

di-aph-a-nous (*-af'ä-nus*), *adj.* transparent.

di-a-phragm (*'ä-fram*), *n.* any substance that intercepts or divides.

di-ar-rhœ-a (*dī-ä-rē'ä*), *n.* persistent looseness of the bowels.

di-a-ry (*'ä-ri*), *n.* [*pl.* diaries (*-riz*)], a register of daily occurrences.

di-as-to-le (*-as'tō-lē*), *n.* the rhythmical expansion and dilatation of the heart.

di-a-ton-ic (*dī-ä-ton'ik*), *adj.* designating the regular tones of a key or scale.

di-a-tribe (*'ä-trīb*), *n.* a continued discourse or disputation.

dice (*dīs*), *n. pl.* small cubes marked on the sides with one to six spots.

di-chro-mism (*dī'krō-mizm*), *n.* inability to see more than one of the three primary colors.

di-cing (*dī'sing*), *n.* gaming with dice.

dick-er (*dik'ēr*), *v. i.* to barter or trade on a small scale.

dick-y (*dik'i*), *n.* [*pl.* dickies (*'iz*)], a small separate shirt front.

dic-tate (*dik'tāt*), *v. t.* to declare with authority: *n.* command.

Syn. DICTATE, prescribe. *Dictate* signifies to make a word for another; and *prescribe* literally signifies to write down for another; to *dictate* is, however, a greater exercise of authority than to *prescribe*. He who *dictates* speaks with an adventitious authority; he who *prescribes* has the sanction of reason.

Ant. SUGGEST.

dic-ta-tion (*-tā'shun*), *n.* the act of dictating.

dic-ta-tor (*'tēr*), *n.* one who dictates.

dic-ta-to-ri-al (*-tō'ri-al*), *adj.* pertaining to a dictator.

dic-tion (*dik'shun*), *n.* manner of speaking or expression.

dic-tion-a-ry (*-ä-ri*), *n.* [*pl.* dictionaries (*-riz*)], a book containing all, or the principal, words in a language, with their meanings, derivations, etc.

Syn. DICTIONARY, lexicon, vocabulary, glossary, nomenclature. *Lexicon* is a species of *dictionary* appropriately applied to the dead languages. *Dictionary* is applied to the words of a modern language. A *vocabulary* is a partial kind of *dictionary*, which may comprehend a simple list of words, with or without explanation, arranged in order or otherwise. A *glossary* is an explanatory *vocabulary*, which commonly serves to explain difficult or obsolete terms. A *nomenclature* is literally a list of names, and in particular a reference to proper names.

dic-tum (*'tum*), *n.* [*pl.* dicta (*-tä*)], aphorism.

di-dac-tic (*di-dak'tik*), *adj.* teaching; instructing.

did-dle (*did'l*), *v. t.* to overreach or cheat.

di-do (*dī'dō*), *n.* a caper.

die (*dī*), *v. i.* [*p. t.* and *p. p.* died; *p. pr.* dying], to cease to live.

Syn. DIE, expire. *Die* designates in general the extinction of being. *Expire* designates the last action of life in certain objects. Plants and trees *die*. The flame of a lamp *expires*.

Ant. BE BORN, live.

die (*dī*), *n.* [*pl.* dies (*dīz*)], a piece of engraved metal with a device used for coining money, medals etc; a small cube (*pl. dice*, see *dice*).

di-er-e-sis (*-er'ē-sis*), *n.* a sign (¨) placed over the second of two separate vowels to show that each has a separate sound in pronunciation.

di-e-sis (*dī'ē-sis*), *n.* the double dagger (‡) used in printing.

di-et (*dī'et*), *n.* manner of living with special reference to food.

di-e-ta-ry (*dī'ē-tā-ri*), *adj.* pertaining to the rules of diet.

di-e-tet-ic (*dī-ē-tet'ik*), *adj.* regulating food or diet.

dif-fer (*dif'ēr*), *v. i.* to be dissimilar.

dif-fer-ence (*'ēr-ens*), *n.* the act or state of being unlike.

Syn. DIFFERENCE, variety, diversity, medley. *Difference* and *variety* seem to lie in the things themselves; *diversity* and *medley* are created either by accident or design. A *difference* may lie in two objects only; a *variety* cannot exist without an assemblage; a *difference* is discovered by means of a comparison which the mind forms of objects to prevent confusion; *variety* strikes on the mind, and pleases the imagination with many agreeable images; *diversity* arises from an assemblage of objects naturally contrasted; a *medley* is produced by an assemblage of objects so ill suited as to produce a ludicrous effect.

Ant. IDENTITY, likeness, uniformity.

★**dif-fer-ent** (*dif'ēr-ent*, not *dif'rent*), *adj.* unlike.

Syn. DIFFERENT, unlike. *Different* is positive, *unlike* is negative; we look at what is *different* and draw a comparison; but that which is *unlike* needs no comparison; a thing is said to be *different* from every other thing, or *unlike* to anything seen before.

Ant. IDENTICAL, one, same, similar.

dif-fer-en-ti-ate (*-en'shi-āt*), *v. t.* to constitute a difference between.

dif-fer-en-ti-a-tion (*-ä'shun*), *n.* the act of differentiating.

dif-fi-cult (*'i-kult*), *adj.* not easy. [OBSCURE.]

dif-fi-cul-ty (*-kul-ti*), *n.* [*pl.* difficulties (*-tiz*)], something that requires labor or skill to overcome.

Syn. DIFFICULTY, obstacle, impediment. *Difficulty* signifies not easy to be done; *obstacle* signifies the thing that stands in the way between a person and the object he has in view; *impediment* signifies something that entangles the feet. A *difficulty* interferes with the completion of any work; an *obstacle* interferes with the attainment of any end; an *impediment* interrupts the progress, and prevents the execution of one's wishes.

dif-fi-dence (*'i-dens*), *n.* lack of self-reliance. [DISTRUST.]

dif-fi-dent (*dif'i-dent*), *adj.* lacking self-reliance. [MODEST.]

dif-frac-tion (*dif-frak'shun*), *n.* the act of turning a ray of light when passing the edge of an opaque body.

dif-fuse (*dif-fūz'*), *v. t.* to pour out and spread all around: *n.* prolix.

Syn. DIFFUSE, prolix. Both mark defects of style opposed to brevity. The *diffuse* is properly opposed to the precise; the *prolix* to the concise or laconic. A *diffuse* writer is fond of amplification; the *prolix* writer is fond of minute details. [See *spread*.]

dif-fu-sion (*dif-fū'zhun*), *n.* the act of diffusing.

dif-fus-ive (*-fūs'iv*), *adj.* capable of diffusing.

dig (*dig*), *v. i.* [*p. t.* and *p. p.* dug or digged; *p. pr.* digging], to work with a spade.

di-gest (*dī'jest*), *n.* any compilation, abridgment, or summary of laws; *v. t.* (*dī-gest'*) dissolve in the stomach by the action of digestive juices. [ABRIDGMENT, DISPOSE.]

di-ges-ti-bil-i-ty (*-jes-ti-bil'i-ti*), *n.* the quality of being digestible.

di-ges-ti-ble (*'tī-bl*), *adj.* capable of being digested.

di-ges-tion (*-jes'chun*), *n.* the act of digesting.

dig-ger (*dig'ēr*), *n.* one who digs.

dig-ging (*'ing*), *n.* the act of excavating.

dig-it (*dij'it*), *n.* a finger or toe; any one of the Arabic numerals.

★**Dig-i-ta-lis** (*dij-i-tā'lis*, not *dij-i-tä'lis*), *n.* a genus of tall plants.

dig-i-tate (*'i-tāt*), *adj.* finger-shaped.

dig-i-ti-grade (*'i-ti-grād*), *adj.* walking on the toes, as cats.

dig-ni-fy (*dig'ni-fī*), *v. t.* [*p. t.* and *p. p.* dignified, *p. pr.* dignifying], to invest with dignity or rank.

dig-ni-ta-ry (*-tä-ri*), *n.* [*pl.* dignitaries (*-riz*)], one who holds a position of dignity or honor.

dig-ni-ty (*'ni-ti*), *n.* [*pl.* dignities (*-tiz*)], elevation of rank; moral worth.

di-gress (*dī-* or *dī-gres'*), *v. i.* to turn aside.

Syn. DIGRESS, deviate. Both these words express going out of the ordinary course; we *digress* only in a narrative, whether written or spoken; we *deviate* in actions as well as in words, in our conduct as well as in writings.

di-gres-sion (*-gresh'un*), *n.* the act of digressing.

dike (*dīk*), *n.* an embankment of earth thrown up as a protection against the sea, floods, etc.

di-lap-i-date (*dī-lap'i-dāt*), *v. t.* to bring into partial ruin.

di-lap-i-da-tion (*-i-dā'shun*), *n.* a state of partial ruin.

di-lat-a-ble (*-lā'tä-bl*), *adj.* expansive.

di-late (*-lāt'*), *v. t.* to enlarge or expand in all directions.

di-la-tor (*-lā'tēr*), *n.* one who, or that which, dilates.

dil-a-to-ry (*dil'ä-tō-ri*), *adj.* causing, or tending to cause, delay.

di-lem-ma (*dī-* or *dī-lem'ä*), *n.* an awkward or vexatious situation.

★**dil-et-tan-te** (*dil-et-an'tä* or *dē-lä-tän'tä*), *n.* [*pl.* dilettanti (*-tē*)], one who pursues the arts only for amusement; an amateur.

dil-et-tant-ism (*-tant'izm*), *n.* the characteristics of dilettanti.

dil-i-gence (*'i-jens*), *n.* careful attention.

dil-i-gent (*'i-jent*), *adj.* active, alert, prompt.

Syn. DILIGENT, expeditious, prompt. *Diligent* marks the interest one takes in doing something; he is *diligent* who loses no time, who keeps close to the work from inclination: *expeditious* marks the desire one has to complete the thing begun. *Prompt* marks one's desire to get ready; he is *prompt* who sets about a thing without delay, so as to make it ready. [See *active*.]

dil-ly-dal-ly (*dil'i-dal'i*), *v. i.* [*p. t.* and *p. p.* -dallied, *p. pr.* -dallying], to loiter; trifle.

di-lute (*dī-* or *dī-lūt'*), *v. t.* to thin or weaken by the admixture of another fluid.

di-lu-tion (*-lū'shun*), *n.* the act of diluting.

dim (*dim*), *adj.* [*comp.* dimmer, *superl.* dimmest], somewhat dark; hazy; obscure; faint; tarnished. [DARK, OBSCURE, FAINT.]

dime (*dīm*), *n.* a silver coin equal to 1-10th of a dollar, or ten cents.

di-men-sion (*di-men'shun*), *n.* the size or measured extent of a body.

di-min-ish (*di-min'ish*), *v. t.* to make less; reduce in bulk or amount. [ABATE.]

dim-i-nu-tion (*dim-i-nū'shun*), *n.* reduction; lessening.

di-min-u-tive (*di-min'ū-tiv*), *adj.* below the average size; little. [LITTLE.]

dim-i-ty (*dim'i-ti*), *n.* [*pl.* dimities (*-tiz*)], a cotton cloth of thick texture.

dim-ple (*dim'pl*) *n.* a small depression or hollow in the cheek or chin.

din (*din*), *n.* a continued and violent noise.

Dinah. From the Hebrew *Dinah*, signifying "judged"; *i. e.*, "acquitted", "vindicated."

dine (*dīn*), *v i.* to take dinner.

ding (*ding*), *v. i.* to sound as a bell.

ding-dong (*'dông*), *n.* the sound of a metallic body produced by blows.

★**din-ghy** (*ding'gi*), *n.* the smallest boat of a man-of-war.

din-gle (*ding'gl*), *n.* a narrow hollow between hills.

din-gle - dan-gle (*-dang'gl*), *adv.* swinging backward and forward.

din-gy (*din'ji*), *adj.* dark-colored; dirty.

din-ner (*'ēr*), *n.* the chief meal of the day.

dint (*dint*), *n.* a mark left by a blow or pressure.
di-oc-e-san (*dī-os'ē-san* or *dī'ō-sē-san*), *adj.* of or pertaining to a diocese.
di-o-cese (*'ō-sēs*), *n.* [*pl.* dioceses (*-sē-sez*)], a bishop's see.
di-op-tric (*-op'trik*), *adj.* assisting vision by means of the refraction of light.
di-ox-ide (*-oks'id* or *id*), *n.* an oxide consisting of 2 atoms of oxygen and 1 atom of a metal.
dip (*dip*), *v. t.* [*p. t.* and *p. p.* dipped, dipt, *p. pr.* dipping], to plunge for a short time into a fluid; the angle of inclination of strata to the horizon.
★**diph-the-ri-a** (*dif-* or *dip-thē'ri-ä*), *n.* a contagious throat-disease characterized by the formation of a false membrane in the air passages.
★**diph-thong** (*dif'* or *dip'thŏng*), *n.* the union of two vowel sounds pronounced in one syllable.
★**di-plo-ma** (*di-plō'mä*, not *di-plō'mä*), *n.* a writing on parchment or paper under sign and seal, conferring some honor.
di-plo-ma-cy (*'mä-si*, or *-plom'ä-si*), *n.* [*pl.* diplomacies (*-siz*)], the art of conducting negotiations between two states or nations.
dip-lo-mat (*dip'lō-mat*), *n.* a diplomatist.
di-plo-ma-tist (*di-plō'mä-tist*), *n.* one who is skilled in diplomacy.
dip-per (*dip'ĕr*), *n.* one who, or that which, dips.
dip-so-ma-ni-a (*-sō-mā'ni-ä*), *n.* a morbid craving for alcoholic drinks.
dire (*dīr*), *adj.* dreadful; mournful.
di-rect (*dī-rekt'*), *adj.* straight; not circuitous. [CONDUCT.]
di-rec-tion (*-rek'shun*), *n.* relative position; a command.
Syn. DIRECTION, address, superscription. A *direction* may serve to direct to place as well as to persons; an *address* is never used but in direct application to the person; a *superscription* has more respect to the thing than the person. A *direction* is given to such as go in search of persons and places; an *address* is put either on a card and a letter, or in a book; a *superscription* is placed at the head of other writings, or over tombs and pillars.
di-rect-ly (*-rekt'li*), *adv.* in a direct or straight line.
di-rect-ness (*'nes*), *n.* the quality of being direct.
di-rect-or (*'ĕr*), *n.* one who directs or superintends.
di-rect-o-rate (*'ō-rāt*), *n.* the office of a director.
di-rect-o-ry (*'ō-ri*), *n.* [*pl.* directories (*-riz*)], a book containing the names of the residents of a place.
dirge (*dĕrj*), *n.* a funeral hymn.
dir-i-gi-ble (*dir'i-ji-ble*), *adj.* that may be guided or steered: *n.* a dirigible balloon.
dirk (*dĕrk*), *n.* a dagger.
dirt (*dĕrt*), *n.* any foul or filthy substance.
dirt-y (*'i*), *adj.* impure; soiled.
dis, *prefix*, signifies separation, privation or negation.
dis-a-bil-i-ty (*dis-ä-bil'i-ti*), *n.* [*pl.* disabilities (*-tiz*)], lack of fitness. [INABILITY.]
dis-a-ble (*-ā'bl*), *v. t.* to deprive of power.
dis-a-buse (*-būz'*), *v. t.* to clear from mistakes.
dis-af-fect (*-af-fekt'*), *v. t.* to fill with discontent.
dis-af-fec-tion (*-fek'shun*), *n.* alienation of affection.
Syn. DISAFFECTION, disloyalty. *Disaffection* may be said with regard to any form of government; *disloyalty* only with regard to monarchy. Many were disaffected by the usurpation of Oliver Cromwell, because they would not be *disloyal* to their king.
dis-a-gree-a-ble (*-ä-grē'ä-bl*), *adj.* exciting repugnance.
dis-ap-pear (*-ä-pēr'*), *v. i.* to pass away.
Syn. DISAPPEAR, vanish. A thing *disappears* either gradually or suddenly; it *vanishes* on a sudden; it *disappears* in the ordinary course of things; it *vanishes* by an unusual effort, a supernatural or a magic power.
dis-ap-pear-ance (*'ans*), *n.* removal from sight.
dis-ap-point (*-point'*), *v. t.* to thwart or frustrate the hopes of.
dis-arm (*-ärm*), *v. t.* deprive of arms.
dis-arm-a-ment (*-ärm'ä-ment*), *n.* the act of disarming.
dis-ar-ray (*dis-ä-rā'*), *v. t.* [*p. t.* and *p. p.* disarrayed, *p. pr.* disarraying], throw into disorder.
dis-as-ter (*diz-as'tĕr*) *n.* a sudden or unexpected misfortune. [CALAMITY, ACCIDENT.]
★**dis-as-trous** (*'trus*), *adj.* unfortunate.
dis-band (*dis-band'*), *v. t.* to dismiss from military service.
dis-bar (*-bär'*), *v. t.* [*p. t.* and *p. p.* disbarred, *p. pr.* disbarring], to deprive a lawyer of his right to practice.
dis-be-lief (*bē-lēf'*), *n.* positive unbelief.
Syn. DISBELIEF, unbelief. *Disbelief* properly implies the believing that a thing is not, or refusing to believe that it is. *Unbelief* expresses properly a believing the contrary of what one has believed before. *Disbelief* is most applicable to the ordinary events of life; *unbelief* to serious matters of opinion.
dis-bur-den (*-bŭr'dn*), *v. t.* to remove a burden from.
dis-burse (*-bŭrs'*), *v. t.* to expend.
dis-burse-ment (*'ment*), *n.* money expended.
disc. Another form of *disk*.
dis-card (*-kärd'*), *v. t.* to cast off as useless.
dis-cern (*diz-zĕrn'*), *v. t.* to distinguish.
dis-cern-i-ble (*'i-bl*), *adj.* perceptible.
dis-charge (*dis-chärj'*), *v. t.* unload; free from any burden, impediment, or obligation: dismission from office or employment. [ABSOLVE, BANISH.]
dis-ci-ple (*di-sī'pl*), *n.* one who receives the teaching of another.
dis-ci-plin-a-ble (*dis'i-plin-ä-bl*), *adj.* capable of instruction.
dis-ci-plin-a-ri-an (*-plin-ä'ri-an*), *adj.* pertaining to discipline.
dis-ci-pline (*'i-plin*), *n.* mental or moral training: *v. t.* to train to obedience or efficiency. [TEACH.]
dis-claim (*-klām'*), *v. t.* to disown.
Syn. DISCLAIM, disown. To *disclaim* is to throw off a claim; to *disown* is not to admit as one's own.
dis-close (*-klōz'*), *v. t.* to uncover. [PUBLISH.]
dis-col-or (*-kul'ĕr*), *v. t.* to change from the natural color.
dis-com-fit (*-kum'fit*), *v. t.* to defeat; rout.
dis-com-mode (*-kom-ōd'*), *v. t.* to inconvenience.
dis-con-cert (*-kon-sĕrt'*), *v. t.* to disturb the composure of.
dis-con-so-late (*'sō-lāt*), *adj.* hopeless.
dis-con-tin-ue (*-tin'ū*), *v. t.* to interrupt; break off. [CEASE.]
dis-cord (*'kôrd*), *n.* disagreement; a confused noise.
Syn. DISCORD, strife. *Discord* consists most in the feeling; *strife* consists most in the outward action. *Discord* evinces itself in various ways; by looks, words, or actions; *strife* displays itself in words or acts of violence. [See *dissension*.]
dis-count (*dis'kount*), *n.* a sum deducted or allowed for prompt payment of an account: *v. t.* (*dis-kount'*) to allow a discount on.
dis-cour-age (*-kur'äj*), *v. t.* dishearten; deter.
★**dis-course** (*dis-kōrs'*, not *dis'kōrs*), *n.* speech or language: *v. t.* and *v. i.* to talk or converse. [SPEAK.]
dis-cov-er (*dis-kuv'ĕr*), *v. t.* to bring to light; reveal.
Syn. DISCOVER, manifest, declare. We *discover* by any means direct or indirect; we *manifest* by unquestionable marks; we *declare* by express words. Talents and dispositions *discover* themselves; particular feelings and sentiments *manifest* themselves; facts, opinions, and sentiments are *declared*. [See *find*, *detect*.]
dis-cov-er-y (*-i*), *n.* [*pl.* discoveries (*-iz*)], a bringing to light or making known.
dis-cred-it (*-kred-it*), *v. t.* disbelieve; *n.* state of being discredited.
Syn. DISCREDIT, disgrace, reproach, scandal. *Discredit* interferes with a man's credit or respectability; *disgrace* marks him out as an object of unfavorable distinction; *reproach* makes him a subject of reproachful conversation; *scandal* makes him an object of offense or even abhorrence.
dis-creet (*-krēt'*), *adj.* prudent.
dis-crep-an-cy (*-krep'an-si*), *n.* disagreement.
dis-crep-ant (*'ant*), *adj.* disagreeing; different.
dis-cre-tion (*-kresh'un*), *n.* prudence; judgment. [JUDGMENT.]
dis-crim-i-nate (*-krim'i-nāt*), *v. t.* to observe or mark the differences between. [DISTINGUISH.]
dis-crim-i-na-tion (*-i-nā'shun*), *n.* faculty of nice discernment.
dis-cur-sive (*-kûr'siv*), *adj.* desultory.
dis-cuss (*dis-kus'*), *v. t.* to debate; agitate.
Syn. DISCUSS, examine. *Discuss* signifies to shake asunder or to separate thoroughly so as to see the whole composition; *examine* is used where the judgment holds the balance in examining. *Discussion* is altogether carried on by verbal and personal communication; *examination* proceeds by reading, reflection, and observation.
dis-cus-sion (*-kush'un*), *n.* argument.
dis-dain (*-dān'*), *v. t.* to think unworthy; deem unsuitable: *n.* haughty, or indignant scorn. [CONTEMN, HAUGHTINESS.]
★**dis-ease** (*diz-ēz'*, not *dis-ēz'*), *n.* any mental, moral, or physical disorder. [DISORDER, DISEASE.]
dis-em-bow-el (*-bou'el*), *v. t.* [*p. t.* and *p. p.* disemboweled, *p. pr.* disemboweling], to deprive of bowels.
dis-fig-ure (*-fig'ūr*), *v. t.* to injure; deform. [DEFACE.]
dis-fran-chise (*-fran'chīz*), *v. t.* to deprive of electoral or municipal privileges.
dis-gorge (*-gôrj'*), *v. t.* to force out of the mouth or stomach with violence.
dis-grace (*-grās'*), *n.* the state of being out of favor; ignominy. [ABASE, DISCREDIT, DISHONOR.]
dis-guise (*-gīz'*), *v. t.* to change the appearance of; conceal. [CONCEAL, PRETENSE.]
dis-gust (*-gust'*), *v. t.* to cause aversion in: *n.* strong aversion or repugnance.
Syn. DISGUST, loathing, nausea. *Disgust* is less than *loathing*, and that than *nausea*. When applied to sensible objects we are *disgusted* with dirt; we *loathe* the smell of food if we have a sickly appetite; we *nauseate* medicine. When applied metaphorically, we are *disgusted* with affectation; we *loathe* the endearments of those who are offensive. [See *antipathy*, *abomination*.]
dish (*dish*), *n.* a broad hollow vessel with a rimmed edge.
★**dis-ha-bille** (*dis-ä-bil'*), *n.* negligent attire.
dis-heart-en (*-härt'n*), *v. t.* to discourage.
di-shev-el (*di-shev'el*), *v. t.* [*p. t.* and *p. p.* disheveled, *p. pr.* disheveling], to disorder.
dis-hon-est (*dis-on'est*), *adj.* lacking in honesty.
Syn. DISHONEST, knavish. What is *dishonest* violates the established laws of man; what is *knavish* supposes peculiar art and design in the accomplishment.
dis-hon-or (*dis-on'ĕr*), *v. t.* to deprive of honor; violate the chastity of: *n.* disgrace.
Syn. DISHONOR, disgrace. *Dishonor* deprives a person of those outward marks of honor which men look for according to their rank and station; *disgrace* deprives a man of the favor and kindness which he has heretofore received from others. [See *abase*.]
dis-hon-or-a-ble (*dis-on'ĕr-ä-bl*), *adj.* discreditable.
dis-in-te-grate (*-in'tē-grāt*), *v. t.* to break up into component parts.
dis-junc-tive (*-jungk'tiv*), *adj.* serving, or tending, to disjoin.
disk (*disk*), *n.* a flat circular plate.
dis-like (*dis-līk'*), *n.* a strong feeling of repugnance. [ANTIPATHY.]
dis-lo-cate (*'lō-kāt*), *v. t.* to put out of joint.
dis-lo-ca-tion (*-kā'shun*), *n.* the act of dislocating.
dis-lodge (*-loj'*), *v. t.* to remove or drive out from. [BANISH.]
dis-loy-al-ty (*-loi'al-ti*), *n.* unfaithfulness. [DISAFFECTION.]
dis-mal (*diz'mal*), *adj.* gloomy; depressing. [DULL.]
dis-man-tle (*dis-man'tl*), *v. t.* to strip or divest of.
dis-may (*-mā'*), *v. t.* [*p. t.* and *p. p.* dismayed, *p. pr.* dismaying], to terrify; dispirit.
Syn. DISMAY, daunt, appall. We are *dismayed* by alarming circumstances; we are *daunted* by terrifying circumstances; we are *appalled* by horrid circumstances.
dis-mem-ber (*dis-mem'bĕr*), *v. t.* to tear limb from limb.
dis-miss (*-mis'*), *v. t.* to send away. [BANISH.]
dis-miss-al (*-mis'al*), *n.* the act of dismissing.
dis-or-der (*-ôr'dĕr*), *n.* want of order or arrangement.
Syn. DISORDER, disease, distemper, malady. In a general sense *disorder* is altogether indefinite; *disease* comprehends every serious and permanent *disorder* in the animal economy. The *disorder* is slight, partial, and transitory; the *disease* is deep-rooted and permanent. *Distemper* is used for such particularly as throw the animal frame most completely out of its temper or course. *Malady* has less of a technical sense than the other terms. [See *confusion*.]
dis-par-age (*-par'äj*), *v. t.* treat with contempt. [ABUSE.]
dis-par-i-ty (*-par'i-ti*), *n.* [*pl.* disparities (*-tiz*)], inequality of rank, station, or excellence.
Syn. DISPARITY, inequality. *Disparity* applies to two objects which should meet or stand in coalition with each other; *inequality* is applicable to those that are compared with each other; the *disparity* of age, situation, and circumstances is to be considered with regard to persons entering into a matrimonial connection; the *inequality* in the portion of labor which is to be performed by two persons is a ground for the *inequality* of their recompense.
dis-pas-sion-ate (*-pash'un-āt*), *adj.* free from passion.
Syn. DISPASSIONATE, cool. *Dispassionate* is taken negatively, it marks merely the absence of *passion*; *cool* is taken positively, it marks an entire freedom from *passion*; when we meet with an angry disputant it is necessary to be *dispassionate*, in order to avoid quarrels; in the moment of danger our safety often depends upon our *coolness*. [See *calm*.]
dis-patch. Same as *despatch*.
dis-pel (*dis-pel'*), *v. t.* [*p. t.* and *p. p.* dispelled, *p. pr.* dispelling], to drive away.
Syn. DISPEL, disperse. To *dispel* is a more forcible action than to *disperse*; we destroy the existence of a thing by *dispelling* it; we merely destroy the junction *dispersing* it.
Ant. GATHER, increase.
dis-pen-sa-ble (*-pen'sä-bl*), *adj.* that for which a dispensation may be granted; that may be spared.
dis-pen-sa-ry (*'sä-ri*), *n.* [*pl.* dispensaries (*-riz*)], a place where medicines are kept and made up.
dis-pen-sa-tion (*-sā'shun*), *n.* the act of dispensing; that which is appointed or bestowed by a higher power.
dis-pense (*dis-pens'*), *v. t.* to deal out in portions; distribute.
Syn. DISPENSE, distribute. *Dispense* is an indiscriminate action; *distribute* is a particularizing action. We *dispense* to all; we *distribute* to each individually.
Ant. COLLECT, consolidate.
dis-perse (*dis-pĕrs'*), *v. i.* to scatter in different directions or parts: *v. t.* to cause to scatter in different directions. [DISPEL.]
dis-pir-it (*-pir'it*), *v. t.* to dishearten.
dis-place (*-plās'*), *v. t.* to put out of place.
dis-place-ment (*'ment*), *n.* the act of displacing.
dis-play (*-plā'*), *v. t.* [*p. t.* and *p. p.* displayed, *p. pr.* displaying], to spread out; exhibit.
dis-please (*dis-plēz'*) *v. t.* to fail to please, offend.
dis-pleas-ure (*dis-plezh'ūr*), *n.* annoyance; vexation.
Syn. DISPLEASURE, anger. *Displeasure* is always a softened and gentle feeling; *anger* is always a harsh feeling, and sometimes rises to vehemence and madness. *Displeasure* is always produced by some adequate cause, real or supposed; but *anger* may be provoked by every or any cause, according to the temper of the individual; *displeasure* is an act of the will, it is an angry sentiment. [See *anger*.]
Ant. AMIABILITY, gentleness, sanction.

dis-port (*dis-pōrt'*), *v. t.* to amuse or divert (with *self*): *v. i.* to play.

dis-pos-al (*-pōz'al*), *n.* arrangement; order; control.

Syn. DISPOSAL, disposition. *Disposal* is a personal act; it depends upon the will of the individual; *disposition* is an act of the judgment; it depends upon the nature of the things. The removal of a thing from one's self is involved in a *disposal;* the good order of the things is comprehended in their *disposition.*

dis-pose (*-pōz'*), *v. t.* to place; arrange; order.

Syn. DISPOSE, arrange, digest. We may *dispose* ordinary matters by simply assigning a place to each; in this manner trees are *disposed* in a row, but we *arrange* and *digest* by an intellectual effort; in the first case by putting those together which ought to go together; and in the latter case by both separating that which is dissimilar; and bringing together that which is similar; books are *arranged* in a library; the materials for a literary production are *digested.* [See *persuade, addicted.*]

Ant. CONFUSE, disturb.

dis-po-si-tion (*-pō-zish'un*), *n.* the act of disposing; order; temper.

Syn. DISPOSITION, temper. *Disposition* is permanent and settled; *temper* may be transitory and fluctuating. The *disposition* comprehends the springs and motives of actions; the *temper* influences the action of the moment. It is possible and not infrequent to have a good *disposition* with a bad *temper,* and vice versa.

Syn. DISPOSITION, inclination. We may always expect a man to do that which he is *disposed* to do; but we cannot always calculate upon his executing that to which he is merely *inclined.* We indulge a *disposition;* we yield to an *inclination.* The *disposition* comprehends the whole state of the mind at the time; an *inclination* is particular, referring always to a particular object. [See *disposal.*]

Ant. DISINCLINATION, dislike.

dis-prove (*-prōōv'*), *v. t.* to prove to be false. [CONFUTE.]

dis-pu-ta-ble (*'pū-tā-bl*), *adj.* liable to be disputed.

★**dis-pu-tant** (*dis'pū-tant,* not *dis-pū'tant*) *n.* a controversialist.

dis-pu-ta-tion (*-tā'shun*), *n.* a verbal controversy.

dis-pute (*dis-pūt'*), *v. i.* to debate; argue; *n.* a controversy. [CONTROVERT, FEUD, CONTEND.]

dis-qui-si-tion (*-kwi-zish'un*), *n.* an elaborate essay.

dis-re-gard (*-rē-gärd'*), *v. t.* to pay no heed to.

Syn. DISREGARD, neglect, slight. We *disregard* the warnings, the words, or opinions of others; we *neglect* their injunctions or their precepts. To *disregard* results from the settled purpose of the mind; to *neglect* from a temporary forgetfulness or oversight; *slight* is altogether an intentional act toward an individual.

Ant. FAVOR, notice, watch.

dis-rup-tion (*-rup'shun*), *n.* forcible separation; breach.

dis-sect (*-sekt'*), *v. t.* to cut in pieces.

dis-sem-ble (*-sem'bl*), *v. t.* to hide under a false appearance. [CONCEAL.]

dis-sem-i-nate (*-sem'i-nāt*), *v. t.* to scatter abroad, like seed.

dis-sen-sion (*dis-sen'shun*), *n.* strife.

Syn. DISSENSION, contention, discord. A collision of opinions produces *dissension;* a collision of interests produces *contention;* a collision of humors produces *discord.* [See *feud.*]

Ant. ACCORD, harmony, peace.

dis-sent (*-sent'*), *v. i.* to disagree in opinion (with *from*).

dis-sent-er (*'ĕr*), *n.* a nonconformist.

dis-sent-ing (*'ing*), *p. adj.* pertaining to, or characterized by, dissent.

dis-ser-ta-tion (*-ĕr-tā'shun*), *n.* a formal argumentative discourse.

dis-sev-er (*-sev'ĕr*), *v. t.* to cut in two.

dis-sim-u-late (*-sim'ū-lāt*), *v. i.* and *v. t.* to dissemble.

dis-sim-u-la-tion (*-lā'shun*), *n.* hypocrisy. [PRETENSE, SIMULATION.]

dis-si-pate (*'i-pāt*), *v. t.* to scatter completely.

dis-si-pa-tion (*-pā'shun*), *n.* the act or state of being dissipated; luxury. [EXCESS.]

dis-so-ci-ate (*-sō'shi-āt*), *v. t.* to separate.

★**dis-sol-u-ble** (*-sol'ū-bl*), *adj.* capable of being dissolved.

dis-so-lute (*'sō-lūt*), *adj.* loose in morals or conduct. [ABANDONED.]

dis-so-lu-tion (*-lū'shun*), *n.* the act of dissolving or liquefying.

dis-solve (*-olv'*), *v. t.* to liquefy; melt; terminate; annul.

dis-so-nance (*'ō-nans*), *n.* discord.

dis-suade (*-swād'*), *v. t.* to advise or counsel against.

dis-sua-sion (*-swā'zhun*), *n.* the act of dissuading.

dis-syl-la-ble (*-sil'ä-bl*), *n.* a word of two syllables.

dis-taff (*dis'tăf*), *n.* [*pl.* distaffs (*'tăfs*)], the staff from which flax is drawn in spinning.

dis-tance (*'tans*), *n.* the space or interval between two objects or points.

dis-tant (*'tant*), *adj.* remote.

Syn. DISTANT, far, remote. *Distant* is used to designate great space; *far* only that which is ordinary; astronomers estimate that the sun is ninety-four millions of miles *distant* from the earth; a person lives not very *far* off, or a person is *far* from the spot; *remote* expresses the relative idea of being gone out of sight.

Ant. NEAR, close, proximate.

dis-taste (*dis-tāst'*), *n.* aversion of the palate. [ANTIPATHY.]

dis-taste-ful (*'fool*), *adj.* unpleasant to the taste.

dis-tem-per (*-tem'pĕr*), *v. t.* to disorder or disease; derange the functions of. [DISORDER.]

dis-tend (*-tend'*), *v. t.* to stretch out in all directions.

dis-ten-tion (*-ten'shun*), *n.* a swelling out.

dis-til (*-til'*), *v. i.* [*p. t.* and *p. p.* distilled, *p. pr.* distilling], to practice the art of distillation.

dis-til-la-tion (*-ā'shun*), *n.* the process of distilling.

dis-tinct (*-tingkt'*), *adj.* separate; plain, unconfused; *adv.* distinctly. [CLEARLY.]

dis-tin-guish (*-ting'gwish*), *v. t.* to separate from others by some mark of honor or preference.

Syn. DISTINGUISH, discriminate. To *discriminate* is in fact to *distinguish* specifically; hence we speak of a *distinction* as true or false, but of a *discrimination* as nice; we *distinguish* by means of the senses as well as the understanding; we *discriminate* by the understanding only. [See *abstract.*]

Ant. CONFUSE, confound.

dis-tin-guished (*'gwisht*), *p. adj.* eminent.

Syn. DISTINGUISHED, conspicuous, noted, eminent, illustrious. A thing is *distinguished* in proportion as it is *distinct* or separate from others; it is *conspicuous* in proportion as it is easily seen; it is *noted* in proportion as it is widely known; *eminent* applies to those things which set a man high in the circle of his acquaintance; *illustrious* applies to that which makes him shine before the world.

Ant. OBSCURE, unimportant, unknown.

dis-tort (*-tôrt'*) *v. t.* to twist or turn from the natural shape or figure. [TURN.]

dis-tract (*-trakt'*), *v. t.* to perplex; harass.

dis-train (*-trān'*) *v. t.* to seize and hold as security for payment.

dis-traint (*-trānt'*), *n.* the act of distraining.

dis-trait (*dis-trā'*), *adj.* absent-minded.

dis-traught (*dis-trawt'*), *adj.* bewildered or harassed.

dis-tress (*-tres'*), *n.* affliction, adversity.

Syn. DISTRESS, anxiety, anguish, agony. *Distress* is the pain felt when in a strait from which we see no means of extricating ourselves; *anxiety* is that pain which one feels on the prospect of an evil. *Distress* always depends upon some outward cause; *anxiety* often lies in the imagination; *anguish* arises from the reflection on the evil that is past; *agony* springs from witnessing that which is immediate or before the eye. [See *grief.*]

Ant. APATHY, calmness, ease, nonchalance.

dis-tress, *v. t.* to inflict pain or suffering upon.

Syn. DISTRESS, harass, perplex. A person is *distressed* either in his outward circumstances or his feelings; he is *harassed* mentally or corporeally; he is *perplexed* in his understanding, more than in his feelings; a deprivation *distresses;* provocations and hostile measures *harass;* stratagems and ambiguous measures *perplex.*

Ant. AID, comfort, soothe, succor.

dis-trib-ute (*dis-trib'ūt*), *v. t.* to deal out or divide; allot. [DISPENSE.]

dis-tri-bu-tion (*-tri-bū'shun*), *n.* the act of distributing.

dis-trib-u-tive (*-trib'ū-tiv*), *adj.* pertaining to distribution.

★**dis-trict** (*dis'trikt,* not *dē'strikt*), *n.* a territorial division.

dis-trust (*-trust'*), *n.* want of confidence, faith, or reliance.

Syn. DISTRUST, suspicion, diffidence. *Distrust* is said either of ourselves or others; *suspicion* is said only of others; *diffidence* only of ourselves. To be *distrustful* of a person is to impute no good to him; to be *suspicious* of a person is to impute positive evil to him. As regards one's self, a person may *distrust* his own powers for the execution of a particular office, or have a *distrust* of himself in company; he has a general *diffidence* or he is naturally *diffident.*

Ant. ASSURANCE, confidence, conviction, certainty.

dis-turb (*-tûrb'*), *v. t.* to trouble; vex.

Syn. DISTURB, interrupt. We may be *disturbed* either inwardly or outwardly; we are *interrupted* only outwardly. Our minds may be *disturbed* by disquieting reflections, or we may be *disturbed* in our rest or in our business by unseemly noises. [See *anxiety, trouble.*]

ditch (*dich*), *n.* a trench cut in the earth.

dit-to (*dit'tō*), *n.* that which has been said; a duplicate.

dit-ty (*'i*), *n.* [*pl.* ditties (*'iz*)], a little song.

di-ur-nal (*dī-ûr'nal*), *adj.* daily. [DAILY.]

di-van (*dī-van'*), *n.* a court of justice; couch.

dive (*dīv*), *v. i.* to plunge head foremost into water.

★**di-verge** (*dī-vĕrj'*), *v. i.* to spread out from one point.

di-ver-gence (*-vĕr'jens*), *n.* a receding from each ther.

di-verse (*'vĕrs,* or *dī-vers'*), *adj.* essentially different.

di-ver-si-fy (*dī-vĕr'si-fī*), *v. t.* [*p. t.* and *p. p.* diversified, *p. pr.* diversifying], to make different.

di-ver-si-ty (*-ti*), *n.* the state of being unlike. [DIFFERENCE.]

di-ver-sion (*'shun*), *n.* variation; alteration.

di-vert (*dī-vĕrt'* not *dī-vĕrt'*), *v. t.* to turn aside from any direction or course.

di-vest (*dī-vest'*), *v. t.* to strip or deprive of.

di-vide (*dī-vīd'*), *v. t.* to cut into two or more parts: *v. i.* to be separated.

Syn. DIVIDE, separate, part. That is said to be *divided* which has been or is conceived to be a whole; that is *separated* which might be joined. An army may be *divided* into two or three *divisions* or portions; the *divisions* are frequently *separated* in their march; to *divide* is properly to make any whole into parts.

Ant. CONSOLIDATE, keep together.

div-i-dend (*div'i-dend*), *n.* a share of the profits of a public company or business.

div-i-na-tion (*-i-nā'shun*), *n.* the pretended art of foreseeing future events.

di-vine (*dī-vīn'*), *adj.* partaking of the nature of God; *v. t.* to conjecture. [GODLIKE, HOLY, GUESS.]

div-ing (*dīv'ing*), *n.* the act of plunging into water.

di-vin-i-ty (*dī-vin'i-ti*), *n.* [*pl.* divinities (*-tiz*)], the state or quality of being divine; theology. [DEITY.]

di-vis-i-ble (*di-viz'i-bl*), *adj.* capable of being divided.

di-vi-sion (*-vizh'un*), *n.* the act or state of being divided.

di-vi-sor (*di-vī'zor*), *n.* the number by which another is divided.

di-vorce (*-vōrs'*), *n.* a dissolution of the marriage contract by legal authority.

di-vulge (*di-vulj'*), *v. t.* to make known. [PUBLISH.]

diz-zy (*diz'i*), *adj.* giddy.

Dnieper (*nē'pĕr*). From *Don-ieper,* "upper river."

Dniester (*nēs'tĕr*). From *Don-iester,* "lower river Don."

do (*dōō*), *v. t.* [*p. t.* did, *p. p.* done, *p. pr.* doing], to perform; achieve.

doc-ile (*dos'il* or *dō'sil*), *adj.* easy to teach; tractable.

do-cil-i-ty (*dō-sil'i-ti*), *n.* the quality of being docile.

dock (*dok*), *n.* a place for constructing and laying up ships: *v. t.* to cut off or curtail.

dock-et (*'et*), *v. t.* to mark the contents or titles of papers on the back of them; a digest.

doc-tor (*'tĕr*), *n.* one skilled in any particular branch of knowledge; an academical degree denoting the highest proficiency in a faculty of a university.

doc-tri-naire (*-trē-nâr'*), *n.* one who theorizes on political or other matters.

doc-trine (*'trin*), *n.* the principles or dogma of any church.

Syn. DOCTRINE, dogma, tenet. A *doctrine* rests on the authority of the individual by whom it is framed; the *dogma* on the authority of the body by whom it is maintained; a *tenet* rests on its own intrinsic merits. A *tenet* is a species of principle maintained in matters of opinion by persons in general.

doc-u-ment (*'ū-ment*), *n.* a printed or written paper.

doc-u-men-ta-ry (*-men'tä-ri*), *adj.* pertaining to, or consisting of, documents.

dodge (*doj*), *v. i.* to start aside and shift about: *v. t.* to escape by starting aside.

doe (*dō*), *n.* the female of a buck or fallow deer.

doff (*dof*), *v. t.* to take, or put, off.

dog (*dog*), *n.* a domesticated carnivorous anima, belonging to the genus Canis.

dog-cart (*'kärt*), *n.* a light cart with two transverse seats.

dog-days (*'dāz*), *n. pl.* a period in July and August when the dog star or Sirius rises and sets with the sun.

Doge's (*dōjez*) **palace.** Formerly the palace of the doges of Venice, and now one of its most interesting architectual monuments. The present building was begun by Marino Falierno in 1354.

dog-ged (*dog'ed*), *adj.* stubborn; pertinacious. [OBSTINATE.]

dog-ger-el (*'ĕr-el*), *n.* verse devoid of sense or rhythm.

dog-ma (*'mä*), *n.* [*pl.* dogmas (*'mäz*) or dogmata (*'mä-tä*)], an established principle, tenet, or doctrine. [DOCTRINE.]

dog-mat-ic (*-mat'ik*), *adj.* pertaining to, or of the nature of, dogma. [CONFIDENT.]

dog-ma-tize (*'mä-tīz*), *v. i.* to make dogmatic assertions.

dog-trot (*'trot*), *n.* a gentle trot.

dog-wood (*'wood*), *n.* the wild cornel.

doily (*doi'li*), *n.* [*pl.* doilies (*'liz*)], a small mat or napkin.

dole (*dōl*), *v. t.* to deal out sparingly.

dole-ful (*'fool*), *adj.* sorrowful; dismal. [PITEOUS.]

doll (*dol*), *n.* a girl's puppet or toy baby.

dol-lar (*'ĕr*), *n.* a silver coin current in the United States and Canada equal to 100 cents.

dol-ly (*'i*), *n.* [*pl.* dollies (*'iz*)], a little doll.

dol-man (*''man*), *n.* a long outer garment worn by the Turks.

Dolores (*dō-lō'res*). Derived from the Spanish name *Dolores,* signifying "sorrows."

dol-o-rous (*dol'ō-rus*), *adj.* sorrowful.

dol-phin (*dol'fin*), *n.* the name of a cetaceous mammal of the genus Delphinus.

dolt (*dōlt*), *n.* a heavy, stupid fellow.

★**do-main** (*dō-mān'*, not *dō'mān*), *n.* lordship.

dome (*dōm*), *n.* a hemispherical roof.

do-mes-tic (*dō-mes'tik*), *adj.* pertaining to the house or household affairs. [SERVANT.]

do-mes-ti-cate (*-ti-kāt*), *v. t.* to make domestic.

do-mes-tic-i-ty (*-tis'i-ti*), *n.* [*pl.* domesticities (*-tiz*)], the state of being domestic.

dom-i-cile (*dom'i-sil*), *n.* a permanent residence.

dom-i-nant (*'i-nant*), *adj.* exercising chief authority; predominant.

dom-i-nate (*'i-nāt*), *v. t.* to govern; rule.

dom-i-neer (*dom-i-nēr'*), *v. i.* to exercise authority arrogantly or tyrannically. [IMPERIOUS.]
Dominic (*dom'i-nik*). From the Latin, *dominicus*, "of or belonging to a lord or master." Danish, *Dominicus;* Dutch, *Dominicus;* Fr., *Dominique;* It., *Domenico;* Port., *Domingos;* Sp., *Domingo;* Sw., *Dominicus.*
Dominica (*dom-i-nē'ka*). "Sunday Island," indicative of its discovery by Columbus, on Sunday, November 2, 1493. A West Indian island.
do-min-ic-al (*dō-min'i-kal*), *adj.* pertaining to Christ as Lord, or to Sunday.
dom-i-nie (*dom'i-nē*), *n.* a schoolmaster.
do-min-ion (*dō-min'yun*), *n.* supreme authority. [EMPIRE.]
dom-i-no (*dom'i-nō*), *n.* [*pl.* dominos (*-nōz*)], a cape or cloak used as a masquerade garment; an ecclesiastical hood.
don (*don*), *v. t.* [*p. t.* and *p. p.* donned, *p. pr.* donning], to put on; assume.
Donald. An English form of *Donghal*, "brown stranger."
do-nate (*dō'nāt*), *v. t.* to contribute. [GIFT.]
don-jon (*don'* or *dun'jun*), *n.* the principal tower of a mediæval castle.
★**don-key** (*dong'ki* not *dung'ki*), *n.* [*pl.* donkeys (*'kiz*)], an ass.
don-na (*don'nä*), *n.* a lady. [*Italian.*]
do-nor (*dō'nēr*), *n.* a giver.
doom (*dōōm*), *n.* a judicial sentence of condemnation. [DESTINY, CONDEMN.]
dooms-day (*dōōmz'dā*), *n.* the day of final judgment.
door (*dōr*), *n.* the gate or entrance of a house.
dor (*dôr*), *n.* a large black dung beetle.
Dora. A female name abbreviated from *Theodora.*
Dorcas. From the Greek name, *dorkas*, signifying "a wild goat," "antelope," "gazelle."
Do-ri-an (*dō'ri-an*), *adj.* pertaining to, or characteristic of, Doris: *n.* a member of the Doric or Dorian race.
Dor-ic order (*ôr'dēr*), the oldest of the three orders of Greek architecture.
dor-king (*dôr'king*), *n.* one of a breed of domestic fowls.
dor-man-cy (*'man-si*), *n.* quiescence.
dor-mant (*'mant*), *adj.* sleeping; quiet.
dor-mer (*'mēr*), *n.* a window pierced vertically in the side of a roof.
dor-mi-to-ry (*'mi-tō-ri*), *n.* [*pl.* dormitories (*-riz*)], a large apartment capable of holding several beds.
dor-mouse (*'mous*), *n.* [*pl.* dormice (*'mīs*)], a small European squirrel-like rodent.
Dorothy (*dor'ō-thi*). From the Greek name *Dorothea*, signifying "the gift of God." Danish, *Dorothea;* Dutch, *Dorothea;* Fr., *Dorothée;* Ger., *Dorothea;* It., *Dorotea;* Lat., *Dorothea;* Sp., *Dorotea;* Sw., *Dorothea.*
dor-sal (*dôr'sal*), *adj.* pertaining to, or situated near, the back.
do-ry (*dō'ri*), *n.* [*pl.* dories (*'riz*)], a small flat-bottomed skiff with a sharp prow.
dose (*dōs*), *n.* the quantity of medicine to be taken at one time.
dot (*dot*), *n.* a small point or speck.
do-tage (*dō'tāj*), *n.* imbecility of mind; foolish or excessive affection.
do-tard (*'tērd*), *n.* one whose intellect is impaired by age.
dote (*dōt*), *v. i.* to exhibit the weakness of age.
dou-ble (*dub'l*), *adj.* twofold; two of a sort: *n.* a turning back to escape pursuit.
dou-ble bass (*-bās*), the largest violin.
dou-ble-en-ten-dre (*dōō'bl-äN-täN'dr*), *n.* a word or phrase with a double meaning.
doub-let (*dub'let*), *n.* a kind of close-fitting man's garment.
doub-loon (*'lōōn*), *n.* a Spanish gold coin.
doubt (*dout*), *v. i.* to waver in opinion; be in suspense; *v. t.* to suspect: *n.* indecision of belief; question.
Syn. DOUBT, suspense. *Doubt* respects that which we should believe; *suspense* that which we wish to know or ascertain. We are in *doubt* for the want of evidence; we are in *suspense* for the want of certainty. *Doubt* interrupts our progress in the attainment of truth; *suspense* impedes us in the attainment of our objects.
Ant. CERTAINTY, confidence, knowledge.
doubt-ful (*'fool*), *adj.* of uncertain issue. [EQUIVOCAL, OBSCURE.]
★**douche** (*dōōsh*), *n.* a jet or current of water
dough (*dō*), *n.* a soft mass of moistened flour yet unbaked.
dough-ty (*dou'ti*), *adj.* valiant; strong.
dough-y (*dō'i*), *adj.* soft like dough.
Douglas (*dug'läs*). From Gaelic *dubh-ghlas*, "dark gray."
douse (*dous*), *v. t.* to plunge suddenly into a liquid.
dove (*duv*), *n.* a pigeon of the genus Columba.
dove-cote (*'kōt*), *n.* a small house for doves.
Dover, Del. Named from the town in England of that name.
dove-tail (*duv'tāl*), *v. t.* to join by a joint resembling a dove's tail spread out.
dow-a-ger (*dou'ä-jēr*). Strictly-speaking, a dowager is an endowed widow. In practice the name "dowager" is applied to any widowed lady.
dow-dy (*'di*), *n.* [*pl.* dowdies (*'diz*)], a slatternly woman who affects finery.
dow-el (*dou'el*), *n.* a pin to connect two pieces of wood.
dow-er (*'ēr*), *n.* that part of a husband's property which his widow enjoys during her life.
down (*doun*), *n.* soft feathers, hair, or wool: *adv.* from a higher to a lower degree or position.
down-cast (*'käst*), *adj.* directed downward; sad.
down-fall (*'fawl*), *n.* a falling downward. [FALL.]
Downing street, London. So named after Sir George Downing.
down-right (*doun'rīt*), *adj.* straight to the point; blunt.
down-ward (*'wērd*), *adj.* tending to the ground.
down-y (*'i*), *adj.* covered with, or made of, down; soft.
dow-ry (*dou'ri*), *n.* [*pl.* dowries (*'riz*)], the property a woman brings to her husband at marriage.
dox-ol-o-gy (*doks-ol'ō-ji*), *n.* [*pl.* doxologies (*-jiz*)], a short hymn of praise to God.
doze (*dōz*), *v. i.* to sleep lightly or fitfully.
drab (*drab*), *n.* a kind of thick dull brown or yellowish-gray woolen cloth.
drab-ble (*'l*), *v. t.* to make wet or dirty.
draft (*dräft*), *n.* a sketch or outline; an order for money; the depth of water a vessel draws or to which she sinks.
drag (*drag*), *v. t.* [*p. t.* and *p. p.* dragged, *p. pr.* dragging], to pull or draw along by force; haul; tug: *v. i.* to trail along the ground. [DRAW.]
drag-gle (*drag'l*), *v. t.* to wet or soil by dragging in the mud.
drag-o-man (*drag'ō-man*), *n.* [*pl.* dragomans (*-manz*)], in the East, an interpreter.
drag-on (*'un*), *n.* a fabulous animal represented as a winged serpent or lizard.
drag-on fly (*flī*), an insect with a long slender abdomen, large eyes and wings.
drag-on's blood (*-unz blud*), *n.* the red juice and gum of several trees.
dra-goon (*drä-gōōn'*), *n.* originally a kind of mounted infantry.
drain (*drān*), *v. t.* to draw off gradually: *n.* a channel or pipe for superfluous water.
drain-age (*'āj*), *n.* the act or means of draining.
drake (*drāk*), *n.* a male duck.
dram (*dram*), *n.* 1-8th of an ounce troy, and 1-16th of an ounce avoirdupois.
★**dra-ma** (*drä'mä*, or *drä'mä*), *n.* a composition depicting a story of human life in character, on the stage.
dra-mat-ic (*drä-mat'ik*), *adj.* pertaining to, or appropriate to, the drama.
dram-a-tis per-so-næ (*dram'ä-tis pēr-sō'nē*), the characters in a play.
dram-a-tize (*dram'ä-tīz*), *v. t.* to compose for stage representation.
dram-a-tur-gy (*'ä-tēr-ji*), *n.* the art of dramatic composition.
drape (*drāp*), *v. t.* to cover with cloth.
dra-per (*drä'pēr*), *n.* a dealer in woolen or cotton cloth, etc.
dra-per-y (*-i*), *n.* [*pl.* draperies (*-iz*)], textile cloths or fabrics.
dras-tic (*dras'tik*), *adj.* powerful.
draw (*draw*), *v. t.* [*p. t.* drew, *p. p.* drawn, *p. pr.* drawing], to pull along or haul: sketch; draft.
Syn. DRAW, drag, haul or hale, pull, pluck, tug. *Draw* expresses here the idea common to the first three terms, namely, of putting a body in motion from behind one's self or toward one's self; to *drag* is to *draw* a thing with violence, or to *draw* that which makes resistance; to *haul* is to *drag* it with still greater violence. To *pull* signifies only an effort to *draw* without the idea of motion; horses *pull* very long sometimes before they can *draw* a heavily laden cart uphill. To *pluck* is to *pull* with a sudden twitch in order to separate; to *tug* is to *pull* with violence.
Ant. LEAVE, push, repel, thrust away or back.
draw-back (*'bak*), *n.* loss of advantage; a discouragement.
draw-bridge (*'brij*), *n.* a bridge which may be lifted up.
★**draw-er** (*'ēr*), *n.* one who draws; a sliding, box-like arrangement for holding clothes, papers, etc.; one who draws a bill of exchange.
draw-ing (*'ing*), *n.* delineation.
draw-ing room (*rōōm*), a room for the reception of company.
drawl (*drawl*), *v. t.* to utter in a slow, lazy tone.
drawn (*drawn*), *p. adj.* left undecided.
dray (*drā*), *n.* a low, stoutly-built cart.
dread (*dred*), *v. t.* to fear greatly. [ANXIETY.]
dread-ful (*'fool*), *adj.* inspiring dread. [FEARFUL, FORMIDABLE.]
dread-naught (*'nawt*), *n.* a fearless person; a very large battleship.
dream (*drēm*), *n.* a train of thoughts or images passing through the mind during sleep.
Syn. DREAM, reverie. *Dreams* and *reveries* are alike opposed to the reality, and have their origin in the imagination; but the former commonly passes in sleep, and the latter when awake.
Ant. REASON, act.
drear-y (*drēr'i*), *adj.* cheerless; gloomy.
dredge (*drej*), *n.* a drag or instrument for sweeping the bottoms of rivers.
dregs (*dregz*), *n. pl.* the sediment of liquors.
drench (*drench*), *v. t.* to wet thoroughly. [SOAK.]
dress (*dres*), *v. t.* [*p. t.* and *p. p.* dressed or drest, *p. pr.* dressing], to invest with, or as with, clothing; adorn; adjust to a straight line: *v. i.* to put on clothes.
dress-ing (*'ing*), *n.* the act of putting on clothes; the smoothing of the surface of stone.
dress-ing-gown (*-goun*), *n.* a light, easy, loose gown.
drib-ble (*drib'l*), *v. i.* to fall in small drops; drip: *n.* a drizzling shower.
drib-let (*drib'let*), *n.* a small piece, part or sum.
dri-er (*drī'ēr*), *n.* one who, or that which, dries.
drift (*drift*), *n.* the direction in which anything is driven; an accumulation heaped up by sea or wind: *v. i.* to be carried along by a current.
drill (*dril*), *v. t.* to pierce with a drill; instruct thoroughly. [TEACH.]
drink (*dringk*), *v. t.* [*p. t.* drank, *p. p.* drunk, *p. pr.* drinking], to swallow (a liquid). [ABSORB.]
drip (*drip*), *v. i.* [*p. t.* and *p. p.* dripped, *p. pr.* dripping], to fall in drops.
drive (*drīv*), *v. t.* [*p. t.* drove, *p. p.* driven, *p. pr.* driving], to impel or urge forward by force. [BANISH.]
driv-el (*driv'el*), *v. i.* to slaver; be weak or foolish.
driz-zle (*driz'l*), *v. i.* to rain slightly.
droll (*drōl'*), *adj.* ridiculous.
droll-er-y (*'ēr-i*), *n.* [*pl.* drolleries (*-iz*)], the quality of being droll.
drom-e-da-ry (*drum'ē-dä-ri*), *n.* [*pl.* dromedaries (*-riz*)], one of a domesticated breed of camels distinguished by having one hump.
drone (*drōn*), *v. t.* to utter in a monotonous tone or sound: *n.* the male of the honeybee, which produces no honey.
droop (*drōōp*), *v. i.* to sink or hang down.
drop (*drop*), *v. i.* [*p. t.* and *p. p.* dropped, dropt, *p. pr.* dropping], to fall in drops; sink to a lower position: *v. t.* to let fall: *n.* a globule of moisture.
drop-si-cal (*'si-kal*), *adj.* affected with dropsy.
drop-sy (*'si*), *n.* an unnatural accumulation of serous fluid in any cavity of the body.
dross (*dros*), *n.* the scum or slag of melted metal.
★**drought** (*drout*), *n.* continued absence of rain.
drove (*drōv*), *n.* [*p. t.* of drive] a collection of cattle or sheep.
drown (*droun*), *v. i.* to perish by suffocation in water.
drow-sy (*drou'zi*), *adj.* sleepy.
drudge (*druj*), *v. i.* to labor hard: *n.* one employed in menial work; drudgery. [SERVANT, WORK.]
drug (*drug*), *n.* an ingredient used in medicine; a narcotic: *v. t.* [*p. t.* and *p. p.* drugged, *p. pr.* drugging], to mix drugs with.
drug-gist (*'ist*), *n.* a dealer in drugs.
dru-id (*drōō'id*), *n.* a priest of the ancient Celts of Britain.
drum (*drum*), *n.* an instrument of percussion, consisting of a hollow cylinder with vellum at the ends.
drum-head (*'hed*), *n.* the head or top of a drum.
drum-mer (*'ēr*), *n.* a commercial traveler.
drum-stick (*'stik*), *n.* the stick with which a drum is beaten.
drunk (*drungk*), *n.* [*p. p.* of drink], a fit of drunkenness.
drunk-ard (*'ard*), *n.* one habitually drunk.
drunk-en-ness (*'n-nes*), *n.* the state of being drunk.
Drury Lane. A street in London, near the Strand. It is one of the great arteries of the parish of St. Clement Danes, an aristocratic part of London in the time of the Stuarts.
Drury Lane theater. This famous London theater was originally a cockpit, which was converted into a theater in the time of James I. It was rebuilt in 1662, in 1674, in 1775, in 1794, and in 1812. The last building was destroyed by fire in the early part of 1908, and replaced by the present structure.
Drusilla (*drōō-sil'lä*). A female name derived from the Greek name *Drousille*, which Bailey translates "dewy eyes." The word signifies "dew," "moisture," "pure water"; and figuratively, what is tender, delicate, young. Fr., *Drusille;* Ger., *Drusille;* It., *Drusilla;* Lat., *Drusilla.*
dry (*drī*), *adj.* [*comp.* drier, *superl.* driest], free from moisture or wetness.
Dryburgh (*drī'bur-o*) **abbey.** An ancient abbey, now in ruins, four miles southeast of Melrose, Scotland. In the south isle is the tomb of Sir Walter Scott.
dry-ly (*drī'li*), *adv.* without moisture; in a dry manner; coldly.
du-al (*dū'al*), *adj.* expressing, or composed of, the number 2.
du-al-ism (*-izm*), *n.* a twofold division.
du-al-i-ty (*-al'i-ti*), *n.* the state or quality of being twofold.
dub (*dub*), *v. t.* [*p. t.* and *p. p.* dubbed, *p. pr.* dubbing], to invest with knighthood by striking the shoulder with a sword.
du-bi-ous (*dū'bi-us*), *adj.* doubtful. [EQUIVOCAL.]
Dublin. The capital of Ireland. In the Irish language this is *Dubh-linn*, the meaning of which is "black pool."
Dubuque (*dōō-būk'*). County and city in Iowa, named for a French trader.
duc-at (*dūk'at*), *n.* a gold or silver coin formerly in use in Europe. Intrinsic value, $2.28½.
duch-ess (*duch'es*), *n.* the consort or widow of a duke.
duch-y (*'i*), *n.* [*pl.* duchies (*'iz*)], the territory, dominions, or jurisdiction of a duke.
duck (*duk*), *n.* any bird of the family Anatidæ, especially the domestic duck.
duck-ling (*'ling*), *n.* a young duck.
duct (*dukt*), *n.* a passage by which a fluid is conveyed.
★**duc-tile** (*duk'til*, not *duk'tēl*), *adj.* capable of being drawn out into threads or wire; tractable.
dude (*dūd*), *n.* a kind of dandy.
dudg-eon (*duj'un*), *n.* sullen anger.
due (*dū*), *adj.* owed or owing; payable; ascribable; proper. [DEBT.]

du-el (*dū'el*), *n.* a combat between two persons with deadly weapons.

du-et (*dū-et'*), *n.* a vocal or instrumental composition for two performers.

Dugald. An English form of *Dughall.*

dug-out (*dug'out*), *n.* a canoe hollowed out from a log.

duke (*dūk*), *n.* the highest order of English nobility.

duke-dom (*'dum*), *n.* a duchy.

dul-cet (*dul'set*), *adj.* sweet or pleasant to the ear; harmonious.

dul-ci-mer (*'si-mēr*), *n.* an instrument with wire strings.

dull (*dul*), *adj.* slow of apprehension or action.

Syn. DULL, gloomy, sad, dismal. When applied to natural objects, *dull* and *gloomy* denote the want of necessary light or life; in this sense metals are more or less *dull* according as they are stained with dirt; the weather is *dull* when the sun is obscured by clouds, and *gloomy* when the atmosphere is darkened by fogs or thick clouds; *dismal* denotes either that which is necessary, or that which is repugnant to the senses; as a glare of light or a sound may be *dismal.* *Sad* is not applied so much to sensible as moral objects; the loss of a parent is *sad.*

Ant. BRIGHT, clear, radiant, joyful.

dull-ness (*'nes*), *n.* the state or quality of being dull. [STUPIDITY.]

Duluth, Minn. Named in honor of the French explorer, Daniel Greysolon du Lhut.

du-ly (*dū'li*), *adv.* in a fit and becoming manner; fitly.

dumb (*dum*), *adj.* incapable of speech.

dumb-bell (*'bel*), *n.* one of a pair of heavy weights used for exercise.

dum-my (*dum'i*), *n.* [*pl.* dummies (*'iz*)], one who is mute or silent.

dump (*dump*), *n.* a place to discharge rubbish in: *v. t.* to throw down and empty.

dump-ling (*dump'ling*), *n.* a pudding.

dun (*dun*), *adj.* of a dull brown color: *n.* a creditor who presses persistently for payment.

Duncan. A Scottish surname. Some render it "powerful chieftain."

dunce (*duns*), *n.* a dull, ignorant person.

dune (*dūn*), *n.* a heap of drifted sand piled up on the seashore.

dung (*dung*), *n.* the excrement of animals.

dun-geon (*dun'jun*), *n.* a dark underground cell.

Dun-kers (*dung'kērz*), *n. pl.* a sect of German-American Baptists.

Dunstan. A masculine name, derived from a locality, signifying, "the stone hill" (*dun-stan*).

du-o-dec-i-mal (*dū-ō-des'i-mal*), *adj.* consisting of, or computing by, twelves.

du-o-dec-i-mo (*'i-mō*), *n.* a sheet folded into twelve leaves (12mo).

dupe (*dūp*), *n.* one who is, or can be, easily tricked.

du-plex (*dū'pleks*), *adj.* double; compound.

du-pli-cate (*'pli-kāt*), *v. t.* to make or render double: *adj.* corresponding exactly with another.

du-pli-ca-tion (*-kā'shun*), *n.* the act of duplicating.

du-plic-i-ty (*-plis'i-ti*), *n.* deceit; hypocrisy.

Duquesne (*dū-kān'*). Borough in Allegheny county Pennsylvania, named from old Fort Duquesne, which was named for a distinguished French officer, the Marquis Abraham Duquesne.

du-ra-ble (*'rā-bl*), *adj.* not perishing; permanent.

Syn. DURABLE, lasting, permanent. *Durable* is naturally said of material substances; and *lasting* of those which are spiritual; although in ordinary discourse sometimes they exchange offices; *permanent* applies more to the affairs of men. That which perishes quickly is not *durable;* that which ceases quickly is not *lasting;* that which is only for a time is not *permanent.*

Ant. BRIEF, fugitive, momentary, temporary.

du-ra ma-ter (*'rā mā'tēr*), the tough covering which envelops the brain.

du-rance (*'rans*), *n.* imprisonment.

du-ra-tion (*-rā'shun*), *n.* continuance in time. [CONTINUANCE, TIME.]

du-ress (*dū-res'* or *dū'res*), *n.* restraint of personal liberty.

dur-ing (*dūr'ing*), *prep.* in the time of.

dusk (*dusk*), *adj.* tending to darkness; shadowy.

dust (*dust*), *n.* fine dry particles of matter state of dissolution. [BODY.]

du-ti-a-ble (*dū'ti-ā-bl*), *adj.* subject to duty.

du-ti-ful (*-fool*), *adj.* respectful.

du-ty (*'ti*), *n.* [*pl.* duties (*'tiz*)], obligatory service; tax levied by government.

Syn. DUTY, obligation. *Duty* has to do with the conscience; an *obligation* arises from circumstances, and is a species of *duty.* He who guarantees to pay a sum of money contracts an *obligation.* He who marries contracts new *duties.*

Ant. CHOICE, pleasure, whim.

dwarf (*dwawrf*), *n.* a human being, much below the average height: *v. t.* hinder from growing to the natural size.

dwell (*dwel*), *v. i.* [*p. t.* and *p. p.* dwelt, *p. pr.* dwelling], to reside for a length of time. [ABIDE.]

dwin-dle (*dwin'dl*), *v. i.* to become gradually less.

dye (*dī*), *v. t.* [*p. t.* and *p. p.* dyed, *p. pr.* dyeing], to stain or color.

dy-nam-ic (*-nam'ik*), *adj.* pertaining to mechanical forces not in equilibrium.

★**dy-na-mite** (*'nā-mīt*), *n.* a highly explosive compound: *v. t.* to destroy by dynamite.

dy-na-mo (*'nā-mō*), *n.* an electric machine for converting mechanical into electric energy.

dy-nas-ty (*dī'nas-ti*), *n.* [*pl.* dynasties (*-tiz*)], a line or succession of sovereigns of a particular family.

dyne (*dīn*), *n.* the force which, acting upon a gram per second, generates a velocity of 1 centimeter.

dys-en-ter-y (*dis'en-ter-i*), *n.* a tropical disease akin to diarrhœa.

dys-pep-si-a (*-pep'si-ā*), *n.* indigestion.

dys-pep-tic (*'tik*), *adj.* pertaining to, causing, or afflicted with, dyspepsia.

E

each (*ēch*), *adj.* and *pron.* every one.

ea-ger (*ē'gēr*), *adj.* impetuous; vehement.

Syn. EAGER, animated, anxious, ardent burning, desirous, earnest, enthusiastic, fervent, glowing, hot, impatient, impetuous, importunate, intense, intent, keen, longing, vehement, yearning, zealous. One is *eager* who *impatiently* desires to accomplish some end; one is *earnest* with a desire that is more deep, and constant; one is *anxious* with a desire that foresees the pain of disappointment. One is *eager* for the gratification of any appetite or passion; he is *earnest* in conviction, purpose, or character; the soldier is *earnest* in his devotion to his country, *eager* for a battle.

Ant. APATHETIC, heedless, purposeless.

ea-gle (*'gl*), *n.* a bird of prey, genus Aquila; a gold coin of the United States equal to 10 dollars.

ear (*ēr*), *n.* the organ of hearing.

earl (*ērl*), *n.* nobleman next in rank below a marquis.

earl-dom (*'dum*), *n.* the possessions or dignity of an earl.

ear-ly (*ēr'li*), *adj.* [*comp.* earlier, *superl.* earliest], before the usual time.

ear-mark (*ēr'märk*), *n.* a mark for identification.

earn (*ērn*), *v. t.* to gain as a just recompense for one's labor.

earn-est (*'est*), *adj.* in serious reality. [EAGER.]

earn-ings (*'ingz*), *n. pl.* wages; reward.

ear-ring (*ēr'ring*), *n.* an ear ornament.

earth (*ērth*), *n.* the inhabited terraqueous globe.

earth-en (*'en*), *adj.* made of earth.

earth-ly (*'li*), *adj.* pertaining to the earth; sensual.

earth-quake (*'kwāk*), *n.* a shaking or trembling of the earth.

earth-work (*'wērk*), *n.* an offensive or defensive fortification.

earth-worm (*'wērm*), *n.* a common name for worms.

earth-y (*'i*), *adj.* pertaining to the earth; dull.

ear-wax (*ēr'waks*), *n.* cerumen.

ease (*ēz*), *n.* freedom from pain, disturbance, labor or affectation.

Syn. EASE, quiet, rest, repose. *Ease* and *quiet* respect action on the body; *rest* and *repose* respect the action of the body; *ease* denotes an exemption from any painful agency in general; *quiet* denotes an exemption from that in particular which noise, disturbance, or the violence of others may cause; *rest* simply denotes the cessation of motion; *repose* is that species of *rest* which is agreeable after labor.

Ant. ANXIETY, dread, solicitude.

ea-sel (*ē'zl*), *n.* a wooden frame for supporting a canvas.

east (*ēst*), *n.* that part of the heavens where the sun is seen to rise.

East (*ēst*), *n.* the Orient; eastern part of the United States.

East-er (*ēst'ēr*), *n.* a festival of the Christian church to commemorate the resurrection of Jesus Christ.

Easter island. In the eastern Pacific; named by Jacob Roggevin in consequence of his visit on Easter Sunday, 1722.

east-er-ly (*-li*), *adv.* situated, or moving toward, the east.

east-ern (*ēst'ērn*), *adj.* situated toward, or lying in, the east.

east-ern-er (*-ēr*), *n.* a person who resides in the eastern part of the United States.

East river. Name applied to the body of water at New York, more properly a strait, connecting Long Island sound with New York bay.

east-ward (*'wērd*), *adv.* toward the east.

eas-y (*ēz'i*), *adj.* [*comp.* easier, *superl.* easiest], free from pain, disturbance, etc.

Syn. EASY, ready. *Easy* marks the freedom of being done; *ready* the disposition or willingness to do; the former refers mostly to the thing or the manner, the latter to the person.

eat (*ēt*), *v. t.* [*p. t.* ate, *p. p.* eaten, *p. pr.* eating], to chew and swallow, as food.

eaves (*ēvz*), *n. pl.* the edges of the roof which overhang a building.

eaves-drop (*'drop*), *v. i.* [*p. t.* and *p. p.* eavesdropped, *p. pr.* eavesdropping], to listen to the private conversation of others.

ebb (*eb*), *n.* the flowing back of the tide.

Ebenezer (*eb-en-ē'zēr*). From the Hebrew *Ebhenezer,* signifying "stone of help," name of the stone which Samuel set up near Mispeh, in witness of the divine assistance obtained against the Philistines.

eb-on-ize (*eb'un-īz*), *v. t.* to make black by staining like ebony.

eb-o-ny (*'un-i*), *n.* a hard, heavy, durable, black-colored wood.

eb-ul-li-tion (*eb-ul-lish'un*), *n.* the act of boiling.

é-car-té (*ā-kär-tā'*), *n.* a game of cards played by two persons.

ec-cen-tric (*ek'sen-trik*), *adj.* not situated in, or deviating from, the center; peculiar in manner or character.

ec-cen-tric-i-ty (*-tris'i-ti*), *n.* [*pl.* eccentricities (*-tiz*)], deviation from a center; peculiarity.

ec-cle-si-as-tic (*ek-klē-zi-as'tik*), *n.* a person in holy orders.

ec-cle-si-as-tic-al (*-ti-kal*), *adj.* pertaining to the church.

e-chi-nus (*ē-kī'nus*), *n.* [*pl.* echini (*'nī*)], a sea-urchin; a rounded egg-shaped molding.

ech-o (*ek'ō*), *n.* [*pl.* echoes (*'ōz*)], the repetition of a sound caused by reflection: *v. i.* [*p. t.* and *p. p.* echoed; *p. pr.* echoing], to emit an echo; give, or reflect back, a sound: *v. t.* to repeat the sound of.

é-clair (*ā-klär'*), *n.* a small oblong cake.

é-clat (*ā-klä'*), *n.* a bursting forth, as of applause or admiration.

ec-lec-tic (*ek-lek'tik*), *adj.* selecting or choosing from different systems, doctrines, or sources.

ec-lec-ti-cism (*'ti-sizm*), *n.* the eclectic system of philosophy.

e-clipse (*ē-klips'*), *n.* the total or partial obscuration of the light of a heavenly body: *v. t.* to overshadow.

Syn. ECLIPSE, obscure. Heavenly bodies are *eclipsed* by the intervention of other bodies between them and the beholder; things are in general *obscured* which are in any way rendered less striking or visible.

Ant. DISCOVER, reveal.

e-clip-tic (*-klip'tik*), *n.* the apparent path of the sun in the heavens during a year.

ec-logue (*ek'log*), *n.* a pastoral poem.

ec-o-nom-ic (*ek-ō-* or *ē-kō-nom'ik*), *adj.* frugal; saving; pertaining to domestic economy.

ec-o-nom-ic-al (*'i-kal*), *adj.* economic. [PENURIOUS.]

e-con-o-mist (*ē-kon'ō-mist*), *n.* one prudent in expenditure.

e-con-o-mize (*'ō-mīz*), *v. t.* to manage with care or frugality.

e-con-o-my (*'ō-mi*), *n.* [*pl.* economies (*-miz*)], the regulation of household affairs. [FRUGALITY.]

é-cru (*ā-kroo'*), *adj.* unbleached.

ec-sta-sy (*ek'stā-si*), *n.* [*pl.* ecstasies (*-siz*)], the state of being beside one's self.

ec-stat-ic (*-stat'ik*), *adj.* overpowering; rapturous.

é-cu (*ā-koo'*), *n.* a mediæval shield.

Ecuador (*ek-wā-dōr'*. Spanish *ā-kwā-dōr'*). Spanish for equator. A republic of South America, so called by virtue of its geographical position.

ec-u-men-ic (*ek-ū-men'ik*), *adj.* general; universal.

★**ec-ze-ma** (*ek'zē-mā*, not *ek-zē'mā*), *n.* an inflammatory disease of the skin.

ed-dy (*ed'i*), *n.* [*pl.* eddies (*'iz*)], a contrary current of air or water causing a circular motion.

e-del-weiss (*ā'del-vīs*), *n.* a small white Alpine plant.

E-den (*ē'dn*), *n.* paradise.

Edgar. From the Anglo-Saxon name *Eadgar.*

edge (*ej*), *n.* the thin, sharp, or cutting part of an instrument; extreme border.

edged (*ejd*), *p. adj.* furnished with an edge, border, or fringe.

edge-tool (*'tōōl*), *n.* any sharp tool.

edg-ing (*'ing*), *n.* that which forms an edge or border.

ed-i-ble (*ed'i-bl*), *adj.* fit to be eaten as food.

e-dict (*ē'dikt*), *n.* a public proclamation or decree. [DECREE.]

ed-i-fi-ca-tion (*ed-i-fi-kā'shun*), *n.* a building up in a moral sense.

ed-i-fice (*ed'i-fis*), *n.* a fine structure.

ed-i-fy (*'i-fī*), *v. t.* [*p. t.* and *p. p.* edified, *p. pr.* edifying], to build up or strengthen.

Edinburgh (*ed'in-bur-ō*). The capital of Scotland. Formerly *Edwinesburg,* means ostensibly the fortress of Eadwine, the Northumbrian king, who was converted by Paulinus.

ed-it (*ed'it*), *v. t.* to revise and prepare for publication.

Edith. Formerly *Eadith;* from Anglo-Saxon *eadig,* "happy," "rich."

e-di-tion (*ē-dish'un*), *n.* the published form of a literary work.

ed-i-tor (*ed'i-tēr*), *n.* one who superintends a literary work for publication.

ed-i-to-ri-al (*-tō'ri-al*), *adj.* pertaining to an editor: *n.* a leading article.

Edmund (*ed'mund*). From Anglo-Saxon *ead-mund* "guardian or defender of happiness." Danish, *Edmund;* Fr., *Edmond;* Ger., *Edmund;* It., *Edmondo;* Lat., *Edmundus;* Sp., *Edmondo,* or *Edmundo.*

ed-u-cate (*'ū-kāt*), *v. t.* to impart knowledge to; train. [TEACH.]

ed-u-ca-tion (*-kā'shun*) *n.* the act of educating.

Syn. EDUCATION, instruction, breeding. *Instruction* and *breeding* are to *education* as parts to a whole; *instruction* respects the communication of knowledge and *breeding* respects the manners or outward conduct; but *education* comprehends not only both these, but the formation of the mind, and the establishment of the principles; good *instruction* makes one wiser; good *breeding* makes one more polished and agreeable.

Ant. IGNORANCE, uncouthness.

ed-u-ca-tor (*-kā-tēr*) *n.* one who, or that which, educates.

e-duce (*ē-dūs'*), *v. t.* to draw out; evolve.

Edward (*ed'ward*). From Anglo-Saxon *ead-weard,* "guardian of happiness." Danish, *Eduard;* Dutch, *Eduard;* Fr., *Edouard;* Ger., *Eduard;* It., *Eduardo* or *Edoardo;* Lat., *Edvardus* or *Edoardus;* Port., *Duarte;* Sp., *Eduardo;* Sw., *Eduard.*

Edwin (*ed'win*). From the Anglo-Saxon name Eadwin, from *ead-winn*, "happy conqueror." Danish, *Edwin*; Lat., *Edwinus*.

eel (*ēl*), *n.* an elongated fish, destitute of ventral fins.

eel-fare (*ēl'fâr*), *n.* a brood of eels.

Eel river, Ind. From the translation of the Indian name, *shoamague*, "slippery fish" (the eel).

e'en (*ēn*), contraction of even and evening.

e'er (*âr* or *âr*), contraction of ever.

ee-rie (*ē'ri*), *adj.* weird.

ef-face (*ef-fās'*), *v. t.* to obliterate. [BLOT.]

ef-face-a-ble (*'ā-bl*), *adj.* capable of being effaced.

ef-fect (*ef-fekt'*), *v. t* to produce as a cause: *n.* result; purpose.

Syn. EFFECT, produce, perform. To *produce* signifies to bring something forth or into existence; to *perform* to do something to the end; to *effect* is to *produce* an effect by performing; whatever is *effected* is the consequence of a specific design; what is *performed* is done by specific efforts. [See *accomplish*, *consequence*.]

Ant. CAUSE, fail, spoil.

ef-fect-ive (*'iv*), *adj.* having the power to effect.

ef-fect-u-al (*'ū-al*), *adj.* producing, or having effect.

ef-fem-i-na-cy (*-fem'i-nā-si*), *n.* the quality of being effeminate.

ef-fem-i-nate (*'i-nāt*), *v. t.* to make womanish or delicate: *adj.* unmanly. [FEMALE.]

ef-fer-vesce (*-fēr-ves'*), *v. i.* to be in a state of natural ebullition.

ef-fer-ves-cence (*'ens*), *n.* the state or condition of effervescing.

ef-fete (*-fēt'*), *adj.* worn out. [effect.

ef-fi-ca-cious (*-i-kā'shus*), *adj.* producing a desired

ef-fi-ca-cy (*-kā-si*), *n.* power to produce results or effects.

ef-fi-cien-cy (*-fish'en-si*), *n.* effectual agency or power. [ABILITY.]

ef-fi-cient (*'ent*), *adj.* producing or causing effects or results; powerful.

Effie. A Scottish corruption of *Euphemia*.

ef-fi-gy (*ef'i-ji*), *n.* [*pl.* effigies (*-jiz*)], an image.

ef-flo-resce (*-flō-res'*), *v. i.* to blossom.

ef-flu-vi-um (*ef-flū'vi-um*), *n. pl.* effluvia (*-ā*)], disagreeable exhalations arising from decaying matter.

ef-fort (*'fort*), *n.* strenuous exertion. [ENDEAVOR.]

ef-front-er-y (*-frunt'ēr-i*), *n.* impudence.

ef-ful-gence (*-ful'jens*), *n.* a great luster.

ef-fu-sion (*-fū'zhun*), *n.* the act of pouring out.

Syn. EFFUSION, ejaculation. An *effusion* commonly flows from a heated imagination uncorrected by the judgment; it is, therefore, in general not only incoherent but extravagant and senseless; an *ejaculation* is produced by the warmth of the moment, but never without reference to some particular circumstance. Enthusiasts are full of extravagant *effusions;* contrite sinners will often express their penitence in pious *ejaculations*.

ef-fu-sive (*'siv*), *adj.* pouring forth freely or widely.

Egbert (*eg'bērt*). It means, "distinguished in battle," Lat., *Egbertus*.

egg (*eg*), *n.* the oval or roundish body laid by birds from which their young are produced.

eg-lan-tine (*'lan-tīn* or *-tin*), *n.* the dog-rose.

ego-ism (*eg'ō-izm*), *n.* the habit of regarding self as the center of everything. [OPINIONATED.]

eg-o-ist (*-ist*), *n.* an adherent of egoism.

eg-o-tism (*eg'ō-tizm*), *n.* vanity. [OPINIONATED.]

eg-o-tist (*-tist*), *n.* one characterized by egotism.

e-gre-gious (*ē-grē'jus*), *adj.* extraordinary.

e-gress (*'gres*), *n.* departure.

e-gret (*'gret*), *n.* a heron's plume.

Egypt. Is the Greek and not the native name of the country which on the monuments is called *Kem* (Ham), "the black," probably from the dark alluvial soil. It has been explained as the "land" (*aia*) of the "vulture" (*guptos*), or sacred kite of Horus, which is the most conspicuous animal in the country.

Egyptian hall. The Egyptian hall in the mansion house of the city of London was so-called because of its exact correspondence with the Egyptian hall described by Vitruvius.

ei-der (*ī'dēr*), *n.* a large marine duck, the down of which is an article of commercial value.

eight (*āt*), *adj.* one more than 7: a cardinal numeral.

eight-een (*āt'ēn*), *adj.* one more than 17: a cardinal numeral; the sum of 17 and 1.

eight-een-mo (*-mō*), *n.* a size of book the sheets for which are folded into 18 leaves.

eight-eenth (*'ēnth*), *adj.* next in order after 17th: an ordinal numeral.

eighth (*āt'th*), *adj.* next after seventh.

eight-i-eth (*āt'i-eth*), *adj.* next to seventy-ninth.

eight-y (*'i*), *adj.* eight times ten.

ei-kon (*ī'kōn*), *n.* a holy image.

ei-ther (*ē'* or *ī'thēr*), *adj.* one or the other of two.

e-jac-u-late (*ē-jak'ū-lāt*), *v. t.* to utter suddenly. [CALL.]

e-jac-u-la-tion (*ū-lā'shun*), *n.* something uttered suddenly. [EFFUSION.]

e-ject (*ē-jekt'*), *v. t.* to cast forth. [BANISH.]

eke (*ēk*), *v. t.* to extend or lengthen.

e-lab-o-rate (*ē-lab'ō-rāt*), *v. t.* improve or refine with study or labor.

e-lapse (*-laps'*), *v. i.* to slip or glide away.

e-las-tic (*-las'tik*), *adj.* springing back; rebounding.

e-las-tic-i-ty (*-tis'i-ti*), *n.* the quality of being elastic.

e-las-tic tis-sue (*ē-las'tik tish'ū*), elastic tissue in the ligaments of the vertebræ.

e-late (*-lāt'*), *v. t.* to raise the spirits of.

e-la-tion (*-lā'shun*), *n.* the state of being elated.

Elba (*el'bā*). An island belonging to the province of Leghorn, Italy, situated in the Mediterranean, east of Corsica, and about five and one-half miles from Tuscany. Napoleon I. lived here in exile from May 4, 1814, to February 26, 1815.

el-bow (*el'bō*), *n.* the joint or bend of the arm: *v. t.* to thrust on one side.

el-der (*'dēr*), *adj.* older: *n.* one older in age, rank, or station; one of a body of laymen, in certain churches, authorized to superintend its spiritual interests.

el-der-ly (*'li*), *adj.* somewhat old.

Syn. ELDERLY, aged, old. The *elderly* man has passed the meridian of life; the *aged* man is fast approaching the term of our existence; the *old* man has already reached **this** term, or has exceeded it.

Ant. YOUNG, youthful.

el-dest (*'dest*), *adj.* oldest; first-born.

Eldred (*el'dred*). From the Teutonic, meaning "all dread," hence "terrible." Lat., *Eldredus*.

Eleanor (*el'ē-a-nōr*, *el'en-ōr*). Derived from *Helen*. Danish, *Eleonore;* Dutch, *Leonora;* Fr., *Elenore;* Ger., *Eleonore;* It., *Eleonora;* Lat., *Eleanora;* Sp., *Leanor*.

e-lect (*ē-lekt'*), *v. t.* to choose for any office or use: *adj.* taken in preference.

e-lec-tion (*-lek'shun*), *n.* the act of electing; voluntary preference. [ALTERNATIVE.]

e-lec-tion-eer (*-shun-ēr'*), *v. i.* to employ means for influencing the result of an election.

e-lect-ive (*-lekt'iv*), *adj.* regulated by choice; exerting the power of choice.

e-lect-or (*'ēr*), *n.* one legally qualified to vote.

e-lect-or-al col-lege (*kol'ej*), a body of representatives elected by the voters of the several states to choose a president of the United States.

e-lect-or-ate (*'ōr-āt*), *n.* the whole body of persons entitled to vote.

e-lec-tric (*-lek'trik*), *adj.* pertaining to electricity; magnetic.

e-lec-tri-cian (*-trish'un*), *n.* one who is skilled in the science of electricity.

e-lec-tric-i-ty (*-tris'i-ti*), *n.* an imponderable and invisible agent producing light, heat, chemical decomposition, and other physical phenomena.

e-lec-tri-fi-a-ble (*'tri-fi-ā-bl*), *adj.* capable of being charged with electricity.

e-lec-tri-fi-ca-tion (*-fi-kā'shun*), *n.* the act of electrifying.

e-lec-tri-fy (*'tri-fī*), *v. t.* [*p. t.* and *p. p.* electrified, *p. pr.* electrifying], to charge with, or act upon, by electricity.

e-lec-tro, a *prefix* denoting electricity as the motive power, or operating agent.

e-lec-tro-cute (*'trō-kūt*), *v. t.* to put to death by an electric current.

e-lec-tro-cu-tion (*-kū'shun*), *n.* the act of electrocuting.

e-lec-trode (*ē-lek'trōd*), *n.* either of the terminals of an electric source; anode or cathode.

e-lec-tro-dy-nam-ics (*ē-lek'trō-dī-nam'iks*), *n.* that branch of physics which treats of electric currents.

e-lec-tro-dy-na-mom-e-ter (*-nā-mom'ē-tēr*), *n.* an instrument for measuring the strength of an electric current.

e-lec-tro-graph (*-grâf*), *n.* an apparatus used in preparing copper cylinders for printing fabrics.

e-lec-trog-ra-phy (*-trog'rā-fi*), *n.* a process of copying fine engravings on copper or steel.

e-lec-tro-ki-net-ics (*-trō-ki-net'iks*), *n.* that branch of electrical science which treats of electric currents in motion.

e-lec-tro-lier (*-trō-lēr'*), *n.* an ornamental bracket for supporting electric lamps.

e-lec-trol-y-sis (*-trol'i-sis*), *n.* the decomposition of a chemical compound by electricity.

e-lec-tro-lyze (*'trō-līz*), *v. t.* to decompose by the action of electricity.

e-lec-tro-mag-net (*-mag'net*), *n.* a coil of soft iron rendered magnetic by the passage of an electric current through it.

e-lec-tro-mag-net-ics (*-mag-net'iks*), *n.* the science of electromagnetism.

e-lec-tro-met-al-lur-gy (*-met'al-ēr-ji*), *n.* the art of precipitating certain metals from their solutions by a slow electric current.

e-lec-tron (*ē-lek'tron*), *n.* an electrical unit.

e-lec-trop-a-thy (*-trop'ā-thi*), *n.* the treatment of diseases by electricity.

e-lec-troph-o-rus (*-trof'ō-rus*), *n.* an instrument for generating statical electricity.

e-lec-tro-pho-tom-e-ter (*'trō-fō-tom'ē-tēr*), *n.* an instrument for comparing the brightness of various lights with that produced by an electric spark.

e-lec-tro-plate (*'trō-plāt*), *v. t.* to cover or give a coating of metal to by means of a current of electricity.

e-lec-tro-tech-nics (*-tek'niks*), *n.* the science of the processes in which electricity is applied to the industrial arts.

e-lec-tro-tint-ing (*-tint'ing*), *n.* a method of producing a design, etc., the lines of which when exposed in an electro bath are protected.

e-lec-tro-type (*'trō-tīp*), *n.* a facsimile in metal of any object made by the action of a galvanic electric current.

el-ee-mos-y-na-ry (*el-ē-mos'i-nā-ri*), *adj.* pertaining to alms.

el-e-gance (*el'ē-gans*), *n.* [*pl.* elegances (*-gan-siz*], the state or quality of being elegant.

el-e-gant (*-gant*), *adj.* characterized by refinement and good taste.

★e-le-gi-ac (*ē-lē'ji-ak*, or *el-ē-ji'ak*), *adj.* pertaining to, or of the nature of, an elegy.

el-e-gy (*el'ē-ji*), *n.* [*pl.* elegies (*-jiz*)], a funeral song or ode.

el-e-ment (*el'ē-ment*), *n.* a first or constituent principle.

el-e-men-tal (*'tal*), *adj.* pertaining to, or characteristic of, an element.

el-e-phant (*'ē-fant*), *n.* a large five-toed proboscidian mammal.

Elephanta (*el-ē-fan'tā*). The Portuguese name for a small island in Bombay harbor, derived from the colossal figure of an elephant carved on the rock.

el-e-phan-ti-a-sis (*-tī'ā-sis*), *n.* a cutaneous disease resembling leprosy.

el-e-phan-tine (*'tīn*), *adj.* huge; unwieldy.

Elephantine (*el-ē-fān-tē'nā*). The Greek name of the island of Philæ.

el-e-vate (*el'ē-vāt*), *v. t.* to raise

el-e-va-tion (*-vā'shun*), *n.* the act of elevating.

el-e-va-tor (*-tēr*), *n.* a hoisting machine or lift.

★e-lev-en (*ē-lev'n*), *adj.* 10 with 1 added.

e-lev-enth (*-lev'nth*), *adj.* next in order after 10th: an ordinal numeral.

elf (*elf*), *n.* [*pl.* elves (*elvz*)], a diminutive mischievous sprite; fairy.

el-fin (*el'fin*), *n.* an inhabitant of fairyland: *adj.* pertaining to elves.

Elgin (*el'gin*) **marbles.** A collection of Greek sculptures comprising the bulk of the surviving plastic decorations of the Parthenon, and a caryatid and column from the Erechtheum, and recognized as containing the finest existing productions of sculpture.

Elias (*ē-lī'as*). From the Greek form of *Elijah*, meaning "God the Lord." Danish, *Elias;* Fr., *Elie;* Ger., *Elias;* It., *Elia;* Lat., *Elias*.

e-lic-it (*ē-lis'it*), *v. t.* to draw out.

e-lide (*-līd'*), *v. t.* slur over, or cut off.

el-i-gi-bil-i-ty (*el-i-ji-bil'i-ti*), *n.* the quality of being eligible.

el-i-gi-ble (*el'i-ji-bl*), *adj.* capable of being, or fit to be, chosen.

Syn. ELIGIBLE, preferable. What is *eligible* is desirable in itself, what is *preferable* is more desirable than another.

Elihu (*ē-lī'hū* or *el'i-hū*). A name derived from Elias.

Elijah. See *Elias*.

e-lim-i-nate (*ē-lim'i-nāt*), *v. t.* to leave out of consideration.

Elisabeth. See *Elizabeth*.

Elisha (*ē-lī'shā*). From the Hebrew, meaning "the salvation of God." Fr., *Elisée;* It., *Eliseo;* Lat., *Elisæus;* Port., *Eliseu;* Sp., *Eliseo*.

e-li-sion (*ē-lizh'un*), *n.* the cutting off of a vowel or syllable for the sake of euphony.

e-lix-ir (*ē-lik's ēr*), *n.* a tincture, essence, or cordial.

Eliza (*ē-lī'zā*). Corrupted from *Elizabeth*. Danish, *Elisa;* Dutch, *Elisa;* Fr., *Elise;* Ger., *Elisa;* Lat., *Eliza*, or *Elisa*.

Elizabeth (*ē-liz'ā-beth*). From the Hebrew *Elisheba*, which St. Jerome translates "oath of my God"; Danish, *Elisabeth;* Dutch *Elizabeth;* Fr., *Elisabeth;* Ger., *Elisabeth;* It., *Elisabetta;* Lat., *Elizabetha;* Sp., *Isabel*.

Elizabeth, N. J. Named for Elizabeth Carteret, wife of Sir George Carteret.

elk (*elk*), *n.* a very large deer of North America and northern Europe.

ell (*el*), *n.* a measure formerly used for cloth, equal to 45 inches.

Ellen. Some consider this the same as *Helen*, and, indeed, in Spanish *Helen* and *Ellen* are both represented by *Elena*. It may, however, be the same as *Ailean*.

el-lipse (*el-lips'*), *n.* one of the sections of a cone.

el-lip-sis (*'is*), *n.* the omission of a word or words in a sentence.

el-lip-tic (*-lip'tik*), *adj.* pertaining to, or formed like, an ellipse.

Ellis island, N. Y. Variously called Oyster, Bucket, and Gibbett island. The port of arrival of immigrants.

elm (*elm*), *n.* a tree of various species belonging to the genus Ulmus.

Elma. A female name abbreviated from *Guilielma*, a feminine formed from *Guilielmus*, from root of *William*.

Elmira. City in Chemung county, New York.

Elmo, Castle of Saint. A castle at Naples and a fort at Malta.

el-o-cu-tion (*el-ō-kū'shun*), *n.* the art, manner, or style of speaking in public.

el-o-cu-tion-ist (*-ist*), *n.* one skilled in the art of elocution.

★e-lon-gate (*ē-lōng'gāt*, not *ē-lon'gāt*), *v. t.* to stretch out.

e-lope (*ē-lōp'*), *v. i.* to escape privately.

e-lope-ment (*'ment*), *n.* running away.

el-o-quence (*el'ō-kwens*), *n.* the art of speaking with fluency and elegance.

el-o-quent (*-kwent*), *adj.* having the power of oratory.

else (*els*), *adv.* besides.

Else or **Elsa.** See *Alice*.

else-where (*'hwâr*), *adv.* in another place.

Elsie. A name corrupted from *Elizabeth*.

e-lu-ci-date (*ē-lū'si-dāt*), *v. t.* to make clear; render intelligible. [EXPLAIN.]
e-lude (*ē-lūd'*), *v. t.* to avoid by artifice or dexterity.
e-lu-sive (*-lū'siv*), *adj.* deceptive.
e-lu-so-ry (*'sō-ri*), *adj.* evasive.
elves, *pl.* of elf.
Elvira (*el-vī'rā*). It has been corrupted from the name *Geloyra* or *Geluira*.
Elysée (*ā-lē-zā'*), **Palace of.** The official residence of the president of France, in Paris. It was built in 1718, and since the reign of Louis XV. has been the property of the state.
e-ly-sian (*ē-lizh'an*), *adj.* pertaining to Elysium.
E-ly-sium (*'um*), *n.* the Greek paradise or residence of the blessed after death; a condition of perfect happiness.
em (*em*), *n.* the square body of any size of type.
e-ma-ci-ate (*ē-mā'shi-āt*), *v. i.* to lose flesh; pine away.
em-a-nate (*em'ā-nāt*), *v. i.* to flow out, issue, as from a source.
e-man-ci-pate (*ē-man'si-pāt*), *v. t.* to liberate from servitude or bondage.
e-man-ci-pa-tor (*-pā-tēr*), *n.* a liberator.
e-mas-cu-late (*-mas'kū-lāt*), *v. t.* to castrate; deprive of virility: *adj.* castrated.
em-balm (*em-bäm'*), *v. t.* to preserve from decay by balsams or aromatic spices.
em-bank (*-bangk'*), *v. t.* to inclose with a bank.
em-bank-ment (*'ment*), *n.* a bank of earth.
em-bar-go (*-bär'gō*), *n.* [*pl.* embargoes (*'gōz*)], an order by authority prohibiting the departure of vessels from port.
em-bark (*-bärk'*), *v. t.* to put on board ship; venture or invest: *v. i.* to go on board a vessel.
em-bar-rass (*-bar'as*), *v. t.* to hinder, perplex.
Syn. EMBARRASS, perplex, entangle. *Embarrassments* depend altogether on ourselves; the want of prudence and presence of mind is the common cause; *perplexities* depend on extraneous circumstances as well as ourselves; extensive dealings with others are mostly attended with *perplexities; entanglements* arise mostly from the evil designs of others. [See *obstruct.*]
Ant. EMBOLDEN, rally, extricate.
em-bas-sy (*'bā-si*), *n.* [*pl.* embassies (*-siz*)], the public function of an ambassador; a legation.
em-bat-tled (*-bat'ld*), *p. adj.* furnished with battlements.
em-bed (*-bed'*), *v. t.* to lay in a bed; set in surrounding matter.
em-bel-lish (*-bel'ish*), *v. t.* to make beautiful.
em-ber (*'bēr*), *n.* a small live coal.
em-bez-zle (*-bez'l*), *v. t.* to appropriate fraudulently.
em-bit-ter (*-bit' ēr*), *v. t.* to make bitter.
em-bla-zon (*-blā'zn*), *v. t.* to adorn with heraldic figures.
em-bla-zon-ry (*-ri*), *n.* [*pl.* emblazonries (*-riz*)], heraldic decoration.
em-blem (*'blem*), *n.* a symbolical figure or design.
em-blem-at-ic (*blem-at'ik*), *adj.* pertaining to an emblem.
em-ble-ments (*'blē-ments*), *n. pl.* annual crops.
em-bod-i-ment (*-bod'i-ment*), *n.* the act of embodying or uniting in a whole.
em-bod-y (*-bod'i*), *v. t.* [*p. t.* and *p. p.* embodied, *p. pr.* embodying], to collect into one mass or united whole: *v. i.* to coalesce.
em-bold-en (*em-bōld'n*), *v. t.* to encourage. [ENCOURAGE.]
em-bo-lus (*'bō-lus*), *n.* [*pl.* emboli (*-lī*)], something inserted and acting in another thing.
em-bos-om (*em-booz'um*), *v. t.* to hold in the bosom.
em-boss (*-bos'*), *v. t.* to cover with bosses or studs.
em-boss-ing (*'ing*), *n.* the art of producing raised figures in relief.
em-bow-el (*-bou'ēl*), *v. t.* [*p. t.* and *p. p.* emboweled, *p. pr.* emboweling], to remove the intestines from.
em-bow-er (*-bou' ēr*), *v. t.* to cover with, or as with, a bower.
em-brace (*-brās'*), *v. t.* to take in close, or press to the bosom with affection; hug: *v. i.* to join in an embrace. [CLASP, EMBRACE.]
em-bra-cer-y (*-brā'sēr-i*), *n.* the act of attempting to corrupt a jury.
em-bra-sure (*'shūr*), *n.* an opening in a wall from which to fire guns.
em-bro-ca-tion (*-brō-kā'shun*), *n.* a liniment for rubbing an injured part.
em-broid-er (*-broid' ēr*), *v. t.* to decorate with needlework.
em-broid-er-y (*-i*), *n.* [*pl.* embroideries (*-iz*)], ornamental work of gold, silver, silk, etc., executed with the needle.
em-broil (*-broil'*), *v. t.* to throw into confusion.
em-bry-o (*'bri-ō*), *n.* [*pl.* embryos (*-ōz*)], the first germ or rudiment of an organism.
em-bry-ol-o-gy (*-ol' ō-ji*), *n.* that branch of biology which treats of embryos.
em-bry-on-ic (*-on'ik*), *adj.* pertaining to an embryo.
em-bry-ot-o-my (*-ot' ō-mi*), *n.* the extraction of an embryo by cutting.
e-mend (*ē-mend'*), *v. t.*, to correct. [AMEND.]
em-en-da-tion (*em-en-dā'shun*), *n.* the alteration or correction of a text.
em-er-ald (*em'ēr-ald*), *n.* a precious stone of a rich, deep green color.
Emerald Isle. Ireland. The author of this epithet was Dr. Drennan, of Belfast, who died 1820.
e-merge (*ē-mērj'*), *v. i.* to rise up, or come forth, from anything.
e-mer-gen-cy (*ē-mēr'jen-si*), *n.* [*pl.* emergencies (*-siz*)], a sudden occasion; crisis. [EXIGENCY.]
e-mer-sion (*-mēr'shun*), *n.* the act of emerging.
em-er-y (*em' ēr-i*), *n.* a very hard variety of corundum.
Emery (*em'e-ri*). A name derived from the old name *Amalaric*, signifying "powerful without a blot," or "rich in chastity." Danish, *Almerik;* Dutch, *Almerik;* Fr., *Emeric* or *Emeri;* Lat., *Almericus;* Sw., *Emmerik.*
e-met-ic (*ē-met'ik*), *adj.* inducing vomiting.
em-i-grant (*em'i-grant*), *n.* one who quits his own country to settle in another.
em-i-grate (*'i-grāt*), *v. i.* to leave one's country to settle in another.
Syn. EMIGRATE, immigrate, migrate. To *migrate* is to change one's dwelling-place, usually with the idea of repeated change, or of periodical return; it applies to wandering tribes of men, and to many birds and animals. *Emigrate* and *immigrate* carry the idea of a permanent change of residence to some other country or some distant region.
Emilia (*ē-mil'i-ä*) or **Emily** (*em'i-li*). A name corrupted from *Amelia.* Fr., *Emilie;* Ger., *Emilie,* or *Emilia;* It., *Emilia.*
Emily. See *Emilia.*
em-i-nence (*em'i-nens*), *n.* that which is lofty; elevation; height.
em-i-nent (*-nent*), *adj.* high in office, or reputation. [DISTINGUISHED.]
em-is-sa-ry (*em'i-sā-ri*), *n.* [*pl.* emissaries (*-riz*)], a person sent on a mission.
Syn. EMISSARY, spy. Both these words designate a person sent out by a body on some public concern among their enemies. The *emissary* is sent so as to mix with the people to whom he goes, to be in all places, and to associate with every one individually as may serve his purpose; the *spy* takes his station wherever he can best perceive what is passing. The *emissary* is generally employed by those who have some legitimate object to pursue; *spies,* on the other hand, are employed by governments in a time of warfare only.
e-mis-sion (*ē-mish'un*), *n.* the act of sending out.
e-mit (*-mit'*), *v. t.* [*p. t.* and *p. p.* emitted, *p. pr.* emitting], to send or give forth.
Emma. Some derive this name from Greek *amme,* "a nurse." Fr., *Emma;* It., *Emma;* Lat., *Emma.*
Emmanuel (*em-man'ū-el*) or **Immanuel.** From the Hebrew, meaning "God with us;" Fr., *Emmanuel;* Ger., *Emanuel* or *Immanuel;* It., *Emanuele;* Lat., *Emanuel;* Port., *Manoel;* Sp., *Manuel.*
e-mol-lient (*ē-mol'yent*), *adj.* softening: *n.* a medicine that has a softening effect.
e-mol-u-ment (*'ū-ment*), *n.* profit; remuneration.
e-mo-tion (*-mō'shun*), *n.* mental agitation.
e-mo-tion-al (*-al*), *adj.* pertaining to emotion.
em-per-or (*em'pēr-ēr*), *n.* the sovereign of an empire.
em-pha-sis (*'fā-sis*), *n.* a particular stress of the voice on a word or words in reading or speaking.
em-pha-size (*'fā-sīz*), *v. t.* to pronounce with emphasis.
em-phat-ic (*-fat'ik*), *adj.* uttered with emphasis; forcibly significant.
em-pire (*'pīr*), *n.* supreme power or dominion; the region ruled over by an emperor or sovereign.
Syn. EMPIRE, reign, dominion. As *empire* signifies command, or the power exercised in commanding, it properly refers to the country or people commanded; and as *reign* signifies the act of *reigning* it refers to the individual who *reigns. Dominion* may be applied in the proper sense to the power which man exercises over the brutes or inanimate objects, and figuratively to the power of the passions.
em-pir-ic (*-pir'ik*), *adj.* pertaining to, or derived from, experience.
em-pir-i-cism (*'i-sizm*), *n.* observation, or practical experience apart from scientific knowledge.
em-ploy (*-ploi'*), *v. t.* [*p. t.* and *p. p.* employed, *p. pr.* employing], to give occupation to: *n.* occupation.
Syn. EMPLOY, use. We *employ* whatever we take into our service, or make subservient to our convenience for a time; we *use* whatever we entirely devote to our purpose.
Ant. NEGLECT.
★**em-ploy-é** (*em-ploi-ā'* or *ăN-plwä-yā*, not *em-ploi-ē'* unless spelled *employee*), *n.* one who works for another.
em-ploy-ment (*'ment*), *n.* business; occupation.
em-po-ri-um (*-pō'ri-um*), *n.* a commercial center or place of trade.
em-pow-er (*-pou' ēr*), *v. t.* to authorize. [COMMISSION.]
em-press (*'pres*), *n.* a woman invested with sovereign sway over an empire.
emp-ty (*emp'ti*), *adj.* [*comp.* emptier, *superl.* emptiest], containing nothing; vacant: *v. t.* [*p. t.* and *p. p.* emptied, *p. pr.* emptying], to pour out; discharge. [HOLLOW.]
em-py-re-an (*em-pi'rē-an*), *adj.* ethereal.
e-mu (*ē'mū*), *n.* a large Australian ostrich-like bird.
em-u-late (*em'ū-lāt*), *v. t.* to strive to equal or excel.
e-mul-gent (*ē-mul'jent*), *adj.* draining out: *n.* a medicine that promotes a flow of the bile.
e-mul-sion (*ē-mul'shun*), *n.* any liquid preparation resembling milk.
en-a-ble (*en-ā'bl*), *v. t.* to make able.
en-act (*-akt'*), *v. t.* to decree; pass into law.
en-act-ment (*en-akt'ment*), *n.* the act of enacting; a statute.
Enaid or **Enid.** A Welsh female name signifying "soul, life."
en-am-el (*en-am'el*), *n.* an opaque, semitransparent substance, or glass, used in coating the surface of metals or porcelain: *v. t.* [*p. t.* and *p. p.* enameled, *p. pr.* enameling], to decorate with enamel.
en-am-or (*-am' ēr*), *v. t.* to captivate.
en-camp (*-kamp'*), *v. i.* to form a camp; halt on the march.
en-camp-ment (*'ment*), *n.* a temporary resting place.
en-chain (*en-chān'*), *v. t.* to hold fast with, or as with, a chain.
★**en-chant** (*-chant'*, not *en-chant'*), *v. t.* to charm or subdue, fill with delight.
en-cir-cle (*-sēr'kl*), *v. t.* to enclasp; embrace. [SURROUND.]
en-co-mi-um (*-kō'mi-um*), *n.* [*pl.* encomiums (*-umz*)], formal praise.
Syn. ENCOMIUM, eulogy, panegyric. We bestow *encomiums* upon any work of art or production of genius; we bestow *eulogies* on the exploits of a hero; but we write *panegyrics* either in a direct address, or in direct reference to the person who is *panegyrized;* the *encomium* is produced by merit, real or supposed; the *euolgy* may spring from admiration of the person *eulogized.*
Ant. ABUSE, censure, denunciation.
en-com-pass (*-kum'päs*), *v. t.* to surround. [SURROUND.]
★**en-core** (*äng-kōr'*, French *ăN-kōr'*), *adv.* once more; again: *n.* a demand by an audience for a repetition of a part of a program.
en-coun-ter (*en-koun'tēr*), *v. t.* to come upon suddenly; meet face to face: *n.* a conflict; battle.
en-cour-age (*-kur'āj*), *v. t.* to inspire with courage.
Syn. ENCOURAGE, embolden. To *encourage* is to give *courage,* and to *embolden* to make *bold;* the former impelling to action in general, the latter to that which is more difficult or dangerous.
Ant. BAFFLE, confuse, deter, discourage.
en-croach (*-krōch'*), *v. i.* to invade gradually or by stealth.
en-cum-ber (*-kum'bēr*), *v. t.* to impede; retard.
en-cum-brance (*'brans*), *n.* that which encumbers.
en-cyc-li-cal (*-sik'li-kal*), *adj.* sent to all members of a class or community.
en-cy-clo-pæ-di-a or **encyclopedia** (*-sī-klō-pē'di-ä*), *n.* a dictionary of the arts, sciences, and literature.
en-cy-clo-pæd-ic (*-ped'ik*), *adj.* pertaining to an encyclopædia.
en-cy-clo-pæ-dist (*-pē'dist*), *n.* a compiler of an encyclopædia.
Encyclopædists or **Encyclopedists** (*en-sī-klō-pē'dists*). The collaborators in the encyclopædia of Diderot and D'Alembert (1751-65).
end (*end*), *n.* the extreme limit or terminal point of anything; purpose in view; death: *v. t.* to bring to an end; destroy: *v. i.* to come to an end; die.
Syn. END, terminate, close. To *end* is indefinite in its meaning and general in its application; *terminate* and *close* are modes of *ending;* to *terminate* is to *end* finally; to *close* to end gradually. Whatever is begun will *end,* and it may *end* in any way; but what *terminates* is that which has been designedly brought to an end; a string, a line, a verse, etc., may *end,* but a road is said properly to *terminate.* [See *abolish.*]
Ant. BEGIN, commence, continue.
en-dan-ger (*en-dān'jēr*), *v. t.* expose to danger.
en-dear (*-dēr'*), *v. t.* to make dear or beloved.
en-deav-or (*-dev' ēr*), *v. i.* to strive for the attainment of some object; attempt: *n.* exertion; effort; attempt.
Syn. ENDEAVOR, effort, exertion. *Endeavor* expresses little more than this common idea, being a term of general import; *effort* and *exertion* are particular modes of *endeavor;* the former being a special strong *endeavor,* the latter a continued strong *endeavor.*
Ant. NEGLECT, idleness.
end-less (*end'les*), *adj.* forever. [ETERNAL.]
en-do-gen (*'dō-jen*), *n.* a plant of one of the primary classes of the vegetable kingdom: *pl.* the class.
en-do-sperm (*'dō-spērm*), *n.* the albumen of a seed.
en-dow (*-dou'*), *v. t.* to bestow a fund or income upon.
en-dow-ment (*'ment*), *n.* the act of endowing; that which is bestowed, settled, or appropriated to any object.
en-due (*-dū'*), *v. t.* to clothe; invest. [INVEST.]
en-dur-a-ble (*-dūr'ä-bl*), *adj.* bearable.
en-dur-ance (*-dūr'ans*), *n.* the capacity to endure; fortitude.
en-dure (*-dūr'*), *v. t.* to support without breaking or yielding; remain in: *v. i.* to harden; remain in the same state.
en-e-ma (*en'ē-mä*), *n.* an injection into the rectum.
en-e-my (*'ē-mi*), *n.* [*pl.* enemies (*-miz*)], one hostile to another.
en-er-get-ic (*-ēr-jet'ik*), *adj.* possessing, or displaying, energy; vigorous in action. [ACTIVE.]
en-er-gize (*'ēr-jīz*), *v. t.* to endow with energy.
en-er-gy (*'ēr-ji*), *n.* [*pl.* energies (*-jiz*)], internal or inherent power; vigorous operation.
Syn. ENERGY, force, vigor. With *energy* is connected the idea of activity; with *force* that of capability; with *vigor* that of health; *energy* lies only in the mind; *force* and *vigor* are the property of either body or mind.
Ant. FEEBLENESS, impatience, weakness.

e-ner-vate (*ē-nĕr'vāt* or *en'ĕr-vāt*), *v. t.* to deprive of nerve.
en-fee-ble (*en-fē'bl*), *v. t.* to weaken; relax.
en-force (*-fōrs'*), *v. t.* to put into execution with vigor.
★**en-fran-chise** (*en-fran'chiz*), *v. t.* to liberate or set free; admit to the right of voting.
Engadine (*en-gā-dēn'*). A valley in the canton of Grisons, Switzerland, traversed by the Inn, noted for its health resorts and high elevation.
en-gage (*en-gāj'*), *v. t.* to pledge or bind by oath or contract; secure for aid or employment; encounter in battle; occupy the time or attention of; interlock. [ATTRACT.]
en-gage-ment (*-gāj'ment*), *n.* the act of engaging; the state or condition of being engaged; betrothal. [PROMISE.]
en-gen-der (*-jen'dĕr*), *v. t.* to beget; excite.
★**en-gine** (*en'jin*, not *en'jin*), *n.* a machine by which power is applied for the performance of work.
en-gi-neer (*-ji-nēr'*), *n.* one who is skilled in the principles or practice of any branch of engineering.
en-gi-neer-ing (*'ing*), *n.* the art of constructing and using machinery.
England (*ing'gland*). When Egbert, king of the West-Saxons, in 829, had subjugated the other six Saxon kingdoms, he summoned a general council at Winchester, at which it was declared that henceforth Britain should be called England, its people Englishmen, and himself king of England. Originally the name was *Engaland*, the land of the Engles, or Angles, who came over from Sleswick, a province of Juteland.
Eng-lish (*ing'glish*), *adj.* belonging to, characteristic of, or pertaining to, the language or the people of England, or those descended from them.
en-grain. Another form of *ingrain*.
en-grave (*en-grāv'*), *v. t.* to cut or carve in sunken patterns.
en-gross (*-grōs'*), *v. t.* to absorb; write in a large distinct, round hand. [ABSORB.
en-gulf. Same as *ingulf*.
en-hance (*-hans'*), *v. t.* to raise in esteem.
en-har-mon-ic (*-här-mon'ik*), *adj.* proceeding by smaller intervals than a semitone.
e-nig-ma (*ē-nig'mȧ*), *n.* a riddle.
e-nig-mat-ic (*-mat'ik*), *adj.* pertaining to an enigma. [EQUIVOCAL, MYSTERIOUS.]
en-join (*-join'*), *v. t.* to direct with authority or urgency; prohibit.
en-joy (*-joi'*), *v. t.* to feel or perceive with pleasure. [ADMIRE.]
en-kin-dle (*-kin'dl*), *v. t.* to set on fire; rouse.
en-large (*-lärj'*), *v. t.* to make larger; extend in limits or dimensions; amplify.
Syn. ENLARGE, increase, extend. *Enlarge* is applied to dimension and extent; *increase* is applicable to quantity, signifying to become greater in size; *extend* signifies to make greater in space. [See *add*.]
Ant. ABBREVIATE, curtail, limit, reduce.
en-light-en (*-lit'n*), *v. t.* to illuminate; make clear to the mind. [ILLUMINATE, TEACH.]
en-list (*-list'*), *v. t.* to enroll, as for military service; register.
en-liv-en (*-liv'n*), *v. t.* to make vigorous, active, or vivacious.
en-mi-ty (*'mi-ti*), *n.* [*pl.* enmities (*-tiz*)], animosity; hatred; hostility; ill will.
Syn. ENMITY, animosity, hostility. *Enmity* lies in the heart; *animosity*, lies in the passions; *hostility*, lies in the action. *Enmity* is altogether personal; *hostility* respects public or private measures; *enmity* often lies concealed in the heart and does not betray itself by any open act of *hostility*. [See *feud*.]
en-no-ble (*-nō'bl*), *v. t.* to make noble.
★**en-nui** (*ȧn-wē*, French *ȧn-nwē*), *n.* languor of mind; listlessness.
Enoch (*ē'nok*). Derived from the Hebrew *Hhanokh*, "initiated, dedicated"; *i. e.*, to God. Fr., *Enoch* or *Henoch*; Lat., *Enochus* or *Henoshus*.
e-nor-mi-ty (*ē-nôr'mi-ti*), *n.* [*pl.* enormities (*-tiz*)], something outrageous or extremely immoderate.
e-nor-mous (*'mus*), *adj.* excessive; very great; immense; huge.
Syn. ENORMOUS, prodigious, monstrous. The *enormous* contradicts our rules of estimate and calculating; the *prodigious* raises our minds beyond their ordinary standard of thinking; the *monstrous* contradicts nature and the course of things. What is enormous excites our surprise or amazement; what is *prodigious* excites our astonishment; what is *monstrous* does violence to our senses and understanding.
Ant. DIMINUTIVE, little, mean, paltry, slight.
e-nough (*ē-nuf'*), *adj.* sufficient: *n.* a sufficiency.
Syn. ENOUGH, sufficient. He has *enough* whose desires are satisfied; he has *sufficient* whose wants are supplied.
Ant. INADEQUATE, scanty, scarce.
en-rage (*en-rāj'*), *v. t.* to throw into a rage.
en-rail (*-rāl'*), *v. t.* to place a car upon rails; opposed to derail.
en-rapt (*-rapt'*), *adj.* enraptured.
en-rap-ture (*-rap'tür*), *v. t.* to transport with delight.
en-rich (*en-rich'*), *v. t.* to make rich.
en-robe (*-rōb'*), *v. t.* to clothe; invest.
en-roll (*-rōl'*), *v. t.* to insert in a register; enlist; record.
en route (*ȧn-rōōt'*), on the way. [*French*.]
en-sam-ple (*en-sam'pl*) *n.* example. [EXAMPLE.]
en-sconce (*-skons'*), *v. t.* to hide; fix securely.
en-sheathe (*-shēth'*), *v. t.* to sheathe.
en-shrine (*en-shrin'*), *v. t.* to place in a shrine.
en-shroud (*-shroud'*), *v. t.* to cover with, or as with, a shroud.
en-sign (*'sin*), *n.* a flag; the lowest rank in the navy.
en-si-lage (*'si-lāj*), *n.* fodder or vegetable produce stored in a silo.
en-slave (*-slāv'*), *v. t.* to bring into, or reduce to, slavery.
en-snare (*-snär'*), *v. t.* to take in, or as in, a snare.
en-sue (*-sū'*), *v. i.* to follow as a consequence. [FOLLOW.]
en-sure. Same as *insure*.
en-tab-la-ture (*-tab'lȧ-tūr*), *n.* the whole parts on the top of a pillar or column.
en-tail (*en-tāl'*), *n.* an estate in fee limited to a particular heir or heirs: *v. t.* to leave or settle, as if by entail.
en-tan-gle (*-tang'gl*), *v. t.* to involve; tangle. [EMBARRASS.]
en-ter (*'tĕr*), *v. t.* to go or come into; begin; penetrate: *v. i.* to effect an entrance.
en-ter-prise (*'tĕr-prīz*), *n.* an undertaking of importance.
en-ter-pris-ing (*-ing*), *adj.* adventurous.
Syn. ENTERPRISING, adventurous. The *enterprising* character conceives great projects, and pursues objects that are difficult to be obtained; the *adventurous* character is contented with seeking that which is new, and placing himself in dangerous and unusual situations.
Ant. TIMID, conservative, meticulous.
en-ter-tain (*-tān'*), *v. t.* to receive and treat hospitably; take into consideration: *v. i.* to receive guests hospitably.
en-ter-tain-ment (*'ment*), *n.* the act of entertaining.
en-thrall (*-thrawl'*), *v. t.* to enslave.
en-throne (*-thrōn'*), *v. t.* to place on a throne.
en-thu-si-asm (*-thū'zi-azm*), *n.* elevation of fancy; zeal.
en-thu-si-ast (*'zi-ast*), *n.* one who is filled with enthusiasm.
en-thu-si-as-tic (*-as'tik*), *adj.* given to, or characterized by, enthusiasm. [EAGER.]
en-tice (*-tis'*), *v. t.* to attract or allure. [PERSUADE.]
en-tire (*-tīr'*), *adj.* complete in all parts; whole: *adv.* entirely; wholly. [WHOLE.]
en-tire-ty (*'ti*), *n.* completeness.
en-ti-tle (*en-ti'tl*), *v. t.* to give a title, or designation to.
en-ti-ty (*'ti-ti*), *n.* [*pl.* entities (*-tiz*)], anything that exists, or is supposed to exist; being.
en-tomb (*en-tōōm'*), *v. t.* to place in a tomb.
en-to-mol-o-gist (*-jist*), *n.* a student of entomology.
en-to-mol-o-gy (*-tō-mol'ō-ji*), *n.* that branch of zoölogy which treats of insects.
en-ton-ic (*-ton'ik*), *adj.* having great tension.
en-trails (*'trālz*), *n. pl.* the intestines.
en-train (*-trān'*), *v. t.* to dispatch by train.
en-trance (*'trans*), *n.* the act of entering; a passage.
en-trap (*-trap'*), *v. t.* to take in, or as in, a trap.
en-treat (*-trēt'*), *v. t.* to solicit earnestly. [BEG.]
en-treat-y (*-trēt'i*), *n.* [*pl.* entreaties (*'iz*)], an earnest petition.
en-trée (*ȧn-trā'*), *n.* entrance; admission.
en-trust. Same as *intrust*.
en-try (*en'tri*), *n.* [*pl.* entries (*'triz*)], an entrance; passage.
en-twine (*-twin'*), *v. t.* to twine around.
e-nu-mer-ate (*ē-nū'mĕr-āt*), *v. t.* to reckon or name singly.
e-nu-mer-a-tion (*-ā'shun*), *n.* the act of numbering.
e-nun-ci-ate (*ē-nun'shi-āt*), *v. t.* to declare or proclaim. [ANNOUNCE, SPEAK.]
e-nun-ci-a-tion (*-si-ā'shun*), *n.* articulation.
en-vel-op (*-vel'up*), *v. t.* to surround with, or as with, a wrapper.
en-vel-ope (*en'vel-ōp*), *n.* a case or wrapper, usually gummed, for safe conveyance of a letter.
en-vel-op-ment (*-vel'up-ment*), *n.* the act of enveloping.
en-ven-om (*-ven'um*), *v. t.* to make poisonous.
en-vi-a-ble (*'vi-ȧ-bl*), *adj.* exciting envy.
en-vi-a-bly (*-bli*), *adv.* in an enviable manner.
en-vi-ous (*'vi-us*), *adj.* feeling, or characterized by, envy.
en-vi-ron (*-vī'run*), *v. t.* to surround or inclose. [SURROUND.]
en-vi-ron-ment (*-ment*), *n.* that which surrounds.
en-voy (*'voi*), *n.* a diplomatic representative. [AMBASSADOR.]
en-vy (*'vi*), *v. t.* [*p. t.* and *p. p.* envied, *p. pr.* envying], to grudge; feel displeasure at the excellence or prosperity of. [JEALOUSY.]
en-wrap (*-rap'*), *v. t.* to wrap up.
en-zo-öt-ic (*-zō-ot'ik*), *adj.* pertaining to a disease of a particular district.
e-pact (*ē'pakt*), *n.* the excess of the solar over the lunar month.
ep-au-let (*ep'aw-let*), *n.* an ornamental badge sometimes worn on the shoulder by officers.
e-pergne (*ē-pern'*), *n.* an ornamental stand with a dish for holding flowers, etc.
e-phem-e-ra (*ē-fem'ē-rȧ*), *n.* [*pl.* ephemeræ (*-rē*)], that which exists but for a day.
e-phem-e-ris (*ē-fem'ē-ris*), *n.* [*pl.* ephemerides (*ef-ē-mer'i-dēz*)], an astronomical almanac showing the daily positions of the sun, moon, and planets.
Ephraim (*ē'frȧ-im*). From the Hebrew *Ephrayim*, "two-fold increase," "very fruitful"; from *p'riy*, "fruit of the earth," hence "fruitful." Fr., *Ephraim*; Lat., *Ephraimus*.
ep-ic (*ep'ik*), *adj.* heroic: *n.* a narrative poem of some heroic deed or event.
ep-i-cure (*'i-kūr*), *n.* one devoted to luxury. [SENSUALIST.]
ep-i-cu-re-an (*i-kū-rē'an*), *adj.* luxurious: *n.* a voluptuary; gormand; epicure.
ep-i-dem-ic (*-i-dem'ik*), *adj.* attacking many at the same time. [CONTAGIOUS.]
ep-i-der-mis (*-dĕr'mis*), *n.* the cuticle or scarf skin.
ep-i-glot-tis (*-glot'is*), *n.* the leaf-shaped cartilage which covers the upper part of the larynx.
ep-i-gram (*'i-gram*), *n.* a verse or short poem ending in some ingenious or witty turn.
ep-i-gram-mat-ic (*-at'ik*), *adj.* pertaining to, or of the nature of, an epigram.
ep-i-gram-mat-ic-al-ly (*i-kal-li*), *adv.* in an epigrammatical manner.
ep-i-graph (*'i-grȧf*), *n.* an inscription on a building, monument, etc.
ep-i-lep-sy (*'i-lep-si*), *n.* a chronic nervous disease accompanied by loss of consciousness.
ep-i-lep-tic (*'tik*), *adj.* affected with epilepsy.
ep-i-logue (*'i-log*), *n.* a poem or speech at the conclusion of a play.
E-piph-a-ny (*ē-pif'ȧ-ni*), *n.* a church festival (Jan. 6) to commemorate the visit of the Magi to Bethlehem.
e-pis-co-pa-cy (*ē-pis'kō-pȧ-si*), *n.* church government by bishops.
e-pis-co-pal (*'kō-pal*), *adj.* pertaining to episcopacy.
e-pis-co-pa-lian (*-pā'li-an*), *adj.* pertaining to episcopacy.
Episcopalian, *adj.* pertaining to the Protestant Episcopal church.
ep-i-sode (*ep'i-sōd*), *n.* an incident.
ep-i-sod-ic (*-sod'ik*), *adj.* pertaining to an episode.
e-pis-tle (*ē-pis'l*), *n.* a letter. [LETTER.]
e-pis-to-la-ry (*'tō-lā-ri*), *adj.* pertaining to letters.
ep-i-taph (*ep'i-tȧf*), *n.* a memorial inscription.
ep-i-thet (*'i-thet*), *n.* an adjective denoting any quality.
Syn. EPITHET, adjective. *Epithet* is the technical term of the rhetorician; *adjective* that of the grammarian. The same word is an *epithet* as it qualifies the sense; it is an *adjective* as it is a part of speech; thus, in the phrase "Alexander the Great," great is an *epithet*, inasmuch as it designates Alexander in distinction from all other persons; it is an *adjective* as it expresses a quality in distinction from the noun Alexander, which denotes a thing.
Ant. SUBSTANTIVE.
e-pit-o-me (*ē-pit'ō-mē*), *n.* a brief summary. [ABRIDGMENT.]
e-pit-o-mize (*'ō-mīz*), *v. t.* to describe briefly.
ep-i-zo-öt-ic (*ep-i-zō-ot'ik*), *adj.* parasitic on animals.
ep-och (*ep'ok* or *ē'pok*), *n.* a point of time from which succeeding years are reckoned. [TIME.]
ep-ode (*ep'ōd*), *n.* the last part of an ode.
Epsom (*ep'sum*). A market town in the county of Surrey, fifteen miles southwest of London, chiefly celebrated now as the place near which the Oaks and Derby races are run.
ep-som salts (*'sum sawlts*), *n. pl.* sulphate of magnesia.
e-qua-bil-i-ty (*ē-kwȧ-bil'i-ti*), *n.* evenness.
e-qua-ble (*'kwȧ-bl*), *adj.* uniform; consistently equal. [EQUAL.]
e-qual (*'kwal*), *adj.* of the same extent, or magnitude; uniform; adequate.
Syn. EQUAL, even, equable, like, or alike, uniform. *Equal* is said of degree, quantity, number and dimensions, as *equal* in years; *even* is said of the surface and position of bodies; a board is made *even* with another board; *like* is said of accidental qualities in things, as *alike* in color or in feature; *uniform* is said of things only as to their fitness to correspond; those which are *unlike* in color, shape, or make, are not *uniform*, and cannot be made to match as pairs; *equable* is used only in the moral acceptation, in which all the others are likewise employed.
Ant. DIFFERENT, dissimilar, heterogeneous.
e-qual-i-ty (*-kwal'i-ti*), *n.* [*pl.* equalities (*-tiz*)], the state of being equal.
e-qual-ize (*'kwal-īz*), *v. t.* to make equal; render uniform.
e-qua-nim-i-ty (*-kwȧ-nim'i-ti*), *n.* evenness of temper or mind.
e-quate (*-kwāt'*), *v. t.* to reduce to an average.
e-qua-tion (*-kwā'shun*), *n.* in mathematics, a proposition expressing the equality of two quantities.
e-qua-tor (*-kwā'tĕr*), *n.* the imaginary circle which passes around the middle of the earth.
e-qua-to-ri-al (*-tō'ri-al*), *adj.* pertaining to the equator.
eq-uer-ry (*ek'wer-i*), *n.* [*pl.* equerries (*-iz*)], an officer in the house of a prince or nobleman.
e-ques-tri-an (*ē-kwes'tri-an*), *adj.* pertaining to horses or horsemanship.
e-ques-tri-enne (*-kwes-tri-en'*), *n.* a skillful horsewoman.
equi, a *prefix* meaning *equal, equally, same.*

e-qui-lat-er-al (*ē-kwi-lat'ēr-al*), *adj.* having all the sides equal.

e-qui-lib-ri-um (*-lib'ri-um*), *n.* equality of weight, power, force.

e-quine (*ē'kwin*), *adj.* pertaining to a horse.

e-qui-noc-tial (*-kwi-nok'shal*), *adj.* pertaining to the equinoxes: *n.* the equinoctial line.

e-qui-nox (*'kwi-noks*), *n.* the point of intersection of the ecliptic and the equator.

e-quip (*ē-kwip'*), *v. t.* [*p. t.* and *p. p.* equipped, *p. pr.* equipping], to furnish or fit out; accouter.

eq-ui-page (*ek'wi-pāj*), *n.* the arms and outfit of an army, vessel, traveler.

e-quip-ment (*ē-kwip'ment*), *n.* articles or supplies necessary for any particular service.

e-qui-poise (*ē'kwi-poiz*), *n.* equilibrium.

eq-ui-ta-ble (*ek'wi-tà-bl*), *adj.* impartial; just.

eq-ui-ty (*'wi-ti*), *n.* [*pl.* equities (*-tiz*)], justice; just regard to right or claim.

e-quiv-a-lent (*ē-kwiv'à-lent*), *adj.* equal in value or power; the same in significance or effect.

e-quiv-o-cal (*'ō-kal*), *adj.* of a doubtful or double significance; ambiguous.

Syn. EQUIVOCAL, ambiguous, doubtful, dubious, enigmatic, enigmatical, indefinite, indeterminate, indistinct, questionable, suspicious, uncertain. *Equivocal* denotes that which may equally well be understood in either of two or more ways. *Ambiguous* signifies lacking in distinctness or certainty. ¶ *Ambiguous* is applied only to spoken or written statements; *equivocal* has other applications; an *equivocal* expression is, as a rule, intentionally deceptive, while an *ambiguous* utterance may be simply the result of a want of adequate expression. That which is *enigmatical* must be guessed like a riddle; that is *doubtful* which is fairly open to doubt; *questionable* may be used nearly in the sense either of *dubious* or of *doubtful;* to say that one's honesty is *questionable* is a mild way of saying that in the opinion of the speaker he is likely to prove dishonest. A *suspicious* character gives manifest reason to be suspected.

e-quiv-o-cate (*'ō-kāt*), *v. i.* to use words of double meaning. [EVADE.]

e-ra (*ē'rà*), *n.* the point of time from which a series of years is reckoned; period. [TIME.]

e-rad-i-cate (*ē-rad'i-kāt*), *v. t.* to destroy thoroughly.

e-rase (*-rās'*), *v. t.* to obliterate by, or as by, scratching. [BLOT.]

e-ra-ser (*-rā'sēr*), *n.* a knife or prepared india-rubber for rubbing out.

Erasmus (*ē-raz'mus*). The Latin name, from Greek *Erasmos*, "desirable", "pleasant." Danish, *Erasmus;* Fr., *Erasme;* Ger., *Erasmus;* It., *Erasmo;* Lat., *Erasmus;* Sp., *Erasmo.*

Erastus (*ē-ras'tus*). Means, "beloved." Fr., *Eraste;* Gr., *Erastos;* Lat., *Erastus.*

★**e-ra-sure** (*ē-rā'zhūr*, not *ē-rā'shūr*), *n.* the act of erasing.

ere (*ār* or *ăr*), *conj.* and *prep.* before; sooner than.

Er-e-bus (*er'ē-bus*), *n.* a place of utter darkness; Hades.

Erechtheum (*er-ek-thē'um*). An Ionic temple in Athens dating from the end of the fifth century B. C., remarkable for its complex plan and architectural variety, as well as for its technical perfection.

e-rect (*ē-rekt'*), *v. t.* to raise upright; construct; build; raise; establish.

e-rec-tion (*-rek'shun*), *n.* the act of constructing or raising.

e-rect-ive (*'iv*), *adj.* tending, or serving, to erect.

erg (*ērg*), *n.* a unit of work in the centimeter-gram-second system.

erg-me-ter (*'mē-tēr*), *n.* an instrument for measuring an electric current in ergs.

er-gom-e-ter (*er-gom'ē-tēr*), *n.* an instrument for measuring work performed.

Eric (*er'ik, ē'rik*). The same as the old *Ericus*, name of several Danish kings. Wachter says it should be written *Errich*, which he translates, "powerful in war."

Erie. The name of one of the Great Lakes, drained by the St. Lawrence, is an Indian word which signifies "cat" or "wildcat"; another authority gives the meaning as "mad."

er-mine (*ēr'min*), *n.* a weasel-like animal, much valued for its fur.

Erminia (*ēr-min'i-à*). A female name derived from the Roman *Herminus*. Latinized from *Hermann*, an Old German compound signifying "war-man", "warrior."

Ernest (*ēr'nest*). From Old German *ernst*, "ardent and vehement desire for study." Danish, *Ernst;* Dutch, *Ernestus;* Fr., *Ernest;* Ger., *Ernst;* It., *Ernesto;* Lat., *Ernestus;* Sw., *Ernst.*

Ernestine (*ēr'nes-tēn*). A female name formed from *Ernest.*

e-rode (*ē-rōd'*), *v. t.* to eat away.

e-rose (*-rōs'*), *adj.* toothed irregularly, as if gnawed away.

e-ro-sion (*-rō'zhun*), *n.* the act of eroding; an eroded part.

e-ro-sive (*-rō'siv*), *adj.* gnawing or wearing away.

e-rot-ic (*-rot'ik*), *adj.* pertaining to, or caused by, love.

err (*ēr*), *v. i.* to commit an error or mistake; wander.

er-rand (*er'rand*), *n.* a message; commission.

er-rant (*'rant*), *adj.* roving; wandering.

er-rat-ic (*-rat'ik*), *adj.* wandering; irregular; eccentric.

er-ra-tum (*er-rā'tum*), *n.* [*pl.* errata (*'tà*)], an error in printing.

er-ro-ne-ous (*-rō'nē-us*), *adj.* characterized by error; incorrect. [ABSURD.]

er-ror (*'ēr*), *n.* deviation from the truth; mistake.

Syn. ERROR, mistake, blunder. *Error* in its universal sense is the general term, since every deviation from what is right in rational agents is termed *error*. Into whatever we attempt to do or think *error* will be sure to creep. The other terms designate modes of *error*, which mostly refer to the common concerns of life; *mistake* is an error of choice; *blunder* an error of action.

e-ruc-ta-tion (*ē-ruk-tā'shun*), *n.* the act of throwing off wind from the stomach.

er-u-dite (*er'ū-dīt*), *adj.* learned.

er-u-di-tion (*-dish'un*), *n.* knowledge obtained by the study of books. [KNOWLEDGE.]

e-rup-tion (*ē-rup'shun*), *n.* a sudden breaking forth; outburst.

Syn. ERUPTION, explosion. *Eruption* is the coming into view, by a sudden bursting; *explosion* signifies bursting out with a noise; hence of flames there will be properly an *eruption*, but of gunpowder an *explosion*.

e-rup-tive (*ē-rup'tiv*), *adj.* bursting forth.

★**er-y-sip-e-las** (*er-i-sip'ē-las*, not *ir-i-sip'ē-las*), *n.* an inflammation of the skin, accompanied with fever.

Erzeroom (*ērz-rōōm'*). From *Arz-er-Room*, "the fortress of the Romans." The capital of a district of same name in Asiatic Turkey.

Esau (*ē'saw*). From the Hebrew, signifying "hairy, covered with hair." Fr., *Esau;* Lat., *Esavus.*

es-ca-lade (*es-kà-lād'*), *n.* the act of scaling the walls of a fortified place by means of scaling ladders.

es-cal-lop. Same as *scallop.*

es-ca-pade (*-kà-pād'*), *n.* a breach of propriety; misdeed.

es-cape (*-kāp'*), *v. t.* to flee from; get out of the way of; avoid: *n.* flight; deliverance.

es-carp (*-kärp'*), *n.* the side of the ditch next the rampart forming a steep slope.

es-carp-ment (*'ment*), *n.* the precipitous face of a ridge of high land.

es-cheat (*-chēt'*), *v. t.* to forfeit through failure of heirs.

es-chew (*-chū'*), *v. t.* to shun; avoid.

Escorial (*es-kō'ri-al*, Spanish *es-kō-rē-äl'*). A celebrated building in Spain, situated twenty-seven miles northwest of Madrid, containing a monastery, palace, church, and mausoleum of the Spanish sovereign.

es-cort (*es'kôrt*), *n.* a body of armed men acting as a guard.

es-cu-lent (*'kū-lent*), *adj.* eatable.

es-cutch-eon (*-kuch'un*), *n.* a shield on which arms are emblazoned.

Es-ki-mo (*'ki-mō*), *adj.* pertaining to one of a tribe of diminutive people inhabiting Greenland.

e-soph-a-gus (*ē-sof'à-gus*), *n.* the gullet or canal through which food and drink pass to the stomach.

★**es-o-ter-ic** (*es-ō-ter'ik*), *adj.* pertaining to doctrines taught privately.

es-pe-cial (*-pesh'al*), *adj.* particular; chief.

es-pe-cial-ly (*-li*), *adv.* particularly; chiefly.

es-per-an-to (*es-pēr-an'tō*), *n.* a recently invented artificial language, designed for international use.

★**es-pi-o-nage** (*es'pē-ō-nāj*, or *es'pē-on-äzh*), *n.* the act or practice of spying.

Espiritu Santo (*ās-pē'rē-tōō sän'tō*) **bay, Texas.** Spanish appellation, meaning "Bay of the Holy Spirit."

es-pla-nade (*es-plà-nād'*), *n.* a level walk or drive, especially by the seaside.

es-pouse (*-pouz'*), *v. t.* to promise, engage, or give in marriage.

es-py (*-pī'*), *v. t.* [*p. t.* and *p. p.* espied, *p. pr.* espying], to see at a distance; discover (something intended to be hid).

es-quire (*-kwīr'*), *n.* originally the armor-bearer or attendant on a knight.

es-say (*'sā*), *n.* a short written composition or treatise.

es-sence (*'ens*), *n.* the concentrated preparation of any substance.

es-sen-tial (*-sen'shal*), *adj.* necessary to the existence of a thing.

Essie (*es'-si*). A female name derived from *Esther* or *Hester.*

es-tab-lish (*-tab'lish*), *v. t.* to fix firmly; settle. [CONFIRM.]

es-tab-lish-ment (*-ment*), *n.* the act of establishing; ratification; settlement.

es-tate (*-tāt'*), *n.* condition of life; rank, position, or quality.

es-teem (*-tēm'*), *v. t.* to set a high value upon; respect; prize; consider. [VALUE, ADMIRE.]

Estelle. A French name derived from Spanish *estella*, from Latin *stella*, a "star."

Esther (*es'tēr*). From the Persian *sitarah*, "star;" Dutch, *Hester;* Fr., *Esther;* Ger., *Esther;* It., *Ester;* Lat., *Esthera;* Sp., *Ester.*

es-thet-ics. Same as *æsthetics.*

es-ti-ma-ble (*'ti-mà-bl*), *adj.* worthy of regard or esteem.

es-ti-mate (*'ti-māt*), *v. t.* to compute; determine the value of.

Syn. ESTIMATE, compute, rate. To *estimate* is to obtain the aggregate sum in one's mind, either by an immediate or a progressive act; to *compute* is to obtain the sum by the gradual process of putting together items; to *rate* is to fix the relative value in one's mind by deduction and comparison. [See *calculate.*]

es-ti-ma-tion (*es-ti-mā'shun*), *n.* calculation; appraisement.

es-top (*-top'*), *v. t.* [*p. t.* and *p. p.* estopped, *p. pr.* estopping], to prevent; bar.

es-trange (*-trānj'*), *v. t.* to alienate; keep at a distance.

Estremadura (*ās-trā-mà-dōō'rà*). From *Esytema-Durii*, the extreme limits of the River Douro. A province of Portugal.

es-tu-a-ri-al (*-tū-ā'ri-al*), *adj.* pertaining to, or formed in, an estuary.

es-tu-a-ry (*'tū-ā-ri*), *n.* [*pl.* estuaries (*-riz*)], the mouth of a tidal river.

etch (*ech*), *v. t.* to engrave by biting out with an acid the design previously drawn with an etching-needle.

e-ter-nal (*ē-tēr'nal*), *adj.* without beginning or end.

Syn. ETERNAL, endless, everlasting. The *eternal* is set above time; the *endless* lies within time. That is properly *eternal* which has neither beginning nor end; that is *endless* which has a beginning, but no end; that which is *everlasting* has neither interruption nor cessation.

Ant. FINITE, mortal, temporary, transient.

e-ter-ni-ty (*'ni-ti*), *n.* [*pl.* eternities (*-tiz*)], infinite duration.

Ethel (*eth'el*). From the Anglo-Saxon, signifying "noble."

Ethelbert (*eth'el-bērt*). From the Teutonic, meaning "nobly bright." Danish, *Adelbert;* Dutch, *Adelbert;* Fr., *Adalbert* or *Adelbert;* Ger., *Adelbert;* Lat., *Ethelbertus* or *Adalbertus.*

e-ther (*ē'thēr*), *n.* an extremely fine fluid, lighter than air, supposed to pervade all space.

e-the-re-al (*-thē'rē-al*), *adj.* pertaining to, or formed of, ether.

eth-ic-al (*eth'i-kal*), *adj.* pertaining to ethics; moral.

eth-ics (*'iks*), *n. pl.* the science that treats of the principles of human morality and duty.

Ethiopia or **Æthiopia** (*ē-thi-ō'pi-à*). The "land of the blacks," according to the two Greek words, *aithein*, "to burn," and *ops*, "the face."

E-thi-o-pi-an (*-thi-ō'pi-an*), *adj.* pertaining to Ethiopia.

eth-nic (*eth'nik*), *adj.* characteristic of races or peoples.

eth-nol-o-gy (*-nol'ō-ji*), *n.* the science that treats of races of men.

e-thos (*ē'thos*), *n.* the characteristic genius of a people.

eth-yl (*eth'il*), *n.* a monatomic fatty hydrocarbon radical.

★**et-i-quette** (*et'i-ket*), *n.* the conventional rules observed in polite society.

Etna (*et'nà*). The chief mountain in Sicily, and the highest volcano in Europe. The Greek name was *Aitna*, "burning mountain."

et-y-mol-o-gist (*et-i-mol'ō-jist*), *n.* one who is proficient in etymology.

et-y-mol-o-gize (*-mol'ō-jīz*), *v. i.* to investigate the origin of words.

et-y-mol-o-gy (*'ō-ji*), *n.* [*pl.* etymologies (*-jiz*)], that branch of philology which treats of the origin of words.

Eu-ca-lyp-tus (*ū-kà-lip'tus*), *n.* [*pl.* Eucalypti (*'tī*)], a genus of Australian evergreen trees.

eu-char-ist (*ū'kär-ist*), *n.* the holy communion; the elements, bread and wine.

eu-cha-ris-tic (*-kà-ris'tik*), *adj.* pertaining to the eucharist.

eu-chre (*'kēr*), *n.* a particular game of cards.

Eugene (*ū-jēn'*). A name derived from the Latin, *Eugenius*, "nobly descended." Dutch, *Eugenius;* Fr., *Eugene;* Ger., *Eugen;* Gr., *Eugenios;* It., *Eugenio;* Sp., *Eugenio.*

Eugenia (*ū-jē'ni-à*). Feminine of the Latin name *Eugenius.* Fr., *Eugénie;* Gr., *Eugenia.*

eu-lo-gist (*ū'lō-jist*), *n.* one who eulogizes.

eu-lo-gis-tic (*-jis'tik*), *adj.* laudatory.

eu-lo-gize (*'lō-jīz*), *v. t.* to praise highly.

eu-lo-gy (*-ji*), *n.* [*pl.* eulogies (*-jiz*)], the praise of any one spoken or written. [ENCOMIUM.]

Eunice (*ū'nis, ū-ni'sē*). A female name derived from the Greek name, *Eunike*, "happy victory." Lat., *Eunice.*

eu-nuch (*'nuk*), *n.* a castrated person.

Euphemia (*ū-fē'mi-à*). From the Greek, *Euphemia*, "words of good omen, or good report."

eu-phe-mism (*'fē-mizm*), *n.* the substitution of a delicate expression in place of that which is offensive or indelicate.

eu-phon-ic (*-fon'ik*), *adj.* sounding pleasantly to the ear.

eu-pho-ny (*'fō-ni*), *n.* [*pl.* euphonies (*-niz*)], an agreeable sound.

Euphrates (*ū-frā'tēz*). A great river of Mesopotamia. The name is merely a Greek adaptation of the Persian *Hufrat* or *Ufratu.*

eu-phu-ism (*'fū-izm*), *n.* the affected use of words.

Eurasian (*ū-rā'shan*). This word, which is often met with in Indian newspapers, is applied to persons born of European fathers and native mothers.

Europe (*ū'rup*). From the Greek *eurus*, "broad," and *op*, "to see," or *ops*, "the face," in allusion to "the broad face of the earth." The continent.

Eusebius (*ū-sē'bi-us*). From the Greek, *eusebes*, "pious," or "religious." Fr., *Eusebe;* Gr., *Eusebios;* It., *Eusebio;* Lat., *Eusebius;* Sp. *Eusebio.*

Eustace (*ūs'tās*). From the Latin name, *Eustathius*, "standing fast," "firm," "constant." Dutch, *Eustatius;* Fr., *Eustache;* It., *Eustachio;* Lat., *Eustachius;* Sp., *Eustaquio.*

eu-sta-chi-an (*ū-stā'ki-an*), *adj.* pertaining to a tube which leads from the cavity of the tympanum of the ear to the pharynx.

Euxine (*ūks'in*). The Black Sea. Greek, "the hospitable"; formerly *axinos,* "the inhospitable sea."

e-vac-u-ate (*ē-vak'ū-āt*), *v. t.* to make void or empty; discharge through the excretory passages.

e-vade (*-vād'*), *v. t.* to elude; escape by artifice.

Syn. EVADE, equivocate, prevaricate. We *evade* by artfully turning the subject or calling off the attention of the inquirer; we *equivocate* by the use of *equivocal* expressions; we *prevaricate* by the use of loose and indefinite expressions; we avoid giving satisfaction by *evading;* we give a false satisfaction by *equivocating;* we give dissatisfaction by *prevaricating.*

Ant. ANSWER, meet; be frank, direct, open, candid.

e-vad-i-ble (*'i-bl*), *adj.* capable of being evaded.

Evan (*ev'an*). A Welsh name. *Evan,* or rather *Evans,* is merely another spelling of *Jones,* which has been corrupted from the Greek original of *John.*

ev-a-nes-cent (*ev-ȧ-nes'ent*), *adj.* disappearing gradually.

e-van-gel-ic-al (*ē-van-jel'i-kal*), *adj.* pertaining to the gospel, or the four Gospels.

e-van-gel-ism (*'jel-izm*), *n.* the doctrine and preaching of evangelical principles.

e-van-gel-ist (*-ist*), *n.* an itinerant preacher.

e-van-gel-ize (*'jel-iz*), *v. t.* to instruct in the gospel; convert to Christianity.

e-vap-o-rate (*-vap'ō-rāt*), *v. i.* to disperse in vapor.

e-vap-o-ra-tion (*-rā'shun*), *n.* the slow conversion of a fluid into vapor.

e-va-sion (*-vā'zhun*), *n.* the act of evading; an excuse.

e-va-sive (*-vā'siv*), *adj.* tending or seeking to evade.

eve (*ēv*), *n.* the period immediately preceding some important event; evening. [*Poetry.*]

Evelina (*ev-ē-lī'nȧ*), **Eveline** (*ev'ē-līn*). Female names derived from *Evelyn.*

Evelyn (*ev'ē-lin*). From the Latin, meaning "hazel nut."

e-ven (*ē'vn*), *adj.* level; uniform; divisible by 2 without a remainder; equal; balanced. [EQUAL.]

e-ven-ing (*-ing*), *n.* the close of the day.

e-ven-ly (*-li*), *adv.* in an even manner; smoothly.

e-ven-ness (*-nes*), *n.* smoothness; uniformity.

e-vent (*ē-vent'*), *n.* an occurrence; incident.

Syn. EVENT, incident, accident, adventure, occurrence. These terms are expressive of what passes in the world, which is the sole signification of the term *event;* an *incident* is a personal *event;* an *accident* an accidental *event* which happens by the way; an *adventure* an extraordinary *event;* an *occurrence* an ordinary or domestic event. *Event* in its ordinary and limited acceptation, excludes the idea of chance; *accident* excludes that of design; *incident, adventure,* and *occurrence* are applicable in both cases. [See *circumstance, consequence.*]

e-vent-ful (*'fool*), *adj.* full of incidents or events.

e-ven-tide (*ē'vn-tīd*), *n.* evening.

e-ven-tu-al-i-ty (*-ven-tū-al'i-ti*), *n.* [*pl.* eventualities (*-tiz*)], a possible occurrence.

e-ven-tu-ate (*'tū-āt*), *v. i.* to happen; terminate.

ev-er (*ev'ēr*), *adv.* at any time.

Everard (*ev'ēr-ard*). Same as the German names *Eberhard, Eberhardt.* From *eberhart,* "strong as a wild boar." Danish, *Eberhard;* Dutch *Everard;* Ger., *Eberhard.*

ev-er-glade (*-glād*), *n.* a low, swampy tract of land.

ev-er-green (*-grēn*), *n.* a tree or plant which retains its foliage throughout the year.

ev-er-last-ing (*-lȧst'ing*), *adj.* perpetual: *n.* eternity. [ETERNAL.]

Ev-er-last-ing, *n.* God, the Eternal.

ev-er-more (*-mōr*), *adv.* eternally.

eve-ry (*ev'ri* or *ev'ēr-i*), *adj.* the whole, taken one at a time.

e-vict (*ē-vikt'*), *v. t.* to expel or dispossess by legal process. [BANISH]

e-vic-tion (*-vik'shun*), *n.* the act of evicting.

ev-i-dence (*ev'i-dens*), *n.* indubitable certainty. [DEPONENT, TESTIMONY.]

ev-i-dent (*-dent*), *adj.* plain. [APPARENT.]

ev-i-den-tial (*-den'shal*), *adj.* proving clearly.

e-vil (*ē'vl*), *adj.* morally bad; wicked: *adv.* badly; unfortunately: *n.* anything that harms or injures. [ABOMINATION.]

e-vince (*ē-vins'*), *v. t.* to manifest or make evident.

e-vin-ci-ble (*-vin'si-bl*), *adj.* capable of proof.

e-vis-cer-ate (*-vis'ēr-āt*), *v. t.* to disembowel.

e-voke (*-vōk'*), *v. t.* to call forth.

ev-o-lu-tion (*ev-ō-lū'shun*), *n.* the gradual development or descent of forms of life from simple or low organized types.

ev-o-lu-tion-ist (*-ist*), *adj.* pertaining to evolution.

ev-o-lu-tive (*-tiv*), *adj.* causing evolution.

e-volve (*ē-volv'*), *v. t.* to develop; unfold; expand.

ewe (*ū*), *n.* a female sheep.

ew-er (*ū'ēr*), *n.* a large water jug.

ex, *prefix,* meaning *out of, beyond, from.*

ex-act (*egz-akt'*), *adj.* very correct or accurate; precise; particular: *v. t.* to demand; extort.

Syn. EXACT, extort. To *exact* is to demand with force; it is commonly an act of injustice; to *extort* is to get with violence; it is an act of tyranny.

ex-act-ing (*egz-akt'ing*), *p. adj.* making unreasonable demands.

ex-ac-tion (*-ak'shun*), *n.* the act of exacting; extortion.

ex-act-ness (*-akt'nes*), *n.* accuracy; precision.

★**ex-ag-ger-ate*** (*egz-aj'ēr-āt*), *v. t.* to enlarge or heighten by overstatement.

ex-alt (*-awlt'*), *v. t.* to elevate in rank, station or dignity.

ex-am-i-na-tion (*-am-i-nā'shun*), *n.* careful search; investigation; interrogatory.

★**ex-am-ine** (*egz-am'in,* not *eks-am'in*), *v. t.* to scrutinize or investigate carefully. [DISCUSS.]

★**ex-am-ple** (*egz-am'pl*), *n.* a pattern; a model or copy.

Syn. EXAMPLE, pattern, ensample. The *example* must be followed generally; the *pattern* must be followed particularly, not only as to what, but how a thing is to be done; the former serves as a guide to the judgment; the latter to guide the actions; the *ensample* is a species of *example,* the word being employed only in the solemn style.

Ant. ANOMALY, abnormality.

ex-as-per-ate (*egz-as'pēr-āt*), *v. t.* to irritate exceedingly; enrage greatly; exasperation. [AGGRAVATE.]

ex ca-the-dra (*eks kȧ-thē'drȧ*), with an air of official authority.

ex-ca-vate (*eks'kȧ-vāt*), *v. t.* to dig or hollow out.

ex-ca-va-tion (*-vā'shun*), *n.* a hollow cavity formed by digging out earth.

ex-ceed (*ek-sēd'*), *v. t.* to go beyond the limit or measure of; surpass; excel; transcend.

ex-ceed-ing (*'ing*), *p. adj.* very great.

ex-cel (*-sel'*), *v. i.* to possess good qualities in a great degree.

ex-cel-lence (*'sel-ens*), *n.* the state of excelling in anything; virtue.

ex-cel-len-cy (*-en-si*), *n.* a title of honor of various high officials.

ex-cel-lent (*-ent*), *adj.* of great value, merit, or virtue.

ex-cel-si-or (*'si-ēr*), *adj.* yet higher.

ex-cept (*-sept'*), *v. t.* to omit or leave out: *prep.* omitting; without inclusion of. [UNLESS.]

ex-cep-tion (*-sep'shun*), *n.* the state of being excepted.

ex-cep-tion-a-ble (*-ȧ-bl*), *adj.* objectionable.

ex-cep-tion-al (*-al*), *adj.* unusual.

ex-cerpt (*-serpt'*) *v. t.* to take out or select from, as a passage from a book.

ex-cess (*-ses'*), *n.* that which exceeds the ordinary limit; overplus.

Syn. EXCESS, dissipation, exorbitance, extravagance, intemperance, lavishness, prodigality, profusion, redundance, redundancy, superfluity, surplus, waste wasteful. *Excess* is more than enough of anything; the word is used frequently in an unfavorable sense. Careless expenditure is *extravagance;* we may have also *extravagance* of language; *exorbitance* is *excess* in pecuniary demands upon others; *lavishness* and *profusion,* a generous, bountiful, or amiable *excess; surplus* is neutral, having none of the unfavorable meaning that often attaches to *excess;* a *surplus* is that which remains over after all demands are met. *Redundance* or *redundancy* refers chiefly to literary style, denoting an *excess* of words or matter.

Ant. DEARTH, lack, need, want.

ex-cess-ive (*'iv*), *adj.* extreme; unreasonable.

ex-change (*eks-chānj'*), *v. t.* to give in return for an equivalent; barter; give; resign. [CHANGE, INTERCHANGE.]

ex-change-a-ble (*ȧ-bl*), *adj.* that may be exchanged.

ex-cheq-uer (*-chek'ēr*), *n.* a treasury; cash or funds.

ex-cis-a-ble (*ek-sīz'ȧ-bl*), *adj.* dutiable.

ex-cise (*-sīz'*), *v. t.* to levy a duty upon: *n.* a tax.

ex-ci-sion (*-sizh'un*), *n.* the act of cutting out, or off.

ex-ci-ta-bil-i-ty (*-sī-tȧ-bil'i-ti*), *n.* [*pl.* excitabilities (*'tiz*)], the state or quality of being excitable.

ex-ci-tant (*-sī'tant*), *n.* a stimulant.

ex-ci-ta-tion (*-tā'shun*), *n.* the act of exciting.

ex-cite (*-sīt'*), *v. t.* to animate; put into motion or action.

Syn. EXCITE, incite, provoke. To *excite* is said more particularly of the inward feelings; *incite* is said of the external actions; *provoke* is said of both. A person's passions are *excited;* he is *incited* by any particular passion to a course of conduct; a particular feeling is *provoked,* or he is *provoked* by some feeling to a particular step. [See *awaken.*]

Ant. CALM, quiet, soothe.

ex-cite-ment (*'ment*), *n.* the state of being excited; commotion; stimulation.

ex-claim (*eks-klām'*), *v. i.* and *v. t.* to cry out abruptly. [CALL.]

ex-cla-ma-tion (*-klȧ-mā'shun*), *n.* an abrupt or clamorous outcry.

ex-clam-a-to-ry (*-klam'ȧ-tō-ri*), *adj.* containing or using exclamation.

ex-clude (*-klūd'*), *v. t.* to shut out; hinder from entrance or admission.

ex-clu-sion (*-klū'zhun*), *n.* the act of excluding.

ex-clu-sive (*'siv*), *adj.* tending to exclude; illiberal.

ex-cog-i-tate (*-koj'i-tāt*), *v. t.* to discover by thinking.

ex-com-mu-ni-cate (*kom-mū'ni-kāt*), *v. t.* to punish by cutting off from the communication of the church.

ex-co-ri-ate (*-kō'ri-āt*), *v. t.* to strip off the skin; rub or gall.

ex-cre-ment (*eks'krē-ment*), *n.* matter discharged from the body of an animal after digestion.

ex-cres-cence (*-kres'ens*), *n.* an unnatural outgrowth.

ex-cre-tion (*eks-krē'shun*), *n.* the ejection or waste matter from the body.

ex-cre-to-ry (*'tō-ri*), *adj.* pertaining to excretion.

ex-cru-ci-ate (*-krū'shi-āt*), *v. t.* to inflict severe pains upon; torture.

ex-cul-pate (*-kul'pāt*), *v. t.* to clear from blame; exonerate. [APOLOGIZE, ABSOLVE.]

ex-cur-sion (*-kūr'shun*), *n.* a pleasure trip; a short or rapid tour.

Syn. EXCURSION, ramble, tour, trip, jaunt. *Excursion* signifies going out of one's course; a *ramble* is a going without any course or regular path; a *tour,* is a circuitous course; a *trip* means to go on the toes like a dancer, is properly a pedestrian *excursion* or *tour;* those who have no better means of spending their time make *jaunts.* [See *circuit.*]

ex-cus-a-ble (*-kūz'ȧ-bl*), *adv.* pardonable.

ex-cuse (*-kūz'*), *v. t.* to extenuate by apology; pardon: *n.* (*-kūs'*), apology; pretext.

Syn. EXCUSE, pardon. We *excuse* a person or thing by exempting him from blame; we *pardon* by giving up the punishment of the offense one has committed. We *excuse* a small fault; we *pardon* a great fault; we *excuse* that which personally affects ourselves; we *pardon* that which offends against morals. [See *apologize, pretense.*]

Ant. CHASTEN, condemn, punish.

ex-e-crate (*'ē-krāt*), *v. t.* to imprecate evil upon.

ex-e-cra-tion (*-krā'shun*), *n.* the act of execrating. [ABOMINATION.]

ex-e-cute (*'ē-kūt*), *v. t.* to perform; carry into effect; put to death.

Syn. EXECUTE, fulfill, perform. To *execute* is to bring about an end; it involves active measures, and is peculiarly applicable to that which is extraordinary; to *fulfill* is to satisfy a moral obligation. We *fulfill* the duties of citizens; to *perform* is to carry through by simple action or labor; we *perform* a work or a task. [See *accomplish.*]

Ant. FAIL, frustrate, miscarry, neglect.

ex-e-cu-tion (*-kū'shun*), *n.* the act of executing; performance; capital punishment.

ex-ec-u-tive (*egz-ek'ū-tiv*). *adj.* pertaining to the governing body; administrative.

ex-ec-u-tor (*'ū-tēr*), *n.* a person appointed by a testator to see that the terms of his will are carried out.

ex-e-ge-sis (*eks-ē-jē'sis*), *n.* explanation or interpretation of a text of the bible.

ex-em-plar (*egz-em'plēr*), *n.* something to be copied, example.

ex-em-pla-ry (*-em'plȧ-ri*), *adj.* serving as a copy or model.

ex-em-pli-fy (*'pli-fī*), *v. t.* [*p. t.* and *p. p.* exemplified, *p. pr.* exemplifying], to illustrate by example.

ex-empt (*-empt'*), *v. t.* to free from some duty or obligation. [FREE, ABSOLVE.]

ex-er-cise (*eks'ēr-siz*), *v. t.* to train by use; exert; practice; employ actively.

Syn. EXERCISE, practice. We *exercise* in that where the powers are called forth; we *practice* in that where frequency and habitude of action is requisite.

ex-ert (*egz-ērt'*), *v. t.* to put forth; use with an effort.

ex-er-tion (*-ēr'shun*), *n.* effort. [ENDEAVOR.]

ex-ha-la-tion (*eks-hȧ-lā'shun*), *n.* the act of exhaling.

ex-hale (*-hāl'*), *v. t.* to breathe forth; emit or send out.

★**ex-haust** (*egz-awst'*), *v. t.* to empty by drawing off the contents; drain; weaken: *adj.* wholly or partially deprived of strength. [ABSORB, FAINT.]

ex-haust-i-ble (*'i-bl*), *adj.* capable of being exhausted.

ex-haust-ive (*'iv*), *adj.* exhausting.

ex-hib-it (*egz-ib'it* or *eks-hib'it*), *v. t.* to present to view; display. [GIVE.]

ex-hi-bi-tion (*eks-hi-bish'un*) *n.* the act of exhibiting. [SHOW.]

ex-hil-a-rate (*egz-il'ȧ-rāt* or *eks-hil'ȧ-rāt*), *v. t.* to make joyous, glad, enliven.

ex-hort (*egz-ōrt'* or *eks-hōrt'*). *v. t.* to incite by appeal or argument to good deeds.

ex-hume (*eks-hūm'*), *v. t.* to disinter.

ex-i-gen-cy (*eks'i-jen-si*), *n.* [*pl.* exigencies (*-siz*)], pressing necessity or demand.

Syn. EXIGENCY, emergency. The *exigency* is more common, but less pressing; the *emergency* is imperious when it comes, but comes less frequently. A prudent traveler will never carry more money with him than what will supply the *exigencies* of his journey; and in case of an *emergency* will rather borrow than risk his property.

ex-ile (*eks'il*), *v. t.* to banish from one's native country. [BANISH.]

ex-ist (*egz-ist'*), *v. i.* to have existence.

ex-ist-ence (*-ist'ens*), *n.* the state of being; life.

★**ex-it** (*eks'it,* not *egz'it*), *n.* the act of going out.

ex-o-gen (*'ō-jen*), *n.* a plant which increases year by year by the addition of layers outside the previous bark.

ex-on-er-ate (*egz-on'ēr-āt*), *v. t.* to free from the imputation of a fault; acquit.

Syn. EXONERATE, exculpate. The first is the act of another; the second is one's own act. We *exonerate* him upon whom a charge has lain, or who has the load of guilt; we *exculpate* ourselves when there is any danger of being blamed; cir-

cumstances may sometimes tend to *exonerate;* the explanation of some person is requisite to *exculpate.* [See *absolve.*]
Ant. ACCUSE, implicate.
ex-or-bi-tance (*egz'ôr-bi-tans*), *n.* going beyond due limits. [EXCESS.
ex-or-bi-tant (*-tant*), *adj.* excessive.
ex-or-cise (*eks'or-sīz*), *v. t.* to expel (an evil spirit).
ex-or-cism (*-sizm*), *n.* the act of expelling evil spirits.
ex-or-di-um (*egz-ôr'di-um*), *n.* the opening part of a speech.
ex-o-ter-ic (*eks-ō-ter'ik*), *adj.* pertaining to the uninitiated public.
ex-ot-ic (*egz-ot'ik*), *adj.* foreign.
ex-pand (*eks-pand'*), *v.t.* to distend; dilate. [SPREAD]
ex-panse (*-pans'*), *n.* a continuous area.
ex-pan-sion (*-pan'shun*), *n.* the state of being expanded.
ex-pan-sive (*'siv*), *adj.* capable of being expanded.
ex-pa-ti-ate (*-pā'shi-āt*), *v. i.* to enlarge in statement or language.
ex-pa-tri-ate (*-pā'tri-āt*), *v. t.* to drive from one's native country. [BANISH.]
ex-pect (*-pekt'*), *v. t.* to wait for. [ANTICIPATE.]
ex-pect-ance (*'ans*), *n.* the act or state of expecting.
ex-pect-ant (*'ant*), *adj.* waiting in expectation.
ex-pec-ta-tion (*-tā'shun*), *n.* the act of looking forward to.
ex-pec-to-rate (*-tō-rāt*), *v. t.* to eject by coughing.
ex-pe-di-en-cy (*-pē'di-en-si*), *n.* [*pl.* expediencies (*-siz*)], suitability to an end or purpose.
★**ex-pe-di-ent** (*eks-pē'di-ent*, not *eks-pē'jent*), *adj.* fit; convenient; suitable; proper: *n.* device; resource.
Syn. EXPEDIENT, resource. The *expedient* is an artificial means; the *resource* is a natural means. A cunning man is fruitful in *expedients;* a fortunate man abounds in *resources.*
Syn. EXPEDIENT, fit. The *expediency* of a thing depends altogether upon the outward circumstances; the fitness is determined by a moral rule.
Ant. FUTILE, unwise.
ex-pe-dite (*'pē-dīt*), *v. t.* to hasten. [HASTEN.]
ex-pe-di-tion (*-dish'un*), *n.* haste; dispatch; promptness; a march.
ex-pe-di-tious (*'us*), *adj.* quick; speedy. [DILIGENT; ACTIVE.]
ex-pel (*-pel'*), *v.t.* to drive away; force out. [BANISH.]
ex-pend (*-pend'*), *v. t.* to spend.
ex-pend-i-ture (*'i-tūr*), *n.* laying out, as money. [EXPENSE.]
ex-pense (*-pens'*), *n.* expenditure; cost.
Syn. EXPENSE, cost, expenditure, outlay. The *cost* of a thing is whatever one surrenders or gives up for it; *expense* is what is laid out by calculation or intention. There is a tendency to use *cost* of what we pay for a possession, *expense* of what we pay for service; *outlay* is used of some definite *expenditure,* as for the purchase of supplies; outgo is a steady drain of incidental *expenses.* [See *cost.*]
ex-pen-sive (*pen'siv*), *adj.* causing expense.
ex-pe-ri-ence (*-pē'ri-ens*), *n.* knowledge gained by trial and practice. [ACQUAINTANCE.[
ex-per-i-ment (*-per'i-ment*), *n.* a trial or operation to discover something. [periment.
ex-per-i-men-tal (*-men'tal*), *adj.* founded on ex-
ex-pert (*-pē'rt'*), *adj.* skillful, through practice or experience; adroit; dexterous. [CLEVER.]
ex-pi-ate (*'pi-āt*), *v. t.* to atone for.
ex-pi-ra-tion (*-pi-rā'shun*), *n.* termination.
ex-pire (*-pīr'*), *v. t.* to breathe out from the lungs; cease to live. [DIE.]
ex-plain (*-plān'*), *v. t.* to make intelligible or clear.
Syn. EXPLAIN, expound, interpret. Single words or sentences are *explained;* a whole work, or considerable parts of it, are *expounded;* the sense of any writing or symbolical sign is *interpreted.*
Ant. CONFUSE, obscure, darken, obfuscate.
ex-pla-na-tion (*plā-nā'shun*), *n.* the act of explaining; elucidation. [DEFINITION.]
ex-plan-a-to-ry (*-plan'ā-tō-ri*), *adj.* serving to explain.
ex-ple-tive (*'plē-tiv*), *n.* a word inserted in a sentence for ornament or to fill up a verse.
ex-pli-ca-ble (*'pli-ka-bl*), *adj.* that may be explained.
ex-pli-ca-tive (*-kā-tiv*), *adj.* serving to explain.
ex-plic-it (*-plis'it*), *adj.* plain; definite.
ex-plode (*-plōd'*), *v. i.* to burst forth with sudden noise and violence.
ex-ploit (*-ploit'*), *v. t.* to make use of for one's own profit: *n.* a remarkable deed or heroic act.
ex-ploi-ta-tion (*-ploi-tā'shun*), *n.* the act of exploiting; the improvement of lands.
ex-plo-ra-tion (*-plō-rā'shun*), *n.* the act of exploring; careful investigation or search. [thoroughly.
ex-plore (*-plōr'*), *v. t.* to search into or examine
ex-plo-sion (*-plō'zhun*), *n.* the act of exploding. [ERUPTION.]
ex-plo-sive (*'siv*), *adj.* pertaining to, or causing, explosion.
ex-po-nent (*-pō'nent*), *n.* one who explains or interprets the principles of something.
ex-port (*-pōrt'*), *v. t.* to send or carry out of the country, as merchandise.
ex-pose (*-pōz'*), *v. t.* to lay open; leave to the action of any force or circumstance; disclose.
ex-po-si-tion (*-pō-zish'un*), *n.* an explanation or interpretation. [DEFINITION.] [terprets.
ex-pos-i-tor (*-poz'i-tēr*), *n.* one who expounds or in-
ex-pos-i-to-ry (*eks-poz'i-tō-ri*), *adj.* pertaining to, or conveying, exposition.
ex-pos-tu-late (*-pos'tū-lāt*), *v. i.* to reason earnestly or remonstrate.
Syn. EXPOSTULATE, remonstrate. We *expostulate* in a tone of authority; we *remonstrate* in a tone of complaint. He who *expostulates* passes a censure, and claims to be heard; he who *remonstrates* presents his case and requests to be heard.
ex-po-sure (*-pō'zhūr*), *n.* the act of exposing.
ex-pound (*-pound'*), *v. t.* to set forth, explain, or interpret. [EXPLAIN.]
ex-press (*-pres'*), *v. t.* to exhibit by language; utter; dispatch by express. [SPEAK.]
ex-press-i-ble (*'i-bl*), *adj.* capable of being expressed.
ex-pres-sion (*-presh'un*), *n.* the act or power of representing anything; mode of speech.
ex-press-ive (*'iv*), *adj.* serving to express.
ex-press-man (*'man*), *n.* the person who takes charge of express matter.
ex-pul-sion (*-pul'shun*), *n.* forcible ejection.
ex-pul-sive (*'siv*), *adj.* serving to expel.
ex-punge (*-punj'*), *v. t.* to erase; destroy. [BLOT.]
ex-pur-gate (*'pēr-gāt*), *v. t.* to remove whatever is offensive.
★**ex-qui-site** (*eks'kwiz-it*, not *eks-kwiz'it*), *adj.* refined; delicate; nice; accurate.
★**ex-tant** (*eks'tant*, not *eks-tant'*), *adj.* still existing.
ex-tem-po-ra-ne-ous (*-tem-pō-rā'nē-us*), *adj.* unpremeditated; without previous notes or study.
ex-tem-po-rize (*'pō-rīz*), *v. t.* to compose on the spur of the moment.
ex-tend (*-tend'*), *v. t.* to stretch out; enlarge; amplify; continue. [ENLARGE, ADD.]
ex-ten-sion (*-ten'shun*), *n.* the act of extending; the state of being extended.
ex-ten-sive (*'siv*), *adj.* having great extent. [COMPREHENSIVE.]
ex-ten-sor (*-ten's ēr*), *n.* a muscle that extends a limb.
ex-tent (*-tent'*), *n.* the space or degree to which a thing is extended; size.
ex-ten-u-ate (*-ten'ū-āt*), *v. t.* to offer excuses for; palliate.
ex-te-ri-or (*-tē'ri-ēr*), *adj.* outward; external. [OUTWARD.]
ex-ter-mi-nate (*-tēr'mi-nāt*), *v. t.* to destroy utterly.
ex-ter-mi-na-to-ry (*-nā-tō-ri*), *adj.* pertaining to extermination.
ex-ter-nal (*-tēr'nal*), *adj.* outside; exterior; superficial; objective; foreign. [OUTWARD.]
ex-ter-ri-to-ri-al-i-ty (*-ter-ri-tō-ri-al'i-ti*), *n.* the right possessed by ambassadors to live under the laws of their own country.
ex-tinct (*-tingkt'*), *adj.* extinguished; put out.
ex-tin-guish (*-ting'gwish*), *v. t.* to put out.
ex-tin-guish-er (*-ēr*), *n.* that which extinguishes.
ex-tir-pate (*'tēr-pāt*), *v. t.* to eradicate; destroy.
ex-tol (*-tōl'*), *v. t.* [*p. t.* and *p. p.* extolled, *p. pr.* extolling], to praise highly; magnify. [ADMIRE.]
ex-tort (*-tôrt'*), *v. t.* to obtain by threats, violence, or injustice. [EXACT.]
ex-tor-tion (*-tôr'shun*), *n.* the act or practice of extorting.
ex-tor-tion-ate (*'shun-āt*), *adj.* characterized by extortion.
ex-tor-tion-er (*'shun-ēr*), *n.* one who practices extortion.
ex-tra (*'trā*), *adj.* additional.
ex-tract (*-trakt'*), *v. t.* to draw out of; pull out; select from a large literary work: *n.* an abstract or excerpt from a book.
ex-trac-tion (*-trak'shun*), *n.* lineage, birth, or descent.
ex-tra-dite (*'trā-dīt*), *v. t.* to surrender (a person) to another government.
ex-tra-di-ta-ble (*-dī-tā-bl*), *adj.* liable or subject to, extradition.
ex-tra-di-tion (*-dish'un*), *n.* the surrender by the government of one nation to another of a person guilty of a crime.
ex-tra-ne-ous (*-trā'nē-us*), *adj.* external.
Syn. EXTRANEOUS, extrinsic, foreign. The *extraneous* is that which forms no necessary or natural part of anything; the *extrinsic* is that which forms a part or has a connection, but only in an indirect form; it is not an inherent or component part; the *foreign* is that which forms no part whatever, and has no kind of connection.
Ant. APROPOS, essential, relevant, intrinsic.
★**ex-traor-di-na-ry** (*-trôr'di-nā-ri*), *adj.* beyond or out of the usual course; uncommon.
Syn. EXTRAORDINARY, remarkable. The *extraordinary* is that which is out of the ordinary course, but it does not always excite remark, and is not, therefore, *remarkable,* as when we speak of an *extraordinary* loan; on the other hand, *extraordinary* expresses much more than *remarkable.* [See *rare.*]
Ant. ORDINARY, usual, obscure.
ex-trav-a-gance (*-trav'ā-gans*), *n.* excess in anything. [EXCESS.]
ex-trav-a-gant (*'ā-gant*), *adj.* exceeding reasonable limits; wasteful; prodigal.
Syn. EXTRAVAGANT, prodigal, lavish, profuse. The *extravagant* man spends his money without reason; the *prodigal* man spends it in excesses. One may be *extravagant* with a small sum where it exceeds one's means; one can be *prodigal* only with large sums; *lavish* and *profuse* are properly applied to particular actions, the former to denote an expenditure more or less wasteful or superfluous, the latter to denote a full supply without any sort of scant.
Ant. CLOSE, miserly, parsimonious, saving.
ex-trav-a-gan-za (*eks-trav-ā-gan'zā*), *n.* a stage burlesque; an irregular piece of music.
ex-treme (*-trēm'*), *adj.* of the highest degree; last; utmost; furthest; uncompromising.
ex-trem-ist (*'ist*), *n.* a supporter of extreme views or practice.
ex-trem-i-ty (*-trem'i-ti*), *n.* [*pl.* extremities (*-tiz*)], the utmost point or degree.
ex-tri-ca-ble (*'tri-kā-bl*), *adj.* capable of being extricated.
ex-tri-cate (*'tri-kāt*), *v. t.* to free from difficulties.
ex-trin-sic (*-trin'sik*), *adj.* external. [EXTRANEOUS.]
ex-trude (*-trūd'*), *v. t.* to thrust out.
ex-u-ber-ance (*-ū'bēr-ans*), *n.* superabundance.
ex-u-ber-ant (*-ant*), *adj.* copious.
Syn. EXUBERANT, luxuriant. These terms are both applied to vegetation in a flourishing state; but *exuberance* expresses the excess, and *luxuriance* the perfection.
Ant. DRAINED, poor, scant.
ex-ude (*-ūd'*), *v. t.* to discharge gradually through pores.
ex-ult (*egz-ult'*), *v. i.* to rejoice in triumph.
ex-ult-ant (*'ant*), *adj.* rejoicing triumphantly.
ex-u-vi-æ (*egz-ū'vi-ē*), *n. pl.* the cast off skins, shells, etc., of animals.
eye (*ī*), *n.* the organ of sight; the eyeball; sight; observation; view.
eye-ball (*'bawl*), *n.* the globe of the eye.
eye-brow (*'brou*), *n.* the hairy arch above the eyes.
eye-lash (*'lash*), *n.* the ridge of hair that lines the eyelid.
eye-let (*'let*), *n.* a small hole to receive a cord.
eye-lid (*'lid*), *n.* the movable skin which covers over and closes the eye.
eye-sight (*'sīt*), *n.* the sight of the eye.
eye-sore (*'sōr*), *n.* anything that offends the sight.
eye-tooth (*'tōōth*), *n.* [*pl.* eye-teeth (*'tēth*)], one of the upper teeth in the jaw.
★**ey-rie** (*ā'ri* or *ē'ri*), *n.* the nest of a predatory bird. Also *eyry.*
Ezekiel (*ē-zē'ki-el*). From the Hebrew, meaning "strength of God." Dutch, *Ezechiel;* Fr., *Ezechiel.*
Ezra (*ez'rā*). From the Hebrew, *Ezra,* meaning "a helper." Fr., *Esdras;* Lat., *Ezra* or *Ezdras.*

F

Fabian (*fā'bi-an*). A name derived from the Roman *Fabius,* which, in turn, is derived from *faba,* a bean. Danish, *Favian;* Dutch, *Fabiaan;* Fr., *Fabien;* It., *Fabiano;* Lat., *Fabianus.*
fa-ble (*fā'bl*), *n.* a short fictitious narrative intended to convey some moral: *v. i.* to speak falsely or untruthfully. [FICTION.
fab-ric (*fab'rik*), *n.* an edifice or building.
fab-ri-cate (*'ri-kāt*), *v. t.* to construct; invent falsely.
fab-u-lous (*'ū-lus*), *adj.* fictitious.
★**fa-çade** (*fā-sād'* or *fā-sād'*), *n.* front elevation.
face (*fās*), *n.* the countenance; dial of a clock, etc.; value, excluding discount or interest) said of a note, etc.: *v. t.* to meet in front. [CONFRONT.]
faced (*fāst*), *p. adj.* having a face; dressed, as stone or tea.
fac-et (*fas'et*), *n.* a small surface or face.
fa-ce-tious (*fā-sē'shus*), *adj.* humorous; jocular.
Syn. FACETIOUS, pleasant, jocular, jocose. *Facetious* may be employed either for writing or conversation; the rest only in conversation. The *facetious* man deals in that kind of discourse which may excite laughter; a *conversable* man may instruct as well as amuse; the *pleasant* man says everything in a *pleasant* manner; his *pleasantry* even on the most delicate subject is without offense; the person speaking is *jocose;* the thing said, or the manner of saying it, is *jocular.*
fa-cial (*fā'shal*), *adj.* pertaining to the face.
fa-ci-es (*'shi-ēz*), *n.* the general resemblance or aspect of any group of organisms or rocks.
fac-ile (*fas'il*), *adj.* yielding.
fa-cil-i-tate (*fā-sil'i-tāt*), *v. t.* to make easy or less difficult.
fa-cil-i-ty (*'i-ti*), *n.* [*pl.* facilities (*-tiz*)], freedom from difficulty; dexterity; ease. [EASE.]
fa-cing (*fā'sing*), *n.* a covering in front for ornamental or other purposes.
fac-sim-i-le (*fak-sim'i-lē*), *n.* an exact reproduction, counterpart, or likeness of an original.
fact (*fakt*), *n.* anything that is done; reality. [CIRCUMSTANCE.]
fac-tion (*fak'shun*), *n.* a party in disloyal opposition.
fac-tious (*'shus*), *adj.* given to faction.
Syn. FACTIOUS, seditious. *Factious* is an epithet to characterize the tempers of men; *seditious* characterizes their conduct. The *factious* man attempts to raise himself into importance, he aims at authority, and seeks to interfere in the measures of government; the *seditious* man attempts to excite others, and to provoke their resistance to established authority. [See *perverse.*]
Ant. PEACEABLE, quiet, well disposed, governable.
fac-ti-tious (*-tish'us*), *adj.* artificial; sham.

fac-tor (*fak'tĕr*), *n.* an agent who transacts business for another.

★fac-to-ry (*fak'tō-ri*, not *fak'tri*), *n.* [*pl.* factories (*-riz*)], a manufactory.

fac-to-tum (*-tō'tum*), *n.* a man of all work.

fac-ul-ty (*'ul-ti*), *n.* [*pl.* faculties (*-tiz*)], any mental or physical power; the masters and professors of a department in a university. [ABILITY.]

fad (*fad*), *n.* a pet idea or hobby.

fade (*fād*), *v. i.* to lose color or distinctness. [FAINT.]

fæ-ces (*fē'sēz*), *n. pl.* excrement.

fag (*fag*), *v. i.* [*p. t.* and *p. p.* fagged, *p. pr.* fagging], to work hard: *v. t.* to tire out or exhaust.

fag-ot (*'ot*), *n.* a bundle of sticks bound together.

fag-ot-ing (*-ing*), *n.* a method of ornamenting textile fabrics.

fail (*fāl*), *v. i.* to be deficient; waste away: *v. t.* to be wanting, or insufficient for; forsake.

fail-ing (*'ing*), *n.* a fault; weakness; imperfection; the act of becoming bankrupt.

fail-ure (*fāl'ūr*), *n.* the act of failing; omission; want of success. [INSOLVENCY.]

fain (*fān*), *adv.* willingly; gladly.

faint (*fānt*), *v. i.* to become feeble; lose consciousness; swoon.

Syn. FAINT, dim, exhausted, faded, faltering, fatigued, feeble, indistinct, languid, listless, timid, weak, wearied. *Faint* has the general sense of lacking strength or effectiveness. A person may be *faint* when physically *wearied;* he may be a *faint* adherent because naturally *feeble* or purposeless, or because half hearted in the cause. Written characters may be *faint* or *dim*, either because originally written with poor ink, or because they have become *faded* by time and exposure.

faint-ing (*'ing*), *n.* a sudden and temporary loss of consciousness.

fair (*fār*), *adj.* beautiful; handsome; pleasing to the eye or mind; *n.* market; *adv.* justly openly.

Syn. FAIR, clear. *Fair* is used in a positive sense; *clear* in a negative sense; there must be some brightness in what is *fair;* there must be no spots in what is *clear*. The weather is said to be *fair*, which is not only free from what is disagreeable but somewhat enlivened by the sun; it is *clear* when it is free from clouds or mists.

Ant. DECEITFUL, unjust, unprincipled.

fair-y (*fār'i*), *n.* [*pl.* fairies (*-iz*)], an imaginary being of graceful and diminutive human form.

faith (*fāth*), *n.* belief; trust in the honesty and truth of another; the assent of the mind to divine revelation; a system of doctrines or tenets.

Syn. FAITH, creed. These words are synonymous when taken for the thing trusted in or believed; but they differ in this, that *faith* has always a reference to the principle in the mind; *creed* only respects the thing which is the object of faith.

Ant. DENIAL, disbelief, infidelity.

faith-ful (*'fool*), *adj.* full of faith; trustworthy; truthful; honest; loyal.

Syn. FAITHFUL, trusty. *Faithful* respects the principle altogether; *trusty* includes not only the principle, but the mental qualifications in general. It is the part of a Christian to be *faithful* to all his engagements; it is a particular excellence in a servant to be *trusty*.

Ant. FAITHLESS, deceitful.

faith-less (*'les*), *adj.* without faith or belief; unbelieving.

Syn. FAITHLESS, perfidious, treacherous. A *faithless* man is *faithless* only for his own interest; a *perfidious* man is expressly so to the injury of another. *Perfidy* may lie in the will to do; *treachery* lies altogether in the thing done. A friend is *perfidious* whenever he evinces his *perfidy;* but he is said to be *treacherous* only in the particular instance in which he betrays the confidence and interests of another.

Ant. FAITHFUL, honest, magnanimous, trustworthy.

fake (*fāk*), *v. t.* to fabricate with the view of deception.

fak-er (*'ĕr*), *n.* a swindler; pickpocket.

Fa-kir (*fā'kĕr*), *n.* a Mohammedan ascetic.

fal-chion (*fawl'chun*), *n.* a short, slightly curved sword.

★fal-con (*faw'kn*), *n.* a predatory bird.

fal-con-er (*faw'kn-ĕr*), *n.* one who trains or sports with falcons.

fal-con-ry (*faw'kn-ri*), *n.* the art of training hawks.

fall (*fawl*), *v. i.* [*p. t.* fell, *p. p.* fallen, *p. pr.* falling], to drop from a higher to a lower place: *adj.* pertaining to the autumn.

Syn. FALL, downfall, ruin. *Fall* applies to that which is erect; *downfall* to that which is elevated. Everything which is set up, although as trifling as a stick, may have a *fall;* but we speak of the *downfall* of the loftiest trees or the tallest spires. A man may recover from his *fall*, but his *downfall* is commonly followed by the entire *ruin* of his concerns, and often of himself.

Ant. RISE, flourish, prosper.

fal-la-cious (*fal-lā'shus*), *adj.* deceptive.

Syn. FALLACIOUS, deceitful, fraudulent. The *fallacious* has respect to falsehood in opinion; *deceitful* to that which is externally false. Our hopes are often *fallacious;* the appearances of things are often *deceitful*. *Fallacious*, as characteristic of the mind, excludes the idea of design; *deceitful* excludes the idea of mistake; *fraudulent* is a gross species of the *deceitful*.

Ant. HONEST, sound, truthful.

fal-la-cy (*fal'ā-si*), *n.* [*pl.* fallacies (*-siz*)], a deceptive or false appearance; mistake.

fall-en (*fawl'n*), *p. adj.* sunk to a lower state or condition.

fal-li-ble (*fal'i-bl*), *adj.* liable to be deceived.

fall-ing (*fawl'ing*), *p. adj.* moving or hanging downward: *n.* the act or process of falling.

fal-low (*fal'ō*), *adj.* plowed but not sown for the season.

false (*fawls*), *adj.* untrue; dishonest; disloyal; perfidious. [ABSURD.]

false-hood (*'hood*), *n.* an untruth; lie. [FICTION.]

fal-set-to (*fawl-set'ō*), *n.* an artificial tone higher in key than the natural compass of the voice.

fal-si-fy (*'si-fī*), *v. t.* [*p. t.* and *p. p.* falsified, *p. pr.* falsifying], to make, or prove to be, false.

fal-si-ty (*'si-ti*), *n.* [*pl.* falsities (*-tiz*)], the quality of being false.

Fal-staf-fi-an (*fawl'staf-i-an*), *adj.* resembling Falstaff; convivial.

fal-ter (*'ĕr*), *v. t.* to utter in a weak, trembling manner (with *out*). [FAINT, HESITATE.]

fame (*fām*), *n.* public report.

Syn. FAME, report, reputation, renown. *Fame* may be applied to any object, good, bad, or indifferent; a *report* serves to communicate information of events; *reputation* is applied only to real eminence in some department; *renown* is employed only for extraordinary men and brilliant exploits. [See *character*.]

famed (*fāmd*), *adj.* renowned; celebrated.

fa-mil-iar (*fa-mil'y ĕr*), *adj.* well acquainted, or intimate, with; domestic; affable; easy; unconstrained; unceremonious. [CONVERSANT.]

fa-mil-iar-i-ty (*yar'i-ti*), *n.* [*pl.* familiarities (*-tiz*)], intimacy; ease of conversation; freedom from ceremony or conventionality. [ACQUAINTANCE.]

fam-i-ly (*fam'i-li*), *n.* [*pl.* families (*-liz*)], a household; a group of animals larger than a genus, but less than an order.

fam-ine (*fam'in*), *n.* extreme dearth; great scarcity.

fam-ish (*'ish*), *v. t.* and *v. i.* to starve.

fa-mous (*fā'mus*), *adj.* renowned.

Syn. FAMOUS, celebrated, renowned, illustrious. *Famous* signifies literally having *fame* or the cause of *fame;* it is applicable to that which causes a noise or sensation; *celebrated* signifies literally kept in the memory by a celebration or memorial; *renowned* signifies literally possessed of a name; *illustrious* signifies literally what has or gives a luster.

Ant. OBSCURE, unknown.

fan (*fan*), *v. t.* [*p. t.* and *p. p.* fanned, *p. pr.* fanning], to cool with a fan; agitate (the air), as with a fan: *n.* an object with a broad surface used to agitate the air; a fanatic (said of a baseball enthusiast).

fa-nat-ic (*fa-nat'ik*), *n.* one who is intemperately zealous, or wildly extravagant: *adj.* characterized by fanaticism.

fa-nat-i-cism (*i'sizm*), *n.* extravagant or frenzied zeal.

fan-cied (*fan'sid*), *adj.* imaginary.

fan-ci-ful (*'si-fool*), *adj.* influenced by the fancy.

Syn. FANCIFUL, fantastic, whimsical, capricious. *Fanciful* is said of that which is irregular in the taste or judgment; *fantastical* is said of that which violates all propriety, as well as regularity; the former may consist of a simple deviation from rule; the latter is something extravagant; *whimsical* is a species of the *fanciful* in regard to one's likes or dislikes; *capricious* respects errors of temper.

fan-cy (*'si*), *v. t.* [*p. t.* and *p. p.* fancied, *p. pr.* fancying], to imagine; be pleased with: *v. i.* to imagine: *n.* creative imagination.

Syn. FANCY, imagination. The *fancy* only employs itself about things without regarding their nature; but the *imagination* aims at tracing a resemblance, and getting a true copy. The *fancy* consequently forms combinations, either real or unreal, as chance may direct; but the *imagination* is more seldom led astray. The *fancy* is busy in dreams, or when the mind is disordered; but the *imagination* acts when the intellectual powers are in full play. [See *conceit*.]

Ant. RATIOCINATION.

fan-dan-go (*-dang'gō*), *n.* a lively Spanish dance.

fane (*fān*), *n.* a temple.

fan-fare (*fan'fār*), *n.* a flourish of trumpets.

fang (*fang*), *n.* the poison tooth of a serpent; a tusk.

Fanny. A female name corrupted from *Frances*.

fan-tail (*fan'tāl*), *n.* a variety of pigeon.

fan-tan (*'tan*), *n.* a Chinese gambling game.

fan-ta-si-a (*fan-tä'zi-ä*, It. *fän-tä'zē-ä*), *n.* a musical composition not restricted by usual laws.

fan-tas-tic (*fan-tas'tik*), *adj.* odd; whimsical; grotesque. [FANCIFUL.]

far (*fär*), *adj.* remote; distant; extending widely or at length. [DISTANT.]

far-ad (*far'ad*), *n.* a unit of electric capacity.

farce (*färs*), *n.* a short comedy in which qualities are exaggerated.

far-ci-cal (*fär'si-kal*), *adj.* of the nature of a farce.

fare (*fär*), *v. i.* to be in any state; live: *n.* the sum paid for a journey by rail, etc.

fare-well (*fär'wel*), *interj.* may you fare well or prosper; good-by.

Syn. FAREWELL, adieu, good-by, leave-taking, parting salutation, valedictory. *Good-by* is the homely and hearty, *farewell* the formal, English word at parting. *Adieu*, from the French, is still more ceremonious than *farewell*. A *valedictory* is a public farewell to a company or assembly.

far-fetched (*fär'fecht*), *adj.* unnatural; forced.

fa-ri-na (*fa-rī'* or *fa-rē'nä*), *n.* meal or flour.

far-i-na-ceous (*far-i-nā'shus*), *adj.* consisting of farina.

farm (*färm*), *n.* a portion of land with the buildings, etc., appurtenant to it: *v. t.* to cultivate (land).

farm-er (*'ĕr*), *n.* one who cultivates a farm; an agriculturist.

farm-ing (*'ing*), *adj.* pertaining to, or engaged in, agriculture.

Farnese (*fär-nēz'*, Italian *fär-nā'zā*) **palace.** A celebrated palace of the Farnese in Rome, founded in the first part of the reign of Leo X.

fa-ro (*fā'rō* or *fā'rō*), *n.* a game of chance, played with cards.

far-ri-er (*far'i-ĕr*), *n.* one who shoes horses.

far-ther (*fär'thĕr*), *adj.* [*comp.* of far], more distant or remote; additional.

far-thing (*'thing*), *n.* one-fourth of an English penny.

fas-ci-nate (*fas'i-nāt*), *v. t.* to influence the mind or will of, as if by enchantment.

fas-ci-na-tion (*-nā'shun*), *n.* the act of fascinating.

fash-ion (*fash'un*), *n.* the shape or form of anything; conventional custom or usage: *v. t.* to mold, shape, or form. [CUSTOM, FORM.]

fash-ion-a-ble (*ä-bl*), *adj.* made in accordance with the fashion of the day.

fast (*fäst*), *v. i.* to abstain from food as a religious obligation.

fast (*fäst*), *adj.* quick; speedy in motion; in advance of the standard: *adv.* rapidly; firmly.

fast day (*'dā*), a day set apart for religious fasting.

fas-ten (*fäs'n*), *v. t.* to fix securely; make fast; bolt or bar.

fas-tid-i-ous (*-tid'i-us*), *adj.* squeamish.

fast-ing (*fäst'ing*), *n.* abstinence from food.

fat (*fat*), *adj.* [*comp.* fatter, *superl.* fattest], corpulent; fleshy; adipose; greasy: *n.* a solid, oily substance forming part of the tissue of animals.

fa-tal (*fā'tal*), *adj.* causing death; mortal. [DEADLY.]

fa-tal-ism (*-izm*), *n.* the doctrine that all things happen by irresistible necessity.

fa-tal-is-tic (*-is'tik*), *adj.* pertaining to fatalism.

fa-tal-i-ty (*fā-tal'i-ti*), *n.* [*pl.* fatalities (*-tiz*)], predetermined order or series of events.

fate (*fāt*), *n.* destiny; inevitable necessity; death or destruction. [DESTINY.]

fat-ed (*fāt'ed*), *p. adj.* decreed by fate; destined.

fa-ther (*fä'thĕr*), *n.* a male parent; the official title of a confessor of the Roman Catholic church.

Fa-ther, *n.* the Creator, God.

fath-om (*fath'um*), *n.* a measure of length equal to 6 feet.

fa-tigue (*fa-tēg'*), *n.* weariness; toil.

Syn. FATIGUE, weariness, lassitude. *Fatigue* is an exhaustion of the animal or mental powers; *weariness* is a wearing out the strength, or breaking the spirits; *lassitude* is a general relaxation of the animal frame. [See *faint*.]

fat-ten (*fat'n*), *v. t.* to make fat, plump, or stout.

fat-ty (*'i*), *adj.* consisting, or having the qualities, of fat.

fa-tu-i-ty (*fa-tū'i-ti*), *n.* weakness of intellect.

fat-u-ous (*fat'ū-us*), *adj.* weak in intellect; silly.

★fau-cet (*faw'set*, not *fas'et*), *n.* a short pipe with a valve, used for drawing out liquor.

fault (*fawlt*), *n.* a slight crime or offense; blemish; defect. [BLEMISH.]

fault-y (*'i*), *adj.* imperfect.

faun (*fawn*), *n.* a classic woodland deity.

fau-na (*faw'nä*), *n.* [*pl.* faunas (*'näz*), faunæ (*'nē*)], the animals characteristic of any particular region.

fa-vor (*fā'vĕr*), *n.* kindness; support; patronage; good will; facility: *v. t.* to regard with favor. [CREDIT, MERCY.]

fa-vor-a-ble (*-ä-bl*), *adj.* propitious; advantageous.

fa-vored (*'vĕrd*), *adj.* featured.

★fa-vor-ite (*fā'vĕr-it*, not *fā'vĕr-īt*), *n.* one who, or that which, is particularly esteemed.

fa-vor-it-ism (*-izm*), *n.* the disposition or tendency to favor one person or class in preference to others.

fawn (*fawn*), *n.* a young deer.

fawn-ing (*'ing*), *n.* gross, or servile, flattery.

fay (*fā*), *n.* an elf; fairy.

faze (*fāz*), *v. t.* to worry.

fe-al-ty (*fē'al-ti*), *n.* the duty of a vassal or tenant to his feudal superior.

fear (*fēr*), *n.* apprehension of evil or danger; dread: *v. i.* to be in fear; feel anxiety. [ANXIETY.]

Fear, Cape, N. C. — said to have been named *Cape of Fear*, owing to its tempestuous coast at the time Raleigh's fleet was trying to find an entrance, June 20, 1585.

fear-ful (*fēr'fool*), *adj.* affected with fear; timorous; apprehensive.

Syn. FEARFUL, dreadful, frightful, tremendous, terrible, horrible, horrid. A contest is *fearful* when the issue is important, but the event doubtful; the thought of death is *dreadfull* to one who feels himself unprepared; the

frightful is less than the *tremendous;* the *tremendous* than the *terrible;* the *terrible* than the *horrible;* shrieks may be *frightful;* thunder and lightning may be *tremendous;* the roaring of a lion is *terrible;* the actual spectacle of killing is *horrible* or *horrid.* We may speak of a *frightful, dreadful, terrible,* or *horrid* dream; or *frightful, dreadful,* or *terrible* tempest; *Dreadful, terrible,* or *horrid* consequences.

Ant. COMMONPLACE, contemptible, mean, paltry.

fear-less (*fēr'les*), *adj.* without fear. [BOLD.]

fea-si-ble (*fē'zi-bl*), *adj.* practicable.

feast (*fēst*), *n.* a sumptuous repast; a festival, especially of the church: *v. i.* to feed sumptuously.

feat (*fēt*), *n.* a notable achievement.

feath-er (*feth'ĕr*), *n.* part of the exterior covering of a bird: *v. t.* turn the blade of (an oar) horizontally when leaving the water.

feath-er weight (*wāt*), in a handicap, the least weight that can be put on a racehorse.

feath-er-y (*-i*), *adj.* covered with, or resembling, feathers.

fea-ture (*fē'tūr*), *n.* the cast of the face.

fea-tured (*'tūrd*), *adj.* having a particular cast of face.

fe-brile (*fē'bril* or *fēb'ril*), *adj.* pertaining to, or accompanied by, fever.

February (*feb'roo-ā-ri*). From the Latin word, *februa,* "to purify," because the purification of women took place in this month.

fec-u-lent (*fek-ū'lent*), *adj.* containing dregs.

★**fec-und** (*fek'und,* not *fē'kund*), *adj.* fruitful; prolific.

fec-un-date (*fek'un-dāt*), *v. t.* to make friutful or prolific.

fed-er-al (*fed'ĕr-al*), *adj.* pertaining to, constituting, or founded upon, a league or treaty.

Fed-er-al, *adj.* supporting the cause of the Union in the American Civil war (1861-65).

fed-er-al-ism (*izm*), *n.* the doctrine of federal union.

Federalist (*fed'ĕr-al-ist*), **The.** A collection of essays in favor and in explanation of the United States constitution, first issued in serial form, October, 1787, to April, 1788.

fee (*fē*), *n.* a compensation or payment for service rendered, especially professional service; land held from a superior.

fee-ble (*fē'bl*), *adj.* weak; wanting in physical strength or mental vigor. [WEAK, FAINT.]

feed, *v. t.* to give food to; nourish: *v. i.* to eat: a certain quantity of food given to animals.

feed-er (*'ĕr*), *n.* one who, or that which, feeds.

feel (*fēl*), *v. t.* to perceive by the touch; be influenced or moved by: *v. i.* to seem to the touch.

Syn. FEEL, be sensible, conscious. To *feel* is said of the whole frame, inwardly and outwardly; it is the accompaniment of existence; to be *sensible* is said only of the *senses.* It is the property of all living creatures to *feel* pleasure and pain in a greater or less degree; those creatures which have not the sense of hearing will not be *sensible* of sounds; we are *conscious* of having fallen short of our duty.

Ant. BE INSENSIBLE, unconscious.

feel-er (*'ĕr*), *n.* one who, or that which, feels.

feel-ing (*'ing*), *p. adj.* easily affected; sympathetic; *n.* susceptibility.

fee sim-ple (*fē-sim'pl*), an estate in land or tenements held by a person in his own right.

feign (*fān*), *v. t.* to pretend; invent.

Syn. FEIGN, pretend. One *feigns* in order to gain some future end; a person *feigns* sickness in order to be excused from paying a disagreeable visit; one *pretends* in order to serve a present purpose; a child *pretends* to have lost his book who wishes to excuse himself for his idleness.

Ant. BE SINCERE, unaffected.

feint (*fānt*), *n.* a pretense; mock attack.

feld-spar (*feld'spär*), *n.* a name for various crystalline minerals.

Felicia. A female name formed from *Felix.*

fe-lic-i-tate (*fē-lis'i-tāt*), *v. t.* to congratulate.

Syn. FELICITATE, congratulate. *Felicitate* signifies to make happy, and is applicable only to ourselves; *congratulate* is applicable either to ourselves or others; we *felicitate* ourselves on having escaped the danger; we *congratulate* others on their good fortune.

Ant. CONDOLE, console.

fe-lic-i-tous (*'itus*), *adj.* characterized by, or causing, happiness.

fe-lic-i-ty (*'i-ti*), *n.* [*pl.* felicities (*-tiz*)], a condition of supreme happiness.

fe-line (*fē'lin*) *adj.* pertaining to, or resembling, a cat.

Felix (*fē'liks*). A Latin name meaning "happy." Danish, *Felix;* Dutch, *Felix;* Fr., *Felix;* Ger., *Felix;* It., *Felice;* Sp., *Felix.*

fell (*fel*), *v. t.* to hew, cut, or knock, down; cause to fall: *adj.* cruel.

fel-lah (*'ä*), *n.* [*pl.* fellahs (*'äz*), fellaheen (*-hēn'*)], in Egypt and Syria, a peasant or laboring man.

fel-loe. Same as *felly.*

★**fel-low** (*fel'lō,* not *fel'lu*), *n.* a companion or associate; one of the same kind.

fel-low-ship (*-ship*), *n.* association; communion; intimacy. [ACQUAINTANCE.]

fel-ly (*'i*), *n.* [*pl.* fellies (*'iz*)], one of the curved pieces of wood which form the rim of a wheel.

fel-on (*fel'un*), *n.* one guilty of felony. [CRIMINAL.]

fe-lo-ni-ous (*fē-lō'ni-us*), *adj.* malignant.

felt (*felt*), *n.* an unwoven fabric composed of wool or wool and hair.

fe-luc-ca (*fē-luk'ä*), *n.* a small sailing vessel used in the Mediterranean.

fe-male (*fē'māl*), *n.* one of that sex which conceives and produces young: *adj.* feminine; womanly.

Syn. FEMALE, feminine, effeminate. In the *female* character we expect to find that which is *feminine.* The *female* dress, manners, and habits, have engaged the attention of all essayists, from the time of Addison to the present period. The *feminine* is natural to the *female;* the *effeminate* is unnatural to the male.

★**fem-i-nine** (*fem'i-nin,* not *fem'i-nīn*), *adj.* pertaining to, or characteristic of, women. [FEMALE.]

fem-i-nin-i-ty (*-i-nin'i-ti*), *n.* the state or quality of being feminine.

fem-o-ral (*fem'ō-ral*), *adj.* pertaining to the thigh.

fe-mur (*fē'mĕr*), *n.* the thigh bone.

fen(*fen*), *n.* low, flat marsh land, covered with sedges.

fence (*fens*), *v. i.* to practice fencing: *v. t.* to defend; inclose or surround with a fence.

fen-cing (*fen'sing*), *n.* the art of skillfully using a foil or sword.

fend (*fend*), *v. t.* to ward off.

fend-er (*'ĕr*), *n.* a cushion of rope, or piece of wood, hung over the side of a vessel to prevent injury by contact with a landing stage.

fen-nel (*fen'el*), *n.* an aromatic biennial herb of the parsley family.

Ferdinand (*fĕr'di-nand*). One authority derives this name from the North High German name *Ferdinand* or *Fert-nand,* translated, figuratively, "one quick of comprehension." Ger., *Ferdinand;* It., *Ferdinando;* Lat., *Ferdinandus;* Port., *Fernando* or *Fernao;* Sp., *Fernando.*

Fergus. An English form of *Frederick.*

fer-ment (*fĕr'ment*), *n.* a microscopic fungus which produces fermentation: *v. t.* (*fĕr-ment'*) to produce fermentation in.

fer-men-ta-tion (*-men-tā'shun*), *n.* the chemical decomposition which takes place in an organic substance exposed to the air.

fern (*fĕrn*), *n.* a flowerless plant with broad and feathery fronds or leaves.

Fernandina (*fĕr-nän-dē'nä*), **Fla.** Given by the Spaniards in honor of their king, Ferdinand.

fern-er-y (*fĕrn'ĕr-i*), *n.* [*pl.* ferneries (*-iz*)], a place where ferns are cultivated.

fe-ro-cious (*fē-rō'shus*), *adj.* savage; fierce; rapacious.

Syn. FEROCIOUS, fierce, savage. *Ferocity* marks the untamed character of a cruel disposition; *fierceness* has a greater mixture of pride and anger in it; *savageness* marks a more permanent, but not so violent a sentiment of either cruelty or anger as the two former. *Ferocity* and *fierceness* are in common applied to the brutes, to designate their natural tempers; *savage* is mostly employed to designate the natural tempers of man.

Ant. DOCILE, harmless, tame.

fe-roc-i-ty (*-ros'i-ti*), *n.* [*pl.* ferocities (*-tiz*)], savageness or cruelty of disposition.

fer-ret (*fer'et*), *n.* a domesticated variety of polecat, employed to hunt rats and rabbits from their holes.

fer-ric ac-id (*fer'ik as'id*), an acid composed of 3 atoms of oxygen and 1 of iron.

fer-ro-type (*-tip*), *n.* a photograph taken upon a sensitized iron plate.

fer-rule (*'rūl*), *n.* a metal ring placed at the end of a stick.

fer-ry (*'i*), *n.* [*pl.* ferries (*'iz*)], a passage across a river, etc.; a ferryboat.

fer-tile (*fĕr'til*), *adj.* producing abundantly; fruitful.

fer-til-i-ty (*'i-ti*), *n.* the state or quality of being fertile.

fer-til-i-za-tion (*-i-zā'shun*), *n.* the act or process of making fertile.

fer-ule (*fer'il*), *n.* a rod or flat stick used for chastisement.

fer-vent (*fĕr'vent*), *adj.* zealous; earnest. [EAGER.]

fer-vid (*'vid*), *adj.* burning; ardent; fiery.

fer-vor (*'vĕr*), *n.* intensity of feeling.

Syn. FERVOR, ardor. The affections are properly *fervent;* the passions are *ardent;* we are *fervent* in feeling, and *ardent* in acting. [See *zeal.*]

Ant. COOL, indifferent.

fes-tal (*fes'tal*), *adj.* pertaining to a feast; joyous; festive.

fes-ter (*'tĕr*), *v. t.* to cause to fester or rankle: *n.* an ulcerous sore.

fes-ti-val (*'ti-val*), *n.* a joyful celebration; an entertainment.

fes-tive (*'tiv*), *adj.* pertaining to a feast; gay.

fes-tiv-i-ty (*-tiv'i-ti*), *n.* [*pl.* festivities (*-tiz*)], social gayety at an entertainment or feast.

fes-toon (*-tōōn'*), *n.* a wreath or garland suspended at the extremities and hanging in a curve.

fetch (*fech*), *v. t.* to go after and bring; *v. i.* to move and turn; reach or get. [BRING.]

★**fête** (*fāt*), *n.* a festival or holiday.

fet-id (*fet'id,* or *fē'tid*), *adj.* giving forth an offensive smell.

fe-tish (*fē'tish,* or *fet'ish*), *n.* any object, as a stone, weapon, feather, etc., supposed by the negroes of Western Africa to be the abode of a spirit.

fet-lock (*fetlock*), *n.* a tuft of hair behind a horse's pastern joint.

fet-ter (*fet'ĕr*), *n.* a chain or shackle for the feet (usually *pl.*).

fet-tle (*fet'l*), *n.* good condition or repair; fuss.

fe-tus. Same as *fœtus.*

feud (*fūd*), *n.* an inveterate quarrel between clans or families.

Syn. FEUD, affray, animosity, bitterness, brawl, broil, contention, contest, controversy, dispute, dissension, enmity, fray, hostility, quarrel, strife. A *feud* is *enmity* between families, clans, or parties; *feud* is rarely used of nations; a *feud* is long enduring, and often hereditary. *Dissension* is used of a number of persons, of a party or other organization. *Bitterness* is in feeling only; a *quarrel* is in word or act, or both, and is commonly slight and transient; *contention* and *strife* may be in word or deed; *contest* is often used in a good sense, *contention* and *strife* very rarely so. *Affray, brawl,* and *broil,* like *quarrel,* are words of inferior dignity. [See *quarrel.*]

feu-dal (*fū'dal*), *adj.* pertaining to, or founded upon, a feud or fief.

feu-dal sys-tem (*sis'tem*), the politico-social system prevalent in Europe during the middle ages of holding lands.

fe-ver (*fē'vĕr*), *n.* a disease characterized by marked increase of heat of the skin.

fe-ver-ish (*-ish*), *adj.* affected with fever.

few (*fū*), *adj.* [*comp.* fewer, *superl.* fewest], not many.

fez (*fez*), *n.* a brimless, close fitting, felt hat, usually red, with a black tassel (worn by Turks).

★**fi-an-cé** (*fē-äN-sā'*), *n.* one who is betrothed or affianced. [Fem. *fiancée.*]

fi-as-co (*fē-äs'kō*), *n.* a complete or ludicrous failure.

fi-at (*fī'at*), *n.* peremptory order or decree.

fib (*fib*), *n.* a falsehood.

fi-ber (*fī'bĕr*), *n.* a slender thread-like substance.

★**fi-bril** (*fī'bril,* not *fib'ril*) *n.* a small fiber.

fi-brin (*fī'brin*), *n.* a white albuminoid substance which forms the clot of blood.

fi-bri-nous (*'bri-nus*), *adj.* composed of, or of the nature of, fibrin.

fi-brous (*'brus*), *adj.* composed of, or of the nature of, fibers.

fib-u-la (*fib'ū-lä*), *n.* [*pl.* fibulæ (*-lē*)], the outer and smaller of the two bones which form the lower leg.

fi-chu (*fē-shōō'*), *n.* a linen or lace three-cornered cape or collar worn, by ladies, over the shoulders.

fic-kle (*fik'kl*), *adj.* capricious; inconstant.

fic-tion (*'shun*), *n.* that which is feigned or invented; a literary production of the imagination.

Syn. FICTION. allegory, apologue, fable, falsehood, figment, invention, legend, myth, novel, romance, story. *Fiction* is now chiefly used of a prose work in narrative form in which the characters are partly or wholly imaginary; a *romance* portrays what is picturesque or striking; *novel* is a general name for any continuous fictitious narrative, especially a love story; a *fiction* is studied; a *myth* grows up without intent; a *legend* may be true, but can not be historically verified; a *myth* has been received as true at some time, but is now known to be false, a *fabrication* is designed to deceive; a *figment* is something imaginary which the one who utters it may or may not believe to be true; *apologue* is the same as *fable.*

Ant. ACTUALITY, truth, reality.

fic-ti-tious (*-tish'us*), *adj.* false; unreal.

fid (*fid*), *n.* an iron or wooden bar to support a topmast.

fid-dle (*fid'l*), *n.* a violin: *v. i.* to play the fiddle or violin.

fid-dle-fad-dle (*-fad'l*), *n.* nonsense.

fid-dler (*fid'lĕr*), *n.* a violinist.

fid-dle-stick (*fid'l-stik*), *n.* a bow for playing upon the fiddle or violin.

fid-dling (*fid'ling*), *n.* the act of playing the violin.

fi-del-i-ty (*fi-del'i-ti*), *n.* [*pl.* fidelities (*-tiz*)], integrity; faithful adherence to obligation. [FAITH.]

fidg-et (*fij'et*), *n.* one who is fidgety; nervous.

fi-du-cial (*fi-dū'shal*), *adj.* of the nature of a trust.

fi-du-ci-a-ry (*'shi-ā-ri*), *n.* [*pl.* fiduciaries (*-riz*)], a trustee: *adj.* pertaining to, or of the nature of, a trust.

fie (*fi*), *interj.* for shame!

fief (*fēf*), *n.* a fee or feud.

field (*fēld*), *n.* a piece of land inclosed for tillage or pasture; a wide expanse; in heraldry, the surface of the shield.

field ar-til-ler-y (*är-til'ĕr-i*), artillery so mounted as to be readily handled in active service.

field book (*book*), a surveyor's notebook.

field day (*dā*), a day devoted to outdoor scientific research.

field glass (*glās*), a small portable telescope.

field mar-shal (*mär'shal*), the highest rank in the armies of European countries.

field of-fi-cer (*of'i-sĕr*), a major, lieutenant-colonel, or colonel.

field sports (*spōrtz*), outdoor diversions.

fiend (*fēnd*), *n.* an infernal being; demon.

fiend-ish (*'ish*), *adj.* like a fiend.

fierce (*fērs*), *adj.* savage; violent; merciless. [FEROCIOUS].

fi-er-i-ness (*fī'ĕr-i-nes*), *n.* the quality of being fiery; heat of temper.

fi-er-y (*fī'ĕr-i*), *adj.* [*comp.* fierier, *superl.* fieriest], pertaining to, or consisting of, fire. [HOT.]

Fiesole (*fē-es'ō-lē*). An old Etruscan city in the province of Florence, Italy, four miles northeast of Florence; the ancient *Fæsulæ.* It was the headquarters of Catiline in 63-62 B. C.

fife (*fif*), *n.* a shrill-toned musical instrument of the flute class.
fif-teen (*fif'tēn*), *adj.* consisting of 5 and 10; a cardinal numeral: *n.* the number made up of 5 and 10.
fifth (*fifth*), *adj.* next in order after 4th: *n.* one of 5 equal parts
Fifth avenue. The principal residence street of New York, extending from Washington square to Harlem river, a distance of about six and one-half miles.
fif-ti-eth (*fif'ti-eth*), *adj.* next in order after 49th: *n.* one of 50 equal parts.
fif-ty (*'ti*), *adj.* consisting of five times 10.
fig (*fig*), *n.* the pear-shaped fruit of the fig tree.
fight (*fīt*), *v. i.* [*p. t.* and *p. p.* fought, *p. pr.* fighting], contend in battle; make war: *n.* a combat; contest.
fight-ing (*'ing*), *adj.* pertaining to conflict: *n.* a combat.
fig-ment (*fig'ment*), *n.* an invention. [FICTION.]
fig-ur-a-tive (*'ūr-ā-tiv*), *adj.* representing by figure; metaphorical.
★**fig-ure** (*'ūr*), *n.* the outline or shape of a person or object; appearance; pattern; a space bounded on all sides by lines or planes: *v. i.* to be conspicuous; cipher.
fig-ured (*'ūrd*), *adj.* covered or adorned with figures; symbolized.
fig-ure-head (*'ūr-hed*), *n.* a carved representation placed at the prow of a ship.
fig-ur-ing (*fig'ūr-ing*), *n.* computation.
fil-a-ment (*fil'ā-ment*), *n.* a fine thread, or thread-like process or appendage.
fil-bert (*fil'bĕrt*), *n.* the edible nut of the cultivated hazel.
filch (*filch*), *v. t.* to pilfer; rob.
file (*fīl*), *n.* a wire, etc., on which papers are strung; a tool of hard steel with small grooves on the surface; *v. i.* to march in a file or line.
fil-i-al (*fil'i-al*), *adj.* pertaining to, or befitting, a son or daughter.
fil-i-bus-ter (*-i-bus'tĕr*), *n.* a freebooter; a lawless military adventurer: *v. i.* to act as a filibuster.
fil-i-gree (*'i-grē*), *adj.* made of, or relating to, work in filigree: *n.* ornamental work, resembling lace.
fil-i-greed (*'i-grēd*), *adj.* ornamented with filigree.
fil-ing (*fīl'ing*), *n.* the act of using a file.
Fil-i-pi-no (*fil-i-pē'nō*), *n.* a native of the Philippine islands.
fill (*fil*), *v. t.* to make full; satisfy; crowd: *v. i.* to become full or replete.
fill-er (*'er*), *n.* one who, or that which, fills.
fil-let (*'et*), *n.* a narrow band worn around the forehead for securing the hair.
fill-ing (*fil'ing*), *p. adj.* serving to fill; occupying the whole space; satiating.
fil-ly (*'i*), *n.* [*pl.* fillies (*'iz*)], a young mare.
film (*film*), *n.* a thin skin or filament.
film-y (*'i*), *adj.* composed of, or resembling, films.
fil-ter (*fil'tĕr*), *n.* any material or apparatus by which water is purified; a strainer.
filth (*filth*), *n.* foul matter; dirt.
filth-y (*'i*), *adj.* [*comp.* filthier, *superl.* filthiest], foul; dirty; unclean.
fin (*fin*), *n.* one of the organs of locomotion of a fish.
fi-nal (*fī'nal*), *adj.* pertaining to the end; ultimate; finishing; decisive.
Syn. FINAL, conclusive. *Final* designates simply the circumstance of being the last; *conclusive* the mode of finishing or coming to the last; a determination is *final* which is to be succeeded by no other; a reasoning is *conclusive* that puts a stop to further question.
Ant. OPENING, beginning.
★**fi-na-le** (*fē-nā'lā*, not *fi-nal'ē*), *n.* the last passage in a musical composition.
fi-nal-i-ty (*fi-nal'i-ti*), *n.* completeness.
★**fi-nance** (*fi-nans'*, not *fī'nans*), *n.* the science of the profitable management of monetary affairs.
fi-nan-cial (*-nan'shal*), *adj.* pertaining to finance.
Syn. FINANCIAL, fiscal, monetary, pecuniary. *Monetary* relates to actual money, coin, currency; as, the *monetary* system; *pecuniary* refers to that in which money is involved, but less directly; *financial* applies especially to governmental revenues or expenditures, or to private transactions of considerable moment; we speak of a *pecuniary* reward, a *financial* enterprise; we give a needy person *pecuniary* assistance.
★**fin-an-cier** (*fin-an-sēr'*, not *fī'nan-sēr*), *n.* one who is skilled in the principles of banking.
finch (*finch*), *n.* the common name for various small birds.
find (*find*), *v. t.* [*p. t.* and *p. p.* found, *p. pr.* finding], to discover; obtain by searching; ascertain.
Syn. FIND, find out, discover, invent. The merit of *finding* or *inventing* consists in newly applying or modifying the materials, which exist separately; the merit of *discovering* consists in removing the obstacles which prevent us from knowing the real nature of the thing; imagination and industry are requisite for *finding* or *inventing;* acuteness and penetration for *discovering*. *Find* is applicable to the operative arts; *invent* to the mechanical; *discover* to the speculative.
Ant. CONCEAL, suppress, lose, overlook.
find-er (*'ĕr*), *n.* one who, or that which, finds.
find-ing (*find'ing*), *n.* discovery; the verdict of a jury, or court.
fine (*fīn*), *n.* money paid as a penalty: *v. t.* to impose a monetary penalty upon.
fine (*fīn*), *adj.* slender; thin; pure; refined; delicate.
Syn. FINE, delicate, nice. *Fine*, in the natural sense, denotes smallness in general. *Delicate* denotes a degree of *fineness* that is agreeable to the taste. Thread is said to be *fine;* silk is said to be *delicate*, when to *fineness* of texture it adds softness; *nice* is said of what is agreeable to the appetite.
Ant. BROAD, coarse, huge, repulsive.
fine-drawn (*fīn'drawn*), *adj.* spun very fine.
fi-ner-y (*fī'n ĕr-i*), *n.* [*pl.* fineries (*iz*)], personal adornment, as fine or showy clothes.
fi-nesse (*fi-nes'*), *n.* artifice or stratagem; skill: *v. i.* to use artifice or skill to accomplish some end.
fin-ger (*fing'g ĕr*), *n.* one of the four digits of the hand, as distinguished from the thumb.
fin-ger-ing (*-ing*), *n.* the act of touching with, or manipulating, the fingers; fine work executed with the fingers.
fin-i-cal (*fin'i-kal*), *adj.* fastidious; overparticular.
fin-ing (*fīn'ing*), *n.* the act or process of purifying or refining.
fi-nis (*fī'nis*), *n.* the end.
fin-ish (*fin'ish*), *v. t.* to bring to an end; complete; conclude; make perfect; polish. [COMPLETE.]
fin-ished (*'isht*), *p. adj.* complete; of superior excellence or quality. [COMPLETE.]
fi-nite (*fī'nīt*), *adj.* having limits.
Syn. FINITE, limited. *Finite* is the natural property of things; and *limited* is the artificial property; the former is opposite only to the *infinite;* but the latter, which lies within the *finite*, is opposed to the *unlimited* or the *infinite*. This world is *finite*, and space *infinite*; the power of a prince is *limited*.
Ant. BOUNDLESS, infinite, unlimited.
Finland. Properly *Fenland*, meaning "the land of marshes."
fiord (*fyōrd*), *n.* a long narrow inlet of the sea between high rocks or banks.
fir (*fĕr*), *n.* the name of various cone-bearing trees of the genus Abies, and allied genera; a fir tree.
fire (*fīr*), *n.* heat and light evolved by ignition and combustion; ardor; spirit: *v. t.* explode; excite violently; illuminate.
fire-arms (*'ārmz*), *n. pl.* rifles, cannon, etc.
fire bal-loon (*bal-lōōn*), a balloon inflated by hot air.
fire-box (*'boks*), *n.* in a locomotive engine, the receptacle for the fire.
fire-brand (*'brand*), *n.* a piece of burning wood; an incendiary.
fire-bug (*'bug*), *n.* an incendiary.
fire clay (*klā*), a kind of clay capable of resisting intense heat.
fire-cracker (*'krak-ĕr*), *n.* a small explosive firework.
fire damp (*damp*), carburetted hydrogen.
fire-dog (*'dog*), *n.* an andiron.
fire en-gine (*en-jin*), a hand or steam engine for ejecting water.
fire es-cape (*es-kāp*), a kind of ladder for rescuing persons.
fire-fly (*'flī*), *n.* a winged insect which emits light.
fire irons (*ī-urns*), the shovel, poker, and tongs.
fire-man (*'man*), *n.* [*pl.* firemen (*'men*)], one trained to extinguish fires.
fire ship (*ship*), a ship filled with combustibles, set fire to, and floated among the vessels of an enemy.
fire-side (*'sīd*), *n.* the hearth: hence, domestic life and comfort.
fire-works (*'wĕrkz*), *n. pl.* a pyrotechnic display.
fire wor-ship (*wĕr-ship*), the worship of fire as a deity.
fir-ing (*'ing*), *n.* the act of discharging firearms.
fir-kin (*fĕr'kin*), *n.* a small wooden vessel for holding butter, lard, etc.
firm (*fĕrm*), *adj.* hard; compact; solid; closely compressed; unyielding; not easily moved.
Syn. FIRM, fixed, solid, stable. *Fixed* denotes the state of being *fixed; solid*, in Latin *solidus*, comes from solum, the ground, which is the most *solid* thing existing. That is *firm* which is not easily shaken; that is *fixed* which is fastened to something else, and not easily torn; that is, *solid* which is able to bear, and does not easily give way; that is *stable* which is able to withstand resistance. [See *obstinate, hard.*]
Ant. UNCERTAIN, variable, wavering.
fir-ma-ment (*fĕr'mā-ment*), *n.* the sky.
first (*fĕrst*), *adj.* the ordinal of one; foremost in place, rank, dignity, time, excellence, etc.; earliest: *adv.* before all others in order.
first-class (*-klās*), *adj.* of the highest excellence, rank, or quality.
First day (*dā*), the name given to Sunday by the society of Friends.
first fruits (*frūts*), the first gatherings of the produce of the season.
first-hand (*-hand*), *adj.* obtained direct from the producer or grower.
first mate (*māt*), in the merchant service, the officer next in rank to the captain.
first-rate (*-rāt*), *adj.* of the highest excellence: *adv.* excellently.
firth. Same as *frith*.
fis-cal (*fis'kal*), *adj.* pertaining to the exchequer or public revenues; financial. [FINANCIAL.]
fish (*fish*), *n.* [*pl.* fish, fishes (*'ez*)], a vetebrate, cold-blooded, aquatic animal, furnished with permanent gills: *v. t.* to catch (fish).
fish-er-man (*'ĕr-man*), *n.* one whose occupation it is to catch fish.
fish-er-y (*'ĕr-i*), *n.* [*pl.* fisheries (*-iz*)], the business of catching fish.
fish-hawk (*fish'hawk*), *n.* the osprey.
fish-i-ness (*'i-nes*), *n.* the state of being fishy.
fish-ing (*'ing*), *n.* the art, sport, or business of taking fish.
fish-mon-ger (*'mung-gĕr*), *n.* one who sells fish.
fish-wife (*'wīf*), *n.* a woman who retails fish.
fish-y (*'i*), *adj.* incredible.
fis-sile (*fis'il*), *adj.* capable of being split.
fis-sion (*fish'un*), *n.* the act of cleaving or splitting up into parts.
fis-sure (*fish'ūr*), *n.* a cleft or crack; a narrow opening; furrow.
fist (*fist*), *n.* the hand when closed or clenched.
fis-tic (*fis'tik*), *adj.* pertaining to pugilism.
fis-ti-cuffs (*'ti-kufs*), *n.* a combat with the fists.
fis-tu-la (*'tū-lā*), *n.* a deep ulcer.
fit (*fit*), *v. t.* [*p. t.* and *p. p.* fitted, *p. pr.* fitting], to make fit or suitable; adapt; accommodate to anything; qualify: *adj.* [*comp.* fitter, *superl.* fittest], convenient; suitable.
Syn. FIT, apt, meet. A house is *fit* for the accommodation of the family according to the plan of the builder; the young mind is *apt* to receive either good or bad impressions; *meet* is a term of rare use, except in religion or poetry; it is *meet* to offer prayers. [See *competent, expedient.*]
Ant. UNBECOMING, unseemly, unsuitable.
fit (*fit*), *n.* a sudden attack of disease attended with convulsions.
Fitchburg. City in Worcester county, Mass., named for John Fitch, one of the committee that procured the act of incorporation.
fit-ful (*fit'fool*), *adj.* capricious; spasmodic.
fit-ting (*'ing*), *p. adj.* suitable; appropriate: *n. pl.* the necessary fixtures of a house.
Fitzedward. A baptismal name, son of Edward. Norman *fitz*, for *filius*.
Fitzwilliam Museum. A museum at Cambridge University, England, founded by Richard, seventh and last Viscount Fitzwilliam.
five (*fīv*), *adj.* a cardinal numeral: *n.* the sum of 4 and 1.
five-fold (*'fōld*), *adj.* five times as much or as great.
fix (*fiks*), *v. t.* to make fast, secure, or stable; direct steadily; adjust; predispose.
fix-a-tion (*-ā'shun*), *n.* the act of fixing; stability.
fixed (*fikst*), *p. adj.* firm; lasting; settled; permanent; stable. [FIRM, PERMANENT, OBSTINATE.]
fix-ed-ly (*fiks'ed-li*), *adv.* steadily; firmly.
fix-ing (*fiks'ing*), *n.* the act of making firm, or rendering permanent; the act of adjusting or amending.
fix-i-ty (*'i-ti*), *n.* stability; permanence.
fix-ture (*fiks'tūr*), *n.* that which is firmly fixed; an article of furniture regarded as part of a house.
fizz (*fiz*), *n.* a hissing noise: *v. i.* to make a fizzing noise.
flab-by (*flab'i*), *adj.* easily shaken or yielding to the touch; lacking muscle.
fla-bel-lum (*flā-bel'um*), *n.* [*pl.* flabella (*'ā*)], a large fan carried by the pope's attendants.
flac-cid (*flak'sid*), *adj.* flabby; weak.
flag (*flag*), *n.* a piece of cloth or bunting on which usually some device is wrought, used as a standard, ensign, signal, etc.: *v. t.* to signal with a flag: *v. i.* to droop; become feeble.
flag-el-late (*flaj'el-āt*), *v. t.* to whip.
flag-eo-let (*flaj'ō-let*), *n.* a musical instrument of the flute class.
flag-ging (*flag'ing*), *n.* pavement of flagstones.
fla-gi-tious (*flā-jish'us*), *adj.* atrocious; wicked. [HEINOUS.]
flag-on (*flag'un*), *n.* a large drinking vessel.
fla-grant (*flā'grant*), *adj.* openly wicked; heinous. [HEINOUS.]
flag-stone (*flag'stōn*), *n.* a large flat paving stone.
flail (*flāl*), *n.* a wooden instrument for threshing wheat.
flake (*flāk*), *n.* a small film of anything loosely held together, as snow: *v. t.* and *v. i.* to form into flakes.
flak-y (*'i*), *adj.* consisting of flakes or layers.
flam-beau (*'bō*), *n.* [*pl.* flambeaux (*'bōz*)], a lighted torch.
flam-boy-ant (*-boi'ant*), *adj.* denoting a florid or showy style.
flame (*flām*), *n.* fire; ardor of temper or passion: *v. t.* to heat; excite.
flam-ing (*flām'ing*), *adj.* giving forth flames; blazing.
fla-min-go (*flā-ming'gō*), *n.* a long-legged, web-footed, red-colored bird.
Flaminian (*flā-min'i-an*) **way.** One of the oldest and most famous highways of ancient Rome. It extends in a direct line from Rome to Ariminum (Rimini), and was built by the censor Caius Flaminius in 220 B. C.
flange (*flanj*), *n.* a raised or projecting rim for preventing a wheel slipping.
flank (*flangk*), *n.* the fleshy part of an animal between the ribs and hip; that part of a fortification constructed to defend another: *v. i.* to border or touch (with *on*).
flank-er (*'ĕr*), *n.* one of a body of troops thrown out to protect a line of march.
flan-nel (*flan'el*), *n.* a soft-textured cloth with a light nap.
flap (*flap*), *n.* anything broad and flexible hanging loosely; a slap: *v. t.* [*p. t.* and *p. p.* flapped], to strike with a flap.
flare (*flār*), *n.* a large, unsteady, glaring light: *v. i.* to burn with a broad, unsteady light.

flash (*flash*), *n.* a sudden, quick blaze: *adj* sham; *v. t.* gleam.
flash light (*līt*), a momentary, brilliant light for taking photographs.
flash-ing (*'ing*), *n.* a name for various operations in glass making.
flash-ing point (*point*), *n.* the temperature below the burning point at which the vapor of a volatile liquid will ignite and explode.
flash-y (*'i*), *adj.* brilliant, but empty; gaudy.
flask (*flăsk*), *n.* a small bottle.
flat (*flat*), *adj.* level; insipid; sounded below the true pitch: *n.* story or floor of a house.
flat-fish (*'fish*), *n.* any fish with a compressed body.
flat-ten (*'n*), *v. t.* to lay flat.
flat-ter (*'ĕr*), *v. t.* to gain over or please by complimentary speech: *n.* flatterer, one who flatters.
Syn. FLATTERER, sycophant, parasite. The *flatterer* is one who *flatters* by words; the *sycophant* and *parasite* are therefore always a *flatterer* and something more, for the *sycophant* adopts every mean artifice by which he can ingratiate himself, and the *parasite* submits to every degradation and servile compliance by which he can obtain his base purpose.
flat-ter-ing (*-ing*), *p. adj.* pleasing to pride or vanity.
flat-ter-y (*'ĕr-i*), *n.* [*pl.* flatteries (*-iz*)], insincere complimentary speech.
flat-u-lence (*'ū-lens*), *n.* distension of the stomach, caused by gases. [Also *flatulency.*]
flat-wise (*'wīz*), *adv.* with the flat side downward.
flaunt (*flänt* or *flawnt*), *v. i.* to make an ostentatious display.
fla-vor (*flā'vĕr*), *n.* a particular smell or taste: *v. t.* to impart a flavor to.
flaw (*flaw*), *n.* a blemish; inherent defect. [BLEMISH.]
flax (*flaks*), *n.* a plant, the fiber of which is spun into linen cloth.
flax-en (*'en*), *adj.* resembling, or made of, flax.
flax-seed (*'sēd*), *n.* linseed.
flay (*flā*), *v. t.* [*p. t.* and *p. p.* flayed, *p. pr.* flaying], to strip off, as skin.
flea (*flē*), *n.* a small blood-sucking insect of the genus Pulex.
fleck (*flek*), *n.* a streak or spot: *v. t.* variegate.
fledge (*flej*), *v. i.* to acquire the full plumage necessary for flight.
fledg-ling (*'ling*), *n.* a young bird just fledged.
flee (*flē*), *v. t.* [*p. t.* and *p. p.* fled, *p. pr.* fleeing], to run away from.
fleece (*flēs*), *n.* the whole wool shorn from a sheep at one time: *v. t.* to strip; plunder by injustice.
flee-cy (*flē'si*), *adj.* resembling a fleece; woolly.
fleet (*flēt*), *adj.* swift: *n.* a company of warships or merchant vessels.
Fleet street. A London street running from Ludgate circus to the Strand and the West End. It is named from the Fleet brook.
flesh (*flesh*), *n.* that part of an animal body underlying the skin: *adj.* resembling flesh.
flesh-ings (*'ingz*), *n. pl.* flesh-colored tights.
flesh-ly (*'li*), *adj.* pertaining to the body: *adv.* carnally.
flesh-y (*'i*), *adj.* [*comp.* fleshier, *superl.* fleshiest], plump; succulent; gross.
fleur-de-lis (*flĕr-de-lē'*), *n.* [*pl.* fleurs-de-lis], the royal bearing or emblem of France.
flex-i-ble (*fleks'i-bl*), *adj.* easily bent; yielding to persuasion.
Syn. FLEXIBLE, pliable, pliant, supple. *Flexible* is used in a natural or moral sense; *pliable* in the familiar sense only; *pliant* in the higher and moral application only; what can be bent in any degree, as a stick, is *flexible;* what can be bent as wax, or folded like cloth, is *pliable; supple,* whether in a proper or a figurative sense, is an excess of *pliability;* what can be bent backward and forward, like an osier twig, is *supple.*
Ant. RIGID, stiff, unyielding.
flex-ion (*flek'shun*), *n.* the act of bending; inflection.
flex-or (*fleks'ĕr*), *n.* a muscle that acts in bending the joints.
flex-ure (*'ūr*), *n.* the act of bending.
flick (*flik*), *n.* a light, quick stroke: *v. t.* to whip lightly.
flick-er (*'ĕr*), *v. i.* to move with an unsteady and quick motion: *n.* the golden-winged woodpecker.
fli-er (*flī'ĕr*), *n.* one who flies; that part of a machine that regulates motion.
flight (*flīt*), *n.* the act or power of flying; hasty departure; a series of steps.
flight-y (*'i*), *adj.* changeful; capricious; extravagant in fancy.
flim-sy (*flim'zi*), *adj.* unsubstantial; thin; weak.
flinch (*flinch*), *v. i.* to shrink or draw back.
fling (*fling*), *v. t.* [*p. t.* and *p. p.* flung, *p. pr.* flinging], to throw or hurl: *v. i.* to flounce: *n.* the act of throwing.
flint (*flint*), *n.* a variety of quartz.
Flint, Mich. Named from the river on which it is located, the name derived from translation of the Indian name *Pewonigo,* "river of flint."
flint-y (*'i*), *adj.* composed of, or resembling, flint.
flip (*flip*), *n.* a short quick stroke; a flick: *v. t.* to jerk with the fingers.
flip-flap (*'flap*), *n.* the noise caused by something flapping.
flip-pan-cy (*flip'an-si*), *n.* pertness.
flip-pant (*'ant*), *adj.* characterized by pertness.
flip-per (*flip'ĕr*), *n.* a broad fin, arm, or paddle used in swimming.
flirt (*flĕrt*), *v. t.* to move with a rapid action: *v. i.* to make love from mere amusement.
flir-ta-tion (*flĕr-tā'shun*), *n.* the act of flirting.
flirt-ing (*flĕrt'ing*), *n.* coquetry: *adj.* coquettish.
flit (*flit*), *v. i.* to pass lightly and swiftly along.
flitch (*flich*), *n.* the side of a hog salted and cured.
flit-ting (*flit'ing*), *n.* the act of flying.
float (*flōt*), *v. t.* to cause to rest on the surface of a liquid: *v. i.* to drift about.
float-ing (*'ing*), *p. adj.* swimming, or buoyed up, on the surface of a liquid.
floc-cu-lent (*flok'ū-lent*), *adj.* woolly.
flock (*flok*), *n.* a company or collection of sheep or bird; crowd.
floe (*flō*), *n.* a large flat mass of floating ice.
flog (*flog*), *v. t.* [*p. t.* and *p. p.* flogged, *p. pr.* flogging], to whip; chastise.
flood (*flud*), *n.* a great flow of water; high tide: *v. t.* to overflow.
flood gate (*gāt*), a gate in a water way.
flood tide (*tīd*), the rising tide.
floor (*flōr*), *n.* the part of a house, room, etc., on which one treads; any smooth or level area: *v. t.* to strike down.
floor-ing (*'ing*), *n.* materials for floors; pavement.
flop (*flop*), *v. t.* [*p. t.* and *p. p.* flopped, *p. pr.* flopping], to strike frequently: *v. i.* to plump down; fall loosely and flatly.
flo-ra (*flō'rȧ*), *n.* the wild plants of a particular region.
Flora (*flō'rȧ*). A female name derived from *Flora,* goddess of flowers and gardens, the same as the *Chloris* of the Greeks. Dutch, *Flora;* Fr., *Flore;* It., *Flora;* Lat., *Flora.*
flo-ral (*'ral*), *adj.* pertaining to flowers.
flo-re-a-ted (*'rē-ā-ted*), *adj.* ornamented with floral decorations.
Florence (*flor'ens*). A female name, said to have been Anglicized from *Finin* or *Fineen,* an Irish name used by men, meaning "flourishing." It might also mean "white," or "fair." Danish, *Florenz;* Dutch, *Florentia;* Fr., *Florence;* Ger., *Florenz;* It., *Fiorenza;* Lat., *Florentia;* Sp., *Florencia;* Sw., *Florenz.*
Florence, Italy. This is the French form adopted for the city whose Italian name, formerly *Fiorenza,* is now *Firenze.*
flo-res-cence (*flō-res'ens*), *n.* the flowering of a plant.
flo-ri-cul-ture (*'ri-kul-tūr*), *n.* the culture of flowers.
★**flor-id** (*flor'id,* not *flō'rid*), *adj.* bright in color; brilliant with decorations.
Florida. The southeasternmost state of the United States. So named by Ponce de Leon, a Spanish navigator, in honor of his discovery of the land on Easter Sunday, March 27, 1513, which is called by Spaniards *Pascua Florida,* "holy day of flowers."
flor-in (*'in*), *n.* a Dutch silver coin value, 0.402.
flo-rist (*flō'rist*), *n.* one who cultivates flowers.
floss (*flos*), *n.* floss silk.
floss silk (*silk*), an inferior, untwisted, soft silk.
floss-y (*'i*), *adj.* downy.
flo-ta-tion (*flō-tā'shun*), *n.* the act or state of floating.
flo-til-la (*-til'ȧ*), *n.* a fleet of small vessels.
flot-sam (*flot'sam*), *n.* goods lost in shipwreck, and found floating upon the sea.
flounce (*flouns*), *n.* a narrow piece of cloth sewed to the skirt of a dress or petticoat, with the lower border loose and spreading; a sudden jerk or movement of the body, indicative of impatience: *v. t.* to furnish or trim with flounces: *v. i.* to throw about the limbs and body.
floun-cing (*'sing*), *n.* material for flounces.
floun-der (*floun'dĕr*), *v. i.* to struggle, or proceed with difficulty: *n.* a flat sea fish.
flour (*flour*), *n.* the fine meal of ground wheat.
flour-ish (*flur'ish*), *v. i.* to prosper or thrive; embellish: *v. t.* to swing about or brandish; *n.* ostentatious parade.
flour-ish-ing (*-ing*), *p. adj.* prosperous; thriving.
flout (*floul*), *v. t.* to insult; treat contemptuously: *v. i.* to sneer.
flow (*flō*), *v. i.* to run or spread, as water: *v. t.* to overflow.
flow-er (*flou'ĕr*), *n.* that part of a plant which contains the reproductive organs; blossom; the best part of anything: *v. i.* to put forth flowers.
flow-er-et (*-et*), *n.* a little flower.
flow-er-ing fern (*'ĕr-ing fĕrn*), the Osmunda regalis.
flow-ing (*flō'ing*), *p. adj.* moving, or pouring forth.
fluc-tu-ate (*fluk'tū-āt*), *v. i.* to roll to and fro, as a wave; be irresolute.
Syn. FLUCTUATE, waver. To *fluctuate* conveys the idea of strong agitation; *to waver* that of constant motion backward and forward; when applied in the moral sense, to *fluctuate* designates the action of the spirits or the opinions; to *waver* is said only of the will or opinions.
Ant. ABIDE, persist, be constant.
flue (*flū*), *n.* a pipe or passage to convey away smoke, etc.
flu-en-cy (*flū'en-si*), *n.* the quality of being fluent.
flu-ent (*'ent*), *adj.* possessing readiness and ease of speech.
fluff (*fluf*), *n.* light down or fur nap.
fluff-y (*'i*), *adj.* feathery.
flu-id (*flū'id*), *adj.* liquid or gaseous: *n.* a substance the particles of which are readily separable.
flu-id-i-ty (*-id'i-ti*), *n.* the state of being fluid.
fluke (*flūk*), *n.* the broad part of an anchor; one of the two lobes of a whale's tail: *v. i.* to score by a lucky stroke.
flume (*flūm*), *n.* a channel for the conveyance of water.
flum-mer-y (*flum'ĕr-i*), *n.* a jelly made of flour; blancmange.
flunk (*flungk*), *n.* a complete failure.
flunk-y (*'i*), *n.* [*pl.* flunkies (*'iz*)], a liveried servant.
flu-o-res-cence (*flū-ō-res'ens*), *n.* the quality existing in certain bodies of giving off a color differing from their own.
flu-or-ine (*'or-in*), *n.* an elementary gaseous body.
flu-or spar (*'or spär*), a transparent or semi-transparent mineral.
flur-ry (*flur'i*), *v. t.* [*p. t.* and *p. p.* flurried, *p. pr.* flurrying], to agitate, confuse, or bewilder.
flush (*flush*), *v. t.* to cause to blush; excite; clean out with a flow of water: *adj.* level with the surface.
flush-ing (*'ing*), *n.* the act of cleaning out by a copious flow of water.
flus-ter (*flus'tĕr*), *v. t.* to confuse or agitate; hurry.
flute (*flūt*), *n.* a tubular wind instrument furnished with fingerholes and keys.
flut-ing (*flūt'ing*), *n.* a channel or groove.
flut-ist (*'ist*), *n.* a performer on the flute.
flut-ter (*flut'ĕr*), *v. i.* to move the wings rapidly; be in agitation: *v. t.* to throw into confusion.
flu-vi-al (*flū'vi-al*), *adj.* pertaining to, or caused by, rivers.
flux (*fluks*), *n.* any flow or issue of matter.
fly (*flī*), *v. i.* [*p. t.* flew, *p. p.* flown, *p. pr.* flying], to move in the air with wings: *n.* [*pl.* flies (*flīz*)], a two-winged insect of many species including the housefly.
fly-blow (*'blō*), *n.* the egg or larva of a fly.
fly-ing (*'ing*), *n.* the action of the verb *to fly.*
fly-ing but-tress (*but'tres*), an arched brace for strengthening and supporting a part of a building.
fly-ing fish (*fish*), a fish which has the power of sustaining itself in the air.
fly wheel (*flī' hwēl*), a heavy wheel in a machine which regulates its motion.
foal (*fōl*), *n.* the young of a horse.
foam (*fōm*), *n.* the white substance formed on a liquid by violent agitation or fermentation.
fob (*fob*), *n.* a small pocket.
fo-cal (*fō'kal*), *adj.* pertaining to a focus.
fo-cal dis-tance (*dis'tȧns*), the distance between the optical center of a lens and the point where the rays converge.
fo-cus (*fō'kus*), *n.* [*pl.* focuses (*-ez*), foci (*'sī*)], the point where a system of rays of light or heat meet after being reflected or refracted.
fod-der (*fod'ĕr*), *n.* food for horses, cattle or sheep.
foe (*fō*), *n.* a personal enemy.
fœ-tus (*'tus*), *n.* the young of viviparous animals in the uterus.
fog (*fŏg*), *n.* condensed watery vapor; bewilderment.
fog bank (*bangk*), a dense mass of fog at sea.
fog-gy (*'i*), *adj.* abounding in, or filled with, fog.
fo-gy (*fō'gi*), *n.* [*pl.* fogies (*'giz*)], a person of old-fashioned or eccentric habits.
foi-ble (*foi'bl*), *n.* a failing or imperfection in character.
foil (*foil*), *v. t.* to baffle or frustrate: *n.* a contrast to set something off to advantage.
foist (*foist*), *v. t.* to place wrongfully or surreptitiously.
fold (*fōld*), *v. t.* to bend one part over another: *n.* a pen for sheep.
fold-er (*'ĕr*), *n.* one who, or that which, folds.
fold-ing (*'ing*), *n.* the act or process of doubling one part over another.
fold-ing doors (*dōrz*), a pair of doors hung on opposite side-posts and meeting in the middle.
fo-li-a-ceous (*fō-li-ā'shus*), *adj.* resembling, shaped like, or having, leaves, or laminæ.
fo-li-age (*'li-āj*), *n.* leaves collectively.
fo-li-a-tion (*-ā'shun*), *n.* the act of leafing; the act or process of beating a metal into thin plates.
fo-li-o (*fō'li-ō*), *n.* a book of the largest size; a case for music, etc.
folk (*fōk*), *n.* people in general; nation or race.
folk-lore (*'lōr*), *n.* popular traditions.
folk song (*sŏng*), a popular song or ballad.
fol-low (*fol'ō*), *v. t.* to go or come after; pursue; conform to: *v. i.* to go or come after another; result.
Syn. FOLLOW, succeed, ensue, pursue. *Follow* and *succeed* are said of persons and things; *ensue* of things only; *follow* in respect of persons, denotes the going in order; *succeed* denotes the going or being in the same place immediately after another; *ensue* is used in specific cases; quarrels too often *ensue* from the conversations of violent men who differ either in religion or politics; to *pursue* with a hostile intention.
Ant. FLEE, precede, anticipate, create.
fol-low-er (*-ĕr*), *n.* one who follows another; a disciple, attendant, or dependent.
Syn. FOLLOWER, adherent, partisan. A *follower* is one who *follows* a person generally; an *adherent* is one who *adheres* to his cause; a *partisan* is the follower of a *party.* [See *accessory.*]
Ant. ADVERSARY, betrayer, renegade.
fol-low-ing (*-ing*), *adj. n.* succeeding: vocation or calling.
fol-ly (*fol'i*), *n.* [*pl.* follies (*'iz*)], want of understanding; foolishness.
Syn. FOLLY, foolery. *Folly* is the abstract of *foolish,* and characterizes the thing; *foolery* the abstract of *fool,* and characterizes the person. Young people are perpetually committing *follies* if not under proper control; fashionable people lay aside one *foolery* only to take up another.

o-ment (*fō-ment'*), *v. t.* to bathe with warm or medicated liquids. [ABET.]
fo-men-ta-tion (*-men-tā'shun*), *n.* the act of fomenting.
fond (*fond*), *adj.* affectionate; loving. INDULGENT, LOVE.]
Fond du Lac (*fon-dū-lak'*), **Wis.** A city and county. French appellation, "bottom of the lake."
fondle (*fon'dl*), *v. t.* to caress: *v. i.* to exhibit fondness.
font (*font*), *n.* a stone receptacle to hold the water used in baptizing; a complete assortment of a particular kind of type.
Fontainebleau (*fôn-tān-blō'*). Originally a hunting seat called *Fons Bleaudi*, but now a town in the department of Seine-et-Marne, France.
food (*fōōd*), *n.* nutriment; material.
fool (*fōōl*), *n.* a person devoid of reason or intelligence: *v. t.* to disappoint. [FOLLY.]
Syn. FOOL, idiot, buffoon. *Fool* is doubtless connected with our word foul; *idiot* signifies either a private person or one that is rude and unskilled in the ways of the world; *buffoon* signifies a senseless fellow. The *fool* is either naturally or artificially a fool; the *idiot* is a natural fool; whoever intentionally violates common sense is a *buffoon*. [See *folly*.]
Ant. SAGE.
fool-har-dy (*'här-di*), *adj.* foolishly bold.
Syn. FOOLHARDY, adventurous, rash. The *foolhardy* man ventures in defiance of consequences; the *adventurous* man ventures from a love of the arduous and the bold; the *rash* man ventures for want of thought.
Ant. CAUTIOUS, cowardly, timid, wary.
fool-ing (*'ing*), *n.* banter; idle interference.
fool-ish (*'ish*), *adj.* acting without reason or judgment. [IRRATIONAL, ABSURD.]
fools-cap (*fōōlz'kap*), *n.* a size of paper about 17 in. by 14 in.
foot (*foot*), *n.* [*pl.* feet (*fēt*)], the part of the leg on which an animal walks or stands; a measure equal to 12 inches; a certain number of syllables constituting part of a verse.
foot-ball (*'bawl*), *n.* a large india-rubber ball incased in leather.
foot-ing (*'ing*), *n.* ground or supporting for the feet.
foot-man (*'man*), *n.* [*pl.* footmen (*'men*)], a liveried servant who attends a carriage.
foot-pad (*'pad*), *n.* a highwayman who robs on foot.
foot-pound (*'pound*), *n.* the unit of energy, equal to work required to raise 1 lb. through a space of 1 ft.
foot-step (*'step*), *n.* the act of moving the foot; a footfall. [MARK.]
fop (*fop*), *n.* a dandy; pretentious fool.
fop-pish (*'ish*), *adj.* affected in dress and manners.
for (*fôr*), *prep.* in place of; on account of; for the sake of: *conj.* because; since.
for-age (*for'āj*), *n.* food for horses and cattle: *v. i.* to search for provisions.
for-ag-ing (*-ing*), *n.* the act of searching for forage.
★**for-ay** (*for'ā, fō-rā'*), *n.* a predatory expedition in border warfare.
for-bear (*-bār'*), *v. t.* [*p. t.* forbore, *p. p.* forborne, *p. pr.* forbearing], to abstain from: *v. i.* to restrain one's self. [MERCY.]
for-bid (*-bid'*), *v. t.* [*p. t.* forbade, *p. p.* forbidden, forbid, *p. pr.* forbidding], to prohibit.
for-bid-ding (*'ing*), *p. adj.* repellent; disagreeable.
force (*fōrs*), *n.* active power; power to persuade or convince; troops: *v. t.* to compel: *v. i.* to endeavor.
Syn. FORCE, violence. The arm of justice must exercise *force* in order to bring offenders to a proper account; one nation exercises *violence* against another in the act of carrying on war; *force* is mostly conformable to reason and equity; *violence* is always resorted to for that which is unattainable by law. [See *compel, energy*.]
for-ceps (*fôr'seps*), *n.* pincers for seizing and extracting anything.
for-ci-ble (*fôr'si-bl*), *adj.* characterized by mental or physical power. [COGENT.[
ford (*fôrd*), *n.* a shallow part of a stream.
fore, a *prefix* meaning *before*.
fore-arm (*fôr'ärm*), *n.* the arm between the wrist and elbow: *v. t.* (*fôr-ärm'*) to prepare for attack.
fore-bode (*-bōd'*), *v. i.* to presage. [AUGUR, ANXIETY.]
fore-cast (*'kast*), *n.* a foresight; prediction of the weather. [ANTICIPATE.]
fore-cas-tle (*fôr'kas-l* or *fōk'sl*), *n.* the part of a vessel forward of the foremast.
fore-close (*fôr-klōz'*), *v. t.* to cut off from the right of redemption.
fore-fa-ther (*'fä-thĕr*), *n.* a male ancestor.
Syn. FOREFATHERS, progenitors, ancestors. *Forefathers* signifies our *fathers* before us, and includes our immediate parents; *progenitors* signifies those begotten before us, exclusive of our immediate parents; *ancestors* is said of those from whom we are remotely descended.
Fore father's day (*fä-thĕrz dā*). Dec. 21, the day on which the Pilgrim Fathers landed at Plymouth, Mass.
fore-gath-er (*-gath'ĕr*), *v. i.* to assemble.
fore-go (*-gō'*), *v. t.* to renounce or refrain from. [ABANDON.]
fore-head (*for'ed*), *n.* that part of the face between the eyes and the hair.
for-eign (*for'en*), *adj.* belonging to another nation or country. [EXTRANEOUS.] [forehead.
fore-lock (*fôr'lok*), *n.* a lock of hair growing on the
fore-man (*fōr'man*), *n.* [*pl.* foremen (*'men*)], the spokesman of a jury.
fore-most (*'mōst*), *adj.* chief.
fo-ren-sic (*fō-ren'sik*), *adj.* pertaining to courts of justice or public debate.
fore-run (*-run'*), *v. t.* [*p. t.* foreran, *p. p.* forerun, *p. pr.* forerunning], to run before.
fore-run-ner (*'ĕr*), *n.* a messenger sent before; herald.
fore-sail (*'sāl*), *n.* a large square sail, the principal one on the foremast.
fore-short-en (*-shôrt'n*), *v. t.* to depict (figures as they appear to the eye when viewed obliquely) so as to convey the impression of full length.
fore-sight (*'sīt*), *n.* the act or power of foreseeing.
★**for-est** (*for'est*, not *fôr'ust*), *n.* a large extent of ground covered with trees: *v. t.* to cover with trees or forest.
fore-stall (*fōr-stawl'*), *v. t.* to be beforehand with; anticipate.
for-est-er (*for'est-ĕr*), *n.* one skilled in forestry.
for-est-ry (*'est-ri*), *n.* the art of cultivating forests or managing timber.
fore-taste (*fōr'tāst*), *n.* anticipation. [ANTICIPATE.]
fore-tell (*tel'*), *v. t.* to predict.
Syn. FORETELL, predict, prophesy, prognosticate. We may *foretell* common events, although we cannot *predict* or *prophesy* anything important; one *foretells* by a simple calculation or guess; *to predict* and *prophesy* are extraordinary gifts; to *prognosticate* is an act of the understanding; a physician *prognosticates* the crises of a disorder.
Ant. CALCULATE, demonstrate, make sure, prove.
fore-thought (*'thawt*), *n.* premeditation.
fore-top (*fôr'top*), *n.* the platform at the head of a foremast.
fore-top-mast (*-mast*), *n.* the mast immediately above the foremast.
for-feit (*fôr'fit*), *n.* a fine or penalty: *v. t.* to lose by breach of conditions.
for-fei-ture (*'fi-tūr*), *n.* the act of forfeiting.
for-fend (*-fend'*), *v. t.* to ward off.
forge (*fōrj* or *fôrj*), *v. t.* to fashion (metal) by heating and hammering; impel forward: *v. i.* to be guilty of the crime of forgery.
for-ger (*fôr'jĕr*), *n.* one who commits the crime of forgery.
for-ger-y (*-i*), *n.* the act of counterfeiting the handwriting of another.
for-get (*for-get'*), *v. t.* [*p. t.* forgot, *p. p.* forgotten, *p. pr.* forgetting], to lose the remembrance of.
for-get-a-ble (*'ä-bl*), *adj.* liable to be forgotten.
for-get-ful (*'fool*), *adj.* apt to forget; careless.
for-get-me-not (*-mē-not*), *n.* a perennial plant with small bright sky-blue flowers.
for-giv-a-ble (*-giv'ä-bl*), *adj.* that may be forgiven.
for-give (*-giv'*), *v. t.* [*p. t.* forgave, *p. p.* forgiven, *p. pr.* forgiving], to pardon; remit, as a sin.
Syn. FORGIVE, pardon, absolve, remit. Individuals *forgive* each other personal offenses; they *pardon* offenses against law and morals: *remission* is the consequence of the crime; it has more *particular* regard to the punishment; it arrests the execution of justice. *Absolution* is pronounced either by the civil judge or the ecclesiastical minister; and it reëstablishes the accused in the rights of innocence. [See *absolve, mercy*.]
Ant. ACCUSE, condemn, convict.
fork (*fôrk*), *n.* an instrument with two or more prongs, *v. t.* to raise, throw, or dig with a fork.
forked (*fôrkt*), *adj.* shaped like a fork.
for-lorn (*for-lôrn'*), *adj.* abandoned; deserted; destitute. [FORSAKEN.]
form (*fôrm*), *n.* the appearance or shape of anything; established practice: *v. t.* to give shape to; create.
Syn. FORM, fashion, mold, shape. As everything respects a *form* when it receives existence, so *to form* conveys the idea of producing. When we wish to represent a thing as *formed* in any distinct or remarkable way, we may speak of it as *fashioned*. God *formed* man out of the dust of the ground; he *fashioned* him after his own image. When we wish to represent a thing as *formed* according to a precise rule, we should say it was *molded*. When we wish to represent a thing so as to distinguish it from others, we talk of *shaping* it. [See *body, make*.]
Ant. CONTENT, meaning, soul, spirit.
form-al (*'al*), *adj.* according to form or established rules.
for-mal-de-hyde (*fôr-mal'de-hīd*), *n.* a gas obtained by the partial oxidation of methyl alcohol.
for-ma-lin (*fôr'mä-lin*), *n.* a 40 per cent solution of ormaldehyde.
for-mal-i-ty (*-mal'i-ti*), *n.* [*pl.* formalities (*-tiz*)], strict adherence to external or customary forms.
form-al-ly (*fôrm'al-li*), *adv.* in a formal manner.
for-ma-tion (*-mā'shun*), *n.* the act of forming; that which is formed.
form-a-tive (*fôrm'ä-tiv*), *adj.* giving or serving to form; plastic.
for-mer (*fôr'mĕr*), *adj.* preceding in time or place; first mentioned; formerly.
for-mer-ly (*-li*), *adv.* in time past; heretofore.
for-mic (*'mik*), *adj.* pertaining to, or produced by, ants.
for-mid-a-ble (*'mid-ä-bl*), *adj.* exciting dread; fearful.
Syn. FORMIDABLE, dreadful, terrible, shocking. The *formidable* acts neither suddenly nor violently; the *dreadful* may act violently, but not suddenly; thus the appearance of an army may be *formidable;* but that of a field of battle is *dreadful*. The *terrible* and *shocking* act both suddenly and violently; but the former acts both on the senses and the imagination, the latter on the moral feelings; thus, the glare of a tiger's eye is *terrible;* the unexpected news of a friend's death is *shocking*.
Ant. SMALL, ridiculous, puny.
Formosa (*fôr-mō'sä*). Portuguese for "beautiful." An island near China belonging to Japan.
for-mu-la (*'mū-lä*), *n.* [*pl.* formulas (*-läz*), formulæ (*-lē*)], a prescribed form, rule, or model; a prescription.
for-mu-late (*'mū-lāt*), *v. t.* to put into the form of, or reduce to, a formula.
for-myl (*'mil*), *n.* the hypothetical base of formic
for-sake (*for-sāk'*), *v. t.* [*p. t.* forsook, *p. p.* forsaken, *p. pr.* forsaking], to leave. [ABANDON.]
for-sak-en (*'n*), *p. adj.* deserted; abandoned, forlorn.
Syn. FORSAKEN, forlorn, destitute. To be *forsaken* is to be deprived of the company and assistance of those we have looked to; to be *forlorn* is to be *forsaken* in time of difficulty; to be *destitute* is to be deprived of the first necessaries of life. [See *abandoned*.]
Ant. CHERISHED, favored, protected, supported.
for-sooth (*-sōōth'*), *adv.* verily; in truth.
fort (*fôrt*), *n.* an inclosed fortified place.
forte (*fōrt*), *n.* one's special talent.
forth (*fôrth*), *adv.* onward in time, place or order.
forth-com-ing (*-kum'ing*), *adj.* ready, or about to appear.
forth-with (*-with'*), *adv.* immediately.
for-ti-eth (*fôr'ti-eth*), *adj.* next in order after 39th.
for-ti-fi-ca-tion (*-ti-fi-kā'shun*), *n.* the art or science of fortifying.
for-ti-fy (*'ti-fī*), *v. t.* [*p. t.* and *p. p.* fortified, *p. pr.* fortifying], to strengthen against attack; encourage or confirm. [STRENGTHEN.]
for-ti-tude (*'ti-tūd*), *n.* mental strength to endure suffering with courage. [COURAGE.]
fort-night (*fôrt'nit*), *n.* 14 days.
for-tress (*fôr'tres*), *n.* a large permanently fortified place.
for-tu-i-tous (*for-tū'i-tus*), *adj.* happening by chance.
for-tu-i-ty (*'i-ti*), *n.* [*pl.* fortuities (*-tiz*)], an accidental occurrence. [ACCIDENT.]
for-tu-nate (*fôr'tū-nāt*), *adj.* happening by good fortune; auspicious. [HAPPY.]
for-tune (*'tūn*), *n.* the good or ill that happens to mankind. [CHANCE.]
Fort Wayne, Ind. Named (1749) in honor of "Mad" Anthony Wayne, a Revolutionary general.
for-ty (*'ti*), *adj.* one more than 39: *n.* sum of 10 and 30.
fo-rum (*fō'rum*), *n.* [*pl.* forums (*'rumz*), fora (*'rä*)], the public place of meeting in ancient Rome.
for-ward (*fôr'wĕrd*), *adv.* onward; in advance: *adj.* prompt.
for-ward-er (*-ĕr*), *n.* one who forwards or promotes.
fos-sil (*fos'il*), *n.* any organic body which by burial in the earth's strata has become petrified.
fos-ter (*'tĕr*), *v. t.* to nourish; nurse; rear up.
Syn. FOSTER, cherish, harbor, indulge. These terms are all employed here in the moral acceptation, to express the idea of giving nourishment to an object; to *foster* in the mind is to keep with care and positive endeavors; to *cherish* in the mind is to hold dear or set a value upon; as when one *cherishes* good sentiments; to *harbor* is to allow room in the mind; as when one *harbors* resentment by permitting it to have a resting place in the heart; to *indulge* in the mind is to give the whole mind to it, to make it the chief source of pleasure. [See *cherish*.]
Ant. ABANDON, desert, afflict, chastise.
fos-ter broth-er (*bruth'ĕr*), a brother by nursing, but not by birth.
fos-ter child (*chīld*), a child nursed or reared by one who is not its parent.
foul (*foul*), *adj.* offensive; dirty; impure: *v. t.* to make foul or dirty.
fou-lard (*fōō-lärd'*), *n.* a light silk.
found, *p. t.* and *p. p.* of find.
found (*found*), *v. t.* to lay the basis of; build; fix firmly; establish.
foun-da-tion (*foun-dā'shun*), *n.* the basis or lowest part of a structure; groundwork.
Syn. FOUNDATION, ground, basis. A report is said to be without any *foundation* which has taken its rise in mere conjecture, or in some arbitrary cause independent of all fact; a man's suspicion is said to be without *ground* which is not supported by the shadow of external evidence; both *foundation* and *basis* are the lowest parts of any structure; but the former lies under ground, the latter stands above; the *foundation* supports some large and artificially erected pile; the *basis* supports a simple pillar.
foun-der (*foun'dĕr*), *n.* one who originates; builder: *v. t.* to sink by filling with water.
found-ling (*found'ling*), *n.* a child found whose parent is unknown.
foun-dry (*foun'dri*), *n.* [*pl.* foundries (*'driz*)], the place where metal casting is carried on.
fount (*fount*), *n.* a fountain or spring.
foun-tain (*foun'tin*), *n.* a natural or artificial spring of water.
Fountains abbey. A Cistercian monastery of the fourteenth century, near Ripon, England, now

the largest and most picturesque of English ecclesiastical ruins.

foun-tain head (*foun'tin hed*), the spring from which a stream flows.

foun-tain pen (*pen*), a pen having a reservoir of ink in the holder.

four (*fōr*), *adj.* consisting of 1 more than 3; a cardinal numeral.

four-fold (*fōr'fōld*), *n.* quantity four times as much.

four-in-hand (*fōr'-in-hand*), *n.* a coach drawn by four horses.

four-score (*'skōr*), *adj.* eighty.

four-teen (*'tēn*), *adj.* consisting of 4 more than 10: *n.* the sum of 4 and 10.

fourth (*fōrth*), *adj.* next in order after third.

fowl (*foul*), *n.* a gallinaceous bird, especially the domestic cock or hen.

fowl-ing (*'ing*), *n.* the act of shooting wild birds.

fowl-ing piece (*pēs*), a light gun used for ordinary sporting.

fox (*foks*), *n.* a canine mammal with a long bushy tail, belonging to the genus Vulpes.

fox brush (*brush*), the tail of a fox.

foxed (*fokst*), *p. adj.* stained, as timber, or spotted, as prints, books, etc., with a reddish discoloration.

fox-glove (*foks'gluv*), *n.* a plant of the genus Digitalis, the leaves of which are used medicinally.

fox grape (*grāp*), a variety of grape.

fox-hound (*'hound*), *n.* one of a breed of dogs used for fox-hunting.

Fox islands, Lake Michigan. So named from translation of the Indian name *Annemosine*, "place of the young fox"; *annemose*, "a young fox"; *ink*, "a place."

Fox river, Ill. English rendering of its Indian name *Meshdeke Wakpa*, "river of the foxes."

fox squir-rel (*skwĕr-el*), the North American tree squirrel.

fox-tail (*'tāl*), *n.* the name of various species of grass; the tail of a fox.

fox-y (*'i*), *adj.* pertaining to, or resembling, a fox; cunning; crafty.

foy-er (*fwä-yā'*), *n.* the lobby of a theater.

fra-cas (*frā'kas*), *n.* a noisy quarrel.

frac-tion (*frak'shun*), *n.* a part broken off; act of breaking; the state of being broken; a part of a unit, as one-fourth.

frac-tious (*'shus*), *adj.* unruly; cross. [PERVERSE.]

frac-ture (*'tūr*), *n.* a part broken; a break caused by violence; separation: *v. t.* to break or crack.

★**frag-ile** (*fraj'il*, not *fraj'īl*), *adj.* easily broken weak; delicate.

Syn. FRAGILE, frail, brittle. Man, corporeally considered, is a *fragile* creature, his frame is composed of *fragile* materials; mentally considered, he is a *frail* creature, for he is liable to every sort of *frailty*; *fragile* applies to whatever will break from the effects of time; *brittle* to that which will not bear a temporary violence.

frag-ment (*frag'ment*), *n.* a part broken off from a whole; an imperfect part.

fra-grance (*frā'grans*), *n.* the state or quality of being fragrant.

fra-grant (*'grant*), *adj.* sweet-smelling.

frail (*frāl*), *adj.* fragile; brittle; weak, physically or morally; infirm: *n.* a basket made of rushes. [FRAGILE.]

fram-a-ble (*frām'ä-bl*), *adj.* capable of being framed.

frame (*frām*), *n.* something constructed or composed of parts fitted and joined together; that on which anything is held or stretched; shape; temper; state: *v. t.* to fit (one thing) into another; shape or form; adjust or regulate; invent; adapt. [BODY.]

frame-work (*'wĕrk*), *n.* that which incloses or supports something else.

franc (*frangk*), *n.* a French coin, the unit of monetary value, equal to 19.3 cents.

France (*frans*, French *frāns*). Country of the Franks, or, as the Germans call it, Frankreich; *i. e.*, "kingdom of the Franks." All western nations were styled Franks by the Turks and Orientals, and anything brought to them from the west invariably merited a prenomen descriptive of its origin, as, for example, *frankincense*, by which was meant incense brought from the country of the Franks.

Frances. Female name formed from *Francis*, "free." Danish, *Francisca;* Dutch, *Francisca;* Fr., *Françoise;* Ger., *Francisca;* It., *Francesca;* Lat. *Francesca* or *Francisca;* Sw., *Franciska.*

fran-chise (*fran'chīz*), *n.* the constitutional right of suffrage; a particular privilege or right granted by a sovereign or by a legislative body to an individual, or to a corporation.

Francis (*fran'sis*). From the Latin *Franciscus*, which has been rendered, "one who had visited the Franks"; also, "free." Danish, *Frants*, or *Franciscus;* Dutch, *Franciscus;* Fr., *Francois;* Ger., *Franz;* It., *Francesco;* Port., *Francisco;* Sp., *Francisco;* Sw., *Frans.*

Franconia (*frang-kō'ni-ä*). German province inhabited by the Franks, so called from the *franca*, a kind of javelin which they carried.

fran-gi-bil-i-ty (*fran-ji-bil'i-ti*), *n.* the state or quality of being frangible.

fran-gi-ble (*'ji-bl*), *adj.* easily broken.

frank (*frangk*), *adj.* open or ingenuous; candid; outspoken; unreserved: *n.* a signature that exempts mail-matter from payment of postage: *v. t.* to send or have conveyed free of charge.

Syn. FRANK, candid, ingenuous, free, open, plain. The *frank* man is under no constraint; his thoughts and feelings are both set at ease, and his lips are ever ready to give utterance to the dictates of his heart; the *candid* man has nothing to conceal; he speaks nothing but the truth; the *ingenuous* man throws off all disguise; the *frank*, *free* and open men all speak without constraint; but the *frank* man is not impertinent like the *free* man, nor indiscreet like the *open* man; the *open* man says all he knows and thinks, from the inconsiderate levity of his temper; the *plain* man speaks *plainly* but truly. [See *candid.*]

Ant. ADROIT, cunning, diplomatic, sharp, shrewd, wily.

Frank. A baptismal name corrupted from *Francis.*

Frankfort, Ky. The county, Franklin, was named in honor of Benjamin Franklin, and when its capital was created, a composite word further commemorating the honor was adopted, *Frank*, diminutive of Franklin; *fort*, meaning "town"; "town of Franklin."

frank-in-cense (*frangk'in-sens*), *n.* a fragrant inflammable resin burnt as incense.

frank-ness (*'nes*), *n.* candor; openness.

fran-tic (*fran'tik*), *adj.* violently mad or distracted; outrageous; transported by passion.

frap-pé (*fra-pā'*), *adj.* chilled with ice.

Frascati (*frās-kä'tē*). A town in the province of Rome, Italy, twelve miles southeast of Rome, celebrated for its villas. There are remains of a Roman amphitheater, and of a small but very perfect Roman theater, in which much of the stage structure survives.

fra-ter-nal (*frä-tĕr'nal*), *adj.* pertaining to, becoming, or like, brothers.

fra-ter-ni-ty (*frä-tĕr'ni-ti*), *n.* [*pl.* fraternities (*-tiz*)], brotherly relationship; a body of men associated together by a common bond of interest; men of the same profession or class.

frat-ri-cide (*frat'ri-sīd*), *n.* the crime of killing a brother; one who kills a brother.

fraud (*frawd*), *n.* deceit; artifice; trick; cheat; humbug. [DECEIT.]

fraud-u-lent (*'u-lent*), *adj.* characterized by, ounded on, or obtained by, fraud. [FALLACIOUS.]

fraught (*frawt*), *adj.* laden; charged.

fray (*frā*), *n.* a riot; quarrel; a chafe or rub: *v. t.* to chafe or wear away. [FEUD.]

fray-ing (*'ing*), *n.* the act of wearing away by friction; the peeling off of the velvet of a deer's horn.

freak (*frēk*), *n.* sudden or capricious change of mind, or whim; a prank; an abnormal animal or plant: *v. t.* to variegate; spot or streak.

freck-le (*frek'l*), *n.* a brownish spot in the skin: *v. t.* to mark with freckles: *v. i.* to become freckled.

Frederick (*fred'ĕr-ik*). The same as the Old German name *Friderich*, *Fridorich*, *Fridurih.* Junius translates the two latter "rich or powerful in peace." The more probable etymology is from *frid-reich*, "powerful protector." Danish, *Frederik;* Dutch, *Frederik;* Fr., *Frederic;* Ger., *Friedrich;* It., *Frederico* or *Federigo;* Lat., *Fredericus;* Port., *Frederico;* Sp., *Federico;* Sw., *Frederick.*

Fredericksburg, Va. Name adopted 1727, in honor of Prince Frederick, father of George III.

free (*frē*), *adj.* [*comp.* freer, *superl.* freest], without restraint; at liberty; permitted; generous; open; independent; familiar; not attached or fixed; invested with the franchise, etc. (with *of*): *v. t.* to set at liberty; exempt; clear: *adv.* gratuitously.

Syn. FREE, liberal. To be *free* signifies to act or think at will; to be *liberal* is to act according to the dictates of an enlarged heart and an enlightened mind. [See *frank.*]

Ant. AVARICIOUS, close, parsimonious.

Syn. FREE, exempt. *Free* is applied to everything from which any one may wish to be disengaged; but *exempt* to those burdens which we should share with others. [See *absolve.*]

Ant. LIABLE, subject.

free-boot-er (*'bōōt-ĕr*), *n.* one who roves about for plunder or pillage; buccaneer.

freed-man (*frēd'man*), *n.* [*pl.* freedmen (*'men*)], a slave who has been legally emancipated.

free-dom (*frē'dum*), *n.* the state of being free; liberty; independence; ease in performance; particular privilege.

Syn. FREEDOM, liberty. *Freedom* is personal, and private; *liberty* is public. The *freedom* of the city is the privilege granted by the city to individuals; the *liberties* of the city are the immunities enjoyed by the city.

Ant. CAPTIVITY, bondage, oppression.

free-hold (*'hōld*), *n.* an estate or tenement held by fee simple, fee tail, or for life.

free lance (*lāns*), one of a class of mediæval soldiers who sold their services to fight; one who acts, speaks, or writes irrespective of any party.

free-man (*'man*), *n.* [*pl.* freemen (*'men*)], one in the enjoyment of liberty; one possessed of certain franchises or municipal privileges.

Free-ma-son (*'mā-sn*), *n.* a member of a secret society, consisting formerly of skilled craftsmen, now a social association professing principles of brotherly love, charity, and mutual aid.

free port (*pōrt*), a port where no duties are levied on merchandise.

Free-soil (*'soil*), *adj.* opposed to the extension of slavery: said of the party formed at Boston, United States, 1848, to restrict slavery.

free-think-er (*'thingk-ĕr*), *n.* one who forms his opinions independently of others; one who rejects revelation in religion.

free trade (*frē trād*), trade with other countries unrestricted by tariffs or customs duties.

free-will (*'wil*), *adj.* voluntary; holding the theological doctrine that man is free to exercise his will for good or evil.

freeze (*frēz*), *v. t.* [*p. t.* froze, *p. p.* frozen, *p. pr.* freezing], to congeal or harden into ice; kill by cold: *v. i.* to be congealed with cold; be at or below the temperature of 32 degrees.

freez-ing point (*ing point*), 32° above 0° in the Fahrenheit scale (0° centigrade), at which water freezes.

freight (*frāt*), *n.* cargo of a ship; goods carried by rail; the sum paid or charges for the conveyance of goods: *adj.* used for conveying goods: *v. t.* to load with goods for conveyance.

freight car (*kär*), a railway car for transporting freight.

French (*french*), *adj.* pertaining to France, its inhabitants, or language.

French Broad. River in North Carolina, so named because the country west of the Blue Ridge was held by the French, according to some authorities. Others hold that the river was named by a party of hunters for their captain, whose name was French. The latter part of the name is used descriptively.

French leave (*-lēv*), departure without ceremony or notice.

fren-zy (*fren'zi*) *n.*, [*pl.* frenzies (*'ziz*)], violent agitation; temporary madness; fury: *v. t.* [*p. t.* and *p. p.* frenzied, *p. pr.* frenzying], to throw into a frenzy; render mad. [MADNESS.]

fre-quen-cy (*frē'kwen-si*), *n.* the repeated occurrence of a thing at short intervals.

fre-quent (*'kwent*), *adj.* recurring often: *v. t.* (*frē-kwent'*), to resort to, or visit often.

Syn. FREQUENT, resort to, haunt. *Frequent* is more commonly used of an individual who goes often to a place; *resort* and *haunt* of a number of individuals; a man may *frequent* a theater, a club, or any other social meeting, innocent or otherwise; people from different quarters may *resort* to a fair, a church, or any other place where they wish to meet for a common purpose; but those who *haunt* any place go to it in privacy for some bad purpose. [See *commonly.*]

Ant. AVOID, desert, forsake.

fres-co (*fres'kō*), *n.* [*pl.* frescos, frescoes (*'kōz*)], a method of wall painting in water colors on fresh plaster: *v. t.* to decorate or paint in fresco.

fresh (*fresh*), *adj.* new; recent; unfaded; in good condition; not forgotten; strong and active; lively; pure and cool; not salt; inexperienced: *n.* a spring freshet. [NEW.]

fresh-en (*'n*), *v. t.* to make fresh; render less salt; revive; *v. i.* to become vigorous; grow fresh; lose saltness.

fresh-et (*'et*), *n.* a flood caused by melting snow or heavy rain.

fresh-man (*'man*), *n.* [*pl.* freshmen (*'men*)], a college student in his first year.

fret (*fret*), *v. t.* [*p. t.* and *p. p.* fretted, *p. pr.* fretting], to wear away by friction; corrode; vex; make rough on the surface; ornament with raised or interlaced work. [ANXIETY.]

fret-work (*'wĕrk*), *n.* carved, raised, or open ornamental work.

fri-a-bil-i-ty (*fri-ä-bil'i-ti*), *n.* the state or quality of being friable. [Also *friableness.*]

fri-a-ble (*'ä-bl*), *adj.* readily crumbled, or reduced to powder.

fri-ar (*'ĕr*), *n.* one of a mendicant order of monks in the Roman Catholic church.

★**fric-as-see** (*frik-ä-sē'*, not *frig-ä-sē'*), *n.* a dish of chicken, rabbit, or other meat cut into small pieces, stewed and fried with gravy or sauce: *v. t.* to make into, or dress like, a fricassee.

fric-tion (*'shun*), *n.* the act of rubbing; resistance to the motion of a body, caused by contact with the surface upon which it moves; irritation or disagreement.

Fri-day (*fri'dā*), *n.* the sixth day of the week: named from the Scandinavian deity Frigga, the goddess of love.

friend (*frend*), *n.* one attached to another by affection, regard, or esteem; an intimate acquaintance; an ally; a term of salutation.

Friend, *n.* a member of the society of Friends.

friend-li-ness (*'li-nes*), *n.* the state or quality of being friendly.

friend-ly (*'li*), *adj.* pertaining to a friend; having the characteristics of a friend; amicable; affable; convenient: *adv.* amicably.

Friendly islands. In the South Pacific. So named because of the friendly disposition of the natives.

friend-ship (*'ship*), *n.* intimacy; united with affection or esteem; mutual attachment; good will. [ACQUAINTANCE, LOVE.]

frieze (*frēz*), *n.* the middle part of the entablature of a column between the architrave and cornice, usually ornamented with sculpture, etc.; a coarse woolen cloth.

frig-ate (*frig'āt*), *n.* formerly a warship with an upper flush deck, carrying from 24 to 50 guns.

fright (*frīt*), *n.* a sudden and violent fear; alarm; a person whose dress or appearance is ridiculous.

fright-en (*'n*), *v. t.* to terrify.

Syn. FRIGHTEN, intimidate. The danger

that is near or before the eyes *frightens;* that which is seen at a distance *intimidates.*
Ant. EMBOLDEN, encourage.

fright-ful (*frīt'fool*), *adj.* terrible; dreadful; alarming; shocking; grotesque. [FEARFUL.]

frig-id (*frij'id*), *adj.* without warmth; wintery; cold in temperament; stiff; formal; dull.

frill (*fril*), *n.* a plaited or crimped edging to a garment; ruffle: *pl.* affectation of manner; ornamentation of dress, etc.: *v. i.* to become ruffled: *v. t.* to make into a frill.

frill-ing (*'ing*), *n.* gathered trimming or edging for garments.

fringe (*frinj*), *n.* an ornamental border of hanging cords, etc.; any border or edging resembling a fringe: *v. t.* to border with a fringe.

frip-per-y (*frip'ĕr-i*), *n.* old clothes or furniture; the place where old clothes are sold: *adj.* trumpery; contemptible.

frisk (*frisk*), *v. i.* to gambol or dance in frolic: *n.* a gambol, dance, or frolic.

frisk-i-ness (*'i-nes*), *n.* the state or quality of being frisky.

frisk-y (*'i*), *adj.* lively in action; sprightly; gay; frolicsome.

frit-ter (*frit'ĕr*), *v. t.* to waste by degrees: *n.* a small piece of meat cut for frying; a small fried cake with meat or fruit in it.

fri-vol-i-ty (*fri-vol'i-ti*), *n.* [*pl.* frivolities (*-tiz*)], levity; a trifling act, thought, or action.

friv-o-lous (*friv'ō-lus*), *adj.* trifling; trivial; petty; silly; inclined to levity.

frizz (*friz*), *v. t.* to curl or crisp; form into little hard burrs: said of the nap of cloth: *n.* that which is frizzed, as hair.

friz-zle (*friz'l*), *v. t.* to curl on hot coals; curl or frizz: *n.* a crisped lock of hair.

fro (*frō*), *adv.* away from; backward.

frock (*frok*), *n.* a loose upper garment worn by children and women and laborers; dress; a monk's habit; an undress regimental coat.

frock coat (*kōt*), a close-fitting straight-bodied coat with wide skirts.

frog (*frog*), *n.* a small tailless amphibious animal of the genus Rana; a tender horny substance growing in the middle of the sole of a horse's foot; a spindle-shaped button or toggle used for fastening cloaks, mantles, etc.; a section of a railway line where the rails diverge.

frol-ic (*frol'ik*), *n.* a scene of merry-making or gayety; wild prank: *adj.* sportive; merry or gay: *v. i.* to indulge in tricks of mirth; play wild pranks.

frol-ic-some (*-sum*), *adj.* full of frolic.

from (*from*), *prep.* out of; away since; noting source or beginning, distance, logical or physical sequences.

frond (*frond*), *n.* the union of a leaf and a branch; the leaf of a fern, palm, or seaweed.

front (*frunt*), *n.* the forehead; the forepart or foremost of anything; van; impudence or boldness: *adj.* situated at the front: *v. t.* to stand, or be situated, opposite to: *v. i.* to have the front turned in a particular direction. [area.

front-age (*'āj*), *n.* the front part of a building or its

fron-tal (*fron'tal*), *adj.* pertaining to the front or forehead: *n.* something worn on the forehead; an ecclesiastical hanging in front of an altar.

★**fron-tier** (*fron'tēr*, not *frun'tēr*), *n.* the boundary or limits of a country: *adj.* pertaining to, or situated near, the boundary of a country; contiguous.

fron-tis-piece (*fron'tis-pēs*), *n.* an illustration facing the front page of a book.

frost (*frôst*), *n.* minute frozen particles of moisture; hoarfrost; an enterprise ending in failure: *v. t.* to cover with, or as with, hoarfrost; injure by frost.

frost-ed (*'ed*), *p. adj.* covered with, resembling, or injured by, frost.

frost-ing (*'ing*), *n.* a preparation of fine sugar and white of egg for covering cakes; rough powdered glass used in decorative work.

frost-y (*'i*), *adj.* [*comp.* frostier, *superl.* frostiest], producing, or accompanied with, frost; frozen; hoary; cold or distant in manner.

froth (*frôth*), *n.* the mass of bubbles formed on the surface of a liquid by agitation, or fermentation; foam; superficial knowledge.

froth-y (*'i*), *adj.* [*comp.* frothier, *superl.* frothiest], full of, or composed of, froth; empty; frivolous; unsubstantial.

frow (*frou*), *n.* a German or Dutch woman; slattern; (*frō*), potato-flour; a tool used for cleaving shingles, staves, etc.

fro-ward (*frō'wĕrd*), *adj.* perverse; wayward. [PERVERSE.]

frown (*froun*), *n.* a contraction of the brows: *v. i.* to contract the brows; scowl; lower.

frow-zy (*frou'zi*), *adj.* musty; untidy.

fro-zen (*frō'zn*), *p. adj.* congealed; icy; wanting sympathy.

fruc-ti-fy (*fruk'ti-fī*), *v. t.* [*p. t.* and *p. p.* fructified, *p. pr.* fructifying], to make productive; fertilize: *v. i.* to bear fruit.

fru-gal (*froō'gal*), *adj.* thrifty; economical.

fru-gal-i-ty (*-gal'i-ti*), *n.* thrift; economy.

Syn. FRUGALITY, economy, miserliness, parsimoniousness, parsimony, providence, prudence, saving, scrimping, sparing, thrift. *Frugality* is a withholding of expenditure, or *sparing* of supplies or provision; *economy* is a wise and careful management of the means at one's disposal; *parsimony* is excessive *saving* for the sake of *saving; miserliness* is the denial of ordinary comforts for the sake of hoarding money; *prudence* and *providence* look far ahead, and sacrifice the present to the future; *thrift* seeks not merely to save, but to earn.

fruit (*froōt*), *n.* the product of a tree or plant; product; result or profit; offspring: *v. i.* to produce fruit.

fruit-er-er (*'ĕr-ĕr*), *n.* one who deals in fruit.

fruit-ful (*'fool*), *adj.* yielding fruit; prolific.

fru-i-tion (*froo-ish'un*), *n.* the bearing of fruit; realization.

fruit-y (*froōt'i*), *adj.* full-flavored; rich.

frus-trate (*frus'trāt*), *v. t.* to defeat; thwart; nullify: *adj.* vain; useless.

frus-tum (*'tum*), *n.* [*pl.* frusta (*'tà*)], that part of a solid next the base, as of a cone, pyramid, etc., which is left after cutting off the top.

fry (*frī*), *v. t.* [*p. t.* and *p. p.* fried, *p. pr.* frying], to cook with fat in a pan: *v. i.* to be cooked with fat in a pan; be subjected to intense heat: *n.* a dish of things fried; young fish.

fuch-si-a (*fū'shi-ā*), *n.* a garden plant with handsome pendulous elongated flowers.

fud-dle (*fud'l*), *v. t.* to stupefy with drink; intoxicate: *v. i.* to become intoxicated.

fu-el (*fū'el*), *n.* combustible material for supplying a fire; anything that serves to inflame or sustain passion or excitement.

fu-gi-tive (*fū'ji-tiv*), *adj.* unstable; fleeting; not permanent; fleeing from danger, pursuit, or duty: *n.* one who flees; a runaway.

fugue (*fūg*), *n.* a musical composition in which the parts follow each other with repetitions at certain intervals.

Fujiyama (*fōō'jē-yä'mà*). An extinct volcano and the highest mountain of Japan, situated seventy miles west-southwest of Tokio, and meaning "great mountain." There has been no eruption since 1707. It is a resort of pilgrims, and figures largely in Japanese art and legend.

ful-crum (*ful'krum*), *n.* [*pl.* fulcrums (*'krumz*), fulcra (*'krà*)], that part of a lever on which it rests.

ful-fill (*fool-fil'*), *v. t.* to complete or accomplish; execute; perform or carry out, as that which is promised, foretold, or anticipated. [EXECUTE.]

ful-fill-ment (*'ment*), *n.* accomplishment; completion; execution.

full (*fool*), *adj.* filled; having no empty space; well supplied; stored; saturated; satiated; copious; rounded out; clear; distinct; sonorous: *n.* the highest state, extent, or measure: *v. i.* and *v. t.* to pucker; gather: *v. t.* to scour and thicken: *adv.* without diminution or qualification; directly; quiet. [*Full* is used in composition to express *full extent* or *degree,* its meaning being generally self-evident, as *full-armed, full-fledged,* etc.]

full back (*bak*), in football, the player farthest from the goal of the opposing side.

full dress (*dres*), dress required for formal or ceremonial occasions.

full-er (*'ĕr*), *n.* one who fulls cloth.

ful-mi-nate (*ful'mi-nāt*), *v. t.* to cause to explode; send out or utter: *v. i.* to thunder; make a loud sudden noise; detonate: *n.* a detonating compound of fulminic acid.

ful-some (*ful'sum*), *adj.* offensive; gross.

fum-ble (*fum'bl*), *v. i.* to grope or feel about; handle or attempt something in an awkward manner: *v. t.* to manage awkwardly.

fume (*fūm*), *n.* vapor or exhalation: *v. i.* to emit smoke; to be in a passion: *v. t.* fill with gas or vapor; exhale.

fu-mi-gate (*fū'mi-gāt*), *v. t.* to smoke; perfume; disinfect by the action of smoke or vapor.

fu-mi-to-ry (*'mi-tō-ri*), *n.* a plant, the leaves of which were formerly used as a specific for skin diseases.

fun (*fun*), *n.* mirth; drollery; sport: *v. i.* [*p. t.* and *p. p.* funned, *p. pr.* funning], to indulge in fun.

func-tion (*fungk'shun*), *n.* the performance of any duty, office or business; power; the office of any organ; public or official ceremony: *v. i.* to perform a function; act.

function-a-ry (*-ā-ri*), *n.* [*pl.* functionaries (*-riz*)], one who holds an office, or discharges some trust; an official.

fund (*fund*), *n.* established stock or capital; money set apart for carrying out some object; a permanent debt upon which interest is paid; a stock in reserve: *pl.* money: *v. t.* to place in, or convert into, a fund.

fun-da-men-tal (*fun-dà-men'tal*), *adj.* pertaining to a foundation or basis; essential; primary: *n.* a principle; basis.

fund-ing (*fund'ing*), *n.* the act or process of converting money lent into a permanent fund bearing a fixed rate of interest; investment in stocks or funds.

fu-ner-al (*fū'nĕr-al*), *n.* the ceremony of burying a dead body and the procession of mourners accompanying it: *adj.* pertaining to, befitting, or used at, a funeral.

Syn. FUNERAL, obsequies. We speak of the *funeral* as the last sad office which we perform for a friend; it is accompanied by nothing but mourning and sorrow; we speak of *obsequies* as the greatest tribute of respect which can be paid to the person of one who was high in station or public esteem.

fu-ne-re-al (*-nē'rē-al*), *adj.* pertaining to, or suitable for, a funeral; mournful; sad.

★**fun-gus** (*fung'gus*), *n.* [*pl.* funguses (*-ez*), fungi (*fun'ji*)], a cryptogamous plant not containing chlorophyll, as a mushroom, toadstool, etc.; a spongy excrescence.

fu-nic-u-lus (*fū-nik'ū-lus*), *n.* [*pl.* funiculi (*-lī*)], a small cord, ligature, or fiber; a little stalk or cord-like appendage uniting a seed with the placenta.

funk (*fungk*), *n.* cowardice; ill temper [*Scotch*]; fright: *v. i.* to be in a state of cowardly fear.

fun-nel (*fun'el*), *n.* a wide-mouthed conical vessel terminating in a spout for pouring liquids; the chimney of a steamship or steam engine.

fun-ny (*'i*), *adj.* [*comp.* funnier, *superl.* funniest], comical; droll; provoking laughter; ludicrous: *n.* a long narrow clinker-built pleasure boat rowed with sculls.

fun-ny bone (*bōn*), the lower part of the elbow over which the nerve of the ulna passes.

fur (*fûr*), *n.* the soft hair of certain animals, growing thickly upon the skin: *pl.* the dressed skins of fur-bearing animals, used for apparel or ornament: *adj.* consisting, lined, or trimmed with fur: *v. t.* [*p. t.* and *p. p.* furred, *p. pr.* furring], to cover, line, or trim with fur.

fur-be-low (*'bē-lō*), *n.* an ornament of feminine attire.

fur-bish (*'bish*), *v. t.* to make bright by rubbing, polishing, or burnishing; renovate.

fu-ri-ous (*fū'ri-us*), *adj.* full of fury; frenzied; mad; tempestuous. [VIOLENT.]

furl (*fûrl*), *v. t.* to roll up and secure to something, as a sail, flag, etc.

fur-long (*fûr'lōng*), *n.* 1-8th of a mile.

fur-lough (*'lō*), *n.* leave of absence: *v. t.* to grant leave of absence to.

fur-nace (*'nās*), *n.* a chamber or apparatus for producing a violent heat.

Furness (*fûr'nes*) **abbey.** The extensive ruins of Furness abbey are among the most picturesque of English mediæval remains. A large part of the fine church survives almost complete except the vaulting, and there is a beautiful early English chapter-house. The entrance to the ivy-draped cloisters is by three superb, deeply recessed Norman arches.

fur-nish (*'nish*), *v. t.* to supply with what is requisite; fit out; equip. [PROVIDE.]

fur-ni-ture (*'ni-tūr*), *n.* the necessary equipments of a house, ship, or a trade; outfit.

fu-ro-re (*fōō-rō'rā*), *n.* a great outburst of excitement.

fur-ri-er (*fûr'i-ĕr*), *n.* one who prepares or sells furs; fur dresser.

fur-row (*fûr'ō*), *n.* a trench made in the ground by a plow; a groove: *v. t.* to plow; make grooves in.

fur-ry (*fûr'i*), *adj.* covered with, or consisting of, fur.

fur-ther (*fûr'thĕr*), *adj.* more distant; additional: *adv.* to a greater distance or degree; moreover; also: *v. t.* to promote; help forward.

fur-ther-ance (*-ans*), *n.* advancement.

fur-ther-more (*-môr*), *adv.* moreover; besides.

fur-ther-most (*-mōst*), *adj.* most remote.

fur-thest (*'thest*), *adj.* most distant in time or degree: *adv.* at or to the greatest distance.

fur-tive (*fûr'tiv*), *adj.* sly; secret; stealthy.

fu-ry (*fū'ri*), *n.* [*pl.* furies (*'riz*)], violent rage; madness. [MADNESS, ANGER.]

furze (*fûrz*), *n.* a hardy spiny shrub, belonging to the bean family.

fuse (*fūz*), *v. t.* to liquefy by heat; melt: *v. i.* to become melted by heat; blend: *n.* a small tube filled with an inflammable material, or a cord, used for exploding gunpowder, etc.

fu-see (*fū-zē'*), *n.* a kind of match, used for igniting tobacco.

fu-sel oil (*'zel oil*), an oily poisonous product produced in rectifying spirits.

fus-i-ble (*fūz'i-bl*), *adj.* capable of being fused.

fu-sil-eer (*fū-zil-ēr'*), *n.* the name of several British line regiments. [Also *fusilier.*]

fu-sil-lade (*-zil-ād'*), *n.* a simultaneous discharge of firearms.

fu-sion (*'zhun*), *n.* the act or process of melting by heat; the state of being fused; union by melting.

fuss (*fus*), *n.* unnecessary activity; disorderly confusion: *v. i.* to worry.

fuss-y (*'i*), *adj.* making a fuss.

fus-tian (*'chan*), *n.* a kind of coarse twilled cotton cloth: *adj.* made of fustian.

fus-ti-ness (*'ti-nes*), *n.* the state or quality of being fusty.

fu-tile (*fū'til*), *adj.* vain; useless.

fu-til-i-ty (*-til'i-ti*), *n.* the quality of being futile.

fu-ture (*'tūr*), *adj.* that will be hereafter: *n.* time yet to come; a tense in grammar.

fu-tu-ri-ty (*-tū'ri-ti*), *n.* [*pl.* futurities (*-tiz*)], time to come; future events.

fuzz (*fuz*), *n.* fine minute particles of down.

fuzz-y (*'i*), *adj.* covered with, or like, fuzz.

G

gab (*gab*), *n.* idle chatter: *v. i.* [*p. t.* and *p. p.* gabbed, *p. pr.* gabbing], to chatter.

gab-ble (*gab'l*), *v. t.* to utter rapidly without sense: *v. i.* to chatter: *n.* incoherent talk.

ga-ble (*gā'bl*), *n.* the triangular end of a building.

Gabriel (*gā'bri-el*). From the Hebrew, *Gabriyel,* "man of God," "strength of God," or, according to some, the "hero of God." Arabic, *Jabreel* or *Jabril;* Fr., *Gabriel;* Ger., *Gabriel;* It., *Gabriel;* Lat., *Gabriel;* Sw., *Gabriel.*

gad (*gad*), *v. i.* [*p. t.* and *p. p.* gadded, *p. pr.* gadding], to roam about: *n.* the act of roaming about without an object; an iron tool; a gadfly.

gad-fly (*gad'flī*), *n.* [*pl.* gadflies (*'flīz*)], a fly that stings cattle.

Gael-ic (*gāl'ik*), *adj.* pertaining to the Celtic inhabitants of the Scottish highlands, or to their language: *n.* the language of the Gaels. Also *Gadhelic, Galic,*

gaff (*gaf*), *n.* a large hook for landing salmon, etc.; a boom of a fore-and-aft sail: *v. t.* to seize or land with a gaff.

gag (*gag*), *n.* something placed in the mouth to hinder speech: *v. t.* [*p. t.* and *p. p.* gagged, *p. pr.* gagging], to stop the mouth with, or as with, a gag.

gage, gauge (*gāj*), *n.* a standard of measure; a measuring rod; the distance between the rails of a railway line: *v. t.* to ascertain the capacity or contents of; estimate.

gai-e-ty (*gā'ē-ti*), *n.* [*pl.* gaieties (*-tiz*)], the state or quality of being gay; pleasure.

gai-ly (*gā'li*), *adv.* merrily; finely.

gain (*gān*), *n.* advantage; profit; *v. t.* to obtain, as profit or advantage; earn; arrive at: *v. i.* to improve or make progress; increase.

gain-say (*'sā*), *v. t.* [*p. t.* and *p. p.* gainsaid, *p. pr.* gainsaying], to contradict; oppose.

gait (*gāt*), *n.* manner of walking. [CARRIAGE.]

gai-ter (*ga'tĕr*), *n.* a covering of cloth for the ankle; a shoe with a cloth top.

ga-la (*gā'lā*), *n.* a festive show; pomp.

Gal-ax-y (*gal'aks-i*), *n.* the Milky Way.

gal-ax-y, *n.* an assemblage of splendid persons or things.

gale (*gāl*), *n.* a strong wind. [BREEZE.]

ga-le-ate (*gā'lē-āt*), *adj.* wearing, covered with, or shaped like, a helmet.

ga-le-na (*gā-lē'na*), *n.* sulphide of lead.

Galena, Ill. Name derived from its mines of lead. Latin, *galena,* "lead ore."

Galilee (*gal'i-lē*). In the Roman period, the northernmost division of Palestine. It now belongs to Turkey. The name means the "circuit" or "district of the Gentiles," so called by the Hebrews because largely inhabited by Sidonians.

gal-i-pot (*'i-pot*), *n.* a white resinous juice which exudes from pine trees.

gall (*gawl*), *n.* the bile; anything very bitter; rancor; the gall bladder; gall-nut; a wound caused by friction: *v. t.* to break the skin off by friction; vex; harass: *v. i.* to fret; be vexed, etc.

gal-lant (*gal'ant*), *adj.* brave; chivalrous: *n.* a person of sprightly and gay manners; a beau. [BRAVE.]

gal-lant (*gal-ant'*), *adj.* showing courtesy to women. *n.* a man who is attentive to women (used either in a good or bad sense).

gal-lant-ry (*'ant-ri*), *n.* [*pl.* gallantries (*-riz*)], bravery; heroic courage; polite and deferential attention to women.

gal-la-tin (*'ä-tin*), *n.* coal-tar oil used for preserving timber.

gal-le-on (*'ē-on*), *n.* a large Spanish three-decked vessel.

★**gal-ler-y** (*gal'ĕr-i,* not *gal'ri*), *n.* [*pl.* galleries (*-iz*)], corridor, the upper seats of a theater, church, etc.; a building, or room, used for the exhibition of works of art, etc.

gal-ley (*'li*), *n.* [*pl.* galleys (*'liz*)], a one-decked vessel propelled by oars, and sometimes with sails, formerly rowed by slaves or convicts; the cook-house of a ship; a frame for holding composed type.

Gal-lic (*'ik*), *adj.* pertaining to ancient Gaul, or modern France.

Gal-li-can (*'i-kan*), *adj.* pertaining to Gaul, or France, or the Roman Catholic church in France.

Gal-li-cism (*'i-sizm*), *n.* a French idiom.

gall-ing (*gawl'ing*), *p. adj.* chafing; irritating.

gal-li-vant (*gal'i-vant*), *v. i.* to flirt; idle or gad about with women.

gall-nut (*gawl'nut*), *n.* a round excrescence produced on the oak by the puncturing of the leaf-buds by the gall beetle. Contains tannin, and is used in the manufacture of ink, dyeing, etc.

gal-lon (*gal'un*), *n.* a liquid measure equal to 4 quarts; a dry measure equal to 1-8th of a bushel.

gal-lop (*'up*), *n.* the rapid forward springing movement of a horse; the act of riding at a gallop: *v. i.* ride a horse at a gallop; hasten.

gal-lows (*'ōz*), *n.* a wooden structure used for hanging criminals.

gall-stone (*gawl'stōn*), *n.* a concretion formed in the gall bladder or biliary duct.

ga-lore (*gä-lōr'*), *adv.* in great plenty.

ga-losh (*gä-losh'*), *n.* an overshoe of india rubber. [Also *goloshe.*]

gal-van-ic (*gal-van'ik*), *adj.* pertaining to galvanism; voltaic; spasmodic.

gal-va-nism (*'vä-nizm*), *n.* that branch of electric science which treats of currents arising from the chemical action of certain bodies placed in contact, or of an acid on a metal.

gal-va-nize (*-nīz*), *v. t.* to affect with galvanism; to imbue with fictitious animation; to electrotype.

gal-va-nom-e-ter (*-vä-nom'ē-tĕr*), *n.* an instrument for measuring the presence, extent, and direction of an electric current.

Galveston (*gal'ves-tun*). County and city in Texas, named for Don Jose Galvez, Spanish viceroy of Texas, who, in 1779, established a colony on this island, and, in 1797, was proclaimed king by the people of Mexico.

Gamaliel (*gā-mā'li-el*). From the Hebrew, *Gamliyel,* "the gift, or benefit of God."

gam-bier (*gam'bēr*), *n.* a vegetable extract used medicinally and for tanning and dyeing.

Gambier (*gam'bēr*). Village in Knox county, Ohio, named for Lord James Gambier, a British admiral, who was a benefactor of Kenyon College, located at this place.

gam-bit (*'bit*), *n.* an opening play in chess.

gam-ble (*'bl*), *v. i.* play for money; risk money: *v. t.* to squander in gaming (with *away*).

gam-bler (*'blĕr*), *n.* one who gambles.

gam-bol (*'bol*), *n.* a dancing or skipping about for joy or sport; frolic: *v. i.* [*p. t.* and *p. p.* gamboled, *p. pr.* gamboling], to skip about sportively; frolic.

gam-brel (*'brel*), *n.* the hock of a horse.

gam-brel roof (*rōōf*), a curved roof.

game (*gām*), *n.* a sport or diversion; fun; frolic; a single match at play; any object of pursuit: *pl.* athletic contests: *adj.* pertaining to game; ready; plucky: *v. i.* to play; play for a stake or prize.

game-some (*'sum*), *adj.* sportive. [PLAYFUL.]

gam-in (*gam'in*), *n.* street child; street Arab.

gam-ing (*gām'ing*), *n.* the act of playing games for stakes; gambling.

★**gam-ut** (*gam'ut,* not *gä'mut*), *n.* entire range or extent.

gan-der (*gan'dĕr*), *n.* a male goose.

gang (*gang*), *n.* a number of persons associated together for a particular purpose; an association of political leaders. [*Colloquial.*]

gang-board (*'bōrd*), *n.* a plank with pieces of wood fastened on it for going on board a vessel.

Ganges (*gan'jēz*). The Greek transformation of the name of the great Indian river. Handed on to the Romans and then to the Portuguese, it has been generally adopted throughout Europe as the equivalent of the Indian name *Ganga,* which signifies a "stream" or "flowing water."

gan-gli-on (*gang'gli-on*), *n.* [*pl.* ganglia (*-ä*), ganglions (*-onz*)], an enlargement in the course of a nerve; an encysted tumor on a tendon.

gan-gli-on-ic (*-gli-on'ik*), *adj.* pertaining to a ganglion.

gan-grene (*'grēn*), *n.* the first state of mortification: *v. t.* to mortify: *v. i.* to become mortified.

gang-way (*gang'wā*), *n.* a narrow platform of horizontal planks used as a temporary passage-way, or to enter a ship; a passage; a passageway; the waist of a vessel; the main level in a mine.

gaol. Same as *jail.*

gap (*gap*), *n.* an opening; cleft; breach: *v. t.* to make a gap in. [BREACH.]

gape (*gāp*), *v. i.* to open the mouth wide, as from drowsiness, wonder, etc.; yawn; open as a fissure or chasm: *n.* the act of gaping; yawn.

Syn. GAPE, stare, gaze. *Gape* and *stare* are taken in a bad sense; the former indicating the astonishment of gross ignorance; the latter not only ignorance but impertinence; *gaze* is taken always in a good sense, as indicating a laudable feeling, of astonishment, pleasure, or curiosity.

★**gar-age** (*gar-äj'*), *n.* a place in which automobiles are kept.

garb (*gärb*), *n.* a dress; external form: *v. t.* to clothe.

gar-bage (*'bäj*) *n.* offal; refuse.

gar-ble (*gär'bl*), *v. t.* to cleanse by sifting; select such parts of as are wanted or may serve some particular purpose.

gar-den (*'dn*), *n.* a piece of ground set apart for the cultivation of flowers, fruit, vegetables, etc.: *v. t.* to cultivate as a garden: *v. i.* to lay out and cultivate a garden.

gar-den-ing (*'dn-ing*), *n.* horticulture.

Garden of the Gods. Locality near Pike's Peak, Colorado. Lewis N. Tappan and three others went from Denver to select a site for a town. They stood upon a rocky prominence and exclaimed, "A fit garden for the gods," hence the name.

gar-fish (*gär'fish*), *n.* a marine fish with a long body and spearlike snout.

gar-gle (*'gl*), *n.* a liquid for washing the throat and mouth: *v. i.* to wash the throat and mouth.

gar-goyle (*'goil*), *n.* in Gothic architecture, a projecting stone waterspout, often grotesquely shaped.

gar-ish (*gär'ish*), *adj.* gaudy; dazzling.

gar-land (*gär'land*), *n.* a chaplet or wreath made of flowers, etc.: *v. t.* to deck or adorn with a garland.

gar-lic (*'lik*), *n.* a bulbous rooted plant of the lily family, with a strong pungent taste and unpleasant smell.

gar-ment (*'ment*), *n.* any article of clothing: *pl.* clothing collectively.

gar-ner (*'nĕr*), *n.* a granary: *v. t.* to store for preservation in, or as in, a granary; gather up.

gar-net (*'net*), *n.* a precious stone.

gar-nish (*'nish*), *v. t.* to adorn; embellish (a dish): *n.* an ornament or decoration; something laid around a dish as an embellishment.

gar-nish-ee (*-ē'*), *n.* the person in whose hands the property of another is attached pending the satisfaction of the claims of a third party.

gar-nish-ment (*'nish-ment*), *n.* a warning or summons not to pay money, etc., to a defendant, but to appear in court.

gar-ni-ture (*'ni-tūr*), *n.* embellishment.

gar-ret (*gar'et*), *n.* the uppermost room of a house.

gar-ri-son (*'i-sn*), *n.* a body of troops stationed in a fort; a fortified place: *v. t.* to furnish with troops.

gar-rote (*-rōt'*), *n.* an instrument for strangling a criminal (used in Spain): *v. t.* to execute with a garrote or by strangling.

★**gar-ru-li-ty** (*-rōō'li-ti*), *n.* incessant and inconsequent loquacity.

gar-ru-lous (*gar'roo-lus*), *adj.* characterized by garrulity; verbose.

gar-ter (*gär'tĕr*), *n.* an elastic band, etc., by which a stocking is held up on the leg: *v. t.* to bind or fasten with a garter.

gar-ter fish (*fish*), a long thin-bodied fish.

gar-ter snake (*snāk*), an innocuous yellow striped snake, common in America.

gas (*gas*), *n.* [*pl.* gases (*'ez*)], matter in its most rarefied state: opposed to fluid, and solid; empty talk: *v. t.* [*p. t.* and *p. p.* gassed, *p. pr.* gassing], to impose upon by empty talk: *v. i.* to boast or indulge in empty talk.

gas-con-ade (*-kon-ād'*), *n.* boastful or blustering talk: *v. t.* to bluster; boast.

Gasconade (*gas-kō-nād'*) **river, Mo.** Name adopted by settlers as a memento of their Gasconade of France. The word translated means "a boaster."

gas-e-lier (*'ē-lēr*), *n.* a gas-burring chandelier.

gas-e-ous (*'ē-us*), *adj.* having the nature or form of gas.

gash (*gash*), *n.* a deep or gaping wound: *v. t.* to cut deep.

gas-i-fy (*gas'i-fī*), *v. t.* [*p. t.* and *p. p.* gasified, *p. pr.* gasifying], to convert into gas.

gas-o-gene (*'ō-jēn*), *n.* an apparatus for making aërated beverages.

gas-o-line (*'ō-lēn*), *n.* a volatile inflammable colorless product of petroleum, used for heating purposes, etc.

gas-om-e-ter (*-om'ē-tĕr*), *n.* a circular hollow reservoir for storing or measuring gases.

gasp (*gäsp*), *n.* a convulsed painful effort to catch the breath: *v. i.* to catch the breath: *v. t.* to breathe out in gasps (with *away*).

gasp-ing (*'ing*), *n.* convulsive or difficult breathing.

gas-sing (*gas'ing*), *n.* pretentious talk.

gastero, a *prefix,* meaning *the stomach*: found in various compound scientific words, as *gasteropod,* one of the gasteropoda. [Also *gastro.*]

gas-ter-op-o-da (*gas-tĕr-op'ō-dä*), *n.* *pl.* a division of univalve mollusks, including the snails. [Also *gastropoda.*]

Gaston. A name of French origin, probably from the French *gaston,* "baton."

gas-tral-gi-a (*-tral'ji-ä*), *n.* neuralgia of the stomach; stomach ache.

gas-tric (*'trik*), *adj.* pertaining to the stomach.

gas-tric juice (*jūs*), a fluid secreted in the stomach: the chief agent in digestion.

gas-tri-tis (*-trī'tis*), *n.* inflammation of the stomach.

gas-tro-nom-ic (*-trō-nom'ik*), *adj.* pertaining to gastronomy. [Also *gastronomical.*]

gas-tron-o-my (*-tron'ō-mi*), *n.* the art of good eating, or the preparation of food.

gate (*gāt*), *n.* a frame of wood, iron, etc., closing an entrance or passage, usually moving on hinges; entrance.

gath-er (*gath'ĕr*), *v. t.* to assemble; collect; pick up; pucker or plait; infer: *v. i.* to congregate; increase; ripen: *n.* a plait or pucker in cloth.

Syn. GATHER, collect. To *gather* signifies to bring things of a sort together; to *collect* annexes also the idea of binding or forming into a whole; we *gather* that which is scattered in different parts; stones are *gathered* into a heap; vessels are *collected* so as to form a fleet.

Ant. DISPERSE, scatter.

gath-er-ing (*-ing*), *n.* the act of assembling together; an assemblage; a charitable contribution.

gat-ling gun (*gat'ling gun*), a cannon with numerous small barrels, discharged in succession by turning a handle.

gaud-y (*gawd'i*), *adj.* [*comp.* gaudier, *superl.* gaudiest], showy; vulgarly gay or fine.

gau-ger (*gā'jĕr*), *n.* one who gauges; an officer of excise.

gau-ging (*'jing*), *n.* the art or science of measuring the contents of vessels of capacity.

Gaul. The name by which France was known to the Greeks. It was known to the Romans as *Gallia* because it was the territory of the Celtiæ, or Celts.

gaunt (*gänt*), *adj.* pinched and lean.

gaunt-let (*gänt'let*), *n.* a mailed glove, or one with a long wrist-extension. [Also *gantlet, gantlop.*]

gauze (*gawz*), *n.* a very thin, light, transparent fabric; light, open-work material.

gav-el (*gav'el*), *n.* a small mallet.

ga-votte (*gä-vot'*), *n.* a lively, but dignified, dance of the minuet class.

gawk (*gawk*), *n.* a simpleton; cuckoo.

gawk-y (*'i*), *adj.* awkward; ungainly: *n.* a tall, awkward, stupid person.

gay (*gā*), *adj.* lively; merry; full of spirits; cheerful; sportive.

gaze (*gāz*), *v. i.* to look fixedly: *n.* a steady look. [GAPE.]

ga-zelle (*gä-zel'*), *n.* a small antelope, with large eyes.

ga-zette (*-zet'*), *n.* English government biweekly newspaper: *v. t.* to publish in a gazette.

gaz-et-teer (*gaz-et-tēr'*), *n.* a dictionary of geographical names and places.

gear (*gēr*), *n.* apparatus; tackle; the moving parts of machinery: *v. t.* to put gear on.

gee (*jē*), *v. i.* to turn to the off side.

ge-lat-i-nate (*jē-lat'i-nāt*), *v. t.* to convert into gelatine or a jelly-like substance: *v. i.* to be converted into gelatine. [Also *gelatinize.*]

gel-a-tine (*jel'ä-tin*), *n.* a transparent nitrogenous

substance found in connective tissue; animal jelly. [Also *gelatin.*]

gel-a-tine proc-ess (*jel'a-tin pros'es*), a method of photo-engraving.

geld-ing (*geld'ing*), *n.* castration; a young horse which has been castrated.

ge-lose (*jē'lōs*), *n.* a vegetable gummy isinglass prepared from seaweed and Chinese moss.

gem (*jem*), *n.* a precious stone; any perfect or rare object; jewel.

Gem-i-ni (*'i-nī*), *n. pl.* one of the signs in the zodiac (Castor and Pollux); the Twins.

gen-darme (*zhȧN-dȧrm'*), *n.* [*pl.* gendarmes], in France and Belgium, an armed policeman. [*French.*]

gen-der (*jen'dĕr*), *n.* the grammatical distinction of sex: *v. t.* to produce.

ge-ne-a-log-ic-al (*jē-nē-* or *jen-ē-ȧ-loj'i-kal*), *adj.* pertaining to genealogy; exhibiting descent.

ge-ne-al-o-gy (*-al'ō-ji*), *n.* [*pl.* genealogies (*-jiz*)], family pedigree; lineage; the science of tracing pedigrees.

gen-er-al (*jen'ĕr-al*), *adj.* not special or particular; not restricted; usual; ordinary; common; indefinite; taken as a whole: *n.* the whole; the chief part; the commander of an army division or brigade.

Syn. GENERAL, universal. What is *general* includes the greater part or number; what is *universal* includes every individual or part.

Ant. EXCEPTIONAL, rare.

gen-er-al-ly (*-li.*), *adv.* the state of being general; opposed to specific. [COMMONLY.]

gen-er-al-i-za-tion (*-al-i-zā'shun*), *n.* the act or result of generalizing; an induction.

★**gen-er-al-ize** (*'ĕr-al-īz*), *v. t.* to reduce to, or arrange in, a genus or genera; infer inductively, as a general principle from particular instances.

gen-er-al-ship (*-ship*), *n.* the office, rank, or skill of a general or leader.

gen-er-ate (*'ĕr-āt*), *v. t.* to produce; procreate; originate.

gen-er-a-tion (*-ā'shun*), *n.* the act or process of generating; a single succession in natural descent; progeny.

gen-er-a-tor (*'ĕr-ā-tĕr*), *n.* one who, or that which, generates.

★**ge-ner-ic** (*jē-ner'ik*, not *jen'ĕr-ik*), *adj.* pertaining to a genus, kind, or class.

gen-er-os-i-ty (*jen-ĕr-os'i-ti*), *n.* [*pl.* generosities (*-tiz*)], the quality of being generous; liberality; munificence.

gen-er-ous (*'ĕr-us*), *adj.* munificent; bountiful; high-minded; honorable. [BENEFICENT.]

gen-e-sis (*'ē-sis*), *n.* the act or process of producing or originating; beginning.

gen-et (*-et'*), *n.* an animal allied to the civet, valued for its fur. [Also *genette.*]

gen-et (*'et*), *n.* a small Spanish horse. [Also *jennet.*]

ge-ni-al (*jē'ni-al*), *adj.* kindly and sympathetic; cordial; contributing to cheerfulness.

ge-ni-al-i-ty (*-al'i-ti*), *n.* the quality of being genial; cheerfulness.

gen-i-tal (*jen'i-tal*), *adj.* pertaining to generation.

gen-ius (*jēn'yus*), *n.* remarkable aptitude or natural endowment; character or essential principle; a person possessed of high mental powers (*pl.* geniuses); a good or evil spirit (*pl.* genii). [INTELLECT.]

Genoa (*jen'ō-ȧ*). The English form of the Italian *Genova*, probably from the same roots as *Geneva*, from the Celtic *genava*, "mouth" or "jaw." A seaport of Italy.

Gen-o-ese (*-ō-ēz'*), *adj.* pertaining to Genoa, or to its inhabitants. [Also *Genovese.*]

gens (*jenz*), *n.* [*pl.* gentes (*jen'tēz*)], among the ancient Romans, a clan, or subdivision of a curia.

gen-teel (*jen-tēl'*), *adj.* graceful or elegant in manners or dress; polite; well bred.

Syn. GENTEEL, polite. *Gentility* respects rank in life; *politeness*, the refinement of the mind and outward behavior. A *genteel* education is suited to the station of a gentleman; a *polite* education fits for polished society and conversation, and raises the individual among his equals.

Ant. BOORISH, ill bred.

gen-tian (*'shan*), *n.* a bitter herb with tonic roots.

Gen-tile (*'tīl*), *adj.* belonging to a non-Jewish people: *n.* one who is not a Jew.

gen-til-i-ty (*-til'i-ti*), *n.* [*pl.* gentilities (*-tiz*)], high birth; good breeding; social status.

gen-tle (*'il*), *adj.* mild and refined; kindly; moderate; docile; well born.

Syn. GENTLE, tame. Any unbroken horse may be *gentle*, but not *tame;* a horse that is broken in will be *tame*, but not always *gentle*. *Gentle* signifies literally well born, and is opposed either to the fierce or the rude; *tame* is opposed either to the wild or the spirited. [See *mercy.*]

Ant. FIERCE, rough, wild.

gen-tle-man (*-man*), *n.* [*pl.* gentlemen (*-men*)], a well-bred and honorable man.

gen-tle-wom-an (*-woom'an*), *n.* [*pl.* gentlewomen (*-wim'en*)], a woman of good birth and breeding; lady.

gen-try (*'tri*), *n.* the upper class of society.

gen-u-flec-tion (*-ū-flek'shun*), *n.* bending of the knee, especially in worship. [Also *genuflexion.*]

★**gen-u-ine** (*jen'ū-in*, not *jen'ū-īn*), *adj.* real, unadulterated; not hypocritical; open.

ge-nus (*jē'nus*), *n.* [*pl.* genera (*jen'ĕr-ȧ*)], that which has under it several species or subgenera.

ge-o-cen-tric (*jē-ō-sen'trik*), *adj.* pertaining to the center of the earth; having the earth as the center.

ge-od-e-sy (*-od'ē-si*), *n.* the science of measuring large portions of the earth's surface.

ge-o-det-ic (*jē-ō-det'ik*), *adj.* pertaining to, determined by, or carried out by, geodesy. [Also *geodetical.*]

Geoffrey (*jef'ri*) or **Geffrey.** Sometimes translated "God's peace or joyful peace." The name has been corrupted from *Galfrid* for *Walfrid;* from Old German *walt-frid*, "powerful protector." Danish, *Galfred;* Fr., *Geoffroy;* Dutch, *Godfried;* It., *Gioffreddo;* Lat., *Galfridus.*

ge-og-ra-pher (*jē-og'rȧ-fĕr*), *n.* one who is versed in, or a writer on, geography.

ge-o-graph-i-cal (*-ō-graf'i-kal*), *adj.* pertaining to geography.

ge-og-ra-phy (*og'rȧ-fi*), *n.* [*pl.* geographies (*-fiz*)], the science that describes the surface of the earth, and its divisions.

ge-o-log-ic-al (*-ō-loj'i-kal*), *adj.* pertaining to geology.

ge-ol-o-gist (*jē-ol'ō-jist*), *n.* one versed in geology.

ge-ol-o-gy (*'ō-ji*), *n.* the science that investigates the structure and physical history of the earth.

ge-o-met-ric (*jē-ō-met'rik*), *adj.* pertaining to, or done by, geometry. [Also *geometrical.*]

ge-om-e-tri-cian (*jē-om-ē-trish'an*), *n.* one who is skilled in geometry.

ge-om-e-try (*-om'e-tri*), *n.* [*pl.* geometries (*-triz*)], that branch of mathematics that treats of the measurement of lines, angles, surfaces, and solids.

George. From the Latin name, *Georgius*, "a tiller of the ground," "husbandman," "a vinedresser." Danish, *Georg;* Dutch, *Georg;* Fr., *George* or *Georges;* Ger., *Georg;* Gr., *Georgios;* It., *Giorgio;* Lat., *Georgius;* Port., *Jorge;* Sp., *Jorge;* Sw., *Georg.*

George, Lake, N. Y. So named in honor of England's king.

Georgeanna, Georgiana, Georgina. Female names derived from *George.*

Georgetown. Formerly a city, now a part of the District of Columbia, named for George Boone, an Englishman, who purchased several tracts of land in the neighborhood.

Georgia. A South Atlantic state of the Union. Named in honor of George II. of England, who here established a colony in 1732.

geor-gic (*jôr'jik*), *adj.* pertaining to husbandry or rural life: *n.* a poem on agriculture.

ge-ra-ni-um (*jē-rā'ni-um*), *n.* a plant cultivated for its handsome scarlet or white flowers.

Gerard (*jer'ȧrd*, French *zhȧ-rär'*). From the Old German name *Gerhard, Gerart;* from *gerhart*, "very strong." Sometimes corrupted to *Gar'ret* and *Ger'rit;* *i. e.*, "firm spear." Danish, *Gerhard;* Dutch, *Gerard;* Fr., *Gérard;* Ger., *Gerhard;* It., *Gerardo;* Lat., *Gerardus;* Sw., *Gerhard.*

germ (*jĕrm*), *n.* the rudimentary form of an organism; origin; first principle.

Ger-man (*jĕr'man*), *adj.* pertaining to Germany, its inhabitants, or language; of the same stock or parentage; germane.

ger-mane (*jĕr-mān'*), *adj.* related; relevant; appropriate.

Ger-man-ic (*-man'ik*), *adj.* pertaining to Germany; Teutonic.

Ger-man-ism (*-izm*), *n.* a German idiom, custom, or characteristic; love of German institutions.

Ger-man-ize (*-iz*), *v. t.* to make German, in language, customs, etc.

German Ocean. The North Sea. Name indicative of its geographical position.

Ger-man sil-ver (*sil-vĕr*), a white alloy of zinc, nickel, and copper.

Germany. A country of central Europe. Known in ancient times as *Tronges*, the country of the *Tungri*, "speakers"; but the Romans afterward gave it the name of *Germanus*, meaning "neighbors," originally bestowed by the Gauls.

ger-mi-cide (*jĕr'mi-sīd*), *n.* a substance used to destroy disease germs.

ger-mi-nal (*'mi-nal*), *adj.* pertaining to a germ or seed bud.

ger-mi-nate (*'mi-nāt*), *v. i.* to sprout or bud; begin to develop into a higher form.

ger-mi-na-tion (*-nā'shun*), *n.* the first act of growth in a seed, bud, or germ.

Gertrude (*gĕr'trūd*). From the Old German name *Gertrude;* from *gerdraut*, which translates either "very faithful," or "very dear or beloved." Another meaning is given as "true spear." Dutch, *Geertruida;* Fr., *Gertrude;* Ger., *Gertraud* or *Gertrud;* It., *Gertruda;* Lat., *Gertruda;* Sw., *Gertrud.*

★**ger-und** (*jer'und*, not *jē'rund*), *n.* a kind of verbal noun.

ges-ta-tion (*jes-tā'shun*), *n.* pregnancy.

ges-tic-u-late (*-tik'ū-lāt*), *v. i.* to make gestures or motions.

ges-ture (*'tūr*), *n.* a movement of the face, body, or limbs. [Also *gesticulation.*] [ACTION.]

get (*get*), *v. t.* [*p. t.* got, *p. p.* got, gotten, *p. pr.* getting], to obtain; procure; gain; procreate: *v. i.* to arrive at; find time, opportunity, etc.

gew-gaw (*gū'gaw*), *n.* showy trifle.

gey-ser (*gī'sĕr*), *n.* an intermittent spring from which water or mud is ejected. [Also *geysir.*]

ghast-ly (*gȧst'li*), *adj.* death-like; pale; haggard; cadaverous; horrible.

gher-kin (*gĕr'kin*), *n.* a small cucumber used for pickling.

Ghet-to (*get'ō*), *n.* [*pl.* ghettos (*'ōz*), ghetti (*'i*)], the Jews' quarter.

ghost (*gōst*), *n.* the spirit of a deceased person; apparition; remotest likelihood.

ghost-ly (*'li*), *adj.* pertaining to the soul; spiritual; supernatural.

ghoul (*gōōl*), *n.* a supposed demon who robs graves and feeds on the flesh of the dead.

gi-ant (*jī'ȧnt*), *n.* a man of extraordinary bulk or stature: *adj.* like a giant; huge.

gib-ber (*gib'ĕr*), *v. i.* to speak incoherently.

gib-ber-ish (*-ish*), *n.* rapid incoherent talk: *adj.* incoherent.

gib-bet (*jib'et*), *n.* a gallows: *v. t.* to hang on a gibbet; expose to public scorn or ridicule.

gibe (*jīb*), *n.* a scoff; taunt: *v. t.* to sneer at; taunt: *v. i.* to use gibes; cast reproaches; sneer.

gib-let (*jib'let*), *n.* one of the edible internal parts of a fowl, goose, etc.

Gibraltar (*ji-brawl'tĕr*). A fortified city and promontory on southern coast of Spain. Derived from *Gibel el Tarik*, "the mountain of Tarik." Tarik was the leader of the Saracens when they entered Spain in 711, and he first fortified the hill as a base of operations and a ready point of access from the Barbary coast.

gid-dy (*gid'i*), *adj.* [*comp.* giddier, *superl.* giddiest], having a whirling sensation in the head; frivolous; fickle.

Gideon (*gid'ē-on*). From the Hebrew *Gidhon*, which Tregelles renders "cutter down"; *i. e.*, "brave soldier." Fr., *Gedeon;* It., *Gedeone;* Lat., *Gideon.*

gift (*gift*), *n.* something given or bestowed; present.

Syn. GIFT, present, donation. The *gift* is an act of generosity or condescension; it contributes to the benefit of the receiver; the *present* is an act of kindness, courtesy or respect; it contributes to the pleasure of the receiver. The *gift* is private, and benefits the individual; the *donation* is public, and serves some general purpose; what is given to relieve the necessities of any poor person is a *gift;* what is given to support an institution is a *donation.*

gig (*gig*), *n.* a two-wheeled open chaise drawn by one horse; a long ship's boat.

gi-gan-tic (*jī-gan'tik*), *adj.* huge; colossal.

gig-gle (*gig'l*), *v. i.* to laugh in a nervous, foolish, tittering manner: *n.* a nervous, silly laugh.

Gila (*hē'lȧ*). **river, Ariz.** Name corruption of the Spanish word *Guija*, meaning "pebbly" or "pebble-stone," applied by them owing to this local characteristic in its waters.

Gilbert (*gil'bĕrt*). From the Teutonic, *Giselbert*, "bright," or "bright as gold." Danish, *Gilbert;* Dutch, *Gilbert;* Fr., *Gilbert;* Ger., *Gilbert;* Lat., *Gilbertus;* Sw., *Gilbertus.*

gild (*gild*), *v. t.* [*p. t.* and *p. p.* gilded, gilt, *p. pr.* gilding], to overlay or wash with gold: *n.* another form of guild.

gild-ing (*'ing*), *n.* the art or process of overlaying or covering with gold; gold leaf, powder, etc., applied to a surface.

Giles (*jīlz*). Probably derived from *Ægidius*, from Greek *aiqidios*, "a goatskin." Fr., *Gilles;* Ger., *Ægidius;* It., *Egidio;* Lat., *Ægidius;* Sp., *Gil.*

gill (*gil*), *n.* the respiratory organ of aquatic animals, especially fishes: *pl.* the thin spore-bearing lamellæ under a cap of certain fungi.

gill (*jil*), *n.* 1-4th of a pint.

gil-ly-flow-er (*jil'i-flou-ĕr*), *n.* one of various plants of the mustard family.

gilt (*gilt*), *adj.* covered with, or yellow like, gold: *n.* gilding.

gim-crack (*jim'krak*), *adj.* showy, but of no value; trumpery: *n.* a pretty, useless thing; toy.

gim-let (*gim'let*), *n.* a small boring tool.

gimp (*gimp*), *n.* a kind of twist or trimming interwoven with wire or cord: *v. t.* to border with gimp.

gin (*jin*), *n.* an aromatic alcoholic liquid flavored with juniper berries; a trap or snare; a machine for clearing cotton fibers from the seeds: *v. t.* [*p. t.* and *p. p.* ginned, *p. pr.* ginning], to catch in a trap; clear cotton.

gin-ger (*'jĕr*), *n.* the scraped and dried root of a pungent aromatic East and West Indian plant.

gin-ger-bread (*-bred*), *n.* a dark colored cake made of flour, ginger, molasses, sugar, etc.

gin-ger-ly (*-li*), *adv.* cautiously; daintily.

ging-ham (*ging'am*), *n.* a cotton dress cloth.

gin-seng (*jin'seng*), *n.* an herb with an aromatic root.

Giorgio. See *George.*

Giovanni. See *John.*

Gip-sy (*jip'si*), *n.* [*pl.* Gipsies (*'siz*)], one of a wandering, dark-skinned, and dark-eyed race, of Eastern, probably Hindu, origin; a person of dark complexion; a hoydenish girl. [Also *Gypsy.*]

gi-raffe (*ji-raf'*), *n.* the camelopard.

gird (*gĕrd*), *v. t.* [*p. t.* and *p. p.* girded, girt, *p. pr.* girding], to surround; bind; encircle.

gird-er (*'ĕr*), *n.* the main beam in a floor.

gir-dle (*gĕr'dl*), *n.* a belt; anything that encompasses like a girdle: *v. t.* to bind with, or as with, a girdle; inclose; to cut the bark of a tree and so kill it.

girl (*gĕrl*), *n.* a female child; young unmarried woman.

girth (*gĕrth*), *n.* the band by which the saddle is kept secured on a horse; the circumference of anything.

★**gist** (*jist*, not *gist*). *n.* the substance of a matter; main point; object.

Giulia. See *Julia.*

Giuseppe. See *Joseph.*

give (*giv*), *v. t.* [*p. t.* gave, *p. p.* given, *p. pr.* giving].

to bestow; grant; yield; deliver: *v. i.* to give gifts; yield to pressure; grow moist. [ADDICTED.]

Syn. GIVE, grant, bestow. The idea of communicating to another what is our own, or in our power, is common to these terms; this is the whole signification of *give*. To *grant* is to give at one's pleasure; to *bestow* is to give from a certain degree of necessity. We *give* money, clothes, food, or whatever is transferable; *granting* is confined to such objects as afford pleasure or convenience; *bestowing* is applied to such objects only as are necessary to supply wants, which always consist of that which is transferable.

Ant. KEEP, retain.

Syn. GIVE, present, offer, exhibit. We *give* to our domestics; we *present* to princes; we *offer* to God; we *give* to a person what we wish to be received; we *present* to a person what we think agreeable; a poem is said to *exhibit* marks of genius.

Ant. CLING TO, hold, refuse.

giz-zard (*giz'ērd*), *n.* the muscular part of the intestinal canal in certain birds.

gla-cial (*glā'shal*), *adj.* pertaining to, consisting of, or caused by, ice.

gla-cier (*glā'shēr* or *glas'i-ēr*), *n.* a vast accumulation of ice and snow found in the valleys and ravines of mountains.

glad (*glad*), *adj.* [*comp.* gladder, *superl.* gladdest], in a state of hilarity; joyous; gay; pleased; cheerful; satisfied. [JOY.]

glad-den ('*n*), *v. t.* to make glad: *v. i.* to rejoice.

glade (*glād*), *n.* an open space or passage in a wood or forest.

glad-i-a-tor (*glad'i-ā-tēr*), *n.* in ancient Rome a professional swordsman who fought in the arena.

glad-i-a-to-ri-al (*-ā-tō'ri-al*), *adj.* pertaining to gladiators or their combats.

★**gla-di-o-lus** (*glā-dī'ō-lus*), *n.* the sword lily.

Gladys. Most probably a Welsh form of *Claudia*. It is derived from the Welsh *gwlad*, which now means "of country," but formerly signified "a prince," "a sovereign," a meaning which still survives in several of its derivations.

glair (*glâr*), *n.* the white of egg, used as size or varnish; any sticky or glairy matter.

glam-our (*glam'ēr*), *n.* fascination; witchery: *v. t.* to fascinate.

glance (*glāns*), *n.* quick passing look of the eye: *v. i.* to shoot a sudden ray; view with a quick movement of the eye: *v. t.* to shoot or dart suddenly or obliquely. [GLIMPSE, LOOK.]

gland (*gland*), *n.* organ by which secretion is carried on; an acorn; a name for various mechanical contrivances.

glan-ders (*glan'dērz*), *n. pl.* a contagious disease in horses.

glare (*glâr*), *n.* a bright dazzling light, or luster; a fierce look: *v. i.* to shine with a dazzling light; look with fierce piercing eyes; be excessively gaudy: *adj.* having a smooth slippery surface, as ice.

glar-ing ('*ing*), *adj.* Staring; clear; barefaced.

Syn. GLARING, barefaced. *Glaring* designates the thing; *barefaced* characterizes the person; a *glaring* falsehood is that which strikes the observer in an instant to be falsehood; a *barefaced* lie or falsehood betrays the effrontery of him who utters it.

Ant. COVERT, imperceptible, unseen.

Glasgow (*glas'gō*). The second city in the British isles was called *Glas-gu* in 1301. Numerous etymologies have been proposed, such as *clais-dhu*, the "black ravine," *glaise-dhu*, "the black brook," or *glas-coed*, the "gray wood," but the most probable is that given by Professor Rhys, who holds that the name is from one of the Gaelic pet names of St. Kentigern, or St. Mungo, around whose cell the place grew up.

glass (*glas*), *n.* a hard, brittle, transparent substance formed of silica; an instrument or vessel made of glass; a drinking glass, or the quantity contained in it: *adj.* pertaining to, or made of, glass; vitreous; *v. t.* to mirror, or reflect in a mirror; glaze.

Glastonbury (*glas'tun-bēr-i*). A town in Somerset, England, twenty-one miles south of Bristol. Its abbey, founded in Roman times, was refounded under Ine in the eighth century. Glastonbury is associated in legend with Joseph of Arimathea, who is said to have visited it, and, in sign of possession, planted his staff, which took root and became the famous Glastonbury thorn that bursts into leaf on Christmas eve. The Isle of Avalon, where King Arthur was buried, is also here.

glau-ber's salt (*glaw'bērz sawlt*), sulphate of soda, used medicinally as a strong purgative.

glaze (*glāz*), *v. t.* to furnish with glass; overlay with a transparent substance resembling glass: *v. i.* to become glassy or glazed: *n.* the vitreous or glassy coating on potter's ware.

gla-zier (*glā'zhēr*), *n.* one whose business is to set glass in windows, etc.

glaz-ing (*glāz'ing*), *n.* a glaze; the operation of setting glass, or applying a glaze; glass.

gleam (*glēm*), *n.* a stream or shoot of light; brightness: *v. i.* to emit brightness; shoot, or dart, as rays of light.

glean (*glēn*), *v. t.* to gather; collect little by little; infer: *v. i.* to gather gleanings.

glebe (*glēb*), *n.* land belonging to a parish church, or ecclesiastical benefice.

glede (*glēd*), *n.* the kite.

glee (*glē*), *n.* gayety; mirth; exhilaration; a musical composition for voices in harmony.

glen (*glen*), *n.* a narrow valley; a secluded hollow between hills.

glib (*glib*), *adj.* voluble; flippant: *n.* the tongue; smooth talk.

glide (*glīd*), *v. i.* [*p. t.* and *p. p.* glided, *p. pr.* gliding], to flow or move along smoothly and noiselessly: *n.* the act of gliding; a gliding movement. [SLIP.]

glim (*glim*), *n.* a light or candle.

glim-mer ('*ēr*), *v. i.* to shine faintly and intermittently: *n.* a faint intermittent light; sheen.

glimpse (*glimps*), *n.* a weak, faint light; transient view; slight trace: *v. t.* to catch a glimpse of: *v. i.* to glance; appear for the moment.

Syn. GLIMPSE, glance. A *glimpse* is the action of the object appearing to the eye; a *glance* is the action of the eye seeking the object; one catches a *glimpse* of an object; one casts a *glance* at an object.

glint (*glint*), *n.* a gleam of light: *v. i.* to gleam or flash out.

glis-sade (*glis-ād'*), *n.* the act of sliding down a glacier; a glide in dancing: *v. i.* to slide.

glis-ten (*glis'n*), *v. i.* to sparkle; shine: *n.* a glitter.

glit-ter (*glit'ēr*), *v. i.* to sparkle; gleam; be showy: *n.* brilliancy; luster.

gloam (*glōm*), *v. i.* to begin to grow dark; exhibit gloom.

gloam-ing ('*ing*), *n.* twilight: *adj.* pertaining to twilight.

gloat (*glōt*), *v. i.* to stare or gaze, often with feelings of lust and cruelty.

globe (*glōb*), *n.* a spherical body; ball; the earth.

globe trot-ter (*trot-ēr*), an extensive traveler.

glob-ule (*glob'ūl*), *n.* a small spherical particle.

glob-u-lin ('*ū-lin*), *n.* an albuminous proteid substance.

glom-er-ate (*glom'ēr-āt*), *adj.* gathered into a roundish head or mass.

gloom (*glōōm*), *n.* partial darkness; melancholy; sullenness: *v. i.* to be, or become, partially dark: *v. t.* to make gloomy.

gloom-y ('*i*), *adj.* [*comp.* gloomier, *superl.* gloomiest], overspread with, or enveloped in, darkness; dismal; melancholy. [DULL.]

glo-ri-a (*glō'ri-ā*), *n.* an ascription of praise.

glo-ri-fi-ca-tion (*-ri-fi-kā'shun*) *n.* exaltation to honor; a jollification.

glo-ri-fy ('*ri-fī*), *v. t.* [*p. t.* and *p. p.* glorified, *p. pr.* glorifying], to raise in honor; magnify and honor in worship.

glo-ri-ous ('*ri-us*), *adj.* full of glory; illustrious; celebrated.

glo-ry ('*ri*), *n.* [*pl.* glories ('*riz*)], magnificence; praise ascribed in adoration; distinction: *v. i.* [*p. t.* and *p. p.* gloried, *p. pr.* glorying], to rejoice or exult (with *in*).

Syn. GLORY, honor. *Glory* is something dazzling and widely diffused; *honor* is something less splendid, but more solid; *glory* impels to extraordinary efforts and to great undertakings; *honor* induces to a discharge of one's duty.

Ant. IGNOMINY, infamy.

Syn. GLORY, boast, vaunt. *To glory* is to hold as one's *glory; to boast* is to set forth to one's advantage; *to vaunt*, is to set one's self up before others; *to glory* is more particularly the act of the mind, the indulgence of the internal sentiment; *to boast* denotes rather the expression of the sentiment; *to vaunt* is properly to proclaim praises aloud.

Ant. BE HUMBLE, meek, modest.

gloss (*glos*), *n.* luster from a polished surface; a plausible, specious representation: *v. t.* to explain by comments; palliate by plausible representation; make glossy: *v. i.* to annotate.

glos-sa-ry ('*a-ri*), *n.* [*pl.* glossaries (*-riz*)], a dictionary of obsolete, obscure, or technical words. [DICTIONARY.]

glos-sy ('*i*), *adj.* [*comp.* glossier, *superl.* glossiest], having a lustrous, smooth surface; plausible.

glot-tal (*glot'al*), *adj.* pertaining to, or produced by, the glottis.

★**glot-tis** (*glot'is*, not *glō'tis*), *n.* the small elastic oblong opening at the top of the windpipe.

glove (*gluv*), *n.* a hand covering with a separate sheath for each finger: *pl.* boxing gloves: *v. t.* to cover with, or as with, a glove.

glow (*glō*), *v. i.* to radiate heat and light; be red or flushed; be animated with passion, love, etc.: *n.* intense or shining heat; passion. [EAGER.]

glow-er (*glou'ēr*), *v. i.* to stare with a threatening countenance; frown.

glow-worm (*glō'wērm*), *n.* a beetle, the wingless female of which emits a shining green light at night.

glox-in-i-a (*gloks-in'i-ā*), *n.* a genus of tropical plants with bell-shaped flowers.

glu-cose (*glōō'kōs*), *n.* the particular form of sugar existing in many organisms.

glue (*glōō*), *n.* a tenacious viscid cement made by boiling some animal substance to a jelly: *v. t.* to unite or cement with glue.

glum (*glum*), *adj.* gloomy; moody; sullen.

glut (*glut*), *n.* a superabundance: *v. t.* [*p. t.* and *p. p.* glutted, *p. pr.* glutting], to fill to repletion; oversupply.

glu-ten (*glōō'ten*), *n.* a tough, gray, albuminous substance obtained from grain.

glu-ti-nous ('*ti-nus*), *adj.* viscid; like glue.

glut-ton (*glut'n*), *n.* one who eats to excess.

glut-ton-ous (*-us*), *adj.* pertaining to, or characterized by, gluttony.

glut-ton-y (*glut'n-i*), *n.* [*pl.* gluttonies (*-iz*)], the act or habit of eating to excess.

★**glyc-er-ine** (*glis'ēr-in* not *glis'ēr-ēn*), *n.* a sweet, colorless viscid liquid obtained from oils, fat, etc. [Also *glycerin*.]

glyp-tic (*glip'tik*), *adj.* pertaining to engraving on gems; figured: *n. pl.* the art of engraving designs on stones.

gnarl (*nārl*), *n.* a knot on a tree.

gnarled (*nārld*), *adj.* full of knots; distorted.

gnash (*nash*), *v. t.* to strike together, as the teeth: *v. i.* to grind the teeth.

gnat (*nat*), *n.* a small stinging winged insect of several species, allied to the mosquito.

gnaw (*naw*), *v. t.* to bite off, or eat away, by degrees; fret: *v. i.* to exercise the teeth in biting repeatedly.

gnome (*nōm*), *n.* a fabulous deformed, diminutive goblin, supposed to dwell in the earth or to be the guardian spirit of miners; a pithy or sententious saying.

gnom-ic (*nom'ik*), *adj.* dealing in, or containing, pithy or sententious sayings; didactic.

gno-mon (*nō'mon*), *n.* the figures made up of the two complements of a parallelogram.

gno-sis ('*sis*), *n.* higher knowledge or insight.

Gnos-ti-cism (*nos'ti-sizm*), *n.* a system of religion and Greek and Oriental philosophy (first to sixth century A. D.).

gnu (*nōō*), *n.* a ruminant horned animal of the antelope kind, inhabiting South Africa.

go (*gō*), *v. i.* [*p. t.* went, *p. p.* gone, *p. pr.* going], to depart; proceed; succeed; move by mechanism, as a clock: *n.* the fashion; enterprise or push.

goad (*gōd*), *n.* a pointed stick to urge on cattle: *v. t.* to urge on with, or as with, a goad: *v. i.* to act as a goad.

goal (*gōl*), *n.* the winning post at a race or at foot-ball; hence, the end aimed at.

goat (*gōt*), *n.* a ruminating horned quadruped with long hair.

goat-ee (*gō-tē'*), *n.* a tuft of hair on chin after the rest of the face is shaved.

gob-ble (*gob'l*), *v. t.* to swallow hastily or greedily: *v. i.* to utter a cry like a turkey: *n.* the noise of a turkey.

go-be-tween (*gō'-bē-twēn*), *n.* an intermediary.

gob-let (*gob'let*), *n.* a drinking vessel with a stem and without a handle.

gob-lin ('*lin*), *n.* an evil, mischievous spirit; gnome; fairy.

go-by (*gō'bi*), *n.* [*pl.* gobies ('*biz*)], a fish of peculiar shape.

go-by (*gō'-bi*), *n.* avoidance; evasion.

go-cart ('*kärt*), *n.* a child's cart; a light village cart.

god (*god*), *n.* a supernatural being conceived of as possessing divine powers or attributes; idol; a person or thing deified or honored to excess.

God, *n.* the Supreme Deity, and self-existent Creator or Upholder of the universe.

god-child ('*chīld*), *n.* one for whom another is sponsor at baptism.

god-dess ('*des*), *n.* a female deity; a woman of superior charms or excellence.

god-fa-ther ('*fä-thēr*), *n.* one who acts as sponsor to another at baptism: *v. t.* to act as godfather to.

Godfrey (*god'fri*). From the Teutonic, meaning "God's peace." Danish, *Gottfried;* Dutch, *Godfried;* Fr., *Godefroi;* Ger., *Gottfried;* It., *Goffredo;* Lat., *Godfridus.*

god-like ('*lik*), *adj.* like God or a god in any respect; divine.

Syn. GODLIKE, divine, heavenly. *Godlike* is a more expressive but less common term than *divine; divine* is generally employed for that which appertains to a superior being, in distinction from that which is human; as *divine* is opposed to human, so is *heavenly* to earthly.

Ant. BASE, mean, mortal, devilish.

god-ly ('*li*), *adj.* devout; pious.

god-moth-er ('*muth-ēr*), *n.* a female sponsor at baptism.

god-send (*god'send*), *n.* unexpected assistance or acquisition.

god-speed ('*spēd*), *n.* success.

Godwin (*god'win*). From the Teutonic, meaning "divine friend," or "victorious in God." Dutch, *Godewijn;* Lat. *Godwinus.*

gog-gle (*gog'l*), *v. i.* to strain or roll the eyes; *adj.* staring: *n.* affected rolling of the eyes: *pl.* spectacles for protecting the eyes from dust, excessive light, etc.

go-ing (*gō'ing*), *n.* the act of departing or moving; state of roads.

goi-ter (*goi'tēr*), *n.* a swelling of the glands in the front part and side of the neck.

gol-con-da (*gol-kon'dä*), *n.* a mine of wealth.

Golconda. A place in India, seven miles northwest of Hyderabad. It is noted for its fort, for the mausoleums of the ancient kings, and for the diamonds which were cut and polished here. It was the capital of a kingdom from 1512 until its overthrow by Aurungzebe in 1687.

gold (*gōld*), *n.* a metallic element, soft, ductile, and of a bright yellow color when pure; money wealth.

Gold coast. That portion of Guinea on the west coast of Africa where gold is found.

gold-en (*gōld'n*), *adj.* formed of, consisting of, or resembling, gold; shining; lustrous like gold: bright; most valuable; excellent.

Golden Gate, California. Bay in California, named by Colonel Frémont, before the discovery

of gold in the country, because of the brilliant effect of the setting sun on the cliffs and hills.

Golden gate, Constantinople. A gate in the wall of Theodosius, now walled up because of a Turkish tradition that the conquerer of Constantinople is destined to enter through it. It consists of three arches between two huge towers of white marble. The great central arch was reserved for the passage of the emperor.

Golden house. Palace of the Emperor Nero in ancient Rome, which occupied the valley between the Palatine and the Esquiline, and connected the palaces of the Cæsars with the gardens of Mæcenas. It was built after the great fire of 64 A. D., and was so large that it contained porticos 2,800 feet long and inclosed a lake where the Colosseum now stands. The forecourt contained a colossus of Nero 120 feet high.

golden pheas-ant (*gold'n fez'ant*), a handsome Chinese pheasant.

gold-en-rod (*-rod*), *n.* a tall plant of the aster family with yellow flowers.

gold-en rule (*rōōl*), the rule to treat others as we ourselves wish to be treated.

gold fields (*fēldz*), auriferous deposits and diggings.

gold-finch (*'finch*), *n.* a beautiful singing bird with yellow-streaked wings and a red throat.

gold-fish (*'fish*), *n.* an orange-colored fresh-water fish of the carp family.

gold-smith (*'smith*), *n.* a worker in gold, or dealer in gold plate.

golf (*golf*), *n.* a game played with a small gutta-percha ball and club-headed sticks: *v. i.* to play golf.

Gol-go-tha (*gol'gō-thȧ*), *n.* [Hebrew, "the place of the skull"], the place where Jesus Christ was crucified.

★**gon-do-la** (*gon'dō-lȧ*, not *gon-dō'lȧ*), *n.* a long narrow Venetian pleasure boat propelled by one oar.

gon-do-lier (*-dō-lēr'*), *n.* the rower of a gondola.

gong (*gong*), *n.* a musical instrument of bronze, which is struck by a padded stick.

good (*good*), *adj.* [*comp.* better, *superl.* best], having excellent qualities; proper, fit for, adapted, or conducive to; convenient; useful; unblemished: *n.* that which contributes to happiness; moral qualities; prosperity: *pl.* household furniture; merchandise: *interj.* an expression of assent or pleasure.

Good Fri-day (*frī'dȧ*), a fast held in commemoration of the crucifixion of Jesus Christ on the Friday before Easter day.

good-li-ness (*'lī-nes*), *n.* grace; physical beauty.

good-ly (*'lī*), *adj.* [*comp.* goodlier, *superl.* goodliest], good looking; noble; considerable; pleasant.

good na-ture (*nȧ'chūr*), good humor; good disposition.

good will (*wil'*), benevolence; kindly feeling; the value a business has over and above stock-in-trade, etc.

good-y (*'i*), *adj.* affectedly or weakly pious; namby-pamby: *n.* (*pl.* goodies), a person affectedly or weakly pious.

goose (*gōōs*), *n.* [*pl.* geese (*gēs*)], a web-footed domesticated bird of the genus Anser; a tailor's smoothing iron; a silly person.

goose-ber-ry (*gōōz'ber-i*), *n.* [*pl.* gooseberries (*-iz*)], the fruit of a shrub of the genus Ribes; the shrub itself.

go-pher (*gō'fēr*), *n.* a North American burrowing, rat-like rodent.

gor-di-an (*gôr'di-an*), *n.* anything intricate or difficult.

Gor-di-an, *adj.* pertaining to the Phrygian king, Gordius, or to the intricate knot tied by him in his harness, which Alexander the Great cut with his sword.

gore (*gôr*), *n.* congealed or clotted blood; a triangular piece sewn into a dress, sail, etc: *v. t.* to pierce as with a horn; furnish with gores (said of a garment, etc.)

gorge (*gôrj*), *n.* the throat; gullet; that which is gorged or swallowed; a narrow passage between mountains or hills: *v. t.* to swallow with greediness; satiate: *v. i.* to feed greedily.

gor-geous (*gôr'jus*), *adj.* glittering in various colors; splendid; showy.

Gor-gon (*'gon*), *n.* one of three sisters in Greek mythology whose aspect was so terrible that any one who beheld them was turned to stone.

go-ril-la (*gō-ril'ȧ*), *n.* the largest ape known.

gor-mand (*gôr'mand*), *n.* a greedy or ravenous eater; glutton.

gor-mand-ize (*-iz*), *v. i.* to eat greedily or voraciously.

gor-y (*gôr'i*), *adj.* covered or stained with gore.

gos-hawk (*gos'hawk*), *n.* a raptorial bird of the hawk family.

gos-ling (*goz'ling*), *n.* a young goose; a catkin.

gos-pel (*gos'pel*), *n.* the history of the life and doctrines of Jesus Christ, contained in the four canonical books of SS. Matthew, Mark, Luke and John; something received as infallibly true: *adj.* pertaining to the gospel.

gos-sa-mer (*'ȧ-mēr*), *n.* a very thin, soft, filmy, strong gauze: *adj.* very thin, like gossamer; flimsy.

gos-sip (*'ip*), *n.* familiar or idle talk; scandal; a babbler; formerly a sponsor, neighbor, or friend: *v. i.* to tell idle tales about others; tattle; chat.

Goth (*goth*), *n.* one of an ancient Teutonic tribe that overran the Roman empire (third and fourth centuries A. D.).

Gotham (*gō'tham*). At one time the term was applied to a parish of Nottingham, England. The people there were famed for their stupidity and simplicity, which obtained for them the satirical appellation of the "wise men of Gotham." Many nations have designated some particular locality as the paradise of fools; for example, Phrygia was the fools' home in Asia, Abdera of the Thracians, Bœotia of the Greeks, Swabia of the modern Germans, etc. To Americans it is chiefly significant as a colloquial term for the city of New York. Thus applied, it first appeared in *Salmagundi*, by Washington Irving and James K. Paulding, and is supposed to hint sarcastically at the worldly wisdom of its inhabitants.

Goth-ic (*goth'ik*), *adj.* pertaining to the Goths or their language; denoting the style of architecture characterized by high and pointed arches, clustered columns, etc.: *n.* the language of the Goths; the Gothic or pointed style of architecture.

Gothland (*goth'land*). Southern division of Sweden. Name indicated a settlement of the Goths.

Gottlieb. See *Theophilus.*

gouge (*gouj*), *n.* a rounded hollow chisel for cutting grooves or holes: *v. t.* to scoop out with a gouge.

gourd (*gōrd*), *n.* a plant and fruit of various species of the genus *Cucurbita.*

gour-met (*gōōr-mȧ'*), *n.* an epicure.

gout (*gout*), *n.* a painful inflammatory disease of the joints or extremities, especially of the great toe.

gout-y (*'i*), *adj.* pertaining to, or affected with, gout.

gov-ern (*guv'ērn*), *v. t.* regulate; direct; manage; *v. i.* to exercise authority; administer the law.

Syn. GOVERN, rule, regulate. The exercise of authority enters more or less into the signification of these terms; but *to govern* implies the exercise likewise of judgment and knowledge. *To rule* implies rather the unqualified exercise of power, the making the will the rule; a king *governs* his people by means of wise laws and an upright administration; a despot *rules* over a nation according to his arbitrary decision; *regulate* is a species of governing simply by judgment; one *governs* the affairs of a nation, or a large body where great interests are involved; we *regulate* the concerns of an individual.

Ant. BEING SUBJECT, obey, yield.

gov-ern-ess (*-es*), *n.* a lady who trains and instructs children.

gov-ern-ing (*-ing*), *p. adj.* exercising control; prevalent; ruling.

★**gov-ern-ment** (*guv'ērn-ment*, not *guv'ēr-ment*), *n.* the act of governing; administration of public affairs; relation between two words by which one determines the case or mood of another.

Syn. GOVERNMENT, administration. Both these terms may be employed either to designate the act of *governing* and *administering* or the persons governing and administering. In both cases *government* has a more extensive meaning than *administration;* the former includes every exercise of authority; while *administration* implies only that exercise of authority which consists in putting the laws or will of another in force.

★**gov-ern-or** (*'ērn-ēr*), *n.* chief ruler; tutor; a mechanical device for regulating speed.

Governor's island. A small fortified island in New York harbor. So named from its former Dutch owner, Governor Van Twiller; previously called *Nutten island*, Indian name *Paggauck.*

gown (*goun*), *n.* a woman's dress; a long loose outer covering or wrapper, as a dressing gown, etc.

gowned (*gound*), *adj.* attired in a gown.

grab (*grab*), *v. t.* [*p. t.* and *p. p.* grabbed, *p. pr.* grabbing], to seize suddenly and forcibly; snatch: *n.* a sudden and forcible seizure.

grace (*grās*), *n.* any excellence, characteristic attraction, or endowment; elegance; beauty; divine influence; spiritual excellence; a brief prayer before or after meals; a respectful title of address: *v. t.* to adorn or embellish; honor; dignify; favor.

Syn. GRACE, charm. *Grace* is altogether corporeal; *charm* is either corporeal or mental; the *grace* qualifies the action of the body; the *charm* is an inherent quality in the body itself. A lady moves, dances, and walks with *grace;* her *charms* of person equal those of her mind. [See *mercy.*]

Ant. AWKWARDNESS, hatefulness, hardness, justice, rigor.

grace-ful (*'fool*), *adj.* full of grace or beauty; easy and elegant in manner or demeanor.

gra-cious (*grā'shus*), *adj.* showing or bestowing grace, kindness, or mercy; affable; polite.

gra-da-tion (*grȧ-dā'shun*), *n.* a regular advance or progress, step by step; regular arrangement; series; order.

grade (*grād*), *n.* a step or degree in rank, dignity, quality, order, etc.; the rise or descent of a railroad, etc.: *v. t.* to level and prepare; arrange in a regular series; *v. i.* to take rank. [CLASS.]

grad-u-al (*grad'ū-al*), *adj.* proceeding by degrees; regular and slow.

grad-u-ate (*'ū-āt*), *n.* one on whom a degree has been conferred: *v. t.* to mark with degrees or a scale: *v. i.* to take or receive an academical degree; change by degrees: *adj.* having been graduated.

grad-u-a-tion (*-ā'shun*), *n.* the conferring or reception of an academical degree; regular progression; a marking into degrees or parts.

graft (*grȧft*), *n.* a small shoot of a tree inserted into another tree; a bribe: *v. t.* to insert, as a shoot in another tree; in surgery, to transplant (tissue): *v. i.* to practice grafting; to accept bribe money.

Graham (*grā'am, grām*). From the Gaelic *gruama* "surly, stern, morose, dark, gloomy."

grail (*grāl*), *n.* a dish or chalice, especially the Holy Grail (Sangreal), the cup used by Jesus Christ at the Last Supper. [Also *graal.*]

grain (*grān*), *n.* any minute, hard mass; a single seed of corn; a unit of weight equal to 1-20th of a scruple, 1-24th of a pennyweight; the arrangement of particles in a body; texture; *v. t.* form into grains; to paint in imitation of the grain of wood.

grain-ing (*'ing*), *n.* painting in imitation of the grain of wood; the pebbling of paper or leather.

gram. See *gramme.*

gra-mer-cy (*grȧ-mēr'si*), *interj.* great thanks.

gram-i-niv-o-rous (*gram-i-niv'ō-rus*), *adj.* feeding on grasses.

gram-mar (*'ēr*), *n.* the science that treats of the principles that govern the correct use of language.

gram-ma-ri-an (*-mȧ'ri-an*), *n.* one who is versed in grammar; a philologist.

gram-mat-ic-al (*-mat'i-kal*), *adj.* pertaining to grammar, or its rules.

gramme (*gram*), *n.* the unit of weight in the metric system, 15.43 grains troy. [Also *gram.*]

gram-o-phone (*'ō-fōn*), *n.* an instrument for recording and reproducing speech.

gram-pus (*'pus*), *n.* a large cetacean, akin to the porpoise.

Granada (*grȧ-nȧ'dȧ*). The capital of the province of Granada, Spain, situated on the Jenil, on spurs of the Sierra Nevada. It is famous for the Alhambra. The name is from the Arabic. *Garnatha,* "pomegranate," because the city is built on four hills divided somewhat like the divisions of a pomegranate.

gran-a-ry (*gran'ȧ-ri*), *n.* [*pl.* granaries (*riz*)], a storehouse for grain.

grand (*grand*), *adj.* high in dignity or power; illustrious; great; magnificent; noble; conceived or expressed in dignified language; complete; the second degree of parentage or descent: *n.* a grand piano. [GREAT.]

Grand canal. The principal canal of Venice. It runs in the form of the letter S through the center of the city, from the railway station to Santa Maria del Salute.

grand-child (*grand'chīld*), *n.* the child of one's son or daughter.

grand-daugh-ter (*'daw-tēr*), *n.* the daughter of one's son or daughter.

gran-dee (*gran-dē'*), *n.* a Spanish nobleman of the highest rank.

gran-deur (*'dūr*), *n.* greatness; vastness; sublimity; splendor of appearance.

grand-fa-ther (*grand'fä-thēr*), *n.* the father of one's father or mother.

gran-dil-o-quent (*gran-dil'ō-kwent*), *adj.* speaking in, or characterized by, a lofty or bombastic style.

gran-di-ose (*'di-ōs*), *adj.* really or affectedly grand or impressive.

Grand Manan island. An island east of Maine, at entrance to bay of Fundy, belonging to New Brunswick. A compound word meaning "great island." English, *grand;* Indian, *munnohan,* "the island." [Also spelled *Menan.*]

grand-mother (*'muth-ēr*), *n.* the mother of one's parent.

grand-par-ent (*'pâr-ent*), *n.* the parent of one's parent.

Grand Prix (*grän prē'*), **The.** The great horse-race at Longchamps, Paris, established by Napoleon III. (prize 20,000 francs), run by three-year-olds. Longchamps is a very good course, situated in the Bois de Boulogne, first used for racing in the reign of Louis XVI. Races have been run here since 1859. The Grand Prix is run on the Sunday of Ascot week.

Grand Prix de Rome (*grän prē' du rōm*). A prize given by the Academy of Fine Arts in Paris to the most successful competitor in painting, sculpture, engraving, architecture, or music. The examinations are held annually, and the successful candidates become pensioners of the government for four years. They are sent to reside at Rome, where Louis XVI. founded the Academie de France in 1666.

grand-son (*'sun*), *n.* the son of one's son or daughter.

grange (*grānj*), *n.* a farm with its dwelling house, appurtenances, etc.

gran-ite (*gran'it*), *n.* a massive crystalline rock composed of quartz, feldspar, and mica.

gra-niv-o-rous (*grȧ-niv'ō-rus*), *adj.* eating grain; living on seeds.

grant (*grȧnt*), *v. t.* to give or confer; concede; transfer the title of: *n.* the act of granting; a gift; a bestowing; the thing conveyed. [GIVE.]

gran-u-lar (*gran'ū-lēr*), *adj.* composed of, or resembling, grains or granules.

gran-u-late (*'ū-lāt*), *v. t.* to form into grains or small masses; roughen the surface of: *v. i.* to become granular.

gran-ule (*'ūl*), *n.* a small grain or particle.

grape (*grāp*), *n.* the fruit of the grapevine; a vine of the genus *Vitis;* grapeshot.

grape-shot (*'shot*), *n.* a cluster of small shot arranged in tiers of three shots each between plates, so as to disperse when fired.

graph-ic (*grȧf'ik*), *adj.* pertaining to the art of writing; vividly described.

graph-ite (*'it*), *n.* a metallic variety of carbon.

graph-o-phone (*graf'ō-fōn*, *n.* an instrument re-

sembling the phonograph, but having a rubber cylinder instead of one of wax.

grap-nel (*grap'nel*), *n.* a kind of small anchor usually with flukes; heavy tongs.

grap-ple (*grap'l*), *v. t.* to lay fast hold of: *v. i.* struggle or contend: *n.* a close fight; a seizing; close hold; a mechanical device for taking hold of anything.

Grasmere. One of the group of English lakes, meaning "the lake of swine."

★**grasp** (*grȧsp*), *v. t.* to seize or catch at: *v. i.* to endeavor to seize; struggle or grapple: *n.* a seizure of the hand; reach of the hand; hold; intellectual capacity. [LAY.]

grass (*grȧs*), *n.* herbage having hollow-jointed stalks; that which is subject to decay: *v. t.* to cover with grass or turf; pasture or graze.

grass-wid-ow (*-wid'ō*), *n.* a wife whose husband is abroad.

grate (*grāt*), *n.* a framework of iron bars: *v. t.* to rub or wear away by friction; produce a sound by friction: *v. i.* make a harsh noise; produce mental irritation.

grate-ful (*'fool*), *adj.* thankful; pleasurable. [ACCEPTABLE.]

grat-i-fi-ca-tion (*grat-i-fi-kā'shun*), *n.* the act of gratifying; satisfaction; pleasure; reward.

grat-i-fy (*'i-fī*), *v. t.* [*p. t.* and *p. p.* gratified, *p. pr.* gratifying], to afford pleasure to; indulge; delight; humor.

Syn. GRATIFY, indulge, humor. *To gratify* is a positive act of the choice; *to indulge* is a negative act of the will, a yielding of the mind to circumstances. One *gratifies* his desires or appetite; and *indulges* his humors, or *indulges* in pleasures. We *gratify* and *indulge* others as well as ourselves, and mostly in the good sense; *to gratify* is for the most part in return for services; it is an act of generosity; *to indulge* is to yield to the wishes or be lenient to the infirmities of others. *To humor* is mostly taken in a bad sense. [See *satisfy*.]

Ant. ABSTAIN, discipline.

grat-ing (*grāt'ing*), *n.* an open framework or lattice of bars: *p. adj.* harsh, irritating.

★**gra-tis** (*grā'tis*, not *grat'is*), *adv.* gratuitously.

grat-i-tude (*grat'i-tūd*), *n.* the state of being grateful; appreciation. [THANKFULNESS.]

gra-tu-i-tous (*grȧ-tū'i-tus*), *adj.* freely bestowed; voluntary.

Syn. GRATUITOUS, voluntary. *Gratuitous* is opposed that which is obligatory; *voluntary* is opposed to that which is compulsory or *involuntary*.

gra-tu-i-ty (*'i-ti*), *n.* [*pl.* gratuities (*-tiz*)], a donation or present; free gift.

★**gra-va-men** (*grȧ-vā'men*), *n.* [*pl.* gravimina (*-vim'i-nȧ*)], cause of complaint or action.

grave (*grāv*); *adj.* serious; solemn; thoughtful; sedate; important; a long-sounding accent: *n.* an excavation for a dead body: *v. t.* to shape or carve by cutting with a chisel; engrave.

Syn. GRAVE, serious, solemn. *Grave* expresses more than *serious;* it does not merely bespeak the absence of mirth, but heaviness of mind; *seriousness*, on the other hand, bespeaks no depression, but simply steadiness of action; a judge pronounces the *solemn* sentence of condemnation in a *solemn* manner; a preacher delivers many *solemn* warnings to his hearers.

Ant. FRIVOLOUS, light, gay.

grav-el (*grav'l*), *v. t.* to embarrass; lame a horse by gravel under the shoe: *n.* fragments of rock coarser than sand; a disease in the bladder and kidneys.

grav-el-ly (*-li*), *adj.* composed of, or abounding in, gravel.

grav-i-tate (*grav'i-tāt*), *v. i.* to be acted upon, or attracted by, the force of gravity; be naturally attracted.

grav-i-ta-tion (*-i-tā'shun*), *n.* the force which attracts material bodies to each other.

grav-i-ty (*'i-ti*), *n.* that force which tends to draw all bodies toward the center of the earth; weight; importance; seriousness; solemnity.

gra-vy (*grā'vi*), *n.* [*pl.* gravies (*'viz*)], the fatty juice from roasting flesh.

gray (*grā*), *adj.* of a white color with a mixture of black; hoary; mature: *n.* the color of white mixed with black.

graze (*grāz*), *v. t.* to furnish pasture for; touch or rub lightly: *v. i.* to eat grass; move along while grazing: *n.* a slight rub or touch.

★**gra-zier** (*grā'zhēr*), *n.* one who pastures cattle or breeds them for the market.

grease (*grēs*), *n.* soft animal fat; oily matter: *v. t.* (*grēz*) to smear or rub with grease; cause to move easily.

greas-y (*grēz'i* or *grēs'i*), *adj.* [*comp.* greasier, *superl.* greasiest], resembling, smeared or spotted with, grease; oily; unctuous; foggy; muddy.

great (*grāt*), *adj.* large; chief; principal; marvelous; eminent; high in rank or position: *adv.* very much: *n.* the whole, or gross; noble, or influential, people.

Syn. GREAT, large, big. *Great* is applied to all kinds of dimensions in which things can grow or increase; *large* signifies to give freely, it is properly applied to space, extent, and quantity; *big* denotes *great* as to expansion or capacity. A house, a room, is *great* or *large;* an animal or a mountain is *great* or *big*.

Ant. DIMINUTIVE, little, tiny, small.

Syn. GREAT, grand, sublime. These terms are synonymous only in their moral application; *great* simply designates extent; *grand* includes likewise the idea of excellence and superiority. A *great* undertaking characterizes only the extent of the undertaking; a *grand* undertaking bespeaks its superior excellence; *sublime* designates the dimensions of height. A scene may be either *grand* or *sublime*.

Ant. INSIGNIFICANT, petty, trivial.

Great Barrington. Town in Berkshire county, Massachusetts, named for William, Lord Barrington.

Great Bear lake. In British North America. So called owing to its northern situation, referring to the northern constellations of the Great and Little Bear.

Great Mogul. An extinct title borne by the chief of the Moguls of the empire founded in Hindustan by Baber, fifteenth century.

Great Salt lake, Utah. Received its name on account of the saline character of its waters.

Great Tom. A bell, weighing about 17,000 pounds, in the tower of the Tom gate of Christ church, Oxford. Every night at ten minutes past nine (closing time) it is tolled.

Great Wall of China. A wall begun by the Emperor Tsin Chi-hwangti 214 B. C. and finished 204 B. C. as a defense against northern tribes. It extends from Shanhaikwan along the northern frontiers of Chihli, Shansi, Shensi, and Kansu. Length about 1,500 miles.

greaves (*grēvz*), *n. pl.* armor to protect the legs from the ankle to the knee.

Gre-cian (*grē'shan*), *adj.* pertaining to Greece; a native or inhabitant of Greece; a Greek scholar.

Greece. The modern form of the Lat. *Græcia*, Gr. *Graikoi*, a name originally bestowed on the inhabitants of Hellas. A country of southern Europe.

greed (*grēd*), *n.* avarice; greediness.

greed-y (*'i*), *adj.* [*comp.* greedier, *superl.* greediest], voracious; gluttonous; desirous; covetous.

Greek (*grēk*), *adj.* pertaining to, or resembling, Greece or the Greeks; Hellenic: *n.* a Grecian; the language of ancient and modern Greece; something unintelligible.

Greek church (*chērch*), the eastern or oriental church.

Greek cross (*kros*), a cross with four equal arms.

Greek fire (*fīr*), an inflammable material used by the ancient Greeks in warfare.

Greeley. City in Colorado, county and city in Kansas, and county in Nebraska, named for Horace Greeley.

green (*grēn*), *adj.* having the color of growing grass or plants; of a color composed of blue and yellow; fresh; flourishing; unripe; immature; inexperienced: *n.* the color of growing grass or plants; a color composed of blue and yellow; a grass plot or common: *v. t.* to make green: *v. i.* to become green.

green-back (*'bak*), *n.* a paper money (U. S. legal-tender note) with a green back, first issued in 1862.

Green bay, Wis. Located on its shores were a tribe of Indians, whose mode of life was so filthy, when first met by the French, they designated them as the Puans (*puans*, "stinkards"). To the bay they gave the name of *Baye de Puans*, and transposition through pronunciation carried it to *Grand bay* and *Grun bay* to *Green bay*.

green-horn (*'hôrn*), *n.* a simpleton; novice.

green-house (*'hous*), *n.* a conservatory.

Greenland. The name given by Eric the Red in 983 to the sheltered nook where he founded his colony from Iceland, thinking that "much people will go thither if the land has a pleasant name." The name is not altogether unsuitable, as the place chosen by Eric for the settlement which he named *Greenland* is the pleasantest spot in the country, a smooth grassy plain at the head of Igaliko fiord, near the modern Julianshaab. The name was afterward inappropriately extended to the whole ice-clad arctic island.

Green mountains, Vt. Name a translation of the French name "*vert-monts*."

Green river, Ky. Named in honor of General Nathaniel Greene of the Revolution. The letter *e* was originally added to the name of the river.

green-room (*'room*), *n.* the actors' retiring room in a theater.

Greensboro, N. C. Named in compliment to General Nathaniel Greene, he having had a victorious skirmish at this locality during his famous retreat in 1781.

Green Sea. Otherwise the Persian gulf, owing to a peculiar strip of green always discernible along the Arabian shore.

greet (*grēt*), *v. t.* to salute in kindness or respect; congratulate: *v. i.* to exchange greetings. [ADDRESS.]

greet-ing (*'ing*), *n.* salutation; welcome. [SALUTE.]

gre-ga-ri-an (*grē-gā'ri-an*), *adj.* living in herds; common.

gre-ga-ri-ous (*grē-gā'ri-us*), *adj.* associating or going together in herds.

Gre-go-ri-an cal-en-dar (*gre-gō'ri-an kal'en-dēr*), the reformed calendar introduced, 1582, by Pope Gregory XIII.

Gre-go-ri-an chant (*chânt*), the mediæval system of choral music, introduced by Pope Gregory the Great; plain song.

Gregory (*greg'ō-ri*). From the Latin *Gregorius*, from the Greek *Gregorios*, "to watch." The name means "watchful." Danish., *Gregor;* Dutch, *Gregorius;* Fr., *Grégoire;* Ger., *Gregor;* It., *Gregorio;* Lat., *Gregorius;* Sp. *Gregorio;* Sw., *Gregorius*.

gre-nade (*grē-nād'*), *n.* an explosive shell fired by a fuse and thrown by hand.

gren-a-dier (*gren-ȧ-dēr'*), *n.* originally a foot soldier who threw grenades, now a soldier of the Grenadier Guards.

gren-a-dine (*gren-ȧ-dēn'*), *n.* a dress fabric of thin gauzy silk or wool; a dyestuff.

grey. Another form of *gray*.

grey-beard (*'bērd*), *n.* an old man.

grey-hound (*'hound*), *n.* a slender, swift hound.

grid-dle (*grid'l*), *n.* a broad shallow pan, used for cooking cakes.

grid-dle-cake (*-kāk*), *n.* a thin butter cake.

grid-i-ron (*grid'i-urn*), *n.* a grated iron utensil for broiling meat or fish.

grief (*grēf*), *n.* mental pain on account of present or past trouble; physical pain.

Syn. GRIEF, affliction, distress, melancholy, mourning, regret, sadness, sorrow, tribulation, trouble, woe. *Grief* is acute mental pain resulting from loss, misfortune, or deep disappointment; *sorrow* and *grief* are for definite cause; *sadness* and *melancholy* may arise from a vague sense of want or loss, from a low state of health; *affliction* expresses a deep heart-sorrow. [See *affliction*.]

griev-ance (*grēv'ȧns*), *n.* a sense of wrong or oppression; an injustice; cause of annoyance.

grieve (*grēv*), *v. t.* to cause to experience grief: *v. i.* to be in sorrow; lament.

griev-ous (*'us*), *adj.* causing grief or sorrow; hard to be borne.

grif-fin (*grif'in*), *n.* a fabulous animal with the body and legs of a lion, the wings and beak of an eagle.

Griffith. The English form of the Welsh name *Gryffydd*. Danish, *Griffith;* Dutch, *Rufinus;* Lat., *Griffithius;* Sw., *Rufin*.

grill (*gril*), *v. t.* to broil; torment, as if by grilling: *v. i.* to be broiled: *n.* a gridiron; grilled meat.

grille (*gril*), *n.* an open grating or screen of wrought metal.

grim (*grim*), *adj.* [*comp.* grimmer, *superl.* grimmest], of a forbidding aspect; stern and surly; unyielding.

★**gri-mace** (*gri-mās'*, not *grim'ȧs*), *n.* a distortion of the countenance; smirk: *v. i.* to make grimaces.

grime (*grīm*), *n.* foul matter; dirt deeply ingrained: *v. t.* to make dirty or grimy.

grim-y (*'i*), *adj.* full of grime.

grin (*grin*), *n.* the act of closing the teeth and showing them; a broad smile: *v. i.* [*p. t.* and *p. p.* grinned, *p. pr.* grinning], to show the teeth in laughter, scorn, or pain: *v. t.* to express by grinning.

grind (*grīnd*), *v. t.* [*p. t.* and *p. p.* ground, *p. pr.* grinding], to pulverize or reduce to powder by friction; sharpen or smooth; study hard: *v. i.* to perform the act of grinding; be rubbed together: *n.* the act of grinding; laborious and tedious work.

grind-stone (*'stōn*), *n.* a flat, circular stone for sharpening tools, etc.

grip (*grip*), *n.* a grasp with the hand; that by which anything is held firmly; a particular mode of grasping the hand: *v. t.* to grasp, or seize: *v. i.* to take fast hold.

gripe (*grīp*), *n.* a clasping with the hand or arms; a squeeze: *pl.* colic: *v. t.* grasp; hold tightly; seize; clutch; oppress; pinch: *v. i.* to take firm hold. [PRESS, LAY.]

grippe (*grip*, or *grēp*), *n.* influenza. [Also *grip*.]

grip-ping (*grip'ing*), *adj.* avaricious.

gris-ly (*griz'li*), *adj.* terrible; savage looking.

Grisons (*grē-zōn'*). The largest canton of Switzerland. So called from the German *Graubünden*, "the gray league," so called from the dress worn by the Unionists in 1424.

grist (*grist*), *n.* grain for grinding; ground corn; provision or supply.

gris-tle (*gris'l*), *n.* cartilage.

gris-tly (*'li*), *adj.* cartilaginous.

grit (*grit*), *n.* rough, hard particles, as sand, etc.; courage: *pl.* oats hulled and coarsely ground.

grit-ty (*'i*), *adj.* composed of, containing, or resembling, grit; courageous.

griz-zly (*griz'li*), *adj.* somewhat gray: *n.* a large, fierce bear of North America.

groan (*grōn*), *n.* low, deep sound uttered in pain, sorrow, disapprobation or ridicule: *v. i.* to utter a groan; lament; be burdened: *v. t.* to express disapproval of by groans.

Syn. GROAN, moan. *Groan* is a deep sound produced by hard breathing; *moan* is a plaintive, long-drawn sound produced by the organs of utterance. The *groan* proceeds involuntarily as an expression of severe pain, either of body or mind; the *moan* proceeds often from the desire of exciting compassion.

groat (*grōt*), *n.* formerly a silver coin current in England, value 4d.; a trifling sum.

gro-cer (*grō'sēr*, *n.* one who sells groceries.

gro-cer-y (*-i*), *n.* [*pl.* groceries (*-iz*)], tea, coffee, sugar, spices, etc. (usually *pl.*); a grocer's shop; a grogshop.

grog (*grog*), *n.* a mixture of spirits and water; spirituous liquor.

grog-gy (*'i*), *adj.* tipsy; staggering as if dazed.

groin (*groin*), *n.* the depressed part of the human body between the thigh and the belly; the curve made by the intersection of two arches: *v t.* to build or form into groins.

groom (*grōōm*), *n.* one who has charge of horses; a bridegroom: *v. t.* to feed and take care of, as a groom does a horse; curry and brush.

grooms-man (*grōōmz'man*), *n.* one who attends a bridegroom; best man.

groove (*grōōv*), *n.* channel or furrow, especially as cut by a tool; settled habit or routine: *v. t.* to form or cut a groove in.

grope (*grōp*), *v. i.* to feel one's way with the hands; seek blindly: *v. t.* to search out, as in the dark.
gros-beak (*grōs'bēk*), *n.* the name of various warblers with a large, stout beak, allied to the finches.
gros-grain (*grō'grān*), *n.* a stout double-corded silk.
gross (*grōs*), *adj.* bulky; thick; coarse; indelicate; corpulent; dense; whole: *n.* 12 dozen; entire amount.
Syn. GROSS, coarse. These terms are synonymous in the moral application. *Grossness* of habit is opposed to delicacy; *coarseness* to softness and refinement. A person becomes *gross* by an unrestrained indulgence of his sensual appetites; he is *coarse* from the want of polish.
Ant. EXQUISITE, fine.
Grosvenor (*grōv'nẽr*) **gallery.** A gallery for the exhibition of paintings of the modern æsthetic school, established by Lord Grosvenor in New Bond street, London, in 1876. Pictures were received only by invitation. The exhibitions have been for some time discontinued.
Grosvenor square. A fashionable square in London, east of Hyde Park. It was laid out before 1716 and has been the residence of many famous men. There is great variety of styles in its architecture, and it is noted for the old ironwork and flambeau extinguishers before many of the doors.
gro-tesque (*grō-tesk'*), *adj.* fantastically or oddly formed; extravagant; whimsical; ridiculous.
grot-to (*grot'ō*), *n.* a natural or artificial cavern in the earth.
ground (*ground*), *n.* the earth or soil; surface of a floor or pavement; land; territory; cause or reason; origin: *pl.* dregs or sediment: *v. t.* to place or set on, or in, the ground; settle in first principles; base; run aground: *v. i.* to take the ground; run aground: *adj.* fundamental: *p. t.* and *p. p.* of grind. [FOUNDATION.]
ground-hog (*'hog*), *n.* the woodchuck; the aardvark.
group (*grōōp*), *n.* a small crowd or assemblage; a cluster; an assemblage of figures or objects: *v. t.* to form into a group.
grouse (*grous*), *n.* red and black heath game; partridge; pheasant; prairie hen.
grout (*grout*), *n.* mortar or cement mixed with gravel; a fine plaster for ceilings: *v. t.* to surround or fill in with grout.
grove (*grōv*), *n.* a small wood.
grov-el (*grov'l*), *v. i.* to lie prone; be mean or debased.
grow (*grō*), *v. t.* [*p. t.* grew, *p. p.* grown, *p. pr.* growing], to cultivate: *v. i.* to increase in stature or size by development; be produced by vegetation; thrive; become. [INCREASE.]
growl (*groul*), *n.* a deep angry snarl or murmur: *v. i.* to snarl or murmur like a dog; grumble.
growl-er (*'ẽr*), *n.* one who, and that which, growls.
growth (*grōth*), *n.* the progressive increase of animal or vegetable bodies; advancement; increase; progress; result; effect.
grub (*grub*), *v. t.* [*p. t.* and *p. p.* grubbed, *p. pr.* grubbing], to dig up: *v. i.* to drudge or toil; perform dirty work: *n.* the larva of a beetle, moth or other insect.
grudge (*gruj*), *v. t.* to regard with envy or discontent; give or take with reluctance: *n.* secret malice or ill will.
gru-el (*grōō'el*), *n.* a light, semiliquid food for invalids.
grue-some (*grōō'sum*), *adj.* horrible of aspect; inspiring gloom or horror.
gruff (*gruf*), *adj.* rough or surly in voice or manner; harsh; hoarse.
grum-ble (*grum'bl*), *v. i.* to murmur discontentedly; find fault.
grump-y (*grump'i*), *adj.* surly; cross; low-spirited.
grunt (*grunt*), *n.* the guttural noise of a hog: *v. i.* to make a noise like a hog.
gua-no (*gwä'nō*), *n.* the dung of sea birds, yielding a valuable manure.
guar-an-tee (*gar-an-tē'*), *n.* an engagement made to secure the fulfillment of an agreement: *v. t.* to undertake to secure (that another shall perform a certain stipulation); warrant; be responsible for.
guar-an-tor (*-tōr'*), *n.* one who becomes surety for the performance of another's acts.
guar-an-ty. The legal form of *guarantee.*
guard (*gärd*), *v. t.* to watch over or protect; preserve by caution: *v. i.* be cautious (with *against*): *n.* security or defense against injury or attack; any contrivance or device for security; a man or body of men employed for defense or control.
Syn. GUARD, defend, watch. *To guard*, in its largest sense, comprehends both *watching* and *defending.* In the restricted sense, *to guard* is properly to keep off an enemy; *to defend* is to drive him away when he makes the attack. *Watch*, like *guard*, consists in looking to the danger; he who *watches* may only give an alarm.
Ant. BETRAY, expose, surrender.
Syn. GUARD, guardian. The *guard* only *guards* against external evils; the *guardian* takes upon himself the office of parent, counselor, and director.
Ant. BETRAYER, enemy.
guard-i-an (*'i-an*), *n.* one who has the care of the person or property of another; a warden: *adj.* protecting; tutelary. [GUARD.]
Guatemala (*gaw-tē-mä'lä*, Spanish *gwä-tä-mä'lä*). A republic of Central America. Name is European rendering of the Mexican *quahtemalt*, "a decayed log of wood"; so called by the Mexican Indians who accompanied Alvarado into this region because they found an old worm-eaten tree near the ancient palace of the kings or *Kachiquel*, which was thought to be the center of the country.
gua-va (*gwä'vä*), *n.* a tree of tropical America yielding a pear-shaped fruit.
gu-ber-na-to-ri-al (*gū-bẽr-nä-tō'ri-al*), *adj.* pertaining to a governor or to his office.
gudg-eon (*guj'un*), *n.* a small edible fresh-water fish; a person who is easily imposed upon.
guer-il-la (*gẽr-il'ä*), *n.* one of an irregular force engaged in harassing an enemy in small bands: *adj.* belonging to, or consisting of, guerillas; pertaining to irregular warfare.
guern-sey (*gẽrn'zi*), *n.* a close-fitting knitted woolen shirt.
Guern-sey, *n.* a breed of dairy cattle from the island of Guernsey in the English channel.
guess (*ges*), *n.* a conjecture; the act of guessing: *v. t.* to hit upon at random; believe or think: *v. i.* to conjecture.
Syn. GUESS, conjecture, divine. We *guess* that a thing actually is; we *conjecture* that which may be; *guess* that it is a certain hour; we *conjecture* as to the meaning of a person's actions. *To guess* and *to conjecture* are natural acts of the mind; *to divine* in its proper sense is a supernatural act.
Ant. ASCERTAIN, discover, prove.
guest (*gest*), *n.* one who is entertained at the house or table of another.
Syn. GUEST, visitor, or visitant. *Guest* signifies one who is entertained; *visitor* or *visitant* is the one who pays the *visit;* the *visitor* simply comes to see the person, and enjoy social intercourse; but the *guest* patakes also of hospitality.
guf-faw (*guf-faw'*), *n.* a rude, boisterous laugh.
Guglielmo (*gōōl-yel'mō*). See *William.*
guid-ance (*gīd'ans*), *n.* direction; leading.
guide (*gīd*), *n.* one who leads or directs; conductor; that by which one directs his course: *v. t.* to lead or direct; influence; regulate. [LEAD.]
guide-book (*'book*), *n.* a handbook for the direction of travelers.
Guido (*gwē'dō*). See *Guy.*
guild (*gild*), *n.* a fraternity; corporation; association. [Also *gild.*]
guil-der (*gil'dẽr*), *n.* the Dutch florin, value about 40.2 cents.
Guildhall (*gild'havl*). The council hall of the city of London, founded in 1411, and restored after the fire of 1666. The great hall measures 153 by 48 feet, and is 55 feet high; it has a handsome open-framed roof, modern colored glass windows, and the two legendary colossal wooden figures of Gog and Magog. Along the walls are placed statues of famous men. The crypt, with its cloistered columns, is of the original construction.
guile (*gīl*), *n.* deceit; cunning; duplicity. [DECEIT.]
Guillaume (*gē-yōm'*). See *William.*
guil-lo-tine (*gil'o-tēn*), *n.* an apparatus for beheading a criminal by means of a heavy knife sliding in two upright grooves: *v. t.* (*gil-ō-tēn'*) to behead with the guillotine.
guilt (*gilt*), *n.* the state of one who is liable to a penalty; sin; criminality.
guilt-less (*'les*), *adj.* free from guilt; innocent.
guilt-y (*'i*), *adj.* [*comp.* guiltier, *superl.* guiltiest], justly chargeable with a crime; wicked.
guin-ea (*gin'ē*), *n.* a gold coin, formerly current in England, value 21s. or about $5.00. The English *guinea* was first coined in 1673. It derived its name from the fact that the gold of which it was first composed came from *Guinea.*
Guinea. A native West African term, meaning "abounding in gold."
guin-ea fowl (*foul*), a grayish-blue gallinaceous bird with white spots.
guin-ea pig (*pig*), a small domesticated South American rodent.
guise (*gīz*), *n.* external appearance; dress; mien.
Syn. GUISE, habit. The *guise* is that which is unusual, and often only occasional; the *habit* is that which is usual among particular classes; a person sometimes assumes the *guise* of a peasant, in order the better to conceal himself; he who devotes himself to the clerical profession puts on the *habit* of a clergyman.
gui-tar (*gi-tär'*), *n.* a six-stringed instrument, on the principle of the violin, played with the fingers.
gulch (*gulch*), *n.* a rocky, or rough, narrow valley.
gulf (*gulf*), *n.* an arm of the sea extending into the land, intermediate in size between a bay and sea; an abyss; something insatiable.
Gulf of Carpentaria. In north coast of Australia; preserves the memory of a Dutch captain named Carpenter, who discovered it in 1616.
Gulf of St. Lawrence. An arm of the Atlantic; first explored, and the navigation of the long river of same name flowing into it commenced, on the Feast of St. Lawrence, 1500.
gulf stream (*strēm*), a vast and important warm ocean current flowing out from the Gulf of Mexico.
gull (*gul*), *n.* a web-footed sea fowl with long wings; one easily cheated: *v. t.* to cheat; deceive.
gul-let (*'et*), *n.* the throat; œsophagus.
gul-li-ble (*gul'i-bl*), *adj.* capable of being easily deceived.
gul-ly (*gul'i*), *n.* [*pl.* gullies (*'iz*)], a channel or hollow worn by water; narrow ravine.
gulp (*gulp*), *v. t.* to swallow down eagerly: *n.* the act of gulping.
gum (*gum*), *n.* the soft fleshy part of the jaws by which the teeth are surrounded; a semitransparent viscid substance that exudes from certain trees and hardens: *v. t.* [*p. t.* and *p. p.* gummed, *p. pr.* gumming], to smear or unite with gum.
gum-my (*'i*), *adj.* like gum.
gump-tion (*gump'shun*), *n.* quickness of perception; common sense.
gump-tious (*'shus*), *adj.* shrewd; smart.
gun (*gun*), *n.* an instrument for discharging shot.
gun-boat (*gun'bōt*), *n.* a warship of light draft, next in size to a cruiser.
gun cot-ton (*kot-n*), a highly explosive substance formed by the action of nitric and sulphuric acid upon cotton.
gun fire (*fīr*), the hour at which the morning and evening gun is fired.
gun met-al (*met-al*), an alloy of copper and tin.
gun-ner (*'ẽr*), *n.* one who works a gun.
gun-ny (*'i*), *n.* [*pl.* gunnies (*'iz*)], a coarse heavy sackcloth of jute or hemp.
gun-pow-der (*'pou-dẽr*), *n.* an explosive substance composed of sulphur, niter and charcoal.
Gun-ter's chain (*gun'tẽrz chān*), surveyor's chain used in measuring land, 66 ft. long, and divided into 100 links of 7.92 inches each.
Gun-ter's scale (*skāl*), a large plane scale, with various lines of numbers engraved upon it.
gun-wale (*gun'wāl*), *n.* the upper edge of the side of a ship next to the bulwarks.
gur-gi-ta-tion (*gūr-ji-tā'shun*), *n.* a state of boiling, or whirling round.
gur-gle (*gūr'gl*), *v. i.* to flow or run with a purling, bubbling sound: *n.* a purling, bubbling noise.
gush (*gush*), *n.* a sudden and violent flow of a liquid from an inclosed space; outburst; an extravagant display of sentiment: *v. i.* to issue with violence and rapidity; be extravagantly sentimental.
gush-er (*'ẽr*), *n.* one who, or that which, gushes.
gus-set (*gus'et*), *n.* a small triangular piece of cloth inserted in a garment to strengthen or enlarge a part.
gust (*gust*), *n.* a sudden squall; a sudden and violent outburst of passion. [BREEZE.]
gus-ta-to-ry (*gus'tä-tō-ri*), *adj.* pertaining to the taste.
Gustavus (*gus-tā'vus*). From the Swedish name *Gustaf*, which some translate "Goth's staff"; others derive it from the Su-Goth *God*, "God" or "good," and *staf*, "staff." Gustaf is more probably corrupted from *Augustus.* Dutch, *Gustavus;* Fr., *Gustave;* Ger., *Gustav;* Lat., *Gustavus;* Sw., *Gustaf.*
gus-to (*'tō*), *n.* zest; relish.
gus-ty (*'i*), *adj.* characterized by gusts.
gut (*gut*), *n.* an intestine; catgut: *v. t.* [*p. t.* and *p. p.* gutted, *p. pr.* gutting], to extract the entrails of; to plunder, or empty entirely.
gut-ta-per-cha (*gut-ä-pẽr'chä*), *n.* a reddish-brown horn-like substance; the inspissated juice of the gutta-percha tree.
gut-ter (*'ẽr*), *n.* a channel for carrying away water: *v. t.* to cut into channels; furnish with gutters.
gut-tur-al (*'ur-al*), *adj.* pertaining to, or produced in, the throat: *n.* a letter produced in the throat.
guy (*gī*), *n.* a rope, chain, etc., to swing and keep steady a heavy body; a person oddly or dowdily dressed: *v. t.* to steady or guide with a guy; ridicule; delude.
Guy. Probably derived from French *gui*, "mistletoe," or from *Guillaume* (William), whence the diminutives, *Guyot* and *Gusion.* Danih, *Guido;* Dutch, *Guido;* Fr., *Guy;* Ger., *Veit;* It., *Guido;* Lat., *Guido;* Sw., *Guido.*
guz-zle (*guz'l*), *v. i.* to drink greedily and immoderately.
Gwendolen (*gwen'dō-len*). A Welsh female name. Sometimes translated "the lady of the bow"; another translation is "white-browed."
gym-na-si-um (*jim-nā'zi-um*), *n.* [*pl.* gymnasia (*ä*)], a building where gymnastic exercises are practiced.
gym-nast (*'nast*), *n.* one who practices, or is expert in, gymnastics.
gym-nas-tic (*-nas'tik*), *adj.* pertaining to, or of the nature of, gymnastics.
gym-nas-tics (*'tiks*), *n. pl.* athletic exercises; the art of developing the physical powers by athletic exercises.
gyn-e-col-o-gy (*jin-ē-kol'ō-ji*), *n.* that branch of medical science which treats of the functions and diseases of women.
gyp-sum (*jip'sum*), *n.* sulphate of lime; plaster of paris.
Gypsy. Same as *Gipsy.*
gy-ral (*ji'ral*), *adj.* rotatory; whirling.
gy-rate (*'rāt*), *v i.* to revolve round a central point; rotate; wheel.
gy-ra-to-ry (*'rä-tō-ri*), *adj.* revolving in a circle.
gy-ro-scope (*ji'rō-skōp*), *n.* an instrument for demonstrating the laws of dynamics governing rotating bodies.
gy-ro-scope rail-way (*-rāl'wā*), a recent invention of a single-rail railway, each car being kept erect by the rotary force of two gyroscopes in rapid opposite motion. The car used is called a *gyro-car.*
gy-ro-stat (*-stat*), *n.* an instrument for demonstrating the dynamics of rotating rigid bodies.

H

hab-er-dash-er (*hăb'ĕr-dash-ĕr*), *n.* a dealer in small wares, as ribbons, laces, tapes, needles, etc.

ha-bil-i-tate (*hă-bil'i-tāt*), *v. i.* to become qualified.

hab-it (*hab'it*), *n.* ordinary course of conduct; established custom; dress; a woman's riding dress; *v. t.* to dress; furnish with a habit. [GUISE, CUSTOM.]

hab-it-a-ble (*hab'it-ă-bl*), *adj.* fit to be dwelt in.

hab-i-tat (*'i-tat*), *n.* the natural locality of animals, plants, etc., in their wild state; geographical range.

hab-i-ta-tion (*-i-tā'shun*), *n.* residence or place of abode; natural locality.

Syn. HABITATION, home, house, residence. *Habitation* implies merely a dwelling place; *house* refers to a building constructed purposely for dwelling therein. *Home* is usually restricted to mean an endeared dwelling as the scene of domestic ties and family life.

ha-bit-u-al (*hă-bit'ū-al*, *adj.* formed or acquired by use; customary; inveterate.

ha-bit-u-ate (*'ū-āt*), *v. t.* to make familiar by use or custom; familiarize. [ADDICTED.]

★**ha-bit-u-é** (*ă-bē-too-ā'*, not *hab-it'yū-ē'*), *n.* one who habitually frequents a place of amusement, etc.

ha-ci-en-da (*ă-thē-ăn'dă*, or *hă-si-en'dă*), *n.* in Spanish America, a large plantation on which the owner is resident.

hack (*hak*), *v. t.* to cut irregularly and into small pieces; notch; kick (the shins of another), let out for hire: *n.* a notch; hollow irregular cut; a horse let out for hire; a kick on the shins; a carriage let out for hire; a literary drudge.

Hackensack, N. J. A town, so called from the river of same name, which is a corruption of its Indian name *haucquansauk*, "hook mouth," from its shape near the mouth, its many windings before it empties into Newark bay.

hack-ing (*'ing*), *adj.* notching; irritating and wearing: said of a cough.

hac-kle (*hak'l*), *v. t.* to dress or comb, as flax or hemp; tear into pieces: *n.* an implement with sharp spikes for cleansing flax or hemp; unspun fiber; a long narrow feather in the neck of a cock; feather fly for angling.

hack-ney (*'ni*), *v. t.* [*p. t.* and *p. p.* hackneyed, *p. pr.* hackneying], to wear out by constant use: *adj.* let out for hire; common or trite: *n.* a hackney coach; a horse kept for hire.

hack-neyed (*'nid*), *p. adj.* worn out; commonplace.

had-dock (*had'ok*), *n.* a sea fish of the cod family.

Ha-des (*hā'dēz*), *n.* the abode and state of the dead.

Hadrian's (*hā'dri-anz*) **villa.** Now simply an assemblage of ruins, perhaps the most impressive in Italy, about fifteen miles from Rome, near Tivoli. It included the Greek and Latin theaters, so called, an odeum, thermæ, a stadium, a palace, several temples, spacious structures for guards and attendants, and many subsidiary buildings and devices. Of most of these there are extensive remains; and here were found many of the fine statues now in Roman museums.

Hadrian's wall. One of the most noted Roman antiquities of Great Britain, constructed by Hadrian between the Solway firth and the mouth of the Tyne, for purposes of defense. The work has been ascribed to Severus and others, but the opinion now prevails that the whole system of defense bears the impress of a single mind, and that the wall and its parallel earthworks, its camps, roads, and stations, were designed and constructed by Hadrian alone.

hæm-a-lo-pi-a (*hem-ă-lō'pi-ă*), *n.* disease of the eye in which objects appear red.

hæ-mat-ic (*hē-mat'ik*), *adj.* pertaining to the blood: *n. pl.* that branch of physiology that treats of the blood.

haft (*haft*), *n.* a handle of a tool or knife.

hag (*hag*), *n.* a witch; an ugly old woman.

Hagar (*hā'gär*). From the Hebrew *Haghar*, which some translate "flight"; others render the name "stranger," from *gur*, "to tarry," "to be a sojourner." Arab. *Hajar*, or *Hagar*; Fr., *Agar*; Lat., *Hagar*.

hag-gard (*'ärd*), *adj.* worn and anxious in appearance; lean and hollow-eyed.

Haidee (*hī-dē'*). A female name which Stephanus renders "sempiternus"; *i. e.*, "perpetual," "eternal."

hail (*hāl*), *n.* frozen raindrops; a call or salutation: *v. i.* to pour down hail: *v. t.* to pour down or out like hail; call to or salute. [ADDRESS.]

hair (*här*), *n.* one of the small horny fibrous tubes with a bulbous root growing out of the skin of a mammal; the mass of such horny fibrous tubes.

hair-split-ting (*'split-ing*), *adj.* making oversubtle or very minute distinctions.

hair-spring (*'spring*), *n.* a very fine spring to regulate the balance wheel of a watch. [of a gun.

hair-trig-ger (*här'trig-ĕr*), *n.* a secondary trigger

hair-y (*'i*), *adj.* covered with, abounding in, or resembling, hair.

hal-cy-on (*hal'si-un*), *adj.* peaceful; happy; calm.

hale (*hāl*). *adj.* sound bodily; healthy; hearty: *v. t.* to drag or draw by violence. [DRAW.]

half (*hăf*), *n.* [*pl.* halves (*hăvz*)], one of two equal parts; a school term: *adv.* equally; partly: *adj.* consisting of a half; approximating.

half-blood (*'blud*), *n.* one whose parents are of different races; relationship between persons who have one parent in common.

half-breed (*hăf'-brēd*), *n.* a person of mixed blood; as, an Indian *half-breed*.

hal-i-but (*hal'i-but*), *n.* a large edible flatfish.

Halifax, Nova Scotia. Named for the Earl of Halifax.

hall (*hawl*), *n.* a large room; the first large room of a house; a college room.

hal-le-lu-jah (*hal-ē-lōō'yȧ*), *n.* [Hebrew, Praise ye Jehovah] an ascription of praise to God: *adj.* singing, or containing, hallelujah. [Also *alleluiah*.]

hall-mark (*hawl'-märk*), *n.* the official mark attesting the quality of gold and silver articles; a mark or proof of genuineness.

hal-loo (*hal-lōō'*), *interj.* an exclamation to call attention or to cheer on: *v. t.* to shout out; incite or cheer on: *v. i.* to cry out loudly. [Also *halloa*.]

hal-low (*hal'ō*), *v. t.* to consecrate; devote to sacred purposes; revere. [DEDICATE, HOLY.]

Hal-low-een (*-ēn'*), *n.* the eve of All Saints' or Allhallows day, Oct. 31.

hal-lu-ci-na-tion (*hal-lōō-si-nā'shun*), *n.* belief in something imaginary; delusion; error.

ha-lo (*hā'lō*), *n.* a ring or circle of light round the sun or moon; a ring of light or nimbus.

halt (*hawlt*), *n.* a stop in marching: *adj.* crippled or lame: *v. i.* to limp; be dubious; to stop in marching.

halt-er (*'ĕr*), *n.* one who halts.

hal-ter (*hawl'tĕr*), *n.* a rope for hanging; a rope for leading or holding a horse.

halve (*hăv*), *v. t.* to divide into two equal parts; fasten together, as timbers.

hal-yard (*hal'yĕrd*), *n.* a rope or tackle for hoisting a sail, flag, etc. [Also *halliard*.]

ham (*ham*), *n.* the hinder parts of the thigh; a thigh of a hog, salted and smoked.

Ham-a-me-lis (*-ă-mē'lis*), *n.* an order of shrubs, to which the witch-hazel belongs.

Ham-burg (*'bĕrg*), *n.* a rich kind of black grape; a breed of black domestic fowl.

hame (*hām*), *n.* one of the curved bars on the collar to which the traces of a draft horse are fastened.

ham-let (*'let*), *n.* a small village.

Hamlet. From the Old German *amal-laut*, "distinguished for spotlessness." According to some the name in Hamlet's country was pronounced *amlet*, and signified "madman," but no etymology has been suggested for such rendering.

ham-mer (*'ĕr*), *n.* an instrument with a handle and iron head for driving nails, beating metals, etc.: *v. t.* to beat with, or as with, a hammer: *v. i.* to work hard.

ham-mock (*'ok*), *n.* a swinging bed usually of network or canvas.

Hampden. County and town in Massachusetts and a town in Penobscot county, Maine, named for the English patriot, John Hampden.

ham-per (*'pĕr*), *n.* a large wicker-work basket for carrying food, etc.: *v. t.* to embarrass; impede.

Hampton (*hamp'tun*) **court.** A royal palace on the Thames twelve miles from Charing Cross, built by Cardinal Wolsey. Hampton court is most intimately associated with James I. and William III., and was a place of imprisonment of Charles I.

Hampton roads. A channel connecting the estuary of James river with Chesapeake bay, situated south of Fort Monroe, Virginia. Here, March 8, 1862, the Confederate ironclad *Virginia* (*Merrimac*) destroyed the Federal frigates *Cumberland* and *Congress*; and the following day there was a contest between the *Virginia* and the ironclad *Monitor*, the former retiring. This was the first engagement between ironclads in our history.

ham-string (*'string*), *v. t.* [*p. t.* and *p. p.* hamstrung, *p. pr.* hamstringing], to lame by cutting the tendons of the ham: *n. pl.* the strong sinews at the back of the knee.

hand (*hand*), *n.* the divided and terminal extremity of the arm connected with the wrist; something resembling a hand in appearance or use; a measure of 4 inches; right or left side; style of writing; an employé; cards held; nearness; agency of; index of any kind: *v. t.* to give or transmit with, or as with, the hand; assist or lead with the hand: *adj.* pertaining to, or used by, the hand.

hand-i-craft (*'i-kraft*), *n.* the work or skill of an artificer; manual skill or labor: *adj.* pertaining to manual labor.

hand-i-work (*-wĕrk*), *n.* work done, or produced by, the hands.

hand-ker-chief (*hang'kĕr-chif*), *n.* a square of linen, cotton or silk carried in the hand, to wipe the nose or face; a cloth square for the neck.

han-dle (*hand'l*), *n.* that part of a tool, vessel, etc., grasped by the hand: *v. t.* to touch or feel with the hand; manage; manipulate; treat; buy, sell, or invest in.

hand-maid (*'mād*), *n.* a female servant or attendant. [Also *handmaiden*.]

hand screw (*skrōō*), a lifting jack.

hand-some (*'sum*), *adj.* pleasing to look upon; well formed; elegantly dressed; graceful.

hand-spike (*'spīk*), *n.* a wooden lever for moving heavy weights.

hand-y (*'i*), *adj.* [*comp.* handier, *superl.* handiest], dexterous; skillful; convenient; close at hand.

hang (*hang*), *v. t.* [*p. t.* and *p. p.* hung, hanged, *p. pr.* hanging], to suspend; suspend by the neck; display; furnish with ornaments or drapery; catch fast: *v. i.* to be suspended; dangle; cling: *n.* method of hanging; manner of doing or using.

★**han-gar** (*han'gär*), *n.* a carriage shed; a shed for housing aeroplanes.

hang-ing (*'ing*), *p. adj.* suspended or dangling; suggesting or involving death by hanging: *n.* the act of putting to death by hanging: *pl.* drapery for a room.

hang-man (*'man*), *n.* [*pl.* hangmen (*'men*)], a public executioner.

hang-nail (*'nāl*), *n.* a small piece of skin hanging from the root of a finger nail; an agnail.

hank (*hangk*), *n.* two or more skeins of thread, silk, wool, etc., fastened together: *v. t.* to form into hanks.

han-ker (*hang'kĕr*), *v. i.* to desire eagerly (with *after*).

Hannah (*han'nȧ*). From the Hebrew *Hannah*, which Simonis translates "gratuitous gift"; *i. e.*, "grace," "mercy." Danish, *Hanne* or *Hanna*; Dutch, *Hanna*; Fr. *Anna*; Lat., *Hanna*; Sw., *Hanna*.

Hannibal (*han'ni-bal*). From the Punic, meaning "grace of Baal," or, more freely, a "gracious lord." Fr., *Hannibal*; It., *Annibale*; Lat., *Hannibal*.

Hanover (*han'ō-vĕr*) **island.** Off coast of Chili; named in honor of the house of Hanover.

Hanover square. A square in the West End of London, south of Oxford street and west of Regent street. It received its name in the days of the early popularity of George I. St. George's, Hanover square, is noted as a fashionable church for marriages in London. The square was built about 1731, when the place for executions was removed from Tyburn, lest the inhabitants of the "new square" should be annoyed by them. It contains a bronze statue of William Pitt by Chantrey.

Hans. See *John*.

han-som (*han'sum*), *n.* a two-wheeled cab.

hap (*hap*), *n.* something unexpected. [ACCIDENT.]

hap-haz-ard (*haz-ĕrd*), *n.* chance; accident: *adv.* by chance.

hap-less (*hap'les*), *adj.* unfortunate; unlucky; unhappy.

hap-ly (*'li*), *adv.* by chance; perhaps.

hap-pen (*'n*), *v. i.* to chance; occur.

Syn. HAPPEN, chance. *Happen* respects all events, without including any collateral idea; *chance* comprehends likewise the idea of the cause and order of events; whatever comes to pass *happens*, whether regularly in the course of things, or particularly and out of the order; whatever *chances*, *happens* altogether without concert.

hap-pi-ly (*'i-li*), *adv.* successfully; by good fortune; felicitously.

hap-pi-ness (*'i-nes*), *n.* the state of being happy; good fortune; felicitousness.

hap-py (*'i*), *adj.* [*comp.* happier, *superl.* happiest], enjoying pleasure or good; successful; prosperous; lucky; living in concord.

Syn. HAPPY, fortunate. Both words are applied to the external circumstances of a man; but the former conveys the idea of that which is abstractly good, the latter implies rather what is agreeable to one's wishes. A man is *happy* in his marriage; he is *fortunate* in his trading concerns. *Happy* excludes the idea of chance; *fortunate* excludes the idea of personal effort.

Ant. ILL-STARRED, unlucky.

Hapsburg (*haps'-burg*), or **Habsburg.** In *Canton Aargau*, the stamm-schloss of the Austrian dynasty appears in an eleventh century document as *Habechisburc*, "hawk's castle." According to the well-known legend, Radbot, an ancestor of Rudolf of Hapsburg, while hunting in the Aargau lost his favorite hawk, and found it sitting on the ridge of the Wulpelsberg. He was so delighted with the view from the spot that he chose the site for the erection of a castle, which he built about 1020 and called *Habichtsburg*.

ha-rangue (*hȧ-rang'*), *n.* a public address or oration, especially extempore: *v. i.* to deliver a harangue: *v. t.* to address by a harangue.

★**har-ass** (*har'ȧs*), *v. t.* to annoy or vex; fatigue or weary; to tire out and annoy an enemy by incessant petty attacks. [DISTRESS.]

★**har-bin-ger** (*här'bin-jĕr*), *n.* a precursor; forerunner: *v. t.* announce; foretell; usher in.

har-bor (*'bĕr*), *n.* a port or haven for ships; any place of refuge or safety: *v. t.* to shelter or protect; cherish.

Syn. HARBOR, haven, port. The idea of a resting place for vessels is common to these terms. *Harbor* carries with it the idea of affording a resting or anchoring place; *haven* conveys the idea of security; *port* conveys the idea of an inclosure. A *haven* is a natural harbor; a *port* is an artificial harbor. [See *foster*, *cherish*.]

Ant. CAST OUT, expel, expose.

hard (*härd*), *adj.* compact and solid; firm; laborious; fatiguing; cruel; oppressive; unfeeling; exacting: *adv.* forcibly; laboriously; diligently; near; with vexation, trouble, or sorrow.

Syn. HARD, firm, solid. That is *hard* which will not yield to a closer compression; that is *firm* which will not yield so as to produce a separation. Ice is hard as far as it respects itself, when it resists every pressure; it is *firm*, with regard to the water which it covers, when it is so closely bound as to resist every weight without breaking. *Hard* and *solid* respect the internal constitution of bodies, and the adherence of the

component parts; but *hard* denotes a much closer degree of adherence than solid; the *hard* is opposed to the soft; the *solid* to the fluid.
Ant. SOFT, shaking, wavering.

ard-en (*härd'n*), *v. t.* to make hard or harder; confirm in impudence or wickedness: *v. i.* to become hard or harder. [ABANDONED.]

ard-heart-ed (*-härt'ed*), *adj.* cruel; unmerciful; merciless.

ard-i-hood (*'i-hood*), *n.* effrontery; boldness; physical endurance.

ard-i-ly (*'i-li*), *adv.* with hardihood.

ard la-bor (*lā'bĕr*), work imposed as an additional punishment to a term of imprisonment.

ard-ly (*'li*), *adv.* with difficulty; scarcely.
Syn. HARDLY, scarcely. Where the idea of practicability predominates, *hardly* seems most proper; and where the idea of frequency predominates, *scarcely* seems preferable. One can *hardly* judge of a person's features by a single and partial glance; we *scarcely* ever see men lay aside their vices from a thorough conviction of their enormity.
Ant. EASILY, abundantly.

ard-pan (*'pan*), *n.* in mining, a stratum of gravel or sand; a solid foundation.

ard-ship (*'ship*), *n.* oppression; severe labor or want; injustice.

ard-tack (*'tak*), *n.* large hard cracker or biscuit.

ard-ware (*'wär*), *n.* manufactured articles of metal.

are (*hâr*), *n.* a rodent, with long ears and a short tail, larger than a rabbit.

are-brained (*'brānd*), *adj.* volatile; wild.

are-lip (*'lip*), *n.* a malformation of the upper lip, which is divided in the middle.

a-rem (*hä'* or *hä-rem*), *n.* the apartments of the women and children in a Mohammedan house; the wives and concubines of a Mohammedan. [Also *hareem, haram.*]

are's-foot (*hârz'-foot*), *n.* a species of fern; a kind of clover.

are's-tail (*-tāl*), *n.* a species of cotton grass allied to the bulrushes.

ar-i-cot (*har'ĭ-kō*), *n.* a kind of stew of meat and vegetables; the kidney bean.

ark (*härk*), *v. i.* to listen. [Also *harken.*]

arlem or **Haarlem.** In Holland, called *Haralem* in a ninth century document, is a name of doubtful meaning. In Old Saxon we have *lemo*, "clay" or "mud," and *hara*, "an estuary," and the dialect-word *har* or *haar* denotes a rising ground or small eminence. Harlem, now a suburb of New York, stands on the Harlem river, a tidal channel. With Brooklyn and Hoboken it is one of the few names surviving from the time of the Dutch occupancy.

ar-le-quin (*här'lē-kin* or *kwin*), *n.* the performer in a pantomime who wears parti-colored garments: *adj.* fantastic or full of trickery; parti-colored.

ar-lot (*'lot*), *n.* a prostitute.

ar-lot-ry (*-ri*), *n.* the trade or practice of prostitution.

arm (*härm*), *n.* injury; hurt; damage: *v. t.* to inflict hurt, damage, or injury upon. [ABUSE.]

ar-mon-ic (*här-mon'ik*), *adj.* pertaining to, or producing, harmony; musical. [Also *harmonical.*] *n. pl.* the science of musical sounds.

ar-mon-i-ca (*-mon'ĭ-kä*), *n.* a mouth organ; an oblong musical instrument consisting of glass slips which are struck by a mallet. [Also *harmonicon.*]

ar-mo-ni-ous (*-mō'ni-us*), *adj.* concordant; musical; symmetrical.

ar-mo-nize (*'mō-nīz*), *v. t.* to render harmonious; cause to agree; reconcile: *v. i.* to agree; be in peace and friendship; correspond.

ar-mo-ny (*'mō-ni*), *n. pl.* harmonies (*-niz*)], the quality of being pleasing to the ear; unison; accord in feeling, sentiment, etc.; a literary work showing the agreement between histories or passages; the science of music. [CONCORD.]

ar-ness (*'nes*), *n.* the working gear of a horse; accouterment: *v. t.* to put harness upon.

arold (*har'uld*). The same with the Middle High German names *Ariold, Harhold*, etc., which Wachter translates "powerful in battle," "a champion." Danish, *Harald;* Dutch, *Herold;* Fr., *Harold;* It., *Araldo;* Lat., *Haroldus.*

arp (*härp*), *n.* a musical stringed instrument of triangular shape, played with the fingers: *v. i.* to play on the harp; dwell tediously or persistently on a subject (with *on* or *upon*).

arper's Ferry, Va. Robert Harper of Oxford, England, an architect, en route to Winchester, saw this pass, bought land here and formed a settlement in 1734. Later he established a ferry at this point, known as "Harper's ferry."

ar-poon (*här-pōōn'*), *n.* a long barb-headed spear having a line attached to the staff: *v. t.* to strike with a harpoon.

arp-si-chord (*härp'si-kôrd*), *n.* a stringed instrument with a keyboard, the precursor of the pianoforte.

ar-py (*här'pi*), *n.* [*pl.* harpies (*'iz*)], in classical mythology, one of three winged monsters, the daughters of Neptune and Terra, with a woman's face and the body and sharp claws of a vulture; a large crested American eagle.

ar-ri-er (*har'ĭ-ĕr*), *n.* a variety of dog used for hunting hares; a species of hawk.

arriet (*har'ri-et*). From the German *Henriette*, "head of the house." Danish, *Henriette;* Dutch, *Henrietta;* Fr., *Henriette;* It., *Enrichetta;* Sp., *Enriqueta;* Sw., *Henrietta.*

Harrisburg, Pa. A city; named from its first settler, John Harris of Yorkshire, England. Founded in 1785, name subsequently changed to *Louisbourg;* in 1791, changed back to *Harrisburg.*

har-row (*har'ō*), *n.* an agricultural instrument for breaking up clods upon sown land: *v. t.* to use a harrow; lacerate or torment.

har-ry (*'i*), *v. t.* [*p. t.* and *p. p.* harried, *p. pr.* harrying], to plunder, lay waste; annoy or vex: *v. i.* to make raids.

harsh (*härsh*), *adj.* discordant; jarring; rough to the ear, taste, or touch; austere.

hart (*härt*), *n.* the male of the red deer.

Hartford. Name transferred from Hertford, England, to many places in the United States, the capital of Connecticut being one of these.

harts-horn (*härtz'hôrn*), *n.* a volatile preparation of ammonia.

har-um-scar-um (*hâr-um-skâr'um*), *adj.* giddy; wild; untidy.

har-vest (*här'vest*), *n.* the season of reaping and gathering: *v. t.* to gather in, as corn; reap.

har-vest-home (*-hōm*), *n.* a harvest festival.

Harvey. A masculine name from Old German *her-wig*, "noble," "noble soldier or warrior."

Harz (*härts*) or **Hartz mountains.** In German *Harzgebirge*, were called in the eighth century *Hart* (Old Saxon *hard*, Old High German *hart*, "wood" or "forest"). The present spelling, *Harz*, is supposed to be due to a folk etymology which has made the name into *Harzwald*, the "forest of resin" (*harz*). The *Hardt*, a wooded range of hills near Carlsruhe, is the "wood."

hash (*hash*), *n.* a dish of meat cut and cooked with vegetables; a mixture: *v. t.* to chop small and mix.

hasp (*hâsp*), *n.* a clasp folded over a staple and secured with a padlock.

has-sock (*has'ok*), *n.* a padded mat or cushion for kneeling upon.

haste (*hāst*), *n.* celerity; speed; urgency; precipitancy: *v. t.* to hasten.

has-ten (*hās'n*), *v. t.* to cause to make haste; hurry: *v. i.* to move with speed; be quick.
Syn. HASTEN, accelerate, speed, expedite, dispatch. *To hasten* expresses little more than the general idea of quickness in moving toward a point; *accelerate* expresses, moreover, the idea of bringing something to a point. The word *speed* includes not only quick but forward movement. He who goes with *speed* goes effectually forward. This idea is excluded from the term *haste*, which may often be a planless, unsuitable quickness. Hence the proverb, "The more *haste*, the less *speed*." *Expedite* and *dispatch* are terms of higher import, in application to the most serious concerns in life; but to *expedite* expresses a process, a bringing forward toward an end; *dispatch* implies a putting an end to, a making a clearance. We do everything in our power to *expedite* a business; we *dispatch* a great deal of business within a given time.
Ant. CHECK, delay, impede, retard.

has-ty (*'ti*), *adj.* [*comp.* hastier, *superl.* hastiest], precipitate; quick; speedy; eager; vehement; rash. [CURSORY.]

ha-sty pud-ding (*pud'ing*), a pudding of flour or meal and water or milk.

hat (*hat*), *n.* a covering for the head, with a crown and brim.

hat-band (*'band*), *n.* a band worn round the hat.

hatch (*hach*), *v. t.* to produce (young) from eggs; plot or contrive: *n.* the number of young produced from eggs at a sitting; brood; plot; a door with an opening over it: *pl.* doors or openings in the deck of a ship.

hatch-er-y (*'ĕr-i*), *n.* a place where eggs are artificially hatched.

hatch-et (*'et*), *n.* a small ax.

hatch-way (*'wā*), *n.* a rectangular opening in the deck of a vessel for passage below.

hate (*hāt*), *v. t.* to dislike intensely; abhor; detest: *n.* hatred.
Syn. HATE, detest. *To hate* is a personal feeling directed toward the object independently of its qualities; *to detest* is a feeling independent of the person, and altogether dependent upon the nature of the thing. One *hates*, but not *detests*, the person who has done an injury to one's self; and that one *detests*, rather than *hates* the person who has done injuries to others.
Ant. AFFECT, dote, love.

hate-ful (*'fool*), *adj.* causing hate.
Syn. HATEFUL, odious. *Hateful* is properly applied to whatever violates general principles of morality; lying and swearing are *hateful* vices; *odious* is more commonly applied to such things as affect the interests of others, and bring *odium* upon the individual.
Ant. CONGENIAL, pleasant.

ha-tred (*hā'tred*), *n.* bitter aversion; continued hostility of feeling; detestation. [ABOMINATION, ANTIPATHY.]

Hatteras, Cape, N. C. Name applied to the headland by early English navigators, from a tribe of Indians inhabiting its shores, the *Hatterask* or *ash.*

haugh-ty (*haw'ti*) *adj.* proud and disdainful; supercilious; haughtiness.

haugh-ti-ness (*'ti-nes*), *n.* the character or quality of being haughty; pride; disdain.
Syn. HAUGHTINESS, disdain, arrogance. *Haughtiness* is founded on the high opinion we entertain of ourselves; *disdain*, on the low opinion we have of others; *arrogance* is the result of both, but if anything, more of the former than the latter. *Haughtiness* and *disdain* are properly sentiments of the mind, and *arrogance* a mode of acting resulting from a state of mind. [See *pride.*]
Ant. HUMILITY, meekness, modesty.

haul (*hawl*), *v. t.* to pull or draw with force; transport by drawing: *n.* a strong pull; draft of a net; quantity caught at one time; distance over which anything is drawn. [DRAW.]

haunch (*hänch*), *n.* the fleshy part of the hip and buttock.

haunt (*hänt*), *n.* a place of accustomed resort: *v. t.* to visit frequently or habitually. [FREQUENT.]

hau-teur (*hō-tĕr'*), *n.* haughty bearing or spirit.

Ha-van-a (*hä-van'ä*), *n.* a cigar made of Cuban tobacco.

Havana. Capital city of Cuba, city in Mason county, Illinois, named for former. The word is Spanish, meaning "harbor."

have (*hav*), *v. t.* [*p. t.* and *p. p.* had, *p. pr.* having], to possess; take; hold or bear; enjoy; desire; be obliged; bring forth; cheat; obtain the advantage of.
Syn. HAVE, possess. *To have* is sometimes *to have* in one's hand or within one's reach; but *to possess* is *to have* as one's own; a clerk *has* the money which he has fetched for his employer; the latter *possesses* the money which he *has* the power of turning to his use.

ha-ven (*hā'vn*), *n.* a sheltered anchorage for ships; harbor; place of shelter and safety. [HARBOR.]

hav-er-sack (*hav'ĕr-sak*), *n.* a strong coarse linen bag which soldiers carry.

hav-oc (*'ok*), *n.* wide and general destruction; devastation.

Havre (*hä'vĕr*). The "haven" at the mouth of the Seine was, before 1515, merely a fishing village with a chapel dedicated to Notre Dame de Grace, hence the official name *Le Havre de Grace.* The French *havre*, "a harbor," is descended from the Old French *havle*, originally *hable*, which is derived from the Low-Latin *habulum*, a word of Teutonic origin related to the English *haven.*

haw (*haw*), *n.* the fruit of various species of hawthorn; a hesitation in speech.

Ha-wai-ian (*hä-wī'yan*), *adj.* pertaining to Hawaii, its inhabitants, or language.

Hawarden (*här'den*). A town in Flintshire, North Wales, sixteen miles south of Liverpool. Near it is Hawarden castle, once the residence of Gladstone, the British statesman.

hawk (*hawk*), *n.* a name for various species of raptorial birds allied to the eagles and falcons; a forcible effort to clear the throat: *v. t.* to cry, or carry about, for sale: *v. i.* to make a forcible effort to cough.

hawk-er (*'ĕr*), *n.* peddler; falconer.

hawk-eyed (*'id*), *adj.* keen sighted like a hawk.

hawse-hole (*hawz'hōl*), *n.* one of the two holes under a ship's bow through which the cable passes.

haws-er (*'ĕr*), *n.* a thick rope or cable.

haw-thorn (*haw'thôrn*), *n.* a prickly shrub or tree of the rose family.

Hawthornden (*haw'thôrn-den*). A picturesque glen or valley in Edinburghshire, Scotland, eight miles south of Edinburgh. The estate of Hawthornden was the property of the poet, William Drummond.

hay (*hā*), *n.* grass, clover, etc., cut and dried for fodder.

hay-cock (*'kok*), *n.* a conical pile of hay.

hay fe-ver (*fē-vĕr*), a catarrh, accompanied by itching, sneezing, slight fever, and pains in the head.

Haymarket, The. A London market, established in 1644 on the site now partly covered by the Criterion restaurant and theater and Lower Regent street. It was abolished in 1830. The place is called *Haymarket square*, or the *Haymarket.*

hay-mow (*'mow*), *n.* a mass of hay laid up in a barn.

Hayti (*hā'ti*, French *ä-ē-tē'*). A native name, meaning "mountainous country." One of the West Indian islands. [Also *Haiti.*]

Hay-ti-an (*hā'ti-an*), *adj.* pertaining to Hayti or its inhabitants. [Also *Haitian.*]

haz-ard (*haz'ĕrd*), *n.* chance; accident; risk; danger: *v. t.* to run the risk of; chance; put in peril.
Syn. HAZARD, risk, venture. He who *hazards* an opinion or an assertion does it from presumptuous feelings and upon slight grounds; he who *risks* a battle does it often from necessity; he chooses the least of two evils; he who *ventures* on a mercantile speculation does it from a love of gain. [See *accident, danger.*]

haz-ard-ous (*-us*), *adj.* risky; perilous.

haze (*hāz*), *n.* a slight fog or mist; dimness of sight or knowledge: *v. i.* to be foggy or misty: *v. t.* play practical jokes upon.

haz-el (*'l*), *n.* a shrub or tree of the genus Corylus, bearing an edible nut.

haz-y (*'i*), *adj.* misty; obscure.

he (*hē*), *pr.* [*pl.* they (*thā*)], the masculine pronoun of the third person: *n.* a male.

head (*hed*), *n.* the uppermost part of the body of an animal that contains the face, brain, etc.; chief or principal part of anything; leader or commander; place of honor or authority; top; the understanding or intellect; origin or source: *adj.* principal or chief: *v. t.* to lead or direct; take the first place in; get in front of; direct the course of; *v. i.* come to, or form, a head.

head-ed (*'ed*), *adj.* having a head; noting under-

standing or intellect (much used in composition, as clear-*headed*, wrong-*headed*, etc.).

head-ing (*hed'ing*), *n.* a title.

head-land (*'land*), *n.* a promontory.

head-line (*'līn*), *n.* a line of type displayed conspicuously at the top of a page, chapter, column: *pl.* the ropes at the head of a sail.

head-long (*'lông*), *adv.* head foremost; rashly; precipitously: *adj.* rash; precipitate; thoughtless.

heads-man (*hedz'man*), *n.* an executioner.

head-strong (*hed'strông*), *adj.* ungovernable; self-willed. [OBSTINATE.]

head-y (*hed'i*), *adj.* precipitate; intoxicating. [OBSTINATE.]

heal (*hēl*), *v. t.* to restore to health; cure; make sound; *v. i.* to become well or sound. [CURE.]

health (*helth*), *n.* freedom from bodily pain or disease; vigor of mind; a toast or pledge.

health-ful (*'fool*), *adj.* promoting health; salubrious.

health-y (*'i*), *adj.* [*comp.* healthier, *superl.* healthiest], noting a sound condition of body.

Syn. HEALTHY, wholesome, salubrious, salutary. *Healthful* is applied to exercise, to air, situation, climate, and food, for which latter *wholesome* is commonly substituted; the life of a farmer is reckoned the most *healthy;* and the simplest diet is the most *wholesome.* *Healthy* and *wholesome* are rather negative in their sense; *salubrious* and *salutary* are positive; that is *healthy* and *wholesome* which does no injury to the health; that is *healthful* and *salubrious* which serves to improve the health; and that is *salutary* which serves to remove a disorder. [See *sound.*]

Ant. DELICATE, diseased, frail, ill, sick.

heap (*hēp*), *n.* a quantity; accumulation; crowd: *v. t.* to form into a heap; pile up; amass.

Syn. HEAP, pile, accumulate, amass. *To heap* is an indefinite action; it may be performed with or without order; *to pile* is a definite action done with design and order; thus we *heap* stones, or *pile* wood. *To accumulate* is properly to bring or add *heap* to *heap*, which is a gradual and unfinished act; *to amass* is to form into a *mass*, which is a single complete act; a man may *accumulate* guineas or anything else in small quantities, but he properly *amasses* wealth.

Ant. DISSIPATE, spend, squander, waste.

hear (*hēr*), *v. t.* [*p. t.* and *p. p.* heard, *p. pr.* hearing], to perceive by the ear; attend or listen to; attend judicially: *v. i.* to have the sense of hearing; be told of.

hear-ing (*'ing*), *n.* the sense by which sound is perceived; audience; judicial investigation.

hearк-en (*härk'n*). Same as *hark.*

hear-say (*hēr'sā*), *n.* rumor or report: *adj.* second hand. [FAME.]

hearse (*hērs*), *n.* a vehicle for the conveyance of dead bodies.

heart (*härt*), *n.* the organ in animals by the muscular contraction and dilation of which the blood is circulated through the arteries, etc.; the vital, inner, or chief part of anything; the seat of affection; affection; courage; will; spirit; conscience; a suit of cards marked with one or more red hearts.

heart-bro-ken (*'brō-kn*), *adj.* overwhelmingly grieved.

heart-burn (*'bērn*), *n.* a burning affection of the œsophagus, caused by acidity of the stomach.

heart-en (*'n*), *v. t.* to give courage to; inspirit.

★**hearth** (*härth*, not *hērth*), *n.* that part of a room where the fire is made; hence, the family circle.

heart-y (*härt'i*), *adj.* [*comp.* heartier, *superl.* heartiest], cordial; sincere; open; warm; kind; healthy.

Syn. HEARTY, warm, sincere, cordial. There are cases in which it may be peculiarly proper to be *hearty*, as when we are supporting the cause of religion and virtue; there are other cases in which it is peculiarly proper to be *warm*, as when our affections ought to be roused in favor of our friends; in all cases we ought to be *sincere* when we express either a sentiment or a feeling; it is peculiarly happy to be on terms of *cordial* regard with those who stand in any close relation to us. The man himself should be *hearty*; his heart should be *warm;* professions should be *sincere;* a reception *cordial.*

Ant. COLD, distant, inimical, unfriendly.

heat (*hēt*), *n.* the sensation produced by a hot body; the state of being hot; ardor; vehemence; a course at a race: *v. t.* to make hot; warm; excite with passion or desire: *v. i.* to become hot or warm.

heath (*hēth*), *n.* a small evergreen flowering shrub with rose-colored flowers, etc.; heather; moorland.

hea-then (*hē'then*), *n.* one who is ignorant of the true God; a pagan; idolator.

hea-then-ish (*-ish*), *adj.* pertaining to heathens; rude; ignorant, or uncultured.

hea-then-ism (*-izm*), *n.* ignorance of the true God; paganism; idolatry.

heave (*hēv*), *v. t.* to hoist or lift up; force from the breast, as a sigh; throw: *v. i.* to be lifted up; rise and fall alternately; pant: *n.* an effort or exertion upward; lift; the act of throwing; haul. [LIFT.]

heav-en (*hev'n*), *n.* the abode of God and the blessed; the firmament or sky; a state or condition of bliss.

heav-en-ly (*-li*) *adj.* belonging to, or suggestive of, heaven. [CELESTIAL, GODLIKE.]

heav-er (*hēv'ēr*), *n.* one who, or that which, lifts or heaves, especially one who loads or unloads goods, coal, etc.

heav-y (*hev'i*), *adj.* [*comp.* heavier, *superl.* heaviest], ponderous; weighty; oppressive; grievous; laborious; dull; indigestible: *adv.* heavily. [*Poetry.*]

Hebe (*hē'bē*). A female name, derived from *Hebe*, daughter of Jupiter and Juno, or of Juno only; and who, being fair and always in the bloom of youth, was called "the goddess of youth."

He-bra-ic (*hē-brā'ik*), *adj.* pertaining to the Hebrews, the Jewish language or literature.

He-bra-ist (*-ist*), *n.* one who is learned in the Hebrew language and literature.

He-brew (*'brōō*), *adj.* pertaining to the Hebrews, a Semitic race; Jewish: *n.* the Hebrew language; a Jew.

Hebrides (*heb'ri-dēz*). A group of islands west of Scotland. Anciently referred to by Ptolemy as the *Ebudæ*, and by Pliny as the *Hebudes*, denoting the "western isles."

hec-a-te (*hek'ä-tē*), *n.* a witch; a hag.

Hec-a-te, *n.* an ancient threefold Grecian deity possessing power over heaven, earth, and the underworld.

hec-tic (*'tik*), *adj.* constitutional; slow, but of long continuance; feverish: *n.* a remittent fever accompanying consumption.

hec-to-graph (*'tō-grăf*), *n.* an apparatus for multiplying copies of a letter or drawing, etc. [*French.*]

hec-tor (*'tēr*), *v. t.* to bully or bluster, from *Hector*, the Trojan hero.

Hector. From the Greek name *Hektor.* The name signifies "anchor," literally, "what holds"; also translated a "defender." Fr., *Hector*; It., *Ettore*; Lat., *Hector.*

hedge (*hej*), *n.* a fence of bushes or shrubs: *v. t.* to inclose with a hedge; encircle; invest: *v. i.* to bet on both sides.

hedge-hog (*'hog*), *n.* an insectivorous mammal covered on the back with spines or prickles.

hed-on-ism (*hed'on-izm*), *n.* the doctrine that pleasure is the chief end of life.

heed (*hēd*), *v. t.* to regard with care; take notice of; mind: *n.* careful attention; caution.

Syn. HEED, care, attention. *Heed* applies to matters of importance to one's moral conduct; *care* to matters of minor import; a man is required to take *heed;* a child is required to take *care;* the former exercises his understanding in taking *heed;* the latter exercises his thoughts and his senses in taking *care.* We speak of giving *heed* and paying *attention.*

Ant. CARLESSNESS, neglect.

heed-ful (*'fool*), *adj.* cautious; attentive.

hee-haw (*hē'haw*), *v. i.* to bray like an ass: *n.* the bray of an ass.

heel (*hēl*), *n.* the hinder part of the foot, shoe, or stocking: *v. t.* to furnish with a heel: *v. i.* lean on one side, as a ship.

heft (*heft*), *n.* weight; the greater part or bulk: *v. t.* to try the weight of, by lifting or holding in the hand.

He-gi-ra (*hē-jī'rä*), *n.* the flight of Mohammed from Mecca to Medina (662 A. D.). [Also *Hejira.*]

heif-er (*hef'ēr*), *n.* a young cow.

heigh-ho (*hā'-hō*), *interj.* an expression of languor or uneasiness.

★**height** (*hīt*, not *hītth*), *n.* altitude; elevation; highest state or degree; stature.

height-en (*'n*), *v. t.* to make high or higher; elevate; intensify; set off; increase.

★**hei-nous** (*hā'nus*, not *hē'nus*), *adj.* atrocious; extremely wicked; flagrant.

Syn. HEINOUS, flagrant, flagitious, atrocious. A crime is *heinous* which seriously offends against the laws of men; a sin is *heinous* which seriously offends against the will of God; an offense is *flagrant* which is in direct defiance of established opinions and practice; it is *flagitious* if a gross violation of the moral law, or coupled with any grossness; a crime is *atrocious* which is attended with any aggravating circumstances.

Ant. MERITORIOUS, moral, right, virtuous.

Heinrich (*hīn'rēk*). See *Henry.*

heir (*ār*), *n.* one who succeeds another in possession.

heir-ess (*'es*), *n.* a female heir.

heir-loom (*'lōōm*), *n.* any movable or personal chattel which descends to the heir.

Helen (*hel'en*) or **Helena** (*hel'ē-nä*). From the Greek *Helene*, signifying "a lamp," "a torch," hence "brightness." Danish, *Helena;* Dutch, *Helena;* Fr., *Hélène;* Ger., *Helene;* It., *Elena;* Lat., *Helena;* Sp., *Elena.*

Helena, Mont. From the Greek Latinized word, *Helen.* John Somerville suggested it at a meeting of several hundred miners, in 1864, as a name for the settlement. Opinions differ, however, as to the origin of the name, for by some it is supposed to be named for Helen of Troy. The Helena Historical Directory of 1879 says it was named by John Somerville, of Minnesota, *St. Helena,* from the resemblance in its location to that of the original St. Helena. It was then voted to drop the prefix *Saint,* and that was done.

He-li-an-thus (*hē-li-an'thus*), *n.* a genus of plants to which the sunflower belongs.

hel-ic-al (*hel'i-kal*), *adj.* spiral-shaped.

he-li-cop-ter (*hē-li-kop'tēr*), *n.* in aëronautics, a flying machine in which propellers are used to give the necessary power to rise.

Heligoland (*hel'i-gō-länd*). Now a German island, expresses the Danish for "holy land settlement."

helio, a *prefix* meaning *sun, caused by,* or *like,* the *sun* or *sunlight,* as *heliograph,* an instrument for taking a photograph of the sun, or for signaling by reflecting sunlight.

he-li-om-e-ter (*hē-li-om'ē-tēr*), *n.* a micrometer fo measuring small angles in the heavens.

he-li-o-scope (*'li-ō-skōp*), *n.* a form of refractin telescope for observing the sun.

he-li-o-stat (*'li-ō-stat*), *n.* an instrument by whic signaling is carried on by means of a mirror.

he-li-o-trope (*'li-ō-trōp*), *n.* a plant whose flowe follow the course of the sun; the color of the flowe of heliotrope, bluish-pink.

he-li-o-type (*'li-ō-tīp*), *n.* an impression from photograph taken on a gelatine plate hardene with alum.

hell (*hel*), *n.* the place of the dead or of departe souls (more correctly *Hades*); the place of punish ment for the wicked after death.

Hel-len-ic (*hel-en'ik*), *adj.* pertaining to, or charac teristic of, the ancient Hellenes or Greeks, or t Grecian art and literature.

Hel-len-ism (*hel'en-izm*), *n.* a Greek idiom; Grecia culture.

Hel-len-ist (*'en-ist*), *n.* a Jew who spoke Greek; on learned in Greek.

helm (*helm*), *n.* the apparatus for steering a ship tiller; the place of its direction and government a helmet. [*Poetry.*] *v. t.* to guide or conduct.

hel-met (*hel'met*), *n.* metal or leather armor for th head; the hooded upper lip of a flower.

help (*help*), *v. t.* to give assistance to; aid; support sustain; remedy; cure: *v. i.* to lend aid; be availabl or useful: *n.* assistance; aid; support; succor; relief a portion of food; a hired servant.

Syn. HELP, assist, aid, succor, relieve *Help* signifies to do good to; *assist* signifies t place one's self by another so as to give him ou strength; *aid* signifies to profit toward a specifi end; *succor* signifies to run to the help of any one *relieve* signifies to alleviate. We *help* a person t prosecute his work, or *help* him out of a difficulty we *assist* in order to forward a scheme, or w *assist* a person in the time of his embarrassment we *aid* a good cause, or we *aid* a person to mak his escape; we *succor* a person who is in danger we *relieve* him in time of distress.

Ant. OPPOSE, thwart, withstand.

Helsingfors (*hel-sing-fors'*), **Finland.** From th tribal name of the *Helsings*, and *fors*, "a water fall." We have cognate names *Helsingland* an *Helsingborg* in Sweden, and *Helsingor* in Denmark

hel-ter-skel-ter (*hel'tēr-skel'tēr*), *adv.* in hurry an confusion.

Helvetia (*hel-vē'shi-ä*). The old Latin name o Switzerland; often used as a poetical appellatio in modern literature. The country is ofte mentioned as the *Helvetian Republic,* and that is still the official name.

Hel-ve-tian (*hel-vē'shan*), *adj.* pertaining to Switzerland: *n.* a Swiss. [Also *Helvetic.*]

hem (*hem*), *n.* the edge of a garment doubled an sewn; an ejaculatory sound: *v. t.* [*p. t.* and *p. p* hemmed, *p. pr.* hemming], to form a hem on; t shut in; environ: *v. i.* utter the ejaculation "hem!"

hem-a-tin (*hem'ä-tin*), *n.* the red coloring matte in the blood. [Also *hæmatin.*]

hemi, a *prefix* meaning *half,* as *hemi*sphere, half sphere or globe.

hem-i-sphere. See under *hemi.*

hem-i-stich (*hem'i-stik*), *n.* in poetry, an incomplete line, or the half of a line.

hem-lock (*hem'lok*), *n.* a wild poisonous plant of the parsley family; *hemlock* spruce, an evergreen tree of the pine family.

hem-mer (*'ēr*), *n.* one who, or that which, hems.

hem-ming (*'ing*), *n.* the action of the verb *to hem;* hems collectively.

hem-op-ty-sis (*-op'ti-sis*), *n.* spitting of blood.

hem-or-rhage (*hem'ō-rāj*), *n.* bleeding from the lungs, arteries, veins, etc.

hem-or-rhoids (*'ō-roidz*), *n. pl.* bleeding piles.

hemp (*hemp*), *n.* a plant of the nettle family, the tough fiber of which is used for cordage and various kinds of coarse linen.

hemp-en (*'en*), *adj.* pertaining to, or made of, hemp.

hem-stitch (*'stich*), *n.* a particular kind of ornamental stitching.

hen (*hen*), *n.* the female of a bird, especially the domestic fowl.

hence (*hens*), *adv.* from this, in consequence of this: *interj.* away! begone!

hench-man (*hench'man*), *n. pl.* henchmen (*'men*), formerly, a male attendant or servant. [ACCESSORY.]

Henderson, Ky. A town named after the county, so called in honor of Col. Richard Henderson.

Henlopen (*hen-lō'pen*), **Cape, Del.** From a Dutch expression, *en lofen,* meaning "to run in" as indicating the place of entrance to a bay. Previously named *Cornelius* by the Dutch commander, Mey, after his Christian name.

hen-pecked (*'pekt*), *adj.* governed by one's wife.

Henri (*än-rē'*). The French form of *Henry.*

Henrietta (*hen-ri-et'tä*). A name formed from *Henry.*

Henry. Usually rendered "home-ruler," or "chief of the house." The Gothic name is *Heinric*, the Anglo-Saxon *Henric* and *Cynric*, and the North High German, *Heinrich;* but all these names are the same as the old *Hunoricus*, from *Kunreich* "illustrious for strength." The English name *Henry*, formerly also *Henrie*, *Henri*, *Herry*, now *Harry*, is derived from the Old French and French *Henri.* Danish, *Hendrik;* Dutch, *Hendrik.*

Ger., *Heinrich;* It., *Enrico,* or *Errico;* Lat., *Henricus;* Port., *Henrique;* Sp., *Enrique;* Sw., *Henrik.*

Henry, Cape, Va. Named by Admiral Newport in April, 1607, in honor of Henry, prince of Wales, son of James I. of England.

he-pat-ic (*hē-pat'ik*), *adj.* pertaining to the liver.

hep-tarch-y (*hep'tärk-i*), *n.* [*pl.* heptarchies (*-iz*)], a government by seven rulers, especially the seven Anglo-Saxon kingdoms established in England.

her (*hēr*), *pron.* the objective and possessive case of the personal pronoun *she.*

her-ald (*her'ald*), *n.* formerly an official who proclaimed messages from a sovereign; a precursor: *v. t.* proclaim; usher in. [ANNOUNCE.]

he-ral-dic (*hē-ral'dik*), *adj.* pertaining to heralds or heraldry.

her-al-dry (*her'al-dri*), *n.* the science that treats of armorial bearings.

Herat (*her-ät'*). Anciently *Aria-Civitas,* the town on the Arius, now the river Heri.

herb (*ĕrb* or *hĕrb*), *n.* a plant with a soft and succulent stem.

her-ba-ceous (*hĕr-bā'shus*) *adj.* pertaining to, of the nature of, or feeding upon, herbs.

herb-age (*ĕrb'āj* or *hĕrb'āj*), *n.* herbs collectively; grass; pasturage; the right of pasture on the lands of another.

her-ba-ri-um (*hĕr-bā'ri-um*), *n.* [*pl.* herbaria (*-ä*)], a systematic collection of dried plants for purposes of study; a building where such a collection is kept.

Herbert (*hĕr'bĕrt*). A name derived from the Alemannic *Heribert, Heribret, Heripreht,* Old German *Aribert,* which Wachter derives from *aer bert,* "illustrious lord." Lat., *Herbertus;* Sw., *Herbert.*

her-bif-er-ous (*-bif'er-us*), *adj.* producing herbs.

Herculaneum (*hĕr-kū-lā'nē-um*). An ancient city of Campania, Italy, near the coast, six miles southeast of Naples, directly at the foot of Mount Vesuvius. The ancient Greek name was *Herakleion,* "city of Hercules."

Her-cu-le-an (*-kū'lē-an*), *adj.* pertaining to Hercules, the hero of Grecian mythology, possessed of superhuman strength; hence, of exceeding strength and power; very difficult.

Hercules (*hĕr'kū-lēz*). From the Greek *Hera* and *Kleos,* "glory or fame"; hence, the "glory of Hera." Fr., *Hercule;* Ger., *Hercules;* Gr., *Herakles;* It., *Ercole;* Lat., *Hercules.*

herd (*hĕrd*), *n.* a collection of beasts or cattle; crowd; a keeper of cattle: *v. i.* to unite or associate, as beasts; crowd together.

here (*hēr*), *adv.* in, or to, this place or time; at this point.

here-by (*-bī'*), *adv.* by virtue of this; near.

he-red-i-ta-ry (*hē-red'i-tā-ri*), *adj.* passing from an ancestor to a descendant.

he-red-i-ty (*'i-ti*), *n.* the transmission of physical or mental characteristics or qualities from parent to offspring.

here-in (*hēr-in'*), *adv.* in this.

here-in-aft-er (*-äft'er*), *adv.* in this (deed, book, etc.) after or subsequently.

her-e-sy (*her'ē-si*), *n.* [*pl.* heresies (*-siz*)], an opinion or doctrine at variance with fundamental truths commonly received. [HETERODOXY.]

her-e-tic (*'ē-tik*), *n.* one who holds, or maintains, heretical opinions.

he-ret-i-cal (*hē-ret'i-kal*), *adj.* pertaining to, or having the character of, heresy.

here-to-fore (*hēr-tōō-fōr'*), *adv.* previously; hitherto.

her-i-tage (*her'i-tāj*), *n.* an estate or birthright that passes from an ancestor to a descendant.

Herman (*hĕr'man*). From the Teutonic, meaning the "leader of an army." Danish, *Hermann;* Dutch, *Herman;* Fr., *Armand* or *Armant;* Ger., *Hermann;* Lat., *Hermannus* or *Harmannus;* Sw., *Herman.*

her-maph-ro-dite (*hĕr-maf'rō-dīt*), *adj.* having the sexual characteristics of both male and female: *n.* an animal with both the male and female sexual organs.

her-met-ic (*hĕr-met'ik*), *adj.* perfectly closed and air-tight. [Also *hermetical.*]

Hermione (*hĕr-mī'ō-nē*). A name derived from *Hermione,* a daughter of Mars and Venus, who married Cadmus.

her-mit (*'mit*), *n.* one who retires from society and lives in solitude; an anchorite.

her-mit-age (*-āj*), *n.* the abode of a hermit; a wine.

Her-mit-age, The. A palace at St. Petersburg, Russia, founded by Catherine II., originally in the form of a pavilion of moderate size, but rebuilt in the nineteenth century in a neo-Greek style of excellent effect, and forming one of the best-designed museums existing. Also the name of the home of President Jackson, near Nashville, Tenn.

her-nia (*'ni-ä*), *n.* a protrusion of some part of the intestine, or of some other internal organ.

he-ro (*hē'rō*), *n.* [*pl.* heroes (*'rōz*)], a man of distinguished courage, moral or physical; the chief character in a play, novel, poem, etc.

Hero. Female name, so called after the celebrated Greek name *Hero,* "one raised or elevated."

he-ro-ic (*hē-rō'ik*), *adj.* having the qualities of a hero; larger than life; venturesome; drastic. [Also *heroical.*] *n. pl.* extravagant or boastful language.

he-ro-ic verse (*vĕrs*), epic poetry; the hexameter verse in Greek and Latin poetry; in English, iambic pentameter.

her-o-ine (*her'ō-in*), *n.* a female hero.

her-o-ism (*her'ō-izm*), *n.* the qualities of a hero.

Herold. See *Harold.*

her-on (*'un*), *n.* a wading bird with a long neck and long legs.

he-ro wor-ship (*hē'rō wĕr'ship*), excessive admiration of distinguished men.

her-pe-tol-o-gy (*hĕr-pē-tol'ō-ji*), *n.* that branch of zoölogy that treats of reptiles and amphibians.

★**her-ring** (*her'ing,* not *her'in*), *n.* an edible sea fish moving in shoals.

her-ring-bone (*-bōn*), *n.* a kind of cross-stitch: *v. t.* and *v. i.* to work in such a stitch.

hes-i-tan-cy (*hez'i-tan-si*), *n.* hesitation; suspense.

hes-i-tate (*'i-tāt*), *v. i.* to be in suspense or uncertainty; pause; vacillate; stammer.

Syn. HESITATE, falter, stammer, stutter. A person who is not in the habit of public speaking, or of collecting his thoughts into a set form, will be apt *to hesitate* even in familiar conversation; he who first addresses a public assembly will be apt *to falter;* children who first begin to read will *stammer* at hard words; and one who has an impediment in his speech will *stutter* when he attempts to speak in a hurry. [See *demur.*]

Hes-sian (*hesh'an*), *adj.* pertaining to Hesse in Germany or its inhabitants.

Hester. See *Esther.*

het-er-o-dox (*het'ĕr-ō-doks*), *adj.* deviating from an accepted doctrine or standard; opposed to orthodox.

het-er-o-dox-y (*-doks-i*), *n.* [*pl.* heterodoxies (*-iz*)], an unorthodox doctrine or opinion; heresy.

Syn. HETERODOXY, heresy. To be of a different persuasion is *heterodoxy;* to have a faith of one's own is *heresy.*

Ant. ORTHODOXY.

het-er-o-ge-ne-ous (*-ō-jē'nē-us*), *adj.* opposite or dissimilar in character, etc.; not homogeneous.

Hetty, Hettey. Female names derived from *Henrietta;* perhaps also from *Harriet.*

hew (*hū*), *v. t.* [*p. t.* hewed, *p. p.* hewn, hewed, *p. pr.* hewing], to cut or shape, as with an ax; hack; form laboriously.

hex-a-gon (*heks'ä-gon*), *n.* a plane figure having six sides.

hex-am-e-ter (*-am'ē-tĕr*), *n.* in Greek and Latin verse, a line consisting of six feet, the last being usually a spondee.

hex-i-ol-o-gy (*-i-ol'ō-ji*), *n.* the science of habits and environment.

Hezekiah (*hez-ē-kī'ä*). From the Hebrew *Hhizkeyyah,* from *hhezek-Yah,* "the strength of Jehovah," or "cleaving to the Lord." Dutch, *Hiskia;* Lat., *Hezekias.*

hi-a-tus (*hī-ā'tus*), *n.* a break; vacancy; gap; the concurrence of two vowels in two successive syllables.

hi-ber-nal (*-bĕr'nal*), *adj.* wintry.

hi-ber-nate (*'bĕr-nāt*), *v. i.* to pass the winter in a state of torpor; to winter.

Hi-ber-ni-an (*'ni-an*), *adj.* pertaining to, or characteristic of, Hibernia or Ireland.

hic-cough (*hik'up*), *n.* a short convulsive cough: *v. i.* to utter a short convulsive cough. [Also *hiccup.*]

hick-o-ry (*hik'ō-ri*), *n.* [*pl.* hickories (*-riz*)], an American nut-bearing tree of the genus Carya.

hi-dal-go (*hi-dal'gō*), *n.* in Spain, a nobleman of the lowest rank. [Fem. *hidalga.*]

hide (*hīd*), *v. t.* [*p. t.* hid, *p. p.* hidden, *p. pr.* hiding], to conceal; secrete; whip: *v. i.* to lie concealed: *n.* an animal's skin. [COVER, SECRETE, CONCEAL, MYSTERIOUS.]

hide-bound (*'bound*), *adj.* having the skin close or contracted; prejudiced; bigoted.

hid-e-ous (*hid'ē-us*), *adj.* offensive; shocking; horrible.

hie (*hī*), *v. t.* [*p. t.* and *p. p.* hied, *p. pr.* hieing], to excite; speed: *v. i.* to hasten.

hi-er-arch (*'ĕr-ärk*), *n.* the chief ruler of an ecclesiastical body.

hi-er-arch-y (*-i*), *n.* [*pl.* hierarchies (*-iz*)], the higher and lower clergy of a church; priesthood; rank of holy beings, as angels.

hi-er-o-glyph-ic (*hī-ĕr-ō-glif'ik*), *n.* a sacred character or symbol: *pl.* the picture writings of the ancient Egyptians, etc.: *adj.* pertaining to hieroglyphics.

Hieronymus (*hī-ē-ron'i-mus*). See *Jerome.*

hig-gle (*hig'l*), *v. i.* to carry provisions about for sale; dispute about trifles.

hig-gle-dy-pig-gle-dy (*-di-pig'l-di*), *adv.* in confusion; topsy-turvy.

high (*hī*), *adj.* elevated in place; lofty; chief; noble; strong; powerful; intense; tempestuous; full or complete; tainted; shrill; acute: *n.* an elevated place: *adv.* aloft; profoundly; eminently.

Syn. HIGH, tall, lofty. *High* expresses the idea of extension upward, which is common to them all; what is *tall* is *high,* but what is *high* is not always *tall;* that which attains considerable *height* by growing is *tall;* a thing may be *high* because on a pedestal; *lofty* is said of that which is extended in breadth as well as in height; we say that a house is *high,* a chimney *tall,* a room *lofty.*

Ant. BASE, deep, low.

high-church (*'chĕrch*), *adj.* attaching great importance to the prerogative and authority of the church, its sacraments and priesthood.

high-col-ored (*-kul' ĕrd*), *adj.* having a strong, deep, or glaring color; flushed; vivid; exaggerated.

high-est (*'est*), *adj.* most high.

high-fa-lu-tin (*-fä-lū'tin*), *adj.* bombastic: *n.* bombastic speech.

high-flown (*hī'flōn*), *adj.* elevated; proud; extravagant; inflated.

high-hand-ed (*-hand'ed*), *adj.* violent; arbitrary.

high jinks (*jinks*), sportive jollification.

high-land (*'land*), *n.* a mountainous region: *pl.* mountainous district.

Highlands, The. A district in northern and western Scotland, of vague limits. It includes the Hebrides, the counties of Argyll, Inverness, Ross and Cromarty, Sutherland and Caithness, and parts of Nairn, Elgin, Banff, Aberdeen, Kincardine, Forfar, Perth, Stirling, Dumbarton, and Bute. The inhabitants are mainly of Celtic stock. The Highlands are celebrated for romantic scenery; they contain the highest mountains in Great Britain.

Highlands of the Hudson. A range of hills and low mountains in eastern New York, in Orange Putnam, Dutchess, and Rockland counties. Prominent points are Fishkill mountain, Storm King, Crow's Nest, Donderberg, Anthony's Nose, and West Point.

high life (*lif*), fashionable society; its manner of living.

high mass (*mas*), a mass accompanied with singing, and incense.

high-ness (*'nes*), *n.* the state or quality of being high.

high priest (*prēst*), a chief priest.

high-road (*'rōd*), *n.* a chief road; an easy course or method.

high-strung (*'strung*), *adj.* strung to a high pitch; extremely sensitive.

high-toned (*'tōnd*), *adj.* high pitched; fashionable.

high wa-ter (*waw-tĕr*), pertaining to high tide, or its height or time.

high-way (*'wā*), *n.* a public road; a course or path.

★**high-way-man** (*hī'wā-man,* not *hī-wā'man*), *n.* [*pl.* highwaymen (*-men*)], one who robs on the public road.

hi-la-ri-ous (*hi-lā'ri-us*), *adj.* merry; exhilarated.

hi-lar-i-ty (*-lar'i-ti*), *n.* [*pl.* hilarities (*-tiz*)], noisy merriment; exhilaration.

Hilary (*hil'ä-ri*). Derived from the Latin name *Hilarius,* signifying "pleasant," "cheerful," "merry." Danish, *Hilarius;* Dutch, *Hilarius;* Fr., *Hilaire;* It., *Ilario;* Lat., *Hilarius;* Sw. *Hilarius.*

Hilda. A female name abbreviated from *Everhilda;* or derived from the Lombardian word *hild,* "noble."

Hildebrand (*hil'dē-brand*). The same as Teutonic names *Hildebrand* and *Hiltiprant.* Translated "very fervent," "hero," "leader," etc. Wachter claims the name to be the same as *Childebrand,* from *child-brand,* which might be translated either "distinguished youth," or "distinguished warrior."

hill (*hil*), *n.* an elevation less than a mountain; a small mound or heap: *v. t.* to draw earth about (plants in mounds), as potatoes.

hill-ock (*'ok*), *n.* a small hill.

hill-y (*'i*), *adj.* abounding with, or characterized by, hills.

hilt (*hilt*), *n.* a handle, especially of a sword.

Himalaya (*hi-mä'lä-yä*). A mountain system of Asia. From the Sanskrit, *hima,* "snow," and *alaya,* "abode," "dwelling." Hence, "the abode of snow."

hind (*hīnd*), *n.* the female of the stag or red deer; a farm servant; peasant: *adj.* backward; hinder.

hind-er (*hīnd' ĕr*), *adj.* belonging to, or constituting, the back or rear of anything.

hin-der (*hin'dĕr*), *v. t.* to obstruct or impede: *v. i.* to impose obstructions or impediments.

Syn. HINDER, stop. We are *hindered* from proceeding by something that draws us back; to *stop* refers simply to the cessation of motions. [See *obstruct, retard, cessation.*]

Ant. AID, assist, expedite, further.

hind-most (*hīnd'mōst*), *adj.* farthest from the front; in the extreme rear.

hin-drance (*hin'drans*), *n.* obstruction.

Hin-du (*'dōō*), *n.* a native of Hindustan belonging to the Aryan race; Brahman: *adj.* pertaining to the Hindus or to Hinduism. [Also *Hindoo.*]

Hindustan (*hin-doo-stän',* *hin-dō-stan'*). A Persian term signifying the country or place of the Hindus or Indians. *Hindu* is the Persian form of the Sanskrit *Sindhu,* "a dweller on the Indus," which means the river.

hinge (*hinj*), *n.* the joint or hook on which a door, etc., turns or swings; that on which anything depends or turns: *v. t.* to furnish with a hinge: *v. i.* to stand, turn, or depend, as on a hinge.

hint (*hint*), *v. t.* to suggest; mention casually: *n.* a suggestion; distant allusion. [ALLUDE.]

hip (*hip*), *n.* the upper fleshy part of the thigh; haunch: *interj.* a huzzah.

hip-po-drome (*hip'ō-drōm*), *n.* an ancient Greek racecourse for equestrian games and chariots; a circus.

hip-po-pot-a-mus (*-ō-pot'ä-mus*), *n.* [*pl.* hippopotami (*mī*), -muses (*-ez*)], a large pachydermatous aquatic animal of Africa.

hire (*hīr*), *v. t.* to engage for temporary service at a certain price; bribe; let or lease: *n.* recompense or consideration paid for the use of anything; wages; bribe.

hire-ling (*hīr'ling*), *n.* one who serves for hire: *adj.* mercenary.

hir-sute (*hĕr'sūt*), *adj.* hairy; shaggy.

hiss (*his*), *n.* a noise, made by forcing the breath

between the tongue and upper teeth: *v. i.* to utter such a sound.

hist (*hist*), *interj.* silence! hark!

his-tol-o-gy (*his-tol'ō-ji*), *n.* the science of animal tissues.

his-to-ri-an (*-tō'ri-an*), *n.* a writer or student of history.

his-tor-ic (*-tor'ik*), *adj.* pertaining to, contained in, or celebrated in, history. [Also *historical.*]

★**his-to-ry** (*his'tō-ri*, not *his'tri*), *n.* [*pl.* histories (*-riz*)], a narration of facts and events arranged chronologically; knowledge of facts.

his-tri-on-ic (*-tri-on'ik*), *adj.* pertaining to actors or the stage; theatrical. [Also *histrionical.*]

hit (*hit*), *v. t.* [*p. t.* and *p. p.* hit, *p. pr.* hitting], to strike; give a blow to; touch (the mark); attain to; suit: *v. i.* to clash or collide; succeed: *n.* a stroke or blow; felicitous remark.

hitch (*hich*), *n.* a catch; impediment; a pulling upward: *v. i.* to move by jerks; strike the feet together: *v. t.* to fasten or tie.

hith-er (*hith'ēr*), *adv.* to this place: *adj.* on the side nearest to the speaker.

hive (*hiv*), *n.* an artificial house for bees; bees inhabiting a hive; a busy assemblage: *v. t.* to gather or put into a hive.

hives (*hivz*), *n. pl.* nettle rash; croup.

ho (*hō*), *interj.* stop! hold!

Hoang-Ho (*hō-äng-hō'*). In China, this is the "yellow river," which borders Ho-Nan, the province "south of the river," and flows into the Hoang-Hai, or "yellow sea," so called because discolored by the yellow mud brought down by the Hoang-Ho.

hoar (*hōr*), *adj.* white; gray with age; ancient.

hoard (*hōrd*), *n.* a store or treasure laid up secretly; an accumulation of things: *v. t.* to collect and lay up: *v. i.* to lay up a store.

hoar-frost (*hōr'frost*), *n.* white particles of frozen dew or moisture.

hoar-hound (*'hound*), *n.* a white, woolly, aromatic herb.

hoarse (*hōrs*), *adj.* rough and harsh in sound, as the voice when affected by a cold.

hoax (*hōks*), *n.* a sportive, deceptive trick; *v. t.* to delude by a hoax.

hob (*hob*), *n.* the flat part of a grate on which things are placed to be kept warm.

hob-ble (*'l*), *v. i.* to walk with a limp or awkward step: *v. t.* embarrass or perplex; shackle: *n.* limping or awkward step.

hob-bly (*'li*), *adj.* rough or uneven.

hob-by (*hob'i*), *n.* [*pl.* hobbies (*'iz*)], a favorite pursuit or object; an ambling nag.

hob-by-horse (*-hôrs*), *n.* a stick with a horse's head, across which children sit; a wooden or rocking-horse.

hob-gob-lin (*-gob'lin*), *n.* a goblin, sprite, or elf, especially one of frightful appearance.

hob-nail (*'nāl*), *n.* a short thick nail with a large head.

hob-nob (*'nob*), *v. i.* to drink familiarly with; associate intimately together.

ho-bo (*hō'bō*), *n.* an idle itinerant workman; a tramp.

Hoboken (*hō'bō-ken*). In New Jersey, opposite New York, often said to be a native name meaning "the smoked pipe," marking the spot where the first colonists smoked the pipe of peace with the Indian chiefs. It is more likely, however, a reminiscence of the Dutch village of *Hoboken*, three miles from Antwerp.

hock-ey (*hok'i*), *n.* an outdoor game played with a ball and clubs curved at one end.

ho-cus-po-cus (*hō'kus-pō'kus*), *n.* a juggler's trick; a juggler.

hod (*hod*), *n.* a wooden trough, affixed to a long handle, for carrying mortar, bricks, etc.

hod-car-ri-er (*'kar-i-ēr*), *n.* a man who carries a hod.

hodge-podge (*hoj'poj*), *n.* a medley of ingredients.

hod-man (*hod'man*), *n.* a hodcarrier.

hoe (*hō*), *n.* an agricultural tool for cutting weeds, etc.: *v. t.* to cut, or till, with a hoe.

hog (*hog*), *n.* a swine; a grasping, gluttonous person.

hogs-head (*hogz'hed*), *n.* a measure of capacity equal to 52½ imperial gals. or 63 wine gals.; a large barrel or cask.

Hohenzollern (*hō'en-tsol-ērn*) **castle.** A castle situated in the Swabian Alps, near Hechingen, southern Germany, belonging to the present Prussian royal family. It is the ancestral home of Emperor Wilhelm II. of Germany.

hoi-den (*hoi'dn*), *n.* a rude rustic girl; *adj.* rustic; ill-mannered: *v. i.* to romp roughly. [Also *hoyden.*]

hoist (*hoist*), *v. t.* to lift or raise: *n.* an apparatus for lifting goods. [LIFT.]

hoi-ty-toi-ty (*hoi'ti-toi'ti*), *interj.* an exclamation of surprise, rebuke, etc.

hold (*hōld*), *v. t.* [*p. t.* held, *p. p.* held, holden, *p. pr.* holding], to grasp and keep in the hand; clutch; retain; possess; judge or consider: *v. i.* to cling; adhere; maintain an opinion: *n.* the act of holding; a grasp or clutch; that part of a vessel where the cargo is stored.

Syn. HOLD, keep, detain, retain. To *hold* is a physical act; it requires a degree of bodily strength, or at least the use of the limbs; to *keep* is simply to have by one at one's pleasure; *detain* and *retain* are modes of *keeping;* the former signifies *keeping* back what belongs to another; the latter signifies *keeping* a long time for one's own purpose.

Ant. FREE, let loose, release.

hold-ing (*hold'ing*), *n.* anything held; tenure or right of possession.

hole (*hōl*), *n.* a cavity; hollow place; pit; perforation; a difficulty or dilemma.

hol-i-day (*hol'i-dā*), *n.* a day of gayety and joy in celebration of some event, etc.: *adj.* pertaining to a festival; joyous; gay.

ho-li-ness (*hō'li-nes*), *n.* the state or quality of being holy; freedom from sin; sacredness; a title of the pope.

Syn. HOLINESS, sanctity. *Holiness* is to the mind of a man what *sanctity* is to his exterior; with this difference, that *holiness* to a certain degree ought to belong to every man professing Christianity; but *sanctity*, as it lies in the manners, the outward garb, and deportment, is becoming only to certain persons, and at certain times.

hol-land (*hol'and*), *n.* fine unbleached linen.

Holland. A kingdom of western Europe. Name supposed to be derived from *ollant*, or *holtland*, "marshy ground." Taylor gives the translation of *holtland* as "woodland," that is, the forest around Dordrecht.

hol-loa (*hol-ō'*), *v. i.* to shout to one at a distance: *n.* a shout.

hol-low (*'ō*), *adj.* having a void space within: opposed to solid; insincere; superficial: *n.* a cavity; space between hills or elevations: *v. t.* to make hollow: *adv.* completely; thoroughly.

Syn. HOLLOW, empty. *Hollow*, a cavity formed by taking material out; as, a *hollow* tree. That which has nothing in it is empty; as, an *empty* chair.

hol-ly (*'li*), *n.* a shrub or tree of the genus Ilex.

hol-ly-hock (*hol'i-hok*), *n.* a tall plant of the mallow family.

hol-o-caust (*'ō-kawst*), *n.* a sacrifice wholly consumed by fire.

hol-ster (*hōl'stēr*), *n.* a leather pistol case usually carried at the saddle bow.

ho-ly (*hō'li*), *adj.* [*comp.* holier, *superl.* holiest], pure; morally and spiritually perfect; sinless; pious; sacred; consecrated.

Syn. HOLY, blessed, consecrated, devoted, divine, hallowed, sacred, saintly, set apart. *Sacred* is applied to that which is to be regarded as inviolable on any account; that which is *holy* is so by its own nature, possessing intrinsic moral purity, and, in the highest sense, absolute moral perfection. God is *holy;* his commands are *sacred. Divine* has been used with great looseness, as applying to anything eminent or admirable.

Ant. CURSED, secular, unsanctified, wicked.

Holyoke (*hōl'yōk*). City in Hampden county, Mass., and mountain in same county, named for Rev. Edward Holyoke, an early president of Harvard College.

Holyrood (*hō'li-rōōd*) **palace.** An ancient royal palace of Scotland, situated in Edinburgh. It was originally an abbey, founded in 1128; was several times burned and was the scene of the murder of Rizzio, 1566. It was once the place of residence of Mary, Queen of Scots.

hom-age (*hom'āj*), *n.* respect paid by external action; deference; reverence.

home (*hōm*), *n.* one's abode or residence: dwelling place of a man and his family; a benevolent institution: *adj.* pertaining to one's abode or country; near; effective: *adv.* to or at home. [HABITATION.]

home-li-ness (*'li-nes*), *n.* the state of being homely; plainness.

home-ly (*'li*), *adj.* plain-featured; uncultured; rude.

ho-me-o-path-ic (*hō-mē-ō-path'ik*), *adj.* of or pertaining to homeopathy.

ho-me-op-a-thist (*-op'ā-thist*, *n.* one who practices or believes in homeopathy.

ho-me-op-a-thy (*-op'ā-thi*), *n.* the medical system introduced by Hahnemann, which seeks to cure diseases by the administration of medicines in minute quantities.

Homer. An English baptismal name at the present time. From the classical name, in Greek, *Homeros*, signifying a "pledge," "security," "hostage."

home-sick (*hōm'sik*), *adj.* ill because of absence from home; nostalgic.

home-sick-ness (*-nes*), *n.* state of being homesick; nostalgia.

★**home-stead** (*hōm'sted*, not *hōm'stid*), *n.* a dwelling house with the adjacent land; original abode.

hom-i-cide (*hom'i-sid*), *n.* the killing of a human being; one who kills another.

hom-i-let-ics (*-i-let'iks*), *n. pl.* that branch of theology which treats of sermons and their composition.

hom-i-ly (*'i-li*), *n.* [*pl.* homilies (*-liz*)], a plain religious discourse or sermon.

hom-ing (*hōm'ing*), *adj.* returning home: said of carrier pigeons.

hom-i-ny (*hom'i-ni*), *n.* Indian corn soaked so as to remove the hull, and then coarsely ground.

ho-mo-ge-ne-ous (*hō-mō-jē'nē-us*), *adj.* uniform; composed of similar parts or elements.

Honduras (*hon-dōō'rās*). Spanish for "deep water." A republic of Central America.

hone (*hōn*), *n.* a kind of fine whetstone: *v. t.* to sharpen on a hone.

★**hon-est** (*on'est*, not *on'ust*), *adj.* upright; just; sincere; honorable; frank or open. [CANDID.]

hon-est-y (*-i*), *n.* the quality of being honest.

hon-ey (*hun'i*), *n.* a sweet sirupy substance collected by bees; sweetness: *adj.* resembling honey: *v. t.* to talk to in an endearing or flattering manner.

hon-ey-bee (*-bē*), *n.* the common hive-bee.

hon-ey-comb (*-kōm*), *n.* the waxen hexagonal cells made by bees to contain their honey, eggs, etc.; any structure resembling a honeycomb: *v. t.* to fill with holes.

hon-ey-dew (*-dū*), *n.* a saccharine secretion from the leaves of certain plants.

hon-ey-moon (*-mōōn*), *n.* the first month after marriage.

hon-ey-suck-le (*-suk'l*), *n.* a climbing plant with fragrant flowers.

Hongkong (*hong'kong*). The place of fragrant streams. Island off coast of China.

hon-or (*on'ēr*), *n.* respectful regard; esteem; worship; reputation; fame; chastity; an outward mark of high esteem; a title; one of the four highest trump cards in whist: *v. t.* to treat with respect, deference, or civility; bestow marks of honor upon (with *with*); accept and pay when due.

Syn. HONOR, reverence, respect. *To honor* is only an outward act; *to reverence* is either an act of the mind or the outward expression of a sentiment; *to respect* is mostly an act of the mind, though it may admit of being expressed by some outward act. We *honor* God by adoration and worship; we *honor* our parents by obeying them and giving them our personal service; we *reverence* our Maker by cherishing in our minds a dread of offending him; we *respect* a person or thing that is lofty, worthy, or honorable. [See *admire, glory.*]

Honora. An Irish female name derived from the Latin name *Honor.*

★**hon-or-a-ble** (*on'ēr-ä-bl*, not *on'rä-bl*), *adj.* worthy of, or conferring, honor; distinguished in rank; a title of distinction.

★**hon-o-ra-ri-um** (*on-ō-rā'ri-um*), *n.* a fee paid to a professional man.

hon-or-a-ry (*'ēr-ä-ri*), *adj.* done, or conferred, as an honor.

Honoria. A female name derived from the Roman name *Honoria*, the feminine of *Honorius;* from root of *Honor.*

hood (*hood*), *n.* a soft wrapper or covering for the head; an ornamental fold hanging down the back denoting a university degree: *v. t.* to cover or furnish with, or as with, a hood: *suffix* meaning state, condition, or quality, as man*hood* hardi*hood.*

hood-lum (*hōōd'lum*), *n.* origimally a California rough or bully; a rowdy.

hoo-doo (*hōō'dōō*), *n.* a person or thing that causes ill luck: *v. t.* to bring ill luck upon.

hood-wink (*hood'wingk*), *v. t.* to deceive.

★**hoof** (*hōōf*, not *hoof*), *n.* [*pl.* hoofs], the horny substance covering the feet of certain mammals, etc.; an animal with hoofs.

hook (*hook*), *n.* a curved piece of metal, bone, etc., to hold or catch something; a cape or headland: *v. t.* to catch with, or as with, a hook: *v. i.* to bend in the shape of a hook; become fastened to anything with a hook (with *on*).

hoop (*hōōp*, or *hoop*), *n.* a band to hold together the staves of a cask, etc.; a finger ring; a kind of crinoline; a whoop; *v. t.* to bind or secure with a hoop; encircle.

Hoosac. River in Massachuetts, New York, and Vermont. Derived from the Mohican Indian *wudjoo*, meaning "a mountain," and *abic*, "a rock." [Also *Hoosic* and *Hoosick.*]

hoot (*hōōt*), *n.* a contemptuous shout: *v. t.* to jeer at or drive with contemptuous shouts: *v. i.* to utter a hoot.

hop (*hop*), *v. t.* [*p. t.* and *p. p.* hopped, *p. pr.* hopping], to leap over: *v. i.* to proceed by short leaps on one leg: *n.* a jump on one leg; a dance; a twining plant used in brewing malt liquors: *adj.* pertaining to hops.

Hopatcong (*hō-pat'kong*). Lake in New Jersey. An Indian name, meaning "stone over water," because of an artificial causeway of stone which connected an island of the lake with the shore.

hope (*hōp*), *n.* the desire of good accompanied by expectation; anticipation; confidence; the object of hope: *v. t.* to expect with confidence or desire: *v. i.* to cherish a desire for good; trust confidently. [ANTICIPATE.]

Hope. Found frequently as a female name. From the Anglo-Saxon, meaning "expectation."

hope-ful (*'fool*), *adj.* full of hope; promising success.

hop-scotch (*hop'skoch*), *n.* a children's game.

Horace. From the classical name, *Horatius*, which Littleton translates, "worthy to be looked upon, or becoming in appearance." Danish, *Horats;* Dutch, *Horatius;* Fr., *Horace;* Ger., *Horaz;* It., *Orazio;* Lat., *Horatius;* Port., *Horacio;* Sp., *Horacio.*

Horatio (*hō-rā'shi-ō*). From the root of *Horace.*

Horatius (*hō-rā'shi-us*). See *Horace.*

horde (*hōrd*), *n.* a vast multitude: *v. i.* to live, or act together, in hordes.

hore-hound. Same as *hoarhound.*

★**ho-ri-zon** (*hō-ri'zun*), *n.* the circular line where the sky and earth, or sea, appear to meet; hence the limit of one's mental vision.

hor-i-zon-tal (*hor-i-zon'tal*), *adj.* parallel to, or situated near, the horizon; level; opposed to vertical.

horn (*hôrn*), *n.* a hard protuberance on the head of certain mammals; anything made of horn, or like horn; a wind instrument.

horn-bill (*hôrn'bil*), *n.* a bird with a large horn-crested bill, allied to the kingfishers.
horn-blende (*'blend*), *n.* a dark green or black colored mineral.
hor-net (*hôr'net*), *n.* a wasp which inflicts a severe sting; hence, a disagreeable person.
horn-pipe (*hôrn'pīp*), *n.* a lively dance, especially by sailors.
hor-o-loge (*hor'ō-lōj*), *n.* a mechanism, as a clock, etc., for marking the hours.
hor-o-scope (*hor'ō-skōp*), *n.* a representation of the heavens at any time.
hor-ri-ble (*'i-bl*), *adj.* terrible; dreadful. [FEARFUL.]
hor-rid (*'id*), *adj.* dreadful; terrible; hideous; most obnoxious; gloomy. [FEARFUL.]
hor-ri-fy (*'i-fī*), *v. t.* to fill or strike with horror.
hor-ror (*'ēr*), *n.* excessive fear; extreme dread; great disgust: *pl.* extreme depression. [ABOMINATION.]
horse (*hôrs*), *n.* a solid-hoofed animal, used for riding or drawing burdens; cavalry; a framework for the support of anything: *v. t.* to mount on, or furnish with, a horse; place astride: *v. i.* to get on horseback.
horse-fly (*hôrs'flī*), *n.* a large fly that stings horses.
Horse latitudes. So called because situated between the trade winds and the westerly winds of higher latitudes, and distinguished for tedious calms. It received this name because it was in this portion of the Atlantic the old navigators often threw overboard the horses which they had undertaken to transport to the West Indies.
horse-laugh (*'lăf*), *n.* a coarse, noisy laugh.
horse pow-er (*pou-ēr*), the theoretical unit of work of a steam engine equal to 33,000 lbs. raised 1 ft. in 1 minute.
horse-rad-ish (*'rad-ish*), *n.* a plant with a long root having an acrid, pungent taste.
horse-shoe (*'shōō*), *n.* a U-shaped metal shoe to protect the hoof of a horse; anything U-shaped; the king crab.
hor-ta-tive (*hôr'tă-tĭv*), *adj.* inciting; giving exhortation. [Also *hortatory.*]
hor-ti-cul-ture (*-tĭ-kul'tūr*), *n.* the art of cultivating gardens.
hor-ti-cul-tur-ist (*-ist*), *n.* one who is skilled in horticulture.
ho-san-na (*hō-zan'ȧ*), *n.* an exclamation of praise and glory to God.
hose (*hōz*), *n.* [*pl.* hose], coverings for the legs; stockings; flexible tubing for conveying water, etc.
ho-sier-y (*hō'zhēr-i*), *n.* stockings, underclothing, etc.; a manufactory for such goods.
hos-pit-a-ble (*hos'pit-ȧ-bl*), *adj.* receiving and entertaining friends or strangers.
hos-pit-al (*-al*), *n.* an institution for the medical treatment and care of the sick.
hos-pi-tal-i-ty (*hos-pi-tal'i-ti*), *n.* [*pl.* hospitalities (*-tiz*)], the practice of entertaining friends and strangers with kindness and liberality.
host (*hōst*), *n.* a crowd; one who entertains another; the consecrated bread or wafer of the Eucharist.
hos-tage (*hos'tăj*), *n.* a person who remains in the hands of another as a pledge for the fulfillment of certain conditions; a pledge.
hos-tel (*'tel*), *n.* a hostelry.
hos-tel-ry (*-ri*), *n.* an inn or lodging house.
host-ess (*hōst'es*), *n.* a female host.
hos-tile (*hos'til*), *adj.* showing animosity; inimical; adverse.
hos-til-i-ty (*-til'i-ti*), *n.* [*pl.* hostilities (*-tiz*)], antagonism; enmity; animosity: *pl.* acts of warfare. [ENMITY, FEUD, ANTIPATHY.]
hos-tler (*'lēr*), *n.* one who takes charge of horses. [Also *ostler.*]
hot (*hot*), *adj.* [*comp.* hotter, *superl.* hottest], having much heat; burning; fiery; passionate; furious; pungent; unendurable.
Syn. HOT, fiery, burning, ardent. In the figurative application, a temper is said to be *hot* or *fiery;* rage is *burning;* the mind is *ardent* in pursuit of an object. Zeal may be *hot, fiery, burning* and *ardent;* but in the first three cases it denotes the intemperance of the mind when heated by religion or politics. [See *eager.*]
hot-bed (*'bed*), *n.* a bed of earth covered with glass for rearing plants.
hotch-potch (*hoch'poch*), *n.* a mixture of various ingredients; a thick broth of meat and vegetables. [*Scotch.*]
ho-tel (*hō-tel'*), *n.* a superior inn or lodging house.
Hôtel des Invalides (*ō-tăl'dā zan-vā-lēd'*). Freely translated, "soldiers' home." A great establishment founded in 1670 at Paris for disabled and infirm soldiers. The interior possesses halls adorned with interesting military paintings, and contains the Musée d'Artillerie, which includes a remarkable collection of mediæval and Renaissance armor. It contains also the tomb of Napoleon I.
Hôtel-de-Ville (*ō-tăl' du văl*), **Paris.** A celebrated building of great size, burned by the French Commune in 1871, but carefully restored and much enlarged. The exterior is richly adorned with sculpture. The rooms of state display splendid sculptures and wall paintings by the most distinguished contemporary artists.
hot-house (*hot'hous*), *n.* a glazed building artificially heated for rearing tender plants.
Hottentot. The early Dutch settlers at the Cape of Good Hope were much struck with the *click* which forms such a distinct feature of the Caffre languages, and which sounded to them like a perpetual repetition of the syllables *hot* and *tot.* From these sounds they gave the natives the name of *Hott-en-tot, en* in the Dutch language meaning "and."
hound (*hound*), *n.* a particular breed of hunting dog; a mean fellow: *v. t.* to chase with, or as with, hounds; set upon.
hour (*our*), *n.* the 1-24th part of a day; 60 minutes; particular time: *pl.* life.
hour-glass (*our'glăs*), *n.* a device for measuring time by running sand through a narrow neck of a glass vessel.
★**hou-ri** (*hou'* or *hōō'ri*), *n.* [*pl.* houris (*'riz*)], one of the dark-eyed nymphs of the Mohammedan paradise.
Housatonic (*hōō-sȧ-ton'ik*). River of Massachusetts and Connecticut. From the Indian words *wussi,* "beyond," and *adene,* "mountain," meaning "beyond the mountain." According to other authorities from the Indian words *wassa,* "proud," *aton,* "stream," and *ick,* from *azhubic,* meaning "rocks," the whole meaning "proud river flowing through the rocks."
house (*hous*), *n.* a building for residence; place of abode; family or race; one of the divisions of a legislative or ecclesiastical body; a mercantile firm: *v. t.* to place in a house; shelter or lodge: *v. i.* to take shelter. [HABITATION.]
house-hold (*'hōld*), *n.* a family living together: *adj.* domestic; pertaining to a family or home.
Houston (*hūs'ton*), **Texas.** So called in honor of General Samuel Houston, the first president of the Texan republic. This name is borne by many places in the United States, generally given in honor of Gen. Houston, among them being counties in Minnesota, Tennessee, and Texas; city in Chickasaw county, Mississippi, and the city in Texas county, Missouri.
hov-el (*hov'el*), *n.* a mean habitation.
hov-er (*huv'ēr*), *v. i.* to flutter over or about; stand in suspense or expectation.
how (*hou*), *adv.* in what manner; to what degree or extent; for what reason.
how-be-it (*-bē'it*), *adv.* nevertheless.
how-ev-er (*-ev'ēr*), *adv.* in whatever manner or degree; at all events: *conj.* notwithstanding; yet.
how-itz-er (*'itz-ēr*), *n.* a short cannon, formerly used for throwing shells.
howl (*houl*), *n.* a prolonged cry: *v. i.* to cry like a dog or wolf; utter a prolonged cry; roar, like the wind: *v. t.* to utter in a loud wailing tone.
howl-er (*'ēr*), *n.* one who howls.
hoy-den. Same as *hoiden.*
hub (*hub*), *n.* the nave of a wheel.
hub-bub (*hub'bub*), *n.* uproar.
Hubert (*hū'bērt*). From the German name *Hugobert,* which Wachter derives from *hug-bert,* "distinguished for memory or prudence." Danish, *Hubertus;* Dutch, *Hubertus;* Fr., *Hubert;* Lat., *Hubertus;* Sw., *Hubertus.*
huck-a-back (*'ȧ-bak*), *n.* a rough kind of linen or cotton cloth.
huck-le-ber-ry (*'l-ber-i*), *n.* [*pl.* huckleberries (*-iz*)], the edible berry of any species of Gaylussacia; the whortleberry.
huck-ster (*'stēr*), *n.* one who retails small articles.
hud-die (*hud'l*), *v. t.* to crowd together in a disorderly manner; collect closely: *v. i.* to come in a crowd or haste (with *on, up, over*): *n.* confusion; crowd.
Hudson river, N. Y. Named in honor of Henry Hudson, an English navigator in the Dutch service who ascended the river in 1607. He called it "the Great River," or "Great River of the Mountains," from the extraordinary circumstance of such a body of water flowing through the mountains without a cataract. The Dutch gave the name of *Mauritius river,* in honor of Prince Maurice, to the section above New York island.
Hudson's bay and Hudson's strait. In northern North America. So named after their rediscovery by Captain Henry Hudson, while searching for the northwest passage in 1610. Prior to this date the bay and the strait had not been navigated since their original discovery by Cabot in 1512.
★**hue** (*hū*), *n.* color tint; a shouting; clamor.
hue and cry (*krī*), the process of pursuing.
huff (*huf*), *v. t.* to puff, or blow, up; treat with insolence: *n.* fit of petulance or sudden offense.
hug (*hug*), *n.* a close embrace: *v. t.* [*p. t.* and *p. p.* hugged, *p. pr.* hugging], to embrace closely; fondle; hold fast; keep close to. [CLASP.]
huge (*hūj*), *adj.* vast; very large.
Hugh (*hū*). Derived from the Teutonic *hoog,* or *hugr,* "high, tall, elevated;" also translated as "mind," "thought." Danish, *Hugo;* Dutch, *Hugo;* Fr., *Hugues;* It., *Ugo;* Lat., *Hugo;* Sw., *Hugo.*
Hu-gue-not (*hū'gē-not* or *-nō*), *n.* a name applied to French Protestants of the 16th and 17th centuries.
Hulda. A female name, from the Hebrew *Hhuldah,* signifying "a mole or weasel."
hulk (*hulk*), *n.* the body of a ship, especially if old or dismantled.
hulk-ing (*'ing*), *n.* unwieldy; bulky.
hull (*hul*), *n.* outer covering, especially of grain or nuts; the body or frame of a vessel: *v. t.* to peel off the hull or husk of.
hul-la-ba-loo (*'ȧ-bȧ-lōō'*), *n.* uproar; noisy contention.
hum (*hum*), *n.* the noise of bees and other insects in flight: *v. i.* [*p. t.* and *p. p.* hummed, *p. pr.* humming], to make such a noise: *v. t.* to sing in a low undertone; set or keep going energetically: *interj.* a sound implying hesitation.
hu-man (*hū'man*), *adj.* pertaining to, or characteristic of, man or mankind. [HUMANE.]
hu-mane (*-mān'*), *adj.* having the feelings proper to man; benevolent; kind; compassionate.
Syn. HUMANE, benevolent, benignant, charitable, compassionate, human, kind, merciful. *Human* denotes what pertains to mankind; as, the *human* race; *humane* denotes what may rightly be expected of mankind at its best. The *compassionate* man sympathizes with and desires to relieve actual suffering.
hu-man-ize (*'man-īz*), *v. t.* to render human.
hu-man-ism (*-izm*), *n.* culture derived from classical training.
hu-man-ist (*-ist*), *n.* a student of the humanities; one versed in the knowledge of human nature.
hu-man-i-ta-ri-an (*hu-man-i-tā'ri-an*), *n.* a philanthropist; an anti-Trinitarian; a perfectionist: *adj.* philanthropic.
hu-man-i-ty (*'i-ti*), *n.* [*pl.* humanities (*-tiz*)], mankind; philanthropy; kindness: *pl.* the ancient classics.
hum-ble (*hum'bl*), *adj.* having a low estimate of one's self; modest; meek; mean; obscure: *v. t.* to make submissive; humiliate.
Syn. HUMBLE, modest, submissive. A man is *humble* from a sense of his comparative inferiority to others in point of station and outward circumstances, or he is *humble* from a sense of his imperfections, and a consciousness of not being what he ought to be; he is *modest* inasmuch as he sets but little value on his qualifications, acquirements, and endowments. Between *humble* and *submissive* there is this prominent feature of distinction, that the former marks a temper of mind, the latter a mode of action; we may be *submissive* because we are *humble;* but we may likewise be *submissive* from fear, from interested motives, and the like. [See *abase, compliant.*]
Ant. ADVANCE, exalt, honor.
hum-ble-bee (*-bē*), *n.* a bumble-bee.
Humboldt (*hum'bōlt,* Ger. *hoom'bōlt*) **river, Nev.** Named by General John C. Frémont in honor of Baron von Humboldt, prior to which it was known as *Mary's river,* also *Ogden river.*
hum-bug (*'bug*), *n.* a fraud or imposition under fair pretenses: *v. t.* [*p. t.* and *p. p.* humbugged, *p. pr.* humbugging], to cheat or impose upon.
hum-drum (*'drum*), *adj.* dull; monotonous; commonplace.
hu-mer-al (*hū'mēr-al*), *adj.* pertaining to the shoulder.
hu-mer-us (*'mēr-us*), *n.* [*pl.* humeri (*-ī*)], the arm from the shoulder to the forearm.
hu-mid (*hū'mid*), *adj.* damp; moist.
hu-mid-i-ty (*'i-ti*), *n.* dampness. [MOISTURE.]
hu-mil-i-a-tion (*-mil-i-ā'shun*), *n.* the act of humiliating; the state of being humiliated; mortification.
hu-mil-i-ty (*-mil'i-ti*), *n.* [*pl.* humilities (*-tiz*)], the state or quality of being humble; modesty.
hum-ming bird (*hum'ing bērd*), a very small bird of the family Trochilidæ.
hum-mock (*'ok*), *n.* a large mass of floating ice; a hillock or mound.
hu-mor (*hū'* or *ū'mēr*), *n.* wit; merriment; the tendency to look at things mirthfully; caprice; temper; disease: *v. t.* to indulge; yield to a desire of.
Syn. HUMOR, temper, mood. The *humor* is so fluctuating that it varies in the same mind perpetually; but the *temper* is so far confined that it always shows itself to be the same whenever it shows itself at all. The *humor* makes a man different from himself; the *temper* makes him different from others; hence we speak of the *humor* of the moment; of the *temper* of youth or of old age. *Humor* and *mood* agree in denoting a particular and temporary state of feeling; but they differ in the cause; the former being attributable rather to the physical state of the body, and the latter to the moral frame of the mind; *mood* is a temporary or capricious state or condition of the mind in regard to passion or feeling. The *humor* of a man depends upon his *mood* whether he performs ill or well. [See *gratify.*]
hu-mor-ist (*-ist*), *n.* a droll person; one who is characterized by humor.
hu-mor-ous (*-us*), *adj.* full of, or characterized by, humor; comical; diverting.
hu-mor-some (*-sum*), *adj.* characterized by humor; laughable; capricious.
hump (*hump*), *n.* a protuberance on the back.
Humphrey (*hum'fri*). The same as *Cundfrid,* which Wachter translates "illustrious protector," or "support of peace." Dutch, *Humfried;* Fr., *Onfroi;* It., *Onofredo;* Lat., *Humphredus* or *Onuphrius;* Sw., *Humfrid.*
hu-mus (*hū'mus*), *n.* vegetable mold.
Hun (*hun*), *n.* one of an ancient Tartar race, which, in the 5th century A. D., overran and devastated Europe.
hunch (*hunch*), *n.* a hump; lump; a thrust with the fist or elbow: *v. t.* to push with the fist or elbow; push with a sudden jerk.
★**hun-dred** (*hun'dred*), *adj.* 10 times 10: *n.* the number of 10 times 10; the symbol (C or 100) denoting it.

hun-dredth (*hun'dredth*), *adj.* the ordinal of 100: *n.* one of 100 equal parts.

hun-dred-weight (*'dred-wāt*), *n.* the 1-20th part of a ton.

Hungary (*hung'gä-ri*). A country of central Europe. So named because originally inhabited by the Huns, who were first heard of in China in the third century B. C., as *Hiong-nu*, "giants."

hun-ger (*hung'gẽr*), *n.* keenness of appetite; want of food; strong desire: *v. i.* to feel the pain of hunger; to have a longing.

hun-gry (*'grĭ*), *adj.* [*comp.* hungrier, *superl.* hungriest], having a keen appetite; feeling want of food; emaciated; eagerly desirous.

hunk (*hungk*), *n.* a lump or large piece.

hunt (*hunt*), *v. t.* to pursue, or chase: *v. i.* to follow the chase: *n.* pursuit of game; a search.

hunts-man (*huntz'man*), *n.* [*pl.* huntsmen (*'men*)], one who hunts game.

hur-dle (*hûr'dl*), *n.* a movable fence; a fence to be leaped over: *v. t.* to cover or inclose with hurdles or jump hurdles.

hur-dy-gur-dy (*'dĭ-gûr'dĭ*), *n.* a barrel organ.

hurl (*hûrl*), *v. t.* to throw with violence; drive forcibly: *n.* the act of throwing.

hur-ly-bur-ly (*hûr'lĭ-bûr-lĭ*), *n.* tumult; great commotion.

Huron (*hū'ron*). One of the Great Lakes of North America. Opinions differ as to the classification of the name, whether French or Indian, and as to its meaning. According to some authorities it is a corruption of the name *Hure*, given a tribe of Indians by the French, the word meaning "head of a wild boar," applicable on account of their unkempt appearance; another authority says it is derived from the Indian words *Ohkwe honwe*, "true man"; by others to have been corrupted by the French from the Indian *Irri roron*, "cat tribe."

hur-rah (*hōō-rä'*), *interj.* a shout of joy, triumph, applause, etc.: *v. i.* to utter such a shout in applause, etc. [Also *hurra.*]

hur-ri-cane (*hur'i-kān*), *n.* a gale of extreme violence characterized by fitful changes of the wind. [BREEZE.]

hur-ri-cane deck (*dek*), the bridge-deck of a steamship; the upper deck of a river steamer.

hur-ry (*'ĭ*), *v. t.* [*p. t.* and *p. p.* hurried, *p. pr.* hurrying], to impel to greater speed; hasten on; accelerate: *v. i.* to act or move with haste: *n.* haste; urgency; precipitation; confusion. [HASTEN.]

hurt (*hûrt*), *v. t.* [*p. t.* and *p. p.* hurt, *p. pr.* hurting], to cause or inflict pain in; wound; injure: *n.* a wound; injury; damage.

hurt-ful (*'fool*), *adj.* injurious; harmful.

Syn. HURTFUL, pernicious, noxious, noisome. Between *hurtful* and *pernicious* there is the same distinction as between hurting and destroying; that which is *hurtful* may hurt in various ways; but that which is *pernicious* necessarily tends to destruction; confinement is *hurtful* to the health; bad company is *pernicious* to the morals; *noxious* and *noisome* are species of the *hurtful;* that which is *noxious* inflicts a direct injury; that which is *noisome* inflicts it indirectly; *noxious* insects are such as wound; *noisome* vapors are such as tend to create disorders.

hur-tle (*hûrt'l*), *v. t.* to move violently; impel forcibly: *v. i.* to clash; dash in collision.

hus-band (*huz'band*), *n.* a married man: *v. t.* to manage or use with economy.

hus-band-man (*-man*), *n.* [*pl.* husbandmen (*-men*)], a tiller of the soil; farmer.

hus-band-ry (*-ri*), *n.* agriculture; frugality.

hush (*hush*), *interj.* be still! silence! *adj.* quiet; silent: *n.* quietness; silence: *v. t.* to make silent; soothe.

husk (*husk*), *n.* the dry outer covering of certain fruits or seeds: *v. t.* to remove husks from.

husk-ing bee (*'ing bē*), a social gathering to assist in husking corn.

husk-y (*'ĭ*), *adj.* [*comp.* huskier, *superl.* huskiest], consisting of, or like, husks; worthless; rough or hoarse: said of the voice: *n.* sledge dog.

★**hus-sar** (*hooz-är'*), *n.* a light-armed cavalry soldier.

★**hus-sy** (*huz'ĭ*, not *hus'ĭ*), *n.* [*pl.* hussies (*'iz*)], a worthless woman.

hus-tle (*hus'l*), *v. t.* to push roughly; jostle; mob; *v. i.* exhibit energy and alacrity.

hut (*hut*), *n.* a small house or cabin.

huz-zah. Same as *hurrah.*

hy-a-cinth (*hī'a-sinth*), *n.* a handsome bulbous flowering plant of the genus Hyacinthus.

hy-a-line (*hī'a-lin*), *adj.* glassy; transparent.

hy-brid (*hī'brid*), *n.* a mongrel; an animal or plant produced by interbreeding different species; a compound word, the elements of which are derived from different languages.

Hyde Park. A park in Westminster, London, situated two and one-fourth miles south by west of St. Paul's. This was originally the manor of Hyde, belonging to the abbey of Westminster. It became crown property at the dissolution of the monasteries in 1539. It contains about 400 acres.

Hy-dra (*hī'dra*), *n.* in classical mythology, the water serpent with nine heads slain by Hercules; hence any evil grappled with.

Hy-dran-ge-a (*hī-dran'jē-a*), *n.* a genus of shrubs of the saxifrage family.

hy-drant (*hī'drant*), *n.* a plug with a valve connected with a water main.

hy-drate (*'drāt*), *n.* a chemical compound containing a definite quantity of water: *v. t.* to combine with water to form a hydrate.

★**hy-drau-lic** (*hī-draw'lik*, not *hī-drol'ik*), *adj.* pertaining to fluids in motion: *n. pl.* the science of liquids in motion.

hy-dride (*'drīd*), *n.* a chemical combination of hydrogen with another element.

hy-dro-car-bons (*-drō-kär'bonz*), *n. pl.* a general name for bitumens, mineral resins and fats which are composed of hydrogen and carbon.

hy-dro-gen (*'drō-jen*), *n.* a colorless, gaseous, inflammable substance, which is the lightest element known.

hy-drog-ra-phy (*-drog'ra-fĭ*), *n.* the art of measuring and mapping the water surface of the earth.

hy-dro-path-ic (*hī-drō-path'ik*), *adj.* pertaining to hydropathy.

hy-drop-a-thy (*hī-drop'a-thĭ*), *n.* the cure of disease by water treatment.

hy-dro-pho-bi-a (*-fō'bĭ-a*), *n.* a disease caused by the virus from the saliva of a mad dog.

hy-dro-stat-ic (*hī-drō-stat'ik*), *adj.* pertaining to hydrostatics: *n. pl.* that branch of physics that treats of fluids.

hy-dro-ther-a-py (*-ther'a-pĭ*), *n.* treatment of disease by water.

hy-e-na (*hī-ē'na*), *n.* a bristly-maned wolf-like quadruped.

hy-giene (*'jēn*), *n.* the science of health; sanitation.

hy-gi-en-ic (*-ji-en'ik*), *adj.* pertaining to hygiene.

hy-men (*'men*), *n.* marriage, from *Hymen*, the Grecian god of marriage.

hymn (*him*), *n.* a sacred ode expressive of praise or adoration: *v. t.* to sing hymns to; adore or praise by hymns.

hym-nal (*'nal*), *n.* a collection of hymns for public worship.

hym-nol-o-gy (*-nol'ō-ji*), *n.* the study of hymns.

hyper, a *prefix* meaning *over, beyond, excess, highest.*

hy-per-bo-la (*-pẽr'bō-la*), *n.* a curve formed by the section of a cone when the cutting plane makes a greater angle with the base than the side of the cone makes.

hy-per-bo-le (*'bō-lē*), *n.* a figure of speech in which there is obvious exaggeration.

hy-per-bol-ic (*-bol'ik*), *adj.* exaggerated; pertaining to, or of the nature of, a hyperbola.

hy-phen (*hī'fen*), *n.* a mark (-) joining two words or syllables: *v. t.* to join by such a mark.

hyp-no-sis (*hip-nō'sis*), *n.* a hypnotic state or trance.

hyp-no-tism (*'nō-tizm*), *n.* a method of inducing a trance-like sleep.

hyp-no-tize (*'nō-tīz*), *v. t.* to produce, or subject to, hypnotism.

hyp-o-chon-dri-a (*hip-ō-kon'dri-a*), *n.* a disease attended with extreme melancholy and anxiety. [Also *hypochondriasis.*]

hyp-o-chon-dri-ac (*'dri-ak*), *n.* one who is affected with hypochondria: *adj.* pertaining to, or affected with, hypochondria.

hy-poc-ri-sy (*hi-pok'ri-si*), *n.* dissimulation; false profession.

★**hyp-o-crite** (*hip'ō-krit*), *n.* one who practices hypocrisy.

hy-po-der-mic (*hī-pō-dẽr'mik*), *adj.* inserted under the skin: *n.* a medicine thus injected.

hy-pot-e-nuse (*-pot'ē-nūs*), *n.* the side of a right-angled triangle opposite the right angle. [Also *hypothenuse.*]

hy-poth-e-sis (*-poth'ē-sis*), *n.* [*pl.* hypotheses (*-sēz*)], something assumed for the purpose of argument; supposition; conjecture.

hy-po-thet-ic (*-pō-thet'ik*), *adj.* based on hypothesis; conjectural. [Also *hypothetical.*]

hys-sop (*his'up*), *n.* an aromatic plant with blue flowers.

hys-te-ri-a (*his-tē'ri-a*), *n.* a nervous affection of women characterized by choking sensations or paroxysms.

hys-ter-ic-al (*-ter'i-kal*), *adj.* pertaining to, or affected by, hysterics; violently emotional.

hys-ter-ics (*his-ter'iks*), *n. pl.* hysteria.

I

I (*ī*), *pron.* [*pl.* we (*wē*)], *nom. case, sing.* of the pronoun of the first person; the word by which the speaker or writer denotes himself.

i-am-bus (*ī-am'bus*), *n.* a metrical foot consisting of two syllables, of which the first is short and the second is long (⏑ —).

i-bex (*'beks*), *n.* one of a genus of wild goats, having very large recurved horns.

i-bis (*'bis*), *n.* one of a genus of large wading birds, having a long, curved beak.

ice (*īs*), *n.* frozen water or other fluid: *v. t.* freeze; preserve in ice; cover with concreted sugar.

ice-berg (*'bẽrg*), *n.* a large mass of ice floating in the sea.

ice floe (*flō*), a smaller sheet of floating ice.

Iceland. Island of north Atlantic Ocean. Was called *Snæland*, the "land of snow," by the viking, Naddodd, who discovered it in 868. On account of the ice floes which then beset the northern coast, Floki, who followed him, called it *Island*, of which *Iceland* is the English translation.

ice pack (*is pak*), a field of broken and drifting ice.

Ichabod (*ik'a-bod*). From the Hebrew *Iykhabhodh*, which Simonis renders "inglorious."

ich-thy-ol-o-gy (*ik-thi-ol'ō-ji*), *n.* that branch of zoölogy which treats of fishes.

i-ci-cle (*ī'si-kl*), *n.* a pendent cone of ice formed by the freezing of dripping water.

i-ci-ly (*'si-lĭ*), *adv.* in an icy manner; coldly.

i-cing (*'sing*), *n.* a coating of concreted sugar.

i-con (*ī'kon*), *n.* [*pl.* icons (*'konz*), icones (*'kon-ēz*)], in the Greek church, a sacred image or picture. [Also *eikon, ikon.*]

i-con-o-clast (*ī-kon'ō-klast*), *n.* an image breaker; one who attacks superstitions or shams.

i-cy (*ī'sĭ*), *adj.* [*comp.* icier, *superl.* iciest], pertaining to, or resembling, or abounding in, ice; cold; chilling; indifferent.

Idaho. A western state of the union. From the Indian words *Edah hoe*, descriptive of the sheen on the mountains, occasioned by the light on the snowy summits, expressed in English "gem of the mountains," or, literally, "the first appearance of the sun after sunrise on the mountain tops."

Iddo. Male name from the Hebrew *Iddo*, signifying "love of Him"; *i. e.*, of the Lord.

i-de-a (*ī-dē'a*), *n.* a mental image or picture; opinion; belief; plan.

Syn. IDEA, thought, imagination. The *idea* is the simple representation of an object; the *thought* is the reflection; and the *imagination* is the combination of ideas; we have *ideas* of the sun, the moon, and all material objects; we have *thoughts* on moral subjects; we have *imaginations* drawn from the *ideas* already existing in the mind.

Ant. ACTUALITY, fact, reality, substance.

i-de-al (*-dē'al*), *adj.* existing in imagination only; visionary; conforming to a standard of perfection; perfect: *n.* a mental conception, or an individual regarded as the standard of perfection.

Syn. IDEAL, imaginary. The *ideal* is not directly opposed to, but abstracted from, the real; the *imaginary*, on the other hand, is directly opposed to the real; it is the unreal thing formed by the imagination. *Ideal* happiness is the happiness which is formed in the mind without having any direct and actual prototype in nature; the *imaginary* is that which is opposite to some positive existing reality.

i-de-al-ism (*-izm*), *n.* in art, the effort to realize the highest type of any natural object; the doctrine that all our knowledge is a knowledge of ideas.

i-de-al-ize (*-īz*), *v. t.* to make ideal; embody in an ideal form: *v. i.* to form ideals.

i-den-tic-al (*ī-den'ti-kal*), *adj.* expressing sameness.

i-den-ti-fy (*-den'ti-fī*), *v. t.* [*p. t.* and *p. p.* identified, *p. pr.* identifying], to make, prove to be, or consider as, the same.

i-den-ti-ty (*'ti-tĭ*), *n.* essential or practical sameness.

i-de-ol-o-gy (*ī-dē-ōl'ō-jĭ*), *n.* the science of ideas; the system of philosophy which derives ideas exclusively from sensation.

id-i-o-cy (*id'i-ō-si*), *n.* the state of being an idiot. [Also *idiotcy.*]

id-i-om (*'i-um*), *n.* a turn of expression peculiar to a language.

id-i-o-mat-ic (*-ō-mat'ik*), *adj.* peculiar to a language; given to, or marked by, the use of idioms. [Also *idiomatical.*]

★**id-i-o-syn-cra-sy** (*-i-ō-sin'krä-si*), *n.* [*pl.* idiosyncrasies (*-siz*)], peculiarity of constitution or temperament.

id-i-ot (*'i-ot*), *n.* one of weak intellect; a foolish person. [FOOL.]

i-dle (*ī'dl*), *adj.* unemployed; unused; useless; irrelevant; lazy: *v. i.* to be inactive or without employment: *v. t.* to spend in idleness.

Syn. IDLE, lazy, indolent. One is termed *idle* who will do nothing useful; one is *lazy* who will do nothing at all without great reluctance; one is *indolent* who does not care to do anything or set about anything.

Ant. BUSY, industrious.

i-dler (*ī'dlẽr*), *n.* one who idles; a lazy person.

i-dol (*ī'dol*), *n.* an object of worship.

i-dol-a-ter (*'ä-tẽr*), *n.* an idol-worshipper.

i-dol-a-try (*'ä-trĭ*), *n.* [*pl.* idolatries (*-triz*)], the paying of divine honors to idols.

i-dol-ize (*ī'dol-īz*), *v. t.* to make an idol of; love or admire to excess.

i-dyl (*ī'dil*), *n.* a short, highly-wrought, pastoral poem. [Also *idyll.*]

i-dyl-lic (*'lik*), *adj.* pertaining to, or of the nature of, an idyl.

if (*if*), *conj.* on the condition; whether; although.

Ignatius (*ig-nā'shi-us*). From the Greek *Ignatios*, "ardent," "fiery." Dutch, *Ignatius;* Fr., *Ignace;* Ger., *Ignaz* or *Ignatius;* Gr., *Ignatios;* It., *Ignacio;* Lat., *Ignatius;* Sp., *Ignacio* or *Inigo.*

ig-nite (*-nīt'*), *v. t.* to set on fire; to make incandescent with heat: *v. i.* to take fire.

ig-ni-tion (*-nish'un*), *n.* the act of igniting; the state of being ignited.

ig-no-ble (*-nō'bl*), *adj.* of low birth or station; of mean character or quality.

ig-no-min-i-ous (*-nō-min'i-us*), *adj.* marked with ignomy or public disgrace.

-no-min-y (*ig'nō-min-i*), *n.* [*pl.* ignominies (*-iz*)], public disgrace or dishonor; cause or source of disgrace.
g-no-ra-mus (*ig-nō-rā'mus*, not *ig-nō-rā'mus*), *n.* an ignorant person.
-no-rance (*ig'nō-rans*), *n.* the state of being ignorant; want of knowledge.
-no-rant (*-rant*), *adj.* destitute of knolwedge; uninstructed; illiterate.
Syn. IGNORANT, illiterate, not educated, unlettered. *Ignorant* signifies destitute or lacking in education or knowledge; the most learned man is still *ignorant* of many things; *illiterate* is without letters and the knowledge that comes through reading; the *unlettered* man may have acquired some elementary knowledge; the *uneducated* man has never taken any systematic course of mental training.
Ant. EDUCATED, learned, trained, wise.
-nore (*-nōr'*), *v. t.* to be ignorant of; treat as unknown; disregard.
e de France (*ēl-du-frāns'*), "Isle of France." An ancient government of France. It was the portion of the country about Paris that was most completely under the control of the kings; *i. e.*, the royal domain.
um (*il'i-um*). In ancient geography, a place in Mysia, Asia Minor, identified by the Greeks with the legendary Troy. It was frequently destroyed in prehistoric times; was rebuilt by Greek colonists in the sixth century B. C., and continued (as *New Ilium*) to late Roman times. Its site has been identified by Schliemann at Hissarlik, about 100 miles north by west of Smyrna.
(*il*), *adj.* [*comp.* worse, *superl.* worst], bad or evil; diseased; unfriendly; vicious: *n.* evil; misfortune; disease: *adv.* not well; not easily.
lic-it (*-lis'it*), *adj.* not authorized or allowed; unlicensed.
lim-it-a-ble (*-lim'it-ȧ-bl*), *adj.* immeasurable; vast; infinite.
inois (*il-lin-oi'*, *il-lin-oiz'*). State of the United States. One authority gives it as a combination of the Indian word *Illini*, meaning "men," and the French suffix *ois*, meaning "tribe," "band of men."
lit-er-a-cy (*-lit'ĕr-ȧ-si*), *n.* ignorance of letters.
lit-er-ate (*il-lit'ĕr-āt*), *adj.* uneducated. [IGNORANT.]
-ness (*'nes*), *n.* the condition of being ill; disease; sickness.
lude (*-lūd'*), *v. t.* to mock; deceive; delude.
lu-mi-nate (*-lū'mi-nāt*), *v. t.* to give light to; decorate with light; enlighten; make plain; adorn, as a manuscript: *v. i.* to display lights.
Syn. ILLUMINATE, illumine, enlighten. We *illuminate* by means of artificial lights; the sun *illuminates* the world by its own light; preaching and instruction *enlighten* the minds of men. *Illumine* is but a poetic variation of *illuminate*.
lu-mi-na-tion (*-nā'shun*), *n.* supply of light; the act of illuminating, or state of being illuminated; the art of illumining books; a design in an illuminated work; intellectual light.
lu-sion (*'zhun*), *n.* deceptive appearance; false show; hallucination.
lu-sive (*'siv*), *adj.* deceiving by illusion; deceptive; illusory.
lu-so-ry (*'sō-ri*), *adj.* causing illusion; fallacious; deceptive.
l-lus-trate (*il-lus'trāt*, not *il'lus-trāt*), *v. t.* to make clear or intelligible; explain by examples. [EXPLAIN.]
lus-tra-tion (*-trā'shun*), *n.* the act of illustrating; the state of being illustrated; that which illustrates; a picture.
lus-tra-tive (*'trā-tiv*), *adj.* tending to illustrate, elucidate, or exemplify.
lus-tri-ous (*'tri-us*), *adj.* distinguished by luster or greatness; eminent; renowned; glorious. [DISTINGUISHED, FAMOUS.]
-age (*im'āj*), *n.* an imitation of any person or thing; likeness; a conception, or idea: *v. t.* to form, or reflect, an image of; represent to the mental vision; imagine.
-age-ry (*'āj-ri*), *n.* [*pl.* imageries (*-riz*)], representation by images; images collectively; forms of the fancy.
-ag-i-na-ble (*-aj'i-nȧ-bl*), *adj.* that may be imagined or conceived.
-ag-i-na-ry (*'i-nā-ri*), *adj.* existing only in imagination; unreal; utopian. [IDEAL.]
-ag-i-na-tion (*-nā'shun*), *n.* the image-forming power of the mind; a conception or idea; fancy; invention. [IDEA, FANCY.]
-ag-i-na-tive (*'i-nȧ-tiv*), *adj.* proceeding from, exhibiting, or endowed with, imagination.
-ag-ine (*-aj'in*), *v. t.* to form a mental picture of; produce by the imagination; think; suppose: *v. i.* to form a mental image; fancy; surmise. [APPREHEND, THINK.]
-be-cile (*im'bē-sil*), *adj.* without strength of mind; *n.* one of feeble mind.
-be-cil-i-ty (*-sil'i-ti*), *n.* [*pl.* imbecilities (*-tiz*)], mental weakness. [DEBILITY.]
-bibe (*-bīb'*), *v. t.* to drink in; absorb, as if by drinking: *v. i.* to drink. [ABSORB.]
m-brogl-io (*-brōl'yō*), *n.* intricate and perplexing state of affairs; strife; complicated plot.
-brue (*-brōō'*), *v. t.* to wet or moisten; soak; drench.
-bue (*-bū'*), *v. t.* to cause to absorb; tinge deeply; dye.

im-i-tate (*im'i-tāt*), *v. t.* to produce a semblance of; use as a model or pattern; copy.
im-i-ta-tion (*-tā'shun*), *n.* the act of imitating; that which is produced by imitating: *adj.* not genuine.
im-mac-u-late (*-mak'ū-lāt*), *adj.* without blemish; unspotted; undefiled; pure. [inherent.
im-ma-nent (*im'mȧ-nent*), *adj.* remaining within;
im-ma-te-ri-al (*-mȧ-tē'ri-al*), *adj.* not consisting of matter; spiritual; unimportant.
im-ma-ture (*-mȧ-tūr'*), *adj.* not ripe; not fully grown or developed; not finished or perfected; crude.
im-ma-tur-i-ty (*-tūr'i-ti*), *n.* unripeness; incompleteness.
im-meas-ur-a-ble (*im-mezh'ūr-ȧ-bl*), *adj.* not to be measured; immense; limitless; vast.
im-me-di-ate (*-mē'di-āt*), *adj.* next; direct; instant.
im-me-mo-ri-al (*-mē-mō'ri-al*), *adj.* extending beyond the reach of memory, record, or tradition.
im-mense (*-mens'*), *adj.* immeasurable; boundless; vast; very great or large.
im-men-si-ty (*-men'si-ti*), *n.* [*pl.* immensities (*-tiz*)], the character of being immense; vastness in extent or bulk.
im-merge (*-mĕrj'*), *v. t.* to plunge into or under anything, especially a fluid; immerse.
im-merse (*-mĕrs'*), *v. t.* to plunge into or under anything, especially a fluid; sink; dip.
im-mi-grant (*'i-grant*), *adj.* passing or coming into, as a new habitat: *n.* one who, or that which, immigrates.
im-mi-grate (*'i-grāt*), *v. i.* to come into a new habitat or place of residence. [EMIGRATE.]
im-mi-nence (*'i-nens*), *n.* the condition of being imminent; nearness.
im-mi-nent (*'i-nent*), *adj.* threatening or about to fall or occur immediately.
Syn. IMMINENT, impending, threatening. All these terms are used in regard to some evil that is exceedingly near; *imminent* conveys no idea of duration; *impending* excludes the idea of what is momentary. A person may be in *imminent* danger of losing his life in one instant, and the danger may be over the next instant; but an *impending* danger is that which has been long in existence and gradually approaching; a *threatening* evil gives intimations of its own approach; we perceive the *threatening* tempest in the blackness of the sky.
Ant. CONTINGENT, remote, unlikely.
im-mo-bil-i-ty (*-mō-bil'i-ti*), *n.* fixedness in place or state.
im-mod-er-ate (*-mod'ĕr-āt*), *adj.* not moderate; extravagant; intemperate.
im-mod-est (*-mod'est*), *adj.* forward; arrogant; indelicate; unchaste.
im-mo-late (*'ō-lāt*), *v. t.* to kill as a sacrificial victim; offer in sacrifice; make a sacrifice of.
im-mor-al (*-mor'al*), *adj.* vicious; dissolute; dishonest; unprincipled.
im-mor-tal (*-môr'tal*), *adj.* not mortal or subject to death; imperishable; ever-living: *n.* one who is immortal.
im-mor-tal-i-ty (*-tal'i-ti*), *n.* exemption from death or oblivion.
im-mor-telle (*-mor-tel'*), *n.* [*pl.* immortelles (*-telz'*)], a plant whose flowers may be dried without losing their form or color.
im-mov-a-ble (*-mōōv'ȧ-bl*), *adj.* incapable of being moved; fixed; unfeeling. [OBSTINATE.]
im-mune (*-mūn'*), *adj.* exempt, as from a disease: *n.* one who is exempt from disease.
im-mu-ni-ty (*-mū'ni-ti*), *n.* [*pl.* immunities (*-tiz*)], exemption from any duty, office, tax or liability.
im-mure (*-mūr'*), *v. t.* to inclose within walls.
im-mu-ta-ble (*-mū'tȧ-bl*), *adj.* unchangeable; invariable; unalterable; permanent. [PERMANENT.]
imp (*imp*), *n.* a young, little or inferior devil; a mischievous child.
im-pact (*im'pakt*), *n.* collision.
im-pair (*-pâr'*), *v. t.* to make worse; lessen in quality: *v. i.* to deteriorate.
Syn. IMPAIR, injure. *To impair* is a progressive mode of *injuring;* an *injury* may take place either by degrees or by an instantaneous act; straining of the eyes *impairs* the sight, but a blow *injures* rather than *impairs* the eye.
im-pale (*-pāl'*), *v. t.* to fix on a stake.
im-pal-pa-ble (*-pal'pȧ-bl*), *adj.* not to be perceived by touch; not material; incorporeal.
im-pan-el (*-pan'el*), *v. t.* summon to serve on a jury; draw from the panel and swear in.
im-par-i-ty (*-par'i-ti*), *n.* inequality; disproportion; want of correspondence.
im-part (*-pärt'*), *v. t.* to bestow a share or portion of; give; make known: *v. i.* to give a share. [COMMUNICATE.]
im-par-tial (*-pär'shal*), *adj.* free from partiality; just; unprejudiced. [CANDID.]
im-pass-a-ble (*-pas'ȧ-bl*), *adj.* not to be passed.
im-pas-sioned (*-pash'und*), *p. adj.* moved to strong feeling; animated; excited.
im-pas-sive (*-pas'iv*), *adj.* apathetic.
im-pa-tient (*-pā'shent*), *adj.* intolerant of pain, delay, opposition, control, or circumstances. [EAGER.]
im-peach (*-pēch'*), *v. t.* to call in question; accuse before a tribunal of official misconduct. [ACCUSE.]
im-peach-ment (*'ment*), *n.* the arraignment of a public officer for malfeasance in office; a discrediting or calling in question.

im-pec-ca-ble (*im-pek'ȧ-bl*), *adj.* not liable to sin; faultless.
im-pe-cu-ni-ous (*-pē-kū'ni-us*), *adj.* without money; poor.
im-pede (*-pēd'*), *v. t.* to obstruct; hinder. [OBSTRUCT.]
im-ped-i-ment (*-ped'i-ment*), *n.* that which impedes progress or activity; obstruction; obstacle; hindrance. [DIFFICULTY.]
im-pel (*-pel'*), *v. t.* [*p. t.* and *p. p.* impelled, *p. pr.* impelling], to drive or urge forward or on; constrain to any kind of motion or action. [PERSUADE.]
im-pend (*-pend'*), *v. i.* to hang over; be ready to fall; be at hand.
im-pend-ing (*'ing*), *p. adj.* overhanging; suspended so as to menace; close at hand. [IMMINENT.]
im-pen-e-tra-ble (*-pen'ē-trȧ-bl*), *adj.* not penetrable; not admitting entrance.
im-pen-i-tence (*-pen'i-tens*), *n.* hardness of heart; stubborn wickedness. [Also *impenitency*.]
im-pen-i-tent (*'i-tent*), *adj.* not contrite; obdurate: *n.* a hardened sinner.
im-per-a-tive (*-per'ȧ-tiv*), *adj.* expressing command; obligatory: *n.* that mood of a verb that expresses command.
im-per-cep-ti-ble (*-pĕr-sep'ti-bl*), *adj.* that cannot be immediately perceived.
im-per-fect (*'fekt*), *adj.* wanting in completeness, correctness, or excellence; defective; faulty.
im-per-fec-tion (*-fek'shun*), *n.* incompleteness; faultiness; a defect or blemish.
im-pe-ri-al (*-pē'ri-al*), *adj.* pertaining to an empire or emperor of superior size or excellence; royal; sovereign.
im-pe-ri-al-ism (*-izm*), *n.* the system of imperial government; the policy of imperial federation; policy of territorial expansion.
im-per-il (*-per'il*), *v. t.* to put in peril; endanger; jeopardize.
im-pe-ri-ous (*-pē'ri-us*), *adj.* domineering, dictatorial, overbearing; urgent; imperative.
Syn. IMPERIOUS, lordly, domineering. A person's temper or his tone is denominated *imperious;* his air or deportment is *lordly;* his tone is *domineering; overbearing* is employed for men in the general relations of society, whether superiors or equals. A man of an *imperious* temper and some talent will frequently be so *overbearing* in the assemblies of his equals as to awe the rest into silence.
im-per-ish-a-ble (*-per'ish-ȧ-bl*), *adj.* indestructible; not subject to decay; permanently enduring.
im-per-me-a-ble (*pĕr'mē-ȧ-bl*), *adj.* not permitting passage, as of a fluid, through its substance; impervious; impenetrable.
im-per-son-al (*'sun-al*), *adj.* wanting personality or conscious individuality; not referring to a particular person: *n.* an impersonal verb.
im-per-son-ate (*'sun-āt*), *v. t.* to invest with personality; to represent the person or character of, especially on the stage.
im-per-ti-nence (*'ti-nens*), *n.* that which is impertinent or irrelevant, as in speech or manners; rudeness.
im-per-ti-nent (*'ti-nent*), *adj.* nonpertinent; of no relation to the matter in hand; uncivil, or offensive.
im-per-turb-a-ble (*-tȧrb'ȧ-bl*), *adj.* not easily disturbed, agitated, or disconcerted. [CALM.]
im-per-vi-ous (*'vi-us*), *adj.* not to be passed through or penetrated; impenetrable.
im-pet-u-ous (*-pet'ū-us*), *adj.* rushing with force and violence; precipitate. [VIOLENT, EAGER.]
im-pe-tus (*'pē-tus*), *n.* impulse; impulsion; momentum.
im-pi-e-ty (*-pī'e-ti*), *n.* [*pl.* impieties (*-tiz*)], want of piety; ungodliness; an act of irreverence.
im-pinge (*-pinj'*), *v. i.* to strike or dash; clash; come in collision (with *on*, *upon*, or *against*).
★**im-pi-ous** (*im'pi-us*, not *im-pī'us*), *adj.* irreligious; wicked; profane. [IRRELIGIOUS.]
imp-ish (*imp'ish*), *adj.* having the character of an imp.
★**im-pla-ca-ble** (*im-plā'kȧ-bl*, not *im-plak'ȧ-bl*), *adj.* not to be pacified or appeased; relentless.
im-plant (*-plant'*), *v. t.* to infix for growth; cause to take root.
im-ple-ment (*'plē-ment*), *n.* that which supplies a want, or is a requisite to an end: *pl.* tools and weapons.
im-pli-cate (*'pli-kāt*), *v. t.* to infold; involve; entangle.
Syn. IMPLICATE, involve. *Implicate* denotes to fold into a thing; and *involve* signifies to roll into a thing; *to implicate* marks something less entangled than *to involve*. In application to human affairs, people are said to be *implicated* who have taken ever so small a share in a transaction; but they are *involved* only when they are deeply concerned.
Ant. EXTRICATE, remove.
im-pli-ca-tion (*-kā'shun*), *n.* entanglement; that which is implied; deduction.
im-plic-it (*-plis'it*), *adj.* implied; resting on implication; trusting in another; tacit; unreserved.
im-plore (*-plōr'*), *v. t.* to entreat (a person, or for a thing) earnestly, humbly, and importunately: *v. i.* to beg; pray; supplicate. [BEG.]
im-ply (*-plī'*), *v. t.* [*p. t.* and *p. p.* implied, *p. pr.* implying], to contain by implication; mean or signify by fair inference.

im-po-lite (*im-pō-līt'*), *adj.* wanting in good manners; boorish.

im-pol-i-tic (*-pol'i-tik*), *adj.* contrary to good policy; unwise.

im-port (*-pōrt'*), *v. t.* to bring into a country from abroad; bring in from without, as irrelevant matter into a discussion; imply; signify; concern: *v. i.* to be of moment. *n.* (*im'pōrt*) merchandise brought into a country from abroad (usually in *pl.*); meaning; purport; significance; importance.

im-por-tance (*-pôr'tans*), *n.* the quality of being important; high place in public estimation; high self-esteem.

im-por-tant (*'tant*), *adj.* of much import or significance; momentous; of high standing; pompous.

im-por-tu-nate (*-pôr'tū-nāt*), *adj.* persistent; unreasonable or troublesome in solicitation; urgent. [EAGER.]

★**im-por-tune** (*-pôr-tūn'*), *v. t.* to harass with perpetual petitions or demands: *v. i.* to beg persistently or urgently. [SOLICITATION.]

im-pose (*-pōz'*), *v. t.* to lay upon, as a burden, punishment, or charge; palm off: *v. i.* to place a burden or tax; practice deception (with *upon*). [ABUSE.]

im-pos-ing (*'ing*), *p. adj.* adapted to impress forcibly; commanding; stately; grand; impressive.

im-po-si-tion (*-pō-zish'un*), *n.* a laying upon, especially of hands in ordination or confirmation; that which is imposed, levied, or enjoined; a trick, fraud, or deception.

im-pos-si-ble (*-pos'i-bl*), *adj.* that cannot be done; inconceivable.

im-post (*'pōst*), *n.* that which is imposed or levied; a tax, or duty.

im-pos-tor (*-pos'tĕr*), *n.* one who imposes upon others. [DECEIVER.]

im-pos-ture (*-pos'tūr*), *n.* deception.

im-po-tence (*'pō-tens*), *n.* the state of being impotent in body or mind; feebleness.

★**im-po-tent** (*'pō-tent*, not *im-pō'tent*), *adj.* wanting in physical, intellectual, or moral power; weak.

im-pound (*-pound'*), *v. t.* to shut up in a pound or pen; confine.

im-pov-er-ish (*-pov'ĕr-ish*), *v. t.* to make poor; reduce to poverty; cause to deteriorate.

im-prac-ti-ca-ble (*-prak'ti-kȧ-bl*), *adj.* not to be effected by the means employed, or at command.

im-pre-cate (*'prē-kāt*), *v. t.* to invoke, especially an evil or curse, upon; curse; wish evil to.

im-preg-na-bil-i-ty (*-preg-nȧ-bil'i-ti*), *n.* the quality of being unconquerable.

im-preg-na-ble (*'nȧ-bl*), *adj.* not to be captured, as a fortress; not to be overcome, as virtue.

im-preg-nate (*-preg'nāt*), *v. t.* to make pregnant; fecundate; imbue; saturate.

im-pre-sa-ri-o (*ēm-prȧ-sȧ'rē-ō*), *n.* the manager of an opera or concert company.

im-press (*-pres'*), *v. t.* to mark, stamp, or print by pressure; to affect forcibly, or stamp deeply on, the mind; compel to enter the public service as soldiers or sailors: *n.* (*im'pres*) a mark made by pressure; an image or figure; an impression or image fixed in the mind.

im-press-i-ble (*'i-bl*), *adj.* capable of being impressed; susceptible of impressions.

im-pres-sion (*-presh'un*), *n.* the mark made by a stamp or mold; style or character formed by external force or influence; an image in the mind; the effect produced by a sensation, passion, or emotion; remembrance, or belief; edition.

im-pres-sion-a-bil-i-ty (*-ȧ-bil'i-ti*), *n.* the quality of being impressionable.

im-pres-sion-a-ble (*-ȧ-bl*), *adj.* capable of receiving impressions; susceptible.

im-pres-sion-ism (*'un-izm*), *n.* the doctrine that natural objects should be painted (in literature described) so as to reproduce only their general effect or impression.

im-pres-sion-ist (*'un-ist*), *n.* one who, in art or in literature, holds the theory of impressionism.

im-press-ive (*-pres'iv*), *adj.* capable of making impression.

im-press-ment (*-pres'ment*), *n.* the act of seizing for public use, or of compelling to enter the public service.

im-print (*-print'*), *v. t.* to mark by pressure; print; impress feebly, as on the mind or memory: *n.* (*im'print*) an impression, impress, or mark left by something.

im-pris-on (*-priz'n*), *v. t.* to put into a prison; restrain or confine in any way.

im-prob-a-ble (*-prob'ȧ-bl*), *adj.* unlikely; not to be expected.

im-prob-i-ty (*-prob'i-ti*), *n.* want of probity or rectitude; dishonesty.

im-promp-tu (*-promp'tū*), *adv.* without preparation; *adj.* extemporaneous: *n.* extemporaneous speech or effort.

im-prop-er (*-prop'ĕr*), *adj.* not well adapted or suited to the purpose; erroneous; unseemly.

im-pro-pri-e-ty (*-prō-pri'ē-ti*), *n.* [*pl.* improprieties (*-tiz*)], the quality of being improper; unsuitableness.

im-prove (*-prōōv'*), *v. t.* to make better; turn to account: *v. i.* to grow better. [AMEND.]

im-prove-ment (*'ment*), *n.* advancement of anything from good to better; profitable use or application of anything; that by which the value of anything is advanced: *pl.* betterments.

im-prov-i-dence (*-prov'i-dens*), *n.* want of foresight or thrift.

im-prov-i-dent (*im-prov'i-dent*), *adj.* lacking foresight or thrift; careless.

im-prov-i-sa-tion (*-sȧ'shun*), *n.* the act of improvising; an impromptu.

im-pro-vise (*-prō-vīz'*), *v. t.* to compose extemporaneously; bring about on a sudden: *v. i.* to compose extemporaneously; do a thing in an offhand way.

im-pru-dent (*-prōō'dent*), *adj.* wanting prudence; indiscreet; injudicious.

im-pu-dent (*'pū-dent*), *adj.* shameless; immodest; offensively forward.

im-pugn (*-pūn'*), *v. t.* to attack by arguments; contradict.

Syn. IMPUGN, attack. He who *impugns* may sometimes proceed insidiously and circuitously to undermine the faith of others; he who *attacks* always proceeds with more or less violence. When there are no arguments wherewith to *impugn* a doctrine, it is easy *to attack* it with ridicule and scurrility.

Ant. DEFEND, resist.

im-pulse (*'puls*), *n.* force communicated suddenly; the result of an impelling force; a mental force directly urging to action.

im-pul-sive (*'siv*), *adj.* having the power of impelling; actuated by, or resulting from, impulse; passionate.

im-pu-ni-ty (*-pū'ni-ti*), *n.* freedom from punishment, injury, or loss.

im-pure (*-pūr'*), *adj.* mixed with extraneous matter; unchaste; unclean; dirty; not accurate.

im-pu-ri-ty (*'ri-ti*), *n.* [*pl.* impurities (*-tiz*)], uncleanness; a physical or moral blemish.

im-pu-ta-tion (*-tȧ'shun*), *n.* the act of imputing or charging; anything imputed or charged; censure; reproach; insinuation.

im-pute (*-pūt'*), *v. t.* to charge, attribute or ascribe; attribute as derived from another.

in-ac-tive (*in-ak'tiv*) *adj.* not active.

in-ad-e-quate (*-ad'ē-kwāt*), *adj.* not adequate.

in-ad-vert-ent (*-vĕrt'ent*), *adj.* inattentive; heedless; unconscious.

in-al-ien-a-ble (*-āl-yen-ȧ-bl*), *adj.* that cannot, or should not, be alienated, surrendered or transferred to another.

in-ane (*-ān'*), *adj.* empty; senseless; pointless: *n.* infinite void; space.

in-an-i-mate (*-an'i-māt*), *adj.* not animate or animated.

in-an-i-ty (*-an'i-ti*), *n.* [*pl.* inanities (*-tiz*)], emptiness; mental vacuity; frivolity: *pl.* vanities.

in-ap-pre-ci-a-ble (*-ap-prē'shi-ȧ-bl*), *adj.* not to be appreciated or estimated; of no consequence.

in-ar-tic-u-late (*-är-tik'ū-lāt*), *adj.* not uttered with intelligible distinctness; incapable of speech; not articulated.

in-as-much (*-az-much'*), *adv.* in a like degree; seeing that (with *as*); because.

in-at-ten-tive (*-at-ten'tiv*) *adj.* not attentive. [ABSTRACTED.]

in-au-gu-ral (*-aw'gū-ral*), *adj.* pertaining to an inauguration.

★**in-au-gu-rate** (*in-aw'gu-rāt*, not *in-aw'gur-āt*), *v. t.* to invest with office in a formal manner; consecrate; make a formal beginning of; dedicate.

in-aus-pi-cious (*-aws-pish'us*), *adj.* ill-omened; unlucky; unfavorable.

in-breed (*-brēd'*), *v. t.* to breed or develop within; breed from animals closely related.

In-ca (*ing'kȧ*), *n.* the Peruvian emperor, or a member of the royal race in Peru (which claimed descent from the sun) previous to the Spanish conquest under Pizarro, 1531; the aboriginal Peruvian race.

in-cal-cu-la-ble (*in-kal'kū-lȧ-bl*), *adj.* beyond calculation.

in-can-des-cent (*-kan-des'ent*), *adj.* glowing; white with heat.

in-can-des-cent lamp (*lamp*), *n.* a lamp in which the light is produced by a thin strip of nonconducting material contained in a vacuum, and heated to incandescence by an electric current.

in-can-ta-tion (*-kan-tā'shun*), *n.* a magical charm said or sung.

in-ca-pa-ble (*kā'pȧ-bl*) *adj.* not capable.

in-ca-pac-i-tate (*-kȧ-pas'i-tāt*), *v. t* to deprive of capacity or natural power; disqualify; disable.

in-ca-pac-i-ty (*-ti*), *n.* lack of power, physical or mental; legal disqualification.

in-car-cer-ate (*-kär'sĕr-āt*), *v. t.* to imprison; confine.

in-car-na-tion (*-nā'shun*), *n.* the act of clothing with, or assuming, flesh; embodiment in human form.

in-cau-tious (*-kaw'shus*), *adj.* wanting in caution; unwary.

in-cen-di-a-rism (*-sen'di-ȧ-rizm*), *n.* the act of an incendiary; burning; arson.

in-cen-di-a-ry (*'di-ȧ-ri*), *adj.* pertaining to arson or the malicious burning of property; tending to excite passion or violence: *n.* one guilty of arson; one who excites passion or violence.

in-cense (*in-sens'*), *v. t.* to fire; inflame with anger; provoke; irritate; (*in'sens*), perfume with incense: *n.* any aromatic material which exhales perfume when burned; any gratifying odor; homage.

in-cen-tive (*-sen'tiv*), *adj.* inciting; encouraging: *n.* incitement; encouragement; motive; spur.

in-cep-tion (*-sep'shun*), *n.* reception; beginning.

in-cep-tive (*-sep'tiv*), *adj.* beginning; noting beginning: *n.* an inceptive word or phrase.

in-ces-sant (*in-ses'ant*), *adj.* unceasing; ceaseless; continuous.

inch (*inch*), *n.* 1-12th of a foot.

in-cho-ate (*'kō-āt*), *adj.* just begun; incipient; elementary.

in-ci-dence (*'si-dens*), *n.* the direction in which a ray of light or heat falls upon a surface.

in-ci-dent (*'si-dent*), *adj.* apt to occur; appertaining; occurring accidentally; subordinate: *n.* occurrence; that which happens beside the main design; episode. [EVENT, ACCIDENT, CIRCUMSTANCE.]

in-ci-dent-al (*'al*), *adj.* casual; subordinate: *n.* something casual or subordinate: *pl.* minor expenses.

in-cin-er-ate (*-sin'ĕr-āt*), *v. t.* to burn to ashes.

in-cip-i-ent (*-sip'i-ent*), *adj.* beginning to be or to appear; initial.

in-cise (*-sīz'*), *v. t.* to cut in; to engrave.

in-ci-sion (*-sizh'un*), *n.* a cut made with a sharp instrument.

in-ci-sive (*-sī'siv*), *adj.* having the quality of cutting into; sharp; trenchant.

in-cite (*-sīt'*), *v. t.* to move to action; stir up; spur on. [EXCITE, PERSUADE.]

in-cite-ment (*'ment*), *n.* an inciting cause; incentive; impulse.

in-ci-vil-i-ty (*-si-vil'i-ti*), *n.* [*pl.* incivilities (*-tiz*)], lack of civility or courtesy; impoliteness.

in-clem-ent (*-klem'ent*), *adj.* not clement; unmerciful; tempestuous.

in-cli-na-tion (*-kli-nā'shun*), *n.* a leaning; tendency of the mind; disposition; slant; propensity.

Syn. INCLINATION, tendency, propensity, proneness. All these terms are employed to designate the state of the will toward an object; *inclination* denotes its first movement toward an object; *tendency* is a continued *inclination; propensity* denotes a still stronger leaning of the will; and *prone* characterizes an habitual and fixed state of the will toward an object. *Propensity* and *proneness* both designate a downward direction, and consequently refer only to that which is bad and low; a person has a *propensity* to drinking, and a *proneness* to lying. [See *disposition.*]

Ant. DISINCLINATION, repulsion.

in-cline (*-klīn'*), *v. i.* to deviate from the normal; lean; bow; have a tendency: *v. t.* to cause to lean; direct; bow; turn; dispose: *n.* a slope; an inclined plane. [LEAN, ADDICTED, PERSUADE.]

in-close (*-klōz'*), *v. t.* to shut in; encompass; surround; put into an envelope.

Syn. INCLOSE, include. A yard is *inclosed* by a wall; particular goods are *included* in a reckoning. [See *circumscribe.*]

in-clude (*-klōōd'*), *v. t.* to inclose; hold as in an inclosure. [COMPRISE.]

in-clu-sive (*-klōō'siv*), *adj.* inclosing; including.

in-co-her-ence (*-kō-hēr'ens*), *n.* want of cohesion; incongruity; inconsequence. [Also *incoherency.*]

in-co-her-ent (*'ent*), *adj.* without cohesion; incongruous.

in-com-bus-ti-ble (*-kom-bus'ti-bl*), *adj.* that cannot be consumed by fire: *n.* an incombustible.

in-come (*'kum*), *n.* the gain which proceeds from labor, business, property, or capital.

in-com-men-su-ra-ble (*kom-men'shoo-rȧ-bl*), *adj.* having no common measure; having no common divisor except unity: *n.* one of two (or more) quantities that have no common measure.

in-com-men-su-rate (*-rāt*), *adj.* incommensurable; not sufficient in measure; inadequate.

in-com-mode (*-kom-ōd'*), *v. t.* to give inconvenience to.

in-com-mo-di-ous (*'i-us*), *adj.* troublesome; inconvenient.

in-com-mu-ni-ca-ble (*-mū'ni-kȧ-bl*), *adj.* that cannot be communicated or told.

★**in-com-pa-ra-ble** (*in-kom'pȧ-rȧ-bl*, not *in-kom-pär'ȧ-bl*), *adj.* not admitting of comparison; unequaled. [RARE.]

in-com-pat-i-ble (*kom-pat'i-bl*), *adj.* incapable of harmonious subsistence or combination; inconsistent; incongruous: *n. pl.* persons or things irreconcilably disagreeing with each other.

in-com-pe-tence (*-kom'pē-tens*), *n.* inability; insufficiency; inadequacy. [Also *incompetency.*]

in-com-pe-tent (*'pē-tent*), *adj.* wanting ability; inadequate; incapacitated; inadmissible.

in-com-plete (*-plēt'*), *adj.* not fully finished or developed; imperfect; defective.

in-com-pre-hen-si-ble (*-prē-hen'si-bl*), *adj.* illimitable; inconceivable. [MYSTERIOUS.]

in-con-ceiv-a-ble (*in-kon-sēv'ȧ-bl*), *adj.* incapable of being conceived or imagined; incredible.

in-con-clu-sive (*-klōō'siv*), *adj.* leading to no conclusion; unconvincing; ineffective. [ABSURD.]

in-con-gru-i-ty (*-grōō'i-ti*), *n.* [*pl.* incongruities (*-tiz*)], want of mutual fitness; unsuitableness of one thing to another.

in-con-gru-ous (*-kong'grōō-us*), *adj.* reciprocally disagreeing; unsuited to one another; inharmonious; inappropriate.

in-con-se-quent (*kon'sē-kwent*), *adj.* not following from the premises; irrelevant.

in-con-sid-er-a-ble (*-sid'ĕr-ȧ-bl*), *adj.* not deserving consideration; unimportant.

in-con-sid-er-ate (*-sid'ĕr-āt*), *adj.* without consideration; thoughtless.

in-con-sis-tent (*-sis'tent*), *adj.* lacking coherence or agreement; discrepant; self-contradicting.

in-con-sol-a-ble (*in-kon-sōl'ä-bl*), *adj.* not to be consoled or comforted.
in-con-spic-u-ous (*-spik'ū-us*), *adj.* not easily perceived; hardly discernible.
in-con-stant (*'stant*), *adj.* subject to change; unstable; variable; fickle; capricious.
in-con-test-a-ble (*-test'ä-bl*), *adj.* not admitting of question or dispute; incontrovertible.
in-con-ti-nence (*'ti-nens*), *n.* lack of restraint; licentiousness. [Also *incontinency.*]
in-con-ti-nent (*'ti-nent*), *adj.* unrestrained; unchaste: *n.* an unchaste person.
in-con-tro-ver-ti-ble (*tro-vĕr'ti-bl*), *adj.* not admitting of controversy: indisputable. [INDUBITABLE.]
in-con-ven-ience (*-vēn'yens*), *n.* want of convenience; unfitness; disadvantage. [Also *inconveniency.*] *v. t.* to put to inconvenience; incommode; annoy; molest.
Syn. INCONVENIENCE, annoy, molest. We *inconvenience* in small matters, or by omitting such things as might be *convenient;* we *annoy* or *molest* by doing that which is positively painful; we are *inconvenienced* by a person's absence; we are *annoyed* by his presence if he renders himself offensive; we are *molested* by that which is weighty and oppressive; the rude insults of ill-disposed persons may *molest.*
in-con-ven-ient (*'yent*), *adj.* disadvantageous; inopportune.
in-con-vert-i-ble (*vĕrt'i-bl*), *adj.* incapable of being converted into, or exchanged for, something else.
in-cor-po-rate (*-kôr'pō-rāt*), *v. t.* to embody; unite; associate; form into a corporation: *v. i.* to unite with another body so as to form a part of it: *p. adj.* incorporated; united in one body.
in-cor-po-ra-tion (*-pō-rā'shun*), *n.* combination; assimilation; mixture; a corporation.
in-cor-po-re-al (*kor-pō'rē-al*), *adj.* not corporeal; immaterial; intangible.
in-cor-rect (*-kor-ekt'*), *adj.* faulty; not according to fact; inaccurate; improper. [ABSURD.]
in-cor-ri-gi-ble (*'ri-ji-bl*), *adj.* bad beyond correction or amendment; irreclaimable.
in-cor-rupt (*-kor-upt'*), *adj.* free from physical or moral taint: unimpaired; upright; honest.
in-cor-rupt-i-ble (*'i-bl*), *adj.* incapable of physical corruption, decay, or dissolution; not liable to moral perversion.
in-crease (*-krēs'*), *v. i.* to become greater in any respect: *v. t.* to make greater in any respect: *n.* (*in'krēs*), a growing larger; that which is added; offspring.
Syn. INCREASE, grow. To *increase* is either a gradual or an instantaneous act; to *grow* is a gradual process; a stream *increases* by the addition of other waters; but if we say that the river or stream *grows,* it is supposed to *grow* by some regular and continual process of receiving fresh water, as from the running in of different rivulets or smaller streams. [See *add, enlarge.*]
Ant. DECREASE, fade, decline.
in-cred-i-ble (*-kred'i-bl*), *adj.* surpassing belief; hard to believe.
in-cre-du-li-ty (*-krē-dū'li-ti*), *n.* the quality of being incredulous. [UNBELIEF.]
in-cred-u-lous (*-kred'ū-lus*), *adj.* hard of belief; skeptical.
in-cre-ment (*'krē-ment*), *n.* increase; augmentation; produce.
in-crim-i-nate (*-krim'i-nāt*), *v. t.* to charge with a crime; accuse.
in-crust (*in-krust'*), *v. t.* to cover with, or as with, a crust. [Also *encrust.*]
in-cu-bate (*'kū-bāt*), *v. t.* to sit upon (eggs) to hatch them; hatch out: *v. i.* to brood.
in-cu-ba-tor (*'kū-bā-tĕr*), *n.* one who, or that which, incubates.
in-cu-bus (*'kū-bus*), *n.* [*pl.* incubuses (*-ez*), incubi (*-bi*)], the nightmare; a heavy weight or burden.
in-cul-cate (*-kul'kāt*), *v. t.* to impress upon the mind by frequent admonitions. [TEACH.]
in-cum-bent (*kum'bent*), *adj.* lying upon; imposed as a duty: *n.* the holder of an office.
in-cur (*-kûr'*), *v. t.* [*p. t.* and *p. p.* incurred, *p. pr.* incurring], to become liable to; contract, as a debt.
in-cur-a-ble (*-kūr'ä-bl*), *adj.* incapable of being cured: *n.* a person diseased beyond cure.
in-cur-sion (*-kûr'shun*), *n.* an inroad; raid; invasion.
in-debt-ed (*-det'ed*), *p. adj.* lying under an obligation.
Syn. INDEBTED, obliged. *Indebted* is more binding and positive than *obliged;* we are *indebted* to whoever confers an essential service; we are *obliged* to him who does us any service. A man is *indebted* to another for the preservation of his life; he is *obliged* to him for an ordinary act of civility.
in-de-cen-cy (*-dē'sen-si*), *n.* [*pl.* indecencies, (*-siz*)] want of decency, modesty, or good manners; that which is indecent, grossly vulgar, or obscene.
in-de-cent (*'sent*), *adj.* immodest; indelicate; obscene.
in-de-ci-sion (*-dē-sizh'un*), *n.* want of decision; irresolution.
in-de-ci-sive (*-sī'siv*), *adj.* not bringing to a decision; inconclusive.
in-de-co-rous (*-dē-kō'rus*), *adj.* violating decorum.
in-de-co-rum (*-kō'rum*), *n.* violation of decorum or propriety.
in-deed (*-dēd'*), *adv.* in fact; in truth.
in-de-fat-i-ga-ble (*in-dē-fat'i-gä-bl*), *adj.* not to be wearied out; not yielding to fatigue.
in-de-fea-si-ble (*-fē'zi-bl*), *adj.* not to be defeated or made void.
in-de-fen-si-ble (*-fen'si-bl*), *adj.* that cannot be defended.
in-de-fin-a-ble (*-fīn'ä-bl*), *adj.* that cannot be defined.
in-def-i-nite (*-def'i-nit*), *adj.* not defined; not precise; vague; having no particular limit. [EQUIVOCAL.]
in-del-i-ble (*-del'i-bl*), *adj.* not to be blotted out, effaced, or obliterated.
in-del-i-ca-cy (*-del'i-kä-si*), *n.* [*pl.* indelicacies (*-siz*)], want of delicacy; that which is offensive.
in-del-i-cate (*'i-kāt*), *adj.* offensive to modesty or propriety; coarse; indecent.
in-dem-ni-fy (*-dem'ni-fī*), *v. t.* [*p. t.* and *p. p.* indemnified, *p. pr.* indemnifying], to secure or insure against loss or damage; reimburse.
in-dem-ni-ty (*'ni-ti*), *n.* [*pl.* indemnities (*-tiz*)], security against loss, damage, or punishment; compensation for loss.
in-dent (*-dent'*), *v. t.* to make a dent or depression in; dent; notch.
in-den-ture (*'tūr*), *n.* a covenant or deed: *v. t.* to bind by indenture, as an apprentice.
in-de-pend-ence (*-dē-pend'ens*), *n.* freedom from support or governance by others; a competency; self-reliance.
Independence day (*dā*), July 4, the anniversary of the Declaration of Independence.
in-de-pend-ent (*'ent*), *adj.* not dependent, supported by, or governed by, another; having a competency; not subject to bias or influence; irrespective.
in-de-struc-ti-ble (*-struk'ti-bl*), *adj.* not to be destroyed.
in-de-ter-mi-nate (*-tĕr'mi-nāt*), *adj.* indefinite; not precise; having an idefinite number of values or solutions. [EQUIVOCAL.]
in-dex (*'deks*), *n.* [*pl.* indexes (*-ez*), indices (*'di-sēz*)], that which points out or indicates; a table of contents; the exponent: *v. t.* provide with an index.
India. Means the country traversed by the Indus, or rather the Hindu, which name is a Persianized form of the Sanskrit *Sindhu,* "a great river," rendered *Hindos* in the Greek.
in-di-an (*'di-an*), *adj.* pertaining to the Indies, to the West Indies or to the American Indians: *n.* an East Indian, West Indian or Anglo-Indian; one of the aborigines of America, or a Red Indian.
Indiana. From the word Indian, first applied in 1768 to a grant of land north of and near the Ohio river, which was obtained that year by a company of traders from the Indians.
Indianapolis, Ind. Literally, the city of Indiana, from *Indiana* and *polis,* "city." This name was proposed by Judge Jeremiah Sullivan of Jefferson county, Ind., being preferred to *Tecumseh* and *Suwarrow,* which were suggested.
Indian Ocean. Indicative of its geographical position.
in-di-a rub-ber (*'di-ä rub'ĕr*), caoutchouc.
in-di-cate (*'di-kāt*), *v. t.* to point out; show; suggest; hint.
in-dic-a-tive (*-dik'ä-tiv*), *adj.* pointing out; bringing to notice; noting that mood of the verb which indicates, predicates, or affirms: *n.* the indicative mood.
in-di-ca-tor (*'di-kā-tĕr*), *n.* one who, or that which, indicates.
in-dict (*-dīt'*), *v. t.* to charge with a crime, by the presentment of a grand jury.
in-dict-ment (*'ment*), *n.* a written accusation against a prisoner.
in-dif-fer-ence (*-dif'ĕr-ens*), *n.* the state of being indifferent; absence of preference or interest; unconcernedness; condition of being indifferent in character or quality.
in-dif-fer-ent (*'ĕr-ent*), *adj.* unconcerned; regardless.
Syn. INDIFFERENT, unconcerned, regardless. *Indifferent* respects only the will, *unconcerned* either the will or the understanding, *regardless* the understanding only; we are *indifferent* about matters of minor consideration; we are *unconcerned* or *regardless* about serious matters that have remote consequences; an author will seldom be *indifferent* about the success of his work; nor be *unconcerned* about the influence which his writings may have, nor *regardless* of the estimation put upon his character. [See *abstracted.*]
in-di-gence (*'di-jens*), *n.* the state of being indigent. [Also *indigency.*]
in-dig-e-nous (*-dij'ē-nus*), *adj.* born or produced in a country; innate; inherent. [NATIVE.]
in-di-gent (*'di-jent*), *adj.* destitute; needy.
in-di-gest-i-ble (*-jest'i-bl*), *adj.* not digestible.
in-di-ges-tion (*-jes'chun*), *n.* difficulty in digesting food; dyspepsia.
in-dig-nant (*-dig'nant*), *adj.* affected with indignation.
in-dig-na-tion (*-nā'shun*), *n.* anger at what is unworthy, unjust, dishonorable, or base. [ANGER.]
in-dig-ni-ty (*-dig'ni-ti*), *n.* [*pl.* indignities (*-tiz*)], an action intended to lower the dignity of another; insult.
in-di-go (*'di-gō*), *n.* a blue dyestuff obtained from the indigo plant.
in-di-rect (*in-di-rekt'*), *adj.* not straight; not directly resulting from a cause; not straightforward or fair.
in-dis-creet (*in-dis-krēt'*), *adj.* wanting in discretion; imprudent.
in-dis-cre-tion (*-dis-kresh'un*), *n.* want of discretion; imprudence; an imprudent act.
in-dis-crim-i-nate (*-krim'i-nāt*), *adj.* undistinguishing; promiscuous.
in-dis-pens-a-bil-i-ty (*-pen-sä-bil'i-ti*), *n.* incapability of being dispensed with.
in-dis-pen-sa-ble (*'sä-bl*), *adj.* that cannot be dispensed with; absolutely necessary.
in-dis-po-si-tion (*-pō-zish'un*), *n.* slight illness; disinclination.
★**in-dis-pu-ta-ble** (*in-dis'pū-tä-bl*, not *in-dis-pū'tä-bl*), *adj.* too evident to admit of dispute; unquestionable. [INDUBITABLE.]
in-dis-so-lu-ble (*'ō-lū-bl*), *adj.* not dissoluble or dissolvable.
in-dis-tinct (*-dis-tingkt'*), *adj.* not distinct to the senses or the mind. [EQUIVOCAL, FAINT.]
in-dis-tin-guish-a-ble (*-ting'gwish-ä-bl*), *adj.* incapable of being distinguished.
in-dite (*-dīt'*), *v. t.* to compose; write.
in-di-vid-u-al (*-di-vid'ū-al*), *adj.* pertaining to, or characteristic of, a single person or thing: *n.* a single person, animal, or thing. [PARTICULAR.]
in-di-vid-u-al-ism (*-izm*), *n.* the quality of being individual; a social system in which each individual works for himself alone.
in-di-vid-u-al-i-ty (*-al'i-ti*), *n.* the condition of being individual; distinctive character.
in-di-vid-u-al-ize (*'ū-al-iz*), *v. t.* to invest with individuality; distinguish.
in-di-vis-i-ble (*-viz'i-bl*), *adj.* not separable into parts: *n.* that which is indivisible.
in-doc-tri-nate (*-dok'tri-nāt*), *v. t.* to imbue with doctrines. [TEACH.]
In-do-Eu-ro-pe-an (*-dō-ū-rō-pē'an*), *adj.* pertaining to the family of Aryan languages extending from India over Europe.
in-do-lence (*'dō-lens*), *n.* love of ease; laziness.
in-do-lent (*-lent*), *adj.* indulging in ease; avoiding labor; lazy. [IDLE.]
in-dom-i-ta-ble (*-dom'i-tä-bl*), *adj.* untamable; invincible. [OBSTINATE.]
in-dorse (*-dōrs'*), *v. t.* to write on the back of, as a check, etc.; sanction; approve. [Also *endorse.*]
in-du-bi-ta-ble (*-dū'bi-tä-bl*), *adj.* too evident to be doubted.
Syn. INDUBITABLE, unquestionable, indisputable, incontrovertible. When a fact is supported by such evidence as admits of no kind of *doubt* it is termed *indubitable;* when the truth of an assertion rests on the authority of a man whose character for integrity stands unimpeached, it is termed *unquestionable* authority; when a thing is believed to exist on the evidence of every man's senses, it is termed undeniable; when a sentiment has always been held as either true or false, without *dispute,* it is termed *indisputable;* when arguments have never been *controverted* they are termed *incontrovertible.*
in-duce (*dūs'*), *v. t.* to lead on; influence; prevail upon; bring on; effect; cause; to infer by induction. [PERSUADE.]
in-duce-ment (*-dūs'ment*), *n.* that which induces; motive. [office.
in-duct (*-dukt'*), *v. t.* to introduce; install into an
in-duc-tion (*-duk'shun*), *n.* the act of inducting; the introduction of a person into an office; conclusion drawn from a process of induction; electrical or magnetic influence without direct contact.
in-duc-tive (*'tiv*), *adj.* proceeding by induction; producing induction; operating by induction.
in-due (*-dū'*), *v. t.* to clothe or invest; furnish; supply; endow.
in-dulge (*-dulj'*), *v. t.* to be kind or complaisant to; humor: *v. i.* to gratify one's self. [FOSTER, GRATIFY.]
in-dul-gence (*dul'jens*), *n.* permission; license; gratification; excess; toleration.
in-dul-gent (*'jent*), *adj.* disposed to indulge; compliant.
Syn. INDULGENT, fond. *Indulgence* lies more in forbearing from the exercise of authority; *fondness* in the outward behavior and endearments; an *indulgent* parent is seldom a prudent parent; but a *fond* parent does not rise above a fool; all who have the care of young people should occasionally relax from the strictness of the disciplinarian and show an *indulgence* where a suitable opportunity offers; a *fond* mother takes away from the value of *indulgences* by an invariable compliance with the humors of her children.
in-du-rate (*'dū-rāt*), *v. i.* to grow hard: *v. t.* to make hard; render unfeeling or obdurate.
in-dus-tri-al (*-dus'tri-al*), *adj.* pertaining to productive industry.
in-dus-tri-ous (*'tri-us*), *adj.* characterized by diligence or industry; hard-working. [ACTIVE.]
in-dus-try (*'dus-tri*), *n.* [*pl.* industries (*-triz*)], steady application to business or labor; productive labor.
in-e-bri-ate (*-ē'bri-āt*), *v. t.* to make drunk; intoxicate: *n.* an habitual drunkard.
in-ef-fa-ble (*-ef'ä-bl*), *adj.* unspeakable; inexpressible; too sacred for utterance. [UNSPEAKABLE.]
in-ef-fect-ive (*-ef-ekt'iv*), *adj.* not producing the desired effect; ineffectual.
in-ef-fec-tu-al (*-ek'tū-al*), *adj.* not producing the desired effect; unavailing.

in-ef-fi-cient (*in-ef-fish'ent*), *adj.* not producing, or not capable of producing, the desired effect; incapable.

in-el-e-gant (*-el'ē-gant*), *adj.* offensive to good taste.

in-el-i-gi-ble (*'i-ji-bl*), *adj.* unworthy of choice: unsuitable.

in-ept-ly (*-ept'li*), *adv.* unsuitably; foolishly.

in-e-qual-i-ty (*-ē-kwol'i-ti*), *n.* [*pl.* inequalities (*-tiz*)], difference; unevenness; changeableness; inadequacy. [DISPARITY.]

in-eq-ui-ta-ble (*-ek'wi-tā-bl*), *adj.* not according to equity; unjust.

in-ert (*-ērt'*), *adj.* having no power of motion or action.

in-er-ti-a (*-ēr'shi-ā*), *n.* lack of activity; inertness; sluggishness.

in-es-ti-ma-ble (*-es'ti-mā-bl*), *adj.* not to be estimated; beyond measure or price.

in-ev-i-ta-ble (*-ev'i-tā-bl*), *adj.* not to be evaded; unavoidable.

in-ex-act (*egz-akt'*), *adj.* not precise, correct, or accurate.

in-ex-cus-a-ble (*-eks-kūz-ā-bl*), *adj.* incapable of being excused.

in-ex-haus-ti-ble (*-egs-aws'ti-bl*), *adj.* not to be exhausted or spent.

in-ex-o-ra-ble (*-eks'ō-rā-bl*), *adj.* unyielding; unrelenting.

in-ex-pe-di-ent (*-pē'di-ent*), *adj.* unsuitable to circumstances; inadvisable.

in-ex-pen-sive (*-pen'siv*), *adj.* cheap.

in-ex-pe-ri-ence (*-pē'ri-ens*), *n.* want of experience.

in-ex-pert (*-pērt'*), *adj.* unskilled.

in-ex-pi-a-ble (*'pi-ā-bl*), *adj.* that cannot be expiated.

★**in-ex-pli-ca-ble** (*'pli-kā-bl*), *adj.* not to be explained. [MYSTERIOUS.]

in-ex-plo-sive (*-plō'siv*), *adj.* not liable to explode.

in-ex-press-i-ble (*-pres'i-bl*), *adj.* incapable of being expressed. [UNSPEAKABLE.]

in-ex-tin-guish-a-ble (*-ting'gwish-ā-bl*), *adj.* unquenchable.

in-ex-tri-ca-ble (*'tri-kā-bl*), *adj.* not extricable.

in-fal-li-ble (*-fal'i-bl*), *adj.* incapable of erring.

★**in-fa-mous** (*'fā-mus*), *adj.* having a notoriously bad reputation.

Syn. INFAMOUS, scandalous. *Infamous* and *scandalous* are both said of that which is calculated to excite great displeasure in the minds of all who hear it, and to degrade the offenders in the general estimation; but the *infamous* seems to be that which produces greater publicity, and more general reprehension, than the *scandalous*.

in-fa-my (*'fā-mi*), *n.* infamous character; public disgrace; ignominy.

in-fan-cy (*'fan-si*), *n.* the state of being an infant.

in-fant (*'fant*), *n.* a young child; popularly a child under two years; in law, a person who has not attained the age of twenty-one: *adj.* pertaining to infancy.

in-fan-ti-cide (*-fan'ti-sīd*), *n.* the murder of an infant.

in-fan-tile (*'fan-tīl*), *adj.* pertaining to infants or infancy.

in-fan-try (*'fan-tri*), *n.* foot soldiers.

in-fat-u-ate (*-fat'ū-āt*), *v. t.* to make extravagantly foolish; to inspire with fatuous passion.

in-fect (*-fekt'*), *v. t.* to communicate some (especially bad) quality to; taint.

in-fec-tion (*-fek'shun*), *n.* the act of infecting; that which infects. [CONTAGION.]

in-fec-tious (*'shus*), *adj.* communicable by infection.

in-fe-lic-i-tous (*-fē-lis'i-tus*), *adj.* unfortunate; unhappy.

in-fe-lic-i-ty (*-lis'i-ti*), *n.* [*pl.* infelicities (*-tiz*)], misfortune; unhappiness; inappropriateness.

in-fer (*-fēr'*), *v. t.* [*p. t.* and *p. p.* inferred, *p. pr.* inferring], to derive by induction or deduction; imply: *v. i.* to conclude.

in-fer-ence (*f'fēr-ens*), *n.* the act of inferring; the conclusion; deduction; induction. [CONCLUSION.]

in-fer-en-tial (*-en'shal*), *adj.* having the nature of an inference; deduced by inference.

in-fe-ri-or (*-fē'ri-ēr*), *adj.* lower in place, rank, or quality; secondary: subordinate: *n.* one who ranks below another; a subordinate.

in-fe-ri-or-i-ty (*-ri-or'i-ti*), *n.* lower state or quality.

in-fer-nal (*-fēr'nal*), *adj.* pertaining to, or resembling, hell; hellish; diabolical; fiendish; outrageous.

in-fest (*-fest'*), *v. t.* to attack; haunt; overrun.

in-fi-del (*'fi-del*), *adj.* rejecting all religion; manifesting unbelief: *n.* one who rejects Christianity as a divine revelation.

in-fi-del-i-ty (*-del'i-ti*), *n.* [*pl.* infidelities (*-tiz*)], disbelief in all religion; breach of trust; adultery. [UNBELIEF.]

in-field (*'fēld*), *n.* in baseball, the space within the base line, 30 yds. by 30 yds.

in-fil-tra-tion (*-fil-trā'shun*), *n.* the act of infiltrating; that which infiltrates.

in-fi-nite (*'fi-nit*), *adj.* indefinitely extensive; immeasurable; *n.* the Infinite Being; an indeterminate. [BOUNDLESS.]

in-fin-i-tes-i-mal (*-fin-i-tes'i-mal*), *adj.* infinitely small: *n.* a quantity less than any assignable quantity.

in-fin-i-tive (*-fin'i-tiv*), *adj.* the term applied to that verb-form which simply expresses the general sense of the verb without limitation to person or number: *n.* the infinitive mood; a verb in the infinitive mood.

in-fin-i-tude (*in-fin'i-tūd*), *n.* the state of being infinite; unlimited extent; infinity.

in-fin-i-ty (*'i-ti*), *n.* [*pl.* infinities (*-tiz*)], the state of being infinite; an infinite quantity.

in-firm (*-fērm'*), *adj.* feeble in body or health; weak-minded. [WEAK.]

in-fir-ma-ry (*'mā-ri*), *n.* [*pl.* infirmaries (*-riz*)], a hospital for the sick and injured.

in-fir-mi-ty (*'mi-ti*), *n.* [*pl.* infirmities (*-tiz*)], the state of being infirm. [DEBILITY.]

in-flame (*-flām'*), *v. t.* to set on fire; fire with passion; excite; provoke; irritate: *v. i.* to become inflamed.

in-flamed (*-flāmd'*), *p. adj.* heated; exasperated.

in-flam-ma-ble (*-flam'ā-bl*), *adj.* easily set on flame; excitable.

in-flam-ma-tion (*-ā'shun*), *n.* a morbid process, characterized, when external, by heat.

in-flam-ma-to-ry (*'ā-tō-ri*), *adj.* tending to excite passion, tumult, sedition or inflammation.

in-flate (*-flāt'*), *v. t.* to swell, or distend.

in-flec-tion (*-flek'shun*), *n.* a bend or bending; modulation of the voice; variation of nouns, verbs, etc. [Also *inflexion*.]

in-flex-i-ble (*fleks'i-bl*), *adj.* not to be bent; rigid; stiff; inexorable; stubborn. [OBSTINATE.]

in-flict (*-flikt'*), *v. t.* to cause by, or as if by, striking; cause to be suffered.

in-flu-ence (*'flū-ens*), *n.* energy or potency tending to produce effects insensibly and invisibly; power arising from character or station: *v. t.* to exercise influence on. [INFLUENCE, CREDIT.]

in-flu-en-tial (*-en'shal*), *adj.* having or exerting influence.

in-flu-en-za (*-en'zā*), *n.* an epidemic catarrh.

in-flux (*'fluks*), *n.* an inflow; infusion; continuous importation.

in-form (*-fôrm'*), *v. t.* to animate; mold; instruct; appraise; *v. i.* to give information. [TEACH.]

in-form-al (*'al*), *adj.* not according to form, custom or rule; unceremonious.

in-for-mal-i-ty (*-fôr-mal'i-ti*), *n.* [*pl.* informalities (*-tiz*)], want of regular, customary, or legal form.

in-for-ma-tion (*-mā'shun*), *n.* communicated knowledge or intelligence.

Syn. INFORMATION, intelligence, notice, advice. *Information* signifies the thing of which one is *informed; intelligence* to understand signifies that by which one is made to understand; *notice* is that which brings a circumstance to our knowledge; *advice* signifies that which is made known.

Ant. IGNORANCE, unfamiliarity.

in-frac-tion (*in-frak'shun*), *n.* a violation, or breach; infringement.

in-fran-gi-ble (*-fran'ji-bl*), *adj.* that cannot be broken, separated, or violated; inviolable.

in-fre-quent (*-frē'kwent*), *adj.* seldom occurring. [RARE.]

in-fringe (*-frinj'*), *v. t.* to violate or break, as a law: *v. i.* to encroach (followed by *on* or *upon*).

in-fu-ri-ate (*-fū'ri-āt*), *v. t.* to enrage; madden.

in-fu-sion (*-fū'zhun*), *n.* a pouring in, or something poured in or mingled; a liquid extract obtained by steeping.

in-gen-ious (*-jēn'yus*), *adj.* having ingenuity or inventive skill; clever. [INGENUOUS.]

in-ge-nu-i-ty (*in-jē-nū'i-ti*), *n.* cleverness in contriving or inventing; skill.

Syn. INGENUITY, wit. *Ingenuity* comprehends invention; *wit* is the fruit of the imagination, which forms new and sudden conceptions of things. One is *ingenious* in matters either of art or science; one is *witty* only in matters of sentiment.

in-gen-u-ous (*in-jen'ū-us*), *adj.* frank; open; sincere; artless; candid.

Syn. INGENUOUS, ingenious. We love the *ingenuous* character on account of the qualities of his heart; we admire the *ingenious* man on account of the endowments of his mind. One is *ingenuous* as a man, or *ingenious* as an author. The *ingenuous* man is frank, candid; the *ingenious* man is clever, skillful. [See *frank*.]

in-glo-ri-ous (*-glō'ri-us*), *adj.* without glory; disgraceful; shameful.

in-got (*'got*), *n.* a cast mass of metal.

in-graft (*-grāft'*), *v. t.* to insert (a scion) in a stock.

in-grain (*-grān'*), *v. t.* to dye with any deep, lasting color; impregnate deeply: *adj.* (*in'grān*) dyed prior to being manufactured: *n.* a carpet made of cotton warps and wool filling.

in-gra-ti-ate (*-grā'shi-āt*), *v. t.* to insinuate (one's self) into the favor of another. [INSINUATE.]

in-grat-i-tude (*-grat'i-tūd*), *n.* absence of gratitude; insensibility to kindness.

in-gre-di-ent (*-grē'di-ent*), *n.* a component part; part.

in-gress (*'gres*), *n.* entrance.

in-hab-it (*-hab'it*), *v. t.* to dwell in; occupy as a place of residence: *v. i.* to reside: remain. [ABIDE.]

in-hab-it-ant (*'it-ant*), *n.* one who, or that which, inhabits.

in-hale (*-hāl'*), *v. t.* to draw into the lungs.

in-har-mo-ni-ous (*-här-mō'ni-us*), *adj.* unmusical; discordant.

in-her-ent (*-hēr'ent*), *adj.* existing inseparably in something else; innate.

in-her-it (*-her'it*), *v. t.* to possess from an ancestor by right of succession, or by nature; *v. i.* to come into possession of property as the heir.

in-her-it-ance (*-ans*), *n.* the act of inheriting; that which is inherited.

in-hib-it (*in-hib'it*), *v. t.* to restrain; prohibit; interdict.

in-hos-pi-ta-ble (*-hos'pi-tā-bl*), *adj.* not hospitable; affording no shelter; barren; cheerless.

in-hu-man (*-hū'man*), *adj.* cruel; unfeeling. [CRUEL.]

Inigo (*in'i-gō*). Another spelling of Innigo or Enneco, and derived probably from *Ignatius*, or corrupted from *Heinrich*.

in-im-i-cal (*-im'i-kal*), *adj.* hostile; adverse.

in-im-i-ta-ble (*'i-tā-bl*), *adj.* matchless.

in-iq-ui-tous (*-ik'wi-tus*), *adj.* wicked; unjust. [WICKED.]

in-iq-ui-ty (*'wi-ti*), *n.* wickedness; injustice; unrighteousness. [ABOMINATION.]

in-i-ti-ate (*ish'i-āt*), *v. t.* to instruct in the first principles of anything; set on foot; bring in; acquaint with. [TEACH.]

in-i-ti-a-tion (*-i-ā'shun*), *n.* the act of initiating.

in-i-ti-a-tive (*'i-ā-tiv*), *adj.* introductory: *n.* an introductory or first step; power of commencing.

in-ject (*-jekt'*), *v. t.* to throw or cast in: introduce, as a liquid.

in-ju-di-cious (*-jū-dish'us*), *adj.* not judicious; indiscreet.

in-junc-tion (*-junk'shun*), *n.* the act of enjoining; that which is enjoined; command, order, or precept. [COMMAND.]

in-jure (*'jūr*), *v. t.* to hurt; harm; damage. [IMPAIR, ABUSE.]

in-ju-ri-ous (*-jū'ri-us*), *adj.* hurtful; unjust; detrimental.

in-ju-ry (*'jū-ri*), *n.* [*pl.* injuries (*-riz*)], that which occasions harm; detriment; loss; damage. [INJUSTICE.]

in-jus-tice (*-jus'tis*), *n.* the quality of being unjust; violation of another's rights; injury; wrong.

Syn. INJUSTICE, injury, wrong. The violation of *justice* or a breach of the rule of right, constitutes the *injustice;* but the quantum of ill which falls on the person constitutes the *injury;* a *wrong* partakes both of injustice and injury; it is, in fact, an *injury* done by one person to another in express violation of *justice*.

Ant. EQUITY, fairness, right.

ink (*ingk*), *n.* a fluid or viscous material used for writing, printing, etc.: *v. t.* to spread ink upon.

in-kling (*'kling*), *n.* an intimation; hint.

in-land (*in'land*), *adj.* pertaining to, or situated in, the interior of a country: *adj.* toward the interior.

in-lay (*-lā'*), *v. t.* [*p. t.* and *p. p.* inlaid, *p. pr.* inlaying], to ornament (a surface) by laying in pieces of ivory, wood, metal, etc.: *n.* materials for inlaying.

in-let (*-let'*), *v. t.* [*p. t.* and *p. p.* inlet, *p. pr.* inletting], to inlay; insert: *n.* (*in'let*), an entrance; a small bay or creek.

inn (*in*), *n.* a house for the reception and entertainment of travelers; tavern.

in-nate (*'nāt*), *adj.* inborn; native. [NATIVE.]

in-ner (*'ēr*), *adj.* internal; interior; esoteric.

in-nings (*'ings*), *n. pl.* the turn of a side or player to bat.

★**in-no-cent** (*in'nō-sent*, not *in'no-sunt*), *adj.* free from guilt or wrongdoing; pure; weak in intellect. [CANDID.]

Innocent. From the Latin meaning "harmless." Dutch, *Innocentius;* Fr., *Innocent;* Ger., *Innocenz,* or *Innocentius;* It., *Innocente;* Lat., *Innocentius;* Sp. *Inocencio*.

in-noc-u-ous (*-nok'ū-us*), *adj.* harmless.

in-no-vate (*'ō-vāt*), *v. i.* to make alterations or changes in something already established; introduce new things.

in-nox-ious (*-nok'shus*), *n.* harmless.

Innsbruck (*ins'prook*). Means "at the bridge," on the river Inn.

Inns of Court. Legal societies in London which have the exclusive privilege of calling candidates to the bar, and maintain instruction and examination for that purpose; also the precincts or premises occupied by these societies respectively.

in-nu-en-do (*-ū-en'dō*), *n.* [*pl.* innuendos, -does (*-dōz*)], an oblique hint or insinuation.

in-nu-mer-a-ble (*'mēr-ā-bl*), *adj.* that cannot be counted.

in-nu-tri-tious (*-trish'us*), *adj.* not affording nourishment.

in-oc-u-late (*-ok'ū-lāt*), *v. t.* to communicate a disease to: *v. i.* to practice inoculation. [sive.

in-or-di-nate (*-ôr'di-nāt*), *adj.* immoderate; exces-

in-or-gan-ic (*-gan'ik*), *adj.* destitute of organs; not produced by living organisms. [Also *inorganical*.]

in-quest (*'kwest*), *n.* a coroner's inquiry with a jury into the cause of a death; a judicial inquiry.

in-quire (*-kwīr'*), *v. i.* to seek for or after by questions; make inquiry (with *for, into, after, about*). [ASK.]

★**in-quir-y** (*in-kwir'i*, not *in'kwir-i*), *n.* [*pl.* inquiries (*'iz*)], the act of inquiring; investigation; research.

in-qui-si-tion (*-kwi-zish'un*), *n.* inquiry; examination; a judicial inquiry in criminal matters.

in-quis-i-tive (*-kwis'i-tiv*), *adj.* given to asking questions. [CURIOUS.]

in-road (*'rōd*), *n.* a hostile incursion.

in-sane (*-sān'*), *adj.* mentally deranged; irrational; foolish.

in-san-i-ty (*-san'i-ti*), *n.* derangement of mind or intellect; lunacy.

★**in-sa-tia-ble** (*in-sā'shā-bl*, not *in-sā'shi-ā-bl*), *adj.* that cannot be satisfied or appeased.

in-scribe (*in-skrīb'*), *v. t.* to write or engrave upon; address in dedication; draw within.
in-scrip-tion (*-skrip'shun*), *n.* the act of inscribing; that which is inscribed.
in-scru-ta-ble (*skrōō'tà-bl*), *adj.* not to be penetrated by inquiry or reason. [MYSTERIOUS.]
in-sect (*'sekt*), *n.* one of a numerous class of articulate animals, the Insecta.
in-sen-sate (*-sen'sāt*), *adj.* destitute of sense or perception; soulless; brutish.
in-sen-si-bil-i-ty (*-si-bil'i-ti*), *n.* the quality of being insensible. [STUPIDITY.]
in-sen-si-ble (*'si-bl*), *adj.* that cannot be felt or perceived; heedless; callous; senseless.
in-sert (*-sērt'*), *v. t.* to place in or among; introduce into.
in-ser-tion (*-sēr'shun*), *n.* the act of inserting; that which is inserted.
in-side (*'sīd*), *adj.* interior; being within: *adv.* and *prep.* within; in less time or space: *n.* that which is within; inner part.
Syn. INSIDE, interior. The term *inside* may be applied to bodies of any magnitude, small or large; *interior* is peculiarly appropriate to bodies of great magnitude. We may speak of the *inside* of a nutshell, but not of its *interior*. The *interior* of the church was beautifully decorated.
Ant. OUTSIDE, exterior.
in-sid-i-ous (*-sid'i-us*), *adj.* treacherous; deceitful; operating secretly.
in-sight (*'sīt*), *n.* penetration; intuition.
in-sig-ni-a (*-sig'ni-à*), *n. pl.* badges of honor or office.
in-sig-nif-i-cant (*-nif'i-kant*), *adj.* without importance, force, influence, or meaning; trivial.
in-sin-u-ate (*-sin'ū-āt*), *v. t.* to ingratiate; suggest or hint indirectly; worm in: *v. i.* work one's self into the confidence of another.
Syn. INSINUATE, ingratiate. A person who *insinuates* adopts every art to steal into the good will of another; but he who *ingratiates* adopts unartificial means to conciliate good will.
in-sip-id (*-sip'id*), *adj.* without flavor; tasteless
in-sist (*-sist'*), *v. i.* to urge or press, as a wish or command.
Syn. INSIST, persist. Both these terms express the idea of resting or keeping to a thing; but *insist* signifies to rest on a point, and *persist* signifies to keep on with a thing, to carry it through. We *insist* on a matter by maintaining it; we *persist* in a thing by continuing to do it.
Ant. DESIST, leave, abandon.
in-sist-ent (*'ent*), *adj.* urgent; conspicuous.
in-so-bri-e-ty (*-sō-brī'ē-ti*), *n.* intemperance.
in-so-lent (*'so-lent*), *adj.* overbearing or offensive to others; insulting; grossly rude. [PRIDE.]
in-sol-u-ble (*-sol'ū-bl*), *adj.* that cannot be dissolved; inexplicable.
in-sol-ven-cy (*-sol'ven-si*), *n.* bankruptcy.
Syn. INSOLVENCY, failure, bankruptcy. *Insolvency* is a state; *failure* an act flowing out of that state; and *bankruptcy* an effect of that act. *Insolvency* is a condition of not being able to pay one's debts; *failure* is a cessation of business, from the want of means to carry it on; and *bankruptcy* is a legal surrender of all one's remaining goods into the hands of one's creditors, in consequence of a real or supposed *insolvency*.
in-sol-vent (*'vent*), *adj.* unable to pay all debts; bankrupt: *n.* one who cannot pay all his debts; a bankrupt.
in-som-ni-a (*-som'ni-à*), *n.* sleeplessness.
in-spect (*-spekt'*), *v. t.* to examine critically; test officially.
in-spi-ra-tion (*-spi-rā'shun*), *n.* the act of drawing air into the lungs; creative influence of genius; elevating influence.
in-spire (*-spīr'*), *v. t.* to draw (air) into the lungs; breathe into; imbue with ideas; exhilarate or enliven: *v. i.* to inhale air or any other influence.
in-spir-it (*-spir'it*), *v. t.* to infuse spirit into; animate; cheer.
in-sta-bil-i-ty (*-stà-bil'i-ti*), *n.* want of stability or firmness.
in-stal-la-tion (*-stol-ā'shun*), *n.* the act of installing; introduction of machinery for use.
in-stance (*'stans*), *v. t.* to refer to, or offer, as an example: *n.* something offered as an illustration or example; earnest solicitation. [EXAMPLE.]
in-stant (*'stant*), *adj.* urgent; immediate; passing; current: *n.* a particular moment of time; point of duration.
Syn. INSTANT, moment. A dutiful child comes the *instant* he is called; a prudent person embraces the favorable *moment*. When they are both taken for the present time, *instant* expresses a much shorter space than *moment*.
in-stan-ta-ne-ous (*-stan-tā'nē-us*), *adj.* acting or occurring in a moment.
in-state (*-stāt'*), *v. t.* to put in office or rank.
★**in-stead** (*in-sted'*, not *in-stid'*), *adv.* in room or place (followed by *of*).
in-step (*'step*), *n.* the arched forepart of the upper side of the human foot.
in-sti-gate (*'sti-gāt*), *v. t.* to provoke or urge on (in a bad sense); incite.
in-still (*-stil'*), *v. t.* [*p. t.* and *p. p.* instilled, *p. pr.* instilling], to insinuate gradually, as if by drops; pour in by drops. [TEACH.]
in-stinct (*'stingkt*), *adj.* animated; stimulated from within: *n.* natural impulse in animals.
in-sti-tute (*'sti-tūt*), *v. t.* to establish; fix; originate; set in operation; ordain: *n.* a maxim or principle; scientific or literary society: *pl.* a book of laws or principles.
in-sti-tu-tion (*in-sti-tū'shun*), *n.* the act of instituting; that which is instituted or established.
in-struct (*-strukt'*), *v. t.* to teach; educate; furnish with orders or directions.
Syn. INSTRUCT, teach. To inform is the act of persons in all conditions; *to instruct* and *teach* are the acts of superiors, either on one ground or another; one informs by virtue of an accidental superiority or priority of knowledge; one *instructs* by virtue of superior knowledge or superior station; one *teaches* by virtue of superior knowledge, rather than of station. [See *teach*.]
in-struc-tion (*-struk'shun*), *n.* the act of instructing; an order, etc. [EDUCATION.]
in-struct-ive (*-strukt'iv*), *adj.* tending to instruct.
in-stru-ment (*'strōō-ment*), *n.* that by which anything is effected.
in-stru-men-tal (*-men'tal*), *adj.* pertaining to, or done by, an instrument; conducive to some end; helpful.
in-stru-men-tal-i-ty (*-tal'i-ti*), *n.* [*pl.* instrumentalities (*-tiz*)], an agency; means.
in-sub-or-di-nate (*-sub-ôr'di-nāt*), *adj.* not submitting to authority; mutinous.
★**in-suf-fer-a-ble** (*-suf'ēr-à-bl*), *adj.* intolerable.
in-suf-fic-ient (*-fish'ent*), *adj.* not enough.
in-su-lar (*'sū-lēr*), *adj.* pertaining to an island; isolated; narrow.
in-su-late (*'sū-lāt*), *v. t.* to place alone, or in a detached situation; separate.
in-sult (*'sult*), *n.* an affront or indignity; gross abuse: *v. t.* (*in-sult'*) to treat with gross indignity, contempt, or abuse.
in-su-per-a-ble (*-sū'pēr-à-bl*), *adj.* not to be overcome; invincible.
in-sur-ance (*-shūr'ans*), *n.* the act or system of insuring against loss or damage.
in-sure (*-shūr'*), *v. t.* to contract on certain conditions to secure against loss or damage; make sure.
in-sur-gent (*-sûr'jent*), *adj.* rising against constituted authority: *n.* a rebel.
in-sur-rec-tion (*-rek'shun*), *n.* active or open hostility to constituted authority; rebellion.
Syn. INSURRECTION, sedition, rebellion, revolt. There may be an *insurrection* against usurped power, which is always justifiable; but *sedition* and *rebellion* are leveled against power universally acknowledged to be legitimate. *Insurrection* is always open; it is a rising up of many in a mass; but it does not imply any concerted, or any specifically active, measure; *rebellion* is the consummation of *sedition;* the scheme of opposition which has been digested in secrecy breaks out into open hostilities, and becomes *rebellion; resolt* is mostly taken either in an indifferent or a good sense for resisting a foreign dominion which has been imposed by force of arms.
in-tact (*-takt'*), *adj.* entire; uninjured.
★**in-tagl-io** (*in-tāl'yō, in-tal'yō*, Italian, *ēn-tāl'yō*), *n.* [*pl.* intaglios (*yōz*), intagli (*yē*)], a gem stone having a design cut in the surface; incised carving.
in-te-ger (*in'tē-jēr*), *n.* the whole; a whole number; opposed to fraction.
in-te-gral (*'tē-gral*), *adj.* constituting a whole; complete; pertaining to an integer: *n.* the whole made up of parts. [WHOLE.]
in-te-grate (*'tē-grāt*), *v. t.* to bring together the parts of; give the sum total of: *v. i.* to pass from a complex state to a simple one.
in-teg-ri-ty (*-teg'ri-ti*), *n.* uprightness; virtue; honesty; soundness.
in-teg-u-ment (*'ū-ment*), *n.* an external covering [or skin.
in-tel-lect (*'tel-ekt*), *n.* the mind or understanding.
Syn. INTELLECT, genius, talent. *Intellect* is the *intellectual* power improved and exalted by cultivation and exercise; in this sense we speak of a man of *intellect*, or a work that displays great *intellect; genius* is the particular bent of the *intellect* which is born with a man, as a *genius* for poetry, painting, music, etc.; *talent* is a particular mode of *intellect* which qualifies its possessor to do some things better than others, etc. [See *understanding*.]
in-tel-lec-tu-al (*-lek'tū-al*), *adj.* pertaining to, or apprehended by, the intellect; mental; ideal.
in-tel-li-gence (*-tel'i-jens*), *n.* intellectual capacity; mind; notification; news. [INFORMATION, UNDERSTANDING.]
in-tel-li-gent (*'i-jent*), *adj.* endowed with intelligence or understanding; clever; discerning.
in-tel-li-gi-ble (*'i-ji-bl*), *adj.* capable of being understood; clear.
in-tem-per-ance (*-tem'pēr-ans*), *n.* want of moderation or self-restraint. [EXCESS.]
in-tem-per-ate (*'pēr-āt*), *adj.* characterized by want of moderation or self-restraint; excessive.
in-tend (*-tend'*), *v. t.* to purpose; mean. [DESIGN.]
in-tense (*-tens'*), *adj.* increased to excess; strained; forced; ardent; vehement. [EAGER.]
in-ten-si-fy (*-ten'si-fī*), *v. t.* to render more intense; heighten.
in-ten-si-ty (*'si-ti*), *n.* [*pl.* intensities (*-tiz*)], the state or quality of being intense; the force or energy of any physical agent.
in-ten-sive (*'siv*), *adj.* serving to intensify; giving force or emphasis to.
in-tent (*-tent'*), *adj.* having the mind strained or closely fixed on a subject: *n.* purpose; aim. [EAGER.]
in-ten-tion (*in-ten'shun*), *n.* purpose; fixed design; end or aim; project.
in-ter (*-tēr'*), *v. t.* [*p. t.* and *p. p.* interred, *p. pr.* interring], to bury.
in-ter-cede (*-sēd'*), *v. i.* to mediate; plead for another; interpose.
in-ter-cept (*-sept'*), *v. t.* to stop and seize on the way; cut off; obstruct.
in-ter-ces-sion (*-sesh'un*), *n.* the act of interceding; mediation.
in-ter-change (*in-tēr-chānj'*), *v. t.* and *v. i.* to put each of two things in the place of the other; receive and return reciprocally; alternate.
Syn. INTERCHANGE, exchange, reciprocity. *Interchange* is an act; *reciprocity* is an abstract property; by an *interchange* of sentiment, friendships are engendered; the *reciprocity* of good services is what renders them doubly acceptable to those who do them, and to those who receive them.
in-ter-course (*'ter-kōrs*), *n.* connection, correspondence, or communication between individuals, nations, etc.
in-ter-dict (*-dikt'*), *v. t.* to restrain or forbid.
★**in-ter-est** (*'tēr-est*), *v. t.* to engage the attention; cause to take a share in: *n.* advantage; concern; profit; premium paid for the use of money.
Syn. INTEREST, concern. We have an *interest* in whatever touches or comes near to our feelings or our external circumstances; we have a *concern* in that which demands our attention; *interest* is that which is agreeable; *concern*, on the other hand, is something involuntary or painful.
Ant. APATHY, indifference.
in-ter-fere (*-fēr'*), *v. i.* to interpose or meddle in the affairs of others; act reciprocally so as to modify the result.
in-ter-im (*'tēr-im*), *n.* intervening time or period: *adv.* in the meanwhile.
in-te-ri-or (*-tē'ri-ēr*), *adj.* not exterior; inner; internal: *n.* the inside; the inland. [INSIDE.]
in-ter-jec-tion (*-tēr-jek'shun*), *n.* an exclamation.
in-ter-lin-e-ar (*-lin'ē-ēr*), *adj.* written or printed between other lines.
in-ter-loc-u-to-ry (*-lok'ū-tō-ri*), *adj.* conversational; intermediate; not final.
in-ter-lo-per (*'tēr-lō-pēr*), *n.* an intruder.
in-ter-lude (*'tēr-lūd*), *n.* a short entertainment given between acts of a play, etc.; a short instrumental passage played between the acts, etc.
in-ter-me-di-ate (*-mē'di-āt*), *adj.* existing or lying in the middle; intervening.
in-ter-ment (*-ment*), *n.* the act of burial. [BURIAL.]
in-ter-mis-sion (*-mish'un*), *n.* interruption; pause. [CESSATION.]
in-ter-mit (*-mit'*), *v. t.* to cause to cease for a time; interrupt; suspend.
in-ter-nal (*-tēr'nal*), *adj.* pertaining to the center; interior.
★**in-ter-na-tion-al** (*in-tēr-nash'un-al*), *adj.* pertaining to two or more nations in common.
in-ter-po-late (*'pō-lāt*), *v. t.* to insert in a book or writing new or spurious matter.
in-ter-pose (*-pōz'*), *v. t.* to place between; *v. i.* to intercede; come between. [INTERVENTION.]
in-ter-pret (*'pret*), *v. t.* to explain; expound; construe. [EXPLAIN, DEFINITION.]
in-ter-reg-num (*-reg'num*), *n.* the period between two reigns, etc.; time of abeyance.
in-ter-ro-gate (*-ter'ō-gāt*), *v. t.* to question: *v. i.* to ask questions. [ASK.]
in-ter-ro-ga-tion (*-gā'shun*), *n.* the act of interrogating; a question; a mark (?) denoting a question.
in-ter-rog-a-tive (*-tēr-rog'à-tiv*), *adj.* denoting or containing a question: *n.* a word used in asking a question.
in-ter-rog-a-to-ry (*-rog'à-tō-ri*), *adj.* pertaining to, or expressing, a question.
in-ter-rupt (*-rupt'*), *v. t.* to stop or hinder by breaking in upon. [DISTURB, OBSTRUCT.]
in-ter-rup-tion (*-rup'shun*), *n.* the act of interrupting; hindrance.
in-ter-sec-tion (*-sek'shun*), *n.* the act or state of intersecting; place of crossing.
★**in-ter-stice** (*in-tēr'stis* or *in'tēr-stis*), *n.* a narrow space between things closely set; crevice.
in-ter-val (*'tēr-val*), *n.* time or space between.
Syn. INTERVAL, respite. The term *interval* respects time only; *respite* includes the idea of ceasing from action for a time; *intervals* of ease are a *respite* to one who is oppressed with labor.
in-ter-vene (*-vēn'*), *v. i.* to come, or be situated, between; interpose; interfere.
in-ter-ven-tion (*-ven'shun*), *n.* the act of intervening; mediation.
Syn. INTERVENTION, interposition. The light of the moon is obstructed by the *intervention* of the clouds; the life of an individual is preserved by the *interposition* of a superior.
in-ter-view (*'tēr-vū*), *v. t.* to visit, to obtain opinions: *n.* a personal conference or meeting. [MEETING.]
in-tes-tate (*-tes'tāt*), *adj.* dying without a will: *n.* one who dies without a will.
in-tes-tine (*'tin*), *adj.* internal; not foreign: *n. pl.* the bowels.
in-ti-ma-cy (*'ti-mà-si*), *n.* [*pl.* intimacies (*-siz*)], close or confidential friendship. [ACQUAINTANCE.]
in-ti-mate (*'ti-mat*), *adj.* close in friendship; well acquainted: *v. t.* (*in'ti-māt*) to indicate; make known.

in-ti-ma-tion (*in-ti-mā'shun*), *n.* an indirect suggestion or hint.

in-tim-i-date (*-tim'i-dāt*), *v. t.* to make afraid. [FRIGHTEN.]

in-to (*'tōō*), *prep.* noting passage inward; inclusion or comprehension.

in-tol-er-a-ble (*-tol' ĕr-ȧ-bl*), *adj.* unbearable.

in-tol-er-ance (*'ĕr-ans*), *n.* want of toleration; inability to bear.

in-tol-er-ant (*'ĕr-ant*), *adj.* bigoted; unable to bear or endure (with *of*).

in-to-na-tion (*-tō-nā'shun*), *n.* the act or manner of sounding musical notes.

in-tone (*-tōn'*), *v. t.* to recite in monotone.

in-tox-i-cant (*-toks'i-kant*), *n.* that which intoxicates.

in-toxi--cate (*'i-kāt*), *v. t.* to make drunk by spirituous liquors; excite unduly.

intra, a *prefix* meaning *within*, as *intra*mural, within the walls of a city.

in-tract-a-ble (*-trakt'ȧ-bl*), *adj.* unmanageable. [PERVERSE, OBSTINATE.]

in-tract-ile (*'il*), *adj.* incapable of being drawn out; not extensible.

in-tran-si-tive (*-tran'si-tiv*), *adj.* not passing over to or requiring, an object: said of certain verbs.

in-trench (*-trench'*), *v. t.* to fortify with a trench.

in-trep-id (*-trep'id*), *adj.* bold; fearless. [BOLD.]

in-tri-ca-cy (*'tri-kȧ-si*), *n.* [*pl.* intricacies (*-siz*)], the quality of being intricate; perplexity.

in-trigue (*in-trēg'*), *v. i.* to carry on a secret plot; engage in clandestine love affairs: *n.* a secret plot; clandestine love affair.

in-trin-sic (*-trin'sik*), *adj.* pertaining to that which is inherent.

intro, a *prefix* meaning *within, into*, as *intro*cession, a depression or sinking of parts inward.

in-tro-duce (*-trō-dūs'*), *v. t.* to conduct or bring in; bring into acquaintance. [ALLEGE.]

in-tro-duc-tion (*-duk'shun*), *n.* the act of introducing; presentation; a preface. [PREVIOUS.]

in-trude (*-trūd'*), *v. i.* to thrust one's self in: *v. t.* force in.

Syn. INTRUDE, obtrude. It is *intrusion* to go into any society unasked and undesired; it is *obtruding* to put one's self in the way of another by joining the company without invitation.

in-tru-sion (*-trū'zhun*), *n.* the act of intruding; encroachment.

in-tu-i-tion (*-tū-ish'un*), *n.* instinctive knowledge or feeling.

in-tu-i-tive (*'i-tiv*), *adj.* perceived immediately by the mind.

★**in-un-date** (*in-un'dāt*, not *in'un-dāt*), *v. t.* to fill with an overflowing abundance.

in-ure (*-ūr'*), *v. t.* to habituate, or accustom; toughen.

in-vade (*-vād'*), *v. t.* to enter (a country) with a hostile army; infringe upon; violate.

in-val-id (*-val'id*), *adj.* null and void: *n.* (*in'vȧ-lid*) one who is weak or infirm in health: *v. t.* to affect with disease.

Syn. INVALID, patient. An *invalid* is so denominated from lack of health and strength, but the *patient* is one who suffers from bodily pain.

in-val-i-date (*-val'i-dāt*), *v. t.* to weaken or destroy the force of.

in-val-u-a-ble (*-val'ū-ȧ-bl*), *adj.* priceless.

in-va-ri-a-ble (*-vā'ri-ȧ-bl*), *adj.* constant. [PERMANENT.]

in-va-sion (*-vā'zhun*), *n.* the act of invading; hostile incursion.

in-vec-tive (*-vek'tiv*), *n.* a violent utterance of censure, sarcasm, or abuse: *adj.* abusive.

in-veigh (*-vā'*), *v. i.* to rail against persons or things; declaim. [DECLAIM.]

★**in-vei-gle** (*in-vē'gl*, not *in-vā'gl*), *v. t.* to entice; seduce.

in-vent (*-vent'*), *v. t.* to devise or contrive; originate. [FIND.]

in-ven-tion (*-ven'shun*), *n.* the act of inventing; the thing invented. [FICTION.]

in-vent-ive (*-vent'iv*), *adj.* able to invent; quick at contriving.

in-ven-to-ry (*'ven-tō-ri*), *n.* [*pl.* inventories (*-riz*)], a catalogue of goods, etc.: *v. t.* to draw up (an inventory).

in-verse (*-vĕrs'*), *adj.* contrary in tendency, direction, or effect.

in-ver-sion (*-vĕr'shun*), *n.* the act of inverting; the state of being inverted.

in-vert (*-vĕrt'*), *v. t.* to turn upside down.

in-ver-te-brate (*'tē-brāt*), *n.* one of the Invertebrata: *adj.* having no backbone.

in-vest (*-vest'*), *v. t.* to place or lay out, as money; clothe, as with office, authority, or dignity; surround: *v. i.* to make an investment.

Syn. INVEST, endue, or endow. One is *invested* with that which is external; one is *endued* with that which is internal. We *invest* a person with an office or a dignity; a person is *endued* with good qualities; *endow* is but a variation of *endue* and yet it seems to have acquired a distinct office; we may say that a person is *endued* or *endowed* with a good understanding; but as an act of the imagination *endow* is not to be substituted for *endue;* for we do not say that it *endows* but *endues* things with properties.

in-ves-ti-gate (*-ves'ti-gāt*), *v. t.* to ascertain by careful inquiry.

in-ves-ti-ga-tion (*-gā'shun*), *n.* the act of investigating; inquiry; search.

in-ves-ti-ture (*in-ves'ti-tūr*), *n.* the act or right of giving legal possession.

in-vest-ment (*-vest'ment*), *n.* the act of laying out money productively; money so invested.

in-vet-er-ate (*'ĕr-ȧt*), *adj.* deep-rooted; habitual.

in-vid-i-ous (*-vid'i-us*), *adj.* likely to provoke ill will or envy; unpleasant.

in-vig-or-ate (*-vig'ĕr-āt*), *v. t.* to give vigor to; strengthen; animate. [STRENGTHEN.]

in-vin-ci-ble (*-vin'si-bl*), *adj.* unconquerable.

in-vi-o-la-ble (*-vi'ō-lȧ-bl*), *adj.* that cannot be profaned or injured; unbroken. [Also *inviolate.*]

in-vis-i-ble (*-viz'i-bl*), *adj.* that cannot be seen.

in-vi-ta-tion (*-vi-tā'shun*), *n.* the act of inviting; the words or document by which one is invited.

in-vite (*-vīt'*), *v. t.* to ask, solicit, or summon; persuade; allure. [ATTRACT.]

in-vo-ca-tion (*-vō-kā'shun*), *n.* the act or form of invoking.

in-voice (*'vois*), *n.* a document announcing the dispatch of goods: *v. t.* to state or insert in an invoice.

in-voke (*-vōk'*), *v. t.* to address in prayer or supplication; solicit.

in-vol-un-ta-ry (*-vol'un-tā-ri*), *adj.* without will or choice; not spontaneous.

in-vo-lute (*'vō-lūt*), *adj.* folded or rolled inward; coiled spirally.

in-vo-lu-tion (*-lū'shun*), *n.* the act of involving or infolding; complication.

in-volve (*-volv'*), *v. t.* to complicate; entangle; surround; embroil; result. [IMPLICATE.]

in-vul-ner-a-ble (*-vul'nĕr-ȧ-bl*), *adj.* that cannot be wounded or injured; without any weak point.

in-ward (*'wĕrd*), *adj.* situated within: *adv.* interior; toward the center. [Also *inwards.*]

in-wrought (*-rawt'*), *p. adj.* worked in; adorned.

i-o-dine (*i'ō-din*), *n.* a nonmetallic element, which, when heated, gives off a rich violet vapor.

i-o-do-form (*-ō'dō-fôrm*), *n.* a crystalline compound of iodine.

I-on-ic or-der (*i-on'ik ôr'dĕr*), an order of classic architecture, characterized by the volute of its capital.

i-o-ta (*-ō'tȧ*), *n.* the Greek letter, which from its being used under the vowels d, n, w (*iota subscriptum*) denotes anything small or insignificant.

Iowa. A French form of the Indian word *Ayuhba*, signifying "the drowsy or the sleepy ones." Written at first *Aioues*, and applied to a tribe of Indians, would seem to be simply *Ajawa*, "across, beyond," as if to say, "the tribe beyond the river."

ip-e-cac (*ip' ĕ-kak*), *n.* ipecacuanha.

ip-e-cac-u-an-ha (*ip-ĕ-kak-ū-an'ȧ*), *n.* the root of a South American plant: used in medicine.

Ira (*i'rȧ*). A male name, from the Hebrew, *Ira*, "watchful."

i-ras-ci-ble (*-ras'i-bl*), *adj.* easily excited to anger.

i-rate (*-rāt'*), *adj.* angry; enraged.

ire (*ir*), *n.* anger; wrath. [ANGER.]

Ireland. An island west of Great Britain. Was the Roman *Hibernia*, the Greek *Ierne*, and the Celtic *Erin*. The usual explanation of the name is from the Celtic *ıar*, "behind," and hence "to the west," or "western isle."

Irene (*ī-rē'nē*, or *ī-rēn'*). A female name. From the Greek *Eirene*, "goddess of peace," literally "peace." Fr., *Irène;* Ger., *Irene;* It., *Irene.*

ir-i-des-cence (*ir-i-des'ens*), *n.* the exhibition of colors like those of the rainbow.

ir-i-des-cent (*'ent*), *adj.* exhibiting iridescence.

i-ris (*ī'ris*), *n.* [*pl.* irises, irides (*-ez, 'ri-dēz*)], the pupil of the eye; the rainbow.

I-rish (*'rish*), *adj.* pertaining to Ireland, its inhabitants, or language.

Irish Sea. So named from its geographical position.

irk (*ĕrk*), *v. t.* to weary: *v. i.* to become tired.

irk-some (*'sum*), *adj.* tedious; wearisome.

Irmgard or **Ermgard** (*irm'gȧrd*). Anglicized form of the Teutonic *Ermengarde* or *Irmgarde*, meaning a "public benefactor."

★**i-ron** (*ī'urn*), *n.* the most common and useful of the metals; an instrument made of iron: *pl.* fetters: *adj.* pertaining to, resembling, or made of iron: *v. t.* to smooth with an iron implement; furnish with iron; fetter.

i-ron-clad (*-klad*), *n.* a warship protected with iron or steel plates: *adj.* covered or protected with iron armor.

i-ron-i-cal (*ī-ron'i-kal*), *adj.* expressing one thing and meaning another.

i-ron-wood (*'urn-wood*), *n.* a name for the timber of trees of exceptional hardness.

i-ro-ny (*'rō-ni*), *n.* subtle sarcasm.

ir-ra-di-ate (*ir-rā'di-āt*), *v. t.* to shed light upon; illuminate; brighten: *v. i.* emit rays of light.

ir-ra-tion-al (*-rash'un-al*), *adj.* not rational.

Syn. IRRATIONAL, foolish, absurd, preposterous. *Irrational* is applicable more frequently to the thing than to the person, to the principle than to the practice; *foolish*, on the contrary, is commonly applicable to the person as well as the thing; to the practice rather than the principle; *foolish* is applied to anything, however trivial, which in the smallest degree offends our understanding; the conduct of children is therefore often *foolish*, but not *absurd* and *preposterous;* it is *absurd* for a man to persuade another to do that which he in like circumstances would object to do himself; it is *preposterous* for a man to expose himself to ridicule, and then be angry.

ir-re-claim-a-ble (*ir-rē-klām'ȧ-bl*), *adj.* incapable of being reclaimed.

ir-re-spec-tive (*-rē-spek'tiv*), *adj.* regardless (with *of*).

ir-re-spon-si-ble (*-spon'si-bl*), *adj.* not responsible.

ir-ri-gate (*'i-gāt*), *v. t.* to moisten (land) by causing water to flow over by artificial means.

ir-ri-ta-ble (*'i-tȧ-bl*), *adj.* easily provoked to anger; easily stimulated.

ir-ri-tate (*'i- āt*), *v. t.* to provoke or make angry; excite heat and redness in. [AGGRAVATE.]

ir-ri-ta-tion (*-tā'shun*), *n.* the act of irritating; exasperation; excitement of muscular action by external agency.

ir-rup-tion (*-rup'shun*), *n.* a bursting or rushing in; sudden invasion.

Isaac (*ī'zak*). From the Hebrew *Yitschhak*, which some translate "laughing"; others "sporting." Arabic, *Ishak;* Danish, *Isak;* Dutch, *Izaak;* Fr., *Isaac;* Ger., *Isaak;* Hungarian, *Izsak;* It., *Isacco;* Lat., *Isaacus;* Polish, *Izaak;* Sw., *Isak.*

Isabel (*iz'ȧ-bel*), **Isabella** (*iz-ȧ-bel'lȧ*). According to some this name is the same as *Jezebel*, which Tregelles thinks may mean "without cohabitation"; *i. e.*, "chaste," "modest." Another derivation is that it is the same as *Elizabeth;* but *Isabella* is rather from *Isabel*, the Spanish rendering of *Elizabeth.* Dutch, *Isabelle;* Fr., *Isabelle;* Ger., *Isabelle;* It., *Isabelle;* Lat., *Isabella;* Sp., *Isabel;* Sw., *Isabella.*

Isaiah (*ī-zā'yȧ*). From the Hebrew *Y'sha-yahu;* from *yesha-Yahu*, "the salvation of Jehovah." Danish, *Isaias;* Dutch, *Jezajas;* Fr., *Isaie;* Ger., *Esaias;* It., *Isaia;* Lat., *Esaias;* Port., *Isaias:* Sp., *Isaias.*

Ischl (*ish'l*). A famous watering-place in upper Austria, situated at the junction of the rivers Ischl and Traun, twenty-seven miles east by south of Salzburg. It is the favorite resort of the Austrian royal family and nobility, and contains salt and other baths. It is the central point in the Salzkammergut.

Ishmael (*ish'mā-el*). Hebrew for "God hath heard." Arabic, *Ishmaeel*, or *Ismail;* Fr., *Ismael;* It., *Ismaele;* Lat., *Ishmael.*

Isidore (*iz'i-dōr*). From the Latin, *Isidorus*, which some translate "strong gift." The name signifies "gift of Isis." Dutch, *Isidorus;* Fr., *Isidore;* Gr., *Isadoris;* It., *Isidoro;* Lat., *Isidorus.*

★**I-sin-glass** (*ī'zing-glȧs*, not *ī'zin-glȧs*), *n.* a white semitransparent substance prepared from the sounds or air bladders of the sturgeon, cod, etc.

Is-lam (*is'lam*), *n.* the Mohammedan religion; the whole body of Mohammedans.

is-land (*ī'land*), *n.* a tract of land surrounded by water.

Island of Desolation. Island in Tierra del Fuego archipelago; so named by Captain Cook owing to the absence of all signs of life.

isle (*il*), *n.* an island. [*Poetry.*]

Isle of Bourbon (*bōōr'bun*, Fr. *bōōr-bôn'*). An island in the Indian ocean. When settled by the French, it was so named for the Bourbon family.

Isle of Man. The modern designation of Mona island, in the Irish Sea, by which was meant, agreeably to the Celtic *maen*, "a stone," rocky island.

Isle of St. Helena (*hel' ĕ-nȧ*). Island off coast of South Carolina; so named from having been discovered on the Feast of St. Helena, 1502.

Isle of Wight (*wit*). Island in English channel; originally, the island of the Wyts, or Jutes.

iso, a *prefix* in words of Greek origin, signifying *equal;* as *isosceles*, having two sides equal.

i-so-late (*ī'sō-lāt*), *v. t.* to place alone.

i-so-lā-tion (*-lā'shun*), *n.* the state of being isolated.

i-sos-ce-les (*ī-sos' ĕ-lēz*), *adj.* having equal sides.

Israel (*iz'rȧ-el*). From the Hebrew, meaning "prevailing with God." The kingdom of the northern tribes of ancient Palestine. Fr., *Israel;* Ger., *Israel;* Lat., *Israel.*

Is-ra-el-ite (*iz'rȧ-el-īt*), *n.* a descendant of Israel or Jacob; a Jew.

is-sue (*ish'ū*), *n.* the act of passing or flowing out; egress; that which flows or passes out; publication; offspring; essential points in pleading or debate; result: *v. t.* to send out; publish: *v. i.* to come or pass out; flow; proceed; be descended. [OFFSPRING, CONSEQUENCE.]

Isth-mi-an (*is'mi-an* or *ist'mi-an*), *adj.* pertaining to an isthmus.

isth-mus (*'mus*), *n.* a neck of land connecting two larger portions.

★**I-tal-ian** (*i-tal'yan*, not *ī-tal'yan*), *adj.* pertaining to Italy, its inhabitants or language.

I-tal-ic (*'ik*), *adj.* pertaining to Italy; noting a slender, sloping kind of type (*italic*).

i-tal-i-cize (*'i-sīz*), *v. t.* to write or print in italics.

Italy. A country of southern Europe, so called after Italus, one of the early kings of the country.

Itasca. County and lake in Minnesota, into which flow the head waters of the Mississippi. Name derived from the two Latin words *veritas caput*, "the true head." Schoolcraft notes derivation from *ıa*, "to be," and *totosh*, "the female breast," signifying source of the river.

itch (*ich*), *n.* a parasitic cutaneous disease causing irritation; a constant desire: *v. i.* to feel uneasiness in the skin, causing a desire to scratch; have a constant desire for.

i-tem (*ī'tem*), *n.* a separate article or particular; a newspaper paragraph: *adv.* also.

it-er-ate (*it' ĕr-āt*), *v. t.* to repeat.

It-er-a-tion (*it-er-ā'shun*), *n.* repetition.
Ithaca (*ith'a-ka*). City in Tompkins county, New York, and village in Gratiot county, Michigan, named for one of the Ionian islands, supposed to be the one celebrated in the Homeric poems as the kingdom of Ulysses.
i-tin-er-ant (*ī-tin'ēr-ant*), *adj.* passing from place to place: *n.* one who goes from place to place.
i-tin-er-a-ry (*'ēr-ā-ri*), *adj.* pertaining to, or done on, a journey: *n.* a traveler's guide or route-book.
Ivan (*ē-vän'*). See *John.*
★i-vo-ry (*ī'vō-ri*, not *ī'vri*), *n.* the hard, bony, white dentine which forms the tusks of the elephant, walrus, etc.: *adj.* made of, or like, ivory.
i-vy (*ī'vi*), *n.* a clinging evergreen plant of the genus *Hedera.*

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jab-ber (*jab'ēr*), *v. i.* to talk rapidly and indistinctly; chatter.
Jabez. From the Hebrew *Yabets*, which Simonis renders, "he will cause pain," *i. e.*, to his mother.
jack (*jak*), *n.* the male of some animals; the knave of cards; a name applied to various kinds of levers or mechanical labor-saving appliances, etc.: *v. t.* to lift with a jack.
jack-al (*'awl*), *n.* a dog-like carnivorous animal.
jack-a-napes (*'a-nāps*), *n.* a conceited fellow.
jack-ass (*'as*), *n.* the male ass; donkey.
jack-daw (*'daw*), *n.* a glossy species of crow.
jack-et (*'et*), *n.* a short tailless coat: *v. t.* to clothe with a jacket.
Jackson, Miss. The state capital. So named in honor of General Andrew Jackson.
Jacksonville, Fla. Named in 1822 in honor of President Andrew Jackson.
Jacob (*jā'kob*). From the Hebrew, *Yaakob*, which Tregelles translates, "taking hold of the heel," "supplanter," "layer of snares." Arab. *Yakoob*, or *Jakub;* Danish, *Jakob;* Dutch, *Jacob*, or *Jakob;* Fr., *Jacob;* Ger., *Jakob;* Hungarian, *Jakob;* It., *Jacob*, or *Jacopo;* Lat., *Jacobus* or *Jacob;* Polish, *Jakob;* Sw., *Jakob.*
jade (*jād*), *n.* a tired or worn-out horse; a vicious woman; silicate of magnesium and lime, of green color: *v. t.* to tire by long-continued labor; harass.
Jaffa (*jaf'fa, yāf'fā*) or **Joppa** (*jop'pa*). From the Semetic, *Yapho*, "beauty." A seaport of Palestine.
jag (*jag*), *n.* a notch; projecting point: *v. t.* [*p. t.* and *p. p.* jagged, *p. pr.* jagging], to cut into notches or teeth.
jail (*jāl*), *n.* a prison.
jal-ap (*jal'ap*), *n.* the root of *Ipomœa purga.*
jam (*jam*), *n.* a conserve of fruit boiled with sugar; block; crush: *v. t.* to squeeze or crush; press in tightly.
Jamaica (*ja-mā'ka*). An island of the West Indies; so called from *Xaymaco*, a native West Indian name signifying "the country abounding in springs."
jamb (*jam*), *n.* one of the upright sides of a doorway, window-opening, or fireplace.
James. A name corrupted from *Jacobus.* Danish, *Jakob;* Dutch, *Jacobus;* Fr., *Jacques;* Ger., *Jakob;* Hungarian, *Jakab;* It., *Giacomo;* Lat., *Jacobus;* Polish, *Jakub;* Port., *Diogo* or *Jacobo;* Russ., *Yakof;* Sp., *Jaime;* Sw., *Jakob.* [See *Jacob.*]
James bay. An arm of Hudson bay. Named in memory of James I., in whose reign it was explored.
James river, Va. Named in honor of James I. of England. It was first named the *river of the Holy Ghost.* The Indian name was *pawathanne*, "river of pregnancy." To this stream Captain John Smith gave the spelling of *Powhattan*, stating the chief took his name from the stream.
Jamestown. Town in James City county, Virginia, and the first English settlement in America; named for King James I.
Jan (Dutch, *yän*). An Anglo-Norman form of *John.*
Jane. From the French name *Jeanne*, from root of *John.* Dutch, *Hanna;* Fr., *Jeanne;* Ger., *Johanna;* It., *Giovanni;* Lat., *Jana* or *Johanna;* Sp., *Juana;* Sw., *Johanna.*
Janesville. Town in Lassen county, California, and city in Rock county, Wisconsin, named for Henry F. Janes.
Janet (*jan'et*, or *jā-net'*). A diminutive of *Jean.*
jan-gle (*jang'gl*), *v. i.* to quarrel or wrangle; sound discordantly: *n.* a discordant sound; wrangle.
Janiculum (*jan-ik'yū-lum*), or **Mons Janiculus** (*monz ja-nik'u-lus*). Highest of the hills of Rome; situated on the right bank of the Tiber, extends south from the Vatican, and is opposite the Capitoline and the Aventine.
Jan-i-tor (*jan'i-tēr*), *n.* a doorkeeper.
Jan-u-a-ry (*jan'ū-ā-ri*), *n.* the first month of the year in the modern calendar; so named from Janus, a god who presided over the beginning of things.
ja-pan (*ja-pan'*), *n.* work varnished and lacquered after the Japanese style; a kind of varnish: *v. t.* [*p. t.* and *p. p.* japanned, *p. pr.* japanning], to cover, varnish or lacquer.
Japan. An empire of Asia; name, a European modification, brought about through the Portuguese *Gepuen*, or *Japao*, of the native *Nippon*, or *Niphon*, compounded of *ni*, "sun," "fire," and *pon*, "land," literally "sun-land," or "land of the rising sun," and signifying "the fountain of light."
ja-pon-i-ca (*ja-pon'i-ka*), *n.* the name of various species of Japanese plants.
Jaqueline (*jak'wē-lin*). The feminine of *James.* Fr., *Jacqueline* (*zhāk-lēn'*); Ger., *Jakobine;* It., *Giacomina* or *Giacobba.*
jar (*jär*), *n.* a vessel; a shake; jolt; harsh sound; conflict: *v. t.* to cause to shake; jolt: *v. i.* to interfere or clash.
jar-di-nière (*zhär-dē-nyär'*), *n.* an ornamental flower stand.
jar-gon (*jär'gon*), *n.* confused, unintelligible talk.
jas-mine (*jas'min*), *n.* a plant of the genus *Jasminum.*
jas-per (*'pēr*), *n.* an opaque, many-shaded variety of quartz.
Jasper (*jas'pēr*). A male name derived from the Arab *yashb*, or Persian *yashp*, the precious stone jasper; hence, "treasure master." Danish, *Jesper;* Dutch, *Jasper* or *Kasper;* Fr., *Gaspard;* Ger., *Caspar* or *Kaspar;* It., *Gasparo;* Lat., *Gaspar;* Port., *Gaspar;* Sp., *Gaspar;* Sw., *Kasper.*
jaun-dice (*jän'dis*), *n.* a disease characterized by yellowness of the eyeballs, skin, etc.
jaunt (*jänt*), *n.* a short excursion or ramble: *v. i.* to roam or ramble; take a short excursion. [EXCURSION.]
jaun-ty (*'ti*), *adj.* airy; gay; showy.
Java. An island of the Dutch East Indies; name native Malay word signifying "the land of nutmegs."
jave-lin (*-jav'lin*), *n.* a light spear.
jaw (*jaw*), *n.* the bones of the mouth; mouth; a mechanical contrivance.
jay (*jā*), *n.* a crow-like bird.
jeal-ous (*jel'us*), *adj.* full of, or characterized by, jealousy.
jeal-ous-y (*-i*), *n.* suspicious vigilance; earnest care.
Syn. JEALOUSY, envy, suspicion. We are *jealous* of what is our own; we are *envious* of what is another's. *Jealousy* fears to lose what it has; *envy* is pained at seeing others have that which it wants for itself; *suspicion* denotes an apprehension of injury, has more of distrust in it than *jealousy;* the *suspicious* man is altogether fearful of the intentions of another.
jean (*jēn*), *n.* twilled undressed cotton cloth.
Jean. A female name derived from the Fr. *Jeanne*, the feminine form of *Jean*, from root of *John.*
Jeanne. See *Jane.*
Jeannette (*jē-net'*). See *Janet.*
Jedediah (*jed-ē-dī'a*). The Hebrew *Y'dhiydhyah*, from *yadhaydh*, "beloved of Jehovah."
jeer (*jēr*), *v. t.* to scoff at: *v. i.* to speak in a derisive manner: *n.* a scoff; derision.
Jefferson City, Mo. Capital of the state; named in honor of President Thomas Jefferson.
Je-ho-vah (*jē-hō'va*), *n.* Lord; God of the Hebrews.
jel-ly (*jel'i*), *n.* [*pl.* jellies (*'iz*)], any semitransparent, soft gluey substance: *v. i.* to turn to, or become jelly.
Jenet (*jē-net'*). The diminutive of *Jean.* Fr., *Jeannette;* It., *Giovannetta;* Lat., *Joanetta.*
jen-net (*jen'et*), *n.* a small Spanish horse. [Also *genet.*]
jen-ny (*'i*), *n.* a machine for spinning.
jeop-ard (*jep'ērd*), *v. t.* to expose to loss or injury; hazard. [Also *jeopardize.*]
jeop-ard-y (*-i*), *n.* hazard; peril.
Jephthah (*jef'tha*). From the Hebrew, meaning, a "discoverer." Fr., *Jephte;* Lat., *Jephtha.*
Jeremiah (*jer-ē-mī'a*), or **Jeremy** (*jer'ē-mi*). From the Hebrew *Yirm-Yah*, which Simonis renders "elevated of the Lord." Danish, *Jeremias;* Dutch, *Jeremias;* Fr., *Jeremis;* Ger., *Jeremias;* It., *Geremia;* Lat., *Jeremias;* Sw., *Jeremias.*
jerk (*jērk*), *v. t.* to give a sudden pull, twist, or push to: *n.* a sudden quick pull, twist, or push.
jer-kin (*jēr'kin*), *n.* a short coat or jacket; close waistcoat.
Jerome (*jer'om* or *jē-rōm'*). A name corrupted from *Hieronymus*, "holy law," or "sacred name." Danish, *Jeronymus;* Dutch, *Hieronymus;* Fr., *Jerome;* Ger., *Hieronymus;* It., *Geronimo* or *Girolamo;* Lat., *Hieronymus;* Port., *Hieronimo;* Sp., *Geronimo;* Sw., *Hieronymus.*
Jerry. A male name, corrupted from *Jeremiah.*
Jer-sey (*jēr'zi*), *adj.* pertaining to the Isle of Jersey, or to its breed of cattle; of or pertaining to New Jersey: *n.* a close-fitting thick woolen shirt; fine yarn wool.
Jersey. Island in English channel. Was originally *Czar-ey*, meaning "Cæsar's island," so called by the Romans in honor of Julius Cæsar.
Jersey City, N. J. Originally incorporated, 1829, and named after the state as the *City of Jersey.* In 1851, under a new charter, the name was transposed.
Jerusalem (*jē-rū'sa-lem*). The sacred city of Palestine. Name means "foundation of peace"; derived from the Hebrew, *yarah*, "a foundation," and *shalaim*, or *shalem*, "peace, perfect, whole."
Jesse (*jes'sē*). From the Hebrew *Yishay*, from *yesh*, "wealth." Others render the name "graft." If so, it comes from *yash*, "being," "existence."
Jessica. A female name, probably a diminutive of *Jessie.*
Jessie. A female name. Like the French masculine name *Joan*, formed from root of *John.*
jest (*jest*), *n.* a joke; humorous pleasantry; laughing-stock: *v. i.* to joke; make merriment.
Jes-u-it (*jez'ū-it*), *n.* a member of the Roman Catholic Society of Jesus, founded by Ignatius Loyola, 1534.
jet (*jet*), *n.* a stream suddenly emitted; a deep black variety of lignite, black amber: *v. t.* to spout out: *v. i.* to shoot or jut out.
jet-sam (*'sam*), *n.* that part of a ship's cargo which is thrown into the sea. [Also *jetsom, jetson.*]
jet-ty (*'i*), *n.* [*pl.* jetties (*'iz*)], a structure extending into the water to restrain currents.
Jew (*jū*), *n.* an Israelite; Hebrew. [Fem. *Jewess.*]
jew-el (*'el*), *n.* a valuable ornament; gem; precious stone: *v. t.* to adorn with, or as with, jewels.
jew-el-ry (*'ri*), *n.* jewels collectively; the art or trade of a jeweler.
Jew-ry (*'ri*), *n.* The land of the Jews; ghetto.
jib (*jib*), *n.* a large triangular sail projecting beyond the bowsprit.
jibe. Another form of *gibe.*
jif-fy (*jif'i*), *n.* an instant.
jig (*jig*), *n.* a quick lively dance, or music: *v. i.* to dance a jig: *v. t.* jerk up and down.
jilt (*jilt*), *n.* a coquet or flirt: *v. t.* to encourage (a lover) and then discard him: *v. i.* to play the jilt. [COQUET.]
jim-my (*jim'i*), *n.* a burglar's tool.
jin-gle (*jing'gl*), *n.* a sharp tinkling metallic sound; meaningless rhyme: *v. i.* to sound with a jingle.
jin-go (*'gō*), *n.* a mild oath (with *by*).
jin-rik-i-sha (*-rik'i-sha*), *n.* a small Japanese two-wheeled carriage, drawn by one or more men. [Also *jinriksha.*]
job (*job*), *n.* a piece of work: *v. t.* to let out for hire; buy up (goods) and retail them: *v. i.* buy and sell, as a stockholder; perform job work.
Job (*jōb*). From the Hebrew *Iyyobh*, "the persecuted" (man), hence, "sorrowing." Arabic, *Aiyoob* or *Ayyub;* Fr., *Job;* Ger., *Hiob;* Gr., *Iob;* It., *Giobbe;* Lat., *Job* or *Jobus;* Sw., *Job.*
job-ber (*job'ēr*), *n.* a middleman, especially one who acts as agent.
job-ber-y (*'ēr-i*), *n.* [*pl.* jobberies (*-iz*)], low intriguing for private advantage or political ends.
jock-ey (*jok'i*), *n.* [*pl.* jockeys (*'iz*)], one who rides a horse in a race; cheat: *v. t.* to cheat or deceive.
jo-cose (*jō-kōs'*), *adj.* sportive; humorous. [FACETIOUS.]
joc-u-lar (*jok'ū-lēr*), *adj.* making jokes. [FACETIOUS.]
joc-u-lar-i-ty (*-lar'i-ti*), *n.* merriment.
joc-und (*'und*), *adv.* jovial; sportive; gay.
Joel (*jō'el*). Means "acquiescing." Fr., *Joel;* Lat., *Joel.*
jog (*jog*), *v. t.* [*p. t.* and *p. p.* jogged, *p. pr.* jogging], to push or shake slightly; stimulate: *v. i.* to travel along with a slow trotting motion: *n.* a slight push or shake; slow trot; stimulant.
Johanna. A female name derived from *John.*
John. From the Hebrew, *Y'hohhanan*, variously translated, "the lord gave graciously," "whom Jehovah gave," "whom Jehovah bestowed." Danish, *Johann* or *Hans;* Dutch, *Jan;* Fr., *Jean;* Ger., *Johann* (familiarly *Hans*, a contraction of *Johannes*); Gr., *Ioannes;* Hungarian, *Janos;* It., *Giovanni;* Lat., *Joannes* or *Johannes;* Pol., *Jan;* Port., *Joao;* Russ., *Ivan;* Sp., *Juan;* Sw., *Johan* or *Hans.*
john-ny-cake (*jon-i-kāk*), *n.* a flat maize cake.
Johnstown, N. Y. City in Fulton county, New York, named for its founder, Sir William Johnson.
Johnstown, Pa. City and borough in Cambria county, Pennsylvania, named for an early settler, Joseph Jahns or Yahns.
join (*join*), *v. t.* to unite; connect; associate; add or annex: *v. i.* to adhere; be in contact; be associated with. [ADD.]
join-er (*'ēr*), *n.* one who, or that which, joins.
joint (*joint*), *n.* the place where two or more things join; one of the larger pieces into which a carcass is cut up; a place of low resort: *adj.* produced by the action of two or more; united in or sharing: *v. t.* to form with, or unite by, joints; cut or divide into joints, as meat.
join-ture (*join'tūr*), *n.* landed estate or tenements settled on a woman in consideration of her marriage: *v. t.* to settle a jointure upon.
★joist (*joist*, not *jois*), *n.* a horizontal timber of a floor.
joke (*jōk*), *n.* something said or done to excite mirth; jest; sport: *v. t.* to make jokes: *v. i.* to cast jokes at; rally.
Joliet (*jō'li-et*), **Ill.** Named after the French explorer, Louis Joliet.
jol-li-fi-ca-tion (*jol-i-fi-kā'shun*), *n.* merry-making.
jol-li-ty (*'i-ti*), *n.* the state of being jolly.
jol-ly (*'i*), *adj.* full of life and mirth: *adv.* exceedingly: *v. t.* to joke or rally.
jolt (*jōlt*), *v. t.* to shake by sudden jerks: *v. i.* to have a jerky motion: *n.* a sudden jerk.
Jonah (*jō'na*), or **Jonas** (*jō'nas*). From the Hebrew *Yonah*, "a dove"; perhaps given as a term of endearment. Fr., *Jonas;* Ger., *Jonas;* Lat., *Jonas.*
Jonathan (*jon'a-than*). From the Hebrew *Y'honathan*, "the Lord gave," or "given by Jehovah." Fr., *Jonathan;* Lat., *Jonathan.*
★jon-quil (*'kwil*), *n.* a bulbous plant with fragrant flowers. [Also *jonquille.*]
Jordan. The chief river of Palestine. The Hebrew name is *yarden*, which Robinson translates "the flowing," "the river," like the German *Rhein*, from *rinnen.*
Joseph (*jō'sef*). From the Hebrew *Yosheph*

signifying "he shall add." Fr., *Joseph;* Ger., *Joseph;* Hungarian, *Jozsef;* It., *Giuseppe;* Lat., *Josephus* or *Joseph;* Polish, *Jozef;* Port., *José;* Sp., *José.*

Josephine (*jō'zef-in*). The feminine of *Joseph.* Fr., *Josèphe* or *Josephine;* Ger., *Josephe* or *Josephine;* It., *Giuseppa* or *Giuseppina;* Lat., *Josepha.*

Joshua (*josh'ū-ä*). From the Hebrew *Y'hoshua,* "whose help or salvation is Jehovah," hence, "savior." Dutch, *Josua;* Fr., *Josuè;* Ger., *Josua;* It., *Giosue;* Lat., *Josua;* Sw., *Josua.*

Josiah (*jō-sī'ä*), or **Josias** (*jō-sī-as*). From the Hebrew *Y'shiyyahu,* "whom the Lord gives." Danish, *Josias;* Dutch, *Jozias;* Fr., *Josias;* It., *Giosiade;* Lat., *Josias.*

Joss (*jos*), *n.* a Chinese god or idol.

★**Jos-tle** (*jos'l,* not *jost'l*), *v. t.* to push against; elbow.

Jot (*jot*), *v. t.* [*p. t.* and *p. p.* jotted, *p. pr.* jotting], to make a memorandum of (with *down*): *n.* a tittle.

Jour-nal (*jûr'nal*), *n.* record of news or events; the bearing of a machine.

Jour-nal-ism (*-izm*), *n.* newspaper or periodical literature; the profession of a journalist.

Jour-nal-ist (*-ist*), *n.* an editor, or contributor to a journal or newspaper.

Jour-ney (*jûr'ni*), *n.* passage from one place to another: *v. i.* to travel from one place to another.

Syn. JOURNEY, travel, voyage. *Journey* signifies the course that is taken in the space of a day, or in general any comparatively short passage from one place to another; *travel* signifies such a course or passage as requires labor, and causes fatigue; in general any long course; *voyage* is now confined to passage by sea.

Joust (*just*), *n.* a mediæval mock combat between two mounted knights: *v. i.* to engage in such a combat.

Jov-i-al (*jōv'i-al*), *adj.* convivial; merry.

Joy (*joi*), *n.* exhilaration of spirits; gayety; gladness: *v. i.* to rejoice or be glad.

Syn. JOY, gladness, mirth. What creates *joy* and *gladness* is of a permanent nature; that which creates *mirth* is temporary; *joy* is the most vivid sensation in the soul; *gladness* is the same in quality, but inferior in degree; *joy* is awakened in the mind by the most important events in life.

Joy-ful (*'fool*), *adj.* full of joy.

Joy ride (*rid*), a recent term used to designate hilarious and reckless driving of a motor car. [*Colloquial.*]

Juan (*jū-än',* Spanish *hōō-än'*). See *John.*

Juan de Fuca (*jū'ăn de fū'kä*), **Strait of, Wash.** So named by Apostulus Valerianos, after Juan de Fuca, an old Greek sailor who navigated its waters in 1592.

Juan Fernandez (*jū'ăn fēr-nan'dez,* Spanish *hōō-än' fer-nän'deth*). An island in the South Pacific; perpetuates the name of its discoverer. Also known as Selkirk's Island, after Alexander Selkirk, its sole inhabitant from September, 1704, to February, 1707.

Ju-bi-la-tion (*jū-bi-lā'shun*), *n.* a shouting for joy; declaration of triumph.

Ju-bi-lee (*'bi-lē*), *n.* the 50th anniversary of any event.

Judah (*jū'dä*), **Judas** (*jū'das*), **Jude** (*jūd*). Hebrew meaning "confession." Fr., *Zuda* or *Jude;* Ger., *Judas;* Hungarian, *Juda;* It., *Guida;* Lat., *Judas;* Polish, *Judas;* Sw., *Judas.*

Ju-da-ism (*'dä-izm*), *n.* the religious rites and doctrines of the Jews; conformity to Jewish rites and doctrines.

Judge (*juj*), *n.* the presiding official in a court of law; arbitrator; connoisseur: *v. t.* to examine and pass sentence upon; distinguish; consider: *v. i.* to come to a conclusion; hear and determine a case.

★**Judg-ment** (*juj'ment,* not *juj'munt*), *n.* the act of judging; a judicial decision; mental faculty of deciding; criticism; opinion; judgment day.

Syn. JUDGMENT, discretion, prudence. *Judgment* is conclusive; it decides by positive inference; it enables a person to discover the truth; *discretion* is intuitive; it discerns or perceives what is in all probability right; a person is *prudent* who does not inconsiderately expose himself to danger; a measure is *prudent* that guards against the chance of evil; the impetuosity of youth naturally impels them to be *imprudent.* [See *decision.*]

Ant. JOLLITY, heedlessness, recklessness.

Ju-di-cial (*jū-di'shal*), *adj.* pertaining to courts of justice or to the administration of justice; impartial.

Ju-di-cia-ry (*-dish'ä-ri*), *adj.* pertaining to courts of justice: *n.* judges collectively.

Ju-di-cious (*'ush*), *adj.* prudent; discreet.

Judith (*jū'dith*). From the Hebrew *Y'hudhiyth,* "in the Jewish tongue," also, "praising." It., *Giuditta;* Lat., *Juditha.*

Jug (*juq*), *v. t.* to put into a jug: *n.* an earthenware vessel with a handle, used to carry liquids.

Jug-gle (*juq'l*), *v. t.* to cheat by artifice: *v. i.* to conjure: *n.* a trick by sleight of hand.

★**Ju-gu-lar** (*jū'gū-lēr,* not *juq'yū-lēr*), *adj.* pertaining to the neck or throat or jugular vein: *n.* a jugular vein.

Juice (*jōōs*), *n.* sap; the fluid parts of animal bodies.

Jui-cy (*jōō'si*), *adj.* full of juice.

Julia (*jū'li-ä* or *jūl'yä*). The feminine of *Julius.* Dutch, *Julia;* Fr., *Julie;* Ger., *Julie;* It., *Giulia;* Lat., *Julia;* Sp., *Julia;* Sw., *Julia.*

Jul-ian (*jūl'yan*), *adj.* pertaining to Julius Cæsar, or to the Julian calendar as adjusted by Julius Cæsar 46 B.C.

Julian. A name derived from the Latin *Julianus,* formed from *Julius.* Julian is a feminine as well as a masculine name. Dutch, *Julianus;* Fr., *Julien;* Ger., *Julian;* It., *Giuliano;* Lat., *Julianus;* Port., *Juliao;* Sp., *Julian* or *Juliano;* Sw., *Julian.*

Juliana (*jū-li-an'ä*). A female name derived from *Julian.* Dutch, *Juliana;* Fr., *Julienne;* Ger., *Juliane;* It., *Giuliana;* Lat., *Juliana;* Port., *Juliana;* Sp., *Juliana;* Sw., *Juliana.*

Julien. See *Julian.*

Julienne. See *Julia.*

Juliet (*jū'li-et*). A diminutive formed from *Julia.*

Julius (*jū'li-us*). The Roman name, said to be derived from *Julus* or *Iulus,* "sprung from *Iulus.*" Dutch, *Julius;* Fr., *Jules;* Ger., *Julius;* It., *Giulio;* Lat., *Julius;* Port., *Julio;* Sp., *Julio.*

Ju-ly (*-lī*), *n.* the seventh month of the modern calendar; so named by Marc Antony in honor of Julius Cæsar, who was born in it.

Jum-ble (*jum'bl*), *n.* a confused mass: *v. t.* to mix without order: *v. i.* to mix.

Jump (*jump*), *n.* a spring or bound; the space jumped: *v. t.* to cause to spring or bound: leap over: *v. i.* to spring.

Junc-tion (*jungk'shun*), *n.* the act of being joined; union; a point or place of union.

Junc-ture (*'tūr*), *n.* the point on line at which two bodies are joined; occasion.

June (*jōōn*), *n.* the sixth month of the modern calendar; named from Juno, the queen goddess.

Jungfrau (*yoong'frow*) **mountain.** A noted Alpine peak, "the maiden," or "the fair one," so called from its spotless white.

jun-gle (*jung'gl*), *n.* a dense tropical thicket.

Juniata (*jū-ni-at'ä*) **river, Pa.** Named from a tribe of Indians inhabiting its banks, extinguished by the Iroquois. The root of the word means "a stone." *Onajutta-haga,* "the Juniata people," is the name found on early maps.

jun-ior (*jōōn'yēr*), *adj.* younger; of lower standing; pertaining to youth: *n.* the younger of two; one of lower standing.

ju-ni-per (*jōō'ni-pēr*), *n.* a shrub, the berries of which are used in flavoring gin.

junk (*jungk*), *n.* short pieces of old cable, rope; hard salt ship beef; a Chinese flat-bottomed vessel.

jun-ket (*jung'ket*), *n.* a variety of sweetmeat; excursion; picnic: *v. i.* to participate in an excursion or picnic.

jun-ta (*jun'tä*), *n.* a legislative assembly or council.

jun-to (*'tō*), *n.* [*pl.* juntos (*'tōz*)], a secret council of state; faction; cabal.

ju-ris-dic-tion (*jū-ris-dik'shun*), *n.* legal authority; extent of power; district over which any authority extends.

ju-ris-pru-dence (*-prōō'dens*), *n.* legal science; system of laws of a country.

ju-rist (*'rist*), *n.* one skilled in legal science.

ju-ror (*'rēr*), *n.* a juryman.

ju-ry (*'ri*), *n.* a body of men, usually twelve, selected according to law and sworn to inquire into or decide on, the evidence before them.

★**just** (*just,* never *jest*), *adj.* conformable to divine or human laws; upright; impartial; fair: *adv.* exactly; barely; almost; perfectly.

jus-tice (*jus'tis*), *n.* rectitude in dealing with others; impartiality; a judge or magistrate.

jus-ti-fi-a-ble (*'ti-fī-ä-bl*), *adj.* defensible.

jus-ti-fi-ca-tion (*-fi-kā'shun*), *n.* the act of justifying; vindication or defense; the act of acceptance of a man by God as justified by the merits of Jesus Christ.

jus-ti-fy (*'ti-fī*), *v. t.* to show or prove to be just or right; vindicate; pardon: *v. i.* to conform to each other by proper spacing, as lines of type. [APOLOGIZE.]

Justin (*jus'tin*). A masculine name derived from the Roman *Justinus,* formed from *Justus.*

Justina (*jus-tī'nä*). A feminine name formed from *Justin.*

jut (*jut*), *v. i.* [*p. t.* and *p. p.* jutted, *p. pr.* jutting], to project beyond the main body.

jute (*jōōt*), *n.* the fiber of an East Indian plant used for ropes.

Jutland. The continental part of Denmark. Name means the land of the Jutes.

ju-ve-nes-cent (*jōō-vē-nes'ent*), *adj.* becoming young.

ju-ve-nile (*'vē-nīl*), *adj.* youthful; like, or suitable to, youth: *n.* a young person. [YOUTHFUL.]

ju-ve-nil-i-ty (*-nil'i-ti*), *n.* youthfulness.

juxta, a *prefix* meaning *near,* as *juxta*position.

K

Kaaba (*kä'bä*), or **Caaba** (*kä'äbä*). A cube-shaped, flat-roofed building in the center of the Great Mosque at Mecca, the most sacred shrine of the Mohammedans.

Kaf-fir (*kaf'ēr*), *n.* any member of one of the Bantu tribes of South Africa; the Kaffir language.

Kaffraria (*käf-frā'ri-ä*). Country of the Kaffirs, or "unbelievers."

kai-ser (*kī'zēr*), *n.* the title of the emperors of Germany and Austria.

Kalamazoo (*kal-ä-mä-zōō'*). City, river, and county in Michigan. According to one authority, name is derived from the Indian word *Negikanamazo,* meaning "otter-tail"; "beautiful water" and "boiling water" are other versions.

kale (*kāl*), *n.* a cabbage with open curled leaves; sea kale.

★**ka-lei-do-scope** (*kä-lī'dō-skōp*), *n.* an optical instrument which by an arrangement of mirrors causes objects viewed through it to appear in a variety of symmetrical and beautiful patterns.

Ka-na-ka (*kä-nä'kä*), *n.* a Sandwich Islander.

Kanawha (*kä-naw'wä*) **river, W. Va.** So named from a tribe of Indians (branch of the Nanticokes), evoluting in its spelling through *Conoys, Conoise, Canawese, Cohnawas, Canaways,* to *Kanawha.*

kan-ga-roo (*kang-ga-rōō'*), *n.* a herbivorous marsupial mammal peculiar to Australia, having short fore legs and long powerful hind legs, with which it leaps.

Kansas. A north central state of the United States. Named in 1854 from its principal river, so called from a tribe of Indians, formerly in that locality, known as the *Konsos* or *Kows.* The word means "smoky water."

Kansas City, Mo. The name given in the spring of 1839, at a meeting of the "Town Company," an organization for starting towns and locating steamboat landings on the Missouri river.

ka-o-lin (*kā'ō-lin*), *n.* china or porcelain clay.

kar-at. Same as *carat.*

Karnak (*kär'näk*). A village in Egypt, on the eastern bank of the Nile, on the site of Thebes, famous for its remains of antiquity.

Katahdin (*kä-tä'din*). Mountain in Maine. An Indian word, *Ktaadn* or *Katahdu,* meaning, according to different authorities, "highest land," "big mountain," "greatest or chief mountain."

Kathleen (*kath-lēn'*). An Irish diminutive of *Catherine.*

ka-yak (*kā'yak*), *n.* an Eskimo sealskin canoe. [Also *kaiak, kajak.*]

Kearsarge (*kēr'särj*), **Mt., N. H.** Name corruption of the Indian *keas,* "high," *auke,* "a place," "a high place"; another derivation traces it from the Indian *Koowassadchu,* "pine or peaked mountain."

keel (*kēl*), *n.* the chief and lowest timber of a vessel extending from stem to stern and supporting the whole frame; hence, a ship; a low, flat-bottomed coal barge: *v. t.* to furnish with a keel: *v. i.* turn up the keel; give up.

keel-boat (*'bōt*), *n.* a large covered freight boat.

keel-haul (*'hawl*), *v. t.* to drag under water beneath the bottom of a ship from one side to the other: formerly a naval punishment; reprimand sternly.

keen (*kēn*), *adj.* sharp; eager; piercing; bitter; acute: *n.* a shrill, bitter wail. [ACUTE, SHARP, EAGER.]

keep (*kēp*), *v. t.* [*p. t.* and *p. p.* kept, *p. pr.* keeping], to have the care of; guard; do; observe; supply with the necessaries of life; confine: *v. i.* to remain in any state or condition: *n.* subsistence.

Syn. KEEP, preserve, save. The idea of having in one's possession is common to all these terms; which is, however, the simple meaning of *keep; to preserve* signifies *to keep* with care, and free from all injury; *save is to keep* laid up in a safe place; free from destruction. [See *hold.*]

Ant. DEMOLISH, destroy, wreck.

keep-sake (*'sāk*), *n.* something kept as a souvenir of the giver.

keeve (*kēv*), *n.* a large vat or tub.

keg (*keg*), *n.* a small barrel.

kelp (*kelp*), *n.* the calcined ashes of seaweeds, from which iodine is obtained; a large coarse seaweed or wrack.

kemp (*kemp*), *n.* coarse rough hair or wool; refuse of fur.

ken (*ken*), *n.* view; knowledge: *v. t.* [*p. t.* and *p. p.* kenned, *p. pr.* kenning], to know; descry. [*Scotch.*]

Kenilworth (*ken'il-wērth*). A town in Warwickshire, England, five miles north of Warwick. It has been immortalized by Sir Walter Scott.

Kennebec (*ken-ē-bek'*) **river, Me.** So named from the Indian *quinnipippiohke,* "long place of water." This was the Indian name of Moosehead lake.

Kennebunk (*ken-ē-bunk'*), **Me.** Similar to Kennebec, an adaptation of another pronunciation.

ken-nel (*'el*), *n.* a house for a dog or pack of hounds: *v. t.* to confine in a kennel: *v. i.* to live in a kennel.

Kenneth (*ken'neth*). The English form of the Gaelic name *Coinneach;* perhaps from *caoin-neach,* a "kind, gentle, or mild man."

Kenosha (*kē-nō'shä*), **Wis.** Algonquin derivation from *kenose,* "long," meaning "a long fish."

Kensington (*ken'sing-tun*). A borough of London; originally the town of the Kensings, the old form of which was *Cynesige.*

Kent. A county of England; so named from the ancient British word *chent* or *cant* ("a corner"), "because" says Camden, "England at this point stretched itself out in a corner to the northeast." The Roman name was *Cantium.*

Kentucky. One of the Southern states of the United States; so named, in 1782, from its principal river. Indian word, *Kain-tuk-ee,* "at the head of the river."

Keokuk (*kē'ō-kuk*). City and county in Iowa, named for an Indian chief, the word meaning "running or watchful fox."

ker-nel (*kēr'nel*), *n.* a grain or seed; the edible substance of a nut or fruit stone; essence.

ker-o-sene (*ker'ō-sēn*), *n.* refined petroleum.

ker-sey (*kēr'zi*), *n.* a coarse smooth-faced cloth.

ketch-up (*kech'up*), *n.* a sauce prepared from tomatoes, mushrooms, etc.

★**ket-tle** (*ket'l*, not *kit'l*), *n.* a metallic vessel for boiling liquids.

ket-tle-drum (*'drum*), *n.* a hemispherical copper drum.

Kew (*kū*). The name of this place has undergone many transitions. The name is probably derived from the word *quay*, a landing place.

Keweenaw (*kē'wē-naw*) **point, Mich.** So named from a portage called by the Indians *Kewauenau*, the "place where we cross by land carrying the canoe."

Kew observatory. Since 1871 the central meteorological observatory of Great Britain. It is at Old Richmond park, between Kew and Richmond.

key (*kē*), *n.* a portable metal instrument for operating a lock; an instrument by which something is turned, secured, or operated upon; clef; solution; literal translation: *v. t.* to fasten or connect with a key.

key-note (*'nōt*), *n.* the fundamental note; ruling principle.

key-stone (*'stōn*), *n.* central stone of an arch.

Key West. City in Monroe county, Florida. A corruption of *cayo hueso*, a Spanish term meaning "a bone reef or island."

Keziah (*kē-zī'ä*). A feminine name derived from *Keziā*, daughter of Job, from the Hebrew, *kt'siya*, signifying "cassia," a bark similar to cinnamon.

kha-ki (*kä'ki*), *adj.* of the color of dust or ashes: *n.* a light drab or brownish cotton cloth used for military uniforms.

khan (*kän*), *n.* an Asiatic prince, chief, or governor; a caravanserai.

khe-dive (*kä-dēv'*), *n.* the official title of the viceroy of Egypt. This word, from the Persian *khidiw*, according to the best authorities, means "prince."

kick (*kik*), *n.* a blow with the foot; a recoil: *v. t.* to strike with the foot: *v. i.* to recoil; resist.

kid (*kid*), *n.* the young of the goat, or its soft skin, used for gloves, etc.; a child: *adj.* made of kid: *v. i.* to bring forth a kid: *v. t.* to furnish or cover with kid; humbug.

kid-nap (*'nap*), *v. t.* to get forcible and illegal possession of. [ABDUCT.]

kid-ney (*'nī*), *n.* [*pl.* kidneys (*'nīz*)], one of two oblong, flattened organs which separate the urine from the blood; anything resembling a kidney; sort or kind.

kill (*kil*), *v. t.* to deprive of life; destroy; slay.

★**kiln** (*kil*, not *kiln*), *n.* a furnace, oven, or pile for burning, drying, or hardening.

kilt (*kilt*), *n.* a short petticoat or philibeg of the Scottish highlanders: *v. t.* to form into broad, flat plaits; tuck up. [*Scotch*.]

ki-mo-no (*ki-mō'no*), *n.* the loose outer robe of the Japanese.

kin (*kin*), *n.* consanguinity; relationship; kindred; a Chinese lute.

kind (*kind*), *adj.* benevolent; indulgent; affectionate; sympathetic: *n.* genus or species; quality; variety; sort. [HUMANE, PLEASANT.]

kin-der-gar-ten (*kin'dĕr-gär-ten*), *n.* a school for young children in which they are taught by diverting object lessons, etc.

kin-dle (*kin'dl*), *v. t.* to set fire to; inflame.

kind-ly (*kind'li*), *adj.* benevolent; sympathetic; beneficial: *adv.* in a kindly manner. [PLEASANT.]

kind-ness (*'nes*), *n.* the state or quality of being kind; a kind act. [MERCY.]

kin-dred (*kin'dred*), *adj.* of like nature or character; cognate: *n.* relationship by birth or marriage; consanguinity.

kin-e-mat-ics (*kin-ē-mat'iks*), *n.* the science of pure motion.

ki-net-ic (*ki-net'ik*), *adj.* pertaining to, or imparting, motion; active: *n. pl.* that branch of dynamics which treats of the action of forces in causing or influencing motion.

★**ki-ne-to-graph** (*ki-nē'to-graf*), *n.* an apparatus for taking photographs of moving objects and afterward reproducing them on a screen, as if in actual motion.

ki-ne-to-scope (*ki-nē'to-skōp*) *n.* a device for presenting pictures of moving objects in such rapid succession as to give the impression of the actual movements of the original.

king (*king*), *n.* a male sovereign or ruler.

king-dom (*'dum*), *n.* the territory ruled by a king or queen; royal authority; sphere of influence; primary division.

king-fish-er (*'fish-ĕr*), *n.* a fish-eating bird with bright blue and green or slate-blue and white plumage.

king-ly (*'li*), *adj.* worthy of a king. [ROYAL.]

kink (*kingk*), *n.* a twist in a rope or thread when doubled; whim: *v. t.* and *v. i.* to form kinks.

kins-folk (*kins'fōk*), *n.* relatives.

kip-per (*kip'ĕr*), *n.* a salmon after spawning; a salmon, herring, etc., cut open, salted, and smoke dried: *v. t.* to cure, as a salmon.

kir-tle (*kĕr'tl*), *n.* an upper garment; petticoat: *v. t.* to array in a kirtle.

Kiskiminetas (*kis-kē-min'ē-tas*) **river, Pa.** So named from an Indian word, *Kithanne*, translated, "place of the largest stream."

kiss (*kis*), *n.* a salute or caress with the lips; a slight touch: *v. t.* to salute with the lips; touch slightly: *v. i.* to caress mutually with the lips.

kit (*kit*), *n.* a small wooden tub; a small violin; traveling necessaries, outfit, etc.; set.

kitch-en (*kich'en*), *n.* a room set apart for cooking; ship's galley: *adj.* pertaining to the kitchen.

kitch-en-ette (*'en-et*), *n.* a small kitchen.

kite (*kīt*), *n.* a rapacious bird of prey; a light frame of wood covered with paper or linen for flying in the air; a light lofty sail.

kith (*kith*), *n.* acquaintance.

Kittatinny (*kit'tä-tin-ni*) **mountains, Pa.** The Indian word *Kitadini*, that is, "largest mountain."

kit-ten (*kit'n*), *n.* a young cat.

Kittery (*kit'tĕr-i*) **Point, Me.** Named after the small hamlet of Kittery, England. Kittery Point was settled in 1623, and it is claimed was the first settled and the oldest town in the state.

klep-to-ma-ni-a (*klep-tō-mā'ni-ä*), *n.* a form of insanity manifesting itself in an irresistible propensity to steal.

klep-to-ma-ni-ac (*'ni-ak*), *n.* one who is under the influence of kleptomania.

knack (*nak*), *n.* adroitness; dexterity.

knap-sack (*nap'sak*), *n.* a leather or cloth traveling case carried on the back.

knave (*nāv*), *n.* a dishonest or deceitful person.

knav-er-y (*'ĕr-i*), *n.* [*pl.* knaveries (*-iz*)], dishonesty; fraud; deceit. [DISHONEST.]

knead (*nēd*), *v. t.* to work into a mass, as dough; operate upon in massage; mold.

knee (*nē*), *n.* the articulation of the leg and thigh bones; anything resembling a knee: *v. t.* to connect or strengthen with knees.

knee-cap (*'kap*), *n.* a flattened oval bone on the forepart of the knee joint; patella.

kneel (*nēl*), *v. i.* [*p. t.* and *p. p.* knelt. *p. pr.* kneeling], to bend, or fall upon, the knees.

knell (*nel*), *n.* the sound of a bell when struck, especially a funeral bell; an ill omen: *v. t.* and *v. i.* to sound or toll, as a funeral bell.

knick-er-bock-ers (*nik'ĕr-bok-ĕrz*), *n. pl.* wide breeches gathered in below the knee.

knick-knack (*'nak*), *n.* a little ornamental trifle; kickshaw.

knife (*nīf*), *n.* [*pl.* knives (*nīvz*)], a cutting instrument with a sharp-edged blade set in a handle: *v. t.* to stab with a knife.

knight (*nīt*), *n.* one who holds nonhereditary rank next below a baronet, entitling him to the prefix *Sir;* a champion; lover; one of the pieces in chess: *v. t.* to confer the honor of knighthood upon.

knight-er-rant (*-er'ant*), *n.* [*pl.* knights-errant], in the middle ages, a knight who went in quest of adventure, to show his prowess, chivalry, etc.

knight-hood (*'hood*), *n.* the character, rank, or dignity, of a knight.

knit (*nit*), *v. t.* [*p. t.* and *p. p.* knitted, *p. pr.* knitting], to tie, unite, or draw together; weave together by needles: *v. i.* contract.

knob (*nob*), *n.* the rounded handle of a door, etc.; round protuberance: knoll.

knock (*nok*), *n.* a blow or stroke with something hard or heavy; rap: *v. t.* to give a blow to; drive or strike against: *v. i.* to strike a blow with something hard or heavy.

knock-out (*'out*), *n.* a mechanical device for throwing out finished work; a blow that knocks down.

knoll (*nōl*), *n.* a rounded hillock; hilltop.

knot (*not*), *n.* an interweaving or tying of thread or cord, etc.; entanglement; difficulty; a hard part in a piece of wood; a nautical mile equal to 2,025 yds.; bond of union; group: *v. t.* to tie in a knot; unite firmly or closely: *v. i.* to form knots or joints; make knots for fringe.

knot-ty (*'i*), *adj.* [*comp.* knottier, *superl.* knottiest], full of knots; rugged; difficult.

know (*nō*), *v. t.* [*p. t.* knew, *p. p.* known, *p. pr.* knowing], to perceive with the mind; understand clearly; have knowledge of; distinguish: *v. i.* to be informed.

Syn. KNOW, be acquainted with. We may *know* things or persons in various ways; we may *know* them by name only; or we may *know* their internal properties or characters, etc.; one is *acquainted with* either a person or a thing, only in a direct manner, and by an immediate intercourse in one's own person.

knowl-edge (*nol'ej*), *n.* clear perception of a truth or fact; acquaintance; information.

Syn. KNOWLEDGE, science, learning, erudition. *Knowledge* is a general term which simply implies the thing known; *science* is a systematic species of *knowledge* which consists of rule and order; *learning* is that species of *knowledge* which one derives from schools, or through the medium of personal instruction; *erudition* is scholastic *knowledge* obtained by profound research. [See *acquaintance*.]

Ant. IGNORANCE, illiteracy.

Knoxville, Tenn. Named after Gen. Henry Knox of Massachusetts, secretary of war during Washington's administration.

knuc-kle (*nuk'l*), *n.* the projecting joint of the fingers; the knee joint of a calf or pig: *v. i.* to bend the fingers; yield or submit.

ko-dak (*kō'dak*), *n.* a portable camera for taking instantaneous photographs: *v. t.* to take an instantaneous picture of.

Kokomo (*kō'kō-mō*), **Ind.** Name is an Indian word meaning "a young grandmother."

Ko-ran. See *Alcoran*.

kow-tow (*kou-tou'*), *n.* a Chinese form of salutation: *v. i.* salute by the kowtow. [Also *kotow*.]

Kremlin (*krem'lin*). A citadel of Moscow, Russia.

kreut-zer (*kroit'sĕr*), *n.* an Austrian copper coin equal to ½ of a cent; formerly a German coin equal to ⅔ of a cent.

Kurdistan or **Koordistan** (*kōōr-dis-tän'*). Means the country of the Koords.

Kyrle (*kĕrl*). A masculine name derived from *Karl* or *Carl*, from root of *Charles*.

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Laban (*lā'ban*). A masculine name, from the Hebrew *Labhan*, signifying "white."

la-bel (*lā'bel*), *n.* a small slip of paper, etc., attached to anything to indicate its destination, ownership, etc.: *v. t.* to mark with a label; classify.

la-bi-al (*lā'bi-al*), *adj.* formed by the lips: *n.* a letter representing a sound so formed.

la-bor (*'bĕr*), *n.* toil or exertion, physical or mental; effort; parturition: *v. t.* to cause to toil; fabricate: *v. i.* to exert muscular strength; use mental efforts; suffer the pains of childbirth. [WORK.]

★**lab-o-ra-to-ry** (*lab'ō-rä-tō-ri*, not *lab'rä-tō-ri*), *n.* [*pl.* laboratories (*-riz*)], a place where scientific experiments and operations are carried on.

la-bo-ri-ous (*lä-bō'ri-us*), *adj.* difficult; toilsome.

Labrador (*lab-rä-dōr'*). A northeastern peninsula of North America. Its name is believed to testify to the early maritime enterprise of the Portuguese, who called it *Terra de Lavradores*, the "land of the laborers."

labyrinth (*lab'i-rinth*), *n.* an intricate arrangement; perplexity. From the Greek *labyrinthos*, "a maze of intricate passages"; especially, a subterranean structure having many intricate passages.

lace (*lās*), *n.* an ornamental fabric of fine linen, cotton thread, gold or silver, etc., curiously woven: *v. t.* to fasten with a lace; adorn with lace; beat.

lac-er-ate (*las'ĕr-āt*), *v. t.* to rend; wound.

lach-ry-mal (*lak'ri-mal*), *adj.* pertaining to tears.

lach-ry-mose (*'ri-mōs*), *adj.* tearful; sad.

lack (*lak*), *v. t.* to be destitute of: *v. i.* to be in need; to be deficient; come short: *n.* want; failure. [WANT.]

lack-a-dai-si-cal (*-ä-dā'zi-kal*), *adj.* affectedly pensive or sentimental.

Lackawanna (*lak-ä-won'nä*) **creek, Pa.** Named from the Delaware Indian words *lechau-hanne*, "the stream that forks."

lack-ey (*'i*), *n.* a menial attendant; footman: *v. t.* to wait upon, as a lackey: *v. i.* to act servilely.

la-con-ic (*lä-kon'ik*), *adj.* expressing much in few words.

lac-quer (*lak'ĕr*), *n.* a varnish consisting of shellac dissolved in alcohol and variously colored: *v. t.* to varnish with lacquer.

La Crosse (*lä krōs'*). City and county in Wisconsin. A French name given to the town because before its settlement the ground was a favorite place for ball playing with the Indians, the game being called by the French *la crosse*.

lac-ta-tion (*lak-tā'shun*), *n.* secretion of milk; the act or period of suckling.

lac-te-al (*'tē-al*), *adj.* pertaining to, or like, milk; conveying chyle: *n. pl.* the lymphatic vessels which convey chyle from the intestines to the thoracic duct.

lad (*lad*), *n.* a boy or youth; comrade.

lad-der (*'ĕr*), *n.* a framework consisting of two parallel side pieces connected by bars, etc., forming steps at suitable distances.

lad-die (*'i*), *n.* a lad. [*Scotch*.]

lade (*lād*), *v. t.* [*p. t.* laded, *p. p.* laded, laden, *p. pr.* lading], to load; burden; heave or throw out.

la-dle (*lā'dl*), *n.* a deep spoon for serving out liquids: *v. t.* to dip up with a ladle.

Ladrone (*lä-drōn'*) **islands.** In the North Pacific. So designated from the circumstance that when Magellan touched upon one of the lesser isles of the group, in 1520, the natives stole some of his goods; whereupon he called the islands the *Ladrones*, which is Spanish for "thieves."

la-dy (*lā'di*), *n.* [*pl.* ladies (*'diz*)], a well-bred woman; the daughter of a duke, marquis, or earl; mistress of a house.

la-dy-bird (*-bĕrd*), *n.* a red coleopterous insect marked with black spots.

lag (*lag*), *v. i.* [*p. t.* and *p. p.* lagged, *p. pr.* lagging], to move slowly; loiter; stay behind: *v. t.* cause to be arrested or punished: *adj.* long delayed; last: *n.* retardation of mechanical movement. [LINGER.]

la-ger beer (*lä'gĕr bĕr*), a German beer that is stored before using.

lag-gard (*lag'ĕrd*), *n.* a slow person; loiterer: *adj.* backward; slow.

la-goon (*lä-gōōn'*), *n.* a shallow lake formed at the mouth of a river or near the sea; marsh or fen.

lair (*lär*), *n.* the covert of a wild beast.

la-i-ty (*lā'i-ti*), *n.* the people, as distinguished from the clergy.

lake (*lāk*), *n.* a large body of water surrounded by land; a pigment.

Lake district, England. A region in Westmoreland and Cumberland, England, which abounds in lakes inclosed by mountains. The district is a celebrated tourist center, and is associated with the poetry of Wordsworth.

Lake Huron. See *Huron*.

Lake Michigan. See *Michigan*.

Lake of the Woods. Lake in Minnesota. Originally named *Lac des Bois* by the French, "lake of the woods," because of the heavily wooded islands in the lake.

Lake Ontario. See *Ontario.*
Lake Superior. The uppermost and chief of the Great Lakes.
Lake Winnipeg. See *Winnipeg.*
lamb (*lăm*), *n.* the young of a sheep; one who is gentle or innocent; an inexperienced speculator: *v. i.* to bring forth lambs.
lam-bent (*'bĕnt*), *adj.* playing about; flickering; touching lightly.
Lambert (*lăm'bĕrt*). Corrupted from the Old German name *Lamdbert, Lantprecht;* from *landbrecht,* "one distinguished among the people." Dutch, *Lambert* or *Lambertus;* Fr., *Lambert;* Ger., *Lambert;* Lat., *Lambertus.*
Lambeth (*lăm'bĕth*) **palace.** The London residence of the archbishop of Canterbury, situated in Lambeth, near the Thames, one and one-half miles southwest of St. Paul's. It contains a valuable library.
lamb-kin (*'kĭn*), *n.* a little lamb.
lam-bre-quin (*lăm'bre-kĭn*), *n.* a festooned drapery, hanging from the upper part of a window, doorway, etc.
lamb-skin (*'skĭn*), *n.* the skin of a lamb dressed with the fleece on and frequently colored.
lambs-wool (*lămz'wool*), *n.* the wool of lambs; a beverage composed of ale, with nutmeg, sugar, and the pulp of roasted apples.
lame (*lām*), *adj.* crippled or disabled in the limbs; not sound or efficient: *v. t.* to cripple or disable.
la-ment (*lȧ-ment'*), *v. t.* to mourn for: *v. i.* to express sorrow. [COMPLAIN, DEPLORE.]
★**lam-en-ta-ble** (*lăm'en-tȧ-bl,* not *lȧ-ment'ȧ-bl*), *adj.* to be lamented; mournful; pitiable.
La Mollie (*lȧ moil'*) **river, Vt.** Discovered and named by Champlain as *la mouette,* "the mew or gull," which were seen in great numbers on its waters.
lamp (*lămp*), *n.* a vessel for burning oil; any device for producing artificial light.
lamp-black (*'blăk*), *n.* finely divided charcoal or soot: *v. t.* to apply lampblack to.
lam-poon (*lăm-pōōn'*), *n.* personal written satire designed to bring its subject into contempt: *v. t.* to satirize by a lampoon.
lance (*lăns*), *n.* a long shaft of wood with a spear head; a thrust with a lancet: *v. t.* to pierce with a lance; cut open with a lancet.
Lancelot (*lan'sĕ-lot*). Sometimes rendered "servant," or "little lance"; if so, the bearer was so called from carrying a lance or pike. The name seems to be a diminutive formed from Latin *lancea,* "a lance," "javelin," a word which Varro thinks of Spanish origin. Fr., *Lancelot;* Lat., *Lancelottus.*
lan-cet (*'sĕt*), *n.* a surgeon's knife; a lancet-shaped or pointed window.
land (*land*), *n.* the solid portion of the surface of the globe; the earth; a country or district; real estate: *v. t.* to set on shore; capture and bring on shore; win: *v. i.* to come or go on shore; disembark.
Syn. LAND, country. The term *land* in its proper sense excludes the idea of habitation; the term *country* excludes that of the earth, or the parts of which it is composed; hence we speak of the *land* as rich or poor according to what it yields; of a *country* as rich or poor according to what its inhabitants possess.
lan-dau (*lan'dȯ*), *n.* a kind of carriage.
land-grab-ber (*land'grab-ĕr*), *n.* one who gets possession of public land by means of fraud.
land-lord (*'lȯrd*), *n.* one who has tenants holding under him; the keeper of a hotel or inn.
land-lub-ber (*'lub-ĕr*), *n.* one not a sailor.
land-scape (*'skāp*), *n.* the general aspect of a country, or a picture representing it.
lane (*lān*), *n.* a narrow path, as between hedges, walls, etc.
★**lan-guage** (*lang'gwăj,* not *lang'gwĭj*), *n.* human speech; the speech of one nation or race as distinguished from that of another; style or expression peculiar to an individual.
Languedoc (*lan'gwē-dok,* French *lȧN'gu-dȯk*). An ancient government of southern France. It was named from the language of the South of France; the *langue d'oc,* or Provencal.
lan-guid (*lang'gwĭd*), *adj.* wanting energy. [FAINT.]
lan-guish (*'gwĭsh*), *v. i.* to become weak or spiritless; pine away.
lank (*langk*), *adj.* lean; slender.
lank-y (*'ĭ*), *adj.* tall and thin.
Lansing (*lan'sĭng*), **Mich.** Named in honor of Abram Jacob Lansing of Rensselaer county, New York, a large landholder of this section.
lan-tern (*lan'tĕrn*), *n.* a transparent case for holding or carrying a light; the light room of a lighthouse.
lan-tern-jawed (*-jawd*), *adj.* having a long thin face.
lap (*lap*), *n.* part of the body or clothes from the waist to the knees of a person seated; a name for various pieces of mechanism; one length of a course which has to be passed over more than once in a race; the act of lapping: *v. t.* to bend and spread over; lick up: *v. i.* to lie partially on something else.
lap-dog (*'dog*), *n.* a small pet dog.
la-pel (*lȧ-pel'*), *n.* part of a coat which laps over.
lap-i-da-ry (*lap'ĭ-dȧ-rĭ*), *n.* [*pl.* lapidaries (*-rĭz*)], an artificer who cuts and sets precious stones; a connoisseur or dealer in gems.
La Porte (*lȧ-pōrt'*). City and county in Indiana. A French word meaning "door" or "opening" between two stretches of forest connecting two prairies.
lapse (*laps*), *v. i.* to glide or slip slowly away; fall by degrees; commit a slight fault or fail in duty; *n.* a gliding or passing away slowly; slight fault or mistake.
lap-wing (*lap'wing*), *n.* a plover-like bird.
lar-board (*lär'bōrd*), *n.* the term used formerly for the *port* or left-hand side of a ship.
lar-ce-ny (*'se-nĭ*), *n.* theft.
larch (*lärch*), *n.* a coniferous tree.
lard (*lärd*), *n.* the fat of swine melted down: *v. t.* to cover with lard; insert strips of bacon in before roasting: hence, to mix.
lar-der (*lär'dĕr*), *n.* a pantry; household provisions.
large (*lärj*), *adj.* great in size; bulky; wide; extensive; comprehensive.
Syn. LARGE, wide, broad. A field is said to be *wide* both from its figure and the extent of its space in the cross directions; in like manner, a house is *large* from its extent in all directions; it is said to be *wide* from the extent which it runs in front; what is *broad* is in sense, and mostly in application, *wide; large* is opposed to small; *wide* to close; *broad* to narrow. [See *great.*]
Ant. LITTLE, mean, narrow, small.
lar-gess (*lar'jes*), *n.* a gift or bounty.
lar-i-at (*lar'ĭ-ȧt*), *n.* a rope or lasso, especially of horsehair.
lark (*lärk*), *n.* a noted song bird of the genus Alauda; a frolic.
lark-spur (*'spĕr*), *n.* a plant with showy blue spurred flowers.
lar-va (*lär'vȧ*), *n.* [*pl.* larvæ (*'vē*)], an insect in the first stage of its metamorphosis after leaving the egg.
lar-yn-ge-al (*lar-ĭn'jē-al*), *adj.* pertaining to, or situated near, the larynx.
lar-ynx (*'ĭngks*), *n.* the upper part of the trachea or windpipe.
las-civ-i-ous (*las-sĭv'ĭ-us*), *adj.* lustful; wanton; exciting lust.
lash (*lash*), *v. t.* to strike with a sounding blow; whip; scourge with satire; fasten or bind with cord or rope: *v. i.* to apply the whip; flog: *n.* the thong of a whip; a scourge; sarcasm or satire.
lass (*lăs*), *n.* a young woman; girl.
las-si-tude (*las'ĭ-tūd*), *n.* weariness; languor. [FATIGUE.]
las-so (*'ō*), *n.* a rope, usually of hide, with a noose, used for catching wild horses and cattle: *v. t.* to catch with a lasso.
last (*läst*), *adj.* coming after all others in time, place, or order; lowest; utmost; least likely: *adv.* on the last time or occasion; finally: *v. i.* to remain in existence or operation; endure: *n.* a wooden implement for shaping boots and shoes.
last-ing (*'ĭng*), *adj.* durable; permanent: *n.* a twilled fabric used for making women's shoes. [DURABLE, PERMANENT.]
Las Vegas (*läs vā'gas*). City in San Miguel county, New Mexico. A Spanish name meaning "the plains," or the "meadows," and given this city on account of its situation in the midst of a fertile meadow.
latch (*lach*), *n.* a door catch: *v. t.* to secure or fasten with a latch.
latch-et (*'ĕt*), *n.* a shoestring.
late (*lāt*), *adj.* [*comp.* later, *superl.* latest], coming after the usual time; tardy; long delayed; recently deceased: *adv.* after delay; recently.
la-tent (*lā'tent,*) *adj.* concealed; invisible. [SECRET.]
lat-er-al (*lat'ĕr-al*), *adj.* pertaining to, proceeding from, or acting upon, the side.
Lateran (*lat'ĕr-ȧn*), **The.** Now an ecclesiastical palace in the eastern part of Rome. The present edifice dates from the sixteenth to eighteenth centuries. The palace was originally named from the Roman family, *Lateranus,* to which, until the time of Nero, it belonged.
lath (*lăth*), *n.* a strip of wood.
lathe (*lāth*), *n.* a machine for turning and polishing articles of wood, metal, etc.
lath-er (*lath'ĕr*), *n.* froth made by moistened soap; profuse sweating: *v. t.* to cover with lather.
Lat-in (*lat'ĭn*), *adj.* pertaining to, written, or expressed in, Latin; pertaining to Latium, ancient Rome, its inhabitants or language, or the races and languages derived from Rome: *n.* an ancient Roman; the language of ancient Rome and its literature.
La-tin-i-ty (*lȧ-tĭn'ĭ-tĭ*), *n.* purity of Latin style or idiom.
Lat-in-ize (*lat'ĭn-īz*), *v. t.* to give Latin terminations, or characteristics, to; translate into Latin.
lat-i-tude (*'ĭ-tūd*), *n.* distance on the earth's surface as measured by degrees north or south from the equator; breadth; extent; freedom from rules; laxity.
lat-i-tu-di-na-ri-an (*-tū-dĭ-nā'rĭ-an*), *adj.* wide in range or scope; tolerant in speculative religious opinions: *n.* one who holds latitudinarian views.
Latitudinarians. The name applied by contemporaries to a school of theologians within the English church in the latter half of the seventeenth century. It grew out of the earlier movement in favor of a more liberal constitution for the church.
lat-ter (*lat'ĕr*), *adj.* the second of two things previously mentioned; recent; modern.
lat-tice (*'ĭs*), *n.* crossed openwork of metal or wood; *v. t.* to furnish or cross with a lattice.
laud (*lawd*), *v. t.* to praise highly; extol: *n.* praise; worship or hymn of praise.
laud-a-ble (*lawd'ȧ-bl*), *adj.* commendable.
Syn. LAUDABLE, praiseworthy, commendable. Things are *laudable* in themselves; they are *praiseworthy* or *commendable* in this or that person; that which is *laudable* is entitled to encouragement and general approbation; an honest endeavor to be useful to one's family or one's self is at all times *laudable;* what is *praiseworthy* obtains the respect of all men.
laud-a-num (*'ȧ-num*), *n.* a preparation of opium.
laud-a-to-ry (*'ȧ-tō-rĭ*), *adj.* expressing praise.
★**laugh** (*lăf*), *n.* a convulsive sound caused by merriment: *v. i.* to express merriment, etc., by a laugh; appear gay, pleasant, etc.; jeer (with *at*): *v. t.* to express or utter with laughter.
laugh-a-ble (*'ȧ-bl*), *adj.* exciting a laugh; ridiculous; ludicrous; comical.
laugh-ing-stock (*-ĭng-stok*), *n.* object of laughter.
laugh-ter (*'tĕr*), *n.* convulsive merriment.
Launcelot. Another spelling of *Lancelot.*
★**launch** (*lȧnch*), *v. t.* to move or cause to slide into the water, as a vessel; hurl; dart; send forth: *v. i.* to put to sea; expatiate in language; plunge; enter on a new career: *n.* a large open pleasure boat usually propelled by steam, gas, or electricity.
★**laun-dress** (*lȧn'dres*), *n.* a washerwoman.
laun-dry (*'drĭ*), *n.* [*pl.* laundries (*'drĭz*)], a place where clothes are washed and ironed.
Laura (*law-rȧ*). A feminine name derived from Latin *laurus,* "a laurel or baytree," dedicated to Apollo, used in triumphs, and worn by emperors and poets in garlands. *Laura* corresponds to the Greek name *Daphne.*
lau-re-ate (*law'rē-ăt*), *adj.* decked or invested with laurel: *n.* one crowned with laurel; poet-laureate.
lau-rel (*'rel*), *n.* an evergreen shrub; crown or wreath of laurel: hence honor; distinction.
Laurence, Lawrence. From the Latin name *Laurentius,* formed from *laureo* "to crown with laurel." Danish, *Lorenz;* Dutch, *Laurens;* Fr., *Laurent;* Ger., *Laurenz, Lorenz* and *Laurentius;* It., *Lorenzo.*
Lauterbrunnen (*lou'ter-broon-nen*). A valley and parish in the Bernese Oberland, Switzerland, thirty-three miles southeast of Bern. It is noted for the Staubbach, Trummelbach, and other falls.
★**la-va** (*lä'vȧ* or *lȧ'vȧ,* not *lav'ȧ*), *n.* molten volcanic matter.
lav-a-to-ry (*lav'ȧ-tō-rĭ*), *n.* [*pl.* lavatories (*-rĭz*)], a place for washing; retiring room.
lave (*lāv*), *v. t.* and *v. i.* to bathe or wash.
lav-en-der (*lav'en-dĕr*), *n.* an aromatic plant.
Lavinia (*lȧ-vĭn'ĭ-ȧ*). Formed as a feminine name from *Latinus,* mythical Roman king.
lav-ish (*lav'ĭsh*), *adj.* profuse; extravagant: *v. t.* to expend or bestow with profusion; squander; waste. [EXTRAVAGANT, EXCESS.]
law (*law*), *n.* a rule of action established by authority; edict, statute, or custom; act or enactment of a legislative body; jurisprudence; judicial process; rule or axiom of science or art; established principle.
law-ful (*'fool*), *adj.* agreeable or conformable to law; just; legal.
law-less (*'les*), *adj.* not obedient to or controlled by law; not according to law.
lawn (*lawn*), *n.* a plot of grass kept closely mown; fine cambric used for the sleeves of a bishop's gown: hence the office of a bishop.
lawn-ten-nis (*'ten'ĭs*), *n.* an outdoor game played with rackets, balls, and a net.
Lawrence. See *Laurence.*
law-suit (*'sūt*), *n.* an action at law.
law-yer (*'yĕr*), *n.* one skilled in legal knowledge; one, especially a solicitor, who practices in the law-courts.
lax (*laks*), *adj.* loose; vague; weak.
lax-a-tive (*'ȧ-tĭv*), *adj.* loosening; purgative.
lay (*lā*), *v. t.* [*p. t.* and *p. p.* laid, *p. pr.* laying], to put or place; spread over; settle; calm; bring forward; impose; impute: *v. i.* to produce eggs: *n.* share of profits; a simple song: *adj.* pertaining to the people, as distinguished from the clergy; non-professional.
Syn. LAY OR TAKE HOLD OF, catch, seize, snatch, grasp, gripe. *To lay* or *take hold of* is here the generic expression; it denotes simply getting into one's possession, which is the common idea in the signification of all these terms, which differ in regard to the motion in which the action is performed; *to catch* is *to lay hold of* with an effort; *to seize* is *to lay hold of* with violence; *to snatch* is *to lay hold of* by a sudden effort. [See *put, lie.*]
lay-man (*'man*), *n.* [*pl.* laymen (*'men*)], one of the people, as distinguished from a clergyman; a non-professional man.
laz-a-ret-to (*laz-ȧ-ret'ō*), *n.* a hospital for persons suffering with infectious diseases; a ship's store-room. [Also *lazaret.*]
Lazarus (*laz'ȧ-rus*). From the Hebrew *Elazar,* "God aids," *i. e.,* whom God aids. Fr., *Lazare;* Gr., *Lazaros;* It., *Lazzaro;* Lat., *Lazarus.*
la-zy (*lā'zĭ*), *adj.* [*comp.* lazier, *superl.* laziest], idle; indolent; slothful. [IDLE.]
lea (*lē*), *n.* a meadow.
leach (*lēch*), *v. t.* to pass water through (ashes) to form lye.
lead (*led*), *n.* a soft, heavy, ductile, bluish-gray metal; a plummet for sounding depths at sea; a thin strip of type metal for separating lines: *adj.* consisting, wholly or partially, of lead: *v. t.* to furnish with lead.

lead (*lēd*), *v. t.* [*p. t.* and *p. p.* led, *p. pr.* leading], to conduct with the hand; guide or conduct; precede; allure: *v. i.* to take precedence; act as a leader; play the first card or domino: *n.* guidance; precedence; the right to play first.
Syn. LEAD, conduct, guide. One *leads* by helping a person onward in any manner, as *to lead* a child by the hand; *to conduct* and *guide* are different modes of *leading*, the former by virtue of one's office or authority, the latter by one's knowledge or power; as *to conduct* an army; *to guide* a traveler in an unknown country. [See *persuade*.]
Ant. REBUFF, repel.

lead-en (*led'n*), *adj.* made of, or colored like, lead; heavy; sluggish.

lead-er (*lēd'ĕr*), *n.* one who leads; the chief editorial article of a newspaper; tendon.

leaf (*lēf*), *n.* [*pl.* leaves (*lēvz*)], one of the thin flat parts of a plant; anything thinly beaten; part of a book containing two pages.

league (*lēg*), *n.* an alliance for mutual interests; confederacy; 3 geographical miles: *v. t.* to combine for mutual interests: *v. i.* to confederate.

leak (*lēk*), *n.* a hole which lets in water: *v. i.* to let water in or out through a hole, etc.

leak-age (*'ăj*), *n.* the state of a vessel that leaks; allowance for loss by leakage.

lean (*lēn*), *v. i.* [*p. t.* and *p. p.* leaned, leant, *p. pr.* leaning], to incline or deviate from an upright position: *v. t.* to cause to lean; rest: *adj.* thin; sterile.
Syn. LEAN, incline, bend. In the proper sense, *lean* and *incline* are both said of the position of bodies; *bend* is said of the shape of bodies; that which *leans* rests on one side, or in a sideward direction; that which *inclines*, *leans* or turns only in a slight degree; that which *bends* forms a curvature.
Ant. STAND STRAIGHT.

Leander (*lē-an'dĕr*). From the Greek *Leiandros*, translated "man of renown."

leap (*lēp*), *v. t.* [*p. t.* and *p. p.* leaped, leapt, *p. pr.* leaping], to pass over by leaping; jump or spring over: *v. i.* to jump; vault: *n.* the act of leaping; the space passed in leaping.

leap year (*yēr*), a year of 366 days, when February has 29 days; every year divisible by 4, except those divisible by 100 but not by 400.

learn (*lĕrn*), *v. t.* [*p. t.* and *p. p.* learned, learnt, *p. pr.* learning], to acquire knowledge of; fix in the mind: *v. i.* to gain or receive knowledge or skill.

learn-ing (*'ing*), *n.* skill in literature, languages, or science; knowledge acquired. [KNOWLEDGE.]

lease (*lēs*), *n.* a written contract for the letting of land or tenements for a specified number of years; period: *v. t.* to let by a written contract; take a lease of.

leash (*lēsh*), *n.* a brace and a half; three; a band by which anything is held: *v. t.* to tie or bind by a leash.

least (*lēst*), *adj.* smallest in degree, size, value, importance, etc.: *adv.* in the lowest or smallest degree.

leath-er (*leth'ĕr*), *n.* the tanned and curried skin of an animal; anything made of, or resembling, leather.

leath-ern (*'ĕrn*), *adj.* made of, or resembling, leather.

leave (*lēv*), *n.* permission granted; departure; farewell: *v. t.* [*p. t.* and *p. p.* left, *p. pr.* leaving], to depart from; forsake, abandon; bequeath: *v. i.* to depart; go away.
Syn. LEAVE, quit, relinquish. We *leave* that to which we may intend to return; we *quit* that to which we return no more; we *relinquish* it unwillingly; we *leave* persons or things; we *quit* and *relinquish* things only. [See *abandon*, *desist*.]
Ant. KEEP, cherish, retain, stay.

leav-en (*lev'n*), *v. t.* to produce fermentation in; taint; imbue: *n.* any influence working silently and strong that causes changes in things or opinions.

Leavenworth, Kan. In 1820, a fort was established at this place by the United States government under the charge of Col. Henry H. Leavenworth of the 3d U. S. regiment, and named Fort Leavenworth. About this fort a town formed to which the fort's name was applied.

lech-er-y (*lech'ĕr-i*), *n.* lustfulness; lewdness.

lec-tern (*lek'tĕrn*), *n.* the reading desk of a church.

lec-ture (*'tūr*), *n.* a formal discourse on any subject; reprimand: *v. i.* to deliver a lecture: *v. t.* to reprimand.

ledge (*lej*), *n.* a shelf; ridge; layer; edge.

ledg-er (*'ĕr*), *n.* the principal account book of a mercantile house.

leech (*lēch*), *n.* an aquatic worm furnished with a sucker, used in medicine for bleeding; formerly the name for a physician: *v. t.* to bleed with leeches.

Leech lake, Minn. Applied from the meaning of its Indian name *gahsuhgusgwah*, *chemakang*, "the place of leeches."

leek (*lēk*), *n.* a biennial plant of the onion family with a bulbous root.

leer (*lēr*), *n.* a sly, sidelong look indicative of malice, triumph, or lasciviousness: *v. i.* to look with a leer.

lee-ward (*lē'wĕrd*), *n.* in the direction toward which the wind blows: *n.* lee side.

left (*left*), *adj.* opposite to *right*: *n.* the side opposite to *right*: *p. t.* and *p. p.* of *leave*.

left-hand-ed (*'hand-ed*), *adj.* using the left hand with greater strength or dexterity than the right; awkward; malicious.

leg (*leg*), *n.* one of the limbs by which men and animals walk, especially in man the portion of the limb between the knee and the ankle.

leg-a-cy (*leg'ă-si*), *n.* [*pl.* legacies (*-siz*)], a gift by will of money or property; bequest.

le-gal (*lē'gal*), *adj.* pertaining to law; permitted or authorized by law; legitimate.

le-gal-i-ty (*lē-gal'i-ti*), *n.* conformity to law.

★**leg-ate** (*leg'āt*, not *lē'gāt*), *n.* a papal ambassador; envoy.

le-ga-tion (*lē-gā'shun*), *n.* an embassy; ambassador; the official residence of an ambassador.

leg-end (*lej'end*), *n.* a romantic story; myth; fable; inscription, as on a coin. [FICTION.]

leg-er-de-main (*-ĕr-de-mān'*), *n.* sleight of hand.

leg-gings (*leg'ingz*), *n. pl.* long gaiters.

leg-i-ble (*lej'i-bl*), *adj.* capable of being read; clear; distinct.

le-gion (*lē'jun*), *n.* a division of the ancient Roman army; a great number; host; suborder.

leg-is-late (*lej'is-lāt*), *v. i.* to make or enact a law: *v. t.* to effect by legislation.

leg-is-la-tion (*-lā'shun*), *n.* the act of making a law or laws.

le-git-i-ma-cy (*lē-jit'i-mă-si*), *n.* the state of being legitimate; lawfulness of birth.

le-git-i-mate (*'i-māt*), *adj.* lawful; born in wedlock; real; logically correct: *v. t.* to make, or sanction as, lawful; render legitimate.

leg-ume (*leg'yūm*), *n.* a two-valved seed vessel having its seeds attached to one side only, as a pea pod.

Lehigh river, Pa. Corruption of the Delaware word *lechau*, "a fork," a reference to this stream being one of the forks of the Delaware; also traceable as applied to the forked piece of land over which the Indians made a portage when coming down the river.

★**lei-sure** (*lē'zhur*), *n.* spare time: *adj.* free from business; unoccupied.

lem-on (*lem'un*), *n.* the acid fruit of *Citrus Limonum*; the color of a lemon: *adj.* pertaining to, or of the color of, a lemon.

lem-on-ade (*-ād*), *n.* a beverage of sweetened or aërated water flavored with lemon.

Lemuel (*lem'ū-el*). From the Hebrew *L'muel*, from *l'mu-El*, "by God," *i. e.*, created by God.

lend (*lend*), *v. t.* [*p. t.* and *p. p.* lent, *p. pr.* lending], to grant to another for temporary use; accommodate: *v. i.* to make a loan.

length (*length*, not *lenth*), *n.* the measure of anything from end to end; extent; duration; reach.

length-y (*'i*), *adj.* long and tiresome.

le-ni-ent (*lē'ni-ent*), *adj.* mild; merciful.

len-i-ty (*len'i-ti*), *n.* mildness; humanity. [MERCY.]

lens (*lenz*), *n.* a convex, or concave, glass, adapted for changing the direction of rays of light; the crystalline humor of the eye.

Lent (*lent*), *n.* a fast of 40 days (excluding Sundays), from Ash Wednesday to Easter eve.

Leo (*lē'ō*) or **Leon** (*lē'on*). Latin, "a lion." Fr., *Léon*; It., *Leone*; Lat., *Leo*.

Leonard (*len'ĕrd*). From the Old German name *Leonhard*, "as strong as a lion." Dutch, *Leonard*; Fr., *Léonard*; Ger., *Leonhard*; It., *Leonardo* or *Lionardo*; Lat., *Leonardus*.

le-o-nine (*lē'ō-nīn*), *adj.* like a lion; powerful; kingly.

Leonora. See *Eleanor*.

leop-ard (*lep'ĕrd*), *n.* a large catlike beast of prey, with a beautiful spotted skin.

Leopold (*lē'ō-pōld*). Wachter renders this name "bold as a lion." It is doubtless the same name as the Old German *Leopold*, *Leupold*, *Leodpold*, *Luitpold*; Fr., *Léopold*; Ger., *Leopold*; It., *Leopoldo*; Lat., *Leopoldus*.

lep-er (*lep'ĕr*), *n.* one affected with leprosy.

lep-ro-sy (*'rō-si*), *n.* [*pl.* leprosies (*-siz*)], a chronic skin disease characterized by ulcers and white scaly scabs.

le-sion (*lē'zhun*), *n.* injury; morbid change in a function or organism.

less (*les*), *adj.* (used as *comparative* of *little*), not so much; smaller: *adv.* in a smaller or lower degree: *n.* a smaller quantity: *suffix* meaning *absence of a quality*, *without*, as soul*less*, worth*less*, etc.

less-en (*'en*), *v. t.* to make less; reduce. [ABATE.]

less-er (*'ĕr*), *adj.* a double comparative of *less*.

les-son (*les'n*), *n.* that which a pupil learns, or repeats, or does, for a tutor; exercise; precept.

lest (*lest*), *conj.* that not; for fear that.

let (*let*), *v. t.* [*p. t.* and *p. p.* let, *p. pr.* letting], to permit; grant to a tenant; lease; give out on contract: *v. i.* to be hired or leased; suffer something to be done: *n.* an obstacle.

le-thal (*lē'thal*), *adj.* deadly; fatal.

le-thar-gic (*lē-thär'jik*), *adj.* affected by lethargy; sluggish; drowsy; dull.

leth-ar-gy (*leth'ar-ji*), *n.* morbid drowsiness; unnatural prolonged slumber; apathy.

Le-the (*lē'thē*). In classic mythology, the stream of forgetfulness of the underworld, whose waters, when drunk, produced loss of memory; hence oblivion forgetfulness.

Letitia (*lē-tish'i-ă* or *lē-tish'ă*) or **Lettice** (*let'tis*). A feminine name derived from Latin, *lætitia*, "joy," "gladness," "mirth," Danish, *Lætitia*; Dutch, *Lætitia*; Old Fr., *Letice*; Lat., *Lætitia*.

let-ter (*let'ĕr*), *n.* a mark or character used to represent a sound; written or printed communication; a printing type: *pl.* knowledge; erudition: *v. t.* to impress or inscribe letters upon.
Syn. LETTER, epistle. *Letter* is a term altogether familiar; it may be used for whatever is written by one friend to another; even those which were written by the ancients, as the *letters* of Cicero, Pliny, and Seneca; but in strict propriety those are entitled *epistles*, as a term most adapted to whatever has received the sanction of ages, and by the same rule, likewise, whatever is peculiarly solemn in its contents has acquired the same epithet, as the *epistles* of St. Paul.

Levant (*lē-vant'*). Levant means simply "the east," though it is generally confined in its use to the eastern parts of the Mediterranean, as the coasts of Egypt, Syria, and Asia Minor.

lev-ee (*lev'ē*), *n.* a morning reception held by a sovereign or personage of high rank; properly, one attended by gentlemen only; a river embankment: *v. t.* to embank.

lev-el (*'el*), *n.* a horizontal plane or line; surface without inequalities; an instrument for indicating a horizontal line or plane: *adj.* even; horizontal; smooth: *v. t.* to make even; point in taking aim.

lev-er (*lev'ĕr* or *lē'vēr*), *n.* a bar of metal, etc., turning on a support (fulcrum) for raising a weight.

lev-er-age (*-āj*), *n.* the mechanical power gained by using a lever; lever action.

le-vi-a-than (*lē-vī'ă-than*), *n.* a large unidentified aquatic animal; anything huge, as a whale, etc.

lev-i-ta-tion (*lev-i-tā'shun*), *n.* lightness; buoyancy.

lev-i-ty (*lev'i-ti*), *n.* lightness of disposition, conduct, etc.; inconsistency; trifling gayety; lightness of weight.

lev-y (*'i*), *v. t.* [*p. t.* and *p. p.* levied, *p. pr.* levying], to raise or collect, as an army or tax; seize in execution: *v. i.* to make a levy: *n.* the act of raising money or men; amount or number raised.

lewd (*lūd*), *adj.* licentious; libidinous.

Lewellin (*le-wel'lin*). Means "like a lion." Lat., *Leolinus*.

Lewis or **Louis** (*lōō'is*). Like the French name, *Louis*, corrupted from *Ludovicus*, from the Old German name *Ludwig*, "illustrious warrior," or the "fortress or defense of the people." Dutch, *Lodewijk*; Fr., *Louis*; Ger., *Ludwig*; It., *Luigi* or *Lodovico*, or *Ludovico*; Lat., *Ludovicus*; Sp., *Luis*; Sw., *Ludwig*.

lex-i-cog-ra-pher (*leks-i-kog'rä-fĕr*), *n.* the editor or compiler of a dictionary or lexicon.

lex-i-con (*i-kon*) *n.* A dictionary, as of Latin, Greek or Hebrew. [DICTIONARY.]

li-a-bil-i-ty (*lī-ă-bil'i-ti*), *n.* [*pl.* liabilities (*-tiz*)], the state of being liable: *pl.* debts.

li-a-ble (*'ă-bl*), *adj.* exposed to damage, danger, expense, etc.; contingently subject.

li-ar (*lī'ĕr*), *n.* one addicted to lying.

li-ba-tion (*-bā'shun*), *n.* the act of pouring wine or oil on the ground, as a sacrifice to some deity, the liquid so poured out.

li-bel (*'bel*), *n.* defamation of character or reputation: *v. t.* to publish a libel against; defame the character of; exhibit a charge against in a court of law.

lib-er-al (*lib'ĕr-al*), *adj.* generous; munificent; free from narrowness in ideas: *n.* an opponent of conservatism. [BENEFICENT, FREE.]

lib-er-al-i-ty (*-al'i-ti*), *n.* [*pl.* liberalities (*-tiz*)], the quality of being liberal; generosity; magnanimity; mental breadth.

lib-er-ate (*'ĕr-āt*), *v. t.* to set free. [ABSOLVE.]

Liberia (*lī-bē'ri-ă*). A republic on western coast of Africa. Name means "the country of the free." It was colonized by emancipated slaves.

lib-er-tine (*lib'ĕr-tin*), *n.* a debauchee: *adj.* unrestrained, morally or socially; licentious.

lib-er-ty (*'ĕr-ti*), *n.* [*pl.* liberties (*-tiz*)], freedom; special privilege or exemption; immunity. [FREEDOM.]

li-bid-i-nous (*li-bid'i-nus*), *adj.* lustful.

li-bra-ri-an (*-brā'ri-an*), *n.* the custodian of a library.

★**li-bra-ry** (*lī'brā-ri*, not *lī'bri*), *n.* [*pl.* libraries (*-riz*)], an arranged collection of books; the building where such a collection is kept.

li-bret-to (*-bret'tō*), *n.* a book containing the words of an opera, oratorio, etc.; the text itself.

li-cense (*lī'sens*), *n.* permission; leave; unrestrained liberty: *v. t.* to authorize by a legal permit.

li-cen-ti-ate (*-sen'shi-āt*), *n.* one licensed to preach or practice a profession.

li-cen-tious (*'shus*), *adj.* unrestrained, morally or legally; lascivious; dissolute.

★**li-chen** (*lī'ken* or *lich'en*), *n.* one of an order of cellular flowerless (cryptogamic) plants of fungoid nature growing parasitic on stones, algæ, etc.; a kind of skin eruption.

lick (*lik*), *v. t.* to pass the tongue over; lap up; vanquish; chastise: *v. i.* to make a licking movement: *n.* the act of licking; quick or careless stroke; superficial saline deposit.

Licking, Ky. So called from the translation of its Indian name *mahonink*, "the place of the lick," referring to buffalo licks on its banks, now the noted Blue Lick springs.

★**lic-o-rice** (*lik'o-ris*, not *lik'ō-rish*), *n.* the root or inspissated juice of the licorice plant (*Glycyrrhiza glabra*).

lid (*lid*) *n.* a movable cover closing an aperture; top; eyelid.

lie (*lī*), *v. i.* [*p. t.* lay, *p. p.* lain, *p. pr.* lying], to rest in a recumbent position; lean or press; rest or remain.
Syn. LIE, lay. *To lie* is neuter, and desig-

nates a state; *to lay* is active, and denotes an action on an object; it is properly to cause *to lie;* a thing *lies* on the table; some one *lays* it on the table.

lie (*lī*), *v. i.* [*p. t.* and *p. p.* lied, *p. pr.* lying], to utter a falsehood; represent falsely: *n.* a falsehood; willful misstatement.

lief (*lēf*), *adv.* willingly; rather.

liege (*lēj*), *adj.* bound by feudal service or tenure: *n.* a vassal; liege lord, or sovereign.

lien (*lēn* or *lē'en*), *n.* a legal claim upon property; security for payment.

lieu (*lū*), *n.* place; stead.

lieu-ten-ant (*-ten'ant*), *n.* an officer ranking next below a captain in the army and a commander in the navy; a deputy.

life (*līf*), *n.* animate existence; vitality; union of soul and body; period between birth and death.

lift (*lift*), *v. t.* to raise from the ground; elevate: *v. i.* to exert strength in raising: *n.* the act of lifting; promotion; a machine for raising or lifting.

Syn. LIFT, heave, hoist. We *lift* with or without an effort; we *heave* and *hoist* always with an effort; we *lift* a child up to let him see anything more distinctly; workmen *heave* the stones or beams which are used in a building; sailors *hoist* the longboat into the water.

Ant. ABASE, degrade, lower.

lig-a-ment (*lig'ā-ment*), *n.* a strong elastic tissue connecting the extremities of movable bones; bond or tie.

lig-a-ture (*lig'ā-tūr*), *n.* a narrow bandage or tie; two or more letters cast on one shank (*fi*, *æ*); a slur, or notes joined by a slur.

light (*līt*), *n.* the imponderable agent by which objects are rendered visible by its action on the retina; day; that which emits light: *adj.* clear; bright; not heavy; unincumbered; gay; trifling; short in weight; well leavened and raised: *v. t.* to set fire to; inflame; illuminate: *v. i.* to receive or reflect; rest or settle; fall upon by chance; happen.

Light Brigade, Charge of the. A celebrated charge made by the Light Brigade of 670 men, under Lord Cardigan, the British commander, on a Russian battery at Balaklava, October 25, 1854.

light-en (*'en*), *v. t.* to make light; illuminate; flash out; render less heavy: *v. i.* to brighten; shine out.

light-house (*'hous*), *n.* a structure furnished with a brilliant light to indicate points of danger to mariners at night.

light-ning (*'ning*), *n.* a sudden flash of electricity, usually accompanied by thunder.

lig-ne-ous (*lig'nē-us*), *adj.* woody.

lig-num-vi-tæ (*-num-vī'tē*), *n.* the very heavy hard wood of a South American tree (*Guaiacum officinale*) or of similar West Indian and Australasian trees.

like (*lik*), *adj.* similar; resembling; equal or nearly equal; disposed: *adv.* in the same manner as; probably: *v. t.* have a taste for; enjoy: *n.* a counterpart. [EQUAL, LOVE.]

lik-en (*lik'n*), *v. t.* to compare.

like-ness (*'nes*), *n.* similarity; portrait.

Syn. LIKENESS, resemblance, similarity or similitude. *Likeness* respects either external or internal properties; *resemblance* respects only the external properties; *similarity* respects the circumstances or properties; we speak of a *likeness* between two persons; of a *resemblance* in the cast of the eye; of a *similarity* in age and disposition. *Similitude* is a higher term than *similarity* when used in a moral sense.

Ant. DIFFERENCE, dissimilarity, unlikeness.

li-lac (*lī'lak*), *n.* a shrub of the genus Syringa, with pale pinkish purple flowers; a color.

Lillian. A feminine name, from the Latin *lilium*, "a lily."

Lil-li-pu-tian (*lil'i-pū'shan*), *adj.* very diminutive, from Swift's *Gulliver's Travels.* [Also *Liliputian.*]

lil-y (*lil'i*), *n.* a plant of the genus Lilium, with bulbous roots and handsome flowers: *adj.* unsullied; lily-white.

Lima (*lē'mā*, Spanish *lē'mā*), **Peru.** Probably so named from *lomnech*, "a barren spot." Taylor says it is corruption of *Rimac*, the Indian name of the plain on which the city stands.

limb (*lim*), *n.* a jointed or articulated part of an animal body; branch of a tree; leg: *v. t.* to dismember.

lim-ber (*'bēr*), *n.* the detachable forepart of a gun carriage: *adj.* pliant: *v. t.* to attach a limber to (a gun carriage); make pliant.

lime (*lim*), *n.* a calcareous earth obtained by the action of heat upon limestone; bird lime; a tree of the orange kind yielding an edible juicy fruit; the linden tree: *v. t.* to supply lime to.

lime-light (*'līt*), *n.* a brilliant light produced by the action of lighted hydrogen and oxygen upon lime.

lim-er-ick (*lim'ēr-ik*), *n.* a jocose, usually punning, verse of five lines, the first, second and fifth lines of which rhyme.

lime-stone (*lim'stōn*), *n.* a rock having carbonate of lime as its basis.

lim-it (*lim'it*), *n.* a border or boundary; utmost extent: *v. t.* restrict. [BOUND, FINITE.]

lim-i-ta-tion (*-i-tā'shun*), *n.* restriction.

limn (*lim*), *v. t.* to paint or draw; illuminate, as books and manuscripts.

Limoges (*lē-mōzh'*). A city of east central France; so called from Lat., *Lemovicum*, "the dwelling of the Lemovici," or "dwellers among the elms."

li-mou-sine (*lē-mōō-zēn'*) *adj.* designating a type of motor car having a landau-like carriage body, but with the top projecting over the driver's seat: *n.* a motor car with a limousine body.

limp (*limp*), *adj.* flexible; flaccid: *n.* a halt in walking: *v. i.* to walk with a halt.

Lina. A feminine name derived from some name ending in *lina*, as *Carolina*, *Catalina*, *Paulina*; and perhaps sometimes from the Italian name *Madalena*, or the Spanish *Madelena*.

linch-pin (*linch'pin*), *n.* the pin which goes through the end of the axle of a wheel, and keeps it in its place.

Lincoln, Neb. At the time it was made the capital city it received the name Lincoln as a compliment to President Abraham Lincoln, having been previously named *Lancaster*.

Lincoln's Inn Fields. The largest square in London. It is near the junction of High Holborn and Chancery lane, and is surrounded by lawyers' offices, Lincoln's Inn, the Royal College of Surgeons and the Soane museum.

Linda. A feminine name, abbreviated from *Belinda*.

lin-den (*lin'den*), *n.* a tree with heart-shaped leaves, and small clusters of cream-colored flowers.

line (*līn*), *n.* length without breadth; a slender string or cord; fishing line; extended row; 1-12th of an inch; short letter; mark in the hand or face; descent: *v. t.* to draw lines upon; place along side by side; cover on the inside.

lin-e-age (*lin'ē-āj*), *n.* ancestral line of descent from a common progenitor; family.

lin-e-al (*'ē-al*), *adj.* composed of lines; in direct line from an ancestor.

lin-e-a-ment (*'ē-ā-ment*), *n.* feature; outline.

lin-e-ar (*'ē-ēr*), *adj.* pertaining to, or composed of, lines; having a straight direction.

lin-en (*'en*), *n.* a cloth made of flax; articles made of linen: *adj.* made of, or resembling, linen.

lin-ger (*ling'gēr*), *v. i.* to loiter.

Syn. LINGER, tarry, loiter, lag, saunter. *To linger* is to stop altogether, or to move but slowly forward; *to tarry* is properly to suspend one's movements; the former proceeds from reluctance to leave the spot on which we stand; the latter from motives of discretion; *to loiter* is to move slowly and reluctantly; *to lag* is to move slower than others; *to saunter* is altogether the act of an idler; those who have no object in moving either backward or forward will *saunter* if they move at all.

Ant. HASTEN, hurry, quicken, speed.

lin-go (*ling'gō*), *n.* language; dialect.

lin-gual (*'gwal*), *adj.* pertaining to, or formed by, the tongue: *n.* a letter, or sound, so articulated, as *s*, *th*, etc.

lin-i-ment (*lin'i-ment*), *n.* a medicated liquid for rubbing into the skin.

lin-ing (*līn'ing*), *n.* an inside covering; contents.

link (*lingk*), *n.* a single ring or division of a chain; a land measure 7.92 inches; connection: *pl.* flat sandy soil; golfing grounds; *v. t.* to connect by, or as by, a link: *v. i.* to be connected.

li-no-leum (*li-nō'lē-um*), *n.* a floor cloth composed of ground cork, linseed oil, and chloride of sulphur.

lin-o-type (*lin'ō-tīp*), *n.* a machine for composing and casting stereotyped words or lines for printing.

lin-seed (*lin'sēd*), *n.* the seed of flax, from which *linseed oil* is expressed.

lint (*lint*), *n.* scraped linen used for dressing wounds.

lin-tel (*lin'tel*), *n.* the horizontal top piece of a door or window.

li-on (*lī'un*), *n.* a large, powerful carnivorous mammal of the genus Felis, found in Africa and southern Asia: *pl.* noted persons or places: *adj.* (in composition) noble; majestic; courageous.

Lionardo. Same as *Leonardo*. [See *Leonard*.]

Lionel (*lī'ō-nel*). A name formed from a word, *leonellus*, a diminutive of the Latin *leo*, "a lion."

Lion of Lucerne (*lī'un ov lōō-sērn'*). A famous piece of sculpture, by Thorwaldsen, commemorating the heroism and devotion of nearly 800 Swiss guards who died to save Louis XVI., in the attack on the Tuileries, August 10, 1792. The colossal figure of the crouching lion, transfixed and dying but still faithfully defending the lilied shield of France, is carved in the round in a recess in the face of an upright, vine-draped rock, in a little park in Lucerne, Switzerland.

lip (*lip*), *n.* one of the two borders of the mouth; edge of anything; mouth; lip-like organ; speech: *v. t.* to touch with the lips; kiss; utter.

liq-ue-fac-tion (*lik-wē-fak'shun*), *n.* the process of liquefying; state of being melted.

liq-ue-fy (*'wē-fī*), *v. t.* to melt or make liquid: *v. i.* to become liquid.

liq-uid (*lik'wid*), *adj.* clear; tearful; not solid; readily flowing: *n.* liquid substance; one of the consonants *l*, *m*, *n*, *r*.

liq-ui-date (*'wi-dāt*), *v. t.* to pay off as a debt; arrange, as the affairs of a bankrupt.

liq-uor (*lik'ēr*), *n.* an alcoholic beverage; a liquid: *v. t.* to treat with a solution: *v. i.* to take intoxicating drinks. [*Slang.*]

Lisbon (*liz-bun*). The capital of Portugal. In Portuguese, *Lisboa*, is derived from the old name *Olisipo*, supposed to contain the Phenician word *hippo*, a "fortress," or "walled town."

lisle (*īl*), *n.* a fine thread or lace.

lisp (*lisp*), *v. i.* to pronounce *s* and *z* nearly like *th*; speak: *v. t.* to utter imperfectly or affectedly: *n.* the imperfect utterance of *s* and *z*.

lis-som (*lis'um*), *n.* supple; lithesome.

list (*list*), *n.* a catalogue, roll, or register; inclination to one side; small square molding: *pl.* an inclosure for a tournament: *v. t.* to catalogue, register, or enroll; cover with strips of cloth; sew together; cause to tilt over to one side; listen to: *v. i.* to enlist; choose; careen; hearken.

lis-ten (*lis'n*), *v. i.* to attend to closely, so as to hear; hearken.

list-less (*list'les*), *adj.* indifferent; languid. [ABSTRACTED, FAINT.]

lit-a-ny (*lit'ā-ni*), *n.* a solemn responsive form of supplication.

li-ter (*lē't ēr*), *n.* [Fr.] in the metric system, a measure of capacity equal to 61.026 cubic inches, or a little more than one quart.

lit-er-al (*lit'ēr-al*), *adj.* consisting of, or expressed by, letters; following the exact words; exact; plain.

lit-er-a-ry (*'ēr-ā-ri*), *adj.* pertaining to, or appropriate to, literature or men of letters; versed in, or engaged in, literature.

lit-e-ra-ti (*lit-e-rā'ti*), *n. pl.* the learned.

★**lit-er-a-ture** (*'ēr-ā-tūr*), *n.* the written or printed literary productions of a country or period; literary work; learning.

lithe (*līth*), *adj.* supple; pliant.

lithe-some (*'sum*), *adj.* nimble; lissom.

lith-o-graph (*lith'ō-grāf*), *n.* a print reproduced from a drawing on stone: *v. t.* to draw, or engrave on stone, and transfer to paper.

lith-og-ra-phy (*-og'ra-fi*), *n.* the art of making a design on stone so that ink impressions can be taken from it.

lit-i-gate (*lit'i-gāt*), *v. t.* to contest in a court of law: *v. i.* to engage in a lawsuit.

li-ti-gious (*li-tij'us*), *adj.* given to carrying on lawsuits; quarrelsome.

lit-mus (*lit'mus*), *n.* a purple dye, obtained from certain lichens.

lit-ter (*lit'ēr*), *n.* straw, hay, etc., used for horses' bedding; a framework with a bed, for carrying a person in a recumbent position; state of confusion or untidiness; number of young produced at one birth, as pigs, etc.: *v. t.* to supply with litter; cover with straw; scatter about carelessly: *v. i.* to bring forth a litter of young.

lit-te-ra-teur (*lē-tā-rā-tēr'*), *n.* a literary man.

lit-tle (*lit'l*), *adj.* [*comp.* less, *superl.* least], small in size, quantity, duration, or importance; insignificant; young; mean: *adv.* in a small degree; not much: *n.* a small size, quantity, etc.

Syn. LITTLE, small, diminutive. What is *little* is so in the ordinary sense in respect to size; it is properly opposed to great; the *small* is that which is less than others in point of bulk; it is opposed to the large; the *diminutive* is that which is less than it ought to be; as a person is said to be *diminutive* in stature who is below the ordinary stature.

Ant. GREAT, large, broad, noble.

Little Rock, Ark. Name a local application from the town's occupying the top of a rocky cliff, which is much more conspicuous than the other cliffs of the river bank; also traceable from an igneous slate rock in the river bed at this point, visible only at low stages of the water.

li-tur-gic (*li-tēr'jik*), *adj.* pertaining to a liturgy. [Also *liturgical.*]

lit-ur-gy (*lit'ēr-ji*), *n.* [*pl.* liturgies (*-jiz*)], the prescribed forms or ritual for public worship.

live (*liv*), *v. t.* to exist or have life; pass or enjoy life; reside; endure; subsist: *adj.* (*līv*) having life; quick; effective; ignited; kept for use; energetic. [ABIDE.]

live-li-hood (*liv'li-hood*), *n.* means of living.

live-ly (*'li*), *adj.* active; brisk; animated; sprightly; vivid; forcible. [ACTIVE.]

live-oak (*'ōk*), *n.* an American oak valuable for shipbuilding.

liv-er (*liv'ēr*) *n.* one who lives; a glandular organ secreting bile.

liv-er-y (*'ēr-i*), *n.* [*pl.* liveries (*-iz*)], a particular costume worn by servants; the state of being kept and fed at a stipulated rate, as horses.

Livia (*liv'i-ā*). From the Roman *Livia*. Fr., *Livie;* It., *Livia;* Lat., *Livia*.

liv-id (*'id*), *adj.* black and blue; discolored as by a blow; ashy pale.

liz-ard (*liz'ērd*), *n.* a reptile having a slender scaly body, and four well-developed limbs, each with five toes.

Llano Estacado (*lä'nō ās-tä-kä'dō*). An elevated plateau in northwest Texas and New Mexico. Spanish words, meaning "staked plain," applied to this plateau on account of the stake-like boles of the yucca plant which grows there.

lla-nos (*'nōz*), *n. pl.* the extensive level grassy plains or steppes of South America.

Llewellyn (*lū-el'lin*). From the Celtic, meaning "lightning."

Lloyd's (*loidz*). A London underwriters' association for the furtherance of commerce, especially for marine insurance and the publication of shipping news. It originated in meetings at Lloyd's coffee house about 1688.

lo (*lō*), *interj.* behold! see!

load (*lōd*), *v. t.* to put on as much as can be carried, charge, as a gun: *n.* a burden; weight; freight; incumbrance. [WEIGHT.]

load-stone (*'stōn*), *n.* magnetic oxide of iron; magnet. [Also *lodestone.*]

loaf (*lōf*), *v. i.* to idle away time: *n.* [*pl.* loaves (*lōvz*)], a large cake of bread.

loam (*lōm*), *n.* rich vegetable mold, mixed with clay and sand: *v. t.* to cover with loam.

loan (*lōn*), *n.* a sum of money lent for a period, repayable with interest; something granted for temporary use: *v. i.* to lend money.

loath (*lōth*), *adj.* unwilling; reluctant.

loathe (*lōth*), *v. t.* to regard with abhorrence or disgust; detest: *v. i.* to feel nausea. [ABHOR, DISGUST.]

lob-by (*lob'i*), *n.* [*pl.* lobbies (*'iz*)], a small hall or waiting room; passage opening before an apartment; that part of the hall of a legislative chamber to which the public have access: *v. i.* [*p. t.* and *p. p.* lobbied, *p. pr.* lobbying], to solicit the votes of members of a legislature to carry a particular measure.

lob-by-ist (*-ist*), *n.* a person not a member who tries to influence the votes of members of a legislative body.

lobe (*lōb*), *n.* any rounded and projecting part; a subdivision of an organ.

lob-ster (*lob'stĕr*), *n.* an edible marine decapod crustacean.

lo-cal (*lō'kal*), *adj.* pertaining to place; restricted to a particular place: *n.* a newspaper paragraph of local interest; a suburban train.

lo-cal-i-ty (*-kal'i-ti*), *n.* [*pl.* localities (*-tiz*)], existence in, or limitation to, a place; position.

lo-cal op-tion (*op'shun*), the restriction of the sale of intoxicating liquors by the majority of the voters of a district.

lo-cate (*lō'kāt*), *v. t.* to place; establish; mark out and determine the position of: *v. i.* to settle.

lo-ca-tion (*-kā'shun*), *n.* place; plot of ground marked out by boundaries.

lock (*lok*), *n.* a mechanical device furnished with a spring and bolt for fastening a door; tress: *v. t.* to fasten or secure with a lock; shut up: *v. i.* to become fast by a lock.

lock-et (*'et*), *n.* a small gold or silver case attached to a necklace or chain.

lock-jaw (*'jaw*), *n.* a spasmodic disease by which the lower jaw is drawn up and becomes fixed; tetanus.

lock-out (*'out*), *n.* the exclusion of workmen from a factory by an employer to compel them to accept his terms: *v. t.* to close a factory against.

lock-up (*'up*), *n.* a temporary prison; calaboose; jail.

lo-co-mo-tion (*lō-kō-mō'shun*), *n.* the act or power of moving from place to place.

lo-co-mo-tive (*'tiv*), *adj.* pertaining to locomotion; not stationary: *n.* a steam engine for drawing railway cars.

lo-cust (*'kust*), *n.* a migratory and destructive winged insect resembling the grasshopper; a tree of the bean family.

lo-cu-tion (*-kū'shun*), *n.* speech; phrase.

lode (*lōd*), *n.* a vein containing metallic ore.

lodge (*loj*), *v. t.* to furnish with a temporary dwelling: *v. i.* to reside for a time; be deposited or fixed: *n.* a small house in a park; hut of an American Indian.

Lodovico or **Lodovic.** See *Lewis.*

loft (*loft*), *n.* a room directly beneath a roof.

loft-y (*'i*), *adj.* [*comp.* loftier, *superl.* loftiest], very high; proud; stately; sublime. [HIGH.]

log (*log*), *n.* an undressed piece of timber; a log-book: *v. t.* to enter in a log-book.

log-a-rithm (*'ä-rithm*), *n.* the exponent of the power to which a fixed number (the base) must be raised in order to produce a given number.

log-book (*'book*), *n.* a ship's diary, or journal, recording the progress of a vessel.

log-ger-head (*'ĕr-hed*), *n.* a blockhead; dolt.

★**log-gia** (*lod'jä*), *n.* a covered gallery or portico.

log-ic (*loj'ik*), *n.* the science of correct reasoning, especially of inference.

log-ic-al (*loj'i-kal*), *adj.* pertaining to, or used in, logic; according to the rules of logic.

lo-gi-cian (*lō-jish'un*), *n.* one skilled in logic.

lo-gis-tics (*-jis'tiks*), *n. pl.* sexagesimal arithmetic; the science of moving and supplying armies.

log-rol-ling (*log'rōl-ing*), *n.* the act of rolling logs; united action in carrying legislative schemes for mutual benefit.

loin (*loin*), *n.* the lower part of the back of a quadruped or man: *pl.* the reins.

loi-ter (*loi'tĕr*), *v. t.* to hide (with *away*): *v. i.* to spend time idly; delay; linger. [LINGER.]

loll (*lol*), *v. i.* to lounge at ease; hang out the tongue.

Lombard (*lom'bärd*) **street.** The name of a street in the city of London, often used figuratively to mean the banking or financial world.

Lombardy (*lom'bär-di*). The country of the *Longobardi*, so called from their long beards. A territorial division of northern Italy.

London. The origin of this name cannot be ascertained with any certainty. Its most probable derivation is from *Llyn-Din*, the "town on the lake." The capital of England.

lone (*lōn*), *adj.* solitary; retired; by one's self; unmarried or in widowhood.

lone-ly (*'li*), *adj.* [*comp.* lonelier, *superl.* loneliest], deserted; solitary; unfrequented.

lone-some (*'sum*), *adj.* secluded from society; depressed; unfrequented; drearily solitary.

long (*lông*), *adj.* not short; extended in time, or length: *adv.* to a great length or period: *v. i.* to desire eagerly. [DESIRE, EAGER.]

★**lon-gev-i-ty** (*lon-jev'i-ti*), *n.* extended age.

long-hand (*lông'hand*), *n.* ordinary handwriting, as distinguished from *shorthand.*

Long island, N. Y. Name applied by the Dutch in reference to its long and narrow conformation, *Lange Eylandt.*

Long island sound. The arm of the Atlantic separating Long island from the mainland.

lon-gi-tude (*lon'ji-tūd*), *n.* distance east and west on the earth's surface measured from a meridian or place, estimated in degrees; on the ecliptic, distance in degrees from the vernal equinox.

look (*look*), *v. i.* to direct the eye to anything, in order to view it; direct the mind or attention to; appear: *v. t.* to turn the eyes upon: *n.* the act of looking; mien; aspect.

Syn. LOOK, glance, appear. We speak of taking a *look*, or catching a *glance; appearance* implies the simple act of coming into sight.

Lookout, Cape, N. C. Name traceable to coast captains, who, when this land was seen, were to be on the "lookout" for the stormy Cape Hatteras and its long shoals.

loom (*lōōm*), *n.* a frame or machine for weaving cloth.

loon (*lōōn*), *n.* the great northern diver.

loon-y (*'i*), *adj.* crazed.

loop (*lōōp*), *n.* a folding or doubling of string, rope, etc.

loop-hole (*'hōl*), *n.* a narrow aperture for observation or defense; means of evasion.

loose (*lōōs*), *adj.* not fast; unbound; not fixed; not tight: *v. t.* to set free; unbind; disengage; relax. [SLACK.]

loos-en (*lōōs'n*), *v. t.* to free from tightness, restraint, or tension.

loot (*lōōt*), *v. t.* to pillage or plunder, especially a captured city: *n.* booty thus taken.

lop (*lop*), *v. t.* to cut off (a part of anything), especially branches of a tree: *v. i.* to hang down.

lop-sid-ed (*'sid-ed*), *adj.* heavier on one side.

lo-qua-cious (*lō-kwā'shus*), *adj.* talkative.

lo-quac-i-ty (*-kwas'i-ti*), *n.* talkativeness.

Lora. A form of *Laura*, which occurs as early as 1208.

lord (*lôrd*), *n.* a ruler or governor; master; a baron in the British peerage: *v. t.* to invest with authority: *v. i.* to domineer. [IMPERIOUS.]

lore (*lôr*), *n.* learning; instruction; space between the eye and bill of a bird.

Lorenz or **Lorenzo.** See *Laurence.*

Loretta. A diminutive of *Lora.*

★**lor-gnette** (*lôr-nyet'*), *n.* a long-handled opera glass; a pair of eyeglasses fixed to a long handle, into which they shut.

lorn (*lôrn*), *adj.* forsaken; forlorn.

Los Angeles (*lōs an'jel-ez*, Spanish *lōs äng'hel-es*). A city and county of southern California. Originally called by the Spaniards *Pueblo de la Reina de los Angeles* (the town of the queen of the angels), hence *Los Angeles*, "the angels."

lose (*lōōz*), *v. t.* to be deprived of; cease to have in possession: *v. i.* to fail of success; yield.

Syn. LOSE, miss. What is *lost* is supposed to be entirely and irrecoverably gone; but what is *missed* may be only out of sight or not at hand at the time when it is wanted.

Ant. ADVANTAGE, gain, profit.

loss (*lôs*), *n.* detriment; injury; privation; failure; defeat; that which is lost.

lot (*lot*), *n.* fortune; destiny; portion or parcel: *v. t.* to separate into lots; assign; catalogue. [DESTINY.]

lo-tion (*lō'shun*), *n.* a medicated fluid for outward application.

lot-ter-y (*lot'ĕr-i*), *n.* [*pl.* lotteries (*-iz*)], a distribution of prizes by chance; drawing of lots.

Lotty. A feminine name corrupted from *Charlotte.*

lo-tus (*lō'tus*), *n.* a flower of a genus of the waterlily family, especially the sacred lotus of the ancient Nile.

loud (*loud*), *adj.* high or full sounding; noisy; ostentatious in dress or manner.

Louis. See *Lewis.*

Louisa (*lōō-ē'zä*). A comparatively modern name formed from *Lewis.* Fr., *Louise*; Ger., *Luise*; It. *Luigia*; Lat., *Luisa*; Sp., *Luisa*; Sw., *Ludovika.*

Louise (*lōō-ēz'*). See *Louisa.*

Louisiana (*lōō-ē-zē-ä'nä*, not *lōō-ē-zē-an'ä*). Named by La Salle in honor of Louis XIV., king of France. One of the gulf states of the United States.

Louisville (*lōō'i-vil, lōō'is-vil*), **Ky.** Name given by act of the Virginian legislature in 1780, in honor of Louis XVI. of France, then assisting the American colonies in their revolutionary struggle.

lounge (*lounj*), *v. i.* to saunter about in a lazy manner; loll.

louse (*lous*), *n.* [*pl.* lice (*līs*)], a parasitic insect of various species, especially those of the genus Pediculus, parasitic on man.

lout (*lout*), *n.* an awkward fellow.

Louvre (*lōō'vr*). A castle, in Paris, of the kings of France from or before the thirteenth century, and the chief royal palace until Louis XIV. built Versailles. A great part of the interior has been occupied since 1793 by the famous museum, and successive governments have employed the best artists at their command for its decoration.

lov-a-ble (*luv'ä-bl*), *adj.* worthy of love.

love (*luv*), *n.* a strong feeling of affection, especially to one of the opposite sex: *v. t.* to regard with strong affection: *v. i.* to be in love; have strong affection.

Syn. LOVE, affection, attachment, attraction, charity, devotion, fondness, friendship, liking, regard, tenderness. *Affection* is kindly feeling, deep, tender, and constant, going out to some person or object. *Love* is an intense and absorbing emotion, drawing one toward a person or object; it is the yearning or outgoing of soul toward something that is regarded as excellent, beautiful, or desirable; *love* may be briefly defined as strong and absorbing *affection* for, and *attraction* toward, a person or object. *Charity* has so far swung aside from this original meaning that probably it never can be recalled; *love* is more intense, absorbing, and tender than *friendship; love* normally leads to marriage, and subsists throughout all happy wedded life. *Love* can never properly denote mere animal passion; *love* of articles of food is better expressed by *liking*, as *love*, in its full sense, expresses something spiritual and reciprocal, such as can have no place in connection with objects that minister merely to the senses. [See *admire.*]

love-feast (*luv'fēst*), *n.* a religious feast of the nature of the Agape.

love-ly (*'li*), *adj.* exciting love or admiration; amiable; beautiful: *adv.* so as to inspire love or admiration.

low (*lō*), *adj.* not high; depressed; shallow; not noisy; subdued: *adv.* not on high; deeply; softly: *v. i.* o bellow like cattle.

low church (*chûrch*), pertaining to the evangelical section of the English church, or to its doctrines.

Lowell (*lō'el*), **Mass.** Named from Francis Cabot Lowell of Boston, who was distinguished by his successful effort in introducing the cotton manufacture into the states. Indian name of locality, *Wamasit.*

low-er (*'ĕr*), *v. t.* to lessen or bring down: *v. i.* to become lower; sink; (*lou'er*) to appear dark, gloomy, or threatening. [ABASE].

low-er-most (*lō'ĕr-mōst*), *adj.* lowest.

low-ing (*'ing*), *n.* the bellow of cattle.

low-land (*'land*), *adj.* pertaining to a low or level country: *n. pl.* a level country.

low-li-ness (*'li-nes*), *n.* the state of being lowly.

low-ly (*'li*), *adj.* [*comp.* lowlier, *superl.* lowliest], low in rank or size; humble; modest.

loy-al (*loi'al*), *adj.* faithful in allegiance to one's sovereign or country; true to plighted faith or duty.

loy-al-ist (*-ist*), *n.* one who adheres to and supports the authority of his sovereign or country.

loz-enge (*loz'enj*), *n.* an oblique-angled parallelogram; a rhomb; a sweetmeat.

lub-ber (*lub' ĕr*), *n.* an awkward, clumsy fellow; a raw sailor.

lu-bri-cate (*lū'bri-kāt*), *v. t.* to make smooth or slippery.

Lucerne (*lōō-sĕrn'*). A canton of Switzerland. Named from a lighthouse or beacon, *lucerna*, formerly placed on a tower in the middle of the river Rheus.

Lucian (*lū'shi-an* or *lū'shan*). From the Latin, meaning "light." Fr., *Lucien*; It., *Luciano*; Lat., *Lucianus.*

lu-cid (*'sid*), *adj.* clear; readily understood; shining; transparent. [CLEAR.]

lu-ci-fer, (*'si-fĕr*), *n.* a match ignited by friction.

Lucifer. Venus, as the morning star; Satan.

Lucile (*lū-sēl'*). A feminine name formed from *Lucilius*, name of the celebrated Roman satirist; derived, no doubt, from *Lucius.*

Lucius (*lū'shi-us*). The Roman name is said to be derived from *lux, lucis*, "light." Fr., *Luce* or *Lucius*; Ger., *Lucius*; It., *Lucio*; Lat., *Lucius.*

luck (*luk*), *n.* casual event or accident; fortune, either good or bad; success.

Lucknow (*lūk'nou*, commonly *luk'nō*). A division and city of British East India. From the native name *laksneanau'i*, "the fortunate."

luck-y (*'i*), *adj.* [*comp.* luckier, *superl*, luckiest], having good luck or fortune; successful; auspicious.

lu-cra-tive (*lū'krā-tiv*), *adj.* profitable.

Lucretia (*lū-krē'shi-ä*), or **Lucrece** (*lū'krēs*). A name derived from *Lucretia*, a celebrated Roman lady, daughter of Lucretius, and wife of Tarquinius Collatinus.

Lucy or **Lucie** (*lū'si*). The feminine of *Lucius.* Dutch, *Lucie*; Fr., *Lucie*; Ger., *Lucie*; It., *Lucia*; Lat., *Lucia*; Sp., *Lucia.*

lu-di-crous (*'di-krus*). *adj.* exciting mirth; comical; droll. [ABSURD.]

Ludovico or **Ludivicus.** See *Lewis.*

Ludwig. See *Lewis.*

luff (*luf*), *n.* the act of sailing close to the wind; luff-tackle: *v. i.* to steer nearer to the wind.

lug (*lug*), *v. t.* to pull or draw along: *v. i.* to drag move heavily; pull laboriously.

lug-gage (*'äj*), *n.* effects of a traveler; baggage.

lu-gu-bri-ous (*lū-gū'bri-us*), *adj.* mournful.

Luigi. See *Lewis.*

Luise. See *Louisa.*

Luke. From the Latin name *Lucas*, meaning a "light." Some maintain that the original name was *Lucius.* Danish, *Lucas*; Dutch, *Lucas*; Fr., *Luc*; Ger., *Lucas*; Hung., *Lucats*; It., *Luca*; Lat., *Lucas*; Sw., *Lucas.*

luke-warm (*lūk' ärm*), *adj.* moderately warm.

lull (*lul*), *v. t.* to soothe to sleep; quiet: *v. i.* to become calm: *n.* abatement; temporary calm.

lull-a-by (*'ä-bī*), *n.* [*pl.* lullabies (*-biz*)], a cradle-song.

lum-ba-go (*lum-bā'gō*), *n.* rheumatism of the muscles of the loins.

lum-ber (*'bĕr*), *n.* rubbish; forest timber sawed for market: *v. i.* to cut down timber and prepare it for market.

lu-mi-na-ry (*lū'mi-nä-ri*), *n.* [*pl.* luminaries (*-riz*)], a body emitting light, especially a heavenly body

lu-mi-nous (*lū'mi-nus*), *adj.* emitting or radiating light; bright; clear; perspicuous.

lump (*lump*), *n.* a small shapeless mass; aggregate; gross; a swelling: *v. t.* to throw or unite in the gross.

lu-na-cy (*lū'nā-si*), *n.* [*pl.* lunacies (*-siz*)], mental unsoundness: *adj.* pertaining to lunacy, or to lunatics.

lu-nar (*'nēr*), *adj.* pertaining to, measured by, or influenced by, the moon: *n.* lunar distance.

lu-na-tic (*'nā-tik*), *adj.* affected with, or characteristic of, lunacy: *n.* one who is insane.

lunch (*lunch*), *n.* a light meal between breakfast and dinner. [Also *luncheon*.] *v. i.* to take lunch.

lung (*lung*), *n.* one of two organs of respiration in air-breathing vertebrates.

lunge (*lunj*), *n.* a sudden thrust or pass with the sword; sudden lurch: *v. i.* to make a lunge.

lurch (*lêrch*), *n.* a sudden roll to one side, as of a ship; tendency: *v. i.* to roll suddenly to the one side.

lure (*lūr*), *v. t.* to allure: *n.* anything used as an enticement; bait.

lur-id (*'id*), *adj.* grayish-orange; wan; ghastly; pale; gloomy.

lurk (*lêrk*), *v. i.* to lie in wait; be concealed.

lus-cious (*lush'us*), *adj.* sweet to excess; delightful to the taste or sense; fulsome.

lush (*lush*), *adj.* rich and juicy: *n.* intoxicating drink.

lust (*lust*), *n.* strong desire to possess or enjoy; concupiscence: *v. i.* to desire strongly; have inordinate desires (with *after*).

lus-ter (*lus'têr*), *n.* brightness; splendor; brilliancy of reflected light; renown.

lus-tral (*lus'tral*), *adj.* pertaining to, or used in, purification.

lust-y (*'i*), *adj.* [*comp.* lustier, *superl.* lustiest], robust; vigorous; healthy.

lute (*lūt*), *n.* a stringed musical instrument of the guitar family.

Lu-ther-an (*lōō'thêr-an*), *adj.* pertaining to Luther, the German reformer, or to the Lutheran church and its doctrines: *n.* a member of the Lutheran church.

Luxembourg (*luks'em-bûrg*, Dutch *lüks'em-burg*), **Palace of the.** A palace in Paris, built by Debrosse (1615-20) for Maria de' Medici.

Luxor (*luks'ôr, lōōks'ôr*). From *El-Kasur*, "the palaces." A village in upper Egypt, situated on the Nile, on part of the site of the ancient Thebes. It is celebrated for its antiquities.

lux-u-ri-ant (*lugz-ū'ri-ant*), *adj.* characterized by luxuriance; superabundant; superfluous. [EXUBERANT.]

lux-u-ri-ate (*'ri-āt*), *v. i.* to grow exuberantly; live luxuriously; indulge unrestrainedly.

lux-u-ri-ous (*'ri-us*), *adj.* pertaining to luxury; indulging in, or administering to, luxury.

lux-u-ry (*luk'shū-ri*), *n.* extravagant indulgence in the pleasures of the senses, dress, etc.

ly-ce-um (*lī-sē'um*), *n.* a literary seminary; an academy; a literary association.

Lycoming (*lī-kom'ing*) **river, Pa.** Adaptation of the Indian name *legaui-hanne*, *i. e.*, "sandy stream."

Lydia (*lid'i-ā*). A Latin name mentioned in *Horace;* so called as coming from *Lydia*, in Asia Minor. Danish, *Lydia;* Dutch, *Lydia;* Fr., *Lydie;* Gr., *Ludia;* It., *Lidia;* Lat., *Lydia.*

lye (*lī*), *n.* an alkaline solution.

ly-ing-in (*lī-ing-in'*), *adj.* pertaining to childbirth: *n.* parturition.

lymph (*limf*), *n.* a colorless alkaline nutritive fluid in animal bodies.

lynch (*linch*), *v. t.* to judge and punish by lynch law.

Lynchburg, Va. From the origina patentee, John Lynch, brother of Charles Lynch, the reputed originator of what is known as "lynch law."

lynch law. The practice of punishing men for crimes or offenses by private, unauthorized persons, without a legal trial.

Lynn, Mass. So called from an English town of the same name. The Anglo-Saxon meant, originally, "deep pool."

lynx (*links*), *n.* a fierce catlike animal, proverbial for its keenness of sight.

lyre (*līr*), *n.* a musical instrument of the harp kind.

lyr-ic (*lir'ik*), *adj.* pertaining to, or adapted to singing to, a lyre: *n.* a lyric composition.

M

Mabel, Mabell (*mā'bel*). A feminine name derived from *Mabilia*, Latinized from *Amabel*, a corruption of the French *animable*, "lovely." Lat., *Mabilia*, or *Amabilis*.

mac-ad-am-ize (*mak-ad'am-īz*), *v. t.* to cover (a road) with small broken stone, so as to form a smooth hard, rounded, surface.

Macao (*mā-kā'ō, mā-kon'*). A Portuguese city in China. Anciently there was a temple here sacred to an idol named Ama.

mac-a-ro-ni (*mak-ā-rō'ni*), *n.* a paste composed chiefly of fine flour and made into long thin tubes.

mac-a-roon (*-rōōn'*), *n.* a small cake made of flour, eggs, almonds, and sugar.

mace (*mās*), *n.* a massive staff usually surmounted with a crown; a heavy billiard cue.

mac-er-ate (*mas'êr-āt*), *v. t.* to soften or separate the parts of by steeping in a fluid; mortify or harass.

Mach-i-a-vel-ian (*mak-i-ā-vel'yan*), *adj.* crafty; double-dealing: *n.* a cunning, unprincipled politician.

mach-i-na-tion (*mak-i-nā'shun*), *n.* a plot; artifice.

ma-chine (*mā-shēn'*), *n.* any contrivance to increase and regulate motive power; an engine.

ma-chin-ist (*'ist*), *n.* a constructor of machines; one skilled in the principles of machinery.

★**mack-er-el** (*mak'êr-el*, not *mak'rel*), *n.* an edible marine fish, mottled with green and blue.

Mackinac. County in Michigan and town in same county. Name derived from the Indian word *michilimackinac*, meaning "island of the great turtle," or in other dialects, "island of the giant fairies."

Mackinaw straits. Strait connecting Lakes Michigan and Huron. Name has same origin as *Mackinac.*

mack-in-tosh (*mak'in-tosh*), *n.* an india-rubber waterproof overcoat.

Macon (*mā'kun*), **Ga.** Named in honor of Hon. Nathaniel Macon of North Carolina.

mad (*mad*), *adj.* [*comp.* madder, *superl.* maddest], mentally disordered or distracted; insane.

Madagascar. Properly *Malagasy*, the "island of the Malagese," because the natives belong to the Malay race. An island east of southern Africa.

mad-am (*mad'am*), *n.* [*pl.* mesdames (*mā-dām'*)], a complimentary title, or form of courteous address to a lady.

mad-den (*'n*), *v. t.* to make mad or furious: *v. i.* to become mad or furious.

ma-dei-ra (*mā-dē'rā*), *n.* a rich wine made in the island of Madeira.

Madeira (Port. *mā-dā'ē-rā*). A Portuguese term signifying "timber"; indicating that the island was formerly covered by an immense forest. One of a group of islands of the same name in Atlantic west of Africa.

Madeline. A feminine name softened down from *Magdalen.*

ma-de-moi-selle (*mā-dm-wā-zel'*), *n.* [Fr.] a title of courtesy given in France to a young lady.

Madge. A feminine baptismal name derived from *Margaret.*

mad-ness (*mad'nes*), *n.* insanity.

Syn. MADNESS, frenzy, rage, fury. *Madness* is a confirmed derangement in the organ of thought; *frenzy* is only a temporary derangement from the violence of any disease or other cause. *Rage* refers more immediately to the agitation that exists within the mind; *fury* refers to that which shows itself outwardly; a person contains or stifles his *rage;* but his *fury* breaks out into some external mark of violence.

ma-don-na (*mā-don'nā*), *n.* [*pl.* madonnas (*'nāz*)], a picture of the Virgin Mary, usually with the infant Christ.

Madrid (*mā-drid'*, Spanish *mā-drēth'*). Capital of Spain since 1560. The name is usually explained from the Arabic *madarat*, a "town."

Mælstrom (*māl'strum*). A celebrated whirlpool or violent current in the Arctic Ocean, near the western coast of Norway, between the islands Moskenaso and Varo. Etymologically it is the "grinding stream," from the Norwegian *male*, "to grind."

mag-a-zine (*mag-ā-zēn'*), *n.* a warehouse; chamber in a gun; a periodical literary or scientific publication.

Magdalen (*mag'dā-len*) or **Magdalene.** A name derived from *Mary Magdalen*, meaning "of Magdala," a place in Palestine. Dutch, *Magdalena;* Fr., *Madeleine* or *Madelene;* Ger., *Magdalena;* It., *Maddalena* or *Madalena;* Lat., *Magdalena;* Sp., *Magdalena.*

ma-gen-ta (*mā-jen'tā*), *n.* a red aniline dye.

mag-got (*mag'ot*), *n.* the footless larva of a fly; grub; whim.

mag-ic (*maj'ik*), *n.* the pretended art of working by the power or assistance of supernatural beings; *adj.* pertaining to, produced by, or exercising, magic.

ma-gi-cian (*mā-jish'an*), *n.* one skilled in magic.

mag-ic lan-tern (*maj'ik lan'têrn*), an optical instrument for producing magnified objects on a screen.

mag-is-te-ri-al (*maj-is-tē'ri-al*), *adj.* pertaining to, or suitable to, a master or magistrate; authoritative.

mag-is-tra-cy (*'is-trā-si*), *n.* [*pl.* magistracies (*-siz*)], the office or dignity of a magistrate; magistrates collectively.

mag-is-trate (*'is-trāt*), *n.* a civil officer invested with certain judicial and executive powers.

★**Mag-na Char-ta** (*mag'nā kär'tā*). The Great Charter, forming the basis of civil liberty, granted by King John of England to the barons, 1215. Also the Great Charter granted by Henry III. and confirmed by Edward I.

mag-nan-i-mous (*-nan'i-mus*), *adj.* great of mind; elevated in soul or sentiment; generous.

mag-nate (*'nāt*), *n.* a person of rank or distinction; nobleman.

mag-ne-si-a (*-nē'shi-ā*), *n.* a white tasteless earthy powder, the oxide of magnesium.

mag-net (*'net*), *n.* the loadstone; a magnetized steel bar.

mag-net-ic (*'ik*), *adj.* pertaining to, exhibiting, or produced by, the magnet or magnetism.

mag-net-ism (*'net-izm*), *n.* that property possessed by various bodies, as iron or steel, of attracting or repelling each other according to certain physical laws.

mag-nif-i-cence (*mag-nif'i-sens*), *n.* grandeur of appearance; splendor; pomp.

Syn. MAGNIFICENCE, splendor, pomp. *Magnificence* lies not only in the number and extent of the objects presented, but in the degree of richness as to their coloring and quality; *splendor* is but a characteristic of *magnificence*, attached to such objects as dazzle the eye by the quantity of light, or the beauty and strength of coloring; *pomp* signifies in general formality and ceremony.

mag-nif-i-cent (*'i-sent*), *adj.* grand in appearance; splendid; pompous; sublime.

mag-ni-fy (*'ni-fī*), *v. t.* to make great or greater; increase the apparent dimensions of.

mag-nil-o-quent (*-nil'ō-kwent*), *adj.* pompous in style or speech; bombastic.

mag-ni-tude (*'ni-tūd*), *n.* comparative size or bulk; extent of dimensions; importance.

★**mag-no-li-a** (*-nō'li-ā*), *n.* a handsome sweet-scented flowering shrub.

mag-pie (*'pī*), *n.* a chattering bird of the crow genus.

Mag-yar (*'yär*), *adj.* pertaining to the Hungarian race or language.

ma-hog-a-ny (*mā-hog'ā-ni*), *n.* a tree of tropical America yielding a dark reddish-brown wood, used for furniture; a dining table.

Mahony (*mā-hō'ni*) or **Mahoning river, Pa.** Name derived from the Delaware Indian word, *mahonink*, "at the lick."

maid (*mād*), *n.* a young unmarried woman.

maid-en (*'en*), *n.* an unmarried woman; virgin; girl: *adj.* pertaining to, or like, a maiden; pure; innocent; unsullied; unused.

maid-en-hair (*-hâr*), *n.* a handsome and delicate-leafed fern.

Maiden lane. A street in London, between Covent Garden and the Strand. The name is said to have been given from an image of the Virgin which once stood there.

maid-en-ly (*-li*), *adj.* like, or suitable to, a maiden; modest: *adv.* in a maidenlike manner.

mail (*māl*), *n.* defensive body armor of steel, net, or plate-work; government system for conveying letters, etc.: *v. t.* to post, or send by post.

maim (*mām*), *v. t.* to cripple or mutilate: *n.* an injury to the body by crippling or mutilation.

main (*mān*), *adj.* chief; principal; leading; direct: *n.* the ocean. [CHIEF.]

Maine. A state in the Union; said to be named for the private estate of Henrietta Maria, in Maine, a province of France.

main-tain (*-tān'*), *v. t.* to support; sustain; defend; vindicate. [ASSERT, ALLEGE.]

main-te-nance (*'tē-nans*), *n.* sustenance; support; vindication; champerty.

maize (*māz*), *n.* Indian corn.

ma-jes-tic (*mā-jes'tik*), *adj.* having dignity of person or mien; stately; noble; sublime.

maj-es-ty (*maj'es-ti*), *n.* [*pl.* majesties (*-tiz*)], sovereignty; grandeur; nobility; sublimity.

ma-jol-i-ca (*mā-jol'i-kā*), *n.* a fine, soft, enameled kind of pottery.

ma-jor (*mā'jêr*), *adj.* greater in number, extent, or quality: *n.* a military officer next in rank above a captain.

ma-jor do-mo (*-dō'mō*), the steward of a household.

ma-jor gen-er-al (*-jen'êr-al*), *n.* an officer next in rank below a lieutenant general.

ma-jor-i-ty (*mā-jor'i-ti*), *n.* more than half; full legal age (21); rank, etc., of a major.

make (*māk*), *v. t.* to create; fashion; fabricate; compose; produce or effect: *v. i.* to tend or move; have effect; contribute; be active.

Syn. MAKE, form, produce, create. *To make* is the most general and unqualified term; *to form* signifies to give a *form* to a thing, that is, to make it after a given *form; to produce* is to bring forth into the light, to call into existence; *to create* is to bring into existence by an absolute exercise of power.

Ant. DESTROY, demolish, obliterate.

make-shift (*māk'shift*), *n.* a temporary expedient.

mal-a-dy (*mal'ā-di*), *n.* [*pl.* maladies (*-diz*)], a disease, especially a deep-seated or lingering disorder. [DISORDER.]

mal-a-ga (*'ā-gā*), *n.* a variety of wine.

Malakoff (*mā-lā-kōf'*). The Malakoff, near Sebastopol, which was so hotly contested in the Crimean war, was so called from the name of an innkeeper who built a liquor shop on the hill in 1831.

mal-ap-ro-pos (*mal-ap-rō-pō'*), *adv.* unseasonably.

ma-la-ri-a (*mā-lā'ri-ā*), *n.* disease produced by the bite of malaria-infested mosquitoes; chills and fever.

Ma-lay (*mā-lā'*), *adj.* pertaining to the inhabitants of Malay, or to their language.

Malcolm (*mal'kum*). Derived from the Gaelic *maol-Cholum*, "the servant of Columba." *Maol* signifies literally, "the brow of a rock," "a bald head;" then "a shorn head," "a monk."

mal-con-tent (*mal'kon-tent*), *adj.* discontented, especially with established authority.

male (*māl*), *adj.* pertaining to the sex that begets young; not female: *n.* one of the male sex.

mal-e-dic-tion (*mal-ē-dik'shun*), *n.* denunciation of evil; execration; curse.

mal-e-fac-tor (*'ē-fak-têr*), *n.* an evil doer; criminal. [CRIMINAL.]

mal-ev-o-lence (*mal-ev'ō-lens*), *n.* spitefulness; ill will.

mal-ev-o-lent (*mal-ev'ō-lent*), *adj.* malicious; malignant; hostile.

Syn. MALEVOLENT, malicious, malignant. *Malevolence* has a deep root in the heart, and is a settled part of the character; we denominate the person *malevolent* to designate the ruling temper of his mind; *maliciousness* may be applied as an epithet to particular parts of a man's character or conduct; one may have a *malicious* joy or pleasure in seeing the distress of another; *malignity* is not so often employed to characterize the person as the thing; the *malignity* of a design is estimated by the degree of mischief which was intended to be done.

Ant. AMIABLE, friendly, kind, well-disposed.

mal-fea-sance (*mal-fē'zans*), *n* an illegal act or deed.

mal-ice (*mal'is*), *n.* evil intention to injure others; deliberate mischief; spite.

ma-li-cious (*mȧ-lish'us*), *adj.* bearing ill-will or spite; prompted by hatred. [MALEVOLENT.]

ma-lign (*-līn'*), *v. t.* to speak evil of; slander: *adj.* hurtful; pestilential. [ABUSE]

ma-lig-nant (*-lig'nant*), *adj.* malicious; pernicious; intending or effecting evil; virulent. [MALEVOLENT.]

ma-lig-ni-ty (*-lig'ni-ti*), *n.* the state of being malignant; malice; virulence. [ACRIMONY.]

mall (*mawl*), *n.* a large, heavy, wooden mallet or beetle; a public walk shaded by trees.

mal-le-a-ble (*mal'ē-ȧ-bl*), *adj.* capable of being extended by hammering or rolling.

mal-let (*'et*), *n.* a wooden hammer.

★**mal-prac-tice** (*mal-prak'tis*, not *mal'prak-tis*), *n.* evil practice; illegal or immoral conduct.

malt (*mawlt*), *n.* barley or other grain steeped in water, fermented, and kiln dried for brewing.

Malta (*mawl'tȧ*, It. *māl'tȧ*). Anciently *Melita*, "the place of refuge." One of a group of islands in the Mediterrancan south of Sicily.

mal-treat (*mal-trēt'*), *v. t.* to treat ill or roughly. [ABUSE.]

mal-ver-sa-tion (*-vēr-sā'shun*), *n.* fraudulent practices, especially those committed in an office of trust

Malvina (*mal-vī'nȧ*). A feminine name derived from *Malmhin*, name of the daughter of Toscar; from *maol-mhin*, "smooth brow."

ma-ma (*mȧ-mȧ'* or *mȧ'mȧ*). See *mamma*.

Mamaroneck (*mȧ-mar'ō-nek*), **N. Y.** So called from the name of an Indian chief, *Mamaronock*.

mam-ma (*mȧ-mȧ'*, or *mȧ'mȧ*), *n.* a family name for mother. [Also *mama*.]

Mam-ma-li-a (*mam-ā'li-ȧ*), *n. pl.* the highest class of the Vertebrata, containing those animals which suckle their young.

mam-mon (*-un*), *n.* wealth; worldly gain: from Mammon, the Syrian god of riches.

mam-moth (*'moth*), *n.* an extinct species of huge fossil elephants: *adj.* gigantic.

man (*man*), *n.* [*pl.* men (*men*)], a human being; an adult male of the human species; mankind; to furnish with men; guard.

man-a-cle (*'ȧ-kl*), *n.* a handcuff: *v. t.* to place handcuffs upon; shackle.

man-age (*'āj*), *v. t.* to conduct or carry on; govern; render docile or tractable; use cautiously; wield: *v. i.* to conduct affairs. [CONDUCT, CONCERT.]

man-age-a-ble (*'āj-ȧ-bl*), *adj.* easy to be managed; docile.

man-age-ment (*'āj-ment*), *n.* the act or art of managing; control; skill in direction; administration. [CARE.]

Manayunk (*man-ȧ-yungk'*), **Pa.** From the Delaware Indian *meneiunk*, "place of drinking liquor," which was also the Indian name of the Schuylkill river.

Manchester, N. H. Named after a manufacturing town in England. This name is derived from the Celtic *maen*, "a stone or rock," and the Anglo-Saxon *ceastre* or *chester*, "a castle or fortification."

Manchuria (*man-chōō'ri-ȧ*). The European name of the region inhabited by the Manchua, a Tungusic tribe, who established the dynasty which has ruled China for the last three centuries.

Mandalay (*man'dȧ-lā*) or **Mandale.** The capital of Burma, founded in 1860. The usual etymology is from the Pali *mandala*, a "flat plain," but, according to Colonel Yule, the name was that of an isolated conical hill, rising high above the alluvial plain of the Irawadi, and crowned by a gilt pagoda.

man-da-mus (*-dā'mus*) *n.* [Latin, "we command"], a writ issued by a superior court directing the person or inferior court to whom it is issued to perform some specified act.

man-date (*'dāt*), *n.* an order; command; papal rescript.

man-da-to-ry (*'dȧ-tō-ri*), *adj.* containing a mandate; directory.

man-do-lin (*'dō-lin*), *n.* a musical instrument of the guitar kind.

mane (*mān*), *n.* the long hair on the neck of certain quadrupeds, as the horse.

★**ma-neu-ver, ma-nœu-vre** (*mȧ-nōō'vēr*), *n.* adroit management or operation in military or naval affairs; stratagem: *v. i.* to manage with adroitness or address.

man-ful (*man'fool*), *adj.* sturdy, brave. [MANLY.]

man-ga-nese (*man'gȧ-nēz*), *n.* a gray-colored, hard and brittle metallic element.

★**mange** (*mānj*, not *manj*), *n.* a cutaneous disease of dogs, cattle, etc.

man-ger (*mān'jēr*), *n.* a feeding trough for horses or cattle.

man-gle (*mang'gl*), *v. t.* to lacerate; mutilate; hack; to smooth with a mangle: *n.* a machine for smoothing linen.

man-gler (*mang'glēr*), *n.* a meat-chopping machine; one who mangles.

Manhattan. The island on which New York city is built. An Indian word, said by some authorities to mean "little island"; by others, "the people of the whirlpool," referring to Hell Gate.

man-hood (*man'hood*), *n.* human nature; manliness.

★**ma-ni-a** (*mā'ni-ȧ*, not *mān'yȧ*), *n.* violent insanity; intense excitement; excessive or unreasonable desire.

ma-ni-ac (*'ni-ak*), *adj.* affected with mania: *n.* a madman.

man-i-cure (*man'i-kūr*), *n.* the care of the hands, nails, etc.

man-i-fest (*'i-fest*), *adj.* clear; plain; apparent: *v. t.* to make manifest; place beyond doubt. [APPARENT, DISCOVER.]

man-i-fes-to (*-fes'tō*), *n.* [*pl.* manifestos (*'tōz*)], a public declaration concerning political measures or intentions.

man-i-fold (*'i-fōld*), *adj.* various in kind or quality; numerous; multiplied: *v. t.* to reduplicate by means of a manifold writer.

man-i-fold wri-ter (*-rī'tēr*), an apparatus for reduplicating a writing by means of thin tracing paper.

man-i-kin (*'i-kin*), *n.* a dwarf; a model of the human body for anatomical study.

ma-nil-a, ma-nil-la (*mȧ-nil'ȧ*), *n.* a kind of cheroot; a hemp used for ropes, matting, etc.

Manila (*mȧ-nil'ȧ*, Spanish *mȧ-nē'lȧ*). The capital of the Philippines, was founded in 1571, by Legaspi, on the site of a native village of the same name, which is derived from a shrub called *nila*, *Manila* thus meaning, "nila is," or "here is nila."

ma-nip-u-late (*mȧ-nip'ū-lāt*), *v. t.* to operate or work by means of the hands; treat: *v. i.* to use the hands, especially in scientific operations, or mechanical processes.

Manitoba (*man-i-tō'bȧ, man-i-tō-bȧ'*,). The central province of the Canadian Dominion, formerly called the Red River Settlement; takes its name from Lake Manitoba, whose islands were believed by the natives to be the habitation of the Manito or Great Spirit.

Manitou (*man'i-tōō*). County in Michigan, river in Wisconsin, and town in El Paso county, Colorado.

Mankato (*man-kā'tō*) **river, Minn.** A Sioux Indian word signifying "green earth."

man-ly (*'li*), *adj.* having the characteristics of a man; courageous; noble; dignified; resolute: *adv.* like a man.

Syn. MANLY, manful. *Manly*, or like a *man*, is opposed to juvenile, and of course applied properly to youths; but *manful* or full of *manhood*, is opposed to effeminate, and is applicable more properly to grown persons.

man-na (*'ȧ*), *n.* a name given by the Israelites to the food miraculously supplied in the wilderness.

man-ner (*'ēr*), *n.* method; mode of action; habit; custom; sort: *pl.* deportment; morals; behavior. [See *custom*.]

Syn. MANNERS, morals, *Manners* respect the minor forms of acting with others and toward others; *morals* include the important duties of life. By an attention to good *manners* we render ourselves good companions; by an observance of good *morals* we become good members of society.

man-ner-ism (*'izm*), *n.* a peculiarity of style, action, or bearing, especially if constrained or affected.

man-of-war (*man-ov-wawr*), *n.* [*pl.* men-of-war], a large ship of war.

★**man-or** (*man' ēr*), *n.* the district over which a feudal lord held authority, and subject to the jurisdiction of his court-baron.

man-sard roof (*man'sȧrd rōōf*), a roof which has on all sides two slopes, the lower being steeper than the upper.

manse (*mans*), *n.* the residence of a Presbyterian parochial minister. [*Scotch.*]

Mansfield. City in Richland county, Ohio, named for Col. Jared Mansfield, at one time surveyor general of the United States.

man-sion (*man'shun*), *n.* a large dwelling house.

man-slaugh-ter (*-slaw'tēr*), *n.* the unlawful killing of a human being, but without malice or premeditation.

man-tel (*'tel*), *n.* a narrow ornamental slab above a fireplace. [Also *mantelpiece*.]

man-tle (*man'tl*), *n.* a loose cloak or cape; a conical network that becomes incandescent when heated: *v. t.* to cover with, or as with, a mantle; conceal.

man-u-al (*'ū-al*), *adj.* pertaining to, or performed by, the hands: *n.* a handy compendium.

man-u-fac-to-ry (*-fak'tō-ri*), *n.* [*pl.* manufactories (*-riz*)], the place where goods are manufactured.

man-u-fac-ture (*'tūr*), *v. t.* to make or fabricate from raw materials: *n.* the conversion of raw materials into articles for use; the thing manufactured.

ma-nure (*mȧ-nūr'*), *n.* any fertilizing substance used for enriching the soil.

man-u-script (*man'ū-skript*), *adj.* written: *n.* a book or paper written by hand.

man-y (*men'i*), *adj.* [*comp.* more, *superl.* most], numerous; consisting of a great number: *n.* a great number; multitude; people.

map (*map*), *n.* a representation of the earth or of the heavens: *v. t.* to delineate or lay down in a map; describe clearly.

ma-ple (*mā'pl*), *n.* a tree of several species of the genus *Acer*, from one of which the rock-maple sugar is extracted.

mar (*mär*), *v. t.* to disfigure; injure; damage: *n.* a blemish or disfigurement; injury.

ma-ras-mus (*mȧ-raz'mus*), *n.* atrophy.

mar-a-thon (*mar'ȧ-thon*), *n.* a foot-race of 26 miles, 385 yards, so called because an Athenian youth ran that distance from Marathon to Athens, bearing the news of the defeat of the Persians; place abounding in fennel, *marathos*.

ma-raud (*mȧ-rawd'*), *v. i.* to rove in search of plunder.

mar-ble (*mär'bl*), *n.* a hard limestone of various colors capable of taking a fine polish: *adj.* made of, or like, marble; cold; hard.

Marc. See *Mark*.

Marcellus (*mär-sel'lus*). From the Latin, meaning "of Mars." Fr., *Marcellus;* It., *Marcello;* Lat., *Marcellus*.

mar-cel wave (*mär-sel' wāv*), in hairdressing, a style of waving the hair in tiers, made with a grooved curling iron, introduced by Marcel.

march (*märch*), *n.* a regular, measured walk, especially of soldiers; steady onward movement: *v. t.* to cause to move in a regular measured walk, as troops: *v. i.* to move with regular steps, or in military form.

March. The third month of the modern calendar. Named after *Mars*, the god of war.

mar-chion-ess (*mär'shun-es*), *n.* the wife or widow of a marquis.

mar-co-ni-gram (*mär-cō'ni-gram*), *n.* a wireless message transmitted by the Marconi system.

Marcus. See *Mark*.

Marcy, Mount, N. Y. Named in compliment to Gov. W. L. Marcy of N. Y. The Indian name is *Tahawas*, "he splits the sky," an allusion to its great height, compared with its neighbors.

mare (*mär*), *n.* the female of the horse.

Margaret (*mär'gȧ-ret*). From the Greek, meaning "a pearl." Dutch, *Margaretha;* Fr., *Marguerite;* Ger., *Margarethe;* Gr., *Margarites;* It., *Margarita;* Lat., *Margarita*.

Margaretta. Formed from *Margaret*.

Margery. A baptismal name from *Margaret*.

mar-gin (*'jin*), *n.* border; the part of a page at the edge not printed upon; reserved amount: *v. t.* to furnish with a margin.

mar-gin-al (*-al*), *adj.* pertaining to, or placed on, a margin.

Maria. A name derived from one of the Greek forms of *Miriam*. *Maria* is found as a masculine name as well as a feminine name.

Marian (*mȧ'ri-an*). A diminutive of *Mary*.

Marianne (*mȧ-ri-an'*), Sometimes corrupted from *Marian*; at other times from *Mary Anne*.

Marie (*mȧ-rē'*). The French form of *Mary*.

Marietta (*mȧ-ri-et'tȧ*), **Ohio.** A composite word, from *Marie Antoinette*, queen of Louis XVI. of France, in whose honor it was named.

mar-i-gold (*mar'i-gōld*), *n.* a plant of various genera with showy yellow flowers.

ma-rine (*mȧ-rēn'*), *adj.* pertaining to, living in, or formed by, the sea; naval: *n.* a soldier who serves on a warship; the navy of a nation.

mar-i-ner (*mar'i-nēr*), *n.* a sailor. [SEAMAN.]

Marion (*mar'i-on*). A masculine form of *Mary*.

mar-i-tal (*'i-tal*), *adj.* pertaining to marriage.

★**mar-i-time** (*'i-tim*), *adj.* pertaining to, connected with, or bordering upon, the sea; naval.

mar-jo-ram (*mär'jō-ram*), *n.* a genus of aromatic plants, containing the sweet marjoram.

mark (*märk*), *n.* a visible sign by which anything is known; impression; evidence; target: *v. t.* to make a mark upon; take notice of; single out: *v. i.* to keep a score; take note.

Syn. MARK, trace, vestige, footstep, track. The *mark* is said of a fresh and uninterrupted line; the *trace* is said of that which is broken by time; a carriage in driving along the sand leaves *marks* of the wheels, but in a short time all *traces* of its having been there will be lost. The *vestige* is a species of *mark* or *trace* caused by the feet of men, or, which is the same thing, by the works of active industry; as the *vestiges* of buildings. *Footstep* is employed only for the steps of an individual. The *track* is made by the steps of many.

Mark. Derived from *Mars*, meaning "of Mars." Danish, *Marcus;* Dutch, *Marcus;* Fr., *Marc;* Ger., *Marcus;* Gr., *Markos;* Hung., *Mark;* It., *Marco;* Lat., *Marcus;* Sp., *Marcos;* Sw., *Markus*.

Mark, St., Basilica of. A famous basilica of Venice, founded in 830 to receive the relics of the evangelist brought from Alexandria, rebuilt in 976, and given its definite form in 1052.

mar-ket (*mär'ket*), *n.* a public place for the sale or purchase of commodities; market place.

marks-man (*märks'man*), *n.* [*pl.* marksmen (*'men*)], one skillful in shooting.

mar-line (*mär'lin*), *n.* a two-stranded cord used for winding around ropes, splicing, etc.

Marmaduke. From Anglo-Saxon *mara-mihtig*, "very mighty or powerful."

mar-ma-lade (*'ma-lād*), *n.* a confection made of oranges or other fruit.

Marmora (*mär'mō-rȧ*), **Sea of.** A sea between European and Asiatic Turkey. Named from an adjacent island celebrated for its marble, *marmor*.

ma-roon (*mȧ-rōōn'*), *n.* formerly a fugitive slave

in the West Indies: *v. t.* to place and abandon on a desert island: *adj.* of a brownish-crimson color.

★**mar-quis** (*mär'kwis*), *n.* a nobleman ranking next below a duke. [Also *marques*; fem. *marchioness*.]

mar-riage (*mar'äj*), *n.* the act of legally uniting a man and woman in wedlock; marriage ceremony.

mar-row (*'ō*), *n.* the medulla or oily tissue which fills the cavities of bones; the essence of anything.

mar-ry (*'i*), *v. t.* to unite as husband and wife; wed: *v. i.* to enter into the state of wedlock.

marsh (*märsh*), *n.* a swampy tract of land.

mar-shal (*mär'shal*), *n.* an official of high rank who superintends and regulates state ceremonials.

mart (*märt*), *n.* a market; purchase and sale.

Martha (*mär'thä*). Littleton derives this name from a Syriac word signifying "lady" (*domina*). Dutch, *Martha;* Fr., *Marthe;* Ger., *Martha;* It., *Marta;* Lat., *Martha;* Sp., *Martha;* Sw., *Martha.*

Martha's Vineyard, Mass. Named by Bartholomew Gosnold, on one of his voyages, but in whose honor it is not known. The Indian name was *Capawac.* An island southeast of Massachussetts.

mar-tial (*'shal*), *adj.* pertaining to, or adapted for, war; military.

Syn. MARTIAL, warlike, military, soldier-like. We speak of *martial* array, *martial* preparations, *martial* law, a court-*martial;* but of a *warlike* nation, meaning a nation which is fond of war; a *warlike* spirit or temper, also a *warlike* appearance, inasmuch as the temper is visible in the air and carriage of a man; we speak of *military* in distinction from naval, as *military* expeditions, *military* movements, and the like; the conduct of an individual is *soldier-like* or otherwise.

mar-tin (*'tin*), *n.* one of several species of birds allied to the swallow.

Martin (*mär'tin*). From the Latin name, *Martinus;* from *Martius;* from *Mars,* "warlike." Dutch, *Martinus;* Fr., *Martin;* Ger., *Martin;* It., *Martino;* Lat., *Martinus;* Sp., *Martin;* Sw., *Martin.*

Martinez (*mär-tē'neth*). Spanish, meaning "the son of Martin."

mar-tin-gale (*'tin-gāl*), *n.* a broad strap passing from the nose-band to the girth of a horse, between its fore legs, to keep its head down; a lower stay for the jib-boom or flying jib-boom.

Martinsburg. Town in Berkeley county, West Virginia, named for Col. Tom Martin, a nephew of Lord Fairfax, a wealthy landowner.

mar-tyr (*'tėr*), *n.* one who testifies by his death to his faith or principles: *v. t.* to put to death for adherence to some belief.

mar-tyr-dom (*-dum*), *n.* the death or sufferings of a martyr.

mar-vel (*'vel*), *n.* something extraordinary and astonishing; a prodigy: *v. i.* to be struck with astonishment; wonder. [WONDER.]

mar-vel-ous (*-us*), *adj.* exciting wonder; incredible.

Mary. From the Hebrew, meaning "bitter." Danish, *Marie;* Dutch, *Maria;* Fr., *Marie;* Ger., *Maria* or *Marie;* Gr., *Maria;* Hungarian, *Maria;* It., *Maria;* Lat., *Maria;* Polish, *Marya;* Port., *Maria;* Sp., *Maria;* Sw., *Maria.*

Maryland. One of the South-Atlantic states of the United States. It was intended that the country granted by the charter of Charles I. in his patent to Lord Baltimore, June 30, 1632, should be called *Crescentia,* but when presented to the king for signature, in conformity to his wishes, the name of the province was changed to that of *Terra Mariæ,* "Mary's land," in honor of his queen, Henrietta Maria, daughter of Henry IV. of France.

mas-cot (*mas'kot*), *n.* a person or thing that brings good fortune.

★**mas-cu-line** (*mas'kū-lin,* not *mas'kū-līn*), *adj.* pertaining to, having the qualities of, or suitable for, a man; manly.

mash (*mash*), *n.* a soft or pulpy mass; a mixture of bran and water for horses: *v. t.* to mix with hot water (as malt) in brewing.

mash-er (*'ėr*), *n.* one who impertinently endeavors to make himself attractive to, or engage the attention of, women.

mask (*mask*), *n.* a cover or partial cover to conceal the face; pretext or subterfuge; a masquerade: *v. t.* to conceal with, or as with, a mask. [PRETENSE.]

ma-son (*mā'sn*), *n.* a builder in stone; a Freemason.

Ma-son-ic (*mā-son'ik*), *adj.* pertaining to Freemasons or to their craft.

mas-quer-ade (*mas'kėr-ād*), *n.* a ball or festive gathering where masks are worn; a disguise: *v. t.* to cover with a mask or disguise: *v. i.* to take part in a masquerade.

mass (*mas*), *n.* a large quantity; lump; the celebration of the Eucharist in the Roman Catholic church: *pl.* common people.

Massachusetts. Natick Indian word *Masasuset,* contraction of *massa,* "great," *adchu,* "mountain," *et,* "near," "the place of the great hills" (reference to the Blue Hills). One of the New England states.

★**mas-sa-cre** (*'ä-kėr*), *n.* indiscriminate slaughter with unnecessary cruelty: *v. t.* to slaughter indiscriminately. [CARNAGE.]

mas-sage (*'äj* or *mä-säzh'*), *n.* a method of medical treatment by rubbing or kneading the body.

mas-seur (*mä-sėr'*), *n.* one who performs the operation of massage. (Fem. *masseuse.*) [*French.*]

mas-sive (*mas'iv*), *adj.* weighty; heavy; bulky; imperfectly and irregularly crystallized.

mast (*mast*), *n.* a long round piece of timber or iron tube, raised vertically on the keel of a vessel to support the sails.

mas-ter (*mas'tėr*), *n.* one who rules or commands others; director: *adj.* pertaining to a master; chief: *v. t.* to subdue or overcome: *v. i.* excel.

mas-ter-y (*-i*), *n.* dominion; preëminence; eminent skill.

mas-ti-cate (*mas'ti-kāt*), *v. t.* to grind with the teeth; chew.

mas-tiff (*mas'tif*), *n.* a large variety of dog.

mas-to-don (*mas'tō-don*), *n.* an extinct genus of mammals, allied to the elephant.

mas-tur-ba-tion (*-tūr-bā'shun*), *n.* self-pollution.

mat (*mat*), *n.* a texture of various fibrous materials, used for cleansing the feet: *v. t.* to cover with mats; entangle or interweave.

Matanzas (*mä-tan'zas,* Spanish *mä-tän'thäs*) **inlet, Fla.** From the Spanish, meaning, "massacre," applied by Menendez to commemorate his destruction of Ribaut and his followers.

match (*mach*), *n.* anything that readily ignites; a lucifer; anything which agrees with or suits another thing: *v. t.* to be equal to.

match-mak-er (*'māk-ėr*), *n.* one who seeks to arrange marriages.

mate (*māt*), *n.* a companion or associate; an equal; the male and female of animals associated for propagation; checkmate: *v. t.* to match; be equal to; marry.

ma-te-ri-al (*mä-tē'ri-al*), *adj.* consisting of matter; not spiritual; essential: *n.* the substance of which anything is made. [PHYSICAL.]

ma-te-ri-al-ism (*-izm*), *n.* the doctrine that all spiritual phenomena are the result of organized matter.

ma-te-ri-al-ize (*-iz*), *v. t.* to invest with material characteristics.

ma-ter-nal (*-tėr'nal*), *adj.* motherly.

ma-ter-ni-ty (*'ni-ti*), *n.* the character or relationship of a mother.

math-e-mat-ic-al (*math-ē-mat'i-kal*), *adj.* pertaining to, or performed by, mathematics; theoretically precise. [Also *mathematic.*]

math-e-mat-ics (*-mat'iks*), *n.* the science of number and space.

Mathilde (*mä-tēld'*). A French form of *Matilda.*

Matilda (*mä-til'dä*) or **Maud.** From the Old German *magd-hild,* "noble virgin or maid." Danish, *Mathilde;* Dutch, *Mathilda;* Fr., *Mathilde;* It., *Matilda;* Lat., *Mathilda;* Sp., *Matilde;* Sw., *Matilda.*

mat-in (*mat'in*), *adj.* pertaining to the morning or to matins.

mat-i-née (*-i-nā'* or *mä-tē-nā'*), *n.* a reception or musical or dramatic performance held in the daytime.

mat-ri-cide (*'ri-sīd*), *n.* the murder of a mother by a son or daughter; one who murders one's mother.

ma-tric-u-late (*mä-trik'ū-lāt*), *v. t.* to admit to the membership of a college or university by entering one's name in a register.

mat-ri-mo-ni-al (*mat-ri-mō'ni-al*), *adj.* pertaining to marriage; nuptial; connubial.

mat-ri-mo-ny (*'ri-mō-ni*), *n.* marriage.

ma-trix (*mā'triks*), *n.* [*pl.* matrices (*mat'ri-sēz*)], the womb; the cavity in which anything is formed or cast; a mold.

ma-tron (*mā'trun*), *n.* a married woman, especially one who has borne children; the lady superintendent of a hospital or institution.

ma-tron-ly (*-li*), *adj.* matronlike; elderly; sedately.

mat-ter (*mat'ėr*), *n.* that which occupies space, and is perceptible by the senses; body; substance: *v. i.* to signify; be of importance.

Matterhorn. The most precipitous peak in the Alps, derives its lowly name from the meadow (*matt*) at its base, on which the village of Zermatt, "at the meadow," is situated.

Matthew (*math'ū*). From the Hebrew *mattah-Yah,* "the gift of Jehovah." Danish, *Matthæus;* Dutch, *Matheus;* Fr., *Mathieu;* Gr., *Matthaios;* Hungarian, *Mate;* It., *Matteo;* Lat., *Matthæus;* Polish, *Mateusz;* Sp., *Mateo;* Sw., *Matthaus.*

Matthias (*math-ī'as*). Originally the same as *Matthew.* Dutch, *Matthijs;* Fr., *Matthias* Ger., *Mathias;* It., *Mattia;* Lat., *Matthias;* Sp., *Matias.*

mat-ting (*mat'ing*), *n.* mats collectively; material for mats; ornamental mat-work.

mat-tock (*'ok*), *n.* a pickax having one of its ends flat.

★**mat-tress** (*'res*), *n.* a quilted hair or straw stuffed bed; a spring mattress.

ma-ture (*mä-tūr'*), *adj.* ripe; full-grown; ready for application or use: *v. t.* to bring or hasten to maturity: *v. i.* to become ripe.

ma-tu-ri-ty (*-tū'ri-ti*), *n.* the state or quality of being mature; ripeness; full development.

mat-u-ti-nal (*mat-ū-tī'nal*), *adj.* pertaining to the morning; early.

Mauch Chunk (*môk chungk'*). Borough and river in Carbon county, Pennsylvania. An Indian name, meaning, according to different authorities, "on the mountain," or "bear's cave."

Maud, Maude. Corrupted from *Matilda.*

maud-lin (*mawd'lin*), *adj.* easily moved to tears; weakly and foolishly sentimental.

maul (*mawl*), *n.* a large wooden hammer: *v. t.* to wound or bruise in a rough manner.

Maurice (*maw'ris,* French, *mō-rēs'*). Some derive this name from *Amalric,* others from *Mauritius,* but it is rather the reverse, for the island had its name from Prince Maurice. The name is probably from Fr., *du marais,* "from the marsh." Danish, *Moritz;* Dutch, *Maurits* or *Mauritius;* Fr., *Maurice;* Ger., *Moritz;* It., *Maurizio* or *Maurisio;* Lat., *Mauritius* or *Mauricius;* Sp., *Mauricio;* Sw., *Moritz.*

Mauritius (*maw-rish'i-us*). Named for Maurice, prince of Orange. An island in the Indian Ocean.

★**mau-so-le-um** (*maw-sō-lē'um*), *n.* a stately tomb or monument, especially that of Mausolus, king of Caria, erected by his widow Artemisia.

★**mauve** (*mōv*), *n.* a soft lilac or purple color.

maw (*maw*), *n.* the stomach of animals; the craw of a bird.

mawk-ish (*mawk'ish*), *adj.* loathsome; affectedly sentimental.

max-im (*maks'im*), *n.* an established principle or truth; proverb; aphorism.

Maximilian (*maks-i-mil'yan, maks-i-mil'i-an*). A name said to be compounded of *maximus,* "greatest," and the name *Æmilianus.* Dutch, *Maximilianus;* Fr., *Maximilien;* Ger., *Maximilian;* It., *Massimiliano;* Lat., *Maximilianus;* Sp., *Maximiliano;* Sw., *Maximilian.*

max-i-mum (*'i-mum*), *n.* the greatest number, quantity, or degree, attainable.

Maximus (*maks'i-mus*). Latin, meaning "greatest." Fr., *Maxime;* It., *Massimo;* Lat., *Maximus;* Sp., *Maximo.*

may (*mā*), *v. aux.* [*p. t.* might (*-mīt*)], to be able; be allowed.

May. The fifth month in the modern calendar. Named after *Maia,* the mother of Mercury, to whom sacrifices were offered on the first day of this month.

Mayfair (*mā'fär*). A fashionable locality in London, east of Hyde Park. All streets north of Piccadilly now lead into the district of Mayfair, which takes its name from a fair which used to be held in Shepherd's market and its surrounding streets.

may-or (*mā'ėr*), *n.* the chief magistrate of a city or borough. [Fem. *mayoress.*]

may-or-al-ty (*-al'ti*), *n.* the office, or term of office, of a mayor.

maze (*māz*), *n.* bewilderment; a labyrinth: *v. t.* to bewilder.

ma-zy (*mā'zi*), *adj.* intricate; bewildering; winding.

mead (*mēd*), *n.* a fermented liquor of honey, water, and spices; a meadow. [*Poetry.*]

mead-ow (*med'ō*), *n.* a tract of rich pasture land; land yielding hay.

mea-ger (*mē'gėr*), *adj.* thin; scanty; poor; barren; lean; weak.

meal (*mēl*), *n.* edible ground grain; a repast.

meal-y (*'i*), *adj.* consisting of, sprinkled with, or having the qualities of, meal.

mean (*mēn*), *adj.* wanting in dignity or honor; vulgar; inferior; insignificant; humble; sordid; stingy; middle; excessive: *n.* the middle point: *v. t.* to have in the mind or intention; signify: *v. i.* to have an intention. [DESIGN.]

me-an-der (*mē-an'dėr*), *v. t.* to wind or flow around: *v. i.* to have a winding course; be intricate.

mean-time (*mēn'tim*), *adv.* in the intervening time. [Also *meanwhile.*]

mea-sles (*mē'zlz*), *n.* an infectious disease characterized by fever and small red spots on the skin.

meas-ure (*mezh'ūr*), *n.* the standard by which the volume or extent of anything is compared; extent or dimensions of a thing; *pl.* strata or beds: *v. t.* to ascertain the extent, size, or volume of: *v. i.* to take measurements.

meat (*mēt*), *n.* animal food.

me-chan-ic (*mē-kan'ik*), *n.* a skilled workman: *pl.* the science of the laws of matter and motion, especially the science of machinery.

mech-a-ni-cian (*mek-ä-nish'an*), *n.* one skilled in mechanics or machinery.

mech-an-ism (*'an-izm*), *n.* parts of a machine; mechanical construction.

med-al (*med'al*), *n.* a coinshaped piece of metal impressed with a device or inscription to commemorate some event, distinguished person, etc.

me-dal-lion (*mē-dal'yun*), *n.* a large antique medal; a round or oval tablet with figures in bas-relief.

med-dle (*med'l*), *v. i.* to interpose or interfere officiously.

me-di-an (*mē'di-an*), *adj.* pertaining to, or connected with, the middle of anything.

me-di-ate (*-āt*), *v. i.* to interpose as a mutual friend between parties to effect a reconciliation.

me-di-a-to-ri-al (*-ä-tō'ri-al*), *adj.* pertaining to a mediator or mediation; intercessory.

★**me-di-æ-val** (*mē-di-ē'val*), *adj.* pertaining to, or characteristic of, the middle ages (8th to 15th centuries A. D.). [Also *medieval.*]

med-i-cal (*med'i-kal*), *adj.* pertaining to, or connected with, medicine.

me-dic-i-nal (*mē-dis'i-nal*), *adj.* having the properties of, or used in, medicine.

med-i-cine (*med'i-sin*), *n.* the science which relates to the treatment and alleviation of disease; a specific for the cure of disease.

Medina (*mä-dē'nä*). A city in Hedjaz, Arabia, the second holy city of the Mohammedans. It is celebrated as the place where Mohammed took refuge at the flight, 622 A. D., and where he died and was buried. The Great Mosque contains Mohammed's tomb.

me-di-o-cre (*mē'di-ō-kėr*), *adj.* of medium excellence; ordinary.

med-i-tate (*med'i-tāt*), *v. i.* to muse or ponder; think abstractedly: *v. t.* to think upon; design; purpose. [CONTEMPLATE.]

med-i-ta-tive (*med'i-tā-tiv*), *adj.* disposed to meditations.

Mediterranean Sea. Modern name expresses the meaning of Latin *medius*, "middle," and *terra*, "earth." The sea between the two continents, Europe and Africa.

me-di-um (*mē'di-um*), *n.* a mean; anything intervening; agency; space or substance in which bodies exist or move.

med-ley (*med'li*), *n.* mixture or confused mass of different ingredients. [DIFFERENCE.]

meed (*mēd*), *n.* recompense; reward.

meek (*mēk*), *adj.* [*comp.* meeker, *superl.* meekest], gentle; submissive; yielding; mild of temper; humble; patient.

meer-schaum (*mēr'shawm*), *n.* a clay like silicate of magnesia from which pipe bowls are made; a pipe of this material.

meet (*mēt*), *v. t.* confront; encounter; fall in with; receive; satisfy; come upon; answer: *v. i.* to assemble; be united: *adj.* fit; suitable. [FIT.]

mel-an-cho-li-a (*mel-an-kō'li-ä*), *n.* a form of insanity characterized by great depression of spirits.

mel-an-chol-y (*'an-kol-i*), *n.* great depression of spirits; melancholia: *adj.* depressed in spirits; hypochondriac. [DEJECTION, GRIEF.]

Melbourne (*'bûrn*). The largest city of Australia. Named after Lord Melbourne in 1837.

mel-io-rate (*mēl'yō-rāt*), *v. t.* to improve or make better.

mel-lif-lu-ent (*mel-if'lū-ent*), smooth; sweetly flowing. [Also *mellifluous.*]

mel-low (*'ō*), *adj.* fully ripe; not hard, harsh, or rigid; half tipsy.

me-lo-di-ous (*mē-lō'di-us*), *adj.* full of, or produced by, melody; musical.

mel-o-dra-ma (*mel-ō-drä'mä*), *n.* a play characterized by highly sensational or romantic incidents.

mel-o-dy (*'ō-di*), *n.* [*pl.* melodies (*-diz*)], the arrangement of different musical sounds for a single voice or instrument; tune.

mel-on (*'un*), *n.* a plant of the cucumber family with its edible fruit.

melt (*melt'*), *v. t.* and *v. i.* to change from a solid to a liquid state.

mem-ber (*mem'bēr*), *n.* a limb or organ; essential part of anything.

mem-brane (*'brān*), *n.* a thin fold or layer of tissue forming the covering of some part or organ.

me-men-to (*mē-men'tō*), *n.* [*pl.* mementos (*'tōz*)], a souvenir; memorial.

mem-oir (*mem'wär*), *n.* a history written from personal experience and knowledge; a biography.

mem-o-ra-ble (*'ō-rä-bl*), *adj.* worthy of remembrance; remarkable; notable.

mem-o-ran-dum (*-ō-ran'dum*), *n.* a note to assist the memory; brief record.

me-mo-ri-al (*mē-mō'ri-al*), *adj.* commemorative; preservative of, or contained in, the memory.

mem-o-ry (*mem'ō-ri*), *n.* [*pl.* memories (*-riz*)], that faculty of the mind by which it retains the knowledge of previous occurrences, facts, thoughts, etc., and recalls them.

Syn. MEMORY, remembrance, recollection, reminiscence. *Memory* is the power of recalling images once made on the mind; *remembrance* is the exercise of *memory* in a conscious agent; it may be the effect of repetition or habit; *recollection* carries us back to distant periods; *reminiscence* is altogether an abstract exercise of the *memory* which is employed on purely intellectual ideas in distinction from those which are awakened by sensible objects; the mathematician makes use of *reminiscence* in deducing unknown truths from those which he already knows.

Ant. FORGETFULNESS, oblivion, unconsciousness.

Memphis (*mem'fis*). In ancient geography, the early capital of Egypt. It was on the western bank of the Nile, south of Cairo. It is said to have been built by Menes. From *Ma-m-Phthah*, "the place of the Egyptian god Phthah."

Memphis, Tenn. Name adopted from the ancient city of *Memphis;* not from any local similarity.

Memphremagog (*mem-frē-mä'gog*), **Lake, Vt.** An application of the Algonquin name *mem-plow-bouque*, "a large expanse of water."

men-ace (*men'äs*), *n.* a threat: *v. t.* to threaten. [THREAT.]

men-ag-er-ie (*-äzh'ēr-i* or *-aj'e-ri*), *n.* a place where wild animals are kept; a collection of wild animals for exhibition.

mend (*mend*), *v. t.* to repair; make good or better; reform; increase: *v. i.* to grow better; improve. [AMEND.]

men-da-cious (*men-dā'shus*), *adj.* given to falsehood; lying; false.

men-di-cant (*'di-kant*), *adj.* practicing begging; reduced to beggary: *n.* a beggar; a begging friar.

Mendocino (*men-dō-sē'nō*), **Cape, Cal.** So named by Cabrillo in 1542 (*Cabo Mendocino*), in honor of the viceroy of Spain, who had employed him.

Mendota (*men-dō'tä*), **Minn.** So called from a tribe of Indians, *Mendota*, meaning "the mouth," alluding to their dwelling at the mouth of the Minnesota river.

me-ni-al (*mē'ni-al*), *adj.* pertaining to a retinue of servants: *n.* one who performs servile work. [SERVANT.]

★**men-in-gi-tis** (*men-in-jī'tis*), *n.* inflammation of the meninges.

Menominee (*mē-nom'i-nē*) **river, Wis.** From an Indian tribe, the *Malominees* or *Menominees*, their derivative name being *Monomonick*, "wild rice," or *Monomoniking*, "in the place of wild rice."

men-su-ra-tion (*men-sū-rā'shun*), *n.* the act or process of taking the measure or dimensions of anything: measurement.

men-tal (*'tal*), *adj.* pertaining to the mind.

men-thol (*'thol*), *n.* a crystalline substance resembling camphor: used as a counter-irritant.

men-tion (*'shun*), *n.* a brief notice; casual remark; hint: *v. t.* to speak briefly of; name.

men-tor (*'tēr*), *n.* a wise and faithful counselor: from *Mentor*, the friend and tutor of Ulysses.

★**me-nu** (*me-nü'*), *n.* a bill of fare.

mer-can-tile (*mēr'kan-til*), *adj.* commercial.

Syn. MERCANTILE, commercial. *Mercantile*, from *merchandise*, respects the actual transaction of business, or a transfer of *merchandise* by sale or purchase; *commercial* comprehends the theory and practice of *commerce;* hence we speak in a peculiar manner of a *mercantile* house, a *mercantile* situation, and the like; but of a *commercial* education, a *commercial* people, and the like.

mer-ce-na-ry (*'sē-nä-ri*), *n.* [*pl.* mercenaries (*-riz*)], a soldier hired into foreign service; one who serves for pay: *adj.* serving for pay or reward; venal; sordid.

mer-chan-dise (*'chan-dīz*), *n.* goods, wares, or commodities, bought and sold.

mer-chant (*'chant*), *n.* one who traffics or carries on trade on a large scale: *adj.* pertaining to, or employed in, trade.

mer-ci-ful (*mēr'si-fool*), *adj.* full of mercy; tender-hearted; compassionate. [HUMANE.]

mer-ci-less (*-les*), *adj.* destitute of mercy; unfeeling; cruel.

mer-cu-ri-al (*-kū'ri-al*), *adj.* active; volatile; fickle; pertaining to, made of, or caused by, mercury.

mer-cu-ry (*kū-ri*), *n.* quicksilver.

mer-cy (*'si*), *n.* [*pl.* mercies (*'siz*)], the disposition to forgive, spare, or pity; clemency.

Syn. MERCY, benevolence, benignity, blessing, clemency, compassion, favor, forbearance, forgiveness, gentleness, grace, kindness, lenience, leniency, lenity, mildness, pardon, pity, tenderness. *Mercy* is the exercise of less severity than one deserves, or in a more extended sense. *Grace* is *favor, kindness,* or *blessing* shown to the undeserving; *forgiveness, mercy,* and *pardon* are exercised toward the ill-deserving. There may be *mercy* without *pardon,* as in the mitigation of sentence. *Clemency* is a colder word than *mercy,* and without its religious associations, signifying *mildness; leniency* or *lenity* denotes an easy-going avoidance of severity; these words are more general and less magisterial than *clemency;* we should speak of the *leniency* of a parent, the *clemency* of a conqueror.

mere (*mēr*), *adj.* [*superl.* merest], such and no more; simple; entire; absolute.

Meredith (*mer'ē-dith*). The English form of the Welsh name *Meredydd.*

mer-e-tri-cious (*mer-ē-trish'us*), *adj.* pertaining to prostitutes; lustful; alluring by false show.

merge (*mērj*), *v. t.* to absorb or swallow up: *v. i.* to be swallowed up or lost.

mer-ger (*mēr'jēr*), *n.* the legal consolidation of two estates, forming them into one estate.

me-rid-i-an (*mē-rid'i-an*), *adj.* pertaining to midday: *n.* midday; an imaginary great circle of the sphere passing through the poles of the heavens and the zenith and nadir of any given place, and cutting the equator at right angles.

★**me-ringue** (*mē-rang'*), *n.* a light confection of eggs, sugar, cream, or jam.

me-ri-no (*mē-rē'nō*), *n.* [*pl.* merinos (*'nōz*)], a breed of sheep with a fine wool.

mer-it (*mer'it*), *n.* excellence; deserved reward: *pl.* essential character: *v. t.* to earn; be entitled to. [DESERT.]

mer-i-to-ri-ous (*mer-i-tō'ri-us*), *adj.* having merit; deserving of reward or praise.

mer-lin (*mēr'lin*), *n.* a small falcon.

Merlin. The English form of the British name *Merddhin.* Probably derived through the French.

mer-maid (*mēr'mād*), *n.* a fabled marine creature having the upper part like a woman and the lower part like a fish.

Merrimack (*mer'ri-mak*). River, county, and town in Hillsboro county, New Hampshire. From the Indian, meaning "sturgeon," or "swift water."

mer-ri-ment (*'i-ment*), *n.* mirth; fun; frolic; gayety

mer-ry (*'i*), *adj.* [*comp.* merrier, *superl.* merriest], full of mirth and good humor; gay.

mer-ry-go-round (*mer'i-gō-round*), *n.* a circular frame fitted with wooden horses or seats, on which persons ride at fairs, etc.

Merthyr-Tydvil (*mēr'thēr tid'vil*). A town in South Wales. Named after the daughter of an ancient British king.

mesh (*mesh*), *n.* an opening or interstice of a net; brewer's grains.

mes-mer-ism (*mez'mēr-izm*), *n.* the art of inducing an abnormal state of the nervous system in which the thoughts and actions of the patient are controlled by the will of the operator; animal magnetism.

mes-mer-ize (*-iz*), *v. t.* to induce the mesmeric state.

★**mesne** (*mēn*), *adj.* middle; intervening.

mess (*mes*), *n.* a number of persons who sit down to table together, especially soldiers or sailors; a state of dirt or confusion: *v. i.* to eat together.

mes-sage (*'äj*), *n.* a communication, written or verbal, sent from one person to another.

mes-sen-ger (*'en-jēr*), *n.* one who conveys a message.

Mes-si-ah (*-ī'ä*), *n.* Christ, the Anointed One. [Also *Messias.*]

me-tab-o-lism (*mē-tab'ō-lizm*), *n.* the continuous process by which living cells or tissues undergo chemical change.

met-a-car-pus (*met-ä-kär'pus*), *n.* that part of the hand which is between the wrist and the fingers.

met-al (*'al*), *n.* an elementary substance having certain physical characteristics, as luster, ductility, malleability, insolubility, is fusible by heat, and a conductor of electricity.

me-tal-lic (*mē-tal'ik*), *adj.* pertaining to, consisting of, or like, metal.

met-al-lur-gy (*met'al-ēr-ji*), *n.* the art or process of working metals and of separating them from their ores.

met-a-mor-phism (*met-ä-mōr'fizm*), *n.* the process by which stratified rocks under pressure, heat, chemical action, etc., have changed from their original structure, as limestone to marble.

met-a-mor-pho-sis (*'fō-sis*), *n.* change of form, shape, or structure; transformation, as of a chrysalis into a butterfly. [TRANSFIGURE.]

met-a-phor (*'ä-fēr*), *n.* a figure of speech by which one word is employed for another of which it is the image; a compressed simile.

met-a-phys-ics (*-fiz'iks*), *n.* mental philosophy.

me-temp-sy-cho-sis (*mē-temp-si-kō'sis*), *n.* transmigration of the soul after death into the body of another man or lower animal.

me-te-or (*mē'tē-ēr*), *n.* a transient luminous body in the sky; falling or shooting star.

me-te-or-ic (*-or'ik*), *adj.* pertaining to, formed of, or like, a meteor.

me-te-or-ite (*'tē-ēr-īt*), *n.* a stone or metallic body which has fallen upon the earth from space.

me-te-or-ol-o-gist (*-ol'ō-jist*), *n.* one who is skilled in meteorology.

me-te-or-ol-o-gy (*-ji*), *n.* the science of the atmosphere and its various phenomena.

me-ter (*mē'tēr*), *n.* an instrument for registering the measurement of the substance passing through it.

me-ter, me-tre, *n.* a rhythmic arrangement of syllables in verse; unit of length in the decimal system equal to 39.37 inches.

me-thinks (*mē-thingks'*), *v. i.* [*p. t.* methought], it appears, or seems, to me.

meth-od (*meth'od*), *n.* regular arrangement of things; system; order; classification.

me-thod-ic-al (*mē-thod'i-kal*), *adj.* characterized by, or arranged with regard to, method; systematic.

Methuselah (*mē-thū'sē-lä*). Hebrew, "driving away death." Fr., *Mathusalem;* Lat., *Methusela.*

meth-yl (*meth'il*), *n.* the hydrocarbon radical of methyl alcohol, or wood spirit.

me-tre. See *meter.*

★**met-ric** (*met'rik*, not *mē'trik*), *adj.* pertaining to the decimal system of weights and measures.

met-ric-al (*'ri-kal*), *adj.* pertaining to meter, measurement, or rhythm.

met-ro-graph (*'rō-gräf*), *n.* an apparatus for indicating the mileage run by a locomotive, and the number and time of stoppages at stations, etc.

met-ro-nome (*'rō-nōm*), *n.* an instrument which beats musical time by means of a short pendulum.

me-trop-o-lis (*mē-trop'ō-lis*), *n.* the capital or chief city of a kingdom or country.

met-ro-pol-i-tan (*met-rō-pol'i-tan*), *adj.* pertaining to the capital city of a kingdom or country, or to an archbishopric.

met-tle (*met'l*), *n.* constitutional ardor or spirit; fortitude.

met-tle-some (*-sum*), *n.* high spirited.

Metz. A city of Germany. Named from the *Meomatrici,* a tribe.

mew (*mū*), *n.* the cry of a cat; a sea gull: *pl.* stables for carriage horses: *v. t.* to shed or molt (the feathers): *v. i.* to cry like a cat.

Mexico. The modern Spanish spelling is *Mejico.* It took its name from a temple of *Mexitl*, the Aztec war god. A republic of North America.

Mexico, Gulf of. A large gulf of the Atlantic lying south of the United States and east of Mexico.

mez-zo-tint (*mez'ō-tint*), *n.* a variety of copper engraving. [Also *mezzotinto.*]

Miami (*mī-ä'mi, mī-am'i*). County in Indiana, Kansas, and Ohio, city in Dade county, Florida, and Saline county, Missouri, town in Ottawa reservation, Indian territory, and river in Florida and Ohio.

mi-ca (*mī'kä*), *n.* a mineral divisible into thin transparent plates.

Michael (*mī'kel, mī'kä-el*). From the Hebrew, *Miykhael,* from *miy-k'-El,* "who is like God." Fr., *Michel;* Ger., *Michael;* Hungarian, *Mihaly;* It., *Michele;* Lat., *Michael;* Polish, *Michal;* Port., *Miguel;* Russ., *Mikhail;* Sp., *Miguel.*

Michigan (*mish'i-gan*). One of the middle western states of the Union, named from the lake on its western border, the Indian word, signifying "a weir of fish," given the lake from its fancied resemblance to a fish-trap.

micro, a *prefix* meaning *small,* as *microcosm,* a small universe or community.

mi-crobe (*mī'krōb*), *n.* a minute microscopical organism found in the blood of animals, especially those suffering from disease.

mi-cro-cosm. See under *micro.*

mi-cro-cous-tic (*-kous'* or *-kōōs'tik*), *adj.* pertaining to, or serving to increase, indistinct sounds: *n.* an instrument for the deaf, to augment faint sounds.

mi-crom-e-ter (*-krom'ē-tĕr*), *n.* an instrument for measuring minute distances, or apparent diameters.

mi-cro-scope (*'krō-skōp*), *n.* an optical instrument for magnifying minute objects so as to render them visible for purposes of investigation.

★**mi-cros-co-py** (*mī-kros'kō-pi*), *n.* the use of the microscope; microscopic investigation.

mid (*mid*). *adj.* middle: *prefix*, as *midday*: *n.* a midshipman.

mid-dle (*'l*), *adj.* equally distant from the extremes.

mid-dling (*'ling*), *adj.* of middle rank, size, or quality, moderate: *n. pl.* the coarser part of flour.

mid-dy (*'di*), *n.* [*pl.* middies (*'diz*)], a midshipman.

mid-riff (*'rif*), *n.* the diaphragm separating the cavity of the chest from the stomach.

midst (*midst*), *n.* the middle.

mid-wife (*mid'wīf*), *n.* a woman who assists at childbirth: *v. t.* to assist in childbirth.

mien (*mēn*), *n.* external appearance; air; look; carriage.

might (*mīt*), *n.* power; strength; force: *p. t.* of *may.* [POWERFUL.]

mi-gnon-ette (*min-yun-et'*), *n.* a fragrant annual with greenish flower and orange-colored stamens.

mi-grate (*mī'grāt*), *v. i.* to remove or pass from one place of abode or resort to another; roving; nomadic. [EMIGRATE.]

Milan (*mil'an, mil-an'*). A city of northern Italy. The French and English form of the Italian *Milano*, called *Mailand* in German, is a corruption of the Celto-Roman name *Mediolanum*, the capital of the Insubrian Gauls, which signified the town in the "middle of the plain," *lanum* being the equivalent of the Latin *planum.*

milch (*milch*), *adj.* yielding milk.

mild (*mild*), *adj.* gentle in temper and disposition; gentle; soft. [MERCY.]

mil-dew (*mil'dū*), *n.* a disease of plants produced by small fungi; spots of mold on cloth, etc., caused by damp: *v. t.* to taint with mildew.

Mildred (*mil'dred*). A female name, from Anglo-Saxon *mild-red*, "mild in counsel." Lat., *Mildreda.*

mile (*mīl*), *n.* a measure of length varying in different countries: the English statute mile, in use in this country, contains 1,760 yds., the geographical or nautical mile 1-60th of a degree of latitude or 2,025 yds. (nearly).

mile-age (*'āj*), *n.* an allowance for expenses per mile; length in miles.

Miles. From *Milesius*, Latinized from the Irish *mile, milead*, "a soldier," "a champion." Gaelic, *milidh*, "a hero," a "renowned person."

Milicent. A feminine name, which in Latin is found written *Milicentia, Melissa*, and *Mellitta.* It comes from the Greek, which signifies both a "bee" and "honey."

mil-i-tant (*mil'i-tant*), *adj.* warlike; fighting; serving as a soldier.

mil-i-ta-ry (*'i-tā-ri*), *adj.* pertaining to soldiers or to arms; warlike; martial. [MARTIAL.]

mil-i-tate (*'i-tāt*), *v. i.* to be, or stand, opposed; operate against (with *against*).

milk (*milk*), *n.* a white fluid secreted by the mammary glands of female mammals for the nourishment of their young: *v. t.* to draw milk from.

milk-sop (*'sop*), *n.* an effeminate, weak person.

mill (*mil*), *n.* a machine for grinding and reducing a substance to small particles; a manufactory.

Milledgeville, Georgia. Named after Governor Milledge, a soldier of the Revolution.

mil-len-ni-al (*mil-len'i-al*), *adj.* of, or pertaining to, the millennium.

mil-len-ni-um (*'i-um*), *n.* the space of 1,000 years, especially that period during which Satan will be bound and Christ will reign on earth.

mil-ler (*'ĕr*), *n.* one who keeps or works a flour mill.

milli, a *prefix* meaning *1,000th part of*, as *milliampere*, the 1,000th part of an ampere.

mil-li-ner (*mil'i-nĕr*), *n.* one who makes women's bonnets, hats, headdresses, etc.

mil-li-ner-y (*'i-ner-i*), *n.* the articles made and sold by a milliner.

mil-lion (*'yun*), *n.* the number of ten hundred thousand; an indefinitely large number.

mil-lion-aire (*-ār'*), *n.* a person who is worth a million; one very rich.

mill-race (*'rās*), *n.* a current of water that drives a mill.

mill-stone (*'stōn*), *n.* one of two flat cylindrical stones for grinding grain.

Milwaukee (*mil-waw'kē*), **Wis.** Named from the river, which was called by the Algonquins *Minnwaukee*, or *Me-ne-wau-kee*, "good earth," "good country," "rich or beautiful country."

mim-ic (*mim'ik*), *adj.* inclined to imitate; imitative: *n.* one who mimics or imitates: *v. t.* to imitate, or ridicule by imitation.

mim-ic-ry (*-ri*), *n.* ludicrous imitation for sport or ridicule; close external likeness.

Mina. Abbreviated from *Wilhelmina*, or from the English form, *Williamina.*

min-a-ret (*min'ā-ret*), *n.* a tall, slender turret from which a crier calls the people to prayers.

mince (*mins*), *v. t.* to cut or chop into minute pieces; extenuate or suppress.

mince-meat (*'mēt*), *n.* meat chopped very fine, especially with suet, raisins, lemon peel, etc.

Mincing lane. A street in London connecting Fenchurch street with Great Tower street, the center of colonial (wholesale) trade.

mind (*mind*), *n.* the intellectual or rational faculty in man; the understanding or intellect; soul.

mind-ful (*'fool*), *adj.* bearing in mind; observant; attentive.

mine (*min*), *poss. pron.* belonging to me: *n.* an excavation in the earth from which minerals, precious stones, etc., are extracted: *v. i.* to carry on mining operations: *v. t.* to dig out; excavate.

min-er-al (*min'ĕr-al*), *n.* any inorganic body found on the surface of, or in, the earth: *adj.* pertaining to, consisting of, or impregnated with, a mineral.

min-er-al-o-gy (*-al'ō-ji*), *n.* the science of minerals.

Minerva (*mi-nĕr'vā*). So named from *Minerva*, goddess of wisdom, war, and all the liberal arts.

min-gle (*ming'gl*), *v. t.* to intermix; join or combine; *v. i.* to be mixed or united with. [MIX.]

min-i-a-ture (*min'i-ā-tūr*), *n.* a very small painting, especially a portrait on ivory, etc.: *adj.* diminutive: minute.

min-im (*'im*), *n.* the smallest liquid measure; a single drop.

min-i-mize (*min'i-mīz*), *v. t.* to reduce to a minimum.

min-i-mum (*'mum*), *n.* [*pl.* minima (*-mà*)], the least quantity; trifle.

min-ing (*min'ing*), *p. adj.* pertaining to mines; burrowing in the earth: *n.* the act of making mines or working them.

min-ion (*min'yun*), *n.* a size of type intermediate between nonpareil and brevier (see type); a servile flatterer or dependent.

min-is-ter (*'is-tĕr*), *n.* a servant; ambassador; a clergyman or pastor of a church authorized to preach and administer the sacraments: *v. t.* to supply; administer: *v. i.* to serve in some office, clerical or lay.

Syn. MINISTER, agent. The *minister* gives his counsel, and exerts his intellectual powers in the service of another; but the *agent* executes the orders or commissions given him; a *minister* is employed by government in political affairs; an *agent* is employed by individuals in commercial and pecuniary affairs.

min-is-te-ri-al (*-tē'ri-al*), *adj.* pertaining to ministry or service, official or clerical.

min-is-tra-tion (*-trā'shun*), *n.* the act of ministering; administration; service.

min-is-try (*'is-tri*), *n.* [*pl.* ministries (*-triz*)], the agency or service of a minister of religion; the office, duties, or functions of a minister of state.

mink (*mingk*), *n.* a carnivorous mammal allied to the weasel, yielding a valuable fur.

Minneapolis, Minn. So called from Dakota Indian words, *minni*, "water," *ha*, "curling," and the Greek word *polis*, "a city," namely "city of the curling water," alluding to the falls of St. Anthony.

Minnehaha (*min-nē-hā'hà*) **river, Minn.** A Dakota Indian compound word *minne*, "water," *rara*, "to laugh," *Minnerara.* Hennepin, in 1680, from a false pronunciation, gave the present ending, "haha."

Minnesota (*min-nē-sō'tà*). One of the north central states of the Union, named from the St. Peter's river, the Indian name of which was *Minnisotah, minni*, "water," *sotah*, "muddy or slightly turbid."

min-now (*'ō*), *n.* a fresh-water fish of small size.

mi-nor (*mī'nĕr*), *adj.* smaller; less; inconsiderable; *n.* one of either sex who is under the age of 21.

Minorca (*mi-nôr'kà*) **island.** In accordance with the Latin *minor*, "the lesser island." The second largest of the Balearic islands.

mi-nor-i-ty (*mi-nor'i-ti*), *n.* [*pl.* minorities (*-tiz*)], the smallest number: opposed to majority; the state of being a minor.

min-o-taur (*min'ō-tawr*), *n.* in classic mythology, a monster with the head of a bull and the body of a man.

min-strel (*'strel*), *n.* a poet or musician.

mint (*mint*), *n.* the place where money is coined by government authority; an odoriferous plant yielding a pungent essential oil: *v. t.* to coin or stamp (money).

★**min-u-et** (*min'ū-et*, not *min-ū-et'*), *n.* a slow graceful dance; music for such a dance.

mi-nus (*mī'nus*), *n.* the sign (—) of subtraction.

mi-nute (*-nūt'*), *adj.* very small; precise: *n.* (*min'it*) 1-60th part of an hour or of a degree; an official note; memorandum. [CIRCUMSTANTIAL.]

mi-nu-ti-æ (*mi-nū'shi-ē*), *n. pl.* smaller or minor details or particulars.

minx (*mingks*), *n.* a pert, wanton girl.

Mira. See *Myra.*

mir-a-cle (*mir'à-kl*), *n.* a supernatural occurrence or act; wonder or marvel. [WONDER.]

mi-rac-u-lous (*mi-rak'ū-lus*), *adj.* performed supernaturally; wonderful.

★**mi-rage** (*mē-rāzh'*), *n.* an optical atmospheric illusion by which the image of a distant object is seen as if inverted.

mire (*mīr*), *n.* deep mud; wet clayey earth: *v. t.* to soil with mire; plunge and fix in mud: *v. i.* to sink in mud.

Miriam (*mir'i-am*). From the Hebrew *Miryam*, the etymology of which is doubtful.

mir-ror (*mir'ĕr*), *n.* a looking-glass; speculum; pattern: *v. t.* to reflect as in a mirror.

mirth (*mĕrth*), *n.* noisy gayety; social merriment; hilarity; jollity. [JOY.]

mis, *prefix* meaning *wrong, wrongly, ill, error, divergence.*

mis-ad-ven-ture (*mis-ad-ven'tūr*), *n.* an unlucky accident; misfortune. [ACCIDENT.]

mis-al-li-ance (*-ā-lī'ans*), *n.* an improper alliance by marriage.

mis-an-thrope (*'an-thrōp*), *n.* a hater of mankind.

mis-ap-pre-hend (*-ap-rē-hend'*), *v. t.* to misunderstand; misconceive.

mis-carry (*-kar'i*), *v. i.* to go wrong; be unsuccessful; bring forth young prematurely.

mis-cel-la-ny (*'ē-lā-ni*), *n.* [*pl.* miscellanies (*-niz*)], a mixture of various kinds.

mis-chance (*-chàns'*), *n.* misfortune; mishap. [CALAMITY.]

mis-chief (*'chif*), *n.* harm; injury; hurt; damage; misfortune.

★**mis-chie-vous** (*'chē-vus*), *adj.* producing injury or damage; hurtful: inclined to mischief.

mis-con-ceive (*-kon-sēv'*), *v. t.* to conceive wrongly; misjudge; misapprehend.

mis-con-cep-tion (*-sep'shun*), *n.* false opinion; misapprehension.

mis-cre-ant (*'krē-ant*), *n.* an unscrupulous villain; vile wretch: *adj.* unscrupulous.

mis-de-mean-or (*-dē-mēn'ĕr*), *n.* evil conduct; a crime less than a felony.

mi-ser (*mī'zĕr*), *n.* a man who denies himself the comforts of life to hoard up money. [FRUGALITY.]

mis-er-a-ble (*miz'ĕr-ā-bl*), *adj.* wretched; very unhappy; worthless; despicable; very poor.

mis-er-y (*'ĕr-i*), *n.* extreme pain, distress, or misfortune; great unhappiness.

mis-fit (*mis'fit*), *n.* nonfitting clothing; a person in a position for which he is unfitted.

mis-for-tune (*-fôr'tūn*), *n.* bad fortune, calamity. [CALAMITY, ACCIDENT.]

mis-giv-ing (*-giv'ing*), *n.* evil premonition. [ANXIETY.]

mis-hap (*-hap'*), *n.* evil accident. [CALAMITY, ACCIDENT.]

mis-lay (*mis-lā'*), *v. t.* to lose.

mis-place (*mis-plās'*), *v. t.* to put in a wrong place; place on an improper or undeserving object.

mis-rep-re-sent (*-rep-rē-zent'*), *v. t.* to represent falsely or incorrectly, willfully, or through carelessness.

miss, *n.* a young unmarried girl or woman; failure to hit, reach, perceive, or obtain: *v. t.* to fail to hit. [LOSE.]

mis-sal (*'al*), *n.* the book containing the order of service for the Roman Catholic mass.

mis-sile (*mis'il*), *n.* a weapon or thing thrown, or designed to be thrown, to injure another.

mis-sion (*mish'un*), *n.* the act of sending, or state of being sent with certain powers, especially to propagate religion; embassy.

mis-sion-a-ry (*-ā-ri*), *n.* a person who is sent to propagate religion, especially in foreign parts: *adj.* pertaining to missions or missionaries.

Mississippi. State of the Union, county in Arkansas and Missouri, and the largest river in the United States. An Indian word, meaning "great water," or "gathering in of all the waters," and "an almost endless river spread out."

mis-sive (*'iv*), *n.* a letter or message: *adj.* sent specially.

Missoula (*mi-zōō'là*). County, river, and city in Montana. The name is said to mean the same as *Missouri*, "muddy water."

Missouri (*mis-sōō'ri, miz-zōō'ri*, commonly *miz-ōō'rà*). A state of the Union, named from river of the same name. *Mis-souri*, compound word, from two very different languages—*mis* (Algonquin), "great," *souri* (Dakota, commonly called Sioux), meaning "muddy;" in Eng., "big muddy."

mist (*mist*), *n.* visible watery vapor in the atmosphere, at or near the earth's surface; fog: *v. i.* to rain in minute drops.

mis-take (*mis-tāk'*), *v. t.* [*p. t.* mistook, *p. p.* mistaken, *p. pr.* mistaking], to misunderstand; misconceive; misjudge: *v. i.* to err in judgment or opinion: *n.* an error. [ERROR.]

Mis-ter (*'tĕr*), *n.* a title of address prefixed to a man's name (abbreviated in writing *Mr.*).

★**mis-tle-toe** (*miz'l-tō*, not *mis'l-tō*), *n.* an evergreen plant parasitic on apple trees, and on the oak.

mis-tress (*mis'tres*), *n.* a woman who exercises authority or governs; sweetheart.

mist-y (*mist'i*), *adj.* characterized by, or obscured with, mist; dim; obscure; clouded.

mis-un-der-stand (*mis-un-dĕr-stand'*), *v. t.* to take in a wrong sense; misconceive.

mis-use (*mis-ūz'*), *n.* wrong use. [ABUSE.]

mite (*mīt*), *n.* a minute insect of the division Arcadia; a very small object or quantity.

mi-ter, mi-tre (*mī'tĕr*), *n.* the headdress of the high priest of the Jews; the junction of moldings at an angle of 45 degrees: *v. t.* to adorn with a miter; join at 45 degrees.

mit-i-gate (*mit'i-gāt*), *v. t.* to render less severe, rigorous or painful; soften; alleviate. [ALLAY.]

mit-ten (*'n*), *n.* a fingerless winter glove; a fingerless cover for the hand or wrist.

mix (*miks*), *v. t.* to unite or blend into one mass or compound; join: *v. i.* to associate; mingle.

Syn. MIX, mingle, blend, confound. *Mix* is here a general and indefinite term, signifying simply to put together; but we may *mix* two or

several things; we *mingle* several objects; things are *mixed* so as to lose all distinction; but they may be *mingled* and yet retain a distinction; to *blend* is only partially *to mix*, as colors *blend* which fall into each other; *to confound* is *to mix* in a wrong way, as objects of sight are *confounded* when they are erroneously taken to be joined.

mix-ture (*miks'tūr*), *n.* the state of being mixed; a compound or mass formed by mixing.

miz-zen (*miz'n*), *n.* the hindmost of the fore-and-aft sails of a vessel.

mne-mon-ics (*nē-mon'iks*), *n. pl.* the art or science of assisting the memory.

moan (*mōn*), *v. i.* to utter a low sound from, or as from, pain or sorrow: *n.* a low, prolonged expression of sorrow or pain. [GROAN.]

moat (*mōt*), *n.* a ditch around a fortress, etc.: *v. t.* to surround with a moat.

mob (*mob*), *n.* the populace; a rude disorderly crowd: *v. t.* to attack in a disorderly crowd; crowd about and annoy.

mo-bile (*mō'bil*), *adj.* easily moved. [ACTIVE.]

Mobile (*mō-bēl'*). A town in Alabama from which Mobile bay takes its name.

mob-i-lize (*mōb'i-līz*), *v. t.* to call (troops) into active service.

moc-ca-sin (*mok'a-sin*), *n.* a deerskin sandal or shoe worn by the North American Indians; a poisonous American snake.

mo-cha (*mō'kä*), *n.* a kind of coffee from Mocha, a seaport of Arabia.

mock (*mok*), *v. t.* to ridicule; mimic in sport, contempt, or derision: *adj.* false; counterfeit.

mo-dal (*mō'dal*), *adj.* pertaining to mode or form; indicating some mode of expression.

mo-dal-i-ty (*-dal'i-ti*), *n.* the fact of being a mode; in law, the quality of being suspended by a condition.

mode (*mōd*), *n.* form; custom; fashion; manner; variety of a syllogism.

mod-el (*mod'el*), *n.* a pattern of something to be made, or reproduced; example for imitation: *adj.* serving as a pattern or model: *v. t.* to form after a model. [COPY.]

mod-er-ate (*mod' ĕr-āt*), *v. t.* to keep within bounds; lessen: *v. i.* to become less violent or intense; preside as a moderator: *adj.* calm; reasonable; mild.

mod-ern (*'ĕrn*), *adj.* pertaining to the present time; recent: *n. pl.* people of modern times. [NEW.]

mod-est (*'est*), *adj.* restrained by a due sense of propriety; diffident; decent; chaste.

Syn. MODEST, bashful, diffident. *Modesty* is a proper distrust of ourselves; *bashfulness* is a state of feeling which betrays itself in a downcast look or a timid air; *diffidence* is a culpable distrust; *diffidence* altogether unmans a person, and disqualifies him for his duty. [See *humble*.]

mod-i-fi-ca-tion (*-i-fi-kā'shun*), *n.* the act of modifying; slight change in form.

mod-i-fy (*'i-fī*), *v. t.* to change slightly in form; vary; qualify; reduce.

★**mo-diste** (*mō-dēst'*), *n.* a fashionable dressmaker.

mod-u-late (*mod'ū-lāt*), *v. t.* to vary the sound of; change the key or mode of: *v. i.* to pass from one musical key to another.

Mo-ham-me-dan (*mō-ham'ed-an*), *adj.* pertaining to Mohammed, or to Mohammedanism: *n.* an adherent of Mohammedanism.

Mohawk. River, township, and village in Herkimer county, New York, said by one authority to have been named for a tribe of Indians, the word meaning "eats what lives," indicating that they were cannibals.

Mohegan (*mō-hē'gan*) **lake, N. Y.** Named from a tribe of Indians whose name was from *maingan*, "a wolf."

moi-e-ty (*moi'e-ti*), *n.* one of two equal parts or shares; half.

moire (*mwär*), *n.* watered silk.

moist (*moist*), *adj.* containing water or other liquid; humid; damp.

mois-ture (*mois'tūr*), *n.* a moderate degree of dampness; slight wetness.

Syn. MOISTURE, humidity, dampness. *Moisture* is used in general to express any small degree of infusion of a liquid into a body; *humidity* is employed scientifically to describe the state of having any portion of such liquid; hence we speak of the *moisture* of a table, the *moisture* of paper, but the *humidity* of the air, or of a wall that has contracted moisture of itself. *Dampness* is that species of *moisture* that arises from the gradual contraction of a liquid in bodies capable of retaining it; in this manner a cellar is *damp*.

mo-lar (*mō'lĕr*), *n.* a double tooth or grinder: *adj.* used for, and capable of, grinding.

mo-las-ses (*-las'ez*), *n.* treacle.

mold, mould (*mōld*), *n.* a minute fungoid growth of decaying animal or vegetable matter; the matrix in which anything is cast or shaped: *v. t.* fashion in, or as in, a mold. [FORM.]

Moldavia (*mol-dā'vi-ä*). The country traversed by the Moldau, a section of the Roumania.

mold-er, mould-er (*mōld' ĕr*), *v. t.* to turn into dust by natural decay: *v. i.* to crumble to mold; waste away by degrees: *n.* one who molds.

mold-ing, mould-ing (*'ing*), *n.* the act of molding; anything made in or by a mold.

mole (*mōl*), *n.* a dark-colored mark or small protuberance on the skin; a small soft-furred burrowing animal.

mol-e-cule (*mol'ē-kūl*), *n.* the smallest quantity of an element or compound which can exist separately.

mo-lest (*mō-lest'*), *v. t.* to annoy or interfere with; trouble; vex. [INCONVENIENCE, ABUSE, TROUBLE.]

mol-li-fy (*mol'i-fī*), *v. t.* to calm; soften; assuage.

Molly. A baptismal name derived from *Mary*.

molt, moult (*mōlt*), *v. i.* to cast the feathers, hair, skin, etc.

mol-ten (*mōl'tn*), *adj.* melted; made of melted metal.

mo-ment (*mō'ment*), *n.* the smallest possible portion of time; an instant. [INSTANT.]

mo-men-ta-ry (*'men-tā-ri*), *adj.* lasting only for, or done in, a moment.

mo-men-tous (*-men'tus*), *adj.* very important.

mo-men-tum (*-men'tum*), *n.* impetus; the product of the mass by the velocity of a moving body.

mon-ad (*mon'ad*), *n.* an ultimate atom; a simple primary constituent of matter.

Monadnock (*mō-nad'nok*). A mountain in New Hampshire. An Indian word, meaning "spirit place," or, possibly, "bad," as signifying the difficulty of the ascent.

mon-arch (*'ärk*), *n.* a supreme ruler; sovereign; the chief of its class or kind: *adj.* supreme.

mon-arch-y (*'ärk-i*), *n.* [*pl.* monarchies (*-iz*)], government in which the supreme power, either absolute or limited, is vested in a monarch, kingdom, or empire.

mon-as-ter-y (*'ăs-ter-i*), *n.* a home for religious retirement for men. [CLOISTER.]

mon-as-tic (*mon-as'tik*), *adj.* pertaining to monasteries, monks, their rules, etc. [Also *monastical*.]

Monday. The second day of the week. The "day of the moon," so called from Lat. name, *dies lunæ*.

mon-e-ta-ry (*mun'ē-tā-ri*), *adj.* pertaining to money. [FINANCIAL.]

mon-e-tize (*'ē-tīz*), *v. t.* to convert into money; give a standard or current value to.

mon-ey (*mun'i*), *n.* coin; specie; gold, silver, or other metal stamped by legal authority and used as currency. The first silver money was coined at Rome, A. U. C. 482. The mint was in the temple of Juno Moneta, and this circumstance occasioned the origin of our word *money*.

Syn. MONEY, cash. *Money* is applied to everything which serves as a circulating medium; *cash* is, in a strict sense, put for coin only.

mon-eyed (*'id*), *adj.* possessed of money; wealthy.

mon-grel (*mung'grel*), *adj.* of a mixed breed or kind: *n.* anything of mixed breed or kind.

Monica (*mon'ē-kä*). A feminine name. It may be from Italian *monaca*, "a nun," or a feminine formed from its root, Latin, *monachus*, "a monk."

mon-ism (*mon'izm*), *n.* the doctrine of the unity of substance; the identity of matter and mind.

mon-ist (*'ist*), *n.* a supporter or advocate of monism.

mo-ni-tion (*mō-nish'un*), *n.* admonition; warning; notice.

mon-i-tor (*mon'i-tĕr*), *n.* one who warns or admonishes; a genus of large lizards.

monk (*mungk*), *n.* a man who devotes himself exclusively to a religious life and lives in community with others similarly bound by vows to chastity, obedience, and poverty.

mon-key (*mung'ki*), *n.* [*pl.* monkeys (*'kiz*)], a quadrumanous mammal, of the species Simiidæ; a name for various mechanical contrivances.

monk-ish (*mungk'ish*), *adj.* pertaining to, or resembling, a monk; monastic.

mono, a *prefix* meaning *one, single, alone:* as *mono*basic: *adj.* having only a single atom or equivalent of base, *mono*cle, an eyeglass for one eye. [Also *mon*.]

Monocacy (*mō-nōk'-ä-si*) **river, Md.** From the Indian name *menagassi*, "creek of many bends."

mo-noc-u-lar (*mō-nok'ū-lĕr*), *adj.* adapted for use for one eye; with one eye only.

mo-nog-a-my (*mō-nog'ä-mi*), *n.* marriage of one wife only; marrying only once.

mon-o-gram (*mon'ō-gram*), *n.* a cipher or character formed by the interweaving of two or more letters.

mon-o-graph (*'ō-gräf*), *n.* a paper or treatise written on one particular subject or some branch of it.

mon-o-lith (*'ō-lith*), *n.* a pillar or column formed of a single stone.

mon-o-logue (*'ō-log*), *n.* a dramatic scene in which one person only speaks; soliloquy.

mon-o-ma-ni-a (*-mā'ni-ä*), *n.* mental derangement in regard to one subject only.

Monongahela (*mō-non-gä-hē'lä*) **river, Pa.** So called from the Indian name *menawngihella*, "falling-in bank," "a river without islands."

mon-o-plane (*mon'ō-plān*), *n.* a flying machine having one or more supporting surfaces on the same plane.

mo-nop-o-list (*mō-nop'ō-list*), *n.* one who has a monopoly, or monopolizes.

mo-nop-o-lize (*'ō-līz*), *v. t.* to acquire the possession of so as to be the only seller; to engross the whole of.

mon-o-rail (*mon'ō-rāl*), *n.* a system of railway in which only one rail is used, the cars being kept erect by the sustaining force of swiftly revolving gyroscopes.

mon-o-the-ism (*mon'ō-thē-izm*), *n.* the doctrine of, or belief in, the existence of one God.

mon-o-tone (*mon'ō-tōn*), *n.* recitation on a single note or key: *v. t.* to recite (as prayers) on a single note.

mo-not-o-ny (*mō-not'ō-ni*), *n.* dull uniformity of tone; unvarying or irksome sameness.

mon-sieur (*mo-sĕr'*, French *mo-sy ĕ'*) *n.* [*pl.* messieurs (*mesh'y ĕrz*, French *me-sy ĕ'*)], a French title of courtesy, equivalent to *Sir* or *Mr*.

mon-soon (*mon-sōōn'*), *n.* a periodical wind in the Indian Ocean.

mon-ster (*'stĕr*), *n.* anything out of the usual course of nature; prodigy; something greatly deformed. [WONDER.]

mon-stros-i-ty (*-stros'i-ti*), *n.* [*pl.* monstrosities (*-tiz*)], the state or quality of being monstrous; an unnatural production.

mon-strous (*'strus*), *adj.* out of the common course of nature; wonderful; huge; horrible. [ENORMOUS, ABSURD.]

Montana (*mon-tä'nä*). Spanish *montana*, "a mountain," literally, a hilly country. A western state of the Union. Name proposed in 1864 by Hon. James M. Ashley, who was chairman of the committee on territories, suggested by territory's embracing such a large portion of the Rocky mountains and its spurs.

Montauk (*mon-tawk'*) **Point, N. Y.** So called from the Indian *manati-auke*, *manati*, "country," *auke*, "island," the "island country."

Mont Blanc (*môn blăn'*). Means, "white mountain." The highest mountain of the Alps, situated on the frontiers of France and Italy, eternally covered with snow.

Monterey (*mon-te-rā'*), **Cal.** Named in 1603 by Vizcaino in honor of Monte Rey, viceroy of Spain, who had dispatched the expedition under Vizcaino.

Monte Rosa (*mon'te rō'sä*). Meaning "rosy mountain." The highest mountain of the Alps next to Mont Blanc.

Montgomery (*mont-gum' ĕr-i*), **Ala.** After General Richard Montgomery, who was killed at Quebec, Canada, 1775.

month (*munth*), *n.* one of the twelve divisions of the year, either calendar or lunar.

Montpelier (*mont-pē'li-ĕr*), **Vt.** From the French, translated a "little or lesser mountain," probably suggested from Montpellier, a town in France.

Montreal, (*mont-rē-awl'*). A city in Quebec province, Canada. In 1535, Jacques Cartier, on his second voyage, ascended the St. Lawrence as far as Quebec, where he left his ship, and reached an Iroquois village called Hochelaga, perched on an eminence, which from its splendid position he called *Mont Royal*, the "royal mount," now *Montreal*.

mon-u-ment (*mon'ū-ment*), *n.* anything that perpetuates the memory of a person or event.

mon-u-men-tal (*-men'tal*), *adj.* pertaining to, or serving as, a monument; lasting.

moo (*mōō*), *v. i.* to make the noise of a cow; low: *n.* the lowing of a cow.

mood (*mōōd*), *n.* style; manner; temper of mind; variation in the form of a verb to express the manner of action or being. [HUMOR.]

mood-y (*'i*), *adj.* [*comp.* moodier, *superl.* moodiest], abstracted and pensive; out of temper; sad.

moon (*mōōn*), *n.* the satellite that revolves around the earth; satellite of a planet: *v. i.* to wander and look about in an abstracted and listless manner.

moon-sail (*'sāl*), *n.* a sail carried above a skysail. [Also *moonraker*.]

moon-shine (*'shīn*), *n.* moonlight; show without reality; smuggled spirits.

moon-stone (*'stōn*), *n.* a translucent stone of yellowish or yellow-white color exhibiting beautiful pearly reflections.

moon-struck (*'struk*), *adj.* lunatic.

moor (*mōōr*), *n.* an extensive tract of waste land covered with heather: *v. t.* to secure (a ship) by a cable and anchor.

moor-ing (*'ing*), *n.* the act of securing a vessel to a particular place; the cables, anchors, etc., laid at the bottom of a harbor.

moose (*mōōs*), *n.* a large North American deer resembling the European elk.

Moosehead lake, Me. Indian name *Kennebec*, meaning "long lake," also *Seboomook*, meaning "shape of the moose's head."

moot (*mōōt*), *v. t.* to propose for discussion: *v. i.* to argue or plead on a supposed case: *n.* a discussion on a supposed case: *adj.* subject to, or open for, discussion or debate.

mop (*mop*), *n.* an instrument for washing floors, decks: *v. t.* to rub or dry with a mop.

mope (*mōp*), *v. i.* to be silent, dull, or dispirited.

mo-raine (*mō-rān'*), *n.* a line of rocks and gravel at the edges and base of glaciers.

mor-al (*mor'al*), *adj.* pertaining to morality or morals; conformed to right; virtuous: *n. pl.* conduct of life; behavior. [MANNERS.]

mo-rale (*mō-räl'*), *n.* moral condition; that mental state which renders a man capable of endurance and of exhibiting courage in the presence of danger.

mo-ral-i-ty (*mō-ral'i-ti*), *n.* [*pl.* moralities (*-tiz*)], the doctrine or practice of the duties of life; ethics; virtue.

mor-al-ize (*mor'al-īz*), *v. t.* to apply or explain in a moral sense; render moral: *v. i.* to make reflections on good or evil.

mo-rass (*mō-räs'*), *n.* a swamp; fen.

Moravia (*mō-rā'vi-ä*). The country traversed by the Morava, a section of Austria-Hungary.

mor-bid (*môr'bid*), *adj.* pertaining to disease; sickly; unhealthy. [SICK.]

mor-dant (*môr'dant*), *adj.* biting into or fixing colors; sarcastic; caustic: *n.* a substance that serves to fix certain colors in dyeing.

Mordecai (*môr'dē-ki*). From the Hebrew, *Mord'khay*, which Tregelles derived from the Persian, meaning "little man," or from *Merodach*, "worshiper of Mars."

more (*môr*), *adj.* [*comp.* of many and much, *superl.* most], greater in number, quality, extent: *adv.* to a greater degree, etc.; again; *n.* a greater quantity, number.

mo-reen (*mō-rēn'*), *n.* a stout woolen embossed or figured fabric.

more-o-ver (*môr-ō'vĕr*), *adv.* besides; further.

Morgan. Some translate this name "by the sea," or "sea-dweller," or "seaman"; doubtless from Welsh *mor*, "the sea," *gan*, "bringing forth."

mor-ga-nat-ic (*môr-gȧ-nat'ik*), *adj.* noting the marriage of a man of royal rank with a woman of inferior degree, whose children are legitimate but cannot inherit their father's rank or possessions.

morgue (*môrg*), *n.* a place where the bodies of persons unknown found dead are exposed for identification.

mor-i-bund (*mor'i-bund*), *adj.* dying.

Moritz. See *Maurice*.

morn-ing (*môrn'ing*), *n.* the early part of the day: morn [*Poetry.*] *adj.* pertaining to, occurring, or performed, in, the morning.

mo-roc-co (*mō-rok'ō*), *n.* a fine kind of grained leather of goatskin or sheepskin.

Morocco. More correctly *Marocco*. The European name of the north African sultanate called by the natives *Maghrib el Aksa*, "the furthest west," or *El Gharb*, "the west."

mo-rose (*-rōs'*), *adj.* sullen; austere; gloomy.

mor-phi-a (*môr'fi-ȧ*), *n.* the narcotic principle of opium.

mor-phin-ism (*'fin-izm*), *n.* a morbid state occasioned by the excessive use of morphia.

mor-phol-o-gy (*-fol'ō-ji*), *n.* the science of the forms in the organisms of animals and plants.

mor-ris (*mor'is*), *n.* a Moorish dance with tambourines, bells, castanets.

mor-row (*'ō*), *n.* the next day.

mor-sel (*môr'sel*), *n.* a small piece.

mor-tal (*môr'tal*), *adj.* subject to death; causing death; fatal; punishable with death: *n.* a human being; man, as subject to death. [DEADLY.]

mor-tal-i-ty (*-tal'i-ti*), *n.* the condition of being mortal; mankind; frequency or number of deaths in ratio to population.

mor-tar (*'tĕr*), *n.* a vessel in which substances are pounded with a pestle; a building cement of lime, sand, and water.

mort-gage (*môr'gāj*), *n.* a deed conveying property to a creditor as security for the payment of a debt: *v. t.* to convey or make over to a creditor as security.

mor-ti-fi-ca-tion (*-ti-fi-kȧ'shun*), *n.* gangrene; subjugation of the passions and appetites by abstinence; humiliation.

mor-ti-fy (*'ti-fī*), *v. t.* produce gangrene in; subdue by penance or austerities; humble; depress; chagrin: *v. i.* to be subdued; practice austerities. [ABASE.]

mor-tise (*'tis*), *n.* a hole made in wood to receive a tenon: *v. t.* to cut or make a mortise in.

mort-main (*môrt'mān*), *n.* alienation of lands or tenements to any corporate body.

mor-tu-a-ry (*mor'tū-ȧ-ri*), *n.* [*pl.* mortuaries (*-riz*)], a building for the dead pending burial: *adj.* pertaining to the burial of the dead.

mo-sa-ic (*mō-zȧ'ik*), *adj.* pertaining to, or consisting of, mosaic work: *n.* a design, or form, of artistic work.

Moscow (*mos'kō*). Capital of Poland. Name derived from *Muscovea* or *Muscovy*, an old name for Russia, now called in Russian *Moskva*, from the small River Moskva on which it stands.

Moses (*mō'zez*). From the Greek *Mosheh*, "out-drawer, deliverer." Salmasius derives the name from the Coptic *moousi*, *moou*, "water," *si*, "from," or "to take or draw."

mosque (*mosk*), *n.* a Mohammedan temple.

mos-qui-to (*mos-kē'tō*), *n.* an insect of the genus *Culex*, the females of which puncture the skin, causing great cutaneous irritation and pain.

Mosquito Coast, Nicaragua. Owes its name to the troublesome insects (Spanish *mosca*, from the Latin *musca*, "a fly") which infest this neighborhood.

moss (*mŏs*), *n.* soft, peaty moorland; a lichen.

most (*mōst*), *adj.* [*superl.* of more], greatest in number, quantity, or degree: *n.* the greatest number, part, quantity, or value.

mote (*mōt*), *n.* a very small particle.

moth (*mŏth*), *n.* a lepidopterous insect or its larvæ, which feed upon cloth, fur, etc.

moth-er (*muth'ĕr*), *n.* female parent, especially one of the human race; one who has given birth to a child; origin or source: *adj.* native; producing others.

moth-er-in-law (*-in-law*), *n.* the mother of one's husband or wife.

moth-er-of-pearl (*-ov-pĕrl*), *n.* the hard, silvery internal layer of various kinds of shells.

mo-tion (*mō'shun*), *n.* the act, process, or state of moving; passage of a body from one place to another; animal life and action: *v. i.* to make a significant movement or gesture.

Syn. MOTION, movement. We speak of a state of *motion* as opposed to a state of rest, of perpetual *motion*, the laws of *motion*, and the like; on the other hand, we say, to make a *movement* when speaking of an army, a general *movement* when speaking of an assembly.

mo-tive (*mō'tiv*), *adj.* causing motion: *n.* that which moves or excites to action; inducement; reason. [CAUSE, PRINCIPLE.]

mo-tive pow-er (*pou'ĕr*), any natural agent, as wind, water, steam, electricity, etc., employed to produce motion in a machine.

mo-tiv-i-ty (*-tiv'i-ti*), *n.* the power of producing motion.

mot-ley (*mot'li*), *adj.* covered with parts of various colors; heterogeneous.

mo-tor (*mō'tĕr*), *n.* that which produces motion, or power, especially a machine which performs mechanical work: *adj.* imparting motion.

mot-tle (*mot'l*), *v. t.* to mark with spots of various colors; variegate.

mot-to (*'ō*), *n.* [*pl.* mottoes (*'ōz*)], a concise sentence added to a device, or prefixed to anything, suggesting some guiding principle, etc.

mound (*mound*), *n.* an artificial bank of earth or stone, originally for defensive purposes; hillock.

mount (*mount*), *n.* a hill or mountain; a rocky mass or elevation rising above the level of the surrounding land: *v. t.* to raise on high; climb; ascend; bestride: *v. i.* to rise up; get on horseback.

Mount Vernon. Residence of Gen. George Washington, and city in Lawrence county, Missouri, named for the foregoing, which was originally built by Lawrence Washington for Admiral Vernon, for whom it was named.

Mount Zion (*zī'on*), or **Sion** (*sī'on*). A hill on which was situated the old city of Jerusalem; the "city of David." The name has been applied to Jerusalem as a whole, and symbolically to the Christian church and heaven.

moun-tain (*moun'tin*), *n.* a large mass of rock or earth rising above the level of the adjacent country.

moun-tain-eer (*-ēr'*), *n.* one who dwells among, or climbs, mountains: *v. i.* to climb mountains.

Mount Desert (*dez-ĕrt'*) **Island, Me.** Named by Champlain *Isle de Monts Deserts*, owing to barrenness of its craggy heights.

mount-e-bank (*mount'ē-bangk*), *n.* a quack-doctor; boastful pretender.

mourn (*môrn*), *v. i.* to grieve; lament; be sorrowful; wear mourning: *v. t.* to grieve for; bewail.

mourn-ful (*'fool*), *adj.* causing, or expressing, sorrow; doleful; sad.

mourn-ing (*'ing*), *n.* expression of grief; lamenting; the dress of a mourner. [GRIEF.]

mouse (*mous*), *n.* [*pl.* mice (*mīs*)], a small rodent of the genus *Mus*, that infests houses, granaries, etc.

mouth (*mouth*), *n.* the opening in the head of an animal by which it receives food and utters sounds: *v. t.* to utter with an affected swelling or pompous voice.

mouth-ful (*'fool*), *n.* [*pl.* mouthfuls (*-foolz*)], as much as can be put into the mouth at one time; small quantity.

mouth-piece (*'pēs*), *n.* that part of an instrument which is held in or applied to the mouth; a spokesman.

mov-a-ble (*mōōv'ȧ-bl*), *adj.* capable of being moved or conveyed.

move (*mōōv*), *v. t.* to cause to change place or position; impel; set in motion; rouse to action: *v. i.* to change place or position: *n.* the act of moving; artifice or scheme. [STIR.]

Syn. MOVING, affecting, pathetic. The good or bad feelings may be *moved;* the tender feelings only are *affected*. A field of battle is a *moving* spectacle; the death of a friend is an *affecting* spectacle; the *pathetic* applies only to what is addressed to the heart; hence an address is *pathetic*. [See *motion, persuade*.]

mow (*mō*), *v. t.* to cut down with, or as with, a scythe: *v. i.* to cut grass with a scythe.

mow (*mou*), *n.* a heap of hay, etc., stowed in a barn; the compartment in a barn where hay, etc., are stored: *v. t.* to stow in a mow.

much (*much*), *adj.* [*comp.* more, *superl.* most], great in quantity or amount; long in duration; many in number: *adv.* to a great degree or extent.

mu-ci-lage (*mū'si-lāj*), *n.* a gummy or gelatinous substance; gum of plants.

mu-ci-lag-i-nous (*-laj'i-nus*), *adj.* pertaining to, resembling, or secreting, mucilage or gum.

muck (*muk*), *n.* moist dung; anything filthy or vile: *v. t.* to manure with dung.

mu-cous (*mū'kus*), *adj.* pertaining to, resembling, or secreting, mucus; viscous or slimy.

mu-cous mem-brane (*mem'brān*), the moist, glandular lining of the cavities and canals of the human body.

mu-cus (*'kus*), *n.* the viscid fluid secreted by the mucous membrane.

mud (*mud*), *n.* soft wet earth; mire.

mud-dle (*'l*), *v. t.* to make a mess of, or confuse; cloud or stupefy: *n.* a confused state.

muff (*muf*), *n.* a warm, soft, cylindrical cover of fur, etc., to keep the hands warm in cold weather.

muf-fin (*'in*), *n.* a soft, light, spongy round cake.

muf-fle (*'l*), *v. t.* to wrap up closely and warmly; cover or conceal the face of; cover up so as to deaden sound: *v. i.* to speak indistinctly.

mug (*mug*), *n.* an earthenware or metallic drinking vessel; the face.

mug-gy (*'i*), *adj.* warm, damp, and close; moldy.

mug-wump (*mug'wump*), *n.* an independent member of the Republican party.

mu-lat-to (*mū-lat'ō*), *n.* [*pl.* mulattoes (*'ōz*)], the offspring of parents, one of whom is negro and the other white. [Feminine, *mulattress*.]

mul-ber-ry (*mul'ber-i*), *n.* [*pl.* mulberries (*-iz*)], the tree or fruit of the genus Morus; dark purple.

mulch (*mulch*), *n.* half rotten straw, litter: *v. t.* to cover, or protect, with mulch.

mulct (*mulkt*), *v. t.* to punish with a fine: *n.* a fine, especially for some misdemeanor.

mule (*mūl*), *n.* the offspring of a male ass and a mare; a stubborn, obstinate person.

mull (*mul*), *n.* a headland or cape; a snuff-box made of the end of a horn; a very thin, soft kind of muslin: *v. t.* to warm, spice, and sweeten.

mult, multi, *prefixes* meaning many: as, *mult*angular, having many angles, *multi*florous, having many flowers.

mul-ti-ple (*mul'ti-pl*), *adj.* consisting of many parts: *n.* a number or quantity which contains another an exact number of times without a remainder.

mul-ti-plex (*mul'ti-pleks*) *adj.*, multiple, manifold; combining many in one.

mul-ti-pli-ca-tion (*mul-ti-pli-kȧ'shun*), *n.* the act or process of multiplying.

mul-ti-plic-i-ty (*-plis'i-ti*), *n.* the state of being manifold; a great number.

mul-ti-ply (*'ti-plī*), *v. t.* to cause to increase in number: *v. i.* make more by natural generation, production, or addition.

mul-ti-tude (*'ti-tūd*), *n.* a great number; crowd; assembly; populace (with *the*).

mul-ti-tu-di-nous (*-tū'di-nus*), *adj.* pertaining to, or consisting of, a multitude; numerous.

mum (*mum*), *adj.* silent: *n.* silence; a kind of strong ale: *interj.* be silent!

mum-ble (*'bl*), *v. t.* and *v. i.* to mutter or speak indistinctly; chew gently with closed lips.

mum-mer-y (*'ĕr-i*), *n.* masquerading; buffoonery; hypocritical parade or disguise.

mum-my (*'i*), *n.* [*pl.* mummies (*'iz*)], a dead body embalmed after the manner of the ancient Egyptians.

mumps (*mumps*), *n.* a contagious febrile disease characterized by the swelling of the glands of the neck: *pl.* the sulks.

munch (*munch*), *v. t.* and *v. i.* to chew with an audible crunching noise.

Muncy, Pa. Named from the creek on which it is located, the water taking the name from the *Minsi* Indians. *Minsink*, "dwelling place of the Minsi."

mun-dane (*mun'dān*), *adj.* pertaining to the world.

Munich (*mū'nik*). The English name of the capital of Bavaria, which is called *München* in German. Both forms have been independently obtained from the old name *Munichen*, found in 1058, which is from Old High German *munich*, "a monk," the town having been built on lands belonging to the monks of the convent of Schaftlarn.

mu-nic-i-pal (*mū-nis'i-pal*), *adj.* pertaining to a city, corporation, state, or local self-government.

mu-nic-i-pal-i-ty (*-pal'i-ti*), *n.* [*pl.* municipalities (*-iz*)], a corporate town or city; a division of the country. [*French.*]

mu-nif-i-cence (*-nif'i-sens*), *n.* the quality or state of being munificent; liberality.

mu-nif-i-cent (*'i-sent*), *adj.* characterized by great liberality in giving; bountiful. [BENEFICENT.]

mu-ni-tions (*-nish'unz*), *n. pl.* military stores or materials.

mu-ral (*'ral*), *adj.* pertaining to, growing on, or resembling, a wall.

mur-der (*mûr'dĕr*), *n.* homicide with malice aforethought: *v. t.* to kill with premeditated malice.

Murfreesboro (*mûr'frēz-bur-ō*). City in Rutherford county, Tennessee, and town in Hertford county, North Carolina, named for Col. Hardy Murfree, an officer of the Revolution.

mu-ri-at-ic (*mū-ri-at'ik*), *adj.* derived from sea salt.

Muriel, Meriel. From the Greek *Myron*, "myrrh."

murk-y (*mûrk'i*), *adj.* dark; gloomy; obscure.

mur-mur (*mûr'mûr*), *n.* a low indistinct sound, as of a running stream: *v. i.* to make a low continued noise like the hum of bees.

mur-rain (*mur'ān*), *n.* an infectious and fatal disease among cattle.

mus-car-dine (*mus'kär-din*), *n.* a fungus which causes fatal disease in silkworms.

mus-ca-tel (*'kȧ-tel*), *n.* a variety of rich wine; the grapes which produce it; a sweet, fragrant pear. [Also *Muscadel, Muscadine*.]

mus-cle (*'l*), *n.* a highly contractile organ of fibrous tissue by which movement in an animal body is effected.

mus-cu-lar (*'kū-lĕr*), *adj.* pertaining to, consisting of, or performed by, muscles; strong; vigorous; brawny.

mus-cu-lar-i-ty (*-lar'i-ti*), *n.* the quality or state of being muscular.

muse (*mūz*), *v. i.* to study in silence; meditate; be absent-minded: *v. t.* to meditate on. [CONTEMPLATE.]

mu-se-um (*mū-zē'um*), *n.* a collection of natural, scientific, or literary curiosities, or of works of art; the building containing such a collection.

mush (*mush*), *n.* boiled Indian maize meal.

mush-room (*'rōōm*), *n.* an edible fungus, *Agaricus campestris*, or similar edible fungi; an upstart: *adj.* upstart; ephemeral.

mu-sic (*mū'zik*), *n.* the art or science of harmonic sounds; harmony or melody.
mu-si-cian (*-zish'an*), *n.* one skilled in the science of music; one who sings, or plays on a musical instrument.
musk (*musk*), *n.* a strong-scented substance obtained from the male musk-deer.
Muskegon (*mus-kē'gun*) **river, Mich.** So called from the Indian name, meaning "plenty of fish."
mus-ket (*mus'ket*), *n.* the firearm formerly used by infantry.
Muskingum (*mus-king'gum*). River and county in Ohio. An Indian word meaning "moose-eye river," so called because of the number of moose and elk which inhabited the country.
musk-rat (*musk'rat*), *n.* an aquatic rodent of North America which emits a musky secretion.
mus-lin (*muz'lin*), *n.* a fine, thin cotton cloth or fabric: *adj.* made of muslin.
muss (*mus*), *n.* a confused struggle; disorder: *v. t.* to disorder, as clothing.
mus-sel (*'el*), *n.* a marine edible bivalve.
Mus-sul-man (*'ul-man*), *n.* [*pl.* Mussulmans (*-manz*)], a Mohammedan, or Moslem.
must (*must*), *n.* unfermented expressed grape juice: *v. t.* to make moldy and sour: *v. i.* to be obliged morally or physically.
mus-tache (*mus-tăsh'*), *n.* hair worn on a man's upper lip. [Also *moustache.*]
mus-tang (*'tang*), *n.* the small, hardy, semiwild horse of the prairies.
mus-tard (*'tērd*), *n.* a plant and its seed of the genus Sinapis; a condiment made from the seed.
mus-ter (*'tēr*), *n.* an assembly of troops, for review or active service; register of troops mustered; assemblage: *v. t.* to assemble, as troops, for review or active service.
must-y (*'i*), *adj.* [*comp.* mustier, *superl.* mustiest], spoiled with damp, mold, or age; spiritless.
mu-ta-bil-i-ty (*mū-tą-bil'i-ti*), *n.* the quality of being subject to change; instability.
mu-ta-ble (*'tą-bl*), *adj.* susceptible of change.
mute (*mūt*), *adj.* silent; dumb: *n.* one who is dumb or remains silent; a consonant which is not pronounced, or intercepts the sound.
mu-ti-late (*mū'ti-lāt*), *v. t.* to cut off a limb or essential part of; render imperfect; maim.
mu-ti-la-tion (*-lā'shun*), *n.* the act of mutilating.
mu-ti-neer (*-ti-nēr'*), *n.* one who is guilty of mutiny: *v. i.* to mutiny.
mu-ti-nous (*'ti-nus*), *adj.* disposed to, or guilty of, mutiny; seditious.
mu-ti-ny (*'ti-ni*), *n.* insurrection against, or forcible resistance to, constituted authority: *v. i.* to rise against constituted authority.
mut-ter (*mut'ēr*), *v. i.* to utter words in a low voice with compressed lips; murmur: *v. t.* to utter indistinctly: *n.* indistinct utterance; murmur.
mut-ton (*'n*), *n.* the flesh of sheep.
mu-tu-al (*mū'tū-al*), *adj.* reciprocal.
Syn. MUTUAL, common. This word is often confounded with *common.* *Mutual* is used in referring to a thing that belongs to only two people; as, John and I have a *mutual* dislike; he dislikes me and I dislike him. We cannot say John and I have a *mutual* dislike for Mary. *Common* is used with reference to a third object or person; as, Mary is our *common* friend; she is your and my friend. Dickens' use of this word in "Our *Mutual* Friend" is condemned by many good authorities.
mu-tu-al-ism (*-izm*), *n.* the ethical doctrine of mutual dependence in social development.
muz-zle (*muz'l*), *n.* snout; the mouth of a gun, etc.; a fastening or cover for the mouth of a dog: *v. t.* to secure the mouth of with a muzzle.
my (*mī*), *poss. pron.* belonging to me.
Myles. Another spelling of *Miles.*
my-o-pi-a (*mī-ō'pi-ą*), *n.* shortsightedness.
Myra (*mī'rą*). A feminine name. The termination of some other Christian name; or from the Greek, *myron*, "myrrh."
myr-i-ad (*mir'i-ad*), *n.* the number of 10,000; a very large number: *adj.* innumerable.
myrrh (*mēr*), *n.* the aromatic gummy resin of *Balsamodendron myrrha*, growing in Arabia and Abyssinia.
myr-tle (*mēr'tl*), *n.* a fragrant evergreen shrub of the genus Myrtus.
my-self (*mī-self'*), *pron.* [*pl.* ourselves (*our-selvz'*)], I or me in person: used emphatically or reflexively.
mys-te-ri-ous (*mis-tē'ri-us*), *adj.* not clear to the understanding; obscure; incomprehensible.
Syn. MYSTERIOUS, abstruse, cabalistic, dark, enigmatical, hidden, incomprehensible, inexplicable, inscrutable, mystic, mystical, obscure, occult, recondite, secret, transcendental. That is *mysterious* in the true sense which is beyond human comprehension. That is *mystic* or *mystical* which has associated with it some *hidden* or *recondite* meaning, especially of a religious kind; that is *dark* which we can not personally see through; that is *secret* which is *hidden.* [See *secret, dark.*]
mys-ter-y (*'tēr-i*), *n.* [*pl.* mysteries (*-iz*)], something secret; obscure, or unexplained; that which is beyond human comprehension.
mys-tic (*'tik*), *adj.* pertaining to, or containing, mystery or mysticism; emblematical; occult. [Also *mystical.*] [OBSCURE, MYSTERIOUS.]
mys-ti-cism (*mis'ti-sizm*), *n.* the doctrines of the Mystics; obscurity of thought or teaching.
mys-ti-fi-ca-tion (*-fi-kā'shun*), *n.* the act of mystifying; the state of being mystified.
mys-ti-fy (*'ti-fī*), *v. t.* [*p. t.* and *p. p.* mystified, *p. pr.* mystifying], to involve in mystery; obscure; bewilder; puzzle.
myth (*mith*), *n.* a legend; poetic fiction; a fabulous narrative. [FICTION.]
myth-o-log-ic-al (*-ō-loj'i-kal*), *adj.* pertaining to mythology; mythical.
myth-ol-o-gist (*-ol'ō-jist*), *n.* a student of, or one skilled in, mythology.
myth-ol-o-gy (*'ō-ji*), *n.* [*pl.* mythologies (*-jiz*)], the collected body or system of the traditions or legends of a people; a treatise on myths.

N

nab (*nab*), *v. t.* [*p. t.* and *p. p.* nabbed, *p. pr.* nabbing], to catch or seize unexpectedly.
na-bob (*nā'bob*), *n.* in India, a deputy or administrator under the Mogul empire; a very wealthy man.
na-dir (*nā'dēr*), *n.* that part of the heavens directly under our feet, or directly opposite to the zenith.
nag (*nag*), *n.* a small saddle horse: *v. t.* to scold or find fault with continually: *v. i.* to find fault constantly.
Nahant (*ną-hănt'*, *ną-hant'*). Town and watering-place in Essex county, Massachusetts. According to different authorities an Indian word meaning "at the point," or "two things united," the latter meaning given because the town is formed of two islands connected by a beach.
★**na-iad** (*nā'yad*), *n.* a water nymph.
nail (*nāl*), *n.* the horny substance at the ends of the human fingers and toes; a pointed piece of metal usually furnished with a head for fastening woodwork, etc.; *v. t.* to fasten with nails; to expose, as to *nail* a lie.
na-ive (*ną-ēv'*), *adj.* artless; ingenuous; unaffectedly simple.
na-ive-té (*ną-ēv-tā'*), *n.* natural, unaffected simplicity or ingenuousness.
na-ked (*nā'ked*), *adj.* unclothed; bare; unarmed; defenseless; exposed to view; plain.
nam-by-pam-by (*nam'bi-pam'bi*), *adj.* weakly sentimental or affectedly pretty or fine.
name (*nām*), *n.* that by which a person or thing is called; designation; character; reputation: *v. t.* to give an appellation or designation to; specify; mention by name.
Syn. NAME, call. *Name* is employed for distinguishing or addressing one by *name.* To *call* signifies properly to address one loudly, consequently we may *name* without *calling*, when we only mention a *name* in conversation; and we may *call* without *naming.* [See *nominate.*]
name-sake (*'sāk*), *n.* one having the same name.
Nancy (*nan'si*, French *năn-sē'*). Name formed from *Nan* for *Ann.*
nan-keen (*nan-kēn'*), *n.* a buff-colored cotton cloth, originally from China.
Nantucket. Island and county in Massachusetts. This name appeared upon the maps in 1630 as *Natocko*, and some authorities state that it is derived from an Indian word meaning "far away."
Naomi (*nā-ō'mi*, *nā'ō-mi*). From the Hebrew *naomi*, signifying "my pleasantness."
nap (*nap*), *n.* a short slumber; doze; a game at cards; the woolly substance on the surface of cloth: *v. i.* to doze.
nape (*nāp*), *n.* the back of the neck.
na-per-y (*nā'pēr-i*), *n.* table linen; linen underclothing.
naph-tha (*naf'thą*), *n.* a clear, volatile, inflammable, bituminous, liquid hydrocarbon exuding from the earth, or distilled from coal tar, etc.; rock oil.
nap-kin (*nap'kin*), *n.* a small cloth, especially one used at table for wiping the hands, etc.
Naples (*nā'plz*). A French corruption of the Italian *Napoli*, which preserves, with little change, the old Greek name *Neapolis*, "the new city," which in spite of its name is one of the oldest cities in Italy, having been founded by colonists from the still older settlement at Cumæ.
Napoleon (*na-pō'lē-on*, French *ną-pō-lā-ōn'*). From the French name *Napoleone*, which has been translated "of the new city."
nap-py (*nap'i*), *adj.* covered with nap or pile; drowsy.
Nar-cis-sus (*nār-sis'us*), *n.* a genus of ornamental bulbous plants with handsome fragrant flowers, including the daffodils.
Narcissus. From the Greek, meaning a "daffodil." Fr., *Narcisse;* It., *Narcisso;* Lat., *Narcissus.*
nar-co-sis (*-kō'sis*), *n.* stupefaction from the effects of a narcotic.
nar-cot-ic (*-kot'ik*), *adj.* producing coma or torpor: *n.* a medicine to alleviate pain and produce sleep.
Narragansett (*nar-rą-gan'set*). Summer resort in Washington county, Rhode Island. An Anglicization of the Indian name of a tribe, *Naiagansett*, which in their language means "people of the point."
nar-rate (*nar-rāt'*), *v. t.* to tell; recite; give an account of; write, as a story.
nar-ra-tion (*-rā'shun*), *n.* the act of narrating; statement, written or verbal.
nar-ra-tive (*nar'rą-tiv*), *adj.* pertaining to narration: *n.* recital of a story or event; tale.
nar-row (*nar'ō*), *adj.* of little breadth or extent, limited; straitened; contracted in mind: *v. t.* to lessen the breadth or extent of: *v. i.* to become narrow. [CONTRACTED.]
na-sal (*nā'zal*), *adj.* pertaining to, affected by, or pronounced through, the nose: *n.* a letter pronounced through the nose.
nas-cent (*nas'ent*), *adj.* beginning to grow or exist.
Nashua (*nash'ū-ą*), **N. H.** So called from the river, its Indian name meaning "between."
Nashville, Tenn. First named, as a settlement, *Nashborough*, in honor of Francis Nash of North Carolina, a brigadier general in the Continental army. In June, 1784, changed to *Nashville.*
Nas-tur-tium (*-tūr'shum*), *n.* a genus of plants, including the watercresses.
nas-ty (*'ti*), *adj.* [*comp.* nastier, *superl.* nastiest], dirty; nauseous; filthy; obscene; foul; serious.
na-tal (*nā'tal*), *adj.* pertaining to one's birth or birthday; indigenous. [NATIVE.]
Natal (*ną-tăl'*). Received its name from Vasco da Gama, because he discovered it on the Feast of the Nativity. A British colony in South Africa.
na-ta-tion (*ną-tā'shun*), *n.* the act or art of swimming.
na-ta-to-ri-al (*nā-tą-tō'ri-al*), *adj.* swimming, or adapted for swimming. [Also *natatory.*]
Natchez (*nach'ez*). City in Adams county, Mississippi, named for the Indian tribe, the word meaning "hurrying men," or "one running to war."
Nathan (*nā'than*). From the Hebrew *nathan*, signifying "given." Fr., *Nathan;* Ger., *Nathan;* Lat., *Nathan;* Sp. *Natan.*
Nathanael or **Nathaniel** (*ną-than'ą-el* or *ną-than'i-el*). From the Hebrew, meaning the "gift of God." Dutch, *Nathaniel;* Fr., *Nathaniel;* Ger., *Nathaniel;* Lat., *Nathanael;* Sp., *Natanael.*
na-tion (*nā'shun*), *n.* the inhabitants of one country, or united under the same government.
na-tion-al (*na'shun-al*), *adj.* pertaining to a nation; public; general; attached to one's country.
na-tion-al-ism (*-al-izm*), *n.* the state of being national; national idiom, characteristic, or independence.
na-tion-al-i-ty (*-al'i-ti*), *n.* national character; patriotism; nation.
na-tive (*nā'tiv*), *adj.* pertaining to the time and place of birth; not acquired: *n.* one who is born in a certain country or place.
Syn. NATIVE, indigenous, innate, natal, natural, original. *Native* denotes that which belongs to one by birth; *natal* that which pertains to the event of birth; *natural* denotes that which rests upon inherent qualities of character or being. We speak of one's *native* country, or of his *natal* day; of *natural* ability, *native* genius.
na-tiv-i-ty (*-tiv'i-ti*), *n.* time, place and manner of birth.
nat-ty (*nat'i*), *adj.* tidy; neat; smart.
nat-u-ral (*nat'ū-ral*), *adj.* pertaining to nature; inborn; not artificial. [NATIVE, PHYSICAL.]
nat-u-ral his-to-ry (*his'tō-ri*), the scientific description of the earth and its various productions, especially the animal kingdom.
nat-u-ral-ism (*-izm*), *n.* mere state of nature; natural religion.
nat-u-ral-ist (*-ist*), *n.* one skilled in natural history; one who believes in naturalism.
nat-u-ral-ize (*-iz*), *v. t.* to make natural; acclimatize; invest (a foreigner) with the privileges of a natural-born citizen or subject.
★**na-ture** (*nā'tūr*), *n.* the universe; essential qualities; species; natural order of things.
Naugatuck (*naw'gą-tuk*), **Conn.** Indian word expressive of "form of the rivers," "point between two rivers." Another source gives the word as *neguttugk*, meaning "one tree."
naught (*nawt*), *n.* nothing: *adj.* worthless: *adv.* in no degree.
naugh-ty (*naw'ti*), *adj.* bad; perverse or mischievous.
★**nau-se-a** (*naw'shē-ą* or *naw'shą*, not *naw'sē-ą*), *n.* a strong sensation of sickness; seasickness; loathing or disgust. [DISGUST.]
★**nau-se-ate** (*naw'shē-āt* or *naw'sē-āt*), *v. t.* to affect with nausea; loathe: *v. i.* to feel disgust; be inclined to vomit.
nau-seous (*'shus*), *adj.* loathsome; abhorrent.
nau-ti-cal (*naw'ti-kal*), *adj.* pertaining to ships, sailors, or navigation; maritime. [Also *nautic.*]
nau-ti-lus (*'ti-lus*), *n.* [*pl.* nautili (*-li*)], any member of a genus of cephalopods, including those furnished with a chambered spinal univalve shell; a kind of diving bell.
Nauvoo (*naw-vōō'*). City in Hancock county, Illinois, named in obedience to a "revelation" made to Joseph Smith, one of its Mormon founders.
na-val (*nā'val*), *adj.* pertaining to ships or a navy; consisting of ships; maritime.
nave (*nāv*), *n.* the middle or body of a church; the center of a wheel.
nav-el (*'el*), *n.* the depression in the center of the lower part of the abdomen, indicating where the umbilical cord was joined to the fœtus.
nav-i-ga-ble (*nav'i-gą-bl*), *adj.* capable of being navigated.
nav-i-gate (*-gāt*), *v. i.* to pass on the water by a ship or vessel: *v. t.* to pass over in a ship or boat.
nav-i-ga-tion (*-gā'shun*), *n.* the act of navigating; the science of navigating ships.

na-vy (*nā'vi*), *n.* the ships of war belonging to a nation, or their officers and men.

nay (*nā*), *adv.* no; not only so, but: *n.* a refusal or denial.

Naz-a-rene (*naz-ȧ-rēn'*), *n.* a native of Nazareth; applied to Jesus Christ, his followers, and the early Christians as a term of contempt.

Naz-a-rite (*'ȧ-rīt*), *n.* a Jew devoted by vow to God to a life of purity.

neap (*nēp*), *adj.* low; applied to the tides which occur in the beginning of the second and fourth quarters of the moon.

near (*nēr*), *adj.* not far distant in time, place, or degree; close; intimate; dear; familiar; literal: *v. t.* to approach; come near to. [ADJACENT, CLOSE.]

neat (*nēt*), *n.* cattle of the bovine genus: *adj.* pertaining to bovine animals; tidy; trim and clean; simple and elegant; chaste.

Nebraska. State and river in the United States. An Indian word meaning "shallow, or broad water."

neb-u-la (*neb'ū-lȧ*), *n.* [*pl.* nebulæ (*-lē*)], a faint misty patch of light in the heavens produced by groups of stars or by masses of diffused gaseous matter.

neb-u-lar (*'ū-lēr*), *adj.* pertaining to nebulæ.

nec-es-sa-ry (*nes'es-sȧ-ri*), *adj.* that cannot be otherwise; essential; indispensable: *n.* [*pl.* necessaries], things requisite. [NECESSITIES.]

ne-ces-si-tate (*nē-ses'i-tāt*), *v. t.* to make necessary; compel; constrain. [COMPEL.]

ne-ces-si-ty (*'i-ti*), *n.* the state of being necessary; that which is unavoidable; compulsion: *pl.* things necessary.

Syn. NECESSITIES, necessaries. *Necessity* is the mode or state of circumstances, or the thing which circumstances render *necessary;* the *necessary* is that which is absolutely and unconditionally *necessary.* Habit and desire create *necessities;* nature only requires *necessaries.*

Ant. USELESS THINGS.

neck (*nek*), *n.* that part of the body between the head and trunk; a long narrow part, as of land or a vessel.

neck-lace (*'lās*), *n.* a string of beads or ornaments, as pearls, etc., worn round the neck.

nec-rol-o-gy (*-rol'ō-ji*), *n.* a register, or account, of the dead.

nec-ro-man-cy (*'rō-man-si*), *n.* the pretended art of predicting future events by communication with the dead.

nec-tar (*nek'tēr*), *n.* in classic mythology, the wine of the gods.

nec-ta-re-ous (*-tā'rē-us*), *adj.* producing, or sweet like, nectar.

nec-tar-ine (*'tēr-in*), *n.* a variety of peach.

need (*nēd*), *n.* necessity; urgent want; poverty: *v. t.* to want: *v. i.* to be necessary. [WANT.]

nee-dle (*nē'dl*), *n.* a small sharp-pointed steel instrument furnished with an eye to hold thread.

needs (*nēdz*), *adv.* necessarily; indispensably.

ne'er (*nār*), *adv.* contraction of never.

ne-fa-ri-ous (*nē-fā'ri-us*), *adj.* extremely wicked; vile; infamous. [WICKED.]

ne-ga-tion (*nē-gā'shun*), *n.* denial; absence of certain qualities.

neg-a-tive (*neg'ȧ-tiv*), *adj.* implying negation; denying; refusing; having the power of veto: *n.* a word expressing denial: *v. t.* to prove the contrary of; dismiss or reject by vote.

neg-lect (*-lekt'*), *n.* omission; habitual negligence; disregard: *v. t.* to omit by carelessness or design; slight.

Syn. NEGLECT, omit. What we *neglect* ought not to be *neglected;* but what we *omit* may be *omitted* or otherwise, as convenience requires. We *neglect* an opportunity, we *neglect* the means, the time, the use, and the like; we *omit* a word, a sentence, a figure, and the line may be *omitted* as convenience requires. [See *disregard.*]

Ant. CARE, direct, worry.

★**neg-li-gée** (*-li-zhā'*), *n.* a loosely fitting dress or gown: *adj.* carelessly arranged or attired.

neg-li-gence (*'li-jens*), *n.* carelessness.

neg-li-gent (*-jent*), *adj.* careless; remiss; heedless.

neg-li-gi-ble (*'li-ji-bl*), *adj.* that may be neglected; of little account or value.

ne-go-ti-a-ble (*nē-gō'shi-ȧ-bl*), *adj.* capable of being negotiated, transferred, or exchanged.

ne-go-ti-ate (*nē-gō'shi-āt*), *v. i.* to treat with others in business or private affairs: *v. t.* to conclude by treaty, bargain, or agreement.

ne-gro (*'grō*), *n.* [*pl.* negroes (*'grōz*)], an African black. [Fem. *negress.*] *adj.* pertaining to, or characteristic of, negroes.

Nehemiah (*nē-hē-mī'ȧ*). From the Hebrew *N'hhemyah,* from *n'hhem-yah,* "whom Jehovah comforts"; that is, "aids." Danish, *Nehemias;* It., *Neemia;* Lat., *Nehemias;* Sp., *Nehemias.*

neigh (*nā*), *v. i.* to utter the cry, or whinny, of a horse: *n.* the cry of a horse.

neigh-bor (*nā'bēr*), *n.* one who dwells near to another; an intimate: *adj.* near to another. [NEIGHBORING.]

neigh-bor-hood (*-hood*), *n.* adjacent district; vicinity; the state of being neighbors.

Syn. NEIGHBORHOOD, vicinity. *Neighborhood* is employed in reference to the inhabitants, or in regard to inhabited places, to denote nearness of persons to each other or to objects in general; but *vicinity* is employed to denote nearness of one object to another, whether person or thing.

neigh-bor-ly (*nā'bēr-li*), *adj.* like, or becoming, a neighbor; social; civil; friendly: *adv.* in the manner of a neighbor.

nei-ther (*nē'* or *nī'thēr*), *pron.* and *conj.* not either.

Nellie, Nelly. Names derived from *Ellen,* and sometimes from *Helen.*

ne-o, a *prefix* meaning *new, young, recent:* as *neoplastic,* recently formed.

ne-ol-o-gism (*nē-ol'ō-jizm*), *n.* a new word or phrase introduced into a language; new religious doctrines.

ne-o-phyte (*'ō-fit*), *n.* a novice; one recently baptized; a convert: *adj.* recently entered.

neph-ew (*nef'ū*), *n.* the son of a brother or sister.

nep-o-tism (*nep'ō-tizm*), *n.* a preference shown in bestowing patronage to one's relatives in the church or public service.

nerve (*nērv*), *n.* one of the gray fibers which convey sensation from all parts of the body to the brain and originate motion; *v. t.* to invigorate or strengthen.

★**ner-vine** (*nēr'vin,* not *nēr'vēn*), *n.* a tonic for the nerves.

ner-vous (*'vus*), *adj.* pertaining to, or composed of, nerves; having weak nerves; easily agitated.

nest (*nest*), *n.* the bed or dwelling chosen by a bird for incubation, and the rearing of its young.

nes-tle (*nes'l*), *v. i.* to lie close and snug; take shelter: *v. t.* to cherish.

nes-tling (*'ling*), *n.* a young bird in the nest or just taken from it: *adj.* recently hatched.

net (*net*), *n.* an instrument of twine knotted into meshes for catching birds, fish, etc.; anything resembling or made like a net; *v. t.* take with a net; snare.

neth-er (*neth'ēr*), *adj.* lying beneath; lower; belonging to the regions below.

Netherlands. Which means "low lands," is the English name of the Dutch kingdom at the mouth of the Rhine which the French call *Les Pays Bas. Koningrijk der Nederlanden* is the official Dutch name of the kingdom as constituted after the war of 1830, when the Belgians acquired their independence.

net-tle (*net'l*), *n.* a stinging plant of the genus Urtica: *v. t.* to provoke or irritate.

★**neu-ral-gi-a** (*nū-ral'ji-ȧ,* not *nū-ral'jȧ*), *n.* acute pain in a nerve.

neu-ras-the-ni-a (*-ras-thē'ni-ȧ*), *n.* brain and nerve exhaustion, as from influenza, etc.

neu-ro, a *prefix* meaning *nerve:* as *neurography,* a treatise on the nerves.

neu-rot-ic (*nū-rot'ik*), *adj.* pertaining to, seated in, or affecting, the nerves; characterized by a morbid hysterical style.

neu-ter (*'tēr*), *adj.* of neither sex; intransitive: *n.* a flower having neither pistil nor stamens.

neu-tral (*'tral*), *adj.* unbiased; indifferent; taking no part on either side in a contest.

neu-tral-i-ty (*-tral'i-ti*), *n.* the state of being neutral.

Nevada (*nē-vȧ'dȧ*). State of the Union, county in Arkansas and California. Named from the mountain range, the *Sierra Nevada,* running through the state. Spanish words *serrado,* "serrated or saw-toothed," *nevada,* "snowy," *i. e.,* "snowy mountains," the application taken from the *Sierra Nevada* mountains of Granada, Spain.

nev-er (*nev'er*), *adv.* not at any time; in no degree.

Neversink highlands, N. J. So called by the sailors of outgoing craft, from the circumstance of their being the highest seashore elevations.

Neversink river, N. Y. From the Indian *newasink,* "mad river," also stated to be a local application, because the stream is less affected by drought than others.

never-the-less (*-the-les'*), *adv.* notwithstanding; in spite of that.

Nevskii Prospekt (*nef'ski-i pros-pekt'*). The finest and most important street in St. Petersburg, noted for its fine buildings. Length, about three and one-half miles.

new (*nū*), *adj.* recent in origin; modern; novel; lately made, produced, invented, or discovered.

Syn. NEW, novel, modern, fresh, recent. All these epithets are applied to what has not long existed; *new* expresses this idea simply, without any qualifications; *novel* is something strange or unexpected; the *modern* is the thing of to-day, as distinguished from that which existed in fore times; the *fresh* is that which is so *new* as not to be the worse for use, or that which has not been before used or employed; the *recent* is that which is so *new* as to appear as if it were just made or done.

Ant. AGED, ancient, antique, old, venerable.

Newark (*nū'ērk*), **N. J.** Suggested by the settlement's first minister, Rev. Abraham Pierson, from Newark-on-Trent, England, where he was "Episcopally ordained."

New Bedford. City in Bristol county, Massachusetts, the name of the owner of the town site being Russell, the family name of the duke of Bedford.

New Berne, or Newbern, N. C. From Berne, Switzerland, the native place of Christopher, Baron de Graafewidt, who in 1720 emigrated to and settled near this place.

New Brunswick (*brunz'wik*). A maritime province of the Dominion of Canada. Received its name in compliment to the house of Brunswick.

new-el (*nū'el*), *n.* in a winding staircase, the centra upright pillar around which the steps turn.

New England. Name applied to the northeastern section of the United States, embracing Maine, New Hampshire, Vermont, Massachusetts, Connecticut and Rhode Island.

new-fan-gled (*nū-fang'gld*), *adj.* new-fashioned.

Newfoundland (*nū'fund-land*). An island in Atlantic, east of British North America. The earliest of the colonial possessions of Great Britain. The name originally applied to the regions discovered by the two Cabots, and included a great portion of the North American coast.

New Hampshire. One of the New England states. Name given, in 1629, by John Mason, in compliment to his native county in England.

New Harmony. Town in Posey county, Indiana, settled by the "Harmonists," and named for their sect.

New Haven. County and town in same county, in Connecticut, settled by people from Boston, who called it a "new haven." Originally *Quinnipipaq,* from the Indian name of the river *Quinnepyooghq,* "long water place." The present name substituted "by the court," September 5, 1640.

New Holland. The name given to Australia previous to its settlement by the British.

New Jersey. One of the North Atlantic states of the Union. Named in compliment to Carteret, who had defended the Isle of Jersey (Cæsarea, one of the Channel islands) against the Long Parliament. Originally called *New Sweden* (when a Dutch possession).

New London. City and county in Connecticut, and town in Stanley county, North Carolina, named for the city in England.

New Mexico. A southwestern state of the Union. A distinguishing name from "*old*" Mexico, it having been a former possession of Mexico. The territory was called *Nova Mexicana* by Antonio de Espejo at the time of the settlement of Santa Fé.

New Orleans (*nū ôr'lē-anz*), **La.** Translation of the French name *Nouvelle Orleans,* given in honor of the Duc d'Orleans, regent of France.

Newport, R. I. In honor of the English admiral Christopher Newport (under James I.).

news (*nūz*), *n.* recent intelligence. This word is made up of the first letter of each point of the compass: North, east, west, south. This, therefore, is usually given as the origin of the term *news,* which comes from all points of the compass.

Syn. NEWS, tidings. *News* is unexpected, it serves to gratify idle curiosity; *tidings* are expected; they serve to allay anxiety. In time of war the public are eager after *news;* and they who have relatives in the army are anxious to have *tidings* of them.

news-pa-per (*'pā-pēr*), *n.* a paper published periodically, usually daily or weekly, containing the most recent intelligence.

newt (*nūt*), *n.* an eft; salamander.

New York. A middle eastern state of the Union. So named in honor of James, duke of York, afterward James II.

New York City, N. Y. Named from the state. The island on which the main part of the city is located is known as Manhattan island.

New Zealand (*zē'land*). A group of islands southeast of Australia. Name given by Dutch navigators, the word *zeeland* denoting "sea-land," being significant of the low countries.

next (*nekst*), *adj.* [*superl.* of nigh], nearest in time, place, degree, or rank: *adv.* immediately succeeding. [ADJACENT.]

Niagara (*nī-ag'ȧ-rȧ*). The largest cataract in North America, situated north-northwest of Buffalo, N. Y. From the Indian word *neagara,* meaning "across the neck," an allusion to a strip of land between lakes Erie and Ontario.

nib (*nib*), *n.* a bird's beak; the point of anything, especially a pen.

nib-ble (*'i*), *v. t.* and *v. i.* to bite by little at a time; continue to bite at gently and quickly, as a fish.

nib-lick (*nib'lik*), *n.* a heavy, iron, round-headed golf club.

nice (*nīs*), *adj.* fastidious; precise; squeamish; minutely discriminative. [EXACT.]

Nice (*nēs*). A town on the Riviera, French form of the Italian *Nizza.*

ni-ce-ty (*nī'sē-ti*), *n.* delicate management; fastidious delicacy; precision; minute accuracy.

niche (*nich*), *n.* a recess in a wall for a statue.

Nicholas (*nik'ō-las*). From the Latin name, *Nicolaus,* signifying "conqueror of the people." Dutch, *Nicolaas* (more frequently *Klaas*); Fr., *Nicolas;* Ger., *Nicolaus;* Gr., *Nikolaos;* Hun., *Miklos;* It., *Niccolo,* or *Nicolo;* Lat., *Nicolaus;* Port., *Nicolao;* Russ., *Nikolai* or *Nikolas;* Sp., *Nicolas;* Sw., *Nils.*

nick (*nik*), *n.* exact or critical point of time; winning throw at dice: *v. t.* to cut in nicks or notches.

nick-el (*'el*), *n.* a grayish-white ductile metal; a five-cent coin, made of nickel and copper alloy.

nick-el-o-de-on (*nik-el-ō'dē-on*) *n.* a place of amusement, generally charging no admission fee, containing various automatic machines, such as cinematographs, graphophones, etc., which may be used by patrons for a small charge.

nick-name (*'nām*), *n.* a name given in derision or familiarity: *v. t.* to give a nickname to; call by an opprobrious name.

Nicodemus (*nik-ō-dē'mus*). From the Greek meaning, "victory of the people," or the "con

queror of the people." Fr., *Nicodème;* Gr., *Nikodemos;* Lat., *Nicodemus.*

nic-o-tine (*nik'o-tin*), *n.* an acrid, poisonous alkaloid extracted from tobacco. [Also *nicotin.*]

niece (*nēs*), *n.* the daughter of a brother or sister.

Niel (*nēl*). An Anglo-Saxon form of *Nigel.*

Nigel (*ni'gel*). A name derived from the Latin *nigellus,* "somewhat black;" a diminutive of *niger,* "black."

nig-gard (*nig'ērd*), *adj.* meanly covetous; parsimonious; miserly.

nig-gard-ly (*-li*), *adv.* in a miserly manner. PENURIOUS.]

nigh (*nī*), *adj.* near in time or place; adjacent; closely allied by blood or friendship: *adv.* near; almost: *prep.* near to. [ADJACENT, CLOSE.]

night (*nīt*), *n.* the time from sunset to sunrise; period of darkness; death.

night-in-gale (*'in-gāl*), *n.* a small bird which sings with a sweet note at night; philomel.

night-mare (*'mār*), *n.* a dreadful dream accompanied with oppression on the chest and a feeling of helplessness; an incubus.

night-rid-er (*-rīd'ēr*), *n.* one of a band of masked mounted men who travel at night to intimidate and do violence as by burning barns, etc.

ni-hil-ism (*ni'hil-izm*), *n.* skepticism which denies that anything, even existence, can be known.

ni-hil-ist (*-ist*), *n.* a supporter of nihilism.

Nile. A river of Egypt, Africa. Called in Old Egyptian either *Hapi* or *P-iero,* "the river," of which *Nehar Misraim,* "the river of Egypt," or simply *Nahal,* "the valley" or "stream," were Semitic translations. The Greek name *Nilus* was probably a corruption of the Phenician name *Nahal.*

nim-ble (*nim'bl*), *adj.* quick and active; alert; lively; brisk. [ACTIVE.]

nim-bus (*nim'bus*), *n.* in art, the halo or cloud of light surrounding the heads of divinities.

nine (*nīn*), *adj.* containing one more than eight: *n.* the sum of 1 and 8.

nine-teen (*'tēn*), *adj.* consisting of 9 and 10: *n.* the sum of 9 and 10.

nine-ty (*'ti*), *adj.* containing 9 ten times: *n.* the number containing 9 times 10; the symbol (XC, 90) expressing such a number.

nin-ny (*nin'i*), *n.* a simpleton.

ninth (*ninth*), *adj.* the ordinal of 9: *n.* one of 9 equal parts.

Niobrara (*nī-ō-brā'rā*) **river, Neb.** From the Indian *ni,* "water," *abrara,* "wide," "the broad water."

nip (*nip*), *n.* a pinch, as with the nails or teeth; a blast as by cold: *v. t.* to pinch; blast or destroy.

nip-per (*'ēr*), *n.* one who, or that which, nips; one of the four foreteeth of a horse; a small boy: *pl.* small pincers.

nip-ple (*nip'l*), *n.* that part of the breast of a woman from which milk is drawn by a child; a teat.

nit (*nit*), *n.* the egg of any small insect.

Nita (*nē'tā*). A feminine name derived from *Annita,* a diminutive of *Ann.*

ni-tric ac-id (*nī'trik as'id*), a powerful acid used in chemistry, obtained by the action of sulphuric acid upon nitrate of potash; aqua fortis.

nitro, a *prefix* meaning *containing nitrogen:* as *nitro-*hydrochloric acid or aqua regia.

ni-tro-gen (*nī'trō-jen*), *n.* a gas which, with argon, constitutes 4-5ths by volume of the atmosphere, and constitutes the basis of nitric acid.

ni-trog-e-nous (*-troj'ē-nus*), *adj.* pertaining to, or containing, nitrogen.

ni-tro-glyc-er-ine (*-glis'ēr-in*), *n.* a highly explosive, oily liquid, prepared by the action of nitric and sulphuric acids upon glycerine. [Also *nitroglycerin.*]

ni-trous (*'trus*), *adj.* resembling, obtained from, or impregnated with, niter.

no (*nō*), *adv.* a word of denial or refusal: opposed to yes: *adj.* none.

Noah (*nō'ā*). From the Hebrew, *noah,* signifying "rest." Arabic, *Nooh* or *Nuh;* Dutch, *Noach* or *Noak;* Fr., *Noë;* Ger., *Noah;* Gr., *Noe;* Sw., *Noa.*

nob (*nob*), *n.* a knob; the head; a fop.

no-bil-i-ty (*nō-bil'i-ti*), *n.* the state or quality of being noble; noble birth; grandeur; dignity.

no-ble (*nō'bl*), *adj.* high in excellence or worth; illustrious; magnanimous; generous.

no-bod-y (*'bod-i*), *n.* no one; a person of no importance or influence.

noc-tur-nal (*nok-tūr'nal*), *adj.* pertaining to, done, or happening at, night.

nod (*nod*), *n.* a quick inclination of the head; a command: *v. t.* incline or bend: *v. i.* to give a quick forward motion of the head.

nod-dle (*'l*), *n.* the head.

node (*nōd*), *n.* a knot; knob; one of the two points at which the orbit of a planet intersects the ecliptic.

nod-ule (*'ūl*), *n.* a little knot or irregular rounded lump.

Noel (*nō'el*). From Fr. *Noel,* so named from being born on Christmas (*Noel*). Lat., *Natalis, Noelius.*

noise (*noiz*), *n.* sound; clamor; outcry; frequent or public conversation.

noi-some (*noi'sum*), *adj.* injurious to health; noxious; disgusting. [HURTFUL.]

nom-ad (*nom'ad*), *n.* one of a tribe that wanders about in search of game, pasture, etc.: *adj.* wandering.

no-men-cla-ture (*nō'men-klā-tūr*), *n.* the names or technical terms used in any art or science. [DICTIONARY.]

nom-i-nal (*nom'i-nal*), *adj.* pertaining to, or containing, names; existing only in name.

nom-i-nate (*-nāt*), *v. t.* to propose for an office; appoint.

Syn. NOMINATE, name. *To nominate* and *to name* are both to mention by *name;* but the former is to mention for a specific purpose; the latter is to mention for general purposes; persons only are *nominated;* things as well as persons are *named;* one *nominates* a person in order to propose him, or appoint him, to an office; but one *names* a person casually, in the course of conversation, or one *names* him in order to make some inquiry respecting him.

non, *prefix* meaning *not.*

non-age (*non'āj*), *n.* minority.

★**non-cha-lance** (*nōn-shā-lons',* French *nôn-shā-lāns'*), *n.* coolness; indifference.

non-de-script (*non'dē-skript*), *n.* a person or thing that cannot be easily described or classed: *adj.* abnormal; novel; odd.

none (*nun*), *adj.* not any; not one: *n.* and *pron.* no one; nothing.

non-en-ti-ty (*non-en'ti-ti*), *n.* [*pl.* nonentities (*-tiz*)], a thing not existing; a person of no importance or influence.

★**non-pa-rell** (*non-pā-rel',* not *non-pā-rēl'*), *adj.* without an equal: *n.* unequaled excellence; a kind of printing-type.

non-plus (*'plus*), *v. t.* to throw into complete perplexity; puzzle.

non-sense (*'sens*), *n.* language without meaning; anything absurd. [ABSURD.]

non-suit (*'sūt*), *n.* the withdrawal of a suit during trial either voluntarily or by judgment of the court on the discovery of error or defect in the pleadings: *v. t.* to subject to a nonsuit.

noo-dle (*nōō'dl*), *n.* a simpleton; a strip of dried dough, served in soup or as a baked dish.

nook (*nook*), *n.* a small recess or secluded retreat; a corner.

noon (*nōōn*), *n.* the middle of the day, 12 o'clock; height: *adj.* pertaining to noon.

noon-day (*'dā*), *adj.* pertaining to noon, or midday: *n.* noon. [Also *noontide.*]

noose (*nōōs*), *n.* a running knot which binds the closer the more tightly it is drawn: *v. t.* to catch or tie in a noose; ensnare.

nor (*nôr*), *conj.* a negative particle correlative to *neither* or *not.*

Nora, Norah (*nō'rā*). Irish feminine names corrupted from *Onora,* from the English name *Honora.* As an English name *Nora* may sometimes be an abbreviation of *Leonora.*

Norfolk, Va. Named from the county in England of that name. (A.-S. *Northfolc,* northern people.)

nor-mal (*nôr'mal*), *adj.* according to rule; regular; perpendicular.

Norman (*nôr'man*). Means "born in Normandy," or "of Norman extraction." Lat., *Normannus.*

Normandy (*nôr'man-di*). French *Normandie.* A former government of northern France; it was occupied early in the tenth century by the Northmen, whose name on French soil gradually changed to *Norman.*

north (*nôrth*), *n.* one of the four cardinal points; the point opposite to the south: *adj.* pertaining to, situated in, or coming from, the north: *adv.* to the north.

North Carolina (*kar-ō-lī'nā*). A South Atlantic state of the Union. North and South Carolina were originally *Carolina.* The name was given in 1564, at the time of the first colonization by the Huguenots in the reign of Charles IX. of France.

nor-thern (*nôr'thērn*), *adj.* in, from, or toward, the north. [Also *northerly.*]

North Sea. Name indicative of its position geographically. An arm of the Atlantic east of England and west of Norway and Denmark.

Norwalk, Conn. Named from the Indian *nayaug,* "the middle land," "a tract between two rivers."

nose (*nōz*), *n.* the organ of smell; scent; a snout; nozzle: *v. t.* to smell or scent.

nose-gay (*'gā*), *n.* a bouquet.

no-sol-o-gy (*nō-sol'ō-ji*), *n.* the systematic classification of diseases.

nos-tal-gi-a (*nos-tal'ji-ā*), *n.* homesickness.

nos-tril (*'tril*), *n.* one of the two openings in the nose.

nos-trum (*'trum*), *n.* a quack medicine.

no-ta-ble (*nō'tā-bl*), *adj.* worthy of notice; memorable; notorious.

no-ta-ry (*'tā-ri*), *n.* [*pl.* notaries (*-riz*)], an official authorized to attest deeds, contracts, etc.

no-ta-tion (*-tā'shun*), *n.* the act or practice of recording by marks or symbols.

notch (*noch*), *n.* a small hollow cut; indentation: *v. t.* to cut into small hollows.

note (*nōt*), *n.* a memorandum; short letter; a paper acknowledging a debt and promising payment: *v. t.* to make a note of; mark.

not-ed (*'ed*), *p. adj.* well-known; celebrated; remarkable. [DISTINGUISHED.]

noth-ing (*nuth'ing*), *n.* not anything; a thing of no value, use, or importance; a cipher: *adv.* in no degree.

no-tice (*nō'tis*), *n.* mental or visual observation; attention; remark; advice; information: *v. t.* to see or observe.

Syn. NOTICE, remark, observe. *To notice* is a more cursory action than *to remark;* we may *notice* a thing by a single glance, or on merely turning one's head; but *to remark* supposes a reaction of the mind on an object. We *observe* things in order to judge of, or draw conclusions from, them. We *remark* things as matters of fact; we *observe* them in order to judge of, or draw conclusions from them. [See *intelligence.*]

no-tice-a-ble (*nō'tis-ā-bl*), *adj.* worthy of observation; remarkable.

no-ti-fi-ca-tion (*-ti-fi-kā'shun*), *n.* the act of giving notice; notice given; document by which information is communicated.

no-ti-fy (*'ti-fī*), *v. t.* [*p. t.* and *p. p.* notified, *p. pr.* notifying], to give notice to; make known. [ANNOUNCE.]

no-tion (*'shun*), *n.* an idea or conception; opinion; belief; inclination; a clever contrivance. [CONCEPTION.]

no-to-ri-e-ty (*-tō-rī'ē-ti*), *n.* the state of being notorious. [Also *notoriousness.*]

no-to-ri-ous (*-tō'ri-us*), *adj.* publicly known; usually in a bad sense.

not-with-stand-ing (*not-with-stand'ing*), *prep.* in spite of: *conj.* although: *adv.* however; yet.

nou-me-non (*nou'mē-non*), *n.* [*pl.* noumena (*-nā*)], essence; the substance or reality existing under the phenomenal.

noun (*noun*), *n.* the name of anything; a substantive.

nour-ish (*nur'ish*), *v. t.* to feed or bring up; support; maintain: *v. i.* to promote growth. [CHERISH.]

Nova Scotia (*nō'vā skō'shi-ā*), or *New Scotland,* name given by James I. to the French colony of Acadia, when he granted it by patent to Sir William Alexander, a Scotchman, on the pretext of its having been discovered by Cabot in the reign of Henry VII. A maritime province of Canada.

Nova Zembla (*zem'blā*). "New land." An uninhabited island in the Arctic Ocean north of Russia.

nov-el (*nov'el*), *adj.* of recent origin or introduction; new; strange or unusual: *n.* a fictitious tale or romance. [NEW, FICTION.]

nov-el-ist (*'el-ist*), *n.* a writer of novels.

nov-el-ty (*'el-ti*), *n.* newness; something new.

November. The ninth month in the Roman calendar. Lat. *novem,* "nine."

nov-ice (*nov'is*), *n.* a beginner.

now (*nou*), *adv.* at the present time; quite recently.

no-wise (*nō'wiz*), *adv.* not in any manner or degree.

★**nox-ious** (*nok'shus,* not *nok'shi-us*), *adj.* harmful; pernicious; deadly. [HURTFUL.]

noz-zle (*noz'l*), *n.* a projecting mouthpiece.

nu-cle-us (*nū'klē-us*), *n.* the central mass around which matter accretes or grows; the head of a comet.

nude (*nūd*), *adj.* bare; naked; in law, made without consideration.

nudge (*nuj*), *v. t.* to touch gently, as with the elbow.

nu-ga-to-ry (*nū'gā-tō-ri*), *adj.* trifling; useless.

nug-get (*nug'et*), *n.* a lump or mass of metal, especially of gold in auriferous soil.

nui-sance (*nū'sans*), *n.* anything offensive, injurious, or annoying. [ABOMINATION.]

null (*nul*), *adj.* of no legal force; void.

nul-li-fi-ca-tion (*-i-fi-kā'shun*), *n.* the act of nullifying.

nul-li-fy (*'i-fī*), *v. t.* [*p. t.* and *p. p.* nullified, *p. pr.* nullifying], to annul or render void. [ABOLISH.]

nul-li-ty (*'i-ti*), *n.* want of existence, force, or validity.

numb (*num*), *adj.* deprived of sensation or motion; torpid: *v. t.* to benumb.

num-ber (*'bēr*), *n.* a unit; one, or more than one; multitude; one of a series; a collection of things; *v. t.* to count; mark with a number.

nu-mer-al (*nū'mēr-al*), *adj.* pertaining to, consisting of, or denoting, number: *n.* a symbol or word expressing a number. [Also *numerical.*]

Syn. NUMERAL, numerical. *Numeral,* or belonging to *number,* is applied to a class of words in grammar, as a *numeral* adjective or a *numeral* noun; *numerical,* or containing *number,* is applied to whatever other objects respect *number;* a *numerical* difference, is that which subsists between any two *numbers,* or is expressed by *numbers.*

nu-mer-ate (*-āt*), *v. t.* to reckon or enumerate; point or read, as figures.

nu-mer-ous (*'mēr-us*), *adj.* consisting of a great number.

nu-mis-mat-ic (*-mis-mat'ik*), *adj.* pertaining to coins or medals: *n. pl.* the science and study of coins and medals.

num-skull (*num'skul*), *n.* a blockhead.

nun (*nun*), *n.* a female devoted to a religious life and seclusion under a vow of chastity.

nun-ci-o (*'shi-ō*), *n.* a papal ambassador.

nun-ner-y (*nun'ēr-i*), *n.* [*pl.* nunneries (*-iz*)], a religious house for nuns.

★**nup-tial** (*nup'shal,* not *nūp'chal*), *adj.* pertaining to, or constituting, marriage.

nurse (*nûrs*), *n.* a woman who cares for infants; one who tends the sick or infirm: *v. t.* to tend or suckle, as an infant; bring up. [CHERISH.]

nur-ture (*nûr'tūr*), *n.* that which nourishes; diet; food; *v. t.* to bring up; nourish. [CHERISH, TEACH.]

nut (*nut*), *n.* the fruit of certain trees; a piece of metal grooved for screwing onto the end of a bolt.

nut-meg (*nut'meg*), *n.* the aromatic kernel of the fruit of an East Indian tree.

nu-tri-ent (*nū'tri-ent*), *adj.* promoting growth.

nu-tri-ment (*'tri-ment*), *n.* nourishment.

nu-tri-tion (*-trish'un*), *n.* that which nourishes; food.

nu-tri-tious (*'us*), *adj.* affording nutrition.

nu-tri-tive (*nū'tri-tiv*), *adj.* pertaining to, or having the quality of, nutrition.

nymph (*nimf*), *n.* a goddess of nature inhabiting the mountains, woods, streams.

O

oak (*ōk*), *n.* a tree of many species.

oak-um (*'um*), *n.* old ropes untwisted and pulled into loose hemp.

oar (*ōr*), *n.* a light pole with a broad blade, for rowing a boat: *v. t.* and *v. i.* to row.

o-a-sis (*ō-ā'sis*), *n.* [*pl.* oases (*'sēz*)], a fertile spot in a barren sandy desert.

oat (*ōt*), *n.* a grassy plant of the genus Avena, the grain of which is used as food [usually in *pl.*].

oat-en (*'en*), *adj.* made of oats.

oath (*ōth*), *n.* a solemn declaration of truth-telling with an appeal to God as witness.

Obadiah (*ō-bā-dī'ā*). From the Hebrew *Obhadhyah*, "servant or worshiper of Jehovah."

ob-du-ra-cy (*ob'dū-rā-si*), *n.* obdurate conduct or quality.

ob-du-rate (*'dū-rāt*), *adj.* hardened against moral influence. [OBSTINATE.]

o-be-di-ence (*ō-bē'di-ens*), *n.* submission to authority; dutifulness. [dutiful.

o-be-di-ent (*'di-ent*), *adj.* submissive to authority;

Syn. OBEDIENT, submissive, obsequious. One is *obedient* to command, *submissive* to power or the will, *obsequious* to persons. *Obedience* is always taken in a good sense.

★**o-bei-sance** (*-bē'sans*), *n.* a bow or curtsey; act of reverence.

ob-e-lisk (*ob'ē-lisk*), *n.* a lofty, four-sided stone pillar gradually tapering as it rises, and terminating in a pyramidal top; a reference mark (†).

Oberlin (*ō'bēr-lin*). Village in Lorain county, Ohio, named for Jean Frederick Oberlin, a philanthropist.

o-bese (*ō-bēs'*), *adj.* corpulent.

★**o-bes-i-ty** (*-bes'i-ti*), *n.* excessive corpulence, especially of an unhealthy kind. [Also *obeseness.*]

o-bey (*-bā'*), *v. t.* [*p. t.* and *p. p.* obeyed, *p. pr.* obeying], to submit to the rule or authority of: *v. i.* to yield; do as bidden.

o-bit-u-a-ry (*ō-bit'ū-ā-ri*), *n.* [*pl.* obituaries (*-riz*)], a register of deaths; an account of a deceased person.

ob-ject (*ob-jekt'*), *v. t.* to urge against; oppose: *v. i.* to make objections: *n.* (*ob'jekt*) anything placed before the mind or senses.

Syn. OBJECT, oppose. *To object* to a thing is to propose or start something against it; but *to oppose* it is to set one's self up steadily against it. *Ant.* FAVOR, further.

ob-jec-tion (*-jek'shun*), *n.* the act of objecting; adverse reason; difficulty raised. [DEMUR.]

ob-jec-tion-a-ble (*-ā-bl*), *adj.* liable or open to objection; reprehensible.

ob-jec-tive (*'tiv*), *adj.* pertaining to an object; external to the mind: *n.* the accusative case.

ob-jec-tiv-ism (*'tiv-izm*), *n.* in art and literature, the representation of persons and incidents as they really appear.

ob-jur-gate (*-jûr'gāt*), *v. t.* to chide or reprove.

ob-la-tion (*-lā'shun*), *n.* an offering or sacrifice.

ob-li-ga-tion (*-li-gā'shun*), *n.* the binding power of a vow, promise, or contract; the state of being indebted for a favor. [DUTY, INDEBTED.]

★**ob-li-ga-to-ry** (*ob'li-gā-tō-ri*), *adj.* morally or legally binding.

o-blige (*ō-blīj'*), *v. t.* to constrain by force, morally, legally, or physically. [COMPEL.]

o-bli-ging (*-blī'jing*) *adj.* disposed to do favors. [CIVIL.]

ob-lique (*ob-lēk'*), *adj.* deviating from a right line; not parallel.

ob-lit-er-ate (*-lit'ēr-āt*), *v. t.* to efface or wear out; destroy by the effects of time. [BLOT.]

ob-liv-i-on (*-liv'i-un*), *n.* the state of being blotted out from memory; forgetfulness. [FORGETFULNESS.]

ob-liv-i-ous (*'i-us*), *adj.* forgetful. [ABSTRACTED.]

ob-long (*'lông*), *adj.* longer than broad: *n.* a geometrical figure of such shape.

ob-lo-quy (*'lō-kwi*), *n.* reproachful language; calumny; slander; reproach. [REPROACH.]

ob-nox-ious (*-nok'shus*), *adj.* deserving of censure or disapproval; hateful; offensive; unpopular.

Syn. OBNOXIOUS, offensive. In the sense of giving offense *obnoxious* implies as much as hateful, *offensive* little more than displeasing; a man is *obnoxious* to a party whose interest or principles he is opposed to; he may be *offensive* to an individual merely on account of his manners or any particular actions.

★**o-boe** (*ō'boi*), *n.* a musical wind instrument of the reed class; hautboy; an organ stop.

ob-scene (*ob-sēn'*), *adj.* offensive to chastity; impure in language or action; indecent; filthy.

ob-scure (*-skūr'*), *adj.* without light or distinctness; dark; not easily understood: *v. t.* to darken or dim; disguise.

Syn. OBSCURE, abstruse, ambiguous, cloudy, complex, complicated, dark, deep, dense, difficult, dim, doubtful, mysterious, profound. That is *obscure* which the eye or mind can not clearly discern or see through. That which is *complicated* is likely to be *obscure*, but that may be *obscure* which is not at all *complicated* and scarcely *complex*. In that which is *obscure* there may be nothing to hide; it is hard to see to the bottom of the *profound*. [See *mysterious*, *eclipse*, *dark*.]

ob-se-crate (*ob'sē-krāt*), *v. t.* to implore.

★**ob-se-quies** (*'sē-kwiz*), *n. pl.* funeral rites. [FUNERAL.]

ob-se-qui-ous (*-sē'kwi-us*), *adj.* servile; compliant to excess. [OBEDIENT.]

ob-ser-va-tion (*ob-zēr-vā'shun*), *n.* the act of observing; attention; that which is observed; remark; note.

ob-serv-a-to-ry (*-zēr'v'ā-tō-ri*), *n.* [*pl.* observatories (*-riz*)], a building fitted up for astronomical research.

ob-serve (*-zērv'*), *v. t.* to keep in view; take notice of; celebrate: *v. i.* to make observations.

Syn. OBSERVE, watch. We *observe* a thing in order to draw an inference from it; we *watch* anything in order to discover what may happen; we *observe* with coolness. [See *notice*, *see*.]

ob-so-les-cent (*-sō-les'ent*), *adj.* becoming obsolete. [OBSOLETE.]

ob-so-lete (*'sō-lēt'*), *adj.* gone out of date; disused; imperfectly developed.

Syn. OBSOLETE, ancient, antiquated, archaic, obsolescent, old, out of date, rare. Some of the *oldest* or most *ancient* words are not *obsolete*, as father, mother, etc. A word is *obsolete* which has quite gone out of reputable use; a word is *archaic* which is falling out of reputable use.

ob-sta-cle (*ob'stā-kl*), *n.* an obstruction; an impediment. [DIFFICULTY.]

ob-stet-ric (*-stet'rik*), *adj.* pertaining to midwifery: *n. pl.* the science of midwifery.

ob-sti-na-cy (*'sti-nā-si*), *n.* the state or quality of being obstinate; stubbornness.

ob-sti-nate (*'sti-nāt*), *adj.* pertinaciously adhering to one's opinion or purpose; stubborn.

Syn. OBSTINATE, contumacious, decided, dogged, firm, fixed, headstrong, heady, immovable, indomitable, inflexible, intractable, obdurate, opinionated, pertinacious, refractory, resolute, stubborn, The *headstrong* person is not to be stopped in his own course of action, while the *obstinate* and *stubborn* is not to be driven to another's way. The most amiable person may be *obstinate* on some one point; the *stubborn* person is for the most part habitually so; *refractory* implies more activity of resistance; the *stubborn* horse balks; the *refractory* animal plunges, rears, and kicks; *contumacious* refers to a proud and insolent defiance of authority, as of the summons of a court. *Pertinacious* demand is contrasted with *obstinate* refusal. [See *perverse*.] *Ant.* COMPLIANT, docile, obedient, wavering.

ob-strep-er-ous (*-strep'ēr-us*), *adj.* clamorously noisy; turbulent.

ob-struct (*-strukt'*), *v. t.* to block up or impede; hinder from passing; interrupt.

Syn. OBSTRUCT, arrest, bar, barricade, check, choke, clog, embarrass, hinder, impede, interrupt, oppose, retard, stay, stop. To *obstruct* is literally to build up against; the road is *obstructed* by fallen trees; we may *hinder* one's advance by following and clinging to him; anything that makes one's progress slower, whether from within or from without, *impedes*; to *arrest* is to cause to *stop* suddenly.

ob-tain (*-tān'*), *v. t.* to get possession of; gain; acquire; win; procure: *v. i.* to be established in practice or use.

ob-trude (*-trōōd'*), *v. t.* to thrust in or upon; urge or offer with unreasonable importunity. [INTRUDE.]

ob-tru-sive (*-trōō'siv*), *adj.* inclined or apt to intrude.

ob-tuse (*-tūs'*), *adj.* not pointed or acute; greater than a right angle; dull. [STUPIDITY.]

ob-verse (*-vērs'*), *adj.* bearing the head, said of a coin or medal: *n.* opposed to reverse.

ob-vi-ate (*'vi-āt*), *v. t.* to remove, as difficulties or objections.

ob-vi-ous (*'vi-us*), *adj.* evident. [APPARENT.]

oc-ca-sion (*ok-kā'zhun*), *n.* occurrence; state or position of affairs; opportunity.

Syn. OCCASION, opportunity. The *occasion* is that which determines our conduct, and leaves us no choice; it amounts to a degree of necessity; the *opportunity* is that which invites to action; it tempts us to embrace the moment for taking the step. [See *cause*.]

oc-ca-sion-al (*'zhun-al*), *adj.* occurring at regular intervals.

Syn. OCCASIONAL, casual. *Occasional* carries with it more the idea of unfrequency, and *casual* that of unfixedness, or the absence of all design. Our acts of charity may be *occasional*; but they ought not to be *casual*.

Oc-ci-dent (*ok'si-dent*), *n.* the West; the countries west of Asia and the Turkish dominions.

oc-cult (*-kult'*), *adj.* hidden; secret; invisible. [SECRET, MYSTERIOUS.]

oc-cu-pan-cy (*'ū-pan-si*), *n.* the act of taking and holding in possession.

oc-cu-pant (*'ū-pant*), *n.* one who has possession.

oc-cu-pa-tion (*-pā'shun*), *n.* the act or state of occupying; business, employment, or calling.

oc-cu-py (*'ū-pī*), *v. t.* to take possession of; hold or keep in possession. [HOLD.]

oc-cur (*ok-kûr'*), *v. i.* to happen or take place; come to the mind; be found or met with.

oc-cur-rence (*-kur'ens*), *n.* an accident, event, or incident. [EVENT.]

o-cean (*ō'shun*), *n.* the vast expanse of salt water covering more than 3-5ths of the globe.

o-cher (*'kēr*), *n.* a fine yellow or brown colored clay: used as a pigment.

Ocklawaha (*ok-lā-wā'hā*) **river, Fla.** The Seminole Indian name, meaning "muddy place."

Ocklockonee (*ok-lok'ō-nē*) **river, Fla.** From the Indian (Seminole), meaning "yellow water."

Ocmulgee (*ok-mul'gē*) **river, Ga.** So called from the Creek Indian name, *oko-mulgi*, "the turbulent stream."

Oconee (*ō-kō'nē*) **river, Ga.** From the Seminole Indian word *eknoni*, "a water course," a "small river."

octa, a *prefix* meaning *eight*, as *octa*chord, an instrument of 8 strings; a system of 8 sounds. [Also *octo*.]

oc-ta-gon (*ok'tā-gon*), *n.* a plane figure of 8 sides and 8 angles.

oc-tave (*'tāv*), *n.* an eighth or an interval of 12 semitones.

Octave. See *Octavius*.

Octavia (*ok-tā'vi-ā*). Feminine of *Octavius*. Fr., *Octavie;* It., *Octavia;* Lat., *Octavia*.

Octavius (*ok-tā'vi-us*). Latin name, signifying "the eighth," *i. e.*, the eighth son in order of birth. Fr., *Octave;* It., *Octavio;* Lat., *Octavius;* Sp., *Octavio*.

October. The tenth month of the modern calendar. Name means "the eighth month" (of the ancient calendar), from the Latin *octo*, "eight."

oc-to-pus (*'tō-pus*), *n.* [*pl.* octopuses (*-ez*)], a genus of *Cephalopods* having 8 arms, containing the cuttlefish.

oc-u-lar (*'ū-lēr*), *adj.* pertaining to, depending on, or formed by, the eye; known from actual sight.

oc-u-list (*'ū-list*), *n.* one who is skilled in the treatment of eye diseases.

odd (*od*), *adj.* not paired or matched with another; not even; unusual; peculiar. [RARE.]

Odd Fellows. A fanciful name assumed by the original founders of the society.

od-di-ty (*'i-ti*), *n.* a person or thing that is peculiar.

odds (*odz*), *n. pl.* inequality; advantage; superiority.

ode (*ōd*), *n.* a short song; lyric poem.

o-di-ous (*ō'di-us*), *adj.* offensive; unpopular. [HATEFUL.]

o-di-um (*'di-um*), *n.* hatred; dislike.

o-dor (*'dēr*), *n.* a scent; estimation.

o-dor-if-er-ous (*-dēr-if'ēr-us*), *adj.* diffusing fragrance.

o-dor-ous (*'dēr-us*), *adj.* emitting an odor or scent; fragrant.

of (*ov*), *prep.* from; out of; belonging to; according to; proceeding from.

off (*ôf*), *adj.* most distant: *adv.* away from: *prep.* not on; distant from: *interj.* begone!

of-fal (*of'al*), *n.* refuse; waste meat.

of-fend (*-fend'*), *v. t.* to displease or make angry: *v. i.* do anything displeasing.

of-fend-er (*'ēr*) *n.* one who offends or transgresses; a delinquent.

Syn. OFFENDER, delinquent. Those who go into a wrong place are *offenders;* those who stay away when they ought to go are *delinquents*.

of-fense (*-fens'*), *n.* any cause of anger or displeasure; insult; injury; assault. [ABOMINATION.]

of-fen-sive (*-fen'siv*), *adj.* causing displeasure; disagreeable: *n.* act of attacking. [OBNOXIOUS.]

of-fer (*'ēr*), *v. t.* to present for acceptance or refusal; proffer: *v. i.* express a willingness: *n.* a proposal made; price offered. [GIVE, ALLEGE.]

of-fice (*of'is*), *n.* public or private business; employment; function; apartment for the transaction of business.

of-fi-cer (*'sēr*), *n.* a person commissioned to perform a certain public duty.

of-fi-cial (*-fish'al*), *adj.* pertaining to an office or public duty: *n.* one who holds a civil office.

of-fi-ci-ate (*'i-āt*), *v. i* to perform the duties of an office.

of-fi-cious (*-fish'us*), *adj.* too forward in offering services; meddling. [ACTIVE.]

off-ing (*ôf'ing*), *n.* that part of the sea with deep water off the shore.

off-spring (*'spring*), *n.* a child, children, or descendants.

Syn. OFFSPRING, progeny, issue. *Offspring* is a familiar term applicable to one or many children; *progeny* is employed only as a collective noun for a number; *issue* is used in an indefinite manner without particular regard to number. When we speak of the children themselves we denominate them the *offspring;* when we speak of the parents, we denominate the children their *progeny*. The *issue* is said only in regard to a man that is deceased; his property descends to his male *issue* in a direct line.

★**of-ten** (*of'n*, not *ôf-ten*), *adv.* many times; frequently.

Ogdensburg, N. Y. Named from Samuel Ogden, the first proprietor.

o-gle (*ō'gl*), *v. t.* to look fondly at with a side glance: *n.* a side glance.

o-gre (*ō'gēr*), *n.* an imaginary man-eating monster or giant. [Fem. *ogress*.]

Ohio. State in the Union, river and county in

Indiana, Kentucky, and West Virginia. An Indian word meaning "the beautiful river."

ohm (*ōm*), *n.* the unit of electrical resistance.

oil (*oil*), *n.* a highly inflammable fatty liquid obtained from various animal and vegetable substances: *v. t.* to lubricate with oil.

oint-ment (*oint'ment*), *n.* an unctuous substance applied to a wound or injured part.

Okechobee (*ō-kē-chō'bē*) **lake, Fla.** Seminole Indian word meaning "grassy lake." [Also spelled *Okitchobi.*]

Okefinokee (*ō-kē-fin-ō'kē*) **swamp, Ga.** A Choctaw word, *okefinocau*, "quivering water."

Oklahoma (*ōk-lä-hō'mä*). A southwestern state of the Union. A Choctaw word signifying "red people," *okla*, "people," *homa*, "red." Another word is given meaning "home for all Indians."

ok-ra (*ok'rä*), *n.* a West Indian plant, the pods of which are used in soups, etc. [Also *okro*, *ochra.*]

old (*ōld*), *adj.* [*comp.* older, *superl.* oldest], aged; decayed by time; ancient; out of date; long practiced. [ELDERLY, OBSOLETE.]

Old Bailey, The. The principal criminal court of England, situated on the street named Old Bailey, which runs from Newgate to Ludgate hill, not far from St. Paul's, London.

Old Dominion (*dō-min'yun*). A name popularly given to the state of Virginia. Its origin is variously explained. Perhaps the best account is that Captain John Smith called Virginia "Old Virginia" to distinguish it from "New Virginia," as the New England colony was called.

★old-en (*ōld-n*, not *ōld-en*), *adj.* ancient; bygone.

Old Jewry. One of the localities allotted in olden times as a residence for the Jews. The terminal *ry* is the Old English *ru* or *ra*, having a collective signification, as in rookery, cyry (eggery), poultry, etc.

Old Point Comfort. Town in Elizabeth county, Virginia, so named by Capt. Christopher Newport, because he found it a safe haven after a severe storm; the "Old" added to distinguish it from New Point Comfort, a few miles away.

o-le-ag-i-nous (*ō-lē-aj'i-nus*), *adj.* oily; unctuous.

o-le-an-der (*-an'dĕr*), *n.* an evergreen shrub with handsome fragrant flowers.

o-le-fi-ant (*ō-le'fi-ant*), *adj.* noting a gas formed by heating 2 volumes of sulphuric acid with 1 volume of alcohol.

oleo, a *prefix* meaning *oily, pertaining to oil*, or *oily.*

o-le-o-mar-ga-rine (*ō-lē-ō-mär'gä-rin*), *n.* imitation butter made from milk and animal fat, etc.

ol-fac-to-ry (*ol-fak'tō-ri*), *adj.* pertaining to, or used in, smelling: *n.* organ of smell (usually *pl.*)

ol-i-gar-chy (*i-gär-ki*), *n.* [*pl.* oligarchies (*-kiz*)], government in which the supreme power is in the hands of a few.

ol-ive (*'iv*), *n.* a plant of the genus Olea, or its oily fruit.

Olive. Derived, perhaps, through the French, from the Latin *olivia*, the "olive tree," an emblem of peace.

ol-ive branch (*branch*), the branch of the olive; the emblem of peace.

Oliver (*ol'i-vĕr*). From French *olivier*, an olive tree, from the Latin *olivia.* Dutch, *Olivier;* Fr., *Olivier;* It., *Oliviero* or *Uliviero;* Lat., *Olivarus* or *Olivarius;* Sp., *Oliverio;* Sw., *Olivier.*

Olivia (*ō-liv'i-ä*). The feminine of *Oliver.* Danish, *Olivia;* Dutch, *Olivia;* Fr., *Olivie;* Ger., *Olivia;* Sw., *Olivia.*

Olympia (*ō-lim'pi-ä*). In ancient geography, a valley in Elis, Peloponnesus, Greece, situated on the Alpheus.

Olympia, Olympias (*ō-lim'pi-as*). From the Greek, meaning "belonging to Olympus," "divine." Fr., *Olympe;* Gr., *Olympias;* Lat., *Olympias* or *Olympas.*

Omaha (*ō'mä-haw*). City in Douglas county, Nebraska. An Indian word, meaning "up-stream"; also the name of a tribe designated as "up stream people."

★o-me-ga (*ō-mē'gä*), *n.* the last letter of the Greek alphabet; hence the last; end.

om-e-let (*om'ē-let*), *n.* a kind of pancake of eggs, etc.

o-men (*ō'men*), *n.* a sign of some future event: *v. t.* to portend or prognosticate.

Syn. OMEN, prognostic, presage. The *omen* and *prognostic* are both drawn from external objects; the *presage* is drawn from one's own feelings; the *omen* is drawn from objects that have no necessary connection with the thing they are made to represent; it is the fruit of the imagination, and rests on superstition; the *prognostic*, on the contrary, is a sign which partakes in some degree of the quality of the thing denoted.

om-i-nous (*om'i-nus*), *adj.* foreboding evil; inauspicious.

o-mis-sion (*ō-mish'un*), *n.* neglect or failure to do something required; something omitted.

o-mit (*-mit'*), *v. t.* to leave out; neglect; fail to mention. [NEGLECT.]

om-ni-bus (*om'ni-bus*), *n.* a public four-wheeled carriage for passenger traffic.

om-nip-o-tence (*-nip'ō-tens*), *n.* unlimited power.

om-nip-o-tent (*'ō-tent*), *adj.* having unlimited power.

om-ni-pres-ence (*-ni-prez'ens*), *n.* universal presence.

om-nis-cient (*-nish'ent*), *adj.* knowing all things; infinitely wise.

om-niv-o-rous (*om-niv'ō-rus*), *adj.* feeding upon animal and vegetable food; all-devouring.

on (*on*), *prep.* upon; in contact with the upper part; at; near: *adv.* forward; onward.

once (*wuns*), *adv.* at one time; formerly; one time.

one (*wun*), *adj.* single in number; some way; individual: *n.* the number one or its symbol; an individual.

Oneida (*ō-nī'dä*) **lake, N. Y.** The name of an Indian tribe, the word signifying "the people of the beacon stone," so named from a tradition concerning a certain stone which followed them in their wanderings.

on-er-ous (*on'ĕr-us*), *adj.* burdensome; weighty; oppressive.

on-ion (*un'yun*), *n.* a bulbous-rooted plant of the genus Allinn: used in cookery.

on-ly (*ōn'li*), *adj.* single; one and no more: *adv.* singly; merely.

on-o-mat-o-pœ-ia (*on-ō-mat-ō-pē'yä*), *n.* the formation of words to resemble the sounds made by the thing signified.

Onondaga (*on-on-daw'gä*) **lake, N. Y.** So called from a tribe of Indians, the *On-ti-ah-an-taque*, the word meaning "the place of the hills," also translated as "the marsh at the foot of the hill."

on-set (*on'set*), *n.* an assault; attack.

on-slaught (*'slawt*), *n.* a furious attack.

Ontario (*on-tā'ri-ō*). One of the Great lakes, county in New York, and a village in Vernon county, Wisconsin. An Indian word, said by one authority to mean "beautiful lake."

on-to-log-ic-al (*-tō-loj'i-kal*), *adj.* pertaining to that branch of metaphysics that investigates the essence of things.

o-nus (*ō-nus*), *n.* a burden; duty; obligation.

on-ward (*on'wĕrd*), *adj.* advancing; progressing: *adv.* in advance.

on-yx (*on'iks*), *n.* a variety of agate.

oo-long (*ōō'lŏng*), *n.* a Chinese black tea, the flavor of which resembles green tea. [Also *oulong.*]

ooze (*ōōz*), *n.* soft mud or slime; gentle flow; liquor of a tan vat.

o-pal (*ō'pal*), *n.* a precious stone of milky hue, exhibiting a play of various colors.

o-pal-es-cent (*-es'ent*), *adj.* resembling opal in its reflection of light.

o-paque (*-pāk'*), *adj.* not transparent.

Opelika (*op-ē-lī-kä*), **Ala.** A county seat; so called from the swamp's name, the Seminole name of which was *opilualaikata*, "a large swamp."

o-pen (*ō'pen*), *adj.* not shut; unfastened; clear of trees; expanded; uncovered; unsealed: *v. i.* to unclose itself; commence; begin to appear. [FRANK.]

o-pen-ing (*-ing*), *n.* an aperture; cavity.

op-er-a (*op'ĕr-ä*), *n.* a musical drama.

op-er-ate (*'ĕr-āt*), *v. i.* to work; produce a certain effect: *v. t.* to cause to perform certain work.

op-er-at-ic (*-at'ik*), *adj.* pertaining to the opera.

op-er-a-tive (*'er-ā-tiv*), *adj.* having the power of acting; efficacious; vigorous.

Ophelia (*ō-fē'li-ä, ō-fēl'yä*). From the Greek, meaning "help," "usefulness." Fr., *Ophelié;* Gr., *Ophelia;* Lat., *Ophelia.*

oph-thal-mi-a (*of-thal'mi-ä*), *n.* inflammation of the eye or eyeball. [Also *ophthalmitis.*]

oph-thal-mic (*'mik*), *adj.* pertaining to the eye.

o-pi-ate (*ō'pi-āt*), *n.* a medicine compounded with opium to induce sleep or rest: *adj.* narcotic.

o-pin-ion (*-pin'yun*), *n.* belief or judgment; estimation; persuasion.

o-pin-ion-a-ted (*-ā-ted*), *adj.* firm or obstinate in one's opinions.

Syn. OPINIONATED, egotistic, conceited, egoistical. An *opinionated* man is not only fond of his own *opinion*, but full of his own *opinion;* he has an *opinion* on everything, which is the best possible *opinion;* a *conceited* man has a *conceit* or an idle fond *opinion* of his own talent; it is not only high in competition with others, but it is so high as to be set above others; the *egoistical* man makes himself the darling theme of his own contemplation. [See *obstinate.*]

o-pi-um (*ō'pi-um*), *n.* the dried juice of the capsules of the white poppy.

o-pos-sum (*ō-pos'um*), *n.* an American and Australian marsupial carnivorous mammal.

op-po-nent (*op-pō'nent*), *adj.* opposite; adverse; antagonistic: *n.* one who opposes.

op-por-tune (*-por-tūn'*), *adj.* well-timed; seasonable.

op-por-tu-ni-ty (*-tū'ni-ti*), *n.* convenient time or occasion. [OCCASION.]

op-pose (*-pōz'*), *v. t.* to act against; contend with; resist; place as an obstacle against; check. [OBJECT, OBSTRUCT, COMBAT.]

op-po-site (*'pō-zit*), *adj.* placed or standing in front; contrary; adverse; antagonistic.

op-po-si-tion (*-zish'un*), *n.* the act or state of opposing; hostile resistance; contrariety; obstacle. [ANTIPATHY.]

op-press (*-pres'*), *v. t.* to burden; crush by hardship or severity; lie heavily upon. [ABUSE.]

op-pro-bri-um (*-prō'brī-um*), *n.* reproach with disdain or contempt; ignominy.

op-pugn (*-pūn'*), *v. t.* to oppose. [CONFUTE.]

op-tic (*'tik*), *adj.* pertaining to vision. [Also *optical.*] *n. pl.* the science of the properties of light and vision.

op-ti-cian (*-tish'un*), *n.* one skilled in optics; one who makes or sells optical instruments.

op-ti-mism (*op'ti-mizm*), *n.* the doctrine that every thing in the present state of existence is for the best.

op-ti-mist (*'ti-mist*), *n.* one who holds the doctrine of optimism.

op-tion (*'shun*), *n.* power or right of choice; wish; selection. [ALTERNATIVE.]

op-u-lence (*'ū-lens*), *n.* wealth.

op-u-lent (*'ū-lent*), *adj.* wealthy; rich.

or (*ôr*), *conj.* the correlative of *either.*

or-a-cle (*or'ä-kl*), *n.* among the ancients, the response of a deity or inspired priest to some inquiry; temple.

o-rac-u-lar (*ō-rak'ū-lĕr*), *adj.* of the nature of an oracle; uttering oracles; dogmatically magisterial.

o-ral (*'ral*), *adj.* verbal.

or-ange (*ôr'enj*), *n.* a tree (*Citrus aurantium*) with a deep golden-colored and juicy fruit.

Orange Free State. Formerly a republic of South Africa, so called because the original settlers were emigrants from the principality of Orange, in Holland. Now called Orange River Colony.

Orangemen (*ôr'enj-men*). Irish Protestants. The name was given about the end of the seventeenth century by Roman Catholics to the Protestants of Ireland, on account of their support of the cause of William III. of England, prince of Orange.

o-ra-tion (*ō-ra'shun*), *n.* a formal public speech delivered on an occasion of special importance.

or-a-tor (*or'ä-tĕr*), *n.* one who makes an oration; an eloquent speaker.

or-a-to-ri-o (*-tō'ri-ō*), *n.* a musical composition having a sacred theme as its subject.

or-a-to-ry (*'ä-tō-ri*), *n.* the art of an orator.

orb (*ôrb*), *n.* a circular body; sphere; the eye; circuit.

or-bic-u-lar (*ôr-bik'u-lĕr*), *adj.* orb-shaped.

or-bit (*'bit*), *n.* the bony cavity of the eye; the path described by a heavenly body during its periodical revolution.

or-chard (*'chĕrd*), *n.* an inclosure of fruit trees.

or-ches-tra (*'kes-trä*), *n.* in a modern theater, etc., the place occupied by the musicians; the body of musicians.

or-ches-tra-tion (*-trā'shun*), *n.* musical arrangement or instrumentation for an orchestra.

or-chid (*'kid*), *n.* a handsome flower, often of fantastic shape, of the genus Orchis.

or-dain (*-dān'*), *v. t.* to appoint; institute; invest with ministerial or priestly functions.

★or-de-al (*'dē-al*, not *ôr-dē'al*), *n.* an ancient method of trial by fire, water, combat, etc., to determine the guilt or innocence of an accused person; hence a severe trial or test.

or-der (*'dĕr*), *n.* method or regular arrangement; settled mode of procedure; rule; regulation; command; class; rank; degree: *v. t.* to regulate or manage; command; conduct; direct: *v. i.* to give a command or order. [CLASS, COMMAND.]

or-der-ly (*'dĕr-li*), *adj.* well regulated; methodical; *n.* soldier who attends upon an officer to carry his orders: *adv.* methodically.

or-di-nal (*'di-nal*), *adj.* noting order: *n.* a number noting order.

or-di-nance (*'di-nans*), *n.* an established rule, rite, or law.

or-di-na-ry (*'di-nā-ri*), *adj.* according to established order; usual; customary; commonplace.

or-di-nate (*'di-nāt*), *n.* a straight line in a curve terminated on both sides by the curve and bisected by the diameter.

or-di-na-tion (*-nā'shun*), *n.* the act of conferring holy orders; the state of being ordained or appointed.

ord-nance (*ôrd'nans*), *n.* artillery.

ore (*ôr*), *n.* metal as extracted from the earth in its natural state or combined with some other substance.

Oregon (*or'ē-gon*). State of the Union, and a county in Missouri. The name said to have been derived from *Origanum*, a species of wild sage found along the coast in the state, but another authority states that it is derived from the Spanish *Oregones*, which name was given the Indian tribes inhabiting that region, by a Jesuit priest, the word meaning "big-eared men."

or-gan (*ôr'gan*), *n.* an instrument; that part of a living structure by means of which some function is discharged; a wind musical instrument.

or-gan-ic (*-gan'ik*), *adj.* pertaining to, composed of, containing, or produced by, organs; instrumental. [Also *organical.*]

or-gan-ism (*'gan-izm*), *n.* organical structure.

or-gan-ist (*'ist*), *n.* a performer on the organ.

or-gan-ize (*'gan-iz*), *v. t.* to arrange or distribute into parts with the proper officials.

or-gy (*'ji*), *n.* a drunken revel.

o-r-iel (*ô'ri-el*), *n.* a large bay window.

o-ri-ent (*'ri-ent*), *v. t.* to define the position of with reference to the East.

O-ri-ent (*'ri-ent*), *adj.* Oriental: *n.* the East.

O-ri-en-tal-ist (*-en-tal-ist*), *n.* one who is skilled in Oriental languages, subjects, etc.

o-ri-en-ta-tion (*-tā'shun*), *n.* the determination of the position of the east; eastward position.

or-i-fice (*or'i-fis*), *n.* a mouth or aperture.

Syn. ORIFICE, perforation. These terms are both scientifically employed to designate certain cavities in the human body; but the former respects that which is natural, the latter that which is artificial; all the vessels of the human body have their *orifices*, which are so constructed as to open or close of themselves. Surgeons are frequently obliged to make *perforations* into the bones.

Origen (*or'i-jen*). Meaning, "descended from Horus," an Egyptian deity. Fr., *Origène;* Gr., *Origenes;* Lat., *Origenes.*
or-i-gin (*'i-jin*), *n.* beginning; first existence; source; cause; derivation.
o-rig-i-nal (*ō-rij'i-nal*), *adj.* first in order; not copied: *n.* that from which anything is copied. [NATIVE.]
o-rig-i-nal-i-ty (*-nal'i-ti*), *n.* original state or quality.
o-rig-i-nate (*-rij'i-nāt*), *v. t.* to bring into existence: *v. i.* to rise; commence.
o-ri-ole (*ō'ri-ōl*), *n.* the golden-thrush.
Orkney (*ôrk'nē*) **isles.** A group of islands north of Scotland. Name expresses the Gaelic for the "isles of whales, or porpoises."
Orlando (*ôr-lan'dō*). A form of *Roland.* It., *Orlando;* Lat., *Orlandus.*
Orleans (*ôr'lē-anz.* French, *ôr-lā-ān'*). Means "Aurelian's city," from *Aurelianum,* named after the Emperor Aurelian.
or-na-ment (*'nā-ment*), *n.* anything that adorns or beautifies: *v. t.* to adorn.
or-nate (*-nāt'*), *adj.* ornamented.
or-ni-thol-o-gy (*-ni-thol'ō-ji*), *n.* the scientific study of the structure, habits, etc., of birds.
o-ro-tund (*ō'rō-tund*), *adj.* characterized by fullness, clearness, strength, and smoothness: *n.* a quality of voice thus characterized.
or-phan (*ôr'fan*), *n.* a child bereft of one or both parents.
or-phan-age (*-āj*), *n.* the state of an orphan; an institution for orphans.
Orson. A masculine name, derived, like the Italian *Orso,* from the Latin *ursus,* "a bear."
or-tho-dox (*'thō-doks*), *adj.* holding, or in accordance with, the received or established belief or doctrine.
or-tho-dox-y (*-doks-i*), *n.* conformity to orthodox belief or opinion.
or-tho-ë-py (*-thō'ē-pi*), *n.* correct pronunciation.
or-thog-ra-phy (*-thog'rā-fi*), *n.* the art of spelling and writing words correctly
Osage (*ō-sāj*) **river, Mo.** Indian word, "the strong."
Osawattomie (*os-ā-wot'ō-mē*), **Kan.** A composite word, *Osa* and *Wottomie,* formed from the names of the rivers Osage and Pottawottomie.
Oscar. From the Old German name *Oskar,* "very renowned."
os-cil-late (*'sil-lāt*), *v. i.* and *v. t.* to swing backward and forward; vibrate.
os-cu-late (*'kū-lāt*), *v. t.* and *v. i.* to kiss; touch.
o-sier (*ō'shēr*), *n.* a willow, the twigs of which are used in basket making.
Oskaloosa (*os-kā-lōō'sa*) **Kan.** A compound word, *Oska,* name of an Indian chief, *Loosa,* his wife.
Osmund. Some translate this name "house peace." Wachter renders it "excellent, gallant, brave man."
os-si-fi-ca-tion (*os-i-fi-kā'shun*), *n.* conversion of soft animal tissue into bone.
os-si-fy (*'i-fī*), *v. t.* to convert into bone or into a bone-like substance: *v. i.* to become bone.
os-ten-si-ble (*-ten'si-bl*), *adj.* apparent; held forth to view; plausible.
os-ten-ta-tion (*-tā'shun*), *n.* outward show or appearance; ambitious or vain display. [PRIDE.]
os-ten-ta-tious (*'shus*), *adj.* fond of show; intended for vain display; gaudy.
os-te-ol-o-gy (*-tē-ol'ō-jī*), *n.* that part of anatomy treating of bones, their structure, etc.
os-te-op-a-thist (*-op'ā-thist*), *n.* one who practices osteopathy.
os-te-op-a-thy (*-op'ā-thi*), *n.* a system of therapeutics in which the treatment is by manipulation of the bones, muscles, and nerve centers; the treatment of bone disease.
os-tra-cize (*'trā-sīz*), *v. t.* to banish by popular vote; exclude from public or private favor. [BANISH.]
os-trich (*'trich*), *n.* a swift running African bird, valued for its feathers.
Oswald (*oz'wald*). From Old German *os-walt,* "illustrious magistrate, prefect or administrator."
Oswego (*os-wē'gō*), **N. Y.** Named from the river, the Iroquois name being *oswageh,* "flowing out."
oth-er (*uth'ēr*), *adj.* noting something besides; different; contrary.
oth-er-wise (*-wīz*), *adv.* in another manner; in other respects: *conj.* else.
Otho (*ō'thō*), or **Otto** (*ot-tō*). Some translate *Otho* "happy," and *Otto* "rich," but they would seem to be the same name. It comes from Old German *od,* "excelling," "happy," "fortunate." Dutch, *Otto;* Fr., *Othon;* Ger., *Otto;* It., *Ottone;* Lat., *Otho;* Sp., *Otonio;* Sw., *Otto.*
Ottawa (*ot'ā-wa*). The capital of the Dominion of Canada, stands on the river Ottawa, which preserves the name of the *Ottawa* or *Otawa* tribe, an Algonquin term meaning "traders."
Ottoman (*ot'tō-man*) **empire.** The official title of the realm subject to the sultan, takes its name from *Othman,* the emir under whom the Turks first advanced into Europe.
ought (*awt*), *v. i.* to be under obligation; be fit, necessary, or proper: *n.* anything.
ounce (*ouns*), *n.* a weight 1-16th of a pound avoirdupois; 1-12th of a pound troy.
our (*our*), *pron.* pertaining to, or belonging to, us.
★**oust** (*oust,* not *ōōst*), *v. t.* to eject. [BANISH.]
out (*out*), *adv.* without; not within or at home; abroad; gone forth.
out-break (*out'brāk*), *n.* a breaking out; an eruption.
out-cast (*out'kăst*), *adj.* cast out; rejected: *n.* one who is cast or driven out; an exile.
out-crop (*'krop*), *n.* the exposure of strata at the earth's surface.
out-cry (*'krī*), *n.* clamor; tumult.
out-do (*-dōō'*), *v. t.* to excel.
out-law (*'law*), *n.* one who is deprived of legal benefits and protection: *v. t.* to deprive of legal benefits and protection.
out-lay (*'lā*), *n.* expense. [EXPENSE.]
out-line (*'līn*), *n.* a line bounding or defining a figure; first sketch: *v. t.* to sketch out.
out-live (*-liv'*), *v. t.* to live longer than.
out-rage (*'rāj*), *n.* open and excessive violence; wanton abuse or mischief: *v. i.* to act in an outrageous manner.
out-ra-geous (*-rā'jus*), *adj.* violent; excessive; exceeding all bounds.
out-right (*'rīt*), *adv.* completely; at once.
out-side (*'sīd*), *n.* the external part of anything; superficies; utmost: *adj.* exterior.
out-stand-ing (*-stand'ing*), *adj.* projecting; unpaid.
out-ward (*'wērd*), *adj.* external; to or from the exterior; visible; extrinsic.
Syn. OUTWARD, external, exterior. *Outward,* or inclined to the *out,* after the manner of the *out,* indefinitely describes the situation; *external* is employed only in regard to such objects as are conceived to be independent of man as a thinking being; hence, we may speak of the *outward* part of a building, of a board, and the like; but of *external* objects acting on the mind, or of an *external* agency; when we speak of anything which has two coats, it is usual to designate the *outermost* by the name of the *exterior.*
out-wit (*-wit'*), *v. t.* to overreach, or defeat, by superior skill or cunning.
out-work (*'wērk*), *n.* a defense constructed beyond the main body of a fort, etc.
o-val (*ō'val*), *adj.* shaped like an egg; elliptical: *n.* anything egg-shaped.
o-va-ry (*'vā-ri*), *n.* [*pl.* ovaries (*-riz*)], the organ in a female animal in which the ova or first germs of future life are formed; the hollow seed-case of a plant.
o-va-tion (*-vā'shun*), *n.* an enthusiastic demonstration of public esteem.
ov-en (*uv'n*), *n.* a place or apparatus for baking or heating.
o-ver (*ō'vēr*), *prep.* superior in position, authority, dignity, excellence, or value; above; upon: *adv.* in excess: *adj.* beyond; superior.
★**o-ver-alls** (*-awlz*), *n. pl.* loose trousers worn to protect others.
o-ver-awe (*-aw'*), *v. t.* to awe exceedingly.
o-ver-flow (*-flō'*), *v. t.* to flow over.
over-hear (*-hēr'*), *v. t.* to hear by accident or by artifice.
o-ver-pow-er (*-pou'ēr*), *v. t.* to bear down or crush by superior force; vanquish. [BEAT.]
o-ver-pro-duc-tion (*-prō-duk'shun*), *n.* supply in excess of the demand.
o-ver-seer (*-sēr'*), *n.* the superintendent of some department of a business.
o-vert (*'vērt*), *adj.* open; public.
o-ver-take (*ō-vēr-tāk'*), *v. t.* to catch by pursuit; come upon as a punishment.
o-ver-throw (*-thrō'*), *v. t.* to turn upside down; demolish; vanquish; destroy: *n.* (*ō'vēr-thrō*), ruin; defeat. [BEAT, SUBVERT.]
o-ver-turn (*-tûrn'*), *v. t.* to turn or throw over from a base or foundation. [SUBVERT.]
o-ver-whelm (*-hwelm'*), *v. t.* to crush or destroy utterly.
o-ver-wise (*ō'vēr-wīz*), *adj.* affectedly wise.
Ovid (*ov'id*). From the Latin, meaning "goat," or "sheep," or both. Dutch, *Ovidius;* Fr., *Ovide;* Ger., *Ovidius;* It., *Ovidio;* Lat., *Ovidius.*
o-vip-a-rous (*ō-vip'ā-rus*), *adj.* producing young by eggs.
o-void (*'void*), *adj.* egg-shaped. [Also *ovoidal.*]
o-vum (*'vum*), *n.* [*pl.* ova (*'va*)], the germ or body in the ovary which, when impregnated, develops into the fœtus.
owe (*ō*), *v. t.* to be indebted, or under obligation to; be obliged to pay: *v. i.* to be in debt.
Owego (*ō-wē'gō*), **N. Y.** Delaware Indian word, *ahwaga,* "where the valley widens."
Owen. Probably from the Irish name *Eogan,* signifying "youth."
owl (*oul*), *n.* a raptorial nocturnal bird characterized by its hoot: *v. i.* to smuggle.
own (*ōn*), *adj.* belonging to; peculiar or proper to: *v. t.* to possess or hold by right.
ox (*oks*), *n.* [*pl.* oxen (*'n*)], an animal of the bovine genus, especially a castrated bull.
Oxford. Anglo-Saxon *Oxnaford,* the "ford of the oxen," is a name of the same class as *Shefford,* the "sheep ford," *Hertford* and *Swinford* in England, or *Ochsenfurt* and *Schweinfurt* in Germany.
ox-ide (*'id*), *n.* a compound of oxygen and a base.
ox-i-dize (*'i-dīz*), *v. t.* to convert into an oxide: *v. i.* to be converted into an oxide. [Also *oxidate.*]
ox-y-gen (*'i-jen*), *n.* a colorless inodorous gas.
o-yer (*ō'yēr*), *n.* a hearing or trial of legal causes.
o-yes (*'yes*), *interj.* the introductory cry of an official or public crier demanding silence. [Also *oyez.*]
oys-ter (*ois'tēr*), *n.* a bivalve mollusk of the genus Ostrea, much esteemed as a delicacy.
Ozark (*ō-zärk'*). County and city in Christian county, Missouri, and village in Dale county, Alabama. A corruption of the French *aux arcs,* meaning "with bows," a term descriptive of the Indians who inhabited the country.
o-zone (*ō'zōn*), *n.* an allotropic form of oxygen present in the atmosphere.

P

pa (*pä*), *n.* abbreviation of *papa.*
pace (*pās*), *n.* a step; manner of walking; a linear measure, varying from 30 in. to 60 in.: *v. t.* to measure by steps or paces: *v. i.* to amble.
pa-cif-ic (*pā-sif'ik*), *adj.* peace-making; conciliatory; mild; peaceful; tranquil.
pa-cif-i-ca-tion (*-i-kā'shun*), *n.* the act of peace-making; conciliation.
Pacific Ocean. Is the English translaton of *Mar Pacifico,* or *Oceano Pacifico,* the somewhat inappropriate name bestowed by Magellan, in 1521, on the great ocean which he was the first to traverse.
pac-i-fy (*pas'i-fī*), *v. t.* [*p. t.* and *p. p.* pacified, *p. pr.* pacifying], to calm or appease; reconcile.
pack (*pak*), *n.* a large bundle tied up for carriage; load; burden; set of playing cards; number of dogs kept for hunting: *v. t.* to bind and press together.
pack-age (*'āj*), *n.* a bundle or bale of goods.
pack-et (*'et*), *n.* a small pack, or parcel; a vessel sailing between two or more ports at regular intervals for the conveyance of passengers, mails, and merchandise.
pact (*pakt*), *n.* an agreement.
pad (*pad*), *n.* a soft cushion; a thick mass of sheets of paper for writing upon: *v. t.* stuff with padding.
pad-ding (*'ing*), *n.* material used for stuffing.
pad-dle (*'l*), *v. i.* to row slowly; play in the water: *v. t.* to propel by paddle or oar; to spank: *n.* a short broad oar; an oar blade; one of the floats for propelling a steamship.
pad-dock (*'uk*), *n.* a small field or inclosure for horses, etc.; a large toad or frog.
pad-lock (*pad'lok*), *n.* a lock with a link to pass through a staple or eye: *v. t.* to fasten with a padlock.
Paducah (*pā-dū'kä*), **Ky.** So called from the name of an Indian chief, *Paducah.*
pæ-an (*pē'an*), *n.* a triumphal song.
pæ-do-bap-tism (*-dō-bap'tizm*), *n.* **infant baptism.** [Also *pedobaptism.*]
pa-gan (*pā'gan*), *n.* a heathen; idolator: *adj.* heathen; idolatrous.
page (*pāj*), *n.* a boy attending on a person of distinction; a boy in livery; one side of the leaf of a book.
pag-eant (*paj'ent*), *n.* a theatrical show or spectacle.
pa-go-da (*pā-gō'dä*), *n.* a Buddhist temple.
pal-dol-o-gy (*pā-dol'ō-jī*), *n.* scientific child study.
pail (*pāl*), *n.* an open vessel of wood or metal, furnished with a handle, for carrying water, etc.
pain (*pān*), *n.* physical or mental suffering; penalty: *pl.* diligent effort; throes of parturition: *v. t.* to cause physical or mental suffering; render uneasy.
paint (*pānt*), *v. t.* to represent by delineation and colors; depict: *v. i.* to practice painting; rouge: *n.* a coloring substance.
Syn. PAINT, depict. *To paint* is employed either literally to represent figures on paper, or to represent circumstances and events by means of words; *to depict* is used only in this latter sense, but the former word expresses a greater exercise of the imagination than the latter; it is the art of the poet *to paint* nature in lively colors; it is the art of the historian or narrator *to depict.*
paint-er (*'ēr*), *n.* one whose occupation is to paint; an artist who is skilled in depicting subjects in colors.
pair (*pâr*), *n.* two things of a kind, similar in form, suited to each other, and used together.
★**pa-ja-mas** (*pā-jä'mäz*), *n. pl.* loose trousers; a kind of sleeping costume.
pal-ace (*pal'ās*), *n.* the residence of a sovereign or bishop; a magnificent house or building.
pal-a-ta-ble (*-ā-tā'bl*), *adj.* agreeable to the taste; savory.
pal-a-tal (*'ā-tal*), *adj.* pertaining to, or uttered by means of, the palate: *n.* a letter pronounced by means of the palate.
pal-ate (*'āt*), *n.* the roof of the mouth; taste or relish.
pa-la-tial (*pā-lā'shal*), *adj.* pertaining to, or suitable to, a palace; royal.
pal-a-tine (*'ā-tin*), *adj.* invested with royal privileges and rights: *n.* one who is thus invested.
pa-la-ver (*pā-lā'vēr*), *n.* superfluous or idle talk; chatter: *v. i.* to confer; chatter.
pale (*pāl*), *adj.* not of a fresh or ruddy complexion; wan; wanting in colors: *n.* a stake: *v. t.* to turn pale: *v. t.* to inclose with pales.
pa-le-on-tol-o-gy (*pā-lē-on-tol'ō-jī*), *n.* that branch of geology which treats of fossil remains.
Palestine (*pal'es-tīn*). The country of the Hebrews. From Gr. *Palæstina,* a name indicating that the Greek mariners first knew Canaan as the land of the Philistines inhabiting the coast. The latter arrived, probably from Cyprus, after the Hebrew conquest and before the time of Rameses III., on whose monuments they appear as *Pulista.*

Pal-ette (*pal'et*), *n.* a thin oval wood or porcelain plate for mixing and holding colors.

pal-frey (*pawl'frĭ*), *n.* a small saddle horse for a lady's use.

pal-imp-sest (*pal'imp-sest*), *n.* a parchment manuscript which, after the writing upon it has been partially erased, is used again.

pal-i-sade (*pal-i-sād'*) *n.* a fence or fortification formed of stakes driven into the ground and pointed at the top: *v. t.* to inclose or fortify with stakes.

Palisades (*pal-i-sādz'*), **The.** A basaltic bluff extending along the western shore of the Hudson in the states of New Jersey and New York. It commences opposite the northern part of New York City, and continues northward about eighteen miles. Height, 200 to 500 feet.

pall (*pawl*), *n.* a cloak or mantle; a coffin covering: *v. i.* to become insipid; lose strength: *v. t.* to make insipid.

pal-la-di-um (*pal-ā'di-um*), *n.* any safeguard of a liberty, or privilege; a rare grayish metal found with platinum.

pal-let (*'et*), *n.* a name for various tools used in gilding, pottery, etc.; a small rough bed.

pal-li-ate (*'i-āt*), *v. t.* to excuse or cover over; extenuate; lessen or abate.

pal-li-a-tive (*'i-ā-tiv*), *adj.* tending to lessen or mitigate.

pal-lid (*'id*), *adj.* pale; wan.

Pall Mall (*pel-mel'*). A fine street in London, leading from Trafalgar square to the Green park. Its name is a modern spelling of *paille maille*, the title of a French game of ball somewhat similar to croquet, first played in this London thoroughfare about 1621.

pal-lor (*pal'ĕr*), *n.* lack of color.

palm (*päm*), *n.* the inner part of the hand; a tree of various species of the order Palmæ.

pal-met-to (*pal-met'ō*), *n.* a species of palm tree, the cabbage-tree palm.

★**pal-mis-try** (*pal'mis-tri*, not *pä'mis tri*), *n.* the pretended art of foretelling the future by examination of the lines and marks of a person's hand.

Palo Alto (*pä'lō äl'tō*). Town in Santa Clara county, California. A Spanish phrase meaning "high stick."

pal-pa-ble (*pal'pä-bl*), *adj.* easily perceived; obvious.

pal-pi-tate (*'pi-tāt*), *v. i.* to beat or throb.

pal-sy (*pawl'zi*), *n.* paralysis: *v. t.* [*p. t.* and *p. p.* palsied, *p. pr.* palsying], to paralyze.

pal-try (*'trĭ*), *adj.* worthless; contemptible.

Pamlico sound, N. C. Named from a tribe of Indians called the *Pamlicoes*.

pam-per (*'pĕr*), *v. t.* to feed luxuriously; satiate.

pam-phlet (*'flet*), *n.* a small unbound book, usually on some current topic, of one or more sheets stitched together. This word is derived from the name of a Greek authoress, Pamphylia, who compiled a history of the world in thirty-five little books.

pan, a *prefix* meaning *all, universal:* as *pan*-Anglican.

pan (*pan*), *n.* a broad shallow vessel; that part of an old flintlock which held the priming.

pan-a-ce-a (*pan-ä-sē'ä*), *n* a universal remedy or medicine.

Panama (*pan-ä-mä'*, Spanish *pä-nä-mä'*). Was the native name of a village on the Pacific coast of the Gulf and Isthmus of Panama. Here, in 1518, Davila founded the oldest existing city in America.

Panama bay. The bay of "mudfish."

pan-cake (*pan'kāk*), *n.* a thin cake of batter fried.

pan-cre-as (*pang'krē-as*), *n.* a large fleshy gland (the sweetbread) situated under and behind the stomach, secreting a fluid that assists in the process of digestion.

pan-cre-a-tin (*'krē-ä-tin*), *n.* an albuminoid principle in the fluid of the pancreas.

pan-de-mo-ni-um (*-dē-mō'ni-um*), *n.* a place or abode of general disorder.

pan-der (*'dĕr*), *v. i.* to act as an agent for the gratification of the passions.

pane (*pān*), *n.* a square of glass; a piece in variegated work.

★**pan-e-gyr-ic** (*pan-ē-jir'ik*), *n.* an ovation or eulogy in praise of some person or event; encomium. [ENCOMIUM.]

pan-el (*'el*), *n.* a thin board on which a picture is painted; a schedule containing the names of persons summoned to serve as jurors; the jury.

pang (*pang*), *n.* a violent sudden pain; agony, mental or physical.

pan-ic (*pan'ik*), *n.* a sudden fright; a kind of millet.

pan-ni-er (*'ni-ĕr*), *n.* one of two baskets suspended across the back of a horse, for carrying market produce.

pan-o plied (*'ō-plid*), *adj.* furnished with a complete suit of armor.

pan-o-ram-a (*-ō-rä'mä*), *n.* a picture, viewed from a central standpoint, of several scenes unrolled and made to pass before the spectator.

pan-sy (*'zi*), *n.* the heart's-ease.

pant (*pänt*), *v. i.* to breathe rapidly; *n.* rapid breathing.

pan-ta-loon (*pan'tä-lōōn*), *n.* a buffoon in a pantomime; *pl.* a pair of tight trousers.

pan-the-ism (*'thē-izm*), *n.* the doctrine that the universe in its totality is God.

Pan-the-on (*'thē-on*), *n.* a temple dedicated to all the gods, especially that of ancient Rome dedicated to Mars and Jupiter.

pan-ther (*pan'thĕr*), *n.* a fierce feline carnivorous animal. [Fem. *pantheress*.]

★**pan-to-mime** (*pan'tō-mīm*, not *pan'tō-mīn*), *n.* a representation in dumb show.

pan-try (*'trĭ*), *n.* a provision closet.

Paolo. See *Paul*.

pap (*pap*), *n.* soft food for infants; a nipple, teat, or breast; pulp of fruit.

★**pa-pa** (*pä-pä'*, or *pä'pä*), *n.* a word of endearment for father.

pa-pa-cy (*pā'pä-si*), *n.* the office, dignity, or authority, of the pope; popes collectively.

pa-pal (*'pal*), *adj.* pertaining to the pope, or the church of Rome.

pa-per (*pā'pĕr*), *n.* a thin flexible substance made of various materials, as linen, straw, etc., used for writing or printing upon; essay or literary contribution.

★**pa-pier ma-ché** (*pä-pyä'-mä-shā'*) *n.* paper pulp molded and made into trays, etc., and japanned.

pa-poose (*pä-pōōs'*), *n.* a young child [North Am-

Papua (*pä'pōō-ä*). An island north of Australia. A Portuguese term for "frizzled," alluding to the enormous frizzled heads of hair worn by the natives.

★**pa-py-rus** (*pä-pĭ'rus*, not *pap'ir-us*), *n.* [*pl.* papyri (*'rī*)], a species of Egyptian reed, from which the ancients made paper; a manuscript on papyrus.

par (*pär*), *n.* state of equality; nominal and market value.

par-a-ble (*par'ä-bl*), *n.* a comparison or similitude.

pa-rab-o-la (*pä-rab'ō-lä*), *n.* one of the conic sections formed by the intersection of the cone by a plane parallel to one of its sides.

par-a-chute (*par'ä-shōōt*), *n.* an umbrella-shaped apparatus for descending from a balloon.

pa-rade (*pä-rād'*), *n.* ostentatious display; show; military display: *v. t.* to marshal in military order; *v. i.* to exhibit.

par-a-dise (*par'ä-dīs*), *n.* the garden of Eden; any place of happiness; heaven.

par-a-dox (*'ä-doks*), *n.* something apparently absurd or incredible, yet true.

par-a-dox-ic-al (*'i-kal*), *adj.* of the nature of a paradox. [ABSURD.]

★**par-af-fin** (*'ä-fin*), *n.* a white crystalline substance obtained by distillation from wood, shale, etc.

par-a-gon (*'ä-gon*), *n.* something of extraordinary excellence; model or pattern of perfection: *v. t.* to equal or compare.

par-a-graph (*'ä-gräf*), *n.* a small subdivision of a connected discourse.

Paraguay (*par'ä-gwā*). River and republic of South America, meaning "the river of waters," referring to its numerous tributaries.

par-al-lel (*'ä-lel*), *adj.* lying side by side; extended in the same direction and equidistant at all points: *v. t.* to place so as to be parallel; correspond to; equal.

par-al-lel-o-gram (*'ō-gram*), *n.* a 4-sided figure whose opposite sides are parallel and equal.

pa-ral-y-sis (*pä-ral'i-sis*), *n.* loss of the power of sensation in one or more parts of the body; palsy.

par-a-lyze (*'ä-līz*), *v. t.* to affect with paralysis; unnerve; render useless or ineffective.

par-a-mount (*par'ä-mount*), *adj.* superior to all others; eminent or chief: *n.* the highest in rank or authority.

par-a-noi-a (*par-ä-noi'ä*), *n.* a form of monomania.

par-a-pet (*'ä-pet*), *n.* a wall breast-high; a rampart to protect troops from the fire of an enemy.

par-a-pher-na-li-a (*-fĕr-nā'li-ä*), *n.* ornaments of dress generally; equipment; trappings.

par-a-phrase (*'ä-frāz*), *n.* a free translation or explanation: *v. t.* make a free translation of.

par-a-site (*'ä-sit*), *n.* an animal or plant nourished by another to which it attaches itself. [FLATTERER.]

par-a-sit-ic (*-sit'ik*), *adj.* of the nature of a parasite; meanly servile or fawning.

par-a-sol (*'ä-sol*), *n.* a lady's sunshade.

par-boil (*pär'boil*), *v. t.* to boil partially.

par-cel (*'sel*), *n.* a small bundle or package; little part: *v. t.* to divide into parts.

parch (*pärch*), *v. t.* to scorch; burn slightly; dry to excess.

parch-ment (*'ment*), *n.* the skin of a sheep, goat, etc., dressed and prepared for writing upon; a deed: *adj.* made of, or like, parchment.

par-don (*pär'dn*), *v. t.* to forgive; absolve: *n.* forgiveness; absolution. [FORGIVE, MERCY, ABSOLVE, EXCUSE.]

par-don-a-ble (*-ä-bl*), *adj.* that may be pardoned. [VENIAL.]

pare (*pär*), *v. t.* to cut away little by little; reduce or diminish.

par-e-gor-ic (*par-ē-gor'ik*), *n.* a tincture of opium to assuage pain: *adj.* mitigating pain.

par-ent (*pär'ent*), *n.* a father or mother; origin.

par-ent-age (*-äj*), *n.* extraction; birth.

pa-ren-tal (*pä-ren'tal*), *adj.* pertaining to, or becoming, parents; fond.

pa-ren-the-sis (*pä-ren'the-sis*), *n.* [*pl.* parentheses (*sēz*)], an explanatory word or clause inserted in a sentence, which is grammatically complete without it: indicated by the marks ( ).

par-en-thet-ic-al (*par-en-thet'i-kal*), *adj.* expressed in a parenthesis; using parentheses.

par-e-sis (*par'ē-sis*), *n.* insanity with general motor paralysis; softening of the brain.

pa-ri-e-tal (*pä-rī'ē-tal*), *adj.* pertaining to a wall or side; forming the wall or side (said of the large lateral bones of the head).

Paris (*par'is*, Fr. *pa-rē'*). The capital of France, so called from the name of the Celtic tribe *Parisii*. It was called by the Romans *Lutetia Parisiorum*, the "bright city of the Parisii," from the white stone used in building.

par-ish (*par'ish*), *n.* an ecclesiastical district under the particular charge of priest, clergyman, or minister.

pa-rish-ion-er (*pä-rish'un-ĕr*), *n.* one who belongs to a parish.

par-i-ty (*'i-ti*), *n.* equality; likeness.

park (*pärk*), *n.* a large piece of ground used as a public place for recreation.

Parkersburg. City in Wood county, West Virginia, named for Alexander Parker of Pennsylvania.

par-lance (*pär'lans*), *n.* conversation; idiom of conversation.

par-ley (*'li*), *n.* a conference, especially with an enemy: *v. i.* to hold a conference, especially with an enemy with a view to peace.

★**Par-lia-ment** (*'li-ment*), *n.* the supreme legislative assembly of Great Britain and Ireland.

par-lia-men-ta-ri-an (*-men-tā'ri-an*), *n.* one who is versed in parliamentary law and usages.

par-lia-men-ta-ry (*'tä-ri*), *adj.* pertaining to, enacted by, or in accordance with the usages of, Parliament.

par-lor (*'lĕr*), *n.* reception room; drawing room.

Parnell (*pär'nel*). A feminine name corrupted from *Petronilla*.

pa-ro-chi-al (*pä-rō'ki-al*), *adj.* pertaining to a parish; narrow-minded.

par-o-dy (*par'ō-di*), *n.* a burlesque imitation of a serious poem.

pa-role (*pä-rōl'*), *n.* a word of honor, especially one given by a prisoner of war that in return for conditional freedom he will return to custody on a specified day.

par-ox-ysm (*par'oks-izm*), *n.* a sudden spasm, or fit of acute pain; sudden action or convulsion.

par-quet, parquette (*pär-ket'*), *n.* the floor space of a theater between the orchestra-rail and dress-circle.

par-ri-cide (*par'i-sīd*), *n.* the murderer of a father or mother.

par-rot (*'ot*), *n.* a tropical bird with a hooked bill, characterized by its brilliant plumage and its power of imitating the human voice.

par-ry (*'i*), *v. t.* [*p. t.* and *p. p.* parried, *p. pr.* parrying], to ward off, as a blow.

Parry islands. A group of islands in the Arctic Ocean, named for the famous arctic navigator, Sir W. E. Parry.

parse (*pärs*), *v. t.* to resolve by grammatical rules (a sentence) into its component parts, and show the relation of the various parts of speech.

par-si-mo-ni-ous (*pär-si-mō'ni-us*), *adj.* frugal to excess; miserly; penurious.

par-si-mo-ny (*'si-mō-ni*), *n.* closeness in expenditure; niggardliness. [FRUGALITY.]

pars-ley (*pärs'li*), *n.* a culinary herb.

pars-nip (*'nip*), *n.* a plant with an edible carrot-like root.

par-son (*pär'sn*), *n.* the incumbent of a parish; a clergyman.

par-son-age (*-äj*), *n.* an ecclesiastical benefice; the residence of an incumbent of a parish.

part (*pärt*), *n.* something less than the whole; piece; portion; proportional quantity; regions; quarters: *v. t.* to distribute; separate: *v. i.* to be separated or divided; take leave.

Syn. PART, piece, patch. Things may be divided into *parts* without any express separation; but when divided into *pieces* they are actually cut asunder; hence we may speak of a loaf as divided into twelve *parts* when it is conceived only to be so; and divided into twelve *pieces* when it is really so; the *patch* is that which is always broken and disjointed, a something imperfect; many things may be formed out of a *piece*. [See *divide*.]

Ant. WHOLE.

par-take (*pär-tāk'*), *v. i.* [*p. t.* partook, *p. p.* partaken *p. pr.* partaking], to take a part or share in common with others.

par-tial (*'shal*), *adj.* inclined to favor one side or party; biased.

par-ti-al-i-ty (*-shi-al'i-ti*), *n.* the state or quality of being partial. [PREJUDICE.]

par-tic-i-pant (*-tis'i-pant*), *adj.* sharing: *n.* one who shares or partakes.

par-tic-i-pate (*'i-pāt*), *v. i.* to partake: *v. t.* to have part of; share.

★**par-ti-ci-ple** (*pär'ti-sip-l*, not *pärt'sip-l*), *n.* a word which partakes of the nature of a verb and of an adjective.

par-ti-cle (*'ti-kl*), *n.* an atom; the smallest part into which a body can be divided; a word noninflected or not used alone.

par-ti-col-ored (*pär'ti-kul-ērd*), *adj.* having various colors.

par-tic-u-lar (*-tik'ū-lĕr*), *adj.* distinct from others; individual; peculiar or special; exclusive.

Syn. PARTICULAR, individual. *Particular* is much more specific than *individual;* the *particular* confines us to one object only of many; but *individual* may be said of any one object among many. [See *circumstantial*.]

Ant. COMMON, normal, ordinary.

par-tic-u-lar-i-ty (*pär-tik-ū-lar'i-ti*), *n.* circumstantiality.

par-tic-u-lar-ize (*'ū-lēr-īz*), *v. t.* to give the particulars of: *v. i.* be attentive to single things or details.

par-ti-san (*pär'ti-zan*), *n.* an adherent of a party or faction: *adj.* pertaining to, or biased in favor of, a party, etc. [FOLLOWER.]

par-ti-tion (*-tish'un*), *n.* the act or state of being divided; a dividing wall: *v. t.* divide by walls.

part-ner (*'nĕr*), *n.* one who is associated with another. [COLLEAGUE, ACCESSORY.]

★**par-tridge** (*pär'trij*, not *pat'rij*), *n.* a well-known gallinaceous bird of the genus Perdix, preserved as game.

par-tu-ri-tion (*-tū-rish'un*), *n.* the act of bringing forth young.

par-ty (*'ti*), *n.* a number of persons united together for a particular purpose; faction.

par-ty wall (*-wawl*), a common wall separating two tenements.

Pasadena (*pas-ȧ-dē'nȧ*). City in Los Angeles county, California. An Indian word meaning "crown of the valley."

Paschal (*pas'kal*, French *päs-kȧl'*). Means "belonging to Easter," or "born at Easter." Gr., *Pascal;* It., *Pasquale;* Lat., *Paschalis;* Sw., *Pascual.*

pash-a (*pash'ȧ*), *n.* a Turkish title given to high officials. [Also *pacha.*]

pass (*pȧs*), *v. i.* to move from one place or state to another; be progressive; disappear: *v. t.* to go beyond, or through, or by: *n.* a narrow passage.

pas-sage (*pas'ăj*), *n.* the act of passing; course or journey.

Passaic (*pas-sȧ'ik*). County, city, and river in New Jersey; name derived either from the Indian word *Passaic* or *Passajeek*, "a valley," or from the Indian equivalent of "peace."

Passamaquoddy (*pas-sȧ-mȧ-kwod'di*). Bay on coast of Maine. An Indian word meaning "pollock ground," or "pollock-plenty space."

pas-sen-ger (*'en-jĕr*), *n.* one who travels in or on a conveyance; one who passes.

pass-ing (*pȧs'ing*), *p. adj.* departing: *adv.* exceedingly: *n.* the act of going by; transit.

pas-sion (*pash'un*), *n.* violent agitation of mind in anger; love; ardor; intense desire.

pas-sion-ate (*-ăt*), *adj.* moved by passion; angry; excitable.

pas-sive (*'iv*), *adj.* suffering without resisting; not acting; submissive; quiescent.

Pass-o-ver (*pas'ō-vĕr*), *n.* a Jewish feast commemorative of the passing of the destroying angel over the houses of the Israelites when he slew the first-born of the Egyptians.

pass-port (*'pōrt*), *n.* a license to travel in a foreign country.

Passumpsic (*pas-sump'sik*) **river, Vt.** Indian word meaning "much clear river."

pass-word (*'wĕrd*), *n.* a word by means of which friends are distinguished from strangers or enemies.

past (*pȧst*), *p. adj.* having formerly been; gone by; completed: *n.* the time gone by: *adv.* along: *prep.* beyond.

paste (*pȧst*), *n.* a mixture of flour, etc., with water, used as a cement; a composition for making artificial gems: *v. t.* to fasten with paste.

paste-board (*'bōrd*), *n.* thick stiff paper.

pas-tel (*pas'tel*), *n.* a colored crayon.

pas-teur-ize (*pas'tūr-īz*), *v. t.* to inoculate with the bacillus which produces a specific disease.

pas-til (*'til*), *n.* a small cone of aromatic paste used for fumigating a room; a medicated lozenge.

pas-time (*pȧs'tīm*), *n.* diversion; sport.

pas-tor (*'tĕr*), *n.* a clergyman or minister having spiritual charge of a church and congregation.

pas-tor-al (*-al*), *adj.* pertaining to shepherds: *n.* a kind of dramatic poem.

pas-try (*pȧs'tri*), *n.* articles of food, as pies, etc., made of light puffy dough.

pas-ture (*pas'tūr*), *n.* land under grass for grazing cattle: *v. t.* to supply with grass or pasture: *v. i.* to graze.

past-y (*pȧst'i*), *adj.* like paste; a small pie, usually of meat covered with a pie crust.

pat (*pat*), *n.* a light quick blow with the hand; *adj.* apt; exact.

Patagonia (*pat-ȧ-gō'ni-ȧ*). The southernmost portion of South America. So styled by Magellan in accordance with the Spanish word *patagon*, meaning a "large, clumsy foot." It was from the fact of seeing the impressions of the large shoes of the aborigines that he at once concluded the country must be inhabited by giants.

Patapsco (*pȧ-tapsʼkō*) **river, Md.** So called from the Indian name *patapsqui*, "black water."

patch (*pach*), *n.* a piece applied to cover a hole or rent; a plot of ground: *v. t.* to put a patch on; mend clumsily. [PART.]

pate (*pȧt*), *n.* the head; crown of the head.

pat-en (*pat'en*), *n.* the plate used for the bread at the Eucharist.

pat-ent (*pat'ent*, or *pā'tent*), *adj.* apparent; secured by letters patent: *n.* a privilege granted by letters patent, as a title of nobility, or the sole right in an invention: *v. t.* to grant or secure by letters patent.

pa-ter-nal (*pȧ-tĕr'nal*), *adj.* pertaining to, or exhibiting the characteristics of, a father; hereditary.

pa-ter-ni-ty (*-tĕr'ni-ti*), *n.* paternal relation; authorship.

Paternoster Row (*pā'tĕr-nos'tĕr-rō*). A street in London, north of St. Paul's, long famous as a center of book publishing. It is said to be so named from the prayer books or rosaries sold in it.

Paterson. City in Passaic county, New Jersey, named for William Paterson, an early governor.

path (*pȧth*), *n.* a road; footway, track; course of conduct or action.

pa-thet-ic (*pȧ-thet'ik*), *adj.* affecting the emotions or passions; touching. (Also *pathetical.*) [MOVING.]

pa-thol-o-gy (*'ō-ji*), *n.* the science of diseases.

pa-thos (*pā'thos*), *n.* expression of deep feeling; that which excites the mental emotions.

pa-tience (*'shens*), *n.* the quality of being patient or calmly enduring.

Patience. Found as a masculine as well as a feminine name. The name explains itself.

pa-tient (*'shent*), *adj.* suffering pain, hardship, affliction, insult, etc., with calmness and equanimity. [INVALID.]

pa-tois (*pȧ-twȧ'*), *n.* provincial dialect.

pa-tri-arch (*pā'tri-ärk*), *n.* the founder or head of a family; an aged man.

pa-tri-cian (*pȧ-trish'an*), *n.* one of the senators of ancient Rome; a nobleman: *adj.* senatorial; noble.

Patrick (*pat'rik*). From the Latin *Patricius*, meaning "patrician," "noble." Dutch, *Patricius;* Fr., *Patrice;* It., *Patrizio;* Sp., *Patricio.*

pat-ri-mo-ny (*'ri-mō-ni*), *n.* an estate or right inherited from a father or one's ancestors.

★**pa-tri-ot** (*pā'tri-ot*), *n.* one who loves, and is devoted to, his native country and its welfare.

pa-tri-ot-ism (*'tri-ot-izm*), *n.* love of one's country.

pa-tris-tic (*pȧ-tris'tik*), *adj.* pertaining to the theology and writings of the fathers of the Christian church. [Also *patristical.*]

pa-trol (*pȧ-trōl'*), *n.* a corporal's guard that marches round at night to preserve order; a mounted policeman: *v. t.* to go round as a patrol.

★**pa-tron** (*pā'trun*, not *pat'run*), *n.* a guardian or protector: *adj.* giving aid or exercising guardianship; tutelary.

pat-ron-ize (*pat'run-īz*), *v. t.* to act as a patron toward; support or protect; frequent as a customer.

pat-ro-nym-ic (*pat-rō-nim'ik*), *adj.* derived from the name of an ancestor: *n.* a name derived from an ancestor.

pat-ter (*'ĕr*), *v. i.* to strike with a quick succession of light sounds, as hail.

pat-tern (*'ĕrn*), *n.* a model, sample, or specimen. [COPY, EXAMPLE.]

pat-ty (*'i*), *n.* a small pie.

pau-ci-ty (*paw'si-ti*), *n.* smallness of number or quantity.

Paul (*pawl*, French *pōl*, German *powl*). A name derived from the Hebrew, signifying "small in stature." Danish, *Paul* or *Paulus;* Dutch, *Paulus;* Fr., *Paul;* Ger., *Paul;* Gr., *Paulos;* Hungarian, *Pal;* It., *Paola;* Lat., *Paulus;* Polish, *Pawel;* Port., *Paulo,* Russ., *Pavel;* Sp., *Pablo;* Sw., *Paul.*

Paulina (*paw-lē'nȧ, paw-lī'nȧ*). The feminine of *Paul.* Fr., *Pauline;* Ger., *Pauline;* It., *Paolina;* Lat., *Paulina.*

Pauline (*paw-lēn'*, French *pō-lēn'*). A French name derived from the Roman name *Paulina.*

paunch (*pȧnch*, or *pawnch*), *n.* the belly.

pau-per (*paw'pĕr*), *n.* a dependent poor person.

pau-per-ize (*-īz*), *v. t.* to make a pauper of.

pause (*pawz*), *n.* cessation; temporary stop: *v. i.* to make a short stop; wait. [DEMUR.]

pave (*pāv*), *v. t.* to cover or lay with stones, bricks, etc.

pave-ment (*pāv'ment*), *n.* a paved roadway or floor.

pa-vil-ion (*pȧ-vil'yun*), *n.* an ornamental dome-shaped building; a large tent; summer house.

paw (*paw*), *n.* the foot of an animal with claws; the hand: *v. t.* to scrape with the forefoot.

pawn (*pawn*), *n.* something given as security for the redemption of a pledge; a common piece at chess: *v. t.* to give in pledge.

pawn-bro-ker (*'brō-kĕr*), *n.* one who lends money on the security of goods pawned with him.

pay (*pā*), *v. t.* to discharge a debt to; give an equivalent for; compensate: *n.* money given for service rendered.

Payette (*pā-et'*) **river, Idaho.** Named by a French trapper, José Payette.

pay-mas-ter (*'mȧs-tĕr*), *n.* one who pays or from whom wages are received.

pea (*pē*), *n.* [*pl.* peas, or pease (*pēz*)], a leguminous plant of the genus Pisum and its edible seed.

Peabody Institute. An institute at Baltimore, founded by George Peabody, and containing a library, conservatory of music, art gallery, etc.

peace (*pēs*), *n.* a state of rest or tranquillity; calm; freedom from war or disturbance.

Syn. PEACE, quiet, calm, tranquillity. *Peace* implies an exemption from public or private broils; *quiet* implies a freedom from noise or interruption; *calm* is a species of *quiet* which respects objects in the natural or the moral world; it indicates the absence of violent motion as well as violent noise; *tranquillity* expresses the situation as it exists in the present moment; it is sometimes applicable to society, sometimes to natural objects. [See *calm.*]

Ant. AGITATION, excitement, restlessness, tumult.

peace-a-ble (*'ȧ-bl*), *adj.* disposed to peace; calm; quiet.

peace-ful (*'fool*), *adj.* pacific; quiet. [CALM.]

peach (*pēch*), *n.* a tree with its downy edible fruit: *v. i.* to betray one's accomplices.

pea-cock (*pē'kok*), *n.* a gallinaceous bird with handsome plumage.

peak (*pēk*), *n.* the sharp-pointed summit or jutting part of a mountain or hill; pointed end.

peal (*pēl*), *n.* a loud sound, as of thunder, bells, etc.: *v. i.* to give forth loud or solemn sounds.

pea-nut (*pē'nut*), *n.* the groundnut.

pear (*pȧr*), *n.* the juicy edible fruit of the pear tree (*Pyrus communis*).

pearl (*pĕrl*), *n.* a hard, smooth, grayish-white iridescent gem found in the mother-of-pearl oyster: *adj.* pertaining to, or formed of, pearls.

Pearl river, Miss. The Indian name was *Tallahatchie*, signifying "river of pearls," of river stones, obtained from a peculiar shell taken from the bottom of the canoes; supposed to be a kind of oyster.

pearl-y (*'i*), *adj.* resembling, or containing, pearls; clear.

peas-ant (*pez'ant*), *n.* a countryman; rustic laborer: *adj.* rural.

peat (*pēt*), *n.* decayed vegetable matter, resembling turf, cut out of bogs, and used as fuel.

peb-ble (*peb'l*), *n.* a roundish stone.

pe-can (*pē-kan'*), *n.* a species of North American hickory and its fruit.

pec-ca-bil-i-ty (*pek-ȧ-bil'i-ti*), *n.* the state of being subject to sin.

pec-ca-dil-lo (*-dil'ō*), *n.* a trifling fault.

peck (*pek*), *n.* 1-4th of a bushel; quick, sharp stroke with the beak: *v. t.* to strike with the beak.

Pecos (*pā'kōs*) **river, Tex.** Named by the Spaniards, from *pecose*, "freckled," a local suggestion in the appearance of its waters.

pec-tic ac-id (*pek'tik as'id*), an acid found in various fruits.

pec-to-ral (*'tō-ral*), *adj.* pertaining to, or worn on, the chest.

pec-u-late (*'ū-lāt*), *v. i.* to appropriate public money to one's own use; embezzle.

pe-cul-iar (*pe-kūl'yĕr*), *adj.* one's own; appropriate; individual; strange. [RARE.]

pe-cul-iar-i-ty (*-yar'i-ti*), *n.* [*pl.* peculiarities (*-tiz*)], something peculiar or characteristic.

pe-cun-ia-ry (*pe-kūn'yȧ-ri*), *adj.* pertaining to, or consisting of, money; monetary. [FINANCIAL.]

ped-a-gog-ic (*ped-ȧ-goj'ik*), *adj.* pertaining to a pedagogue or to the science of teaching. [Also *pedagogical.*]

ped-a-gogue (*'ȧ-gog*), *n.* a schoolmaster; pedant.

ped-a-go-gy (*'ȧ-gō-jȧ*), *n.* the science of teaching.

ped-al (*ped'al*), *n.* a key or lever attached to a musical instrument and moved by the foot, to modify or swell the tone.

ped-ant (*'ant*), *n.* one who makes an ostentatious display of his learning.

ped-ant-ry (*'ant-ri*), *n.* ostentatious display of learning.

ped-dle (*'l*), *v. i.* to travel about selling small wares: *v. t.* to retail in small quantities.

ped-dler, ped-ler, ped-lar (*'lĕr*), *n.* one who peddles.

ped-es-tal (*'es-tal*), *n.* the base of a column, statue, etc.

pe-des-tri-an (*pē-des'tri-an*), *adj.* going on foot; walking: *n.* one who journeys on foot.

ped-i-gree (*ped'i-grē*), *n.* lineage; genealogy.

pe-do-bap-tism. Same as *pædobaptism.*

ped-om-e-ter (*ped-om'ē-tĕr*), *n.* a watch-shaped instrument for recording distances in walking.

Pedro. See *Peter.*

ped-un-cle (*-ung'kl*), *n.* a flower-stalk.

Peekskill. Village in Westchester county, New York, named for Jan Peek, a Dutch mariner of the seventeenth century.

peel (*pēl*), *v. t.* to strip the skin, bark, or rind from: *n.* skin or rind.

peep (*pēp*), *v. i.* to chirp or cry, as young birds; to look through a crevice or hiding place.

peer (*pēr*), *n.* one of the same rank; an equal; associate.

peer-age (*'ăj*), *n.* the rank or dignity of a peer; peers collectively.

peer-less (*'les*), *adj.* without an equal.

peev-ish (*pēv'ish*), *adj.* fretful; difficult to please. [CAPTIOUS.]

peg (*peg*), *n.* a small pointed wooden pin; a piece of wood serving as a nail.

Pekin (*pē-kin'*) or **Peking** (*pē-king'*). Chinese, *Pekking.* The "north court" or "northern capital," of China, so called since 1421, when the third Ming emperor transferred hither the court from Nanking, the "southern court."

pelf (*pelf*), *n.* money; wealth (used in a bad sense).

pel-i-can (*pel'i-kan*), *n.* a large aquatic bird with a huge ax-shaped bill.

pel-let (*'et*), *n.* a little ball.

pell-mell (*'mel*), *adv.* with confused violence.

pel-lu-cid (*-ū'sid*), *adj.* perfectly clear; transparent.

Syn. PELLUCID, transparent. *Pellucid* is said of that which is pervious to the light, or of that into which the eye can penetrate; *transparent* is said of that which is throughout bright; a stream is *pellucid;* it admits light but it is not *transparent* for the eye. [See *candid.*]

pelt (*pelt*), *n.* a raw hide; a blow from something thrown: *v. t.* to strike by throwing something.

pel-vis (*'vis*), *n.* the bony cavity in the lower part of the abdomen.

Pembina (*pem-bē-nȧ*), **N. D.** Name a contraction

of Ojibway Indian word *ăněpěmĭnăn*, a red berry growing in that vicinity, which Michaux regards as a variety of the cranberry of the east.

pem-mi-can (*pem'ĭ-kăn*), *n.* lean meat, dried, pounded, and pressed into cakes.

pen (*pen*), *n.* a small inclosure; coop; an instrument for writing: *v. t.* to shut up in a small inclosure; write.

pe-nal (*pē'năl*), *adj.* enacting, inflicting, or incurring punishment for crime; punitive.

pen-al-ty (*pen'ăl-tĭ*), *n.* fine or forfeit.

pen-ance (*pen'ăns*), *n.* self-imposed suffering, as an expression of contrition for sin.

pence (*pens*), *pl.* of penny.

pen-cil (*pen'sĭl*), *n.* a pointed instrument of black lead, colored chalk, etc.: *v. t.* to write, sketch, paint, or mark with a pencil.

pend-ant (*pend'ănt*), *n.* anything hanging for ornamentation; an earring or locket; a pennant.

pend-ent (*'ĕnt*), *adj.* hanging; projecting; swinging.

pend-ing (*ĭng*), *adj.* undecided; hanging in suspense.

Pend Oreille (*pend ō-rĕl'*) **lake, Idaho.** So called from the French, meaning "earring," suggested by its shape.

pen-du-lum (*'dū-lum*), *n.* a heavy body suspended so that it may vibrate backward and forward about a fixed point by the force of gravity, as in a clock.

Penelope (*pē-nel'ō-pē*). The Greek name which some render "female weaver"; others define it "a web," and "a garment," because the wife of Ulysses was the best weaveress. Fr., *Pénélope;* Gr., *Penelope;* Lat., *Penelope.*

pen-e-tra-ble (*'ē-trā-bl*), *adj.* that may be penetrated; susceptive of impression.

pen-e-trate (*'ē-trāt*), *v. t.* to pierce into; enter; bore or perforate.

pen-e-tra-tion (*-trā'shun*), *n.* the act of penetrating; mental acuteness.

pen-guin (*'gwĭn*), *n.* a large sea fowl with rudimentary wings.

pen-in-su-la (*pen-in'sū-lă*), *n.* a portion of jutting land nearly surrounded by water, and connected with the mainland by an isthmus.

pen-in-su-lar (*'su-lĕr*), *adj.* pertaining to, or shaped like, a peninsula.

pen-i-tence (*pen'ĭ-tens*), *n.* sorrow for sin; state of being penitent.

pen-i-tent (*'ĭ-tent*), *adj.* repentant: *n.* one who is penitent.

pen-i-ten-tia-ry (*-ten'shă-rĭ*), *adj.* pertaining to penance: *n.* a house of correction; a state prison.

pen-knife (*'nīf*), *n.* a small pocket-knife.

pen-man-ship (*'man-ship*), *n.* the art, or style, of writing.

pen-nant (*'ănt*), *n.* a long narrow strip of bunting at the mastheads of men-of-war.

Pennsylvania. One of the eastern states of the Union. William Penn originally designed calling the territory *New Wales*, but afterward suggested the word *Sylvania*, as suitable for a land covered with forests. The king of England, in 1681, prefixed the word *Penn* in honor of William Penn; literal translation, "Penn's woods."

Pennsylvania ave. The principal avenue of Washington, D. C. Its most important section lies between the capitol and the treasury.

pen-ny (*-ĭ*), *n.* [*pl.* pennies (*'iz*), denoting number, pence (*pens*), denoting amount or value], a bronze coin equal to 1-12 of a shilling, or 2 cents. [*English.*]

pen-ny-weight (*-wāt*), *n.* a weight equal to 24 grains troy.

Penobscot (*pē-nob'skot*), **Me.** Name derived from the Indian word *penobskeag*, meaning "rocky place," or "river of rocks." Also said to be the name of an Indian tribe.

pe-nol-o-gy (*pē-nol'ō-jĭ*), *n.* the scientific study of punishments, prison management, etc.

Pensacola (*pen-sa-kō'lă*). Bay and city in Escambia county, Florida. Name said to be derived from the Indian word *Pan-sha-okla*, meaning "hair people." The French gave to the bay the name of *Port-de-Aucloss*, also *Baï de St. Mariette.*

pen-sion (*'shun*), *n.* a stated allowance paid for past services, as to the state, etc.: *v. t.* to grant a pension to.

pen-sive (*'sĭv*), *adj.* thoughtful; sad.

pent [*p. t.* and *p. p.* of pen], to shut up.

penta, a *prefix* meaning *five:* as *pentachord.*

pen-ta-gon (*pen'tă-gon*), *n.* a figure of 5 sides and 5 angles.

pen-tam-e-ter (*-tam'ē-tĕr*), *n.* a verse consisting of 5 feet.

Pen-ta-teuch (*'tă-tūk*), *n.* the first 5 books of the Old Testament.

Pen-te-cost (*'tē-kost*), *n.* a Jewish festival kept the 50th day after the second day of the Passover.

pent-house (*'hous*), *n.* a shed with a slanting roof projecting from a main wall or building.

pe-nult (*pē-nult'*), *n.* the last syllable of a word but one. [Also *penultima.*]

pe-nult-i-mate (*'ĭ-māt*), *adj.* last but one.

pe-num-bra (*-num'brā*), *n.* a partial shadow on the exterior of the perfect shadow of an eclipse.

pe-nu-ri-ous (*-nū'rĭ-us*), *adj.* miserly; sordid.

Syn. PENURIOUS, economical, saving, sparing, thrifty, niggardly. To be *economical* is a virtue in those who have but narrow means; he who is *saving* when young will be *avaricious* when old; *sparing* is keeping out of that which ought to be spent; *thrifty* is accumulating by means of *saving; penurious* is suffering as from *penury* by means of *saving; niggardly* is not spending or letting go but in the smallest possible quantities.

pen-u-ry (*pen'ū-rĭ*), *n.* want of the necessities of life; poverty.

pe-o-ny (*pē'ō-nĭ*), *n.* a perennial plant with handsome flowers, of the genus Pæonia. [Also *pæony.*]

peo-ple (*'pl*), *n.* [*pl.* people, peoples (*'plz*], persons generally; community; inhabitants: *v. t.* to stock with people.

Peoria (*pē-ō'rĭ-ă*). County and city in Illinois and nation in Indian territory. An Indian word meaning "place where there are fat beasts."

pep-per (*pep'ĕr*), *n.* a hot pungent spice made of the ground seeds of *Piper nigrum.*

pep-per-mint (*-mint*), *n.* an aromatic herb; the cordial prepared from it.

pep-sin (*'sĭn*), *n.* a nitrogenous ferment contained in gastric juice.

per-ad-ven-ture (*pĕr-ad-ven'tūr*), *adv.* by chance.

per-am-bu-la-tion (*-am-bū-lā'shun*), *n.* the act of passing through; a survey made by traveling.

per-ceive (*-sēv'*), *v. t.* to obtain knowledge of by the senses; understand; discern. [SEE.]

per cent (*-sent'*), by the hundred.

per-cent-age (*-sent'ăj*), *n.* proportional allowance; per cent.

per-cep-ti-ble (*-sep'tĭ-bl*), *adj.* that may be perceived.

per-cep-tion (*-sep'shun*), *n.* idea, notion, or conception.

per-cep-tive (*'tĭv*), *adj.* having the faculty of perceiving.

perch (*pĕrch*), *n.* a fresh-water fish; anything on which birds sit or roost.

per-chance (*pĕr-chăns'*), *adv.* perhaps.

Percival (*pĕr'sĭ-val*). An old masculine baptismal name, derived from a local name in Normandy. It probably means "companion of the chalice."

per-co-late (*'kō-lāt*), *v. i.* to pass through small spaces.

per-cus-sion (*-kush'un*), *n.* violent collision; shock produced by the collision of bodies.

Percy. A name derived from *Perci*, a parish and canton near St. Lo, in Normandy.

per-di-tion (*-dish'un*), *n.* total destruction; ruin, utter loss of the soul or of happiness in a future state.

per-e-grin-a-tion (*per-ē-grĭn-ā'shun*), *n.* the act of traveling about.

Peregrine (*per'ē-grĭn*). From the Latin, meaning "foreign," "pilgrim," "traveler." Danish, *Peregrinus;* Dutch, *Peregrinus;* It., *Peregrino;* Lat., *Peregrinus;* Sw., *Peregrinus.*

Père-la-Chaise or **Père Lachaise** (*pâr lă-shāz'*). The Parisian cemetery so named is the site of a great monastery founded by Louis XIV., of which Père la Chaise, a favorite confessor of that luxurious monarch, was the first superior. He died in 1709. After the Revolution the grounds were laid out for a cemetery.

per-emp-to-ry (*per'emp-tō-rĭ*), [*adj.* positive; final; decisive; precluding discussion or hesitation.

per-en-ni-al (*-en'ĭ-al*), *adj.* lasting through the year; perpetual.

per-fect (*pĕr'fekt*), *adj.* complete; without defect or blemish; blameless; pure: *v. t.* to complete or finish. [COMPLETE.]

per-fect-i-ble (*-fek'tĭ-bl*), *adj.* capable of being made perfect.

per-fec-tion (*-fek'shun*), *n.* the state of being perfect; supreme excellence.

per-fid-i-ous (*-fĭd'ĭ-us*), *adj.* false to trust; treacherous; faithless. [FAITHLESS.]

per-fi-dy (*'fĭ-dĭ*), *n.* violation of a trust reposed; breach of faith.

per-fo-rate (*'fō-rāt*), *v. t.* to pierce or bore through; make a hole through. [ORIFICE.]

per-force (*-fōrs'*), *adv.* by force; violently.

per-form (*-fôrm'*), *v. t.* to do or carry out; execute; achieve; fulfill: *v. i.* to act a part. [EFFECT, EXECUTE.]

per-form-ance (*'ans*), *n.* the act of performing; execution; completion. [PRODUCTION.]

per-fume (*-fūm'*), *v. t.* to impregnate with a pleasant odor; scent: *n.* (*pĕr'fūm*) a sweet-smelling scent.

per-fum-er-y (*'ĕr-ĭ*), *n.* perfumes in general.

per-func-to-ry (*-fungk'tō-rĭ*), *adj.* done carelessly or negligently with the purpose of getting rid of the duty; negligent.

per-haps (*-haps'*), *adv.* possibly.

per-i-car-di-um (*per-ĭ-kär'dĭ-um*), *n.* the membrane that surrounds the heart.

per-i-hel-ion (*-hēl'yun*), *n.* [*pl.* perihelia (*-yă*)], that point in the orbit of a planet, or a comet, nearest the sun.

per-il (*'ĭl*), *n.* exposure to injury; danger; jeopardy; risk: *v. t.* to expose to danger or risk. [DANGER.]

per-il-ous (*-us*), *adj.* full of peril; hazardous.

per-im-e-ter (*per-ĭm'ē-tĕr*), *n.* the outer boundary of a plane surface.

pe-ri-od (*pē'rĭ-ud*), *n.* a cycle; interval of time; a dot (.) to mark the end of a sentence. [TIME.]

pe-ri-od-ic-al (*-od'ĭ-kal*), *adj.* occurring at regular intervals. [Also *periodic.*] *n.* a publication issued at stated intervals.

pe-ri-o-dic-i-ty (*-ō-dĭs'ĭ-tĭ*), *n.* the state or quality of being periodical.

per-i-os-te-um (*per-ĭ-os'tē-um*), *n.* the vascular nervous membrane which covers the bones.

per-i-pa-tet-ic (*-pă-tet'ĭk*), *adj.* walking about: *n.* one who is accustomed or compelled to walk.

pe-riph-er-y (*pē-rif'ĕr-ĭ*), *n.* [*pl.* peripheries (*-iz*)], the circumference of a circle, ellipse, or similar figure.

per-i-scope (*per'ĭ-skōp*), *n.* an instrument for seeing over intervening objects.

per-ish (*'ĭsh*), *v. i.* to lose life or vitality; decay or die: be destroyed or come to nothing.

per-ish-a-ble (*per'ĭsh-ă-bl*), *adj.* liable to perish; mortal.

per-i-stal-tic (*per-ĭ-stal'tĭk*), *adj.* pertaining to the peculiar worm-like movement of the intestines.

per-i-sys-to-le (*-sĭs'tō-lē*), *n.* the interval that ensues on the contraction of the heart before the dilation (diastole) which follows.

per-i-to-ne-um (*-tō-nē'um*), *n.* a thin serous membrane which covers the abdominal viscera.

per-i-wig (*per'ĭ-wig*), *n.* a small wig.

per-i-win-kle (*-wing'kl*), *n.* a perennial creeping plant; a small univalve mollusk.

per-jure (*pĕr'jūr*), *v. i.* to swear falsely. [FORSWEAR.]

perk (*pĕrk*), *v. t.* to make trim or smart: *v. i.* to hold up the head in a smart or saucy manner; peer.

per-ma-nence (*pĕr'ma-nens*), *n.* the state or quality of being permanent; duration. [Also *permanency.*]

per-ma-nent (*-nent*), *adj.* lasting; durable; continuing in the same state.

Syn. PERMANENT, abiding, constant, durable, fixed, immutable, invariable, lasting, perpetual, stable, steadfast. *Durable* is said almost wholly of material substances that resist wear; *lasting* is said of either material or immaterial things. *Permanent* is a word of wider meaning; a thing is *permanent* which is not liable to change; as, a *permanent* color; *immutable* is a higher word, applied to that which resists both time and change. [See *durable.*]

per-me-a-ble (*'mē-ă-bl*), *adj.* that may be passed through.

per-me-ate (*'mē-āt*), *v. t.* to penetrate and pass through the pores or interstices of.

per-mis-si-ble (*-mĭs'ĭ-bl*), *adj.* that may be permitted.

per-mis-sion (*-mish'un*), *n.* the act of permitting; leave; license.

per-mit (*-mĭt'*), *v. t.* to allow without command; consent to; tolerate. [CONSENT, ADMIT.]

per-mu-ta-tion (*-mū-tā'shun*), *n.* the exchange of one thing for another.

Pernambuco (*per-năm-boō'kō*). An important city of Brazil. Means "the mouth of hell," in allusion to the violent surf always distinguished at the mouth of its chief river, the Amazon.

per-ni-cious (*pĕr-nĭsh'us*), *adj.* highly injurious or hurtful; destructive. [HURTFUL.]

per-o-ra-tion (*per-ō-rā'shun*), *n.* the concluding part of an oration.

per-ox-ide (*pĕr-oks'id*), *n.* the oxide of a base which contains the largest proportion of oxygen.

per-pen-dic-u-lar (*-pen-dĭk'ū-lĕr*), *adj.* standing at right angles to a given line or surface; perfectly upright.

per-pe-trate (*'pē-trāt*), *v. t.* to commit; perform (in a bad sense).

Syn. PERPETRATE, commit. One may *commit* offenses of various degrees and magnitude but one *perpetrates* crimes only, and those of the more heinous kind.

Ant. BE INNOCENT.

per-pet-u-al (*-pet'ū-al*), *adj.* never ceasing; not temporary. [PERMANENT.]

per-pet-u-ate (*'ū-āt*), *v. t.* to make perpetual; preserve from extinction or oblivion.

per-pe-tu-i-ty (*-pē-tū'ĭ-tĭ*), *n.* the state of being perpetual; endless duration.

per-plex (*-pleks'*), *v. t.* to make difficult to be understood; puzzle. [EMBARRASS, DISTRESS.]

per-plex-i-ty (*'ĭ-tĭ*), *n.* embarrassment; doubt; intricacy. [ANXIETY.]

per-qui-site (*'kwĭ-zĭt*), *n.* a gift or allowance in addition to regular wages or salary.

per-se-cute (*'sē-kūt*), *v. t.* to harass or ill treat, especially for religious opinions. [ABUSE.]

per-se-cu-tion (*-kū'shun*), *n.* the act of persecuting; the state of being persecuted.

Persepolis (*pĕr-sep'ō-lĭs*). In ancient geography, one of the capitals of the Persian empire, situated not far from the Kur, about thirty-five miles northeast of the modern Shiraz.

per-se-ver-ance (*-sē-vēr'ans*), *n.* the act or state of persevering; continuance in grace.

per-se-vere (*-sē-vēr'*), *v. i.* to persist in any enterprise or business undertaken; continue steadfastly. [CONTINUE.]

Persia (*pĕr'shă* or *pĕr'zhă*). Name given by the Greeks to a region of western Asia, the capital of which was Persepolis, originally overrun by a wild branch of the Aryan race, the *Parsa*, meaning in the native tongue "the tigers." The Persian name for the country is *Iran.*

per-sim-mon (*-sim'un*), *n.* an American plum-like fruit; the tree yielding it.

★**per-sist** (*pĕr-sist'*, not *pĕr-zist'*), *v. i.* to continue steadily in any course commenced; persevere. [CONTINUE, INSIST.]

per-sist-ence (*-sist'ens*), *n.* the state or quality of being persistent; obstinacy. [Also *persistency.*]

per-son (*'sn*), *n.* a human being or individual.

per-son-al-i-ty (*-al'ĭ-tĭ*), *n.* that which constitutes distinction of persons.

per-son-ate (*-āt*), *v. t.* to represent by an assumed character; counterfeit.

per-son-i-fi-ca-tion (*pēr-son-i-fi-kā'shun*), *n.* the act of personifying.

per-son-i-fy (*'i-fī*), *v. t.* to represent as endowed with personal qualities.

per-son-nel (*pēr-son-el'*), *n.* the persons employed in any public service.

per-spec-tive (*pēr-spek'tiv*), *adj.* pertaining to, or in accordance with, the art of perspective: *n.* a vista or view; the art of depicting objects on a plane so that they appear as if viewed in reality.

per-spi-cac-i-ty (*-spi-kas'i-ti*), *n.* acuteness of sight or discernment.

per-spi-cu-i-ty (*-kū'i-ti*), *n.* freedom from obscurity; mental clearness; lucidity. [CLEARNESS.]

per-spi-ra-tion (*-spi-rā'shun*), *n.* excretion by the pores of the skin; sweat.

per-spire (*-spīr'*), *v. i.* to excrete by the pores of the skin; sweat.

per-suade (*-swād'*), *v. t.* to influence by argument, advice, entreaty, etc.; exhort; induce.

Syn. PERSUADE, allure, bring over, coax, convince, dispose, entice, impel, incite, incline, induce, influence, lead, move, prevail on or upon, urge; win over. Of these words *convince* alone has no direct reference to moving the will; one may be *convinced* of his duty without doing it; to *persuade* is to bring the will of another to a desired decision; one may be *convinced* that the earth is round; *coax* is a slighter word than *persuade*, as, a child *coaxes* a parent to buy him a toy; he is *won over* chiefly by personal influence.

Ant. DISCOURAGE, deter, repel.

per-sua-sion (*-swā'zhun*), *n.* the act or art of persuading; the state of being persuaded.

per-sua-sive (*'siv*), *adj.* having the power to persuade: influencing the will or passions.

pert (*pērt*), *adj.* saucy; forward.

per-tain (*pēr-tān'*), *v. i.* to belong, or have relation.

Perth Amboy, N. J. One of its landed proprietors was James Drummond, the earl of Perth, who named the original settlement *Towne of Perth;* the point of land at the mouth of the Raritan was known as *Ambo Point*, and early attachment or combination gave its present name.

per-ti-na-cious (*-ti-nā'shus*), *adj.* unyielding; obstinate; resolute. [TENACIOUS, OBSTINATE.]

per-ti-nent (*'ti-nent*), *adj.* fitting or appropriate; relevant.

per-turb (*-tûrb'*), *v. t.* to agitate; disturb; disquiet.

Peru (*pē-rōō'*). A republic of South America. Received its name from its principal river, the Rio Paro, upon which stands the ancient city of Paruru. The Brazilian term *para*, however modified, is at all times suggestive of a river.

pe-ruse (*-rōōz'*), *v. t.* to read with care and attention; examine.

per-vade (*pēr-vād'*), *v. t.* to penetrate; extend or be diffused all over; permeate.

per-va-sion (*-vā'zhun*), *n.* the act of pervading.

per-verse (*-vērs'*), *adj.* obstinate; untractable; petulant.

Syn. PERVERSE, contrary, factious, fractious, froward, intractable, obstinate, petulant, stubborn, wayward. *Perverse* signifies willfully wrong or erring. The *stubborn* or *obstinate* person will not do what another desires or requires; the *petulant* person frets; the *perverse* individual is willfully *intractable*. *Wayward* refers to a *perverse* disregard for morality and duty. [See *petulant*.]

per-ver-sion (*-vēr'shun*), *n.* a turning from truth or propriety; misapplication.

per-ver-si-ty. Same as *perverseness*.

per-vert (*-vērt'*), *v. t.* to turn from the true end or proper purpose; misapply: *n.* (*per'vert*) one who has been perverted. [ABUSE.]

per-vi-ous (*'vi-us*), *adj.* admitting passage; permeable.

pes-ky (*pes'ki*), *adj.* troublesome; annoying.

pes-si-mism (*pes'i-mizm*), *n.* the tendency to exaggerate in thought the evils of life (opposed to *optimism*).

pes-si-mist (*-mist*), *n.* one who looks on the worst side of everything.

pest (*pest*), *n.* a fatal epidemic disease; plague; anything very michievous, or injurious.

pes-ter (*pes'tēr*), *v. t.* to annoy.

pes-tif-er-ous (*-tif'ēr-us*), *adj.* conveying pestilence; physically or morally noxious.

pes-ti-lence (*'ti-lens*), *n.* an infectious or contagious disease.

pes-ti-lent (*'ti-lent*), *adj.* noxious to health, morals, or society.

pes-ti-len-tial (*-len'shal*), *adj.* pertaining to, or producing, a pestilence; pernicious; destructive. [CONTAGIOUS.]

pes-tle (*pes'l*), *n.* an instrument for pounding substances in a mortar.

pet (*pet*), *n.* any person or animal that is fondled: *adj.* favorite: *v. t.* to fondle.

pet-al (*'al*), *n.* one of the separate parts of the corolla of a flower; a flower leaf.

pe-tard (*pē-tärd'*), *n.* a bell-shaped explosive machine used for bursting open gates, etc.

Peter (*pē'tēr*). From the Greek, signifying a "rock," properly, a "stone." Danish, *Peder;* Dutch, *Pieter;* Fr., *Pierre;* Ger., *Peter;* Gr., *Petros;* Hung., *Peter;* It., *Pietro;* Lat., *Petrus;* Polish, *Piotr;* Port., *Pedro;* Russ., *Piotr;* Sp., *Pedro;* Sw., *Peter*.

Petersburg or **St. Petersburg.** Properly *Peterburg* or *St. Peterburg*, the capital of Russia, was founded by Peter the Great, who, having in 1702 taken the Swedish forts on the Neva, in the following year laid the foundations of a fort which he called *Peterburg* (Fort Peter), on an island in the Neva, the nucleus and now the most densely populated portion of the city.

Petersburg, Va. Originally named *Peter's Point*, after the trader Peter Jones, who opened a depot here.

pe-ti-tion (*pē-tish'un*), *n.* an earnest supplication or prayer; a paper or document containing a written request: *v. t.* to solicit earnestly.

pet-it ju-ry (*pet'i jōō-ri*), a trial jury as distinguished from a grand jury. [Also *petty jury*.]

pet-rel (*'rel*), *n.* a web-footed, strong-winged, oceanic bird.

pet-ri-fac-tion (*-ri-fak'shun*), *n.* the process of changing animal or vegetable substance into stone; a fossil.

pet-ri-fy (*'ri-fī*), *v. t.* to change into stone; fix in silent amazement or fear: *v. i.* to become stone or of a stony hardness.

pe-tro-le-um (*pē-trō'lē-um*), *n.* an inflammable dark yellowish-brown bituminous liquid issuing from certain rocks; mineral oil.

pet-ti-coat (*pet'i-kōt*), *n.* a woman's loose underskirt.

pet-ti-fog-ger (*'i-fog-ēr*), *n.* a lawyer who practices in petty cases.

pet-tish (*'ish*), *adj.* fretful; petulant.

pet-ty (*'i*), *adj.* trifling; small; inconsiderable; unimportant; contemptible.

pet-u-lant (*'ū-lant*), *adj.* peevish; capricious. [PERVERSE.]

Pe-tu-ni-a (*pē-tū'ni-ä*), *n.* a South American genus of ornamental plants with handsome flowers.

pew (*pū*), *n.* an inclosed seat in a church: *v. t.* to furnish with pews.

pew-ter (*pū'tēr*), *n.* an alloy of tin, lead, antimony, etc.: *adj.* made of pewter.

pha-lanx (*fā'langks*), *n.* [*pl.* phalanges (*-lan'jēz*)], any close compact body: *pl.* the small bones of the fingers and toes.

phan-tasm (*fan'tazm*), *n.* a vision or specter.

phan-tom (*'tum*), *n.* an apparition; spirit; fancied vision.

Pharaoh (*fā'rō, fā'rā-ō*). A title given to the Egyptian kings. From the Hebrew *Paroh*, which has been variously translated "son of the sun," "mouth of the sun," "voice of God," and "sun" only. The proper meaning of the word is "the king" or "great house."

phar-i-sa-ic (*far-i-sā'ik*), *adj.* pertaining to, or characteristic of, the Pharisees; hypocritical.

Phar-i-see (*'i-sē*), *n.* one who observes the letter rather than the spirit of the law; a mere formalist.

phar-ma-ceu-tic (*fär-mä-sū'tik*), *adj.* pertaining to pharmaceutics. [Also *pharmaceutical*.] *n. pl.* pharmacy.

phar-ma-cy (*'mä-si*), *n.* the art of preparing and compounding medicines; a drug store.

phar-ynx (*far'ingks*), *n.* the muscular or membranous sac at the upper part of the œsophagus.

phase (*fāz*), *n.* [*pl.* phases (*'ez*)], aspect; appearance; transparent green quartz. [Also *phasis*.]

pheas-ant (*fez'ant*), *n.* a gallinaceous bird with brilliant plumage, and preserved for sport.

Phebe. See *Phœbe*.

phe-nix (*fē'niks*), *n.* a fabulous bird, said to live 500 years in the Arabian desert, and to rise rejuvenescent from its ashes after immolating itself on a funeral pyre: hence the emblem of immortality. [Also *Phœnix*.]

phe-nom-e-nal (*fē-nom'ē-nal*), *adj.* pertaining to, or consisting of, phenomena.

phe-nom-e-nal-ism (*-izm*), *n.* the metaphysical doctrine that visible things are really phenomena.

phe-nom-e-non (*'ē-non*), *n.* [*pl.* phenomena (*'ē-nä*)], an appearance, especially one of unusual occurrence.

★**phi-al** (*fī'al*), *n.* a small glass bottle or vessel: *v. t.* to put or keep in a phial. [Also *vial*.]

Philadelphia (*fil-ä-del'fi-ä*), **Pa.** From two Greek words meaning "loved or friendly," and "brother," applied as "brotherly love." The Indian name of the locality was *coaquannock*, "grove of tall pine trees."

phil-an-throp-ic (*fil-an-throp'ik*), *adj.* loving mankind; benevolent. [Also *philanthropical*.]

phil-an-thro-pist (*-an'thrō-pist*), *n.* one who loves and seeks to benefit mankind.

phil-an-thro-py (*-pi*), *n.* love of mankind; benevolence.

phi-lat-e-list (*fi-lat'ē-list*), *n.* a collector of postage stamps: *adj.* pertaining to philately.

Philemon (*fi-lē'mon*). Means "saluting." Fr., *Philémon;* Gr., *Philemon;* It., *Filemone;* Lat., *Philemon*.

Philetus (*fi-lē'tus*). From the Greek, meaning "beloved." Gr., *Philetos;* It., *Fileto;* Lat., *Philetus*.

Philibert (*fil'ē-bērt*) or **Philebert.** From the Teutonic, signifying "famously bright." Danish, *Philibert;* Fr., *Philibert;* It., *Filiberto;* Lat., *Philiberius*.

Philip (*fil'ip*). From the Greek name signifying "fond of horses." Dutch, *Philippus;* Fr., *Philippe;* Ger., *Philipp;* Gr., *Philippos;* Hungarian, *Filep;* It., *Filippo;* Lat., *Philippus;* Polish, *Filip;* Port., *Felippe;* Russ., *Philipp* or *Filip;* Sp., *Felipe;* Sw., *Filip*.

Philippa (*fi-lip'pä*). A feminine name formed from *Philip*. Dutch, *Philippa;* Ger., *Philippine;* Gr., *Philippa;* It., *Filippa;* Lat., *Philippa;* Sp., *Felipa;* Sw., *Filippina*.

Philippi (*fil-ip'i*). In a recent geography a city of Macedonia. Named after Philip of Macedon.

phi-lip-pic (*fi-lip'ik*), *n.* a speech of vehement invective.

Philippines (*fil'ip-inz*). Were discovered by Magellan on the feast of St. Lazarus, 1521, and hence called by him *Archipelago de San Lazaro*, a name changed in 1542 to *Islas Filipinas* in honor of Philip II., in whose reign the Spanish colonization of the islands was begun.

Phil-is-tine (*fil'is-tīn* or *-is'tin*), *n.* an uncultured person or one of narrow views: *adj.* uncultured; narrow-minded; prosaic.

Phillis. Derived from the Greek *Phyllis*, name of a country woman introduced in Vergil's *Eclogeus*, and a nurse of Lycurgus, king of Thrace, and of a nurse of the emperor Domitian. It means "a green branch covered with leaves", "a leaf", "foliage", "a heap of leaves."

phil-ol-o-gy (*-ol'ō-ji*), *n.* the scientific study of languages, their structure and mutual relations.

phil-o-pro-gen-i-tive-ness (*-ō-prō-jen'i-tiv-nes*), *n.* the instinctive love of offspring.

phil-os-o-pher (*-os'ō-fēr*), *n.* a student of philosophy; one noted for calm judgment and practical wisdom.

phil-o-soph-ic (*-ō-sof'ik*), *adj.* pertaining to, or in accordance with, philosophy; rational; wise; calm. [Also *philosophical*.]

phil-os-o-phize (*-os'ō-fīz*), *v. i.* to reason like a philosopher.

phil-os-o-phy (*'ō-fi*), *n.* the knowledge of the causes of all phenomena, both of mind and matter.

phil-ter, phil-tre (*'tēr*), *n.* a love charm or potion.

Phineas (*fin'ē-as*). From the Hebrew *Piynhhas*, "mouth of brass." Fr., *Phinéas;* It., *Fineo;* Lat., *Phineas;* Sp., *Phinees*.

phlegm (*flem*), *n.* mucus secreted in the air passages of the throat; coldness; sluggishness.

★**phleg-mat-ic** (*fleg-mat'ik*), *adj.* abounding in phlegm; sluggish; dull. [Also *phlegmatical*.]

Phlox (*floks*), *n.* a genus of North American bright-colored flowering plants.

Phœbe (*fē'bē*). From the Greek name, meaning "clear, pure, bright." Fr., *Phèbe;* Gr., *Phoibe;* It., *Febe;* Lat., *Phœbe*.

pho-net-ic (*fō-net'ik*), *adj.* pertaining to the voice or sounds: *n. pl.* the science of sounds, especially of the human voice.

phon-ics (*fon'iks*), *n. pl.* the science of sounds; acoustics.

pho-no-gram (*fō'nō-gram*), *n.* articulate sound as recorded by the phonograph; a written character representing a particular sound.

pho-no-graph (*'no-gräf*), *n.* an instrument to record or reproduce articulate speech or sounds.

pho-nog-ra-phy (*-nog'rä-fi*), *n.* a description of sounds uttered by the human voice; a system of shorthand.

phos-phate (*fos'fāt*), *n.* a salt of phosphoric acid.

phos-phor-es-cence (*-fōr-es'ens*), *n.* emission of light under certain conditions by substances at common temperatures; faint light.

phos-phor-es-cent (*'ent*), *adj.* luminous.

phos-phor-ic (*-for'ik*), *adj.* pertaining to, like, or obtained from, phosphorus. [Also *phosphorous*.]

phos-phor-us (*'fōr-us*), *n.* a yellowish, wax-like, inflammable, nonmetallic element, luminous in the dark.

photo, a *prefix* meaning *light*.

pho-toch-ro-my (*fō'tok-rō-mi*), *n.* the art or process of photographing in colors.

pho-to-graph (*'tō-gräf*), *n.* a photographic picture: *v. t.* to take a picture of by means of photography.

★**pho-tog-ra-phy** (*-tog'rä-fi*), *n.* the art or process of producing pictures by the action of light on certain substances sensitized by various chemical processes.

★**pho-to-grav-ure** (*-tō-gräv-ūr'*), *n.* the process of producing by photography on a sensitized surface an incised engraved metal plate from which impressions may be printed.

phrase (*frāz*), *n.* a part of a sentence; brief, pithy expression; idiom; style or manner: *v. t.* to style; express in peculiar words.

phra-se-ol-o-gy (*frā-zē-ol'ō-ji*), *n.* style, manner, or peculiarity, of expression; a collection of phrases.

phren-o-log-ic-al (*fren-ō-loj'i-kal*), *adj.* pertaining to phrenology.

phre-nol-o-gist (*frē-nol'ō-jist*), *n.* one who believes in, or is skilled in, phrenology.

phre-nol-o-gy (*'ō-ji*), *n.* the science of the human mind or brain, as connected with the moral, intellectual, and sensual dispositions of the individual.

★**phthis-ic** (*tiz'ik*), *n.* asthma; phthisis.

phthis-ic-al (*'i-kal*), *adj.* pertaining to, or caused by, phthisic or phthisis.

★**phthi-sis** (*thi'sis*), *n.* pulmonary consumption.

phy-lac-ter-y (*fi-lak'tēr-i*), *n.* [*pl.* phylacteries (*-iz*)], a small square box containing the law; worn by pious Jews upon the forehead and left wrist.

Phyllis. See *Phillis*.

phys-ic (*fiz'ik*), *n.* the science of medicine; a cathartic: *v. t.* to administer medicine.

phys-ic-al (*'i-kal*), *adj.* pertaining to nature, or to material things.

Syn. PHYSICAL, bodily, corporal, corporeal.

material, natural, sensible, tangible, visible. Whatever is composed of, or pertains to, matter may be termed *material; physical* applies to *material* things considered as parts of a system or organic whole; hence, we speak of *material* substances, *physical* forces, *physical* laws. *Bodily, corporal,* and *corporeal* apply primarily to the human body; we speak of *bodily* sufferings, *bodily* presence, *corporal* punishment, the *corporeal* frame.

phy-si-cian (*fi-zish'an*), *n.* one legally qualified to prescribe remedies for diseases.

★**phys-i-cist** (*fiz'i-sist*), *n.* a student of natural science.

phys-ics (*'iks*), *n. pl.* physical science or natural philosophy.

phys-i-og-no-my (*-i-og'nō-mi*), *n.* the face; outward appearance.

phys-i-o-log-ic-al (*-i-ō-loj'i-kal*), *adj.* pertaining to physiology.

phys-i-ol-o-gist (*-i-ol'ō-jist*), *n.* one who is skilled in physiology.

phys-i-ol-o-gy (*-ol'ō-ji*), *n.* the science that treats of the vital functions performed by the organs of animals and plants.

phy-sique (*fi-zēk'*), *n.* physical organization.

pi, pie (*pī*), *n.* disarranged or jumbled type: *v. t.* to jumble or throw into disorder.

★**pi-an-ist** (*pi-an'ist*), *n.* a performer on the piano.

★**pi-an-o** (*pi-an'ō*), *n.* a pianoforte.

pi-an-o-for-te (*-fōr-tā*), *n.* a stringed musical instrument, the notes of which are produced by hammers acted upon by keys.

pi-az-za (*-az'ä*), *n.* an open square surrounded by buildings or colonnades.

pi-ca (*pī'kä*), *n.* a size of type, used as a standard of measurement in printing.

pic-a-yune (*pik'ä-yōōn*), *n.* a small silver coin equal to 6¼ cents.

Piccadilly (*pik'kä-dil-li*). The great thoroughfare in London between Hyde Park corner and the Haymarket. The name originally comes from the picardils or small stiff collars once worn by English gallants.

pic-ca-lil-li (*'ä-lil-i*), *n.* a kind of pickle.

pic-ca-nin-ny (*'ä-nin-i*), *n.* [*pl.* piccaninnies (*-iz*)], a negro baby or child.

pic-co-lo (*'ō-lō*), *n.* a small flute having its notes an octave higher than the ordinary flute.

pick (*pik*), *n.* a sharp pointed iron tool; choice or selection: *v. t.* to pierce; choose or select: *v. i.* to eat, or do anything, leisurely. [ALTERNATIVE, CHOOSE.]

pick-ax, pick-axe (*'aks*), *n.* an excavating tool, pointed at one end and broad at the other.

pick-er-el (*'ēr-el*), *n.* a small pike.

pick-et (*'et*), *n.* pale of a fence; a stake to which a horse is fastened; a military guard to give notice of the approach of an enemy.

pick-le (*'l*), *n.* a mixture of brine and water, etc., for preserving food: *v. t.* to preserve in, or as in, pickle.

pic-nic (*'nik*), *n.* a short excursion into the country.

pic-to-ri-al (*pik-tō'ri-al*), *adj.* pertaining to, or illustrated by, pictures.

pic-ture (*'tūr*), *n.* a painting or drawing representing a person or thing.

pic-tur-esque (*-esk'*), *adj.* giving vivid impression of nature or reality; graphic; romantic.

pie (*pī*), *n.* printer's type confusedly mixed; meat or fruit covered with crust and baked.

pie-bald (*'bawld*), *adj.* having patches of different colors.

piece (*pēs*), *n.* a part of anything; certain quantity; literary or artistic composition: *v. t.* to patch: *v. i.* to join. [PART.]

piece-meal (*'mēl*), *adj.* made of pieces or parts; single: *adv.* in pieces or parts.

pied (*pid*), *adj.* variegated or spotted.

pier (*pēr*), *n.* a mass of masonry supporting an arch, bridge, etc.

pierce (*pērs*), *v. t.* to penetrate, especially with a pointed instrument; affect deeply; explore; dive into: *v. i.* to enter.

Pierre. See *Peter.*

Pietermaritzburg (*pē-tēr-mär'its-burg*). Capital of Natal, South Africa. Named after two Boer leaders.

Pietro. See *Peter.*

pi-e-ty (*pī'ē-ti*), *n.* the quality of being pious; reverence for, and duty toward, God.

pig (*pig*), *n.* the young of swine; a swine; pork.

pi-geon (*pi'jun*), *n.* a bird of the genus Columba.

pi-geon-hole (*hōl*), *n.* a compartment for papers, etc.

pi-geon-toed (*-tōd*), *adj.* having the toes turned inward.

pig-head-ed (*pig'-hed-ed*), *adj.* stupidly obstinate.

pig-ment (*'ment*), *n.* paint; coloring matter.

pig-my. Same as *pygmy.*

pig-tail (*'tāl*), *n.* hair twisted into the form of a long queue.

pike (*pik*), *n.* a weapon with a shaft and spear-head; a voracious fresh-water fish.

Pike's Peak. One of the highest summits of the Rocky mountains, situated in Colorado, seventy miles south by west of Denver.

pi-las-ter (*pi-las'tēr*), *n.* a square column or pillar, inserted partly in a wall.

pile (*pīl*), *n.* a large beam driven into the ground to make a firm foundation; mass or heap: *v. t.* to heap up. [HEAP.]

pil-fer (*pil'fēr*), *v. t.* to steal in small quantities.

pil-grim (*pil'grim*), *n.* a traveler.

pil-grim-age (*-āj*), *n.* a journey, especially to some sacred place.

pill (*pil*), *n.* a small ball of some medicinal substance; something disagreeable that must be accepted.

pil-lage (*'āj*), *n.* the act of plundering; spoil: *v. t.* to plunder or spoil; lay waste.

pil-lar (*'ēr*), *n.* a column to support a structure; monument.

Syn. PILLAR, column. The word *pillar* is the most general in its application to any structure, whether rude or otherwise; the term *column*, on the other hand, is applied to whatever is ornamental, as, the Grecian order of *columns.*

Pillars of Hercules. In ancient geography, the two opposite promontories, *Calpe* (Gibraltar) in Europe and *Abyla* in Africa, situated at the eastern extremity of the Strait of Gibraltar, sentinels, as it were, at the outlet from the Mediterranean into the unknown Atlantic.

pil-lo-ry (*pil'ō-ri*), *n.* [*pl.* pillories (*-iz*)], a wooden frame supported by an upright post, having holes through which the head and hands of a person exposed to disgrace were passed and secured: *v. t.* to place in a pillory.

pil-low (*'ō*), *n.* a case filled with feathers, etc.

pi-lot (*pī'lot*), *n.* one who conducts a vessel in or out of a harbor or where navigation is difficult or dangerous; a guide: *v. t.* to guide or direct as a pilot.

pi-men-to (*pi-men'tō*), *n.* allspice.

pim-ple (*pim'pl*), *n.* a small pustule.

pim-pled (*'pld*), *adj.* having, or full of, pimples. [Also *pimply.*]

pin (*pin*), *n.* a short piece of wire, used for fastening articles together; anything driven to hold parts together: *v. t.* to fasten with, or as with, a pin.

pin-a-fore (*pin'ä-fōr*), *n.* a loose apron or covering to protect children's dresses.

pin-cers. Same as *pinchers.*

pinch (*pinch*), *v. t.* to squeeze or nip; oppress or distress: *v. i.* to bear hard; be straitened: *n.* a squeeze or nip. [PRESS.]

pinch-ers (*pinch'ērz*), *n.* an instrument for drawing out nails, etc.; nippers. [Also *pincers.*]

Pincian (*pin'chan*) **hill.** A hill in the northern part of Rome, extending in a long ridge east from the Tiber. One of the famous "seven hills."

pine (*pīn*), *n.* a cone-bearing tree of the genus Pinus; timber of the pine: *v. i.* to waste away from distress, anxiety, etc.

pine-ap-ple (*pīn'ap-l*), *n.* a tropical plant and its cone-shaped fruit.

pin-ion (*pin'yun*), *n.* the last joint of a bird's wing; a wing; the smaller of two geared wheels: *v. t.* to bind or secure, as by binding the arms; confine or fetter.

pink (*pingk*), *n.* a shade of light-red color; a flower.

pin-money. Catherine Howard, wife of Henry VIII., introduced pins into England from France. As they were expensive at first, a separate sum for this luxury was granted to the ladies by their husbands. Hence the expression *pin-money.*

pin-na-cle (*'ä-kl*), *n.* a small polygonal turret or elevation above the rest of the building.

pint (*pīnt*), *n.* 1-8th of a gallon.

pi-o-neer (*pī-o-nēr'*), *n.* one who goes before to prepare the way for another: *v. i.* act as a pioneer.

pi-ous (*'us*), *adj.* dutiful to God, or to parents; religious; devout.

pip (*pip*), *n.* the seed of certain fruit; a disease in fowls.

pipe (*pīp*), *n.* any long hollow tube; a tube of clay, wood, etc., with a bowl at one end for smoking tobacco: *v. t.* to play on, or call by, a pipe.

pip-pin (*pip'in*), *n.* a variety of apple.

★**pi-quan-cy** (*pē'kan-si* or *pik'an-si*), *n.* the state or quality of being piquant.

pi-quant (*'kant*), *adj.* pungent; severe.

pique (*pēk*), *n.* slight anger or resentment; wounded pride: *v. t.* to wound the pride of.

pi-ra-cy (*pī'rä-si*), *n.* the act or crime of a pirate; infringement of copyright.

pi-rate (*'rat*), *n.* a robber on the high seas; one who infringes the law of literary or artistic copyright: *v. t.* to take without permission or compensation: *v. i.* to practice piracy.

pir-ou-ette (*pir-ōō-et'*), *n.* a whirling or turning about on one toe.

Piscataqua (*pis-kat'ä-kwä*) **river, N. H.** Named from the Indian *piscataquanke,* "a great deer place."

pis-ca-to-ri-al (*-kä-tō'ri-al*), *adj.* pertaining to fishing. [Also *piscatory.*]

pis-mire (*pis'mīr*), *n.* an ant.

pis-til (*'til*), *n.* the seed-bearing organ in the center of a flower.

pis-til-late (*-āt*), *adj.* having a pistil.

pis-tol (*'tul*), *n.* a small handgun: *v. t.* to shoot with a pistol.

pis-ton (*'tun*), *n.* a small solid cylinder of metal or wood, fitting exactly and moving up and down in the barrel of a pump, or the cylinder of a steam engine.

pis-ton rod (*rod*), the rod moving the piston and connecting it with the external machinery.

pit (*pit*), *n.* a deep hole in the earth: *v. t.* to mark with small hollows or depressions; set in competition.

pit-a-pat (*-ä-pat'*), *adv.* with quick beating: *n.* a palpitation; a quick light step.

pitch (*pich*), *n.* the solid black resinous substance obtained from boiled tar; a casting forward or down: *v. i.* to fall headlong: *v. t.* to encamp; throw.

pitch-blende (*pich'blend*), *n.* a black oxide of uranium: used in coloring glass a pale sea-green; it is the chief source of radium.

pitch-er (*'ēr*), *n.* one who pitches; an earthen vessel for holding water; an instrument for piercing the ground.

pitch-fork (*'fôrk*), *n.* a pronged fork for pitching hay, straw, etc.: *v. t.* to lift or throw with.

pitch wheel (*hwēl*), a toothed wheel that works in another.

pitch-y (*'i*), *adj.* like, or smeared with, pitch.

pit-e-ous (*pit'ē-us*), *adj.* exciting pity; sorrowful; sad.

Syn. PITEOUS, doleful, woeful, rueful. *Piteous* is applicable to one's external expression of bodily or mental pain; a child makes *piteous* lamentations when it suffers from hunger, or has lost its way; *doleful* applies to those sounds which convey the idea of pain; there is something *doleful* in the tolling of a funeral bell or in the sound of a muffled drum; *woeful* applies to the circumstances and situations of men; a scene is *woeful* in which we witness a large family of young children suffering under the complicated horrors of sickness and want; *rueful* applies to the outward indications of inward sorrow depicted in the looks or countenance.

Ant. COMMANDING, exalted, glorious, happy, superb.

pit-fall (*'fawl*), *n.* a pit lightly covered so that wild beasts may fall into it; a trap.

pith (*pith*), *n.* the soft spongy substance in the center of plants; marrow; quintessence.

pith-y (*'i*), *adj.* of the nature of, or full of, pith; forcible.

pit-i-a-ble (*pit'i-ä-bl*), *adj.* deserving pity.

pit-i-ful (*'i-fool*), *adj.* moving compassion; insignificant.

pit-i-less (*'i-les*), *adj.* without pity or compassion; merciless.

pit-tance (*'ans*), *n.* a small allowance, especially of money.

Pittsburg. City in Pennsylvania, was originally called *Fort du Quesne,* after a French governor of Canada. Afterward, in 1758, when the French had been driven out by Washington, it was renamed *Fort Pitt,* after William Pitt, earl of Chatham, the name *Pittsburg* being adopted in 1769.

pit-y (*pit'i*), *n.* sympathy with distress; compassion: *v. t.* to sympathize with: *v. i.* to be compassionate.

Syn. PITY, compassion. *Pity* is excited principally by the weakness or degraded condition of the subject; *compassion* by his uncontrollable and inevitable misfortunes. [See *mercy.*]

Ant. HARSHNESS, cruelty, hardness, scorn.

Pius. From the Latin, meaning "pious." Fr., *Pie.,* Ger., *Pius;* It., *Pio;* Lat., *Pius.*

piv-ot (*piv'ut*), *n.* the short shaft on which anything turns.

pla-ca-bil-i-ty (*plā-kä-bil'i-ti*), *n.* the quality of being placable.

pla-ca-ble (*'kä-bl*), *adj.* that may be appeased or pacified; forgiving.

pla-card (*plä'kärd*), *n.* a bill placed on a wall, etc., as an advertisement: *v. t.* to advertise by a placard.

place (*plās*), *n.* a special spot or locality; broadway or square; situation; site; residence; office: *v. t.* to put in any place, office, etc. [PUT.]

pla-cen-ta (*plä-sen'tä*), *n.* the vascular organ that connects the fœtus in the womb with the mother.

plac-er (*plas'ēr*), *n.* a mineral deposit which is not a vein.

plac-id (*plas'id*), *adj.* calm; peaceful. [CALM.]

plack-et (*plak'et*), *n.* a petticoat; a slit in a skirt or petticoat; a woman's pocket.

pla-gi-a-rism (*plā'ji-ä-rism*), *n.* the act of taking another's ideas, etc., and passing them off as one's own.

pla-gi-a-rist (*-rist*), *n.* one who steals the writings, ideas, etc., of another and passes them off as his own; literary theft. [Also *plagiary.*]

plague (*plāg*), *n.* a malignant epidemic; anything very troublesome or annoying: *v. t.* to infest with disease; trouble or annoy. [ABOMINATION.]

pla-guy (*plā'gi*), *adj.* vexatious.

plaid (*plad*), *n.* a checkered woolen cloth, originally worn as a garment by the highlanders of Scotland.

plain (*plān*), *adj.* level; flat; even; smooth; clear; evident: *n.* level ground. [APPARENT, FRANK.]

plaint (*plānt*), *n.* lamentation.

plain-tiff (*plān'tif*), *n.* one who commences a suit in a court of law.

plain-tive (*'tiv*), *adj.* expressing grief or sorrow; sad.

★**plait** (*plāt*), *n.* a flat fold; braid: *v. t.* to fold; braid; interweave. [Also *pleat.*]

plan (*plan*), *n.* a drawing on a flat surface; scheme or project: *v. t.* form in design; outline.

plane (*plān*), *adj.* flat; level; even; without elevations or depressions: *n.* a flat or even surface; a carpenter's tool for smoothing wood: *v. t.* to make level.

plan-et (*plan'et*), *n.* a heavenly body revolving around the sun.

plan-e-ta-ry (*'ē-tā-ri*), *adj.* pertaining to, consisting of, or produced by, planets; erratic.

plank (*plangk*), *n.* a long board; an item in a political program or policy.

plant (*plant*), *n.* any vegetable organism; the machinery, or fixtures of any trade or business; a

swindle: *v. t.* to put into the ground for growth, as seed; establish.

Plantagenet (*plan-taj'ē-net*), **House of.** A line of English kings (1154-1399) founded by Henry II., son of Geoffrey, count of Anjou, and Matilda, daughter of Henry I. of England. The name is said to have been assumed by the first count of the line from his having caused himself to be scourged with branches of broom (*planta genesta*) as penance for some crime he had committed.

plan-tain (*'tān*), *n.* a tropical broad-leaved tree yielding an edible fruit similar to the banana.

plan-ta-tion (*-tā'shun*), *n.* a place planted with trees.

plant-er (*plant'ēr*), *n.* one who plants; the owner of a plantation.

plaque (*plak*), *n.* a metal or terra-cotta plate upon which flowers, figures, etc., are enameled or painted.

plash (*plash*), *n.* a puddle; pond: *v. t.* to splash or dash with water; interweave the branches or twigs of, as, to *plash* a hedge.

plas-ma (*plaz'mä*), *n.* the colorless fluid of the blood in which the red corpuscles float.

plas-ter (*plās'tēr*), *n.* a composition of lime, sand, and water, for coating walls: *v. t.* to overlay or cover with, or as with, plaster.

plas-tic (*'tik*), *adj.* capable of being formed or molded; giving form.

plat. Same as *plait.*

Plata, Rio de la (*rē'ō dā lā plā'tä*). River of northern South America. Literally, "river of the silver," so named by Sebastian Cabot, in 1526, by reason of a few gold and silver ornaments, the earnest of the wealth of Peru, which he obtained by barter from the natives, and which he hoped were an indication of an eldorado in the interior.

plate (*plāt*), *n.* a thin piece of metal; a small, shallow vessel used at table for eating from: *v. t.* to coat with a more valuable metal.

pla-teau (*plä-tō'*), *n.* [*pl.* plateaux (*-tōz'*)], elevated broad flat land; table-land.

plate glass (*plāt'glās*), a fine kind of glass cast in thick plates: used for mirrors, etc.

plat-en (*plat'en*), *n.* the flat part of a printing press, by which the impression is made.

plat-form (*'fôrm*), *n.* a flat floor of wood, stone, etc., raised above the level of the ground; political program or policy.

plat-i-nize (*plat'i-nīz*), *v. t.* to coat with platinum.

plat-i-nous (*-nus*), *adj.* containing platinum.

plat-i-num (*'i-num*), *n.* a grayish-white metal very hard and ductile.

plat-i-tude (*'i-tūd*), *n.* insipidity; dullness; a weak, empty, trite remark.

pla-toon (*plä-tōōn'*), *n.* two files of soldiers forming a subdivision.

Platte (*plat*). River in Nebraska, Colorado and Wyoming. A French word meaning "dull, flat, shallow," singularly applicable to this stream.

plat-ter (*plat'ēr*), *n.* a large flat dish.

plau-dit (*plaw'dit*), *n.* applause.

plau-si-ble (*'zi-bl*), *adj.* specious; superficially pleasing.

play (*plā*), *n.* any exercise or occupation for amusement; exertion of powers: *v. i.* to engage in some exercise for amusement.

play-ful (*plā'fool*), *adj.* sportive; lively.

Syn. PLAYFUL, gamesome, sportive. *Playful* is applicable to youth or childhood, when there is the greatest disposition to play. *Gamesome* and *sportive* are applied to persons of maturer years, the former in the bad sense, and the latter in the good sense. A person may be said to be *gamesome* who gives in to idle jests, or *sportive* who indulges in harmless sport.

pla-za (*plä'zä*), *n.* an open square or market place.

plea (*plē*), *n.* an excuse or apology; urgent entreaty.

plead (*plēd*), *v. i.* argue before a court of law; supplicate earnestly: *v. t.* discuss or defend by arguments; offer as an excuse. [APOLOGIZE, ALLEGE.]

pleas-ant (*plez'ant*), *n.* grateful to the mind or senses; delightful; agreeable; cheerful; facetious.

Syn. PLEASANT, agreeable, attractive, good-natured, kind, kindly, pleasurable. Whatever has active qualities adapted to give pleasure is *pleasant;* in this sense *pleasant* is nearly akin to *kind,* but *kind* refers to act or intent, while *pleasant* stops with the disposition; there are *good-natured* people who by reason of rudeness and ill-breeding are not *pleasant* companions. We can say of one usually *good-natured,* "on that occasion he did not meet me with a *pleasant* face." [See *facetious.*]

pleas-ant-ry (*-ri*), *n.* merriment; lively talk; gayety; a laughable trick or joke.

please (*plēz*), *v. t.* to gratify; give pleasure to; gain approbation from: *v. i.* to afford pleasure or gratification; like or choose. [SATISFY.]

pleas-ur-a-ble (*plezh'ūr-ä-bl*), *adj.* gratifying; delightful. [PLEASANT.]

pleas-ure (*'ūr*), *n.* gratification; agreeable emotions, mental or physical. [COMFORT.]

pleat. Another form of *plait.*

ple-be-ian (*plē-bē'an*), *adj.* pertaining to the common people: *n.* one of the common people.

pledge (*plej*), *n.* anything placed as a security or guaranty; pawn: *v. t.* to give as security; deposit in pawn; drink to the health of. [DEPOSIT.]

ple-na-ry (*plē'nä-ri*), *adj.* full; complete.

plen-i-po-ten-ti-a-ry (*plen-i-pō-ten'shi-ä-ri*), *adj.* having full power: *n.* an ambassador to a foreign court invested with full powers. [AMBASSADOR.]

plen-i-tude (*plen'i-tūd*), *n.* fullness.

plen-te-ous (*tē-us*), *adj.* abundant; amply sufficient.

plen-ti-ful (*'ti-fool*), *adj.* yielding abundance; copious.

plen-ty (*'ti*), *n.* abundance.

ple-o-nasm (*plē'ō-nazm*), *n.* use of more words than necessary in speaking or writing.

pleth-o-ra (*pleth'ō-rä*), *n.* excessive fullness of blood; overabundance.

pleu-ra (*plōō'rä*), *n.* [*pl.* pleuræ (*'rē*)], a delicate serous membrane covering the interior of the thorax and each lung.

pleu-ri-sy (*'ri-si*), *n.* inflammation of the pleura.

plex-us (*pleks'us*), *n.* a network of veins, nerves, etc.

pli-a-bil-i-ty (*pli-ä-bil'i-ti*), *n.* the state or quality of being pliable. [Also *pliableness.*]

pli-a-ble (*'ä-bl*), *adj.* easily bent; flexible; easy to be persuaded. [FLEXIBLE.]

pli-ant (*'ant*), *adj.* flexible; easily bent; yielding to moral suasion. [FLEXIBLE.]

pli-ers (*'ērz*), *n.* a kind of small pinchers for seizing and bending, especially small articles.

plight (*plīt*), *n.* a dangerous or distressed condition; predicament: *v. t.* to pledge, as one's faith.

plinth (*plinth*), *n.* the lowest square-shaped part of the base of a column, pedestal, etc.

Pliny (*plin'i*). From the Roman naturalist Caius Plinius. Fr., *Pline;* Ger., *Plinius;* It., *Plinio;* Lat., *Plinius.*

plod (*plod*), *v. i.* [*p. t.* and *p. p.* plodded, *p. pr.* plodding], to travel laboriously; drudge or toil; study closely.

plot (*plot*), *n.* a complicated scheme; chain of incidents in a play, novel: *v. t.* to devise: *v. i.* to conspire.

plow, plough (*plou*), *n.* an agricultural implement for turning up the soil; a grooving-plane: *v. t.* to turn up with a plow; furrow.

plow-share, plough-share (*'shâr*), *n.* the iron part of a plow that cuts the soil.

pluck (*pluk*), *v. t.* to pull off, out, or up; snatch; pick or gather: *n.* a short pull; courage. [DRAW.]

pluck-y (*'i*), *adj.* [*comp.* pluckier, *superl.* pluckiest], having courage or pluck.

plug (*plug*), *n.* a piece of wood, etc., used for stopping a hole: *v. t.* to stop with a plug.

plum (*plum*), *n.* a tree, *Prunus domestica,* or its well-known fruit; a raisin; $500,000, hence a large fortune.

plum-age (*plūm'āj*), *n.* a bird's feathers.

plumb (*plum*), *n.* a heavy body, usually of lead, suspended at the extremity of a line to indicate the perpendicularity of work done, as a wall, etc.: *v. t.* to adjust by a plumb line; make perpendicular.

plumb-er (*'er*), *n.* one who is engaged in the business of plumbing.

plumb-ing (*'ing*), *n.* the art or occupation of putting into buildings, pipes, traps, etc.

plumb line (*'līn*), a line attached to a mass of lead to indicate the perpendicular; perpendicular line.

plume (*plōōm*), *n.* a feather; crest: *v. t.* adorn with plumes.

plum-met (*plum'et*), *n.* a leaden weight attached to a string used for sounding depths, etc.

plump (*plump*), *adj.* round and sleek with fullness of flesh; in good condition: *v. i.* to grow plump: *v. t.* to make plump; fatten.

plum-y (*plūm'i*), *adj.* feathered.

plun-der (*plun'dēr*), *n.* booty; pillage: *v. t.* to take by open force; spoil; rob.

plunge (*plunj*), *v. t.* to put suddenly into water or any other liquid; immerse: *v. i.* dive; throw the body forward and the legs up, as a horse.

plu-per-fect (*plū'pēr-fekt*), *adj.* noting an event or action occurring prior to some other event or action.

plu-ral (*'ral*), *adj.* consisting of more than one: *n.* that form of a word that expresses more than one.

plu-ral-i-ty (*plū-ral'i-ti*), *n.* the majority; the greatest of three or more numbers.

plus (*plus*), *n.* the sign (+) used to denote addition; *adj.* more (by a certain amount); increased (by a specified addition); above zero.

plush (*plush*), *n.* a kind of shaggy cloth with a pile; woolen velvet.

plu-toc-ra-cy (*plū-tok'rä-si*), *n.* rule or government by the rich.

plu-to-crat (*plū'tō-krat*), *n.* one who exercises political power or influence by virtue of his wealth.

ply (*plī*), *v. t.* to worl on closely; practice diligently or earnestly: *v. i.* to run regularly between two ports.

Plymouth (*plim'uth*). Town in Plymouth county, Massachusetts, the landing place of the Pilgrims, which was named for the town in England where they were most hospitably entertained before sailing for America. The English town was so called because built at the mouth of the river Plym.

★**pneu-mat-ic** (*nū-mat'ik*), *adj.* pertaining to, consisting of, containing, like, or moved by, air. [Also *pneumatical.*]

pneu-mat-ics (*'iks*), *n. pl.* the science that treats of the mechanical properties of air and similar elastic fluids.

pneu-mo-nia (*nū-mō'ni-ä*), *n.* acute inflammation of the lung.

poach (*pōch*), *v. i.* to trespass upon preserves; cook (eggs) by breaking them into boiling water.

pock (*pok*), *n.* a pustule on the skin containing eruptive matter.

pock-et (*'et*), *n.* a small bag inserted in a garment for carrying small articles.

Pocomoke (*pō'kō-mōk*) **river, Md.** So called from its Indian name *pockhammokik,* "broken by knobs", "small hill."

pod (*pod*), *n.* the pericarp or the covering of the seed of certain plants, as the pea, etc.: *v. i.* to produce pods.

pod-o-phyl-lin (*pod-ō-fil'in*), *n.* a purgative resin obtained from the root of the May apple.

★**po-em** (*pō'em*, not *pō'um*), *n.* a metrical or poetical composition; a poetic conception.

po-e-sy (*'ē-si*), *n.* the art of composing poems.

po-et (*'et*), *n.* the author of a poem; one gifted in writing poetry; one who is strongly imaginative. [Fem. *poetess.*]

po-et-ic (*-et'ik*), *adj.* pertaining to, suitable to, or expressed in, poetry; sublime. [Also *poetical.*]

po-et-ry (*'et-ri*), *n.* a metrical composition produced or embellished by creative imagination.

Poet's Corner. A space in the east side of the south transept of Westminster Abbey, containing the tablets, statues, busts, or monuments of Shakespeare, Ben Jonson, Chaucer, Milton, Spenser, and other British poets, actors, divines, and great men. Some of them are buried near or under their monuments.

poign-an-cy (*poin'an-si*), *n.* the state or quality of being poignant.

poign-ant (*'ant*), *adj.* stimulating to the palate; irritating; very painful.

poin-set-ti-a (*-set'i-ä*), *n.* a Mexican plant with handsome flowers.

point (*point*), *n.* the sharp end of any instrument; mark or dot; indivisible part; mark in punctuation: *v. t.* to sharpen: *v. i.* to indicate; show clearly.

point-blank (*'blangk*), *adj.* horizontal; straightforward to the mark; direct.

Point Comfort, Va. Name given to the locality in 1607 by the first colonists on their voyage of exploration up the James river; called *Poynt Comfort* on account of the good channel and safe anchorage it offered.

point-ing (*'ing*), *n.* punctuation; the act or operation of filling in the crevices of masonry with mortar.

Point Judith, R. I. So called from Judith Quincy, wife of John Hull, the coiner of the rare old pine-tree shillings of 1652.

Point Pinos (*pē'nōs*), **Cal.** Named *Pinta de Pinos* by Vizcaino, in 1603, from the prevalence of the pine-tree.

Point Reyes (*point rā'ēs*), **Cal.** So called from *Tres Reyes,* name of the vessel commanded by Aguilar of Vizcaino's Spanish expedition, 1603.

poise (*poiz*), *n.* weight; balance; equilibrium: *v. t.* to balance; weigh; ascertain or examine: *v. i.* to be in a state of equilibrium.

Syn. POISE, balance. *To poise* is properly to keep the weight from pressing on either side; *to balance* is to keep the *balance* even. The idea of bringing into an equilibrium is common to both terms, but a thing is *poised* as respects itself; it is *balanced* as respects other things.

Ant. FALL.

poi-son (*poi'zn*), *n.* anything noxious or destructive to life, health, or morality; venom: *v. t.* to infect with, or kill by, poison.

Syn. POISON, venom. A *poison* must be administered inwardly to have its effect; a *venom* will act by an external application; the juice of the hellebore is a *poison;* the tongue of the adder and the tooth of the viper contain *venom.*

poi-son-ous (*-us*), *adj.* having the qualities of poison; deadly; injurious to health.

Poitiers or **Poictiers** (*poi-tērz'*, French *pwä-ti-ā'*). Town in France, so named from the *Pictones,* or *Pictavi,* a Celtic people.

poke (*pōk*), *n.* a thrust or push: *v. t.* to thrust or push against.

pok-er (*'ēr*), *n.* a metal bar for stirring fires; a card game.

po-ky (*pō'ki*), *adj.* lacking spirit or interest; slow; stupid.

Poland. An inversion of *Land-Pole,* the Slavonic for "men of the plains," who first overran this territory. It is called *Polen* or *Pohlen* in German, *Pologne* in French, and *Polska* in Polish.

po-lar (*'lēr*), *adj.* pertaining to, or situated near, either of the poles, especially the north pole; pertaining to the magnetic poles.

po-lar-i-ty (*-lar'i-ti*), *n.* the property possessed by certain bodies, as in electrified or magnetized bodies, by which they arrange themselves in certain directions or tend to given poles.

pole (*pōl*), *n.* a long staff; a measure; one of the extremities of the imaginary axis of the earth.

pole-cat (*'kat*), *n.* a small carnivorous animal which emits a strong offensive odor.

po-lem-ic (*pō-lem'ik*), *n.* a controversialist: *pl.* the art of controversy.

po-lem-ic-al (*'i-kal*), *adj.* controversial.

pole-star (*pōl'stär*), *n.* the north star (*Polaris*), situated in Ursa Minor, within 1½ degrees of the true pole; a guide.

po-lice (*pō-lēs'*), *n.* in a city, town, or district, an organized force of civil officers for preserving order. [force.

po-lice-man (*pō-lēs'man*), *n.* a member of a police

pol-i-cy (*pol'i-si*), *n.* [*pl.* policies (*-siz*)], the art or method of government; management of public affairs; a warrant for money in the public funds.

pol-ish (*'ish*), *v. t.* to make smooth or glossy by friction: *v. i.* to become polished; *n.* a smooth, glossy surface; refinement or elegance of manners. [POLITE.]

po-lite (*po-lit'*), *adj.* well-bred; refined in manner; courteous or obliging.

Syn. POLITE, polished, refined. *Politeness* and *polish* do not extend to anything but externals; *refinement* applies as much to the mind as the body; rules of conduct, and good society, will make a man *polite;* lessons in dancing will serve to give a *polish; refined* manners or principles will naturally arise out of *refinement* of men. [See *genteel.*]

Ant. CRUDE, rough, rude.

pol-i-tic (*'i-tik*), *adj.* shrewd; specious; sagacious; especially in policy.

po-lit-i-cal (*pō-lit'i-kal*), *adj.* pertaining to politics, or to a nation or state; derived from government.

po-lit-i-cal e-con-o-my (*ē-kon'ō-mi*), the science that treats of wealth, its nature, production, distribution, and consumption, and the laws which regulate and govern these.

pol-i-ti-cian (*pol'i-tish-un*), *n.* one who is skilled in politics; a statesman.

pol-i-ty (*'i-ti*), *n.* the form or constitution of the civil government of a state; constitution.

poll (*pōl*), *n.* the head, especially the back part of it; a register of persons, especially those entitled to vote at elections; an election; place where votes are cast: *v. t.* to cast or deposit in a ballot box; *to poll a jury* is to examine each member individually as to his concurrence in the verdict.

pol-lard (*pol'ērd*), *n.* a tree lopped or polled; a stag that has cast its antlers.

pol-len (*'en*), *n.* the fertilizing powder in the cell of the anthers of flowers.

poll tax (*pōl taks*), a capitation tax.

pol-lute (*pol-lūt'*), *v. t.* to defile; render unclean; taint with guilt; corrupt; violate. [CONTAMINATE.]

pol-lu-tion (*-lū'shun*), *n.* the act of polluting; the state of being polluted; defilement; legal or ceremonial uncleanness.

po-lo (*pō'lō*), *n.* a game similar to hockey, played on horseback.

po-lo-naise (*pō-lō-nāz'*), *n.* a dress, body and skirt made in one; a Polish air or dance.

pol-troon (*pol-trōōn'*), *n.* a coward.

pol-y, a *prefix* meaning *many, much.*

pol-y-an-dry (*pol-i-an'dri*), *n.* the practice of a woman having more than one husband at the same time (opposed to *polygamy*.)

po-lyg-a-mist (*pō-lig'ā-mist*), *n.* one who practices or upholds polygamy.

po-lyg-a-mous (*'ā-mus*), *adj.* pertaining to, or practicing, polygamy.

★**po-lyg-a-my** (*pō-lig'ā-mi*, not *pol'ig-ā-mi*), *n.* the practice of having more than one wife at the same time. [guages.

pol-y-glot (*pol'i-glot*), *adj.* containing many lan-

pol-y-gon (*'i-gon*), *n.* a figure having many angles.

pol-y-pus (*'i-pus*), *n.* [*pl.* polypi (*-pī*)], a fleshy tumor in the nose or uterus; a polyp.

pol-y-syl-la-ble (*-sil'ā-bl*), *n.* a word consisting of three or more syllables.

pol-y-tech-nic (*-tek'nik*), *adj.* noting, including, or giving instruction in, the arts and sciences: *n.* a school for imparting instruction in the arts and sciences.

pol-y-the-ism (*'i-thē-izm*), *n.* the doctrine of a plurality of gods, each taking a part in the government of the world.

po-made (*pō-mād'*), *n.* a perfumed ointment for dressing the hair. [Also *pomatum.*]

pome-gran-ate (*pum'gran-āt*), *n.* a tree (*Punica granatum*) yielding an orange-like, edible fruit with a thick rind and numerous seeds.

pom-mel (*pum'el*), *n.* the knob on a sword-hilt; the high part of a saddle-bow: *v. t.* to beat with anything thick or bulky; bruise.

po-mol-o-gy (*pō-mol'ō-ji*), *n.* the science of cultivating fruit and fruit trees, especially apples; a treatise on fruits.

pomp (*pomp*), *n.* ostentatious display; grandeur; parade. [MAGNIFICENCE.]

Pompey (*pom'pi*). From the Latin, meaning "of Pompeii," *i. e.*, the city of Pompeii. Danish, *Pompejus;* Dutch, *Pompejus;* Fr., *Pompée;* It., *Pompeo;* Lat., *Pompeius.*

Pompey's Pillar. A Corinthian column of beautifully polished red granite at Alexandria, standing on a pedestal or foundation of masonry.

pom-pous (*pom'pus*), *adj.* stately; grand; self-important; ostentatious.

pond (*pond*), *n.* a pool of standing water.

pon-der (*pon'dēr*), *v. t.* to weigh mentally: *v. i.* to deliberate.

pon-der-a-ble (*'dēr-ā-bl*), *adj.* capable of being weighed.

pon-der-ous (*'dēr-us*), *adj.* very heavy; weighty; important; dull.

pon-gee (*pon-jē'*), *n.* an inferior kind of silk.

pon-iard (*pon'yērd*), *n.* a small dagger: *v. t.* to stab with a poniard.

Pontchartrain (*pont-chär-trān'*). Lake in Louisiana, named for a French count who was an early explorer of the Mississippi valley.

Ponte Vecchio (*pon'tē vek'kē-ō*). A bridge in Florence, over the Arno; a picturesque structure with three wide arches, rebuilt in 1345. The roadway is bordered on both sides by quaint little shops, except over the middle arch, where there is an opening. Over the south row of shops is carried a gallery, built by Vascari, connecting the Pitti palace with the Uffizi and the Palazzo Vecchio.

pon-tiff (*pon'tif*), *n.* a high priest; the pope.

pon-tif-ic-al (*'i-kal*), *adj.* pertaining to a pontiff, high priest, or pope; papal.

pon-toon (*pon-tōōn'*), *n.* a buoyant, flat-bottomed structure supporting a floating military bridge; a bridge of boats; a lighter.

po-ny (*pō'ni*), *n.* [*pl.* ponies (*'niz*)], a small horse; student's key to translation of Latin or Greek lessons.

pool (*pōōl*), *n.* a small body of water; the stakes in certain games or the receptacle for them: *v. t.* to unite or aggregate together.

poop (*pōōp*), *n.* the stern of a ship: *v. t.* to break heavily over the stern of, said of waves.

poor (*pōōr*), *adj.* necessitous; having little or no means; destitute of riches; without strength.

pop (*pop*), *n.* a short, smart, quick sound: *v. t.* to thrust suddenly; pawn: *v. i.* to make a short, smart, quick sound.

pop-corn (*'kōrn*), *n.* any variety of Indian corn or maize having small ears and small, hard grains. The grains "*pop*" and expand when exposed to the heat of a fire.

pope (*pōp*), *n.* the bishop of Rome and head of the Roman Catholic church; a title of priests of the Greek church; a variety of perch.

pop-in-jay (*pop'in-jā*), *n.* a parrot; fop.

pop-lar (*pop'lēr*), *n.* a tree of rapid growth, with a white soft wood.

pop-lin (*'lin*), *n.* a fabric of silk and worsted.

Popocatepetl (*pō-pō-kā-tā-pet'l*). The loftiest volcano in Mexico, means the "smoking mountain." From the Aztec *popoca*, "he smokes," and *tepetl*, a "mountain."

pop-py (*pop'i*), *n.* any plant of the genus Papaver, with bright showy flowers.

pop-u-lace (*'ū-lās*), *n.* the common people.

pop-u-lar (*'ū-lēr*), *adj.* pertaining to, suitable for, or pleasing to, the common people; easily understood; plebeian.

pop-u-lar-ize (*-iz*), *v. t.* to render popular.

pop-u-late (*'ū-lāt*), *v. t.* to furnish with inhabitants.

pop-u-la-tion (*-lā'shun*), *n.* the inhabitants of a country, place, town, etc., collectively.

Pop-u-list (*-list*), *n.* a member of a political party in the United States known as the Populist or People's party.

pop-u-lous (*'ū-lus*), *adj.* thickly peopled.

por-ce-lain (*pōr'sē-lin*), *n.* a fine white, thin, semi-transparent kind of earthenware.

porch (*pōrch*), *n.* a vestibule supported by pillars; portico.

por-cu-pine (*pōr'kū-pīn*), *n.* a rodent covered with spines, of the genus Hystrix.

pore (*pōr*), *n.* a minute hole in the skin through which perspiration passes to the surface: *v. i.* to look with close and steady attention, as on a book.

pork (*pōrk*), *n.* the flesh of swine, either fresh or salted.

pork-er (*'ēr*), *n.* a pig.

por-ous (*pōr'us*), *adj.* having pores.

por-phy-ry (*pōr'fi-ri*), *n.* originally a reddish igneous rock found in Egypt.

por-poise (*pōr-pus*), *n.* a cetaceous mammal of the genus Phocæna; the sea hog.

por-ridge (*por'ij*), *n.* oatmeal boiled slowly in water until it thickens.

port (*pōrt*), *n.* a harbor; harem; deportment or carriage; the left side of a ship: *v. t.* to turn to the port or left side of a ship, as, to *port* the helm. [HARBOR.]

port-a-ble (*pōrt'ā-bl*), *adj.* that may be easily carried by hand or about the person.

port-age (*'āj*), *n.* carriage; cost of carriage.

port-al (*'al*), *n.* a gate or entrance; an arch over a gateway or door.

Porta Maggiore (*pōr'tä mäd-jō're*). The finest and most imposing ancient gate in the walls of Rome.

por-tend (*por-tend'*), *v. t.* to indicate in advance; presage. [AUGUR.]

por-tent (*'tent*), *n.* an omen, especially of ill.

por-tent-ous (*'us*), *adj.* ominous; foreshadowing evil; wondrous.

por-ter (*pōr'tēr*), *n.* a door or gate keeper; a dark-colored malt beer; one who carries parcels, etc., for hire. [Fem. *porteress.*

por-ter-age (*-āj*), *n.* money charged for carriage by a porter.

port-fol-io (*pōrt-fōl'yō*), *n.* a portable case for loose papers, drawings, etc.

port-hole (*'hōl*), *n.* a window-shaped hole in the side of a ship, especially of a man-of-war.

por-ti-co (*pōr'ti-kō*), *n.* [*pl.* porticos (*-kōz*)], a walk covered by a roof supported on columns; a columned porch.

por-tion (*'shun*), *n.* a piece or part; allotment; dividend: *v. t.* to divide; allot.

Portland, Me. In 1786, "an act for erecting that part of the town of Falmouth in the county of Cumberland commonly known as the Neck into a town by the name of *Portland.*" The name was recommended from its being the oldest English name in that section, given to a large island in the harbor, the name of the main channel (Portland sound) and the mainland opposite (Portland head).

Portland, Ore. Named in compliment to Portland, Me. F. W. Pettygrove and Gen. A. L. Lovejoy, in 1843, were the purchasers of what was afterward Portland, and of which ground they were the first occupants. As a native of Maine, Pettygrove desired to compliment Maine in naming the locality, and similar motives prompted his partner to call it Boston (his native place). The controversy was settled by tossing an old American red cent; the one who threw the most heads in three flips should name the town. The score is recorded; Lovejoy, tails, two, heads, one; Pettygrove, heads, two; and so we have *Portland* instead of *Boston, Ore.*

Portland Vase. A famous urn of blue transparent cameo-cut glass, ten inches high. It was discovered about 1630 in a sarcophagus in a tomb in the Monte del Grano, near Rome. It is so called from its possessors, the Portland family.

port-ly (*pōrt'li*), *adj.* stately of mien; corpulent.

port-man-teau (*-man'tō*), *n.* a bag or trunk for carrying clothes or traveling necessities.

Porto Rico (*pōr'tō rē'kō*). Spanish for "rich port." West Indian island belonging to the Union.

por-trait (*pōr'trāt*), *n.* a picture or representation of an individual or face drawn from life.

por-trai-ture (*'trā-tūr*), *n.* the art or practice of drawing or painting portraits; vivid delineation in words.

por-tray (*-trā'*), *v. t.* to paint or draw the likeness of; describe in words.

Portsmouth, N. H. Named from Portsmouth, England; the governor of which, Captain John Mason, was the original proprietor of its namesake.

Port Royal, S. C. Named from the bay, called *Royale* by Ribaut, "because of the fairness and largeness thereof" of its waters.

Portugal (*pōr'tū-gal*, Port. *pōr-too-gäl'*). The *Portus Gallia* of the Romans; literally, "the gates of Gaul," as approached from the Mediterranean and Atlantic seas. A country of southwestern Europe.

Por-tu-guese (*pōr-tū-gēz'*), *adj.* pertaining to Portugal, its inhabitants, or language.

pose (*pōz*), *n.* attitude or position: *v. i.* to assume an attitude: *v. t.* to puzzle or perplex.

pos-er (*pōz'ēr*), *n.* a puzzling question; one who, or that which, poses or puzzles.

po-si-tion (*pō-zish'un*), *n.* the state of being set or placed; situation; attitude.

Syn. POSITION, posture. The *position* is that in which a body is placed in respect to other bodies; as the standing with one's face or back to an object is a *position;* but a *posture* is that *position* which a body assumes in respect to itself, as a sitting or reclining *posture.* [See *tenet.*]

pos-i-tive (*poz'i-tiv*), *adj.* clearly expressed; actual; direct; explicit; overconfident; dogmatical: *n.* that which may be affirmed; reality; a photograph with the natural lights and shades restored. [CONFIDENT, DEFINITE.]

pos-i-tiv-ism (*'i-tiv-izm*), *n.* a French philosophical and religious system originated by Auguste Comte (1798-1857), called also Comtism, and the religion of humanity.

pos-se (*pos'ē*), *n.* an improvised force of men.

pos-sess (*poz-es'*), *v. t.* to have as an owner; be master of; occupy; seize. [HAVE, HOLD.]

pos-ses-sion (*-esh'un*), *n.* the having, holding, or detention of property; the thing possessed.

pos-sess-ive (*-es'iv*), *adj.* noting possession.

pos-sess-or (*'ēr*), *n.* owner; one who possesses.

pos-set (*pos'et*), *n.* milk curdled with wine, etc.

pos-si-bil-i-ty (*-i-bil'i-ti*), *n.* the state of being possible; contingency. [ACCIDENT.]

pos-si-ble (*'i-bl*), *adj.* that may happen or exist.

post (*pōst*), *n.* a piece of timber, etc., set erect, usually to support something else; a messenger or postman; the mail; a postoffice: *v. t.* to inform fully: *v. i.* to travel with speed or a relay of horses.

post-age (*'āj*), *n.* the fee for the conveyance of letters by post.

post-al (*'al*), *adj.* pertaining to the postoffice or mail service.

post-er (*'ēr*), *n.* a large advertising bill.

pos-te-ri-or (*pos-tē'ri-ēr*), *adj.* subsequent in time or place; hinder: *n. pl.* the hinder parts of an animal.

pos-ter-i-ty (*-ter'i-ti*), *n.* [*pl.* posterities (*-tiz*)], succeeding generations; descendants.

pos-tern (*pōs'tērn*), *n.* a small gate or door; private entrance.

post-hu-mous (*post'hū-mus*), *adj.* born after the death of the father; published after the death of an author.

pos-til-ion (*pōs-til'yun*), *n.* the rider on the near leader in a carriage.

post-mas-ter (*pōst'mas-tēr*), *n.* the superintendent of a post office; one who supplies post horses.

post-me-rid-i-an (*-mē-rid'i-an*), *adj.* after noon.

post-pone (*-pōn'*), *v. t.* to delay; defer.

post-pone-ment (*'ment*), *n.* the act of deferring to a future time; temporary delay.

post-script (*'skript*), *n.* a paragraph added to a letter after the writer's signature.

pos-tu-late (*pos'tū-lāt*), *v. t.* to assume without proof; solicit: *n.* a self-evident problem.

pos-ture (*'tūr*), *n.* attitude; placing or position of

parts of the body; state: *v. i.* to place the body in particular postures. [ACTION, POSITION.]

po-sy (*pō'zi*), *n.* a bunch of flowers: originally a motto or verse sent with a bouquet.

pot (*pot*), *n.* a metal vessel for holding or boiling liquids, etc.

pot-ash (*pot'ash*), *n.* a powerful alkali obtained from the ashes of certain plants.

po-ta-tion (*pō-tā'shun*), *n.* drinking bout; a draft or drink.

★**po-ta-to** (*pō-tā'tō*, not *pō-tā'tu*), *n.* [*pl.* potatoes (*-tōz*)], the edible tuber of a South American plant, widely cultivated; the plant itself.

po-tent (*'tent*), *adj.* powerful; having great authority or influence. [POWERFUL.]

po-ten-tate (*'ten-tāt*), *n.* one who possesses great power; sovereign or monarch.

po-ten-tial (*-ten'shal*), *adj.* existing in possibility, not in reality; latent.

poth-er (*poth'ĕr*), *n.* confusion; bustle: *v. i.* to make a stir: *v. t.* to confuse; tease.

po-tion (*pō'shun*), *n.* a draft; dose.

Potomac (*pō-tō'mak*). River forming the boundary line between Maryland, Virginia, and West Virginia. Indian *patowmek* or *potowmak*, "they are coming by water"; another translation, "place of the burning pine," allusion to a council fire.

pot-pour-ri (*pō-pōō-rē'*), *n.* a medley, especially of musical airs; a dish composed of various kinds of meats and vegetables.

Potsdam (*pots'dam*, German *pōts'dăm*). Prussian city situated at the junction of the Nuthe with the Havel, sixteen miles southwest of Berlin. It is an imperial residence, and contains many palaces. The name is a corruption of the Slavonic *poddubami*, "under the oaks."

pot-tage (*pot'āj*), *n.* a kind of soup.

pot-ter (*'ĕr*), *n.* a maker of pottery.

pot-ter-y (*'ĕr-i*), *n.* [*pl.* potteries (*-iz*)], earthenware of all kinds; the place where it is manufactured.

pot-to-roo (*-ō-rōō'*), *n.* the kangaroo rat of Australia. [Also *potoroo*.]

pouch (*pouch*), *n.* a small bag; pocket; bag or sack of an animal.

Poughkeepsie (*pō-kip'si*). City in Dutchess county, New York. Derived from the Delaware Indian word, *apakeepsingk*, meaning "safe and pleasant harbor," or "shallow inlet," "safe harbor for small boats."

poul-tice (*pōl'tis*), *n.* a soft preparation of bread, meal, etc., applied to a sore or inflamed part of the body; a cataplasm.

poul-try (*'tri*), *n.* domestic fowls.

pounce (*pouns*), *n.* a fine powder formerly used for drying ink on paper: *v. t.* to sprinkle with pounce: *v. i.* to fall upon and seize with the claws.

pound (*pound*), *n.* a standard weight equal to 16 ounces avoirdupois, or 12 ounces troy; a monetary unit equal to 20 shillings, or about $4.86; an inclosure for confining stray cattle: *v. t.* to shut in or confine in a pound; beat; pulverize as in a mortar: *v. i.* to plod.

pour (*pōr*), *v. t.* to empty, as a liquid, out of a vessel; discharge in a continuous stream: *v. i.* to stream; rush tumultuously.

Syn. POUR, spill, shed. We *pour* with design; we *spill* by accident; we *pour* water over a plant or a bed; we *spill* it on the ground; *to shed* is done in great quantities.

pout (*pout*), *n.* a thrusting out of the lips; fit of sullenness.

pov-er-ty (*pov'ĕr-ti*), *n.* the state of being poor; indigence; necessity.

pow-der (*pou'dĕr*), *n.* any dry substance in fine particles: *v. t.* to reduce to, or sprinkle with, powder; salt.

pow-er (*pou'ĕr*), *n.* the faculty of doing or performing something; ability; energy; force; strength; rule or authority.

pow-er-ful (*-fool*), *adj.* having great power; mighty; forcible; strong; efficacious.

Syn. POWERFUL, potent, mighty. *Powerful* is applicable to strength as well as power; a *powerful* man is one who by size and make can easily *overpower* another; and a *powerful* person is one who has much in his *power; potent* is used only in this latter sense, in which it expresses a larger extent of *power;* a *potent* monarch is much more than a *powerful* prince; *mighty* expresses a still higher degree of *power; might* is *power* unlimited by any consideration or circumstance; a giant is called *mighty* in the physical sense, and genius is said to be *mighty* which takes everything within its grasp.

pow-wow (*pou'wou*), *n.* a North American Indian priest or conjurer; an incantation.

pox (*poks*), *n.* an eruptive disease characterized by pustules; syphilis.

prac-ti-ca-bil-i-ty (*prak-ti-kā-bil'i-ti*), *n.* the state of being practicable.

prac-ti-ca-ble (*'ti-kā-bl*), *adj.* that may be done, used, or passed over; feasible; possible.

prac-ti-cal (*'ti-kal*), *adj.* pertaining to action or use; useful.

prac-tice (*prak'tis*), *n.* frequent or customary action; use: *v. i.* to form a habit; exercise a profession. [CUSTOM. EXERCISE.]

prac-ti-tion-er (*-tish'un-ĕr*), *n.* one who is engaged in the exercise of any profession.

Prado (*prä'dō*). The chief fashionable promenade of Madrid.

præc-i-pe (*pres'i-pē*), *n.* a writ requiring something to be done, or the reason why it is not performed.

præ-tor (*prē'tor*), *n.* a Roman magistrate ranking next to a consul.

prag-mat-ic (*prag-mat'ik*), *adj.* meddling; officious; assuming business airs. [Also *pragmatical*.]

Prague (*präg*). The capital of Bohemia; is the English form of the German *prag*, or *praha*, which in Czech means the "threshold," referring, it is supposed, to a reef of rocks in the bed of the Moldau. The suburb of Warsaw on the right bank of the Vistula similarly goes by the name of *Praga*, the "threshold."

prai-rie (*prā'ri*), *n.* an extensive treeless tract of level or slightly undulating land covered with tall coarse grass.

Prairie du Chien (*prā'rē du shēn*. French, *prā-rē' dü shē-an'*), **Ia.** French words, translated "dog prairie," from the local habitations of the prairie dogs.

praise (*prāz*), *n.* approbation; commendation; *v. t.* to bestow commendation upon; honor; worship; glorify. [LAUDABLE.]

prance (*prans*), *n.* a spring or bound: *v. i.* to spring or bound; strut about in a lively or bellicose manner.

prank (*prangk*), *n.* a freak or frolic; mischievous trick.

prate (*prāt*), *v. i.* to prattle; talk idly; be loquacious: *v. t.* to utter without sense or meaning.

Prater (*prä'ter*). A noted public park in Vienna.

prat-tle (*prat'l*), *n.* childish or empty talk: *v. i.* to talk much and lightly; chatter.

prax-is (*praks'is*), *n.* an example or series of examples for exercise.

pray (*prā*), *v. t.* and *v. i.* to ask earnestly; address or petition.

prayer (*prâr*), *n.* a solemn address to the Supreme Being.

preach (*prēch*), *v. i.* to pronounce a public discourse on a sacred subject: *v. t.* to teach publicly.

pre-am-ble (*prē'am-bl*), *n.* an introduction or preface.

preb-end (*preb'end*), *n.* the stipend granted to a canon out of the estate of a cathedral or collegiate church.

pre-ca-ri-ous (*prē-kā'ri-us*), *adj.* depending upon the will or pleasure of another; uncertain.

pre-cau-tion (*prē-kaw'shun*), *n.* caution taken beforehand; preventive measure.

pre-cede (*prē-sēd'*), *v. t.* to go before in time, place, rank, or importance.

★**pre-ced-ence** (*prē-sēd'ens*, not *pres'ē-dens*), *n.* the act of going before in time, rank, etc.; priority; relative rank in social etiquette. [Also *precedency*.]

★**pre-ced-ent** (*'ent*), *adj.* going before; anterior: *n.* (*pres'ē-dent*) a parallel case in the past.

pre-cen-tor (*-sen'tĕr*), *n.* the leader of a cathedral choir, etc.; the leader of the psalmody in a Presbyterian church.

pre-cept (*prē'sept*), *n.* an authoritative command; rule of action or moral conduct; maxim. [DOCTRINE, COMMAND.]

pre-ces-sion (*-sesh'un*), *n.* a going forward, especially the slow but continual shifting of the equinoctial points along the ecliptic from east to west (*precession of the equinoxes*).

pre-cinct (*prē'singkt*), *n.* an outward limit or boundary.

pre-cious (*presh'us*), *adj.* of great price or value; costly; highly esteemed; worthless (*in irony*). [RARE.]

prec-i-pice (*pres'i-pis*), *n.* a steep descent, especially one nearly or quite perpendicular.

pre-cip-i-tant (*pre-sip'i-tant*), *adj.* falling headlong; hasty: *n.* any chemical substance that causes something held in solution by a liquid to fall down in a solid state.

pre-cip-i-tate (*-sip'i-tāt*), *v. t.* to throw headlong; urge on violently; hurry on rashly: *adj* (*-tat*) headlong; overhasty; rash.

pre-cip-i-tous (*'i-tus*), *adj.* very steep; headlong; rash; hasty.

pre-cise (*prē-sīs'*), *adj.* exact; strict; accurate; definite.

pre-clude (*-klōōd'*), *v. t.* to shut out; hinder from access; obviate.

pre-clu-sion (*-klōō'zhun*), *n.* the act of precluding; the state of being precluded.

pre-co-cious (*-kō'shus*), *adj.* prematurely ripe or developed.

pre-coc-i-ty (*-kos'i-ti*), *n.* the state or quality of being precocious; premature development.

pre-cog-ni-tion (*prē-kog-nish'un*), *n.* previous knowledge or thought.

pre-cur-sor (*prē-kûr'sĕr*), *n.* one who or that which precedes; forerunner; omen.

pred-a-to-ry (*pred'ä-tō-ri*), *adj.* rapacious; plundering; pillaging.

pred-e-ces-sor (*pred-ē-ses'ĕr*), *n.* one who has preceded another in the same office, business, position, etc.; an ancestor.

pre-des-ti-nate (*prē-des'ti-nāt*), *v. t.* to ordain beforehand by an unchangeable purpose.

pre-des-ti-na-tion (*-nā'shun*), *n.* the act of foreordaining; the doctrine that God has from all eternity decreed whatever comes to pass, especially by an unchangeable purpose, the eternal life or death of man.

pred-i-ca-ble (*pred'i-kā-bl*), *adj.* capable of being predicated: *n.* in logic a term that can be predicated of others.

pre-dic-a-ment (*prē-dik'ä-ment*), *n.* in logic a category; a peculiar situation; critical condition.

pred-i-cate (*pred'i-kāt*), *v. t.* to affirm one thing of another; found: *n.* in logic, that which is affirmed or denied of the subject.

pre-dict (*prē-dikt'*), *v. t.* to declare a future event; to prophesy. [FORETELL.]

pre-di-lec-tion (*prē-di-lek'shun*), *n.* preference beforehand; prepossession; partiality.

pre-dis-pose (*-dis-pōz'*), *v. t.* to incline beforehand; adapt previously.

pre-dom-i-nant (*prē-dom'i-nant*), *adj.* having superior influence, etc.; superior; controlling.

pre-dom-i-nate (*'i-nāt*), *v. i.* to be superior in strength, power, authority, etc.; prevail.

pre-ëmpt (*prē-empt'*), *v. t.* to secure or occupy by preëmption; establish a right or claim to befor others.

pref-ace (*pref'ās*), *n.* the introduction to a book, etc.; preamble: *v. t.* to introduce by preliminary remarks: *v. i.* to say or do something introductory.

pref-a-to-ry (*'ä-tō-ri*), *adj.* pertaining to, or of the nature of, a preface; introductory.

pre-fect (*prē'fekt*), *n.* a civil magistrate or governor.

pre-fec-ture (*-tūr*), *n.* the office, jurisdiction, or official residence of a prefect.

pre-fer (*prē-fĕr'*), *v. t.* to regard or esteem more than something else, *adj.* preferable. [CHOOSE, ELIGIBLE.]

★**pref-er-ence** (*pref'ĕr-ens*), *n.* the act of preferring; the thing preferred; choice of one thing more than another; predilection. [ALTERNATIVE.]

pref-er-en-tial (*-en'shal*), *adj.* having a preference.

★**pre-fer-ment** (*prē-fĕr'ment*), *n.* promotion, especially in the church.

pre-fix (*prē'fiks*), *n.* a letter, word or syllable placed at the beginning of a word: *v. t.* (*prē-fiks'*) to place before, or at, the beginning of.

preg-nant (*preg'nant*), *adj.* being with young; fruitful; teeming; fertile.

pre-hen-sile (*prē-hen'sil*), *adj.* adapted for holding or seizing.

prej-u-dice (*prej'ū-dis*), *n.* previous and unfavorable bias; prejudgment without due examination: *v. t.* to bias the mind of; create a prejudice against.

Syn. PREJUDICE, bias, partiality, prepossession, presumption. A *prejudice* or *prepossession* is grounded often on feeling, fancy, associations. A *prejudice* against foreigners is very common in retired communities. A *prepossession* is always favorable, a *prejudice* always unfavorable, unless the contrary is expressly stated. [injurious.

prej-u-di-cial (*-dish'al*), *adj.* disadvantageous;

prel-a-cy (*prel'ä-si*), *n.* the office or status of a prelate; episcopacy.

★**prel-ate** (*prel'āt*, not *prē'lāt*), *n.* an ecclesiastical dignitary having episcopal authority.

pre-lec-tion (*prē-lek'shun*), *n.* a lecture, etc., read before students or others.

pre-lim-i-na-ry (*-lim'i-nā-ri*), *adj.* preceding the main discourse or business; introductory: *n.* an introduction; something preceding. [PREVIOUS.]

pre-lude (*prē'lūd* or *prel'ūd*), *n.* a short piece of music played as an introduction to a larger piece.

pre-ma-ture (*prē-mä-tūr'*), *adj.* arriving, occurring, or done, before the proper time.

pre-med-i-tate (*prē-med'i-tāt*), *v. t.* to design, conceive, or deliberate, beforehand.

pre-mi-er (*prē'mi-ĕr*), *adj.* first; chief: *n.* the prime minister.

pre-mise (*prē-mīz'*), *v. t.* to explain previously: *n.* (*prem'is*) a proposition antecedently assumed and laid down.

pre-mi-um (*prē'mi-um*), *n.* a recompense or reward; prize or bounty; bonus.

pre-mon-i-to-ry (*prē-mon'i-tō-ri*), *adj.* giving warning beforehand.

pre-oc-cu-pied (*prē-ok'ū-pīd*), *p. adj.* engrossed; already occupied. [ABSTRACTED.]

prep-a-ra-tion (*prep-ä-rā'shun*), *n.* the act of preparing or fitting for a particular purpose; state of being prepared; readiness.

pre-par-a-to-ry (*prē-par'ä-tō-ri*), *adj.* previously necessary; introductory. [PREVIOUS.]

pre-pense (*prē-pens'*), *adj.* premeditated.

pre-pon-der-ant (*-pon'dĕr-ant*), *adj.* outweighing.

pre-pon-der-ate (*'dĕr-āt*), *v. i.* to outweigh; exceed in power or influence: *v. t.* to incline to one side.

prep-o-si-tion (*prep-ō-zish'un*), *n.* a word placed before a noun or pronoun to indicate its relation to some other word in the sentence.

pre-pos-i-tive (*prē-poz'i-tiv*), *adj.* placed before: *n.* a word or particle placed before another word.

pre-pos-sess (*prē-poz-es'*), *v. t.* to occupy beforehand; bias.

pre-pos-sess-ing (*'ing*), *p. adj.* tending to win or secure favor; attractive.

pre-pos-ses-sion (*-zesh'un*), *n.* prior possession; preconceived opinion or judgment. [PREJUDICE.]

pre-pos-ter-ous (*prē-pos'tĕr-us*), *adj.* contrary to nature or reason; ridiculous; absurd. [IRRATIONAL, ABSURD.]

pre-rog-a-tive (*-rog'ä-tiv*), *n.* an exclusive or peculiar privilege, especially of a sovereign.

pre-sage (*prē'sāj*), *n.* a foreboding or presentiment: *v. t.* (*pre-sāj'*) to forebode; predict. [AUGUR, OMEN.]

pres-by-o-pi-a (*pres-bi-ō'pi-ä*), *n.* long-sightedness, while near objects are indistinctly seen.

pres-by-ter (*pres'bi-tĕr*), *n.* an elder, minister, or priest.

pres-by-ter-y (*pres'bi-ter-i*), *n.* in the Presbyterian church, a court composed of the pastors and ruling elders of the churches in a given district.
pre-sci-ent (*prē'shi-ent*), *adj.* foreknowing.
Prescott, Ariz. A city named in compliment to the American historian, William H. Prescott.
pre-scribe (*prē-skrīb'*), *v. t.* to set down authoritatively; *v. i.* to write medical directions; give law. [DICTATE.]
pre-scrip-tion (*-skrip'shun*), *n.* the act of prescribing; a written direction for the preparation of a medicine. [USAGE.]
pres-ence (*prez'ens*), *n.* the state or quality of being present; quickness at expedients.
pres-ent (*'ent*), *adj.* at hand or in sight; at this time: *n.* the present time; a gift or donation: *v. t.* (*prē-zent'*) to exhibit to view; offer. [GIFT.]
pres-en-ta-tion (*prez-en-tā'shun*), *n.* the act of presenting; representation.
pre-sen-tient (*prē-sen'shent*), *adj.* having previous perception.
pre-sen-ti-ment (*'ti-ment*) *n.* previous apprehension of something about to come or happen.
pre-sent-ment (*prē-zent'ment*), *n.* the act of presenting; the thing presented; representation.
pres-er-va-tion (*prēz-ēr-vā'shun*), *n.* the act of preserving; the state of being preserved from injury or decay.
pre-ser-va-tive (*prē-zēr'vā-tiv*), *adj.* having the power of preserving: *n.* that which preserves. [Also *preservatory.*]
pre-serve (*-zērv'*), *v. t.* to keep from injury; defend; uphold: *n.* fruit, etc., seasoned and kept in sugar. [KEEP.]
pre-side (*prē-zīd'*), *v. i.* to direct or control, especially at a public meeting; superintend.
pres-i-den-cy (*prez'i-den-si*), *n.* the office, dignity, term, jurisdiction, or residence of a president.
pres-i-dent (*'i-dent*), *n.* one who presides over a corporation or assembly; the highest officer of a republic. [president.
pres-i-den-tial (*-den'shal*), *adj.* pertaining to a
press (*pres*), *v. t.* to urge; squeeze or crush strongly; hurry: *v. i.* to exert pressure: *n.* a printing machine.
Syn. PRESS, squeeze, pinch, gripe. The forcible action of one body on another is included in all these terms. In the word *press* this is the only idea; the rest differ in the circumstances; we may *press* with the foot, the hand, or any particular limb; one *squeezes* commonly with the hand; one *pinches* either with the fingers or an instrument constructed in a similar form; one *gripes* with teeth, claws, or any instrument that can gain hold of the object.
press-gang (*'gang*), *n.* a detachment from a ship's crew to force men into the navy.
press-ing (*'ing*), *p. adj.* exerting pressure, urgent; importunate.
press-man (*'man*), *n.* a printer who works at the press and impresses the sheets; a journalist.
pres-ti-dig-i-ta-tion (*-ti-dij'i-tā'shun*), *n.* sleight of hand; legerdemain. [Also *prestigiation.*]
pres-tige (*'tij*, or *-tēzh'*), *n.* moral influence due to past reputation, achievements, etc.
pre-sume (*prē-zūm'*), *v. t.* to take for granted on probable grounds; suppose: *v. i.* to venture without actual leave.
pre-sump-tion (*-zump'shun*), *n.* strong probability; arrogance or overconfidence. [PREJUDICE, PRIDE.]
pre-sump-tive (*'tiv*), *adj.* taken by previous supposition; proving circumstantially; arrogant.
Syn. PRESUMPTIVE, presumptuous, presuming. A *presumptive* heir is one *presumed* or expected to be heir; *presumptive* evidence is evidence founded on some *presumption* or supposition; so likewise *presumptive* reasoning; but a *presumptuous man*, a *presumptuous* thought, a *presumptuous* behavior, all indicate an unauthorized *presumption* in one's own favor; a man is *presuming* inasmuch as he shows himself disposed to *presume.*
Ant. IMPROBABLE, diffident, meek.
pre-sump-tu-ous (*'tū-us*), *adj.* bold to excess; arrogant; willful; rash. [PRESUMPTIVE.]
pre-sup-pose (*prē-sup-ōz'*), *v. t.* to take for granted; imply as antecedent.
pre-tend (*prē-tend'*), *v. t.* to allege or put forward falsely; make a show of; simulate; counterfeit; assert: *v. i.* to put forward a claim. [FEIGN.]
pre-tend-er (*'ēr*), *n.* one who lays claim to anything under the guise of a right; one who makes a show of anything not real.
★**pre-tense** (*prē-tens'*, not *prē'tens*), *n.* false or hypocritical profession; unfounded claim; pretext.
Syn. PRETENSE, affectation, air, assumption, cloak, color, disguise, dissimulation, excuse, mask, pretension, pretext, ruse, semblance, show, simulation, subterfuge, trick, wile. A *pretense* is something advanced or displayed for the purpose of concealing the reality. A person makes a *pretense* of something for the credit or advantage to be gained by it; a tricky schoolboy makes a *pretense* of doing an errand which he does not do, or he makes the actual doing of an errand a *pretext* for playing truant. [See *cheat.*]
pre-ten-sion (*-ten'shun*), *n.* a claim, true or false; assumed right. [PRETENSE.]
pre-ten-tious (*'shus*). *adj.* assuming an air of superiority.
pre-text (*prē'tekst*), *n.* a pretense or excuse; ostensible motive put forward to conceal the real one. [PRETENSE.]
Pretoria (*prē-tō'ri-á*). The capital of the Transvaal, was named in honor of Andries Pretorius, a Boer leader, whose son became the first president of the republic.
pret-ti-ness (*prit'ti-nes*), *n.* attractiveness without dignity; neatness with taste; agreeable manner.
pret-ty (*'i*), *adj.* [*comp.* prettier, *superl.* prettiest], pleasing without being absolutely beautiful; pleasing: *adv.* fairly; moderately; tolerably.
pret-zel (*pret'zel*), *n.* a hard wheaten biscuit.
pre-vail (*prē-vāl'*), *v. i.* to succeed; gain the advantage. [PERSUADE.]
prev-a-lence (*prev'á-lens*), *adj.* superior strength, influence, or efficacy; preponderance.
prev-a-lent (*-lent*), *adj.* powerful; predominant; victorious.
pre-var-i-cate (*prē-var'i-kāt*), *v. i.* to evade the truth; quibble. [EVADE.]
pre-vent (*-vent'*), *v. t.* to hinder, obstruct, or impede; obviate.
Syn. PREVENT, anticipate. *To prevent* is literally to come beforehand, and *anticipate* to take beforehand; *to prevent* is the act of a person toward other persons or things; *to anticipate* is the act of a being either toward himself or another.
Ant. ALLOW, encourage, further.
pre-ven-tion (*-ven'shun*), *n.* the act of preventing; hindrance or obstruction.
pre-ven-tive (*'tiv*), *adj.* tending to prevent: *n.* that which prevents.
pre-vi-ous (*prē'vi-us*), *adj.* going before; anterior.
Syn. PREVIOUS, preliminary, preparatory, introductory. *Previous* applies to actions and proceedings in general; as a *previous* question, a *previous* inquiry, a *previous* determination; *preliminary* is employed only for matters of contract; a *preliminary* article, a *preliminary* condition, are what precede the final settlement of any question; *preparatory* is employed for matters of arrangement; the disposing of men in battle is *preparatory* to an engagement; *introductory* is employed for matters of science or discussion; as remarks are *introductory* to the main subject in question.
Ant. CONCLUDE, subsequent, later, succeeding.
pre-vi-sion (*-vizh'un*), *n.* foreknowledge.
prey (*prā*), *n.* plunder; booty: *v. i.* to take booty or plunder. [BOOTY.]
price (*pris*), *n.* the current value of a commodity; cost; value; recompense. [COST.]
prick (*prik*), *n.* a puncture; dot or point: *v. t.* puncture; spur or incite.
pric-kle (*'l*), *n.* a sharp point growing from the bark of a plant.
prick-ly (*'li*), *adj.* full of prickles.
pride (*prīd*), *n.* inordinate self-esteem.
Syn. PRIDE, arrogance, assumption, conceit, haughtiness, insolence, ostentation, presumption, self-conceit, self-esteem, self-respect, vainglory, vanity. *Pride* is an absorbing sense of one's own greatness; *haughtiness* thinks highly of itself and poorly of others; *arrogance* claims much for itself and concedes little to others; *haughtiness* feels one's own superiority to others; *disdain* sees contemptuously the inferiority of others to one's self; *presumption* claims place or privilege above one's right; *pride* deems nothing too high; *insolence* is open and rude expression of contempt and hostility; *vanity* is eager for admiration and praise, is elated if they are rendered, and pained if they are withheld, and seeks them; *pride* could never solicit admiration or praise; *conceit* is somewhat stronger than *self-conceit; self-conceit* is ridiculous; *conceit* is offensive; *vainglory* is more pompous and boastful than *vanity.*
Ant. HUMILITY, meekness, diffidence.
priest (*prēst*), *n.* one who officiates in sacred offices, especially by offering sacrifice. [Fem. *priestess.*]
priest-craft (*'kraft*), *n.* the policy pursued by priests for the aggrandizement of their order and material interests.
priest-hood (*'hood*), *n.* the priestly order; office or character of a priest.
prig (*prig*), *n.* a conceited fellow who gives himself airs of wisdom.
prim (*prim*), *adj.* precise; affectedly nice; formally neat.
pri-ma-cy (*prī'má-si*), *n.* the office or dignity of a primate.
★**pri-ma don-na** (*prē'má don'á*), the principal female singer in an opera.
pri-mage (*prī'máj*), *n.* a small allowance paid to the captain and crew of a vessel for loading or unloading a cargo, etc.
pri-mal (*prī'mal*), *adj.* first.
pri-ma-ry (*'má-ri*), *adj.* chief, original, principal: *n.* that which is first in rank, place or importance.
pri-ma-ry col-ors (*kul'ērz*), yellow, red, blue.
pri-mate (*'māt*), *n.* the highest dignitary in a national church.
prime (*prīm*), *adj.* first in order of rank, time or importance: *n.* the spring of life.
prime num-ber (*num'bēr*), a number not divisible without remainder by any number except itself and unity.
prim-er (*prim'ēr*), *n.* a manual of elementary instruction; one of two sizes of type.
pri-me-val (*prī-mē'val*), *adj.* of the earliest age or time; original.
prim-ing (*prim'ing*), *n.* the first coat of paint; powder in the nipple of a firearm.
prim-i-tive (*prim'i-tiv*), *adj.* pertaining to the beginning; old-fashioned.
pri-mo-gen-i-ture (*pri-mō-jen'i-tūr*), *n.* seniority of birth; right of the eldest son to succeed to real estate.
pri-mor-di-al (*-môr'di-al*), *adj.* existing from the beginning; first in order; original: *n.* first principle or element.
primp (*primp*), *v. t.* to deck (one's self) in a prim or affected manner; prink.
prim-rose (*prim'rōz*), *n.* an early spring flower.
prince (*prins*), *n.* a ruler or sovereign; the son of a king or sovereign; the chief of a body of men.
Prince Edward island. In the Gulf of St. Lawrence, was formerly called *St. John's island.* In 1798 the local legislature passed an act, confirmed in 1799 by the king in council, changing the name to *Prince Edward island*, in compliment to Prince Edward, afterward duke of Kent, and father of Queen Victoria, who was then commander of the forces in British North America.
Prince of Wales island. Island belonging to Alaska. Named after the prince regent, afterward George IV. of England.
prin-cess (*prin'ses*), *n.* the daughter of a sovereign; the wife of a prince.
prin-ci-pal (*prin'si-pal*), *adj.* chief; essential: *n.* a principal person or thing; a capital sum lent at interest. [CHIEF.]
prin-ci-pal-i-ty (*-si-pal'i-ti*), *n.* the territory of a prince; royal state; supreme power.
prin-ci-pal-ly (*'si-pal-li*), *adv.* chiefly.
prin-ci-ple (*'si-pl*), *n.* source or origin; element; foundation of morality or religion; uprightness.
Syn. PRINCIPLE, motive. The *principle* lies in conscious and unconscious agents; the *motive* only in conscious agents; all nature is guided by certain *principles;* man is put into action by certain *motives.*
prink (*pringk*), *v. t.* to dress up, or deck out, in a showy or ostentatious fashion.
print (*print*), *n.* a mark or character made by impression; anything produced by printing: *v. t.* to impress; fix or stamp deeply: *v. i.* to practice the art of printing.
printer's devil, the youngest apprentice in a printing office, whose duty it is to do all the dirty jobs. The early printers were by many believed to practice the black art.
print-ing (*'ing*), *n.* the art or act of impressing figures or characters on paper, etc.; typography.
pri-or (*prī'ēr*), *adj.* coming before, in time; former; *adv.* previously: *n.* a superior officer.
pri-or-ate (*-āt*), *n.* the office, dignity, or government of a prior.
pri-or-i-ty (*-or'i-ti*), *n.* the state of being first in rank, time, or place; first claim.
pri-or-y (*'ēr-i*), *n.* [*pl.* priories (*-iz*)], a religious house, in dignity below an abbey.
Priscilla (*pris-sil'lá*). A diminutive of the Latin *priscus*, "old," "ancient." Dutch, *Priscilla;* Fr., *Priscille;* It., *Priscilla;* Lat., *Priscilla.*
prism (*prizm*), *n.* a solid whose bases are similar, equal, and parallel, and whose sides are parallelograms.
pris-mat-ic (*priz-mat'ik*), *adj.* pertaining to, like, formed by, or separated by, a prism.
pris-on (*priz'n*), *n.* a public building for the confinement of criminals.
pris-tine (*pris'tin*), *adj.* pertaining to an early period; first; original; primitive.
prith-ee (*prith'ē*), corruption of "I pray thee."
pri-va-cy (*pri'vá-si*), *n.* a state of retirement; place of seclusion; secrecy.
Syn. PRIVACY, retirement, seclusion. *Privacy* is opposed to publicity; he who lives in *privacy* is one who follows no public line, who lives so as to be little known; *retirement* is opposed to openness or freedom of access; he who lives in *retirement* withdraws from the society of others, he lives by himself; *seclusion* is the excess of *retirement;* he who lives in *seclusion* bars all access to himself; he shuts himself from the world.
Ant. COMPANY, society, publicity.
pri-vate (*pīi'vāt*), *adj.* peculiar to one's self: personal; alone: *n.* a common soldier.
pri-va-teer (*-vá-tēr'*), *n.* a private vessel licensed by the government to seize and plunder the ships of an enemy: *v. i.* to cruise in a privateer.
pri-va-tion (*-vā'shun*), *n.* the state of being deprived of something.
priv-a-tive (*priv'á-tiv*), *adj.* causing privation; taking away: *n.* that which depends on the absence of something else.
priv-et (*priv'et*), *n.* an evergreen shrub.
priv-i-lege (*'i-lej*), *n.* peculiar advantage, right, or immunity; prerogative: *v. t.* to exempt. [RIGHT.]
priv-y (*'i*), *adj.* private; secret; clandestine: *n.* a necessary house.
prize (*priz*), *n.* a reward gained in a competition, lottery, etc.; a lever used for forcing or raising heavy bodies, etc.: *v. t.* to value; esteem; to force with a lever. [VALUE.]
prize fight (*fīt*), a boxing match for stakes.
prob-a-bil-i-ty (*prob-á-bil'i-ti*), *n.* appearance of truth; likelihood.
pro-bate (*prō-bāt*), *n.* the official proof of wills.
pro-ba-tion (*-bā'shun*), *n.* evidence; proof; moral trial; novitiate.
probe (*prōb*), *n.* a surgical instrument for examining a wound: *v. t.* to examine with a probe.

prob-i-ty (*prob'i-ti*), *n.* integrity; sincerity.
prob-lem (*'lem*), *n.* a question for solution: a proposition requiring something to be demonstrated.
prob-lem-at-ic-al (*-at'i-kal*), *adj.* questionable; doubtful.
pro-bos-cis (*prō-bos'is*), *n.* the elongated snout of certain animals and insects.
pro-ce-dure (*-sē'dūr*), *n.* manner of proceeding; conduct; process.
pro-ceed (*-sēd'*), *v. i.* to pass from one step or place to another; advance; issue; make progress: *n. pl.* (*'sēdz*) money resulting from a commercial transaction.
proc-ess (*pros'es*), *n.* progressive course; series of measures or changes; operation.
pro-ces-sion (*prō-sesh'un*), *n.* a train of persons in a formal march.
pro-ces-sion-al (*-al*), *adj.* pertaining to, or consisting in, a procession.
pro-claim (*-klām'*), *v. t.* to announce officially; publish. [ANNOUNCE.]
proc-la-ma-tion (*prok-lā-mā'shun*), *n.* an official announcement to the public; edict. [DECREE.]
pro-cliv-i-ty (*prō-kliv'i-ti*), *n.* an inclination; tendency.
pro-cras-ti-nate (*-kras'ti-nāt*), *v. t.* to put off to a future time; defer: *v. i.* to be dilatory.
pro-cre-ate (*'krē-āt*), *v. t.* to generate and produce; beget.
pro-cre-a-tion (*-ā'shun*), *n.* the begetting and production of young.
Pro-crus-te-an (*-krus'tē-an*), *adj.* pertaining to Procrustes, a fabled robber of ancient Greece.
proc-tor (*prok'tēr*), *n.* one employed to manage the affairs of another.
pro-cur-a-ble (*prō-kūr'ā-bl*), *adj.* obtainable.
proc-u-ra-tion (*prok-ū-rā'shun*), *n.* the act of obtaining young women for immoral purposes.
proc-u-ra-tor (*'ū-rā-tēr*), *n.* one who manages another's affairs, especially legal interests.
pro-cure (*prō-kūr'*), *v. t.* to get or obtain; cause. [PROVIDE.]
prod (*prod*), *n.* a goad; prick: *v. t.* [*p. t.* and *p. p.* prodded, *p. pr.* prodding], to goad.
prod-i-gal (*'i-gal*), *adj.* extravagant in expenditure; lavish; wasteful: *n.* a spendthrift; one who is lavish or wasteful. [EXTRAVAGANT.]
prod-i-gal-i-ty (*-gal'i-ti*), *n.* the state of being prodigal; extravagance; lavishness. [EXCESS.]
pro-di-gious (*prō-dij'us*), *adj.* enormous; adapted to excite wonder. [ENORMOUS.]
prod-i-gy (*prod'i-ji*), *n.* anything wonderful or extraordinary; a miracle; portent. [WONDER.]
pro-duce (*prō-dūs'*), *v. t.* to exhibit or bring to view; yield or bring forth; manufacture; extend: *n.* (*prod'ūs*) that which is yielded or brought forth; result. [EFFECT, ALLEGE, MAKE.]
prod-uct (*prod'ukt*), *n.* work; result; the result of multiplying two or more numbers together.
pro-duc-tion (*prō-duk'shun*), *n.* that which is produced: act of producing; fruit; result.

Syn. PRODUCTION, performance, work. The term *production* cannot be employed without specifying or referring to the source from which it is *produced*, or the means by which it is *produced;* as the *production* of art, the *production* of the inventive faculty; a *performance* cannot be spoken of without referring to the individual by whom it has been *performed;* hence we speak of this or that person's *performance*. When we wish to specify anything that results from *work* or labor, it is termed a *work;* in this manner we speak either of the *work* of one's hands, or a *work* of the imagination.

pro-duc-tive (*'tiv*), *adj.* having the power of producing; generative; fertile.
prof-a-na-tion (*prof-ā-nā'shun*), *n.* the act of treating sacred things with disrespect or irreverence.
pro-fane (*prō-fān'*), *adj.* secular; irreverent; irreligious; blasphemous: *v. t.* to treat with irreverence; desecrate. [IRRELIGIOUS.]
pro-fess (*-fes'*), *v. t.* to make open declaration of; acknowledge or avow; declare publicly.
pro-fes-sion (*-fesh'un*), *n.* the act of professing; calling or vocation. [BUSINESS.]
pro-fes-sion-al (*-al*), *adj.* pertaining to a profession: *n.* one who makes his living by his art.
pro-fes-sion-al-ism (*-izm*), *n.* the cultivation of athletic sports for pecuniary considerations.
pro-fess-or (*prō-fes'ēr*), *n.* one who publicly teaches any branch of knowledge.
pro-fess-or-ship (*-ship*), *n.* the office or position of a professor.
prof-fer (*prof'ēr*), *v. t.* to offer for acceptance; tender: *n.* an offer made.
pro-fi-cien-cy (*prō-fish'en-si*), *n.* degree of advancement in any branch of knowledge, science, or art.
pro-fi-cient (*'ent*), *adj.* thoroughly qualified, or skilled: *n.* an expert.
pro-file (*'fīl*), *n.* a head or portrait in a side view, outline or contour.
prof-it (*prof'it*), *n.* pecuniary gain; benefit or advantage; emolument: *v. t.* to benefit; improve.
prof-it-a-ble (*-ā-bl*), *adj.* yielding or bringing profit; lucrative; advantageous.
prof-li-ga-cy (*'li-gā-si*), *n.* a profligate course of life. [Also *profligateness.*]
prof-li-gate (*'li-gāt*), *adj.* abandoned to vice; dissolute; openly vicious.

Syn. PROFLIGATE, abandoned, reprobate. A *profligate* man has lost all by his vices, and consequently to his vices alone he looks for the regaining those goods of fortune which he has squandered; an *abandoned* man is altogether *abandoned* to his passions, which, having the entire sway over him, naturally impel him to every excess; the *reprobate* man is one who has been *reproved* until he becomes insensible to *reproof* and is given up to the malignity of his own passions.

pro-found (*prō-found'*), *adj.* deep in skill or knowledge; abstruse; deep; intense. [OBSCURE.]
pro-fun-di-ty (*-fun'di-ti*), *n.* depth of place, knowledge, skill, etc. [DEPTH.]
pro-fuse (*-fūs'*), *adj.* liberal to excess; exuberant. [EXTRAVAGANT.]
pro-fu-sion (*-fū'zhun*), *n.* lavishness; excess; abundance. [EXCESS.]
pro-gen-i-tor (*-gen'i-tēr*), *n.* an ancestor; forefather. [FOREFATHER.]
prog-e-ny (*proj'en-i*), *n.* offspring; descendants; lineage. [OFFSPRING.]
prog-nos-ti-cate (*prog-nos'ti-kāt*), *v. t.* to foretell: *v. i.* indicate the future by present signs. [FORETELL, OMEN.]
★**pro-gram, pro-gramme** (*prō'gram*, not *prō'grum*), *n.* a course of action prepared or announced beforehand.
prog-ress (*prog'res*), *n.* a moving or going forward; advancement: *v. i.* (*prō-gres'*), to move forward.
pro-gres-sion (*prō-gresh'un*), *n.* motion onward; intellectual advance; progress.
pro-gress-ive (*-gres'iv*), *adj.* moving forward; improving.
pro-hib-it (*-hib'it*), *v. t.* to forbid; interdict by authority; hinder.
pro-hi-bi-tion-ist (*-hi-bish'un-ist*), *n.* one who desires to prohibit the sale of intoxicating liquors.
pro-hib-i-tive (*-hib'i-tiv*), *adj.* tending to prohibit.
proj-ect (*proj'ekt*), *n.* a design or scheme: *v. t.* (*prō-jekt'*) to throw or cast forward: *v. i.* to put out.
pro-ject-ile (*prō-jekt'il*), *n.* a body thrown forward, especially through the air; a bullet, shot.
pro-jec-tion (*-jek'shun*), *n.* that which juts out; a plan or delineation represented on a plane.
pro-lapse (*-laps'*), *n.* a falling down or out of some part of the body: *v. i.* to fall down or out; project too much. [Also *prolapsus.*]
pro-le-ta-ri-an (*prō-lē-tā'ri-an*), *adj.* pertaining to the common people; low; vulgar: *n.* one of the lowest class of society.
pro-le-ta-ri-at (*'ri-at*), *n.* proletarians collectively.
pro-lif-er-ous (*prō-lif'ēr-us*), *adj.* producing another by budding.
pro-lif-ic (*-lif'ik*), *adj.* productive; fertile.
pro-lix (*prō-liks'* or *prō'liks*), *adj.* tedious and verbose; not concise. [DIFFUSE.]
pro-logue (*'log*), *n.* an introduction or preface: *v. t.* to introduce by a preface.
pro-long (*-long'*), *v. t.* to lengthen; extend.
pro-lon-ga-tion (*-long-gā'shun*), *n.* extension in time or space; delay or postponement.
prom-en-ade (*prom-ē-nād'*), *n.* a walk for pleasure; a public place for walking: *v. i.* walk for pleasure.
prom-i-nence (*prom'i-nens*), *n.* the state or quality of being prominent; a projection.
prom-i-nent (*'i-nent*), *adj.* projecting; conspicuous; chief; protuberant.

Syn. PROMINENT, conspicuous. What is *prominent* is, in general, on that very account *conspicuous;* but many things may be *conspicuous* which are not expressly *prominent;* nothing is *prominent* but what projects beyond a certain line; everything is *conspicuous* which may be seen by many.

pro-mis-cu-ous (*prō-mis'kū-us*), *adj.* confused; mingled; indiscriminate.
prom-ise (*prom'is*), *n.* an engagement to do or not to do something: *v. i.* to assure one by a promise: *v. t.* afford reason to expect.

Syn. PROMISE, engagement, word. In *promises* the faith of an individual is admitted upon his *word*, and built upon as if it were a deed; in *engagements* the intentions of an individual for the future are all that are either implied or understood; as a *promise* and *engagement* can be made only by *words* the *word* is often put for either, or for both, as the case requires.

prom-is-so-ry (*'is-ō-ri*), *adj.* containing a promise or covenant to do, or not to do, something.
prom-is-so-ry note (*nōt*), a written promise to pay a certain sum at a specified date in consideration of value received.
prom-on-to-ry (*'on-tō-ri*), *n.* a high cape; a point of land jutting into the sea.
pro-mote (*prō-mōt'*), *v. t.* to advance, forward, or elevate; excite.
pro-mot-er (*'ēr*), *n.* one who promotes, especially one who makes it his business to float new companies.
pro-mo-tion (*-mō'shun*), *n.* the act of promoting; state of being promoted; advancement.
prompt (*prompt*), *adj.* ready and quick to act as occasion demands; immediate; done without delay. [DILIGENT, ACTIVE, READY.]
prompt-i-tude (*prompt'i-tūd*), *n.* quickness of decision and action; readiness; alacrity.
pro-mul-gate (*prō-mul'gāt*), *v. t.* to publish. [PUBLISH, ANNOUNCE.]
prone (*prōn*), *adj.* lying with the face downward; not erect; inclined; disposed. [ADDICTED.]
prone-ness (*'nes*), *n.* the state of being prone; propensity. [INCLINATION.]
prong (*prông*), *n.* a sharp-pointed instrument; the spike of a fork.
pro-nom-i-nal (*prō-nom'i-nal*), *adj.* pertaining to, or of the nature of, a pronoun.
pro-noun (*'noun*), *n.* a word which refers to, or is used in the place of, a noun.
pro-nounce (*-nouns'*), *v. t.* to articulate; utter formally, or rhetorically. [UTTER, SPEAK.]
pro-nounced (*-nounst'*), *p. adj.* strongly marked or decided.
pro-nun-ci-a-tion (*-nun-si-ā'shun*), *n.* the act of manner of articulating words or syllables.
proof (*prōōf*), *n.* testimony or convincing evidence; test; experiment; reason. [TESTIMONY.]
prop (*prop*), *n.* a support or stay: *v. t.* to sustain. [STAFF.]
prop-a-gan-da (*-ā-gan'dā*), *n. pl.* any methods for the propagation of doctrines, principles, etc., religious or secular.
prop-a-gate (*'ā-gāt*), *v. t.* to continue or spread by generation or successive production; extend: *v. i.* to be produced by generation, or by new shoots or plants.
prop-a-ga-tion (*-gā'shun*), *n.* the act of propagating; spreading or extension.
pro-pel (*prō-pel'*), *v. t.* [*p. t.* and *p. p.* propelled, *p. pr.* propelling], to drive forward; urge onward by force.
pro-pel-ler (*'ēr*), *n.* one who, or that which, propels; a screw-propeller; vessel so propelled.
pro-pen-si-ty (*-pen'si-ti*), *n.* natural tendency. [INCLINATION.]
prop-er (*prop'ēr*), *adj.* noting a particular person or thing; peculiar; fit or suitable; correct; appropriate.
prop-er-ty (*'ēr-ti*), *n.* [*pl.* properties (*-tiz*)], exclusive right of possession; the thing owned; estate.
proph-e-cy (*prof'ē-si*), *n.* a prediction of something to take place in the future.
proph-e-sy (*'ē-sī*), *v. t.* [*p. t.* and *p. p.* prophesied, *p. pr.* prophesying], to foretell future events, especially by divine inspiration: *v. i.* to utter prophecies; preach. [FORETELL.]
proph-et (*'et*), *n.* one who foretells future events.
pro-phet-ic (*prō-fet'ik*), *adj.* pertaining to prophecy; predictive. [Also *prophetical.*]
proph-y-lac-tic (*prof-i-lak'tik*), *adj.* guarding, or preserving, against disease: *n.* a preventive of disease.
★**pro-pin-qui-ty** (*prō-ping'kwi-ti*), *n.* nearness of place, time, or relationship.
pro-pi-ti-ate (*-pish'i-āt*), *v. t.* to conciliate; make propitious: *v. i.* to atone.
pro-pi-tious (*-pish'us*), *adj.* favorable; disposed to be merciful.
pro-por-tion (*prō-pōr'shun*), *n.* comparative relation of one thing to another; ratio; rate: *v. t.* to form symmetrically; apportion.
pro-por-tion-al (*-al*), *adj.* having the same ratio: *n.* a quantity or number in proportion.
pro-por-tion-ate (*'shun-āt*), *adj.* adjusted to something else according to a certain rate: *v. t.* to adjust according to a settled rate.

Syn. PROPORTIONATE, commensurate, adequate. *Proportionate* is here a term of general use; the others are particular terms, employed in a similar sense, in regard to particular objects; that is *proportionate* which rises as a thing rises, and falls as a thing falls; that is *commensurate* which is made to rise to the same measure or degree; that is *adequate* which is made to come up to the height of another thing.

pro-pos-al (*-pōz'al*), *n.* that which is offered for consideration or acceptance; offer of marriage.
pro-pose (*-pōz'*), *v. t.* to bring forward or offer for consideration: *v. i.* to make an offer of marriage.
prop-o-si-tion (*prop-ō-zish'un*), *n.* an offer of terms; a theorem or problem for solution.
pro-pound (*prō-pound'*), *v. t.* to offer for consideration. [ANNOUNCE.]
pro-pri-e-ta-ry (*-prī'ē-tā-ri*), *adj.* belonging to a proprietor or proprietary: *n.* a possessor in his own right; proprietors collectively.
pro-pri-e-tor (*'ē-tēr*), *n.* one who has a legal right to anything; owner. [Fem. *proprietress.*]
pro-pri-e-ty (*'ē-ti*), *n.* conformity to established rules or custom; decorum; fitness.
pro-pul-sive (*-pul'siv*), *adj.* having power to propel. [Also *propulsory.*]
pro-rogue (*-rōg'*), *v. t.* to terminate a session of; to postpone.
pro-sa-ic (*-zā'ik*), *adj.* like prose; commonplace; uninteresting. [Also *prosaical.*]
pro-sce-ni-um (*-sē'ni-um*), *n.* that part of the stage from the curtain to the orchestra.
pro-scribe (*-skrīb'*), *v. t.* to punish with civil death; outlaw; interdict.
prose (*prōz*), *n.* ordinary spoken or written language; unmetrical composition.
pros-e-cute (*pros'ē-kūt*), *v. t.* accuse of a crime before a legal tribunal: *v. i.* to carry on a legal prosecution.
pros-e-cu-tion (*-kū'shun*), *n.* pursuit; the institution and carrying on of a legal suit; prosecutor or prosecutors collectively.
pros-e-cu-tor (*'ē-kū-tēr*), *n.* one who carries on a legal suit with another.
pros-e-lyte (*'ē-līt*), *n.* a convert to some religion or belief: *v. t.* to make proselytes of. [CONVERT.]
pros-e-ly-tism (*'ē-li-tizm*), *n.* the act of proselytising; conversion to a creed or system.
pros-o-dy (*pros'ō-di*), *n.* that part of grammar that

treats of quantity, accent, and the laws of versification.

pros-pect (*pros'pekt*), *n.* a view of something distant; scene; object of view; expectation: *v. t.* to search or explore. [VIEW.]

pro-spec-tive (*prō-spek'tiv*), *adj.* looking forward; acting with, or characterized by, foresight.

pros-pec-tor (*pros'pek-tĕr*), *n.* one who searches for valuable minerals.

pro-spec-tus (*prō-spek'tus*), *n.* an outline of a proposed undertaking; sketch, or plan.

pros-per (*pros'pĕr*), *v. t.* to render successful; favor: *v. i.* to thrive; succeed.

pros-per-i-ty (*pros-per'i-ti*), *n.* successful progress in any business or enterprise; good fortune.

pros-per-ous (*pĕr'us*), *adj.* successful; thriving.

pros-ti-tute (*'ti-tūt*), *v. t.* to devote to infamous or improper purposes: *adj.* prostituted; *n.* a woman who indulges in lewdness. A base mercenary or hireling. [ABUSE.]

pros-trate (*'trāt*), *adj.* lying at full length; extended on the ground: *v. t.* to lay flat.

pros-y (*prōz'i*), *adv.* tedious; dull.

pro-te-an (*prō'tē-an*), *adj.* readily assuming different shapes.

pro-tect (*-tekt'*), *v. t.* to cover over, defend, shield; shelter; support. [DEFEND.]

pro-tec-tion (*-tek'shun*), *n.* defense; shelter, security; passport.

pro-tec-tion-ism (*-izm*), *n.* the doctrine that certain home industries and produce should be encouraged by the imposition of duties on foreign imports.

pro-tec-tion-ist (*-ist*), *n.* one who advocates or supports protectionism; one who opposes free trade unless it be reciprocal.

pro-tect-or (*-tekt'ĕr*), *n.* one who or that which protects.

pro-tect-or-ate (*-tekt'ĕr-āt*), *n.* government or defense by a protector.

★**pro-tē-gé** (*-tā-zhā'*), *n.* one who is under the protection, guardianship, or care of another.

pro-te-ids (*'tē-idz*), *n. pl.* a class of nitrogenous compounds, as albumen, fibrin, casein, etc., which form animal tissue.

pro-te-in (*'tē-in*), *n.* the gelatinous, semitransparent substance obtained from albumen, fibrin, or casein, the essential principle of food.

pro-test (*-test'*), *v. i.* to affirm with solemnity; remonstrate: *v. t.* to make a solemn declaration or affirmation of: *n.* (*prō'test*) a solemn declaration of opinion against something.

Prot-es-tant (*prot'es-tant*), *n.* a member of any of those bodies of Christians that protest against the spiritual supremacy of the church of Rome. The second diet of Spires, in 1529, declared that the religious differences could only be decided by an ecclesiastical council, thus disallowing the right of private judgment. A solemn protest was made against this decision by many princes of Germany, April 19, 1529, in consequence of which the members of the Reformed churches have since been known as Protestants. The protest was drawn up by Luther and Melanchthon.

prot-es-ta-tion (*-tā'shun*), *n.* a formal declaration of dissent; solemn affirmation.

pro-to-plasm (*prō'tō-plazm*), *n.* a semifluid albuminous substance, regarded as the ultimate basis of physical life, from which all living organisms are formed and developed.

pro-to-plas-mic (*-plaz'mik*), *adj.* pertaining to, or formed of, protoplasm.

pro-to-type (*'tō-tīp*), *n.* the original from which others are copied.

Pro-to-zo-a (*-zō'ā*), *n. pl.* the first or lowest division of the animal kingdom, containing animals of the simplest type of organization.

pro-tract (*-trakt'*), *v. t.* to draw out or lengthen in time; prolong; defer.

pro-trac-tion (*-trak'shun*), *n.* the act of protracting; delay.

pro-tract-or (*-trakt'ĕr*), *n.* a mathmetical instrument for laying down angles on paper; a muscle that draws forward any part.

pro-trude (*-trūd'*), *v. t.* to thrust out or push forward: *v. i.* to shoot forward; project.

pro-tru-sion (*-trū'zhun*), *n.* the act of protruding; the state of being protruded.

pro-tru-sive (*'siv*), *adj.* thrusting or impelling forward.

pro-tu-ber-ant (*-tū'bĕr-ant*), *adj.* swelling; prominent.

proud (*proud*), *adj.* having excessive self-esteem; arrogant; ostentatious; haughty.

prove (*prōōv'*), *v. t.* to ascertain or try by an experiment or test; ascertain the genuineness of; experience.

prov-en (*'en*), *adj.* proved.

Provence (*prō-vāns'*). An ancient government of southeastern France. The *Provencia* of Caesar, a name reminding us that it was the first province acquired by Rome beyond the Alps.

prov-en-der (*prov'en-dĕr*), *n.* dry food for beasts, as hay, etc.

prov-erb (*prov'ĕrb*), *n.* a short, familiar, pithy saying; adage.

pro-ver-bi-al (*prō-vĕr'bi-al*), *adj.* pertaining to proverbs; widely spoken of or well known.

pro-vide (*prō-vīd'*), *v. t.* to make ready beforehand; furnish: *v. i.* to procure supplies.

Syn. PROVIDE, procure, furnish, supply. *Provide* and *procure* are both actions that have a special reference to the future; *furnish* and *supply* are employed for that which is of immediate concern; one *provides* a dinner in the contemplation that some persons are coming to partake of it; one *procures* help in the contemplation that it may be wanted; we *furnish* a room, as we find it necessary for the present purpose; one *supplies* a family with any article of domestic use.

Ant. NEGLECT.

pro-vid-ed (*prō-vīd'ed*), *conj.* on condition.

prov-i-dence (*prov'i-dens*), *n.* economy; prudence; foresight. [FRUGALITY.]

Providence, R. I. Name given by Roger Williams in recognition of "God's merciful providence to me in my distress." The Indian name of the locality was *Mooshansick*.

prov-i-dent (*'i-dent*), *adj.* careful for the future; prudent; economical. [CAREFUL.]

prov-i-den-tial (*-den'shal*), *adj.* effected by, or proceeding from, divine providence.

prov-ince (*'ins*), *n.* a division of an empire or state; a dependent country; region.

pro-vin-cial (*prō-vin'shal*), *adj.* pertaining to, or characteristic of, a province; rustic: *n.* one who belongs to a province; countryman.

pro-vi-sion (*-vizh'un*), *n.* measures taken beforehand; accumulation of stores: *pl.* food: *v. t.* to supply with food.

pro-vi-sion-al (*-al*), *adj.* provided for present use; temporary.

pro-vi-so (*-vī'zō*), *n.* a conditional clause or stipulation in a deed.

prov-o-ca-tion (*prov-ō-kā'shun*), *n.* that which excites to anger or resentment; act of provoking.

pro-vo-ca-tive (*prō-vō'kā-tiv*), *adj.* tending to provoke; inciting: *n.* anything that tends to provoke.

pro-voke (*-vōk'*), *v. t.* to excite; enrage or irritate; exasperate. [AGGRAVATE, AWAKEN, EXCITE.]

prov-ost (*prov'ust*), *n.* the head of a college; superintendent or president.

prow (*prou*), *n.* the bow of a ship.

prow-ess (*'es*), *n.* bravery; valor.

prowl (*proul*), *v. i.* to wander stealthily, as for prey or plunder: *n.* a roving for prey or plunder.

prox-i-mate (*proks'i-māt*), *adj.* immediate.

prox-im-i-ty (*-im'i-ti*), *n.* immediate nearness in place, blood, or alliance.

prox-y (*'i*), *n.* [*pl.* proxies (*'iz*)], the agency of a substitute.

prude (*prōōd*) *n.* a woman who affects great reserve, coyness, and excessive virtue.

pru-dence (*prōō'dens*), *n.* the quality of being prudent; wisdom applied to practice. [JUDGMENT, WISDOM, FRUGALITY.]

Prudence. A feminine name given by Puritans. From the Latin *prudentia*, "wisdom," "prudence," "discretion," "knowledge."

pru-dent (*'dent*), *adj.* practically wise; cautious; circumspect.

pru-den-tial (*-den'shal*), *adj.* proceeding from, or influenced by, prudence.

prud-er-y (*prōōd'ĕr-i*), *n.* affected niceness or scrupulousness in conduct; manners of a prude.

prud-ish (*prōōd'ish*), *adj.* like a prude; affectedly precise, nice, or scrupulous.

prune (*prōōn*), *n.* a dried plum: *v. t.* to cut superfluous twigs or branches from; trim.

pru-nel-la (*proo-nel'ā*), *n.* a smooth woolen stuff used for shoes and gaiters.

pru-ri-ent (*'ri-ent*), *adj.* having an eager desire for, or characterized by, lewdness; itching.

Prussia. Is the Latinized form of the German name *Preussen*, itself a corruption of an older Lithuanian name. Old Prussia was the duchy formed in the eastern corner of the modern kingdom out of the possessions of the Teutonic knights, whose inhabitants in the tenth century were called *Hrutheni* or *Pruzzi*, which, according to Zeuss, is a Lettish name meaning "neighbors."

prus-sic ac-id (*prus'ik as'id*), hydrocyanic acid, a deadly poison.

pry (*pri*), *v. i.* to inspect closely or with keen scrutiny. [CURIOUS.]

psalm (*sām*), *n.* a sacred song.

psalm-o-dy (*'ō-di*), *n.* the art or practice of singing psalms.

Psal-ter (*savl'tĕr*), *n.* the Book of Psalms; the prayer book version of the Psalms.

pseu-do, a *prefix* meaning *false*, spurious, as *pseudoblepsis*, false or deceptive vision.

★**pseu-do-nym** (*sū'dō-nim*), *n.* a fictitious name.

pshaw (*shaw*), *interj.* an expression of contempt, etc.

★**psy-chi-cal** (*si'ki-kal*), *adj.* pertaining to, or connected with, the human soul, spirit, or mind.

psy-cho-log-ic-al (*-kō-loj'i-kal*), *adj.* pertaining to psychology.

psy-chol-o-gist (*-kol'ō-jist*), *n.* one skilled in psychology.

psy-chol-o-gy (*-kol'ō-ji*), *n.* the science that treats of mental phenomena, and their classification and analysis; mental philosophy.

psy-cho-phys-ics (*-kō-fiz'iks*), *n.* the science which treats of the correlation of mind and matter.

Ptol-e-ma-ic (*tal-ē-mā'ik*), *adj.* pertaining to Ptolemy, the Greek geographer and astronomer.

Ptolemy (*tol'ē-mi*). From the Greek, meaning "warlike," or "mighty in war." Dutch, *Ptolemeus*; Fr., *Ptolémée*; Ger., *Ptolemaus*; Gr., *Ptolemaios*; It., *Tolomeo*; Lat., *Ptolemæus*.

pto-ma-ines (*tō'ma-inz*), *n. pl.* a class of alkaloids of a highly poisonous nature, originating in decaying or dead matter.

pu-ber-ty (*pū'bĕr-ti*), *n.* the age at which the generative powers begin to be developed.

pub-lic (*pub'lik*), *adj.* pertaining to a nation, state or community; belonging to the people: *n.* the people in general.

pub-li-can (*'li-kan*), *n.* one who keeps a public house.

pub-li-ca-tion (*-li-kā'shun*), *n.* the act of publishing or making public.

★**pub-li-cist** (*'li-sist*), *n.* a writer on international law, or on current events of political or social interest.

pub-lic-i-ty (*-lis'i-ti*), *n.* the state of being public; notoriety.

pub-lish (*'lish*), *v. t.* to make known; announce or proclaim; divulge; print and offer for sale; put into circulation.

Syn. PUBLISH, promulgate, divulge, reveal, disclose. *To publish* is the most general of these terms, conveying in its extended sense the idea of making known; but it is in many respects indefinite; we may *publish* to many or few; but *to promulgate* is always to make known to many. We may *publish* that which is a domestic or a national concern; we *promulgate* properly only that which is of general interest; we *divulge* things mostly not to be known; we commonly *divulge* the secrets or the crimes of another; we *reveal* the secret or the mystery of a transaction; we *disclose* the whole affair from beginning to end, which has never been properly known or accounted for. [See *announce, declare.*]

Ant. CONCEAL, hide, hush, suppress.

puck-er (*puk'ĕr*), *v. t.* and *v. i.* to gather into small folds; wrinkle: *n.* a small fold or wrinkle.

pud-ding (*pood'ing*), *n.* a soft kind of food made of flour and various ingredients.

pud-dle (*pud'l*), *n.* a small pool of dirty water.

pueb-lo (*pweb'lō*), *n.* [*pl.* pueblos (*'lōz*)], a building constructed of adobe or sun-dried brick.

Pueblo. County and important manufacturing city, in same county, in Colorado. A Spanish word meaning "a collection of people, a town or village."

pu-er-ile (*pū'ĕr-il*), *adj.* pertaining to children; juvenile; boyish; trifling. [YOUTHFUL.]

pu-er-il-i-ty (*-il'i-ti*), *n.* the quality of being puerile; childishness.

puff (*puf*), *n.* a short quick blast; sudden forcible breath; a fungous ball filled with dust: *v. i.* to swell with air: *v. t.* to praise in exaggerated terms.

puff-ing (*'ing*), *n.* exaggerated praise; quick and hard breathing.

puff-y (*'i*), *adj.* distended with air or other light matter; windy; bombastic; tumid.

pug (*pug*), *n.* a monkey; a small dog with face and nose like a bulldog.

pug-ging (*'ing*), *n.* the act or operation of working up clay for bricks.

pu-gil-ism (*pū'jil-izm*), *n.* the art or practice of boxing or fighting with the fists; prize fighting.

pug-na-cious (*pug-nā'shus*), *adj.* disposed to fight; quarrelsome.

pug-nac-i-ty (*-nas'i-ti*), *n.* inclination to fight; quarrelsomeness.

★**pu-is-sant** (*pū'is-ant* or *pū-is'nnt*, not *pwē'sant*), *adj.* powerful; strong.

puke (*pūk*), *v. i.* and *v. t.* to vomit.

pule (*pūl*), *v. i.* to whine.

pul-ing (*pūl'ing*), *adj.* whining; infantile.

pull (*pool*), *v. t.* to draw toward one; pluck; rend or tear: *v. i.* to tug. [DRAW.]

pull, *n.* a term much used to indicate a person who possesses political or other influence.

pul-let (*'et*), *n.* a young hen.

pul-ley (*'i*), *n.* a small wheel turning about an axis, and having a groove in which a rope works.

pul-mo-na-ry (*pul'mō-nā-ri*), *adj.* pertaining to, or affecting, the lungs.

pulp (*pulp*), *n.* the soft fleshy part of bodies, as of fruit; any soft uniform mass.

pul-pit (*pool'pit*), *n.* an elevated or inclosed desk in a church from which the sermon is delivered; preachers or preaching.

pulp-y (*pulp'i*), *adj.* consisting of, or like, pulp; soft; succulent.

pul-sate (*pul'sāt*), *v. i.* to throb or beat.

pul-sa-tive (*'sā tiv*), *adj.* beating or throbbing. [Also *pulsatory.*]

pulse (*puls*), *n.* the rhythmic beating of the heart or arteries; vibration: *v. i.* to beat or throb, as the pulse.

pul-ver-ize (*'vĕr-īz*), *v. t.* to reduce to powder.

pum-ice (*pum'is*), *n.* a hard, light, spongy, volcanic lava or rock.

pump (*pump*), *n.* a machine for raising water or other liquid; a slipper: *v. t.* to raise (water or a liquid) by means of a pump.

★**pump-kin** (*pump'kin*, not *pung'kin*), *n.* a plant of the gourd family and its fruit.

pun (*pun*), *n.* a play upon words: *v. i.* to play upon words similar in sound but having a different meaning.

punch (*punch*), *n.* a tool for stamping or perforating; a beverage: *v. t.* to strike with the fist.

Punch and Judy. A contraction for *Pontius* and *Judas*. It is a relic of an old miracle play in which the actors were Pontius Pilate and Judas Iscariot.

punc-til-io (*pungk-til'yō*), *n.* a nice point in conduct or ceremony; formal exactness.

punc-til-ious (*'yus*), *adj.* very nice or precise in conduct or ceremony; exact to excess.

punc-tu-al (*pungk'tū-al*), *adj.* observing, or done at, the exact time. [EXACT.]

punc-tu-al-i-ty (*-al'i-ti*), *n.* the characteristic of keeping the exact time of an appointment or engagement.

punc-tu-ate (*'tū-āt*), *v. t.* to mark with points; divide into sentences by points.

punc-tu-a-tion (*-ā'shun*), *n.* the act or art of dividing sentences by points or stops.

punc-ture (*'tūr*), *n.* a small hole or wound made by a pointed instrument: *v. t.* to make a hole in.

pun-gent (*pun'jent*), *adj.* stinging or pricking; piercing; keen; biting; sarcastic; caustic.

pun-ish (*pun'ish*), *v. t.* to cause loss or pain to, as a penalty for a crime or fault; chastise; correct. [AVENGE.]

pun-ish-ment (*-ment*), *n.* pain, loss, or penalty, inflicted for a crime or fault. [CORRECTION.]

pu-ni-tive (*pū'ni-tiv*), *adj.* pertaining to, or inflicting, punishment.

Punjab or **Punjaub** (*pun-jäb'*). This great northwest Indian territory derives its name from two Persian words, signifying "five rivers." The five affluents of the Indus which give rise to the name are the *Jhelum*, the *Chenab*, the *Ravi*, the *Beas*, and the *Sutlej*.

pun-ster (*pun'stĕr*), *n.* one addicted to, or skilled in, punning.

punt (*punt*), *n.* a flat-bottomed boat for fishing.

pu-ny (*pū'ni*), *adj.* [*comp.* punier, *superl.* puniest], inferior in strength or size; weak; feeble.

pu-pil (*'pil*), *n.* a young person who is under the care of a tutor; scholar; ward.

pup-pet (*pup'et*), *n.* a small doll or image.

pup-py (*'i*), *n.* a whelp; young dog; a conceited young man.

pur-blind (*pûr'blīnd*), *adj.* seeing obscurely.

pur-chase (*pûr'chās*), *v. t.* to obtain by paying an equivalent; acquire; buy; move or raise by the application of some mechanical power: *n.* the act of purchasing; mechanical advantage. [BUY.]

pure (*pūr*), *adj.* free from moral or physical defilement; chaste; unpolluted. [CLEAN.]

pur-ga-tion (*pûr-gā'shun*), *n.* the act of purging; the act of clearing from imputed guilt.

pur-ga-tive (*'gā-tiv*), *adj.* serving to purge.

pur-ga-to-ry (*pûr'ga-tō-ri*), *n.* in the Roman Catholic church, the state after death.

purge (*pûrj*), *v. t.* to cleanse or free from impurities or guilt.

purg-ing (*'ing*), *n.* diarrhœa or dysentery; looseness of the bowels.

pu-ri-fi-ca-tion (*pū-ri-fi-kā'shun*), *n.* the act of purifying; state of being purified.

pu-ri-fi-ca-tive (*pū'ri-fi-kā-tiv*), *adj.* able or tending to purify. [Also *purificatory*.]

pu-ri-form (*'ri-fôrm*), *adj.* like pus.

pu-ri-fy (*'ri-fī*), *v. t.* to render pure; free from impurities, corruptions, or barbarisms.

pur-ist (*pūr'ist*), *n.* one who is scrupulously precise in matters of literary style or the choice of correct words.

pu-ri-tan (*pū'ri-tan*), *n.* one who professes great purity in religious doctrine and practice.

pu-ri-tan-ic-al-ly (*-tan'i-kal-i*), *adv.* after the manner of the Puritans.

pu-ri-tan-ism (*'ri-tan-izm*), *n.* the doctrines and practices of the Puritans.

pu-ri-ty (*'ri-ti*), *n.* the state or quality of being pure; chastity; cleanness.

purl (*pûrl*), *n.* a warm spiced ale, or gin; the continued murmuring sound of a shallow stream: *v. t.* to invert (stitches) in knitting: *v. i.* to ripple or flow with a gentle murmur.

pur-lieus (*pûr'lūz*), *n. pl.* adjacent districts.

pur-loin (*-loin'*), *v. t.* to steal.

pur-ple (*'pl*), *adj.* of the color of blended blue and red; regal; livid; dyed with blood: *n.* purple color; purple robe.

pur-port (*'pōrt*), *n.* meaning; design; signification: *v. t.* to mean or signify.

pur-pose (*'pus*), *n.* design; end or aim desired: *v. t.* to intend or resolve; design: *v. i.* to have an intention. [DESIGN.]

purr (*pûr*), *n.* the low murmuring of a cat when pleased: *v. t.* to signify by purring: *v. i.* to utter a low murmuring sound.

purse (*pûrs*), *n.* a small bag or receptacle for money; sum of money; treasury: *v. t.* to pucker or wrinkle.

pur-su-ant (*pûr-sū'ant*), *adj.* done in consequence or in prosecution of anything; agreeable: *adv.* in consequence of.

pur-sue (*-sū'*), *v. t.* to follow for some end; take and proceed in; prosecute; chase; seek: *v. i.* to go on or continue. [FOLLOW.]

pur-suit (*-sūt'*), *n.* the act of pursuing; prosecution; chase; occupation; attainment.

★**pur-sui-vant** (*'swē-vant*), *n.* an attendant or follower; state messenger.

pu-ru-lent (*pū'rōō-lent*), *adj.* consisting of, or containing, pus.

pur-vey (*pûr-vā'*), *v. t.* to provide; procure: *v. i.* to purchase provisions.

pur-vey-ance (*'ans*), *n.* the procuring of provisions; provisions provided.

pur-view (*'vū*), *n.* extent; proviso; body of a statute.

pus (*pus*), *n.* the white, or yellowish-white, matter secreted in sores, etc.

push (*poosh*), *v. t.* to press against with force, urge forward; drive by pressure: *v. i.* to press hard: *n.* thrust; force applied; effort.

pu-sil-la-nim-i-ty (*pū-sil-a-nim'i-ti*), *n.* cowardice.

pu-sil-lan-i-mous (*pū-sil-an'i-mus*), *adj.* cowardly; mean-spirited; faint-hearted.

puss (*poos*), *n.* a cat; hare. [Diminutive, *pussy*.]

pus-tule (*pus'tūl*), *n.* a small elevation of the skin, or pimple, containing pus.

put (*poot*), *v. t.* to place in, or bring into, any state or condition; cause; drive into action; incite.

Syn. PUT, place, lay, set. One *puts* things generally, but the way of *putting* is not defined; we may *put* a thing into one's room, one's desk, one's pocket, and the like; but *to place* is *to put* in a specific manner, and for a specific purpose; one *places* a book on a shelf; *to lay* and *set* are still more specific than *place;* the former being applied only to such things as can be made *to lie;* and *set* only to such as can be made *to stand;* a book may be said *to be laid* on the table when *placed* in a downward position, and *set* on a shelf when *placed* on one end.

pu-ta-tive (*pū'tā-tiv*), *adj.* reputed.

pu-tre-fac-tion (*pū-trē-fak'shun*), *n.* the act or process of putrefying; decomposition; rottenness.

pu-tre-fy (*'trē-fī*), *v. t.* to cause to rot or decay by the decomposition of organic bodies; rot: *v. i.* to become putrid.

pu-tres-cent (*-tres'ent*), *adj.* pertaining to putrefaction; becoming rotten.

pu-trid-i-ty (*-trid'i-ti*), *n.* putrid state. [Also *putridness*.]

put-ter (*put'ĕr*), *n.* in golf, a club used for playing a short, careful stroke.

put-ty (*'i*), *n.* a compound of whiting and linseed oil used in glazing.

puz-zle (*puz'l*), *n.* something that tries the ingenuity, perplexes, or causes embarrassment: *v. i.* to be puzzled: *v. t.* to perplex.

py-e-mi-a, pyæmia (*pī-ē'mi-ä*), *n.* blood poisoning.

pyg-my (*pig'mi*), *n.* one of a small race mentioned by Herodotus, and found in central Africa by numerous modern travelers. [Also *pigmy*.]

py-lor-ic (*pi-lor'ik*), *adj.* pertaining to the pylorus.

py-lo-rus (*-lō'rus*), *n.* the lower and right opening of the stomach, leading to the small intestines.

pyr, a *prefix*, meaning *fire*, as *pyracanth*, a plant with flame colored flowers. [Also *pyro*, as *pyroscope*.]

pyr-a-mid (*pir'ä-mid*), *n.* a solid body standing on a triangular, square, or polygonal base, having its triangular sides terminating in a point at the apex.

py-ram-i-dal (*pi-ram'i-dal*), *adj.* shaped like a pyramid. [Also *pyramidic, pyramidical*.]

pyre (*pīr*), *n.* a funeral pile.

Pyrenees (*pir'ē-nēz*). The mountain chain separating France from Spain is the *Mons Pyrenæus* of the Greek and Roman geographers. The name first appears in Herodotus, who supposed *Pyrene* was the name of the place where the Danube flowed. The etymology is unknown, being probably pre-Aryan. Many guesses have been made from Basque, Celtic, and Greek sources, explaining the name as the "high," "steep," "pine clad," or "burnt," mountains. The most probable derivation is from *biren* or *pyren*, a local word, doubtless ultimately Basque or Iberian, which signifies "a summit" or "ridge."

★**py-ri-tes** (*pi-rī'tēz*), *n.* a native compound of sulphur with iron, copper, etc.

py-ro-col-lo-di-on (*pī-rō-kol-lō'di-un*), *n.* a smokeless powder, used by Russia.

pyr-o-ma-ni-a (*pir-ō-mā'ni-ä*), *n.* an insane impulse to destroy by fire.

py-rom-e-ter (*pi-rom'ē-tĕr*), *n.* an instrument for measuring the temperature or expansion of bodies under the influence of heat.

py-ro-tech-nic (*pī-rō-tek'nik*), *adj.* pertaining to fireworks or the art of making them.

py-ro-tech-nics (*'niks*), *n.* fireworks or the art of making them. [Also *pyrotechny*.]

pyr-rhic (*pir'ik*), *n.* a metrical foot of two syllables; an ancient Greek military dance: *adj.* pertaining to such a dance.

py-thon (*pi'thon*), *n.* a large nonvenomous serpent nearly allied to the boa.

pyth-o-nism (*pith'ō-nizm*), *n.* the art of predicting future events by divination, after the manner of the ancient oracle at Delphi.

pyx (*piks*), *n.* the box in which selected coins are placed at the mint to be tested prior to their issue as currency.

Q

quack (*kwak*), *n.* the cry of the duck; a pretender to medical skill: *v. i.* to cry like a duck.

quack-er-y (*'ĕr-i*), *n.* boastful pretension to skill in medicine; false pretensions to any art; imposture; empiricism.

quad (*kwod*), *n.* the court of a college, prison, etc.; a quadrat.

quad-ra (*'rä*), *n.* a square border or fillet of an Ionian column. *Prefix* meaning *four*. [Also *quadr, quadri, quadru*.]

quad-ra-ges-i-ma (*-rä-jes'i-mä*), *n.* Lent.

quad-ran-gle (*'rang-gl*), *n.* an open square surrounded by buildings; a plane figure with 4 angles and 4 sides.

quad-ran-gu-lar (*'gū-lĕr*), *adj.* having the form of a quadrangle.

quad-rant (*'rant*), *n.* the 4th part of a circle, an arc of 90 degrees; an instrument for taking elevations.

quad-rate (*kwod'rāt*), *adj.* having 4 equal sides and 4 right angles.

quad-rat-ic (*-rat'ik*), *adj.* pertaining to, or involving, a square.

quad-ra-ture (*'rä-tūr*), *n.* the act of squaring; the reduction of a figure to a square, exactly or approximately.

quad-ren-ni-al (*-ren'ni-al*), *adj.* comprising, or occurring, every 4 years.

quad-ri-lat-er-al (*-ri-lat'ĕr-al*), *n.* a plane figure with 4 sides and 4 angles.

qua-drille (*kwä-drīl'* or *ka-drīl'*), *n.* a dance by four sets of couples; a game at cards played by four persons.

quad-ril-lion (*kwod-ril'yun*), *n.* the French system of numeration, followed in the United States, a thousand trillions.

quad-roon (*-rōōn'*), *n.* the offspring of a mulatto and a white.

quad-ru-ped (*'roo-ped*), *n.* a four-footed animal: *adj.* four-footed.

quad-ru-ple (*'roo-pl*), *adj.* fourfold: *v. t.* to multiply by four; *v. i.* to increase fourfold.

quaff (*kwäf*), *v. t.* to drink or swallow in large quantities: *v. i.* to drink luxuriously.

quag-mire (*kwag'mīr*), *n.* wet, boggy ground, yielding under the feet.

quail (*kwāl*), *v. i.* to sink in spirit or by dejection; lose heart; cower: *n.* a gallinaceous bird.

quaint (*kwānt*), *adj.* singular and antique; not expressed or shown in the usual way; odd; neat. [ANTIQUE.]

quake (*kwāk*), *v. i.* to tremble or shake; be agitated: *n.* a tremble or shudder.

Quaker. (*'ĕr*). This name was originally applied by a Derby, England, magistrate to the members of the Society of Friends, because George Fox, the founder, admonished him and those present to tremble at the name of the Lord.

qual-i-fi-a-ble (*kwol'i-fī-ä-bl*), *adj.* that may be qualified.

qual-i-fi-ca-tion (*-fi-kā'shun*), *n.* any quality, endowment, or acquirement which fits a person for any office or occupation.

Syn. QUALIFICATION, accomplishment. The *qualification* serves the purpose of utility; the *accomplishment* serves to adorn; by the first we are enabled to make ourselves useful; by the second we are enabled to make ourselves agreeable.

qual-i-fy (*'i-fī*), *v. t.* to render fit or capable for any office, occupation, etc.: *v. i.* to become qualified. [COMPETENT.]

qual-i-ta-tive (*'i-tā-tiv*), *adj.* pertaining to quality; determining the nature of component parts.

qual-i-ty (*'i-ti*), *n.* [*pl.* qualities (*-tiz*)], peculiar power or property; attribute; disposition; rank; superior birth.

qualm (*kwäm*), *n.* a sudden fit of sickness; nausea; scruple.

quan-da-ry (*kwon'dä-ri*), *n.* a state of difficulty or perplexity; fix.

quan-ti-ta-tive (*'ti-tā-tiv*), *adj.* pertaining to quantity. [Also *quantitive*.]

quan-ti-ty (*'ti-ti*), *n.* any indeterminate bulk, weight, or number; large portion, sum, or mass.

quar-an-tine (*kwor'an-tēn*), *n.* the time (usually 40 days) during which a vessel from foreign parts suspected to be infected with contagious disease is prohibited from intercourse with the shore: *v. t.* to place under quarantine.

quar-rel (*'el*), *n.* an angry dispute, petty fight; altercation: *v. i.* to dispute violently.

Syn. QUARREL, broil, feud. *Quarrel* is the general and ordinary term; *broil* and *feud*, including active hostility, are particular terms. but the former respects the complaints and charges which are reciprocally made; *broil* respects the confusion and entanglement which arises from a contention and collision of interest; *feud* respects the hostilities which arise out of the variance. [See *feud*.]

quar-rel-some (*-sum*), *adj.* inclined to quarrel; contentious; easily provoked; irascible.

quar-ry (*'i*), *n.* a place where stone is dug out for building purposes, etc.: *v. t.* to dig or take from a quarry.

quart (*kwawrt*), *n.* 2 pints, or 1-4th of a gallon; a sequence of 4 cards in the game of piquet.

quar-ter (*kwawr'tĕr*), *n.* the 4th part; mercy; *pl.* lodgings, especially for soldiers: *v. t.* to divide into four equal parts; furnish with lodgings, as soldiers.

quar-ter-deck (*-dek*), *n.* that part of a ship which is abaft the mainmast.

quar-ter-ly (*'li*), *adj.* consisting of, or containing, a quarter: *adv.* once each quarter of the year: *n.* a publication issued every quarter.

quar-ter-mas-ter (*'tĕr-mäs-tĕr*), *n.* in the navy, a petty officer who attends to the steerage, signals, stowage, etc., of ships.

quar-tet (*-tet'*), *n.* anything in fours; musical composition in 4 parts for 4 voices or instruments.

quar-to (*'tō*), *n.* [*pl.* quartos (*'tōz*)], a book having the sheet folded into 4 leaves (abbreviated *4 to.*): *adj.* having 4 leaves in a sheet.

quartz (*kwawrts*), *n.* a mineral compound of pure silica.

★**quash** (*kwosh*, not *qwash*), *v. t.* to crush; subdue suddenly, or completely; annul. [ABOLISH.]

qua-si, a *prefix* meaning *as it were, apparently, nearly.*

quas-si-a (*kwosh'i-ä*), *n.* a South American tree yielding bark and wood of excessive bitterness.

qua-ter-ni-on (*kwȯ-tĕr'ni-un*), *n.* the number 4; set of 4, a file of 4 soldiers.
qua-tre-foil (*kȧ'tĕr-foil*), *n.* in heraldry, four-leaved grass; an ornamental figure in architectural tracery divided by cusps into 4 leaves.
qua-ver (*kwȧ'vĕr*), *v. i.* to shake or tremble; vibrate.
quay (*kē*), *n.* a wharf for loading or unloading vessels.
Quebec (*kwē-bek'*). The former capital of Canada, arose around a blockhouse built by Champlain in 1608. The name is believed to refer to the "narrowing" of the river at this point to which Champlain alludes. Another account says it was named after Quebesq in Brittany, "the village on the point"; while a third derives it from an Algonquin term signifying "take care of the rock."
queen (*kwēn*), *n.* a female ruler; consort of a king.
Queen Charlotte Island. Named in compliment to the queen of George III.
queen-ly (*'li*), *adj.* like, or befitting, a queen.
queen-post (*-pōst*), *n.* one of two vertical timbers in a roof rising from the tie beam.
queen reg-nant (*reg'nant*), a queen in her own right.
Queensland. A state of Australia; named for Queen Victoria.
Queenstown. An Irish seaport; named for Queen Victoria.
queer (*kwĕr*), *adj.* odd; singular; droll; strange; out of health.
quell (*kwel*), *v. t.* to crush or subdue; put an end to; calm; allay.
quench (*kwench*), *v. t.* to put out or extinguish; check; allay.
Quentin. See *Quintin.*
quer-i-mo-ni-ous (*kwer-i-mō'ni-us*), *adj.* complaining; querulous; discontented.
que-rist (*kwē'rist*), *n.* one who asks questions.
querl (*kwĕrl*), *v. t.* to coil.
quer-u-lous (*kwer'ū-lus*), *adj.* complaining; discontented.
que-ry (*kwē'ri*), *n.* a question: *v. t.* to examine by questions; mark with a query: *v. i.* to ask questions. [QUESTION.]
quest (*kwest*), *n.* search; inquiry; jury of inquest: *v. t.* to search or seek for.
ques-tion (*kwes'chun*), *n.* an inquiry; act of asking; interrogation: *v. t.* to ask or interrogate: *v. i.* to ask a question.
Syn. QUESTION, query. *Questions* and *queries* are both put for the sake of obtaining an answer; but the former may be for a reasonable or unreasonable cause; a *query* is mostly a rational question; idlers may put *questions* from mere curiosity; learned men put *queries* for the sake of information. [See *ask.*]
Ant. ANSWER, reply, response.
ques-tion-a-ble (*-ȧ-bl*), *adj.* that may be questioned; doubtful; suspicious. [EQUIVOCAL.]
★**queue** (*kū*), *n.* the tail of a wig.
quib-ble (*kwib'l*), *n.* a petty evasion or cavil: *v. i.* to evade the truth by artifice or evasion; play on words.
quick (*kwik*), *adj.* rapid; hasty; active; nimble; ready: *adv.* quickly. [ACTIVE.]
quick-en (*'en*), *v. i.* to impart life; vivify; show signs of life in the womb: *v. t.* to increase the speed of; to resuscitate; stimulate; cheer.
quick-en-ing (*'en-ing*), *adj.* vivifying.
quick-lime (*'līm*), *n.* lime burnt and unslacked.
quick-sand (*'sand*), *n.* sand easily moved or readily yielding to pressure.
quick-sil-ver (*'sil-vĕr*), *n.* fluid mercury: *v. t.* to overlay with an amalgam of mercury and tinfoil.
quid (*kwid*), *n.* a plug of tobacco for chewing; a sovereign.
quid-di-ty (*'i-ti*), *n.* [*pl.* quiddities (*-tiz*)], the essence of anything; a trifling nicety.
quid-nunc (*'nungk*), *n.* one who pretends to a knowledge of current events.
qui-esce (*kwi-es'*), *v. i.* to be silent.
qui-es-cence (*'ens*), *n.* repose or rest; mental quietude. [Also *quiescency.*]
qui-et (*kwi'et*), *adj.* free from motion, disturbance, or alarm; still; calm; peaceable; gentle; not showy: *v. t.* to calm or pacify. [EASE, PEACE, CALM.]
qui-e-tus (*-ē'tus*), *n.* rest; death; final settlement or discharge.
quill (*kwil*), *n.* the large strong feather of a bird's wing.
quilt (*kwilt*), *n.* a kind of coverlet or counterpane: *v. t.* to stitch together, as two pieces of cloth.
quilt-ing (*'ing*), *n.* the act or process of making a quilt; material for quilting; quilted work.
qui-nine (*kwi'nin, kwi'nin,* or *kwi'nēn*), *n.* an alkaline substance obtained from the bark of the cinchona tree.
quin-quen-ni-al (*kwin-kwen'i-al*), *adj.* recurring once in, or lasting, five years.
Quinsigamond (*kwin-sig'ȧ-mond*) **lake, Mass.** Indian word meaning "fishing place for pickerel."
quin-sy (*'zi*), *n.* inflammation of the tonsils or the throat.
quint (*kwint*), *n.* a set or sequence of five.
quin-tes-sence (*kwin-tes'ens*), *n.* the pure, concentrated essence of anything; vital or essential part.
quin-tet (*-tet'*), *n.* a musical composition in five obligato parts. [Also *quintette, quintetto.*]
quin-til-lion (*-til'yun*), *n.* in the United States, a thousand quadrillions; in the English system, a million raised to the fifth power.
Quintin, Quintyne (*kwin'tin*). From the Latin name *Quintinus,* formed from the name *Quintus.*
Quintus (*kwin'tus*). The Roman name signifying "the fifth," *i. e.,* the fifth son in order of birth.
quip (*kwip*), *n.* a short sarcastic turn or retort; jeer: *v. i.* to scoff; jeer.
quire (*kwir*), *n.* 24 sheets; an obsolete form of choir.
Quirinal (*kwi'ri-nal* or *kwir-ī'nal*). The farthest north and the highest of the seven hills of ancient Rome, lying northeast of the Capitoline and northwest of the Viminal. It has its name from an old Sabine sanctuary of *Quirinus* (Mars). On the hill stands the palace of the *Quirinal,* the former summer palace of the pope.
quirk (*kwĕrk*), *n.* an artful evasion; subterfuge; quibble.
quit (*kwit*), *v. t.* to depart from; discharge. [LEAVE, ABANDON.]
quite (*kwit*), *adj.* wholly; completely.
quiv-er (*kwiv'ĕr*), *n.* a case for arrows; a trembling or shivering: *v. i.* to tremble, shake, or shiver.
quix-ot-ic (*kwiks-ot'ik*), *adj.* chivalrous or romantic to extravagance.
quix-ot-ic-al-ly (*i-kal-li*), *adv.* in a quixotic manner.
quiz (*kwiz*), *n.* an enigma or obscure question designed to puzzle any one: *v. t.* to puzzle; make fun of. It is said that Daly, the manager of a Dublin playhouse, laid a wager that a new word of no meaning should be the common talk and puzzle of the city in twenty-four hours. In consequence of this the letters *q u i z* were chalked by him on all the walls of Dublin, with an effect that won the wager.
quiz-zic-al (*'i-kal*), *adj.* given to, or of the nature of, quizzing; comical.
quoin (*koin*), *n.* external angle of a building; wedge-shaped wooden block to tighten the pages of type within the chase.
★**quoit** (*kwoit* or *koit*), *n.* a circular ring of iron to be pitched at a fixed object: *pl.* the game thus played.
★**quo-rum** (*kwō'rum,* not *kwȯ'rum*), *n.* the number of members of a body or corporation competent to transact business by law or constitution.
quo-ta (*kwō'tȧ*), *n.* the part or share assigned to each.
quo-ta-tion (*-tā'shun*), *n.* the act of quoting; that which is quoted; current price.
quote (*kwōt*), *v. t.* to adduce (a passage) from some author or speaker, for authority or illustration; give the current price of. [CITE.]
quoth (*kwōth*), *v. i.* said.
quo-tient (*kwō'shent*), *n.* the number resulting from the division of one number by another.

R

rab-bet (*rab'et*), *n.* a groove cut longitudinally in the edge of a plank: *v. t.* to groove and unite by a rabbet.
rab-bi (*'i* or *ī'*), *n.* [*pl.* rabbis (*'iz*)], a Jewish doctor or interpreter of the law. [*Pl.* also *rabbin.*]
rab-bin-ic (*-bin'ik*), *adj.* pertaining to the rabbis, their doctrines, learning, and language.
rab-bin-ism (*'in-izm*), *n.* rabbinic phraseology.
rab-bit (*'it*), *n.* a burrowing rodent animal, esteemed for food and its fur.
rab-ble (*'l*), *n.* a noisy crowd or mob, especially of the lower orders.
rab-id (*'id*), *adj.* mad; enthusiastic to excess.
ra-bi-es (*rā'bi-ēz*), *n.* canine madness; madness caused by the bite of a dog; hydrophobia.
rac-coon (*rak-kōōn'*), *n.* a badgerlike animal of North America with a valuable fur. [Also *racoon.*]
race (*rās*), *n.* a rapid course, as of an animal or river; contest of speed; career; descent or lineage: *v. i.* to run swiftly; contend in running.
Rachel (*rā'chel*). From the Hebrew *Rahhel,* usually translated "a ewe." Fuerstius translates the name "mutterschaft," *i. e.,* motherhood, maternity. Fr., *Rachel;* Ger., *Rahel* or *Rachel;* It., *Rachele;* Lat., *Rachel;* Sp., *Raquel;* Sw., *Rachel.*
ra-cial (*rā'shal*), *adj.* pertaining to race or lineage.
rack (*rak*), *n.* an instrument for stretching or straining; a grating above a manger for holding hay: *v. t.* torture; wrest; perplex; exhaust.
rack-et (*'et*), *n.* a clattering noise; a network bat used in tennis.
ra-coon. Same as *raccoon.*
rac-quet. Another form of *racket.*
ra-cy (*rā'si*), *adj.* having a strong flavor; mentally exciting; piquant.
rad-dle (*rad'l*), *n.* a hedge of branches interwoven: *v. t.* to interweave.
ra-di-al (*rā'di-al*), *adj.* pertaining to, like, or used as, a ray; pertaining to the radius of the forearm.
ra-di-ance (*'di-ans*), *n.* brightness shooting in rays; brilliant brightness; splendor.
Syn. RADIANCE, brilliancy. *Radiance* denotes the emission of rays, and is, therefore, peculiarly applicable to bodies naturally luminous, like the heavenly bodies; and *brilliancy* denotes the whole body of light emitted, and may, therefore, be applied equally to natural and artificial light.
ra-di-ant (*'di-ant*), *adj.* emitting rays of light or heat; shining; brilliant.
ra-di-ate (*'di-āt*), *v. t.* to send out, as rays: *v. i.* to emit, or issue forth in rays: *adj.* having rays.
ra-di-a-tion (*-ā'shun*), *n.* the emission or diffusion of rays of light or heat from one luminous or heated body to another.
ra-di-a-tor (*rā'di-ā-tĕr*), *n.* a chamber, coil, drum, etc., in an apartment for radiating warmth into the apartment.
rad-i-cal (*rad'i-kal*), *adj.* pertaining to the root or origin: *n.* a simple underived word.
rad-i-cate (*'i-kat*), *v. t.* to plant deeply and firmly: *v. i.* to take root: *adj.* deeply planted or rooted.
ra-di-o-ac-tive (*rā'di-ō-ak'tiv*), *adj.* emitting Becquerel rays; exhibiting the properties possessed by radium.
ra-di-o-fy (*-fī*), *v. t.* [*p. t.* and *p. p.* radiofied, *p. pr.* radiofying], to cause to become radio-active by exposing to the influence of radium.
ra-di-o-graph (*-grȧf*), *n.* a picture obtained by means of radiography: *v. t.* to produce (a likeness) of by means of radiography.
ra-di-og-ra-phy (*rā-di-og'rȧ-fi*), *n.* the art or process of producing pictures by the action of Roentgen rays upon certain sensitive salts.
ra-di-o-te-leg-ra-phy (*-tē-leg'rȧ-fi*), *n.* telegraphing through the air without aid of wires; wireless telegraphy.
★**rad-ish** (*rad'ish,* not *red'ish*), *n.* a plant with an edible root, used as a salad.
ra-di-um (*rā'di-um*), *n.* a recently discovered element possessing the property of giving off luminous and actinic rays, accompanied by heat, without apparent loss of energy or weight.
ra-di-us (*rā'di-us*), *n.* [*pl.* radii (*-ī*)], a straight line from the center to the circumference of a circle.
ra-dix (*'diks*), *n.* a root; a primitive word; base of a system of logarithms.
Rafael. See *Raphael.*
Rafaele or **Raffaelle.** See *Raphael.*
raff (*rȧf*), *n.* a jumble; refuse; the rabble.
raf-fle (*raf'l*), *n.* a kind of lottery: *v. t.* to dispose of by raffle: *v. i.* to take part in a raffle.
raft (*rȧft*), *n.* pieces of timber fastened together for transport by floating; a floating wooden framework: *v. t.* to carry on a raft.
raft-er (*'ĕr*), *n.* an inclined beam supporting the roof of a house.
rafts-man (*rȧfts'man*), *n.* a man who manages a raft upon a river.
rag (*rag*), *n.* a fragment of cloth. [fellow.
rag-a-muf-fin (*'ȧ-muf-in*), *n.* a low, disreputable
rage (*rāj*), *n* excessive and uncontrolled anger; vehemence; extreme violence. [ANGER, MADNESS.]
rag-ged (*rag'ed*), *adj.* rent or worn into rags; clothed in tattered garments; destitute; rough.
ra-gout (*rȧ-gōō'*), *n.* a dish of stewed and highly seasoned meat.
rag-time (*'tīm*), *n.* syncopated time, characteristic of negro melodies.
Rahway (*raw'wā*), **N. J.** From the river; its name traditionally traced to a Raritan chief named *Rahwack,* who had his habitation near the river's mouth.
raid (*rād*), *n.* a hostile or predatory incursion: *v. t.* to make a raid upon.
rail (*rāl*), *n.* wooden or iron fence; a wading bird with a harsh cry: *v. i.* to brawl: *v. t.* to inclose with rails. [ABUSE.]
rail-ing (*'ing*), *n.* material for rails; fence made of posts and rails: *adj.* insulting or reproaching.
rail-ler-y (*'ĕr-i*), *n.* good-humored irony or satire; banter.
rail-way (*'wā*), *n.* a way or road laid with two parallel iron or steel rails along which cars are drawn by steam power, electricity, etc.
rai-ment (*rā'ment*), *n.* clothing.
rain (*rān*), *n.* water in drops discharged from the clouds: *v. i.* to fall in drops from the clouds: *v. t.* to pour down like rain.
rain-bow (*'bō*), *n.* the bright-colored arc formed in the heavens.
rain-fall (*'fawl*), *n.* the amount of rain that falls on any given area.
Rainier (*rā'nēr*). Town in Columbia county, Oregon, and mountain in Washington, named for Rear-Admiral Rainier.
rain-y (*rān'i*), *adj.* abounding with rain.
raise (*rāz*), *v. t.* to cause to rise; lift up; elevate; levy; collect.
rai-sin (*rā'zn*), *n.* a dried grape.
rake (*rāk*), *n.* a toothed implement for smoothing the soil; a rascal: *v. t.* to gather or smooth with a rake.
rak-ish (*rāk'ish*), *adj.* dissolute; debauched.
Raleigh (*raw'li*), **N. C.** A city, named in honor of Sir Walter Raleigh, who located a colony on Roanoke island, July 23, 1587.
ral-ly (*ral'i*), *v. t.* [*p. t.* and *p. p.* rallied, *p. pr.* rallying], to collect and arrange, as troops in confusion; reunite: *v. i.* to return to order: recover strength.
Ralph. From the Teutonic, meaning "warrior-wolf." Dutch, *Rudolf;* Fr., *Raoul;* It., *Raolfo;* Lat., *Radulphus;* Sp., *Rodolfo;* Sw., *Rudolf.*
ram (*ram*), *n.* the male of the sheep; a military engine for battering: *v. t.* to push or press with force.
ram-ble (*'bl*), *v. i.* to wander or rove about; visit many places. [EXCURSION.]
ram-i-fi-ca-tion (*ram-i-fi-kā'shun*), *n.* a division or separation into branches; subdivision.
ram-i-fy (*'i-fī*), *v. t.* to divide into branches, or divisions: *v. i.* to shoot into branches.
ramp-age (*ramp'āj*), *v. i.* to prance about with unrestrained spirits; be furious: *n.* a state of excitement.

ramp-ant (*ramp'ant*), *adj.* overleapingrest raint or natural bounds.

ram-part (*ram'pärt*), *n.* a mound or wall surrounding a fortified place.

ram-rod (*'rod*), *n.* a rod used for ramming down the charge of a gun.

ram-shac-kle (*'shak-l*), *adj.* loose; out of repair.

ranch (*ranch*), *n.* a cattle farm. [Also *ranche, rancho* (Mexican).]

ran-cid (*ran'sid*), *adj.* having a rank, unpleasant smell; sour or musty.

★**ran-cor** (*rang'kĕr*, not *ran'kĕr*), *n.* implacable enmity; deep spite or malice.

ran-cor-ous (*-us*), *adj.* malignant; spiteful.

Randolph. Properly *Radolph*, the same as the German names *Radulph, Radolf, Radolph;* from Old German *rad-ulph*, "help or counsel."

ran-dom (*ran'dum*), *n.* want of direction or method; chance: *adj.* done haphazard; left to chance.

range (*rānj*), *v. t.* to set or arrange in a row; place in proper order; rove over: *n.* a rank or row; order or class.

Rangeley. Town and plantation in Franklin county, Maine, and one of the Androscoggin lakes in the same state, named for an Englishman, an early settler and large landowner.

ran-ger (*rān'jĕr*), *n.* a rover; the chief official or keeper of a park or forest; a variety of dog.

Rangoon (*răn-gōōn'*). The chief town and port of Burma, is called in Burmese *Ran-kun*, the "end of the war," literally, enmity exhausted. A name given in 1763, by Alompra, the founder of the Burmese dynasty, who, after the destruction of the city of Pegu, established the capital of the kingdom near the famous golden pagoda called Da-gun, with which *Ran-kun* may probably be connected by assonance.

rank (*rangk*), *n.* station or position; grade; dignity; eminence: *v. t.* to draw up in line: *v. i.* to hold a certain position: *adj.* excessive. [CLASS.]

ran-kle (*'l*), *v. i.* to grow more rank or strong; fester; become mentally disquieted or irritated.

★**ran-sack** (*ran'sak*, not *ram'sack*), *v. t.* to search minutely; rummage; plunder.

ran-som (*'sum*), *v. t.* to free from captivity, slavery, or punishment, by a payment; atone for: *n.* price paid for release from captivity.

rant (*rant*), *v. i.* to bluster or be noisily wordy; rave in extravagant or violent language: *n.* noisy, empty declamation.

Raoul. See *Ralph.*

rap (*rap*), *v. i.* to strike a quick, sharp blow; knock: *v. t.* to strike sharply: *n.* a quick, sharp blow.

ra-pa-cious (*rā-pā'shus*), *adj.* given to plunder; seizing forcibly; subsisting on prey; greedy.

Syn. RAPACIOUS, ravenous, voracious. *Rapacious* is the quality peculiar to beasts of prey, or what is like beasts of prey. A lion is *rapacious* when it seizes on its prey; it is *ravenous* in the act of consuming it. The word *ravenous* respects the haste with which one eats; the word *voracious* respects the quantity which one consumes: a *ravenous* person is loath to wait for the dressing of his food; he consumes it without any preparation; a *voracious* person not only eats in haste, but he consumes great quantities, and continues to do so for a long time.

ra-pac-i-ty (*-pas'i-ti*), *n.* the quality of being rapacious. [Also *rapaciousness.*]

rape (*rāp*), *n.* a seizing and carrying away by force; the seizure and carnal knowledge of a woman against her will.

Raphael (*raf'ā-el, rā'fā-el, rā'fā-el*). From the Hebrew *R'phael*, "healed of God," or "whom God healed." Fr., *Raphael;* Ger., *Raphael;* It., *Rafaele* or *Raffaelle;* Lat., *Raphael;* Sp., *Rafael.*

rap-id (*rap'id*), *adj.* very quick or swift; expeditious: *n. pl.* a swift current in a river where the channel is descending.

Rapidan (*rap-i-dan'*) **river, N. C.** Corruption of *Rapid Anne*, the suffix being given in honor of Queen Anne of England.

ra-pi-er (*rā'pi-ĕr*), *n.* a long thin sword, used for thrusting.

rap-ine (*rap'in*, or *'in*), *n.* the act of plundering or seizing forcibly; pillage; violence.

Rappahannock (*rap-pā-han'nuk*) **river, Va.** Indian *lappihanne*, "river of quick, rising water," also noted as *toppehannock.*

rap-port (*-pōrt'*), *n.* harmonious relation; affinity.

rap-proche-ment (*rā-prōsh'mäN*), *n.* the act of coming together; an understanding.

rap-scal-lion (*rap-scal'yun*), *n.* a rascal.

rapt (*rapt*), *p. adj.* transported; ravished.

rap-ture (*rap'tūr*), *n.* extreme pleasure or delight; ecstasy; enthusiasm.

rare (*rār*), *adj.* [*comp.* rarer, *superl.* rarest], scarce; uncommon; unusual; thinly scattered.

Syn. RARE, curious, extraordinary, incomparable, infrequent, odd, peculiar, precious, remarkable, scarce, singular, strange, unique. *Rare* is *infrequent* of its kind; *unique* is alone of its kind; great poems are *rare; Paradise Lost* is *unique; rare* has the added sense of *precious*, which is sometimes, but not necessarily, blended with that above given; as, a *rare* gem; *extraordinary*, signifying greatly beyond the ordinary, is a neutral word; as, *extraordinary* genius, *extraordinary* wickedness. [See *obsolete.*]

Ant. COMMON, ordinary, plentiful.

rare-bit (*'bit*), *n.* a dainty morsel.

rar-e-fac-tion (*rar-ē-fak'shun*), *n.* the act of rarefying or rendering less dense.

rar-e-fy (*rar'e-fī*), *v. t.* to make rare, thin, or less dense; expand: *v. i.* to become less dense.

rare-ly (*rār'li*), *adv.* seldom.

rare-ness (*'nes*), *n.* the state or quality of being rare.

Raritan (*rar'i-tan*) **river, N. J.** From a local tribe of Indians, the *Raritans.*

rar-i-ty (*'i-ti*), *n.* a rare article; exceptional excellence; rareness.

ras-cal (*ras'kal*), *n.* a mean fellow; a scoundrel; one who is guilty of mean offenses.

ras-cal-i-ty (*-kal'i-ti*), *n.* the state of being a rascal; petty villainy or dishonesty.

rash (*rash*), *adj.* hasty; incautious; precipitate: *n.* a slight cutaneous eruption. [FOOLHARDY.]

rash-er (*'ĕr*), *n.* a slice of bacon.

rasp (*rasp*), *v. t.* to rub with, or as with, a rough instrument; file with a rasp: *n.* a kind of rough file.

rasp-ber-ry (*raz'bĕr-i*), *n.* [*pl.* raspberries (*-iz*)], a shrub and its well-known fruit.

rat (*rat*), *n.* an animal of the mouse family but larger and more voracious.

rat-a-ble (*rāt'ā-bl*), *adj.* assessed at a certain value; liable to be assessed.

ra-tan. Same as *rattan.*

ratch (*rach*), *n.* a toothed bar into which a click drops.

ratch-et (*'et*), *n.* the detent which stops a ratchet wheel.

ratch-et wheel (*hwēl*), a circular ratch.

rate (*rāt*), *n.* ratio or proportion; price fixed or stated; comparative value; degree: *v. i.* to make an estimate: *v. t.* to make a rate upon. [ESTIMATE.]

rath-er (*ráth'ĕr*), *adv.* sooner; more willingly; on the contrary; preferably to the other.

rat-i-fi-ca-tion (*rat-i-fi-kā'shun*), *n.* the act of ratifying; confirmation.

rat-i-fy (*'i-fī*), *v. t.* to approve and sanction; settle or confirm; establish.

ra-ti-o (*rā'shi-ō*), *n.* [*pl.* ratios (*-ōz*)], the relation or proportion of one thing or quantity to another.

ra-ti-oc-i-nate (*rash-i-os'i-nāt*), *v. i.* to reason deductively; argue.

ra-ti-oc-i-na-tion (*-i-nā'shun*), *n.* the act or process of reasoning; act of deducing conclusions from premises.

ra-tion (*rā'shun*), *n.* an allowance: *v. t.* to furnish with rations.

ra-tion-al (*rash'un-al*), *adj.* agreeable to, or consistent with, reason.

ra-tion-a-le (*rash-un-ā'lē*), *n.* a series of reasons assigned for any opinion, action, etc.

ra-tion-al-ism (*'un-al-izm*), *n.* a system or doctrine which, rejecting revelation, makes reason the sole guide in the interpretation of Scripture and dogma.

ra-tion-al-ist (*-ist*), *n.* one who upholds or supports rationalism.

ra-tion-al-i-ty (*-al'i-ti*), *n.* the quality of being rational; power of reasoning; reasonableness.

ra-tion-al-ize (*'al-īz*), *v. t.* to interpret as a rationalist; convert to rationalism: *v. i.* to rely solely on reason or act as a rationalist.

rat-lins (*rat'linz*), *n. pl.* small horizontal ropes, extending over the shrouds, forming ladder-like steps. [Also *ratline.*]

rat-tan (*rat-tan'*), *n.* one of the long, smooth, reed-like stems of several species of palms.

rat-tle (*rat'l*), *v. i.* to produce rapidly sharp noises: *v. t.* to cause to make a rapid, sharp noise: *n.* a succession of rapid, sharp noises.

rat-tler (*rat'lĕr*), *n.* one who, or that which, rattles; a rattlesnake.

rat-tle-snake (*-snāk*), *n.* a venomous snake with hard bony rings on the tail producing a rattling sound when in motion.

rau-cous (*raw'kus*), *adj.* hoarse.

rav-age (*rav'āj*), *v. t.* to lay waste; pillage; plunder or sack: *n.* destruction by violence or decay; devastation; ruin.

rave (*rāv*), *v. i.* to wander in the mind or be delirious.

rav-el (*rav'l*), *v. t.* to unweave or untwist; involve or entangle: *v. i.* to be unwoven or untwisted.

ra-ven (*rā'vn*), *n.* a large bird of the crow family noted for its deep black color: *adj.* raven-colored.

rav-en (*rav'n*), *v. t.* to obtain, or seize, by violence; devour with greediness or voracity: *n.* violence; plunder; prey.

rav-en-ous (*'n-us*), *adj.* devouring with rapacity; eagerly voracious; eager for gratification. [RAPACIOUS.]

ra-vine (*rā-vēn'*), *n.* a long, deep hollow, worn by the action of a stream or torrents.

rav-ish (*rav'ish*), *v. t.* to seize and to carry away by force; have sexual intercourse with by force and without her consent. [ABUSE.]

rav-ish-ment (*'ish-ment*), *n.* forcible violation of chastity; rape; abduction; transport; rapture.

raw (*raw*), *adj.* uncooked; crude; sore; in the natural state.

raw-boned (*'bōnd*), *adj.* with little flesh on the bones.

raw-hide (*'hīd*), *n.* a cowhide whip.

ray (*rā*), *n.* a line or pencil of light proceeding from a radiant point; light.

Raymond. A name derived from the Teutonic, *ram-mund*, "a strong man." Fr., *Raymond;* It., *Raimondo;* Lat., *Raymundus;* Sp., *Raymundo* or *Ramon.*

raze (*rāz*), *v. t.* to level to the ground; blot out; efface; graze or shave.

ra-zor (*rā'zĕr*), *n.* a sharp-edged cutting instrument used for shaving.

reach (*rēch*), *v. t.* to touch with the extended hand; stretch forth; arrive at; gain: *v. i.* endeavor to obtain something.

read (*rēd*), *v. t.* [*p. t.* and *p. p.* read (*red*), *p. pr* reading], to observe and apprehend the meaning of (something written, printed, or inscribed); peruse: *v. i.* to perform the act of reading.

read (*red*), *adj.* well-informed or acquainted with books.

read-a-ble (*rēd'ā-bl*), *adj.* fit to be read; worth reading; legible.

read-er (*'ĕr*), *n.* one who reads; one who reads prayers in church; a corrector of the press; a university lecturer; a reading book.

read-i-ness (*red'i-nes*), *n.* the state of being ready; promptness; cheerfulness.

read-ing (*rēd'ing*), *n.* perusal of books; lecture; public recital; variation.

read-y (*red'i*), *adj.* [*comp.* readier, *superl.* readiest], prepared at the moment; quick; prompt; fit for a purpose.

Syn. READY, apt, prompt. *Ready* is in general applied to that which has been intentionally prepared for a given purpose; *prompt* is applied to that which is at hand so as to answer the immediate purpose; *apt* is applied to that which is fit, or from its nature has a tendency to produce effects. [See *active, easy.*]

re-al (*rē'al*), *adj.* actually existing; not fictitious; genuine; true.

re-al es-tate (*es-tāt'*), lands and all appertaining to them.

re-al-ism (*'al-izm*), *n.* the representation of nature or social life as it actually appears.

re-al-ist (*-ist*), *n.* one who holds the doctrine of, or practices, realism.

re-al-i-ty (*-al'i-ti*), *n.* [*pl.* realities (*-tiz*)], actual existence; fact; truth.

re-al-i-za-tion (*-al-i-zā'shun*), *n.* the act of realizing, or of making and believing something real.

re-al-ize (*'al-īz*), *v. t.* to bring into act or being; make real; convert into real property or money.

re-al-ly (*'al-li*), *adv.* with actual existence; in truth.

realm (*relm*), *n.* royal jurisdiction or territory; kingdom; empire; state. [STATE.]

re-al-ty (*'al-ti*), *n.* real estate.

ream (*rēm*), *n.* 20 quires, or 480 sheets of paper; 516 sheets (printer's *ream*).

reap (*rēp*), *v. i.* to perform the operation of reaping: *v. t.* to gather in.

rear (*rēr*), *n.* the part behind the rest; last in order; background: *v. t.* to raise or lift up: *v. i.* to assume an erect posture.

rear ad-mi-ral (*-ad'mi-ral*), in the United States navy, an officer ranking next below the admiral.

rea-son (*rē'zn*), *n.* that mental faculty in man which enables him to deduce inferences from facts, and to distinguish between right and wrong; right judgment: *v. i.* to exercise the faculty of reason. [CAUSE.]

rea-son-a-ble (*-ā-bl*), *adj.* endowed with reason; rational; equitable; moderate; fair.

rea-son-ing (*-ing*), *n.* the exercise of the faculty of reason; argumentation.

re-bate (*-bāt'*), *v. t.* to make blunt; make obtuse: *n.* a return to shippers by transportation companies of part of freight charges.

Rebecca, Rebekah (*rē-bek'kā*). From the Hebrew *Ribhkah*, signifying a "rope with a noose"; from Arabic *rabkat*, which Tregelles says means "one who ensnares men by her beauty." Fr., *Rebecca;* It., *Rebecca;* Lat., *Rebecca;* Sp., *Rebeca.*

reb-el (*reb'el*), *n.* one who revolts from his allegiance to or defies, constituted authority: *adj.* rebellious: *v. i.* (*rē-bel'*), to revolt; rise against authority.

re-bel-lion (*rē-bel'yun*), *n.* insurrection against, or open resistance to, lawful or constituted authority; revolt. [INSURRECTION, CONTUMACY.]

re-bel-lious (*'yus*), *adj.* opposing lawful or constituted authority.

re-bound (*rē-bound'*), *v. i.* to start or leap back; reëcho; to reverberate: *n.* the act of rebounding.

re-buff (*-buf'*), *n.* a beating back; sudden check or resistance; defeat; refusal: *v. t.* to beat back. [REFUSE.]

re-buke (*-būk'*), *n.* reprimand or reproof; chiding; chastisement: *v. t.* to reprimand or chide.

re-bus (*rē'bus*), *n.* [*pl.* rebuses (*-ez*)], an enigmatica representation of a word or phrase by pictures or figures instead of words.

re-but (*rē-but'*), *v. t.* to beat back; oppose by argument or proof; repel: *v. i.* in law, to put in or return an answer.

re-but-tal (*'al*), *n.* the act of rebutting.

re-cal-ci-trant (*rē-kal'si-trant*), *adj.* refractory.

re-call (*-kawl'*), *v. t.* to call back; remember; revoke; withdraw: *n.* a revocation.

re-cant (*-kant'*), *v. t.* to withdraw or retract; abjure.

re-can-ta-tion (*-kan-tā'shun*), *n.* the act of recanting; a declaration recalling and contradicting a former one.

re-ca-pit-u-late (*-kā-pit'ū-lāt*), *v. t.* to go over, or summarize, as the chief points of a discourse. [REPEAT.]

re-ca-pit-u-la-tion (*-lā'shun*), *n.* the act of recapitulating.

re-ca-pit-u-la-to-ry (*'ū-lā-tō-ri*), *adj.* repeating again in brief.

re-cede (*rē-sēd'*), *v. i.* to fall back or retrograde; retreat: *v. t.* to cede back. [ABATE.]
re-ceipt (*-sēt'*), *n.* the act of receiving; reception; a recipe: *v. t.* to sign in acknowledgment of.
re-ceive (*-sēv'*), *v. t.* to take or obtain from another in any manner; accept; obtain; entertain.
re-ceiv-er (*'ĕr*), *n.* one who, or that which, receives; a person appointed by a court to manage property in controversy.
re-cen-cy (*rē'sen-sĭ*), *n.* lateness of time; newness. [Also *recentness.*]
re-cen-sion (*rē-sen'shun*), *n.* review or revision, especially critical revision of the text of an author.
re-cent (*'sent*), *adj.* of late origin or occurrence; new; modern. [NEW.]
re-cep-ta-cle (*-sep'tȧ-kl*), *n.* a vessel or place into which anything is received.
re-cep-tion (*'shun*), *n.* welcome; entertainment; admission; formal or official receiving of a person.
re-cep-tive (*'tĭv*), *adj.* having the quality of receiving or containing; capable of receiving mental impressions.
re-cess (*-ses'*), *n.* state of being in retirement; cavity in a room or alcove; niche.
re-ces-sion (*-sesh'un*), *n.* the act of receding or withdrawal; cession back.
★**rec-i-pe** (*res'i-pē*), *n.* a medical prescription; formula for compounding anything.
re-cip-i-ent (*rē-sip'i-ent*), *n.* one who receives: *adj.* receiving.
re-cip-ro-cal (*'rō-kal*), *adj.* mutual; alternating; mutually interchangeable.
re-cip-ro-cate (*'rō-kāt*), *v. t.* to give and receive mutually: *v. i.* to alternate; interchange.
re-cip-ro-ca-tion (*-kā'shun*), *n.* interchange of acts; reciprocal motion.
rec-i-proc-i-ty (*res-i-pros'i-ti*), *n.* reciprocal obligation or right. [INTERCHANGE.]
re-ci-sion (*rē-sizh'un*), *n.* the act of cutting off.
rec-it-al (*-sīt'al*), *n.* the act of reciting; rehearsal; narrative; a musical entertainment by one performer.
rec-i-ta-tion (*res-i-tā'shun*), *n.* a public reading; delivery of a composition committed to memory; the composition so delivered.
rec-i-ta-tive (*-tȧ-tēv'*), *adj.* pertaining to recitation; words spoken in the sounds of the musical scale; chant.
re-cite (*rē-sīt'*), *v. t.* to repeat aloud from memory; enumerate. [REPEAT.]
reck (*rek*), *v. t.* and *v. i.* to care for; heed.
reck-less (*'les*), *adj.* heedless of consequences; careless; thoughtless.
reck-on (*'n*), *v. t.* to count or compute; estimate by rank: *v. i.* to calculate. [CALCULATE.]
reck-on-ing (*-ing*), *n.* computation; calculation.
re-claim (*rē-klām'*), *v. t.* to call back; demand the return of.
Syn. RECLAIM, reform. *Reclaim* signifies to call back to its right place that which has gone astray; *reform* signifies to *form* anew that which has changed its *form;* they are allied only in their application to the moral character. A man is *reclaimed* from his vicious courses by the force of advice or exhortation; he may be *reformed* by various means, external or internal.
re-cline (*-klīn'*), *v. t.* to cause to lean or lie back; lean to one side: *v. i.* to rest or repose.
Syn. RECLINE, repose. When we *recline* we put ourselves into a particular position; but when we *repose* we put ourselves into that position which will be most easy.
re-cluse (*rē-klūs'*), *n.* one who lives in retirement; hermit.
rec-og-ni-tion (*rek-og-nish'un*), *n.* remembrance; recollection; formal avowal.
rec-og-ni-za-ble (*rek'og-nī-zȧ-bl*), *adj.* capable of being recognized.
re-cog-ni-zance (*rē-kog'ni-zans* or *rē-kon'i-zans*), *n.* avowal; acknowledgment; badge or token.
rec-og-nize (*rek'og-nīz*), *v. t.* to know again; acknowledge; avow.
rec-ol-lect (*-ol-ekt'*), *v. t.* to call to memory; (*rē-kol-ekt'*), to gather together again.
rec-ol-lec-tion (*rek-ol-ek'shun*), *n.* memory; that which is remembered. [MEMORY.]
rec-om-mend (*-om-end'*), *v. t.* to commend to another; introduce favorably; advise.
rec-om-men-da-tion (*-en-dā'shun*), *n.* the act of recommending; favorable introduction.
re-com-mit (*rē-kom-it'*), *v. t.* to commit anew; refer back to a committee.
rec-om-pense (*rek'om-pens*), *n.* an equivalent given in return; reward; compensation: *v. t.* to give back as an equivalent. [COMPENSATION.]
rec-on-ci-la-ble (*-on-sī'lȧ-bl*), *adj.* capable of being reconciled.
rec-on-cile (*'on-sīl*), *v. t.* to restore to friendship or favor after estrangement; adjust; harmonize. [CONCILIATE.]
rec-on-cil-i-a-tion (*-sil-i-ā'shun*), *n.* renewal of friendship; expiation or atonement.
rec-on-dite (*'on-dīt*), *adj.* deep; abstruse; hidden from view; secret. [MYSTERIOUS.]
re-con-nais-sance (*rē-kon'is-ans*), *n.* the act of reconnoitering.
★**rec-on-noi-ter, rec-on-noi-tre** (*rek-on-noi't ĕr*, not *rē-kon-oi'tĕr*), *v. t.* to make a survey of, especially for military purposes.
re-cord (*rē-kȯrd'*), *v. t.* to remember, or cause to be remembered; register or enroll; celebrate: *n.* (*rek'ȯrd*), register; formal writing or copy of an official document.
re-count (*rē-kount'*), *v. t.* to go over or narrate in detail.
re-coup (*rē-kōōp'*), *v. t.* to indemnify or make good; diminish by keeping back a part.
re-course (*rē-kȯrs'*), *n.* a going to for aid or protection; application of effort for a particular purpose or end.
re-cov-er (*-kuv'ĕr*), *v. t.* to regain; retrieve; cure; obtain as compensation: *v. i.* to regain health, strength, or any former state.
Syn. RECOVER, retrieve, repair, recruit. We *repair* that which has been injured; we *recruit* that which has been diminished; we *recover* property from those who wish to deprive us of it; we *retrieve* our misfortunes, or our lost reputation.
re-cov-er-y (*'ĕr-i*), *n.* the act of recovering; restoration to health.
Syn. RECOVERY, restoration. *Recovery* is the regaining of any object which has been lost or missing; *restoration* is the getting back what has been taken away, or that of which one has been deprived. What is *recovered* may be *recovered* with or without the use of means; the *restoration* is effected by foreign agency.
rec-re-ant (*rek'rē-ant*), *adj.* cowardly; mean-spirited; apostate; false: *n.* a mean-spirited creature; a coward; an apostate.
rec-re-ate (*'rē-āt*), *v. t.* to reanimate, especially after toil; gratify: *v. i.* to take recreation: *v. t.* (*rē-krē-āt'*) to create anew.
rec-re-a-tion (*rek-rē-ā'shun*), *n.* refreshment after toil, etc.; amusement: *n.* (*rē-krē-ā'shun*) the act of creating anew; a new creation.
re-crim-i-nate (*rē-krim'i-nāt*), *v. i.* to return one accusation with another: *v. t.* to accuse in return.
re-crim-i-na-to-ry (*'i-nā-tō-ri*), *adj.* retorting an accusation or charge.
re-cru-des-cence (*-kroo-des'ens*), *n.* the state of becoming sore again; a sharp relapse.
re-cruit (*-krōōt'*), *v. t.* to supply with new soldiers: *v. i.* to obtain fresh supplies; recover health: *n.* a soldier newly enlisted; supply of any want. [RECOVER.]
rec-tan-gle (*rek'tang-gl*), *n.* a 4-sided figure with 4 right angles, or angles of 90 degrees.
rec-ti-fi-ca-tion (*-ti-fi-kā'shun*), *n.* the act of setting right.
rec-ti-fy (*'ti-fī*), *v. t.* to set right; adjust; refine by distillation.
rec-ti-lin-e-al (*-ti-lin'ē-al*), *adj.* bounded by straight lines; right or straight lined; straight.
rec-ti-tude (*'ti-tūd*), *n.* rightness of principles and practice; honesty; moral integrity.
rec-tor (*'tĕr*), *n.* a clergyman.
rec-tor-y (*'tĕr-i*), *n.* the house of a rector.
rec-tum (*'tum*), *n.* the lowest part of the great intestine.
re-cum-bent (*rē-kum'bent*), *adj.* reclining; idle.
re-cu-per-ate (*-kū'pĕr-āt*), *v. t.* and *v. i.* to recover.
re-cur (*-kĕr'*), *v. i.* return to the mind; return; happen at a stated interval; have recourse.
re-cu-sant (*'kū-zant*), *adj.* refusing to acknowledge the royal supremacy in religion; nonconforming: *n.* a nonconformist.
red (*red*), *n.* one of the primary colors, varying from scarlet to pink: *adj.* red-colored.
red-breast (*red'brest*), *n.* the robin.
red-den (*'n*), *v. t.* to make red: *v. i.* to become red; blush.
red-dish (*'ish*), *adj.* somewhat red.
re-deem (*rē-dēm'*), *v. t.* to ransom from bondage; rescue; make atonement for; perform; recover.
re-deem-er (*'ĕr*), *n.* one who redeems.
re-demp-tion (*-demp'shun*), *n.* repurchase; release; ransom.
re-demp-tion-er (*-ĕr*), *n.* an emigrant to the United States who sells his services for a certain term, as payment for his passage out from Europe.
red-i-vi-vus (*red-i-vī'vus*), *adj.* come to life again.
red-let-ter day (*-let' dā*). A day that is fortunate or auspicious; so called in allusion to the custom of marking holy days, or saints' days, in the old calendars with red letters.
red-o-lent (*'ō-lent*), *adj.* emitting a sweet smell; fragrant.
re-doubt (*rē-dout'*), *n.* a field-work for strengthening or fortifying a military position without flanks.
re-doubt-a-ble (*'ȧ-bl*), *adj.* formidable; valiant; terrible to enemies.
re-dound (*-dound'*), *v. i.* to tend or contribute; be in excess.
re-d-ow-a (*red'ō-ȧ*), *n.* a Bohemian dance; music for such a dance.
re-dress (*rē-dres'*), *v. t.* to amend or set right; compensate; relieve from; to dress again: *n.* the reparation of wrong; relief.
re-dress-i-ble (*'i-bl*), *adj.* capable of being redressed.
Red river. From the color of its waters it was called by the French *Riviere Rouge*, "Red river"; called by the Spaniards *Rio Roxo de Natchitoches.*
Red Sea. Translates the unexplained classical names *Erythrasan sea* and *Mare Rubrum.* To the early Portuguese mariners the name *Mar Vermelho* seemed to be appropriate, because of the red streaks of water, due probably to floating infusoria.
red-sear (*red'sēr*), *v. t.* to break or crack under the hammer, as iron when hot.
red-tape (*'tāp*), *n.* excessive official formality.
re-duce (*rē-dūs'*), *v. t.* to bring into a lower state; degrade; diminish; conquer; shorten. [ABASE, ABBREVIATE.]
re-du-ci-ble (*-dū'si-bl*), *adj.* capable of being reduced.
re-duc-tion (*-duk'shun*), *n.* diminution; conquest or subjugation; the changing of quantities from one denomination to another.
re-dun-dance (*-dun'dans*), *n.* superfluity; excess. [Also *redundancy.*] [EXCESS.]
re-du-pli-cate (*-dū'pli-kāt*), *v. t.* to double again; repeat; multiply.
re-du-pli-ca-tion (*-kā'shun*), *n.* the act of reduplicating.
reed (*rēd*), *n.* a large, coarse grass of the genus Arundo.
reef (*rēf*), *n.* that part of a sail which can be reduced by being drawn in by small ropes running in eyelet holes; a chain of rock lying at or near the surface of the water: *v. t.* to reduce the size of a sail.
reef-er (*'ĕr*), *n.* a midshipman; a rough kind of jacket.
reek (*rēk*), *n.* smoke; steam: *v. i.* to emit smoke or steam.
reek-y (*'i*), *adj.* smoky; made foul by smoke or steam.
reel (*rēl*), *n.* a turning frame for winding yarn, etc.: *v. t.* to wind on a reel: *v. i.* to stagger; perform a reel.
reeve (*rēv*), *n.* a bailiff or steward; the female of the ruff.
re-fec-tion (*rē-fek'shun*), *n.* a light repast.
re-fec-to-ry (*'tō-ri*), *n.* an eating room or hall.
re-fer (*-fĕr'*), *v. t.* [*p. t.* and *p. p.* referred, *p. pr.* referring], to submit to another person or authority for information, corroboration, or decision: *v. i.* to allude; have relation; appeal; hint. [ALLUDE.]
★**ref-er-able** (*ref'ĕr-ȧ-bl*, not *rē-fĕr'ȧ-bl*), *adj.* that may be referred; ascribable.
ref-er-ee (*ref-ĕr-ē'*), *n.* one to whom anything is referred for decision; an umpire.
ref-er-ence (*'ĕr-ens*), *n.* the act of referring; allusion; one who, or that which, is referred to.
ref-er-en-dum (*ref'ĕr-en-dum*), *n.* the referring of a legislative act to the decision of a vote of the people.
re-fine (*rē-fīn'*), *v. t.* to separate from impurities; clear from dross: *v. i.* to become fine or pure; improve in accuracy or delicacy. (*refined,*) [POLITE.]
re-fine-ment (*'ment*), *n.* elegance; polish; purity of taste, mind, morals, etc.; affectation of elegant or subtle improvements. [CULTIVATION.]
re-fin-er-y (*'ĕr-i*), *n.* [*pl.* refineries (*-iz*)], a place where anything is refined or purified.
re-fit (*-fit'*), *v. t.* to make fit for use again: *v. i.* to repair damages, especially damages of ships.
re-flect (*-flekt'*), *v. t.* to throw back, especially rays of light or heat after striking on any substance; consider in mind. [CONSIDER.]
re-flec-tion (*-flek'shun*), *n.* that which is reflected; the turning of thought back upon past experiences or ideas; attentive consideration. [INSINUATION.]
re-flect-ive (*-flekt'iv*), *adj.* throwing back images or rays; considering the operations of the mind or things of the past; reflexive.
re-flex (*'fleks*), *adj.* bent or turned back; directed backward: *n.* reflected light, etc.
re-flex-i-ble (*'i-bl*), *adj.* capable of being reflected.
re-flex-ive (*'iv*), *adj.* reflective; having respect to something past; referring back to the grammatical subject.
re-flux (*'fluks*), *n.* a flowing back.
re-form (*-fȯrm'*), *v. t.* to make better; change or return to a former good state: *v. i.* to abandon evil for that which is good: *n.* change for the better; correction.
Syn. REFORM, reformation. Whatever undergoes such a change as to give a new *form* to an object occasions a *reform;* when such a change is produced in the moral character, it is termed a *reformation;* the concerns of a state require occasional *reform;* those of an individual require *reformation.* [See *reclaim.*]
ref-or-ma-tion (*ref-ȯr-mā'shun*), *n.* amendment; political redress. [REFORM.]
Reformation, *n.* the great religious movement (16th century) under Martin Luther. [REFORM.]
re-form-a-to-ry (*rē-fȯrm'ȧ-tō-ri*), *adj.* tending to reform: *n.* an institution for the detention and reformation of juvenile offenders.
re-fract (*-frakt'*), *v. t.* to break the natural course of, or bend from, a straight line.
re-fract-ed (*'ed*), *p. adj.* bent back at an acute angle; bent from a direct course.
re-frac-tion (*-frak'shun*), *n.* the change from a straight line.
re-frac-to-ry (*'tō-ri*), *adj.* sullenly or perversely obstinate; difficult of fusion, etc. [OBSTINATE.]
re-frain (*-frān'*), *v. t.* to restrain: *v. i.* to forbear; abstain from action: *n.* burden of a song repeated at the end of each stanza.
re-fran-gi-ble (*-fran'ji-bl*), *adj.* capable of being refracted.
re-fresh (*-fresh'*), *v. t.* to revive after fatigue or exhaustion; reinvigorate; restore.
re-fresh-ment (*'ment*), *n.* the act of refreshing; state of being refreshed; that which refreshes, as food or rest.

re-frig-er-ate (*rē-frij'ĕr-āt*), *v. t.* to cool, or keep cool, as by a refrigerator.
re-frig-er-a-tor (*'ĕr-ā-tĕr*), *n.* an apparatus or vessel for preserving or cooling things.
ref-uge (*ref'ūj*), *n.* protection from danger or distress; shelter or asylum; stronghold.
ref-u-gee (*ū-jē'*), *n.* one who flees for protection, especially from political or religious persecution.
re-ful-gent (*rē-ful'jent*), *adj.* casting a bright light; brilliant; splendid.
re-fund (*-fund'*), *v. t.* to pay back again.
re-fus-al (*-fūz'al*), *n.* the act of refusing; rejecting; right to take the preference; option.
re-fuse (*-fūz'*), *v. t.* to deny or reject, as a demand or request: *v. i.* to decline to accept; not to comply: *n.* (*ref'ūs*), waste or worthless matter.
Syn. REFUSE, decline, reject, repel, rebuff. We *refuse* what is asked of us, for want of inclination to comply; we *decline* what is proposed from motives of discretion; we *reject* what is offered to us, because it does not fall in with our views; *to repel* is *to reject* with violence; *to rebuff* is *to refuse* with contempt. [See *deny*.]
ref-u-ta-tion (*ref-ū-tā'shun*), *n.* the act of refuting; that which is refuted.
re-fute (*rē-fūt'*), *v. t.* to prove to be false or erroneous; repel; disprove. [CONFUTE.]
re-gain (*-gān'*), *v. t.* to recover possession of; get back; reach again.
re-gal (*rē'gal*), *adj.* pertaining to, or characteristic of, a king; kingly; royal. [ROYAL.]
re-gale (*-gāl'*), *v. t.* to entertain with something to delight the senses; feast sumptuously: *v. i.* to feast.
★**re-ga-li-a** (*-gā'lĭ-ȧ*), *n. pl.* the ensigns of sovereignty; decorations of an order or office.
re-gard (*rē-gärd'*), *v. t.* to observe particularly; heed; esteem. *pl.* good wishes. [CONSIDER, LOVE.]
re-gard-ful (*'fool*), *adj.* taking notice.
re-gard-less (*'lĕs*), *adj.* heedless. [INDIFFERENT.]
re-gat-ta (*-gat'ȧ*), *n.* a sailing or rowing match for prizes.
re-gen-cy (*rē'jen-sĭ*), *n.* the office or jurisdiction of a regent; a body intrusted with the duties of a regent.
re-gen-er-ate (*-jen'ĕr-āt*), *v. t.* to renew the heart of and cause to turn to the love of God; produce anew: *adj.* renewed; reformed.
re-gen-er-a-tion (*-ā'shun*), *n.* formation of new tissue to supply that which has been lost.
re-gent (*rē'jent*), *adj.* exercising vicarious authority: *n.* one who governs in the interim during the minority, absence, or disability of the sovereign.
Regent's (*rē'jents*) **park.** One of the largest parks of London, situated in the northwestern part of the city. It is 472 acres in extent, and contains the zoölogical gardens.
Regent street. One of the principal streets of the West End of London, extending from Portland place to Waterloo place.
reg-i-ci-dal (*rej'ĭ-sī-dal*), *adj.* pertaining to a regicide or to regicide.
reg-i-cide (*'ĭ-sīd*), *n.* the murder, or murderer, of a king.
★**ré-gime** (*rā-zhēm'*), *n.* mode, system or rule of government, social or political.
reg-i-men (*rej'ĭ-men*), *n.* systematic regulation of diet or habit; rule.
reg-i-ment (*rej'ĭ-ment*), *n.* a number of companies of soldiers united into one body under the command of a colonel.
Regina (*rē-jī'nȧ*). A feminine name, probably signifying "queen," from the Latin. Arthur translates it "queenlike."
Reginald (*rej'ĭ-nald*). From the Old German name *Reginald*, "noble hero."
re-gion (*rē'jun*), *n.* a tract of land; country.
reg-is-ter (*rej'ĭs-tĕr*), *v. t.* to record in any way: *v. i.* to enter one's name in a register: *n.* an official written record; that which registers, records, or regulates.
reg-is-trar (*-trär*), *n.* an official who keeps a register or record.
reg-is-tra-tion (*-trā'shun*), *n.* the act of inserting in a register.
reg-is-try (*'ĭs-trĭ*), *n.* the place where a register is kept.
reg-nant (*'nant*), *adj.* reigning; exercising royal authority; prevalent.
re-gret (*rē-gret'*), *n.* mental sorrow or concern for anything, as for past conduct; remorse: *v. t.* to remember with sorrow. [COMPLAIN, GRIEF.]
reg-u-lar (*reg'ū-lĕr*), *adj.* according to rule, order, or established usage; consistent: *n.* a soldier belonging to a standing army.
reg-u-lar-i-ty (*-lar'ĭ-tĭ*), *n.* conformity to rule; uniformity; method or certain order.
reg-u-late (*'ū-lāt*), *v. t.* to make regular; put in good order; adjust by rule. [GOVERN.]
reg-u-la-tion (*-lā'shun*), *n.* the act of regulating; order; method; rule.
re-gur-gi-tate (*rē-gŭr'jĭ-tāt*), *v. i.* to be thrown or poured back.
re-hears-al (*-hĕrs'al*), *n.* a recital in private prior to a public performance.
re-hearse (*-hĕrs'*), *v. t.* to repeat, as what has already been said or written; tell or narrate. [REPEAT.]
reign (*rān*), *v. i.* to exercise sovereign authority; rule; be predominant: *n.* supreme power or influence. [EMPIRE.]
re-im-burse (*rē-im-bûrs'*), *v. t.* to refund.
rein (*rān*), *n.* the strap of a bridle; an instrument for curbing, restraining, or governing; power.
rein-deer (*dēr*), *n.* a large arctic deer.
re-in-force (*rē-in-fōrs'*), *v. t.* to supply with new strength, support, or assistance. [Also *reënforce*.]
re-in-forced con-crete (*-fōrst kon'krēt*), concrete strengthened by rods of iron for building purposes.
Reinhold. See *Reynold*.
re-in-state (*-in-stāt'*), *v. t.* to restore to a former state.
re-it-er-a-tion (*-it-ĕr-ā'shun*), *n.* repetition.
re-ject (*rē-jekt'*), *v. t.* to throw away as useless or vile; refuse; renounce; discard. [REFUSE.]
re-jec-tion (*-jek'shun*), *n.* the act of rejecting.
re-joice (*-joĭs'*), *v. i.* to feel or express joy or gladness; exult: *v. t.* to make joyful.
re-join (*-join'*), *v. t.* to unite again after separation: *v. i.* to answer a reply.
re-join-der (*'dĕr*), *n.* an answer to a reply; in law the defendant's answer to the plaintiff's replication. [ANSWER.]
re-lapse (*-laps'*), *v. i.* to fall back from a state of convalescence; return to a former bad state or habit: *n.* a falling into a former bad state.
re-late (*-lāt'*), *v. t.* to tell; describe; recite; narrate: *v. i.* to refer.
re-la-tion (*-lā'shun*), *n.* mutual connection between two or more things; proportion or ratio; kinsman or kinswoman. [CONNECTION.]
re-la-tion-ship (*-ship*), *n.* the state of being related by kindred, affinity, or other alliance.
rel-a-tive (*rel'ȧ-tĭv*), *adj.* having, or expressing, relation; pertinent: *n.* that which has relation to something else; a person connected by kinship.
re-lax (*rē-laks'*), *v. t.* to slacken; make less close; render less tense: *v. i.* become less severe or close.
Syn. RELAX, remit. In regard to our attempts to act, we may speak of *relaxing* our endeavors, and *remitting* our labors or exertions; in regard to our dealings with others, we may speak of *relaxing* in discipline, *relaxing* in the severity or strictness of our conduct, of *remitting* a punishment or a sentence.
re-lax-a-tion (*-ā'shun*), *n.* diminution of tension; diversion or recreation.
re-lay (*-lā'*), *v. t.* [*p. t.* and *p. p.* relaid, *p. pr.* relaying], to lay a second time: *n.* new supply; a subsidiary electric circuit.
re-lease (*-lēs'*), *v. t.* to set free; discharge; free from obligation or penalty: *n.* liberation from restraint, penalty, pain, etc. [ABSOLVE.]
rel-e-gate (*rel'ē-gāt*), *v. t.* to banish; consign. [COMMIT.]
re-lent (*rē-lent'*), *v. i.* to grow less hard or severe; become more tender; yield.
rel-e-van-cy (*rel'ē-van-sĭ*), *n.* applicability; pertinence. [Also *relevance*.]
rel-e-vant (*'ē-vant*), *adj.* applicable; related; pertinent.
re-li-a-ble (*rē-lī'ȧ-bl*), *adj.* trustworthy.
re-li-ance (*'ans*), *n.* confidence; trust.
re-li-ant (*'ant*), *adj.* having reliance.
rel-ic (*rel'ĭk*), *n.* that which is left after the loss or decay of the rest; memorial or souvenir.
rel-ict (*'ĭkt*), *n.* a widow.
re-lief (*rē-lēf'*), *n.* aid; redress; the projection of a sculptured design from the plane surface.
re-liev-a-ble (*-lēv'ȧ-bl*), *adj.* capable of being relieved.
re-lieve (*-lēv'*), *v. t.* to free from pain, suffering, grief, etc.; mitigate; alleviate; help; release from a post of duty. [HELP.]
re-li-gion (*rē-lĭj'un*), *n.* any system of faith or worship; love and obedience toward God; piety.
re-li-gious (*'us*), *adj.* godly; pious; devotional; conscientiously exact or strict.
re-lin-quish (*-ling'kwish*), *v. t.* to forsake or abandon; quit; renounce. [ABANDON, LEAVE.]
rel-i-qua-ry (*rel'ĭ-kwā-rĭ*), *n.* [*pl.* reliquaries (*-rĭz*)], a depository for relics; a casket or small chest for holding relics.
rel-ish (*rel'ish*), *v. t.* to like the taste of; use with pleasure; enjoy: *v. i.* to have a pleasing taste: *n.* savor; zest; pleasure.
re-luc-tant (*rē-luk'tant*), *adj.* unwilling; disinclined.
re-ly (*-lī'*), *v. i.* [*p. t.* and *p. p.* relied, *p. pr.* relying], to lean upon a person with confidence; trust or have confidence in a person or thing.
re-main (*-mān'*), *v. i.* to continue; stay; last; endure: *n. pl.* a dead body. [CONTINUE, BODY.]
re-mand (*-mȧnd'*), *v. t.* to recommit or send back; remit in custody to a future time.
re-mark (*-märk'*), *v. t.* to note or observe; express; say: *n.* observation; comment. [NOTICE.]
re-mark-a-ble (*'ȧ-bl*), *adj.* worthy of notice or remark; extraordinary; strange; famous; uncommon. [EXTRAORDINARY.]
re-me-di-al (*-mē'dĭ-al*), *adj.* affording, or intended for, a remedy.
rem-e-dy (*rem'ē-dĭ*), *n.* [*pl.* remedies (*dĭz*)], a restorative; an efficacious medicine: *v. t.* to repair or remove something evil from. [CURE.]
re-mem-ber (*rē-mem'bĕr*), *v. t.* to recall to mind; attend to.
re-mem-brance (*'brans*), *n.* power of remembering; memory; recollection. [MEMORY.]
re-mind (*-mīnd'*), *v. t.* to bring to the remembrance of; put in mind.
rem-i-nis-cence (*rem-ĭ-nis'ens*), *n.* recovery of ideas; memory; that which is remembered. [MEMORY.]
re-miss (*rē-mis'*), *adj.* careless in the performance of duty or business; heedless; dilatory.
re-mis-sion (*-mish'un*), *n.* the act of remitting; pardon; abatement.
re-mit (*-mit'*), *v. t.* to pardon; send back: *v. i.* to abate in violence or force. [RELAX, FORGIVE.]
re-mit-tal (*'al*), *n.* surrender; transmission.
re-mit-tance (*'ans*), *n.* that which is remitted; the sending of money, bills, etc., in payment; the sum so transmitted.
re-mit-tent (*'ent*), *adj.* increasing and abating alternately.
rem-nant (*rem'nant*), *n.* that which is left after a part has been removed; remainder.
re-mon-e-tize (*rē-mun'ē-tīz*), *v. t.* to restore to circulation in the shape of money.
re-mon-strance (*-mon'strans*), *n.* strong representation against something complained of; expostulation.
re-mon-strate (*'strāt*), *v. i.* to urge against some act or course complained of; expostulate. [EXPOSTULATE.]
re-morse (*re-môrs'*), *n.* anguish of mind caused by the sense of guilt; sympathetic sorrow; compunction.
re-mote (*-mōt'*), *adj.* distant in time or space; far; primary; alien; foreign; inconsiderable. [DISTANT.]
re-mov-a-ble (*-mōōv'ȧ-bl*), *adj.* capable of being removed.
re-mov-al (*'al*), *n.* the act of removing or displacing; change of place; dismissal.
re-move (*-mōōv'*), *v. t.* to put from its place; withdraw; cut off, or kill: *v. i.* to change place.
re-mu-ner-ate (*-mū'nĕr-āt*), *v. t.* to reward as an equivalent for service; recompense.
re-mu-ner-a-tion (*-ā'shun*), *n.* payment for service; recompense; reward. [COMPENSATION.]
re-mu-ner-a-tive (*'nĕr-ā-tĭv*), *adj.* yielding an equivalent return for outlay; lucrative; profitable.
★**Re-nais-sance** (*rē-nās-ans'*), *n.* revival of letters and arts in the 15th century.
re-nal (*rē'nal*), *adj.* pertaining to the kidneys.
re-nas-cent (*rē-nas'ent*), *adj.* coming again into being.
rend (*rend*), *v. t.* [*p. t.* and *p. p.* rent, *p. pr.* rending], to tear apart with violence; split; lacerate.
ren-der (*ren'dĕr*), *v. t.* to return; pay back; make up; deliver.
★**ren-dez-vous** (*ren'de-vōō* or *rȧn'dȧ-vōō*), *n.* appointed place of meeting, especially for warships or troops: *v. i.* to assemble.
ren-di-tion (*ren-dish'un*), *n.* surrender; translation. [DEFINITION.]
Rene (*rē-nā'*). From the French. Like the Italian name *Renato*, derived from the Latin, *renatus*, "renewed," "born, risen or begun again." Fr., *Réné*; It., *Renato*; Lat., *Renatus*.
Renee. Feminine of *Réné*. Sometimes Anglicized in pronunciation as *ren'ne*. Fr., *Rénée*; It., *Renata*; Lat., *Renata*.
ren-e-gade (*ren'ē-gād*), *n.* one who renounces his faith; apostate; traitor; deserter.
re-new (*rē-nū'*), *v. t.* to make new again; restore; renovate; reinvigorate: *v. i.* to be made new; begin afresh; grow again.
re-nounce (*rē-nouns'*), *v. t.* to disown; reject publicly and finally; repudiate; reject. [ABANDON.]
ren-o-vate (*ren'ō-vāt*), *v. t.* to make new again; restore to a previous condition.
re-nown (*rē-noun'*), *n.* celebrity; fame; distinction: *v. t.* to make famous. [FAME.]
re-nowned (*-nound'*), *p. adj.* celebrated; famous; illustrious; distinguished. [FAMOUS.]
rent (*rent*), *n.* a tear; fissure; schism; periodical payment for the use of property. [*p. t.* and *p. p.* of rend.]
rent-al (*'al*), *n.* amount of rent; schedule of rents of an estate; rent roll.
rent roll (*rent' rōl*), a schedule of income derived from rents.
re-nun-ci-a-tion (*rē-nun-sĭ-ā'shun*), *n.* disavowal; rejection.
re-pair (*rē-pâr'*), *v. i.* betake one's self: *v. t.* to restore; mend; renovate; make amends. [RECOVER.]
★**rep-a-ra-ble** (*rep'ȧ-rȧ-bl*, not *rē-pâr'ȧ-bl*), *adj.* capable of being repaired.
rep-a-ra-tion (*-ȧ-rā'shun*), *n.* restoration to a good condition; amends or compensation.
rep-ar-tee (*rep-ȧr-tē'*), *n.* a ready, witty reply.
re-past (*rē-pȧst'*), *n.* a meal; victuals.
re-pay (*-pā*), *v. t.* to pay back. [RESTORE.]
re-peal (*-pēl'*), *v. t.* to revoke or abrogate; annul: *n.* revocation. [ABOLISH.]
re-peat (*-pēt'*), *v. t.* to do or speak a second time; reiterate; recite: *n.* repetition.
Syn. REPEAT, recite, rehearse, recapitulate. *To recite* is *to repeat* in a formal manner; *to rehearse* is *to repeat* or *recite* by way of preparation; *to recapitulate* is *to repeat* the chapters or principal heads of any discourse.
re-peat-er (*'ĕr*), *n.* one who, or that which, repeats; revolver.
re-pel (*-pel'*) *v. t.* to drive back; resist: *v. i.* to act in opposition to force impressed. [REFUSE.]
re-pel-lent (*'ent*), *adj.* driving back; tending or able to repel; repulsive.
re-pent (*-pent'*), *v. i.* to feel pain or sorrow on account of something done or left undone.
re-pent-ance (*-pent'ans*), *n.* contrition.
re-pent-ant (*'ant*), *adj.* penitent.

★**rep-er-toire** (*rep-ĕr-twär'*), French **ré-per-toire** (*rā-pâr-twär'*), *n.* a repository; stock of dramas, songs, etc., ready for use.
rep-er-to-ry (*-tō-ri*), *n.* a storehouse; treasury.
rep-e-ti-tion (*-ē-tish'un*), *n.* the act of repeating; recital from memory. [complain.
re-pine (*rē-pīn'*), *v. i.* to fret one's self; murmur;
re-plen-ish (*-plen'ish*), *v. t.* to fill up again; fill or stock in abundance.
re-plete (*-plēt'*), *adj.* completely filled; full.
re-plev-y (*-plev'i*), *v. t.* to recover by writ goods wrongfully seized.
★**rep-li-ca** (*rep'li-kä*), *n.* a copy of an original picture or statue executed by the same artist or sculptor.
rep-li-ca-tion (*-kā'shun*), *n.* a reply; echo; repetition; the plaintiff's answer to the plea of the defendant.
re-ply (*rē-plī'*), *v. i.* to answer; respond: *n.* an answer; response. [ANSWER.]
re-port (*-pōrt'*), *v. t.* to give an account of; relate: *v. i.* to make a statement: *n.* rumor; hearsay; noise. [FAME, ANNOUNCE.]
re-por-to-ri-al (*-pōr-tō'ri-al*), *adj.* pertaining to, or constituted by, reporters.
re-pose (*-pōz'*), *v. t.* refresh by rest; compose: *v. i.* to sleep; recline: *n.* sleep; quiet. [RECLINE, EASE.]
re-pos-i-to-ry (*-poz'i-tō-ri*), *n.* [*pl.* repositories (*riz*)], a warehouse for the storing and safe keeping of goods.
rep-re-hend (*rep-rē-hend'*), *v. t.* to censure.
rep-re-hen-si-ble (*-hen'si-bl*), *adj.* deserving censure; culpable.
rep-re-hen-sive (*'siv*), *adj.* given to, or containing, reproof. [Also *reprehensory.*]
rep-re-sent (*rep-rē-zent'*), *v. t.* show; describe; give an account of; personate or act the part of.
rep-re-sen-ta-tion (*-zen-tā'shun*), *n.* portrayal; description; likeness; body of representatives. [SHOW.]
rep-re-sen-ta-tive (*'tā-tiv*), *adj.* typical: *n.* member of the popular branch of Congress or of a state legislature.
re-press (*rē-pres'*), *v. t.* to check or restrain; crush.
Syn. REPRESS, restrain, suppress. *To repress* is to *press* back or down; *to restrain* is to *strain* back or down; the former is the general, the latter the specific term. We always *repress* when we *restrain*, but not vice versa. *Repress* is used mostly for *pressing* down, so as to keep that inward which wants to make its appearance; *restraint* is an habitual *repression* by which a thing is kept in a state of lowness; to *suppress*, which is to keep under, or keep from appearing or being perceptible, is also said in respect of ourselves or others; as to *repress* one's feelings; to *suppress* laughter, sighs, etc.
re-pres-sion (*-presh'un*), *n.* the act of repressing.
re-prieve (*-prēv'*), *v. t.* to grant a respite to; delay the execution of: *n.* temporary suspension of a criminal sentence.
rep-ri-mand (*rep'ri-mänd*), *v. t.* to reprove severely; reprove publicly and officially: *n.* severe reproof.
re-pris-al (*rē-prīz'al*), *n.* something done or seized by way of retaliation for an injury or wrong suffered.
re-proach (*-prōch'*), *v. t.* to censure severely; upbraid: *n.* severe blame mingled with contempt.
Syn. REPROACH, contumely, obloquy. The idea of contemptuous or angry treatment of others is common to all these terms; but *reproach* is the general, *contumely* and *obloquy* are the particular terms. *Reproach* is either deserved or undeserved; the name of Puritan is applied as a term of *reproach* to such as affect greater purity than others; *contumely* is always undeserved; *obloquy* is always supposed to be deserved or otherwise; it is applicable to those whose conduct calls for general censure, and whose name, therefore, has almost become a *reproach*. [See *abuse, blame, discredit.*]
rep-ro-bate (*rep'rō-bāt*), *v. t.* to condemn strongly; disown: *adj.* wholly given up to sin: *n.* a profligate person. [CONDEMN, PROFLIGATE, ABANDONED.]
rep-ro-ba-tion (*-bā'shun*), *n.* abandonment to eternal destruction; condemnation.
re-proof (*rē-prōōf'*), *n.* censure; rebuke.
re-prove (*-prōōv'*), *v. t.* to censure or blame; reprimand; rebuke. [BLAME, CONDEMN.]
rep-tile (*rep'til*), *n.* an animal, of the class Reptilia, that creeps or crawls on the ground.
re-pub-lic (*rē-pub'lik*), *n.* a state or country in which the supreme power is vested in representatives elected by popular vote.
re-pub-lic-an (*'lik-an*), *adj.* pertaining to, characteristic of, or consisting of, a republic.
Re-pub-lic-an (*'lik-an*), *n.* a member of the Republican political party.
re-pub-lic-an-ism (*-izm*), *n.* the principles of a republican government.
re-pub-li-ca-tion (*-li-kā'shun*), *n.* the act of republishing; reimpression of a printed book.
re-pub-lish (*'lish*), *v. t.* to publish anew; print a new edition of.
re-pu-di-ate (*-pū'di-āt*), *v. t.* to disown or disclaim; refuse to pay or acknowledge; disavow.
re-pug-nance (*-pug'nans*), *n.* aversion; reluctance; dislike. [Also *repugnancy.*] [ANTIPATHY.]
re-pug-nant (*'nant*), *adj.* highly distasteful or offensive; contrary; hostile.
re-pulse (*puls'*), *v. t.* to drive back; beat off; repel: *n.* refusal; denial.
re-pul-sion (*rē-pul'shun*), *n.* the act of driving back; state of being repelled. [ANTIPATHY.]
re-pul-sive (*'siv*), *adj.* tending to repel; forbidding; disgusting.
★**rep-u-ta-ble** (*rep'ū-tä-bl*), *adj.* esteemed; honorable; respectable.
rep-u-ta-tion (*-tā'shun*), *n.* good name or character; honor; credit. [FAME, CHARACTER.]
re-pute (*rē-pūt'*), *v. t.* to estimate; deem: *n.* estimation; character.
re-quest (*-kwest'*), *n.* desire expressed; petition; prayer; demand; entreaty: *v. t.* to ask for.
★**re-qui-em** (*rē'kwi-em*), *n.* a mass or musical setting of a mass, for the repose of the soul of a person deceased.
re-quire (*rē-kwīr'*), *v. t.* to ask for or claim as by right or authority; demand; exact; need. [DEMAND.]
req-ui-site (*rek'wi-zit*), *adj.* needful; indispensable: *n.* anything requisite.
req-ui-si-tion (*-wi-zish'un*), *n.* demand, especially a written one: *v. t.* to demand.
re-quit-al (*rē-kwīt'al*), *n.* retaliation. [COMPENSATION.]
re-quite (*-kwīt'*), *v. t.* ro make return for treatment, good or evil; recompense; retaliate; revenge.
re-scind (*rē-sind'*), *v. t.* to annul; revoke.
res-cue (*res'kū*), *v. t.* to set free from danger, restraint, or violence; liberate; deliver: *n.* deliverance from danger. [DELIVER.]
★**re-search** (*rē-sĕrch'*, not *rĕ'sĕrch*), *n.* laborious, careful inquiry or investigation: *v. t.* to investigate carefully and diligently.
re-sem-blance (*-zem'blans*), *n.* likeness. [LIKENESS.]
re-sem-ble (*-zem'bl*), *v. t.* to have a likeness to; have similarity to.
re-sent (*-zent'*), *v. t.* to consider as an injury or affront; take ill; be angry in consequence of.
re-sent-ment (*'ment*), *n.* strong anger or displeasure; deep sense of injury. [ANGER.]
res-er-va-tion (*rez-ĕr-vā'shun*), *n.* anything kept back or reserved; public land reserved for some particular use.
re-serve (*rē-zĕrv'*), *v. t.* to keep in store; hold back for future use: *n.* that which is retained for future use; taciturnity; modesty: *pl.* troops kept for the support of an army.
★**res-er-voir** (*rez'ĕr-vwôr*), *n.* a place where anything (usually fluids and liquids) is collected and stored up for use.
re-side (*rē-zīd'*), *v. i.* to dwell or inhabit; live. [ABIDE.]
res-i-dence (*rez'i-dens*), *n.* place of abode; domicile; act of residing. [HABITATION.]
re-sid-u-a-ry (*rē-zid'ū-ā-ri*), *adj.* pertaining to, or constituting, the residue.
res-i-due (*rez'i-dū*), *n.* remainder.
re-sid-u-um (*rē-zid'ū-um*), *n.* that which is left after a chemical process.
re-sign (*-zīn'*), *v. t.* to yield to another; surrender formally. [ABANDON.]
res-ig-na-tion (*rez-ig-nā'shun*), *n.* the act of resigning; calm submission or acquiescence.
re-sil-i-ent (*rē-zil'i-ent*), *adj.* springing back.
res-in (*rez'in*), *n.* a solid inflammable substance obtained from various trees which exude it in the form of gum.
re-sist (*rē-zist'*), *v. t.* to oppose; withstand; thwart; strive against: *v. i.* to make opposition.
re-sist-ance (*-zist'ans*), *n.* opposition; power of a body that acts in opposition to another.
re-sist-ant (*'ant*), *adj.* offering resistance: *n.* one who, or that which, resists.
re-sist-i-ble (*'i-bl*), *adj.* capable of resisting.
re-sist-less (*'les*), *n.* irresistible.
res-o-lu-ble (*rez'ō-lū-bl*), *adj.* capable of being melted or resolved.
res-o-lute (*'ō-lūt*), *adj.* determined; decided; firm; steady. [DECIDED, OBSTINATE.]
res-o-lute-ness (*-nes*), *n.* the state or quality of being resolute.
res-o-lu-tion (*-lū'shun*), *n.* analysis; fixed determination; constancy of purpose. [COURAGE.]
re-solv-a-ble (*rē-zolv'ä-bl*), *adj.* capable of being resolved.
re-solve (*-zolv'*), *v. t.* to reduce to constituent parts; analyze; free from doubt or difficulty: *v. i.* to determine; pass a formal resolution. [DETERMINE.]
re-solv-ent (*-zolv'ent*), *adj.* having the power of resolving; causing solution.
res-o-nant (*rez'ō-nant*), *adj.* returning sound.
re-sort (*rē-zôrt'*), *v. i.* to betake one's self; go often: *n.* a place much frequented. [FREQUENT.]
re-sound (*-zound'*), *v. i.* and *v. t.* to reverberate; be reëchoed; spread the fame or renown of.
re-source (*-sōrs'*), *n.* source of help or supply; an expedient to which one resorts. [EXPEDIENT, ALTERNATIVE.]
re-spect (*rē-spekt'*), *n.* regard; expression of esteem; deference; manner of treating others: *v. t.* to honor or esteem. [HONOR, ADMIRE.]
re-spect-a-ble (*'ä-bl*), *adj.* capable, or worthy, of respect; held in good repute.
re-spect-ful (*'fool*), *adj.* characterized by respect.
re-spect-ing (*'ing*), *prep.* concerning.
re-spect-ive (*'iv*), *adj.* relating to a particular person or thing; not absolute; relative.
res-pi-ra-tion (*res-pi-rā'shun*), *n.* the act or process of breathing; relief from toil.
re-spir-a-to-ry (*rē-spīr'ä-tō-ri*), *adj.* pertaining to or serving for, respiration.
re-spire (*-spīr'*), *v. i.* to draw air into the lungs and expel it again: *v. t.* breathe; inhale.
res-pite (*res'pit*), *n.* pause or temporary cessation of anything: *v. t.* suspend the execution of. [INTERVAL.]
re-splen-dent (*rē-splen'dent*), *adj.* shining with brilliant luster; intensely bright.
re-spond (*-spond'*) *v. i.* to answer or reply.
re-spond-ent (*'ent*), *adj.* giving response: *n.* one who answers or replies.
re-sponse (*rē-spons'*), *n.* the act of answering; reply. [ANSWER.]
re-spon-si-ble (*-spon'si-bl*), *adj.* involving responsibility; answerable; liable.
re-spon-sive (*'siv*), *adj.* answering; correspondent.
re-spon-so-ry (*'sō-ri*), *adj.* containing answer.
rest (*rest*), *n.* cessation from motion or disturbance; quiet; peace; repose; sleep; death: *v. i.* repose; be quiet; sleep. [EASE, CESSATION.]
★**res-tau-rant** (*res'tō-rānt* or *-tō-răn*), *n.* a house for refreshment; an eating house.
rest-ful (*'fool*), *adj.* full of rest; quiet.
res-ti-tu-tion (*res-ti-tū'shun*), *n.* the act of making good any loss, injury, or damage; compensation.
rest-ive (*rest'iv*), *adj.* unwilling to go forward; stubborn; obstinate; uneasy.
re-stor-a-ble (*rē-stōr'ä-bl*), *adj.* capable of being restored.
res-to-ra-tion (*res-tō-rā'shun*), *n.* the act of restoring; renewal; repair. [RECOVERY.]
re-stor-a-tive (*rē-stōr'ä-tiv*), *adj.* capable of restoring: *n.* a reinvigorating medicine.
re-store (*-stōr'*), *v. t.* to bring back to its former strength; repair; rebuild; heal or cure.
Syn. RESTORE, return, repay. We *restore* upon a principle of equity; we *return* upon a principle of justice and honor; we *repay* upon a principle of undeniable right. We cannot always claim that which ought to be *restored;* but we can not only claim but enforce the claim in regard to what is to be *returned* or *repaid.*
Ant. KEEP, retain.
re-strain (*-strān'*), *v. t.* to check; repress. [REPRESS.]
re-straint (*-strānt'*), *n.* the act of restraining; state of being restrained; limitation.
re-strict (*-strikt'*), *v. t.* to confine or limit. [BOUND.]
re-strict-ive (*'iv*), *adj.* imposing restraint.
re-sult (*-zult'*), *v. i.* to follow as a consequence; to come to a decision; ensue; decree: *n.* conclusion. [CONSEQUENCE.]
re-sume (*rē-zūm'*), *v. t.* to take up again after interruption; begin again; take back.
re-sump-tion (*rē-zump'shun*), *n.* the act of resuming.
res-ur-rec-tion (*rez-ur-ek'shun*), *n.* a rising again from the dead; moral revival.
★**re-sus-ci-tate** (*rē-sus'i-tāt*), *v. t.* to revive from apparent death; revivify.
re-tail (*rē-tāl'*), *v. t.* to sell in small quantities; sell second-hand.
re-tain (*-tān'*), *v. t.* to hold or keep in possession; detain. [HOLD.]
re-tain-er (*'ĕr*), *n.* one who, or that which, retains; a dependent; attendant; preliminary retaining fee paid to counsel. [ACCESSORY.]
re-tal-i-ate (*-tal'i-āt*), *v. t.* to return by giving like for like (usually in an ill sense). [AVENGE.]
re-tal-i-a-tive (*'i-ä-tiv*), *adj.* returning like for like; vindictive. [Also *retaliatory.*]
re-tard (*-tärd'*), *v. t.* to hinder or obstruct; delay; keep back.
Syn. RETARD, hinder. We *retard* or make slow the progress of any scheme toward completion; we *hinder* or keep back the person who is completing the scheme; we *retard* a thing, therefore, often by *hindering* the person; but we frequently *hinder* without *retarding.* [See *obstruct.*]
Ant. QUICKEN, expedite, aid, further.
retch (*rech*), *v. i.* to try to vomit; strain in vomiting.
re-ten-tion (*rē-ten'shun*), *n.* the act of holding back; power of retaining, especially ideas.
re-ten-tive (*'tiv*), *adj.* having the power to retain.
ret-i-cent (*ret'i-sent*), *adj.* silent; reserved.
re-tic-u-lar (*rē-tik'ū-lĕr*), *adj.* formed with interstices.
ret-i-cule (*ret'i-kūl*), *n.* a lady's handbag or workbag; a telescopic eyepiece.
ret-i-na (*ret'i-nä*), *n.* one of the coats of the eye, containing the ends of the sensory nerves which receive the impressions which give rise to vision.
ret-i-nue (*'i-nū*), *n.* the suite or attendants of a prince or person of distinction; train.
re-tire (*rē-tīr'*), *v. i.* to go to a place of privacy; withdraw; retreat; recede; withdraw from business, official, or active life; to go to bed.
re-tire-ment (*-tīr'ment*), *n.* the act of retiring; state of being retired; privacy; solitude. [PRIVACY.]
re-tort (*-tôrt'*), *v. t.* to return, as an argument, incivility: *v. i.* to make a retort: *n.* censure.
re-touch (*-tuch'*), *v. t.* to touch again; improve by going over, as a work of art, to restore faded parts, etc.
re-tract (*-trakt'*), *v. t.* to draw, or take back; recall; rescind; recant: *v. i.* to withdraw something previously said or written.
re-treat (*-trēt'*), *n.* the act of withdrawing or retiring; retirement or seclusion; place of privacy: *v. i.* to withdraw to seclusion or place of safety.

re-trench (*rē-trench'*), *v. t.* to furnish with a retrenchment: *v. i.* to cut down expenses.
re-trench-ment (*'ment*), *n.* curtailment; military work constructed inside another.
ret-ri-bu-tion (*ret-ri-bū'shun*), *n.* reward or punishment suitable to the action.
re-trib-u-tive (*rē-trib'ū-tiv*), *adj.* rewarding for good deeds and punishing for offenses. [Also *retributory.*]
re-trieve (*-trēv'*), *v. t.* to recover; restore; regain: *v. i.* to act as a retriever. [RECOVER.]
re-triev-er (*'ĕr*), *n.* a variety of dog trained to fetch game.
retro, a *prefix* meaning *back, backward,* as *retrospect,* a review of the past.
re-tro-cede (*rē'trō-sēd'*), *v. t.* to cede or grant back.
re-tro-grade (*rē'trō-grād*), *adj.* going or moving backward; going from a better to a worse moral condition.
re-tro-gres-sion (*rē-trō-gresh'un*), *n.* the act of going backward.
re-tro-spect (*rē'trō-spekt*), *n.* act of looking backward.
re-tro-spec-tion (*rē-trō-spek'shun*), *n.* the act or faculty of looking back on the past.
re-tro-spec-tive (*'tiv*), *adj.* looking back on things past; referring to past things.
re-tro-ver-sion (*-vēr'shun*), *n.* a turning or falling backward.
Retta. A feminine name derived from *Margaretta.*
re-turn (*rē-tûrn'*), *v. i.* to come back again to the same place: *v. t.* to repay; restore: *n.* the act of going back or returning; repayment. [RESTORE.]
Reuben (*rū'ben*). From the Hebrew, *R'ubhen,* which St. Jerome translates "son of vision"; Tregelles, "see"; *i. e.,* "behold a son."
re-un-ion (*rē-ūn'yun*), *n.* a festive gathering of familiar friends or associates; act of reuniting.
re-u-nite (*-ū-nīt'*), *v. t.* to unite again; reconcile after variance: *v. i.* to become united again.
re-veal (*rē-vēl'*), *v. t.* to make known; disclose: *n.* the vertical side of a doorway, window, etc. [PUBLISH, ANNOUNCE.]
★**re-veil-le** (*rē-vāl'yā* or *rev-à-lē'*), *n.* the beat of a drum, or bugle call, at daybreak to awaken soldiers.
rev-el (*rev'el*), *n.* a noisy or riotous feast: *v. i.* to feast with joyous or clamorous merriment.
rev-e-la-tion (*-ē-lā'shun*), *n.* the act of revealing or making known, especially divine truth.
rev-el-ry (*'el-ri*), *n.* boisterous festivity.
re-venge (*rē-venj'*), *v. t.* to inflict pain or punishment because of; avenge: *n.* retaliation; malice. [AVENGE.]
re-venge-ful (*'fool*), *adj.* vindictive.
rev-e-nue (*rev-ē'nū*), *n.* the general income of a state, derived from the annual taxes, excise, customs, etc.
re-ver-ber-ate (*rē-vēr'bĕr-āt*), *v. t.* to send back, as sound; reëcho: *v. i.* to be driven back, or reflected, as sound or light.
re-ver-ber-a-to-ry (*'bĕr-à-tō-ri*), *adj.* pertaining to, characterized by, or produced by, reverberation.
re-vere (*-vēr'*), *v. t.* to regard with fear mingled with respect and affection; reverence. [ADMIRE.]
rev-er-ence (*rev'ĕr-ens*), *n.* veneration; honor; respect; a title given to the clergy: *v. t.* to regard with reverence. [HONOR.]
★**rev-er-end** (*rev'ĕr-end,* not *rev'ĕr-ent*), *adj.* worthy of reverence.
rev-er-ent (*-ent*), *adj.* showing, or expressive of, reverence; humble; submissive.
rev-er-en-tial (*-en'shal*), *adj.* proceeding from reverence; respectful.
rev-er-ie (*'ĕr-i*), *n.* deep musing; wakeful dreaminess; irregular train of thoughts or fancies in meditation. [DREAM.]
re-verse (*rē-vērs'*), *adj.* turned backward; having an opposite direction: *v. t.* change entirely: *n.* the contrary or opposite.
re-vers-i-ble (*'i-bl*), *adj.* capable of being reversed.
re-ver-sion (*-vēr'shun*), *n.* tendency of an animal or plant to revert to its original form.
re-vert (*-vērt'*), *v. t.* to turn back; change; reverse: *v. i.* to return or fall back.
re-vest (*-vest'*), *v. i.* to return to a former owner.
re-view (*-vū'*), *v. t.* to consider over again; reëxamine; look back; revise; examine critically: *n.* the act of reviewing.
re-vile (*-vīl'*), *v. t.* to address with opprobrious or contumelious language; reproach. [ABUSE.]
re-vise (*-vīz'*), *v. t.* to review and amend; examine for correction: *n.* a revision; second proof sheet.
re-vi-sion (*-vizh'un*), *n.* the act of examining for correction; that which is revised.
re-viv-al (*-vīv'al*), *n.* the act of reviving; recovery; renewal of life.
re-viv-al-ist (*-ist*), *n.* one who promotes revivals.
re-vive (*-vīv'*), *v. i.* to recover life; return to vigor or activity, especially from a state of languor, neglect, etc.: *v. t.* to restore to life again; renovate; reproduce.
re-viv-i-fy (*-vīv'i-fī*), *v. t.* [*p. t.* and *p. p.* revivified, *p. pr.* revivifying], to reanimate; quicken.
★**rev-o-ca-ble** (*rev'ō-kà-bl,* not *rē-vō'kà-bl*), *adj.* that may be revoked.
rev-o-ca-tion (*-kā'shun*), *n.* the act of revoking; recall; repeal; reversal.
re-voke (*rē-vōk'*), *v. t.* to recall; repeal; annul: *v. i.* to fail to follow suit at cards. [ABOLISH.]
re-volt (*-volt'*), *n.* insurrection; change of sides; desertion: *v. i.* to turn away in disgust; to rebel. [INSURRECTION.]
rev-o-lu-tion (*rev-ō-lū'shun*), *n.* the act of revolving; rotation; change or alteration of system.
rev-o-lu-tion-ist (*'shun-ist*), *n.* one who organizes or takes part in a revolution.
rev-o-lu-tion-ize (*'shun-īz*), *v. t.* to cause revolution or entire change of government or any system.
re-volve (*rē-volv'*), *v. i.* to turn round, as on an axis; roll in a circle; rotate: *v. t.* to cause to turn or roll round.
re-volv-er (*-volv'ĕr*), *n.* a pistol with revolving barrels, fired successively without reloading.
re-vul-sion (*-vul'shun*), *n.* sudden and violent change, especially of feeling.
re-ward (*-wȯrd'*), *n.* something given for good or ill received; recompense: *v. t.* to give in return for good or ill received. [COMPENSATION.]
Reynold (*ren'old*). From the Teutonic, meaning "power of judgment." Danish, *Reinhold;* Dutch, *Reinold;* Fr., *Renaud;* Ger., *Reinhold;* Lat., *Reynaldus* or *Reginaldus;* Sp., *Reynaldo;* Sw., *Reinhold.*
rhap-so-dy (*rap'sō-di*), *n.* [*pl.* rhapsodies (*-diz*)], any unconnected or rambling composition, composed under the influence of excitement.
Rheims or **Reims** (*rēmz,* French *rans*). A famous French city; was named for the *Remi,* a tribe.
rhe-om-e-try (*rē-om'ē-tri*), *n.* the art of measuring the intensity and velocity of electric and other currents.
rhe-o-mo-tor (*'ō-mō-tĕr*), *n.* an apparatus by which an electrical current is generated.
rhe-o-phore (*'ō-fōr*), *n.* the connecting wire of an electric or galvanic apparatus.
rhe-o-stat (*'ō-stat*), *n.* an apparatus for regulating an electric current.
rhe-o-tome (*'ō-tōm*), *n.* an apparatus for interrupting an electric current at stated intervals.
rhet-o-ric (*ret'ō-rik*), *n.* the art of speaking with elegance and force; declamation.
rhe-tor-ic-al (*rē-tor'i-kal, adj.* pertaining to rhetoric; figurative; declamatory.
rhet-o-ri-cian (*ret-ō-rish'an*), *n.* a teacher of rhetoric, or one skilled in the art; orator.
rheum (*rōōm*), *n.* the increased action of the vessels of any organ.
★**rheu-mat-ic** (*roo-mat'ik*), *adj.* pertaining to, or affected by, rheumatism. [Also *rheumatical.*]
★**rheu-ma-tism** (*rōō'mà-tizm*), *n.* a painful disease of the muscles and joints accompanied by swelling and stiffness.
Rhine (*rīn*). Is the English spelling of the German name *Rhein,* which was the Latin *rhenus* and the Celtic *renos.* It means, "to flow."
rhi-noc-er-os (*rī-nos'ĕr-os*), *n.* a large pachydermatous animal allied to the elephant, with one or two horns on the snout.
Rhoda (*rō'dà*). A feminine name derived from the Latin *rhoda,* "a rose." Gr., *Rhode;* Lat., *Rhoda.*
Rhode (*rōd*) **Island.** One of the original thirteen states, said to have received its name from a small island in Narragansett bay named *Roode Eylandt,* "red island"; according to another authority, named for the island of Rhodes.
Rhodes (*rōdz*). Means an "island of roses," in conformity with the Greek *rhodon,* a "rose."
Rho-do-den-dron (*rō-dō-den'dron*), *n.* a genus of ornamental evergreen shrubs with large, handsome, roselike flowers.
rhom-boid (*rom'boid*), *n.* a 4-sided figure having its opposite sides equal and its angles not right angles.
rhom-bus (*'bus*), *n.* a 4-sided figure whose sides are equal and the opposite sides parallel, but which has two of its angles obtuse and two acute.
rhu-barb (*rōō'bärb*), *n.* a plant whose leaf stalks are used for culinary purposes.
rhyme (*rīm*), *n.* harmonical succession of sounds; poetry: *v. i.* to accord in sound: *v. t.* put into rhyme.
rhythm (*rith'm*) *n.* movement in equally measured time; verse.
rhyth-mic (*rith'mik*), *adj.* pertaining to rhythm; harmonical; periodical. [Also *rhythmical.*]
rib (*rib*), *n.* one of the curved bones attached to the vertebral column and supporting the lateral walls of the thorax: *v. t.* to furnish, or inclose, with ribs.
rib-ald (*'ald*), *adj.* low; obscure; filthy: *n.* a vulgar, foul-mouthed licentious fellow.
rib-ald-ry (*-ri*), *n.* obscenity.
rib-bon (*'un*), *n.* a fillet or strip of silk, etc.; narrow strip.
rice (*rīs*), *n.* a valuable food grain produced extensively in hot countries.
rice pa-per (*'pā-pĕr*), a kind of paper prepared from pith; used in China, etc., for painting upon.
rich (*rich*), *adj.* abounding in money or possessions; wealthy; opulent; sumptuous.
Richard. From the Teutonic *reich-hart,* "very powerful, strong, or rich." Dutch, *Richard;* Fr., *Richard;* Ger., *Richard* or *Reichard;* It., *Ricardo;* Lat., *Richardus;* Port., *Ricardo;* Sp., *Ricardo.*
rich-es (*rich'ez*) *n. pl.* valuable property; wealth.
Richmond, Va. From Richmond on the Thames, a suburb of London; the name suggested owing to analogy in situation.
rick (*rik*), *n.* a pile or heap, as of hay or corn, and usually thatched or sheltered.
rick-ets (*'ets*), *n.* a disease affecting children.
rick-et-y (*'et-i*), *adj.* affected with rickets; feeble in the joints; unsteady.
ric-o-chet (*rik-ō-shā'* or *-ō-shet'*), *n.* the rebounding of a shot or shell; *v. i.* to bound by touching the earth or the surface of water and glancing off, as a cannon ball: *v. t.* to cause to ricochet.
rid (*rid*), *v. t.* to set free; deliver; clear or destroy by violence: *adj.* clear; free.
rid-dance (*'ans*), *n.* the act of ridding or clearing away; deliverance.
rid-dle (*'l*), *n.* an enigma; puzzling question: *v. i.* to speak ambiguously or as in riddles.
ride (*rīd*), *v. i.* and *v. t.* [*p. t.* rode, *p. p.* ridden, *p. pr.* riding], to be borne along, as on horseback or in a vehicle: *n.* excursion on horseback or in a vehicle; drive.
rid-er (*rīd'ĕr*), *n.* one who rides on, breaks, or manages, a horse.
ridge (*rij*), *n.* anything formed like an animal's back, as a continuous range of hills: *v. t.* to form or furnish with a ridge.
★**rid-i-cule** (*rid'i-kūl*), *n.* banter; mockery; satire: *v. t.* to expose to contemptuous merriment.
ri-dic-u-lous (*ri-dik'ū-lus*), *adj.* deserving or exciting ridicule; preposterous; absurd; ludicrous. [ABSURD].
rife (*rif*), *adj.* prevalent, common.
riff-raff (*rif'rāf*), *n.* refuse; the rabble.
ri-fle (*rī'fl*), *n.* a musket with the barrel spirally grooved: *v. t.* to groove spirally; pillage.
ri-fle corps (*kōr*), a body armed with rifles.
rift (*rift*), *n.* an opening or split in anything; fissure: *v. t.* to cleave or split.
rig (*rig*), *n.* dress; manner of fitting the masts and rigging to the hull of a vessel: *v. t.* to furnish or fit with rigging; dress (with *out*).
rig-ging (*'ing*), *n.* the cordage or ropes by which the masts of a vessel are supported, and the sails extended or furled.
right (*rīt*), *adj.* according to truth, justice, or law; correct; fit; true; exact; most direct: *adv.* justly: *n.* uprightness; truth; justice; rectitude: *v. t.* to make right or straight; correct: *v. i.* to recover the vertical position.

Syn. RIGHT, claim, privilege. *Right,* in its full sense, is altogether an abstract thing which is independent of human laws and regulations; *claims* and *privileges* are altogether connected with the establishments of civil society. We have often a *claim* to a thing which is not in our power to substantiate; and, on the other hand, *claims* are set up in cases which are totally unfounded on any *right; privileges* are *rights* granted to individuals, depending either upon the will of the grantor, or the circumstances of the receiver, or both; *privileges* are, therefore, partial *rights* transferable at the discretion of persons individually or collectively.

Ant. WRONG, unjust, improper.

right an-gle (*'ang-gl*), an angle of 90°, formed by one straight line standing perpendicular to another.
right-eous (*rī'chus*), *adj.* just; equitable; honest; holy; deserved.
right-ful (*rīt'fool*). *adj.* having a just claim; accordant with justice.
rig-id (*rij'id*), *adj.* not pliant; stiff; inflexible; strict; stern; severely just.
ri-gid-i-ty (*ri-jid'i-ti*), *n.* want of pliability; stiffness; resistance to change of form.
rig-ma-role (*rig'mà-rōl*), *n.* foolish, disconnected talk; long story.
rig-or (*'ĕr*), *n.* stiffness or severity; exactitude; strictness; severity of climate.
rig-or-ous (*rig'ĕr-us*), *adj.* characterized by, or exercising, rigor; stern; inflexible; scrupulously accurate.
rill (*ril*), *n.* a small stream or rivulet: *v. i.* to run in a small stream.
rim (*rim*), *n.* a border or margin; raised border; brim: *v. t.* to furnish with a rim.
rime (*rīm*), *n.* hoarfrost; another form of rhyme *v. i.* to congeal into hoarfrost.
ri-my (*rī'mi*), *adv.* frosty.
rind (*rīnd*), *n.* the outer covering of fruit, etc.; bark: *v. t.* to strip the rind from.
rin-der-pest (*rin'dĕr-pest*), *n.* a malignant and contagious disease in cattle; cattle plague.
ring (*ring*), *n.* a circle; anything circular in form; small hoop worn on the finger: *v. i.* to sound as a bell when struck: *v. t.* to cause to sound, as metal when struck.
ring-dove (*'duv*), *n.* the wood pigeon.
ring-ing (*'ing*), *p. adj.* sounding like a bell; resonant: *n.* the act of sounding as a bell.
ring-let (*'let*), *n.* a little ring; curl.
ring-worm (*'wĕrm*), *n.* a contagious cutaneous disease, usually on the scalp.
rink (*ringk*), *n.* a ground for skating upon: *v. i.* to skate on a rink.
★**rinse** (*rins,* not *rens*), *v. t.* to cleanse lightly with clean water; cleanse repeatedly.
Rio Grande (*rī'ō grand,* Spanish *rē'ō grän'dā*). River rising in the Rocky mountains and emptying into the gulf, which gives name to a county in Colorado. A Spanish phrase meaning "great river."
ri-ot (*rī'ot*), *n.* uproar; tumult; noisy revelry; luxurious excess: *v. i.* to raise an uproar.
ri-ot-ous (*-us*), *adj.* indulging in riot or excess; licentious; noisy; turbulent; seditious.
rip (*rip*). *v. t.* to divide by tearing or cutting; cut asunder; disclose.
ri-pa-ri-an (*ri-pā'ri-an*). *adj.* pertaining to the banks of a river.

ripe (*rip*), *adj.* brought to maturity or perfection; ready for harvest; fit for use; complete.
ri-pen (*ri'pen*), *v. t.* to make ripe; bring to perfection: *v. i.* to grow ripe.
ripe-ness (*rip'nes*), *n.* the state or quality of being ripe; maturity.
rip-ple (*rip'l*), *n.* a small curling wave on the surface of water.
rip-pling (*'ling*), *n.* the breaking of, or sound made by, ripples.
rip-rap (*'rap*), *n.* a loose foundation of stones in deep water on a soft bottom.
rise (*rīz*), *v. i.* [*p. t.* rose, *p. p.* risen, *p. pr.* rising], to ascend; get up from the ground or recumbent position; begin to stir: *n.* ascent; elevated place; appearance above; origin.
ris-i-ble (*rīz'i-bl*), *adj.* having the faculty or power of laughing; inclined to laugh; causing laughter.
ris-ing (*rīz'ing*), *n.* the act of getting up or ascending; insurrection; an ascent.
risk (*risk*), *n.* possibility of loss or injury; peril; danger: *v. t.* to hazard; venture upon. [HAZARD.]
Rita (*rē'ta*). A feminine name of Italian origin; abbreviated from *Margarita*.
rite (*rīt*), *n.* a solemn religious act; external religious observance. [FORM.]
rit-u-al (*rit'ū-al*), *adj.* pertaining to, consisting of, or prescribing, rites: *n.* manner of performing divine service.
rit-u-al-ism (*-izm*), *n.* a system of ritual or prescribed forms of religion.
rit-u-al-ist (*-ist*), *n.* one who advocates, or is skilled in, ritual; an Anglo-Catholic.
ri-val (*rī'val*), *n.* competitor; antagonist: *adj.* having the same claims; emulous: *v. t.* to strive to equal or excel; emulate.
ri-val-ry (*-ri*), *n.* competition; emulation.
rive (*rīv*), *v. i.* to be split or torn asunder: *n.* a rent, tear, or split.
riv-er (*riv'ĕr*), *n.* a large running stream of water flowing into the sea or another river.
riv-et (*'et*), *n.* a short metal bolt clinched by hammering: *v. t.* to secure with, or as with, a rivet.
riv-u-let (*riv'ū-let*), *n.* a little stream.
roach (*rōch*), *n.* a fresh-water fish; a cockroach.
road (*rōd*), *n.* a public way for traveling upon; path; way.
road-ster (*'stĕr*), *n.* a horse suited for traveling; a bicycle for road work.
roam (*rōm*), *v. i.* to wander about without any definite object; ramble: *v. t.* to wander over.
roan (*rōn*), *adj.* of a bay or dark color with a shade of red: *n.* a roan color; grained sheepskin leather.
Roanoke (*rō-a-nōk'*). County and city in same county in Virginia, river in Virginia and North Carolina, town in Hunting county, Indiana, and village in Woodford county, Ill. From the island of same name, *Roenoke* or *Rawnoke*, equivalent to *peag*, "sea-shell," or "wampum."
roar (*rōr*), *n.* the deep, full cry of an animal; a cry as in distress; any loud noise: *v. i.* to utter a roar.
roast (*rōst*), *v. t.* to cook before a fire; parch by exposure to heat; criticise severely: *v. i.* to be roasted.
rob (*rob*), *v. t.* [*p. t.* and *p. p.* robbed, *p. pr.* robbing], to steal; plunder; strip of something by secret theft or violence; deprive.
rob-ber (*'ĕr*), *n.* a thief.
rob-ber-y (*-i*), *n.* theft; the felonious and forcible taking away the money and goods of another.
robe (*rōb*), *n.* a loose outer garment; dressed skin of a buffalo: *v. t.* to invest with a robe; dress; array.
Robert. Is "red-beard," from *ru* or *ro*, "red," and *bert* or *bart*, a "beard." Dr. R. S. Maitland gives no fewer than two hundred different methods of spelling this name. *Rupert* and *Robert* are identical, and were used occasionally for the same person. Danish, *Robert;* Dutch, *Robert;* Ger., *Robert;* It., *Roberto;* Lat., *Robertus;* Sp., *Roberto;* Sw., *Robert.*
Robertina. A feminine name derived from *Robert.*
rob-in (*rob'in*), *n.* the redbreast.
Robin. A diminutive of *Rob*, the nickname of *Robert.*
★**ro-bust** (*rō-bust'*, not *rō'bust*), *adj.* hardy; strong; vigorous; muscular.
roc (*rok*), *n.* a fabulous bird of great size and strength.
Rochester. A city in the state of New York; derives its name from Colonel Nathaniel Rochester, who projected the settlement in 1818.
roch-et (*roch'et*), *n.* a linen vestment worn by a bishop resembling a surplice open at the sides.
rock (*rok*), *n.* a large mass of stone or stony matter; any mineral deposit; movement backward and forward: *v. i.* to move backward and forward.
Rockaway, N. Y. A summer resort, named from the Indian *ackewek*, "bushy."
rock-et (*rok'et*), *n.* a firework.
rock-wood (*'wood*), *n.* ligniform asbestos.
rock-y (*'i*), *adj.* full of, or resembling, rocks; stony; hard; inflexible.
Rocky mountains. Were first called *Montagnes de Pierres Brilliantes*, "mountains of brilliant stones," from the sparkling of the summits in the sunshine. Then came the more prosaic *Montagnes Rocheuses*, or "Rocky mountains;" and our present still more prosaic "The Rockies."
rod (*rod*), *n.* a long twig or shoot of any woody plant; a wand; measure of length equal to 5½ yards.
ro-dent (*rō'dent*), *adj.* gnawing: *n.* any animal of the Rodentia, an order of Mammalia.
Roderick (*rod'ĕr-ik*). From the Old German name *Roderic* or *Roderich*, from *rad-reich*, "rich or powerful in counsel." Fr., *Rodrigue;* Ger., *Roderich;* It., *Rodrigo;* Lat., *Rodericus;* Russ., *Rurik;* Sp., *Rodrigo, Roderigo*, or *Ruy.*
Rodrigo. See *Roderick.*
Rodriguez (Spanish, *rō-drē'geth*). The "son of Roderick."
roe (*rō*), *n.* a species of deer, the roebuck; the female of the hart; the spawn or sperm of fishes.
Roent-gen rays (*rĕnt'gen rāz*), a form of radiant energy emanating from the surface of an electrically excited vacuum tube opposite the cathode electrode having power of penetrating objects impervious to light or heat rays, affecting sensitive photographic films, and exciting fluoresence in certain salts. [Also called *X rays.*]
ro-ga-tion (*rō-gā'shun*), *n.* a litany; supplication.
Roger (*roj'ĕr*). Some translate this name "spear of fame," others "spear-red." It comes from *ratgar*, "a war councilor," or "prompt in counsel." Dutch, *Rutger;* Fr., *Roger;* It., *Rugiero;* Lat., *Rogerus;* Sp., *Rogerio.*
rogue (*rōg*), *n.* a dishonest person; knave; a sly, mischievous person; wag; term of endearment.
ro-guer-y (*rō'gĕr-i*), *n.* knavish or dishonest practices; cheating; mischievous or waggish conduct.
ro-guish (*rō'gish*), *adj.* fraudulent; dishonest; somewhat mischievous or sly.
★**roil** (*roil*, not *ril*), *v. t.* to render turbid; vex or irritate.
Roland or **Rowland** (*rō'land*, French *rō-lāN'*). Derived from the old Frankish name signifying "illustrious countryman." Danish, *Roland;* Dutch, *Rœland;* Fr., *Roland;* Ger., *Roland;* It., *Orlando* or *Rolando;* Lat., *Rolandus;* Port., *Rolando;* Sp., *Rolando.*
rôle (*rōl*), *n.* a part or character in a play, etc.; function or part.
roll (*rōl*), *v. i.* to turn like a wheel or on an axis; be moved with violence; rock: *v. t.* to revolve; inwrap; move on wheels: *n.* the act of rolling.
rol-lick (*rol'ik*), *v. i.* to move or act with a careless, swaggering air.
roll-ing (*rōl'ing*), *adj.* moving on, or as on, wheels; undulating; used for rolling: *n.* a circular motion; undulation.
ro-ly-po-ly (*rō-li-pō'li*), *n.* a game in which by rolling a ball into a certain hole it wins.
Ro-man (*'man*), *adj.* pertaining to Rome, the Romans, or to the church of Rome; noting the ordinary type used in printing.
Ro-man can-dle (*kan'dl*), a kind of firework.
Ro-man Cath-o-lic (*kath'ō-lik*), *adj.* pertaining to the church of Rome, of which the pope is the head: *n.* a member of the church of Rome.
ro-mance (*-mans'*), *n.* a work of fiction or adventure; novel; fable: *v. i.* to invent and tell fictitious stories; exaggerate; lie. [FICTION.]
Ro-mance (*-mans'*), *adj.* pertaining to the dialects of Latin and the languages which grew out of classic Latin, spoken in the old Roman provinces.
Ro-man-esque (*-man-esk'*), *n.* that style of architecture and ornamentation in vogue during the period of the later Roman empire: *n.* the dialect of Languedoc.
Romanoff (*rō-mä'nof*) **cape, Alaska.** Compliment to the prominent Russian statesman, Romanoff.
ro-man-tic (*-man'tik*), *adj.* extravagant; fanciful; ideal; full of wild and fantastic scenery.
ro-man-ti-cism (*'ti-sizm*), *n.* the reactionary movement in opposition to cold classical literary forms, begun in Germany in the 18th century.
Rom-a-ny (*rom'ä-ni*), *n.* a gipsy; gipsy language.
Rome. The French name of the city called *Roma* in Latin and Italian. Among the various guesses as to the meaning of the name, the most probable refers it to the word *gruma* or *groma*, "crossroads," spreading themselves at their junction into a sort of forum.
romp (*romp*), *n.* an unrestrained, boisterous girl; rough play or frolic: *v. i.* to play in a boisterous, unrestrained manner.
ron-deau (*ron'dō*), *n. pl.* rondeaux (*'dōz*), a little poem of thirteen verses or lines.
ron-del (*'del*), *n.* a poem of 14 lines; small, round tower.
rood (*rōōd*), *n.* 40 square poles or perches; a cross or crucifix.
rood loft (*'lôft*), the gallery in a church over the entrance to the choir where the rood was fixed.
★**roof** (*rōōf, roof*), *n.* the top covering of a house or other building: *v. t.* to cover with, or as with, a roof.
roof-tree (*'trē*), *n.* a roof beam; roof; home.
rook (*rook*), *n.* a bird of the crow family; a swindler or sharper.
rook-er-y (*'ĕr-i*), *n.* colony of rooks; place of low resort; low slum.
★**room** (*rōōm*, not *room*), *n.* unoccupied place or space; apartment of a house: *v. i.* to lodge.
room-y (*'i*), *adj.* spacious.
roor-back (*rōōr'bak*), *n.* a lie; fictitious report made for the purpose of influencing an election.
roost (*rōōst*), *n.* the pole, perch, etc., upon which a bird rests at night: *v. i.* to sit or sleep upon a perch.
roost-er (*'ĕr*), *n.* the domestic cock.
★**root** (*rōōt*, not *root*), *n.* that part of a plant that descends and fixes itself in the earth by which the plant is nourished: *v. t.* to fix by the root; implant deeply; to dig or burrow with the snout; eradicate (with *out*): *v. i.* to take root.
rope (*rōp*), *n.* a thick cord; small cable; halter; series of things connected: *v. t.* to fasten or draw with a rope.
rop-y (*rōp'i*), *adj.* like a rope; viscous.
Roque-fort (*rōk'fôr*), *n.* a French mold-streaked cheese made from ewe's milk.
Rosa. See *Rose.*
ro-sa-ceous (*rō-zā'shus*), *adj.* composed of several petals arranged in a circular form; consisting of roses.
Rosalia. A feminine name formed from the name *Rose.*
Rosalin (*roz'ä-lin*), **Rosalind** (*roz'ä-lind*). A feminine diminutive formed from the name *Rose.*
Rosamond (*roz'ä-mund*). Probably from *rosa mundi*, "rose of the world," corrupted to "rose of peace." Dutch, *Rozamond;* Fr., *Rosemonde;* It., *Rosmonda;* Lat., *Rosamunda.*
ro-sa-ry (*rō'zä-ri*), *n.* [*pl.* rosaries(*-riz*)], a garland or chaplet; a string of threaded beads by which prayers are counted.
rose (*rōz*), *n.* a plant of the genus *Rose* or its well-known flower; rose-color.
Rose. A feminine name derived from the Latin *rosa*, a "rose." The Romans sometimes called their sweethearts "rosa mea." Danish, *Rosa;* Dutch, *Rosa;* Fr., *Rose;* Ger., *Rose;* It., *Rosa;* Lat., *Rosa;* Sp., *Rosa;* Sw., *Rosa* or *Rosina.*
ro-se-ate (*rō'ze-āt*), *adj.* rose-colored; rose-like; blooming.
rose-ma-ry (*rōz'mä-ri*), *n.* a sweet-smelling evergreen shrub from which an aromatic water is distilled.
Rosemary. A feminine name formed from the Latin *rosmarinus*, "dew of the sea."
Rosetta (*rō-set'ta*). A diminutive derived from the name *Rose*, or from the Italian form *Rosa.*
ro-sette (*rō-zĕt'*), *n.* a cluster of ribbons arranged like a rose.
rose-win-dow (*'win-dō*), *n.* a circular window with compartments branching from the center.
rose-wood (*'wood*), *n.* a Brazilian wood used as a veneer.
ros-in (*roz'in*), *n.* another form of *resin*; specifically, inspissated turpentine: *v. t.* to rub with rosin.
ross (*ros*), *n.* the outer rough bark of trees; tanbark: *v. t.* to remove the outer bark or rough surface of.
Ross. Either as a name of a place by itself, or as a portion of a name, always means "a headland." It is a Celtic word, and is frequent in Scotland, as in *Rosslyn, Culross, Rossberg, Ardrossan*, etc.
ros-ter (*'tĕr*), *n.* list or muster roll showing how the duties of military officers, regiments, etc., are regulated.
ros-tral (*'tral*), *adj.* pertaining to, or like, a beak.
ros-trate (*'trāt*), *adj.* furnished with a beak or beak-like process.
★**ros-trum** (*ros'trum*, not *rō-strum*), *n.* [*pl.* rostrums (*'trums*), rostra (*'trä*)], the beak of a bird; a pulpit or platform; prow of an ancient war vessel.
ros-y (*rōz'i*), *adj.* like a rose; red; blooming; charming; very favorable.
rot (*rot*), *v. i.* to putrefy or become decomposed; decay: *v. t.* to make putrid or corrupt: *n.* putrefaction; decomposition; nonsense.
ro-ta-ry (*rō'tä-ri*), *adj.* turning on an axis; pertaining to rotation.
ro-tate (*'tāt*), *v. t.* to revolve on, or as on, an axis; cause to turn: *v. i.* to turn round like a wheel.
ro-ta-tion (*-tā'shun*), *n.* the act of turning round on an axis, like a wheel; regular succession.
rote (*rōt*), *n.* mechanical repetition, or learning without understanding.
ro-ti-fer (*rō'ti-fĕr*), *n.* an individual of the Rotifera, the wheel animalcules.
rot-ten (*rot'n*), *adj.* putrefied; decomposed; unsound; untrustworthy.
Rotten Row. The popular name corrupted from *Route en Roi*, "the way of the king," for a famous driveway and promenade in Hyde Park, London, much frequented by fashionables during the season.
ro-tund (*rō-tund'*), *adj.* spherical.
ro-tun-da (*-tun'dä*), *n.* a circular domed building. [Also *rotundo.*]
rou-ble (*rōō'bl*), *adj.* a Russian silver coin of varying value, used as a monetary unit (about 77 cents).
★**rou-é** (*rōō-ā'*), *n.* a fashionable sensualist; confirmed rake; debauchee.
rouge (*rōōzh*), *n.* a cosmetic of red color; *v. t.* to color or paint with rouge: *v. i.* to use rouge.
rough (*ruf*), *adj.* inequality of the surface; rugged; not smooth or plane; uneven: *adv.* roughly. [COARSE]
rou-lette (*rōō-let'*), *n.* a game of chance played with revolving disk and ball.
Roumania (*rōō-mā'ni-ä*). A modern kingdom on the lower Danube, comprising the former Turkish principalities of Wallachia and Moldavia. The kingdom was so named because the people, who speak a neo-Latin dialect derived from the colonists settled by Trajan in Dacia, designate themselves as *Rumeni* or *Romani* (Romans).
rounce (*rouns*), *n.* the handle of a printing press.
round (*round*), *adj.* circular; spherical; globular; cylindrical; plump; corpulent; whole: *adv.* on all sides; circularly: *n.* a circle, sphere, or globe; circuit or tour; routine: *prep.* about; on every side of; around: *v. t.* to make round; travel or pass round: *v. i.* to go the rounds. [CIRCUIT.]
round-a-bout (*'ä-bout*), *adj.* indirect; encompassing: *n.* a merry-go-round; a short coat or jacket.
roun-del (*roun'del*), *n.* a circle; roundelay.

round-e-lay (*round'ē-lā*), *n.* an ancient song or dance in which the passages are repeated.
round-hand (*round'hand*), *n.* penmanship in well-rounded letters.
Round-head (*'hed*), *n.* a contemptuous epithet applied to the Puritans by the Cavaliers, from the close-cut hair of the former.
round-house (*'hous*), *n.* a building having stalls for the housing of locomotives.
round-ly (*'li*), *adv.* in a round form; straightforwardly.
round rob-in (*'rob-in*), a petition having the signatures written in a circle so as not to show who signed it first.
rounds-man (*roundz'man*), *n.* a police inspector who visits the officers on their beats.
rouse (*rouz*), *v. t.* to awaken; stir to thought or action; drive (game) from a covert. [AWAKEN.]
Rouse's Point, N. Y. A village named from Jacques Rouse, a Canadian who settled here in 1783.
roust-a-bout (*roust'a-bout*), *n.* an idler or loafer; a laborer on a steam vessel.
rout (*rout*), *n.* total defeat and flight of an army; tumultuous crowd; uproar: *v. t.* to defeat and put to disorderly flight. [BEAT.]
★**route** (*rōōt*), *n.* way or road traveled; course; journey; march.
rou-tine (*rōō-tēn'*), *n.* course of business or official duties regularly pursued; regular habit or practice.
rove (*rōv*), *v. i.* to wander or ramble: *v. t.* to draw through an eye.
row (*rō*), *n.* line, file, or rank; excursion in a row-boat; (*rou*) noisy disturbance: *v. t.* (*rō*) to impel by means of oars: as to *row* a boat.
row-dy (*rou'di*), *n.* a rough, riotous fellow: *adj.* rough and riotous.
row-el (*'el*), *n.* the small sharp-pointed wheel of a spur; flat ring on a horse's bit.
Rowena (*rō-ē'nà*). A feminine name, which some consider to be of Saxon origin. Mr. Arthur derives it from *D. rouw*, "peace"; Anglo-Saxon *rinnan*, "to acquire"; others derive it from the Welsh *rhonwen*, "white shirt."
row-lock (*rō'lok*), *n.* the crutch or hollow in the wale of a boat in which the oar rests in rowing.
roy-al (*roi'al*), *adj.* pertaining to a king or to the crown; befitting or like a king; majestic; kingly.
Syn. ROYAL, regal, kingly. *Royal* signifies belonging to a king, in its most general sense; *regal* signifies appertaining to a king, in its particular application; *kingly* signifies properly like a king. A *royal* carriage, a *royal* residence, *royal* authority, all designate the general and ordinary appurtenances of a king; *regal* government, *regal* state, *regal* power, denotet he peculiar properties of a king; *kingly* always implies what is becoming a *king* or after the manner of a *king*; a *kingly* crown is such as a *king* ought to wear.
roy-al-ist (*-ist*), *n.* an adherent of a king or government by a king.
roy-al-ty (*'al-ti*), *n.* [*pl.* royalties (*-tiz*)], the character, or status, of a king; a percentage for the use of a patent or copyright.
rub (*rub*), *v. t.* to apply pressure with motion to the surface of; clean or scour; wipe; polish: *v. i.* to make a friction: *n.* the act of rubbing.
rub-ber (*'ēr*), *n.* one who, or that which, rubs; india rubber.
rub-bish (*'ish*), *n.* mixed or waste fragments; anything of no value.
rub-ble (*'l*), *n.* rough undressed stone; builder's rubbish.
Ruben. See *Reuben.*
ru-bes-cent (*rōō-bes'ent*), *adj.* becoming red.
ru-bi-cund (*'bi-kund*), *adj.* inclined to red.
ru-bric (*'brik*), *n.* the directions for liturgical use in prayer books, formerly printed in red: *adj.* pertaining to, or marked in, rubrics; red.
ru-bri-cate (*'bri-kāt*), *v. t.* to mark, or distinguish, with red.
ru-by (*'bi*), *n.* [*pl.* rubies (*'biz*)], a precious stone, varying in color from carmine red to crimson; a size of type used in England.
ruche (*rōōsh*), *n.* frilled or plaited lace, silk, etc., for edging dresses, etc.: *v. t.* to make, or ornament, with a ruche.
ruck (*ruk*), *v. t.* to wrinkle or crease: *n.* a wrinkle or crease; the crowd of horses that come in at the end of a race.
ruc-tion (*'shun*), *n.* a row; disturbance.
rud-der (*rud'ēr*), *n.* the frame of wood or metal by which a vessel is steered; anything that directs or governs.
rud-dle (*'l*), *n.* red ocher.
rud-dock (*'ok*), *n.* the robin redbreast.
rud-dy (*'i*), *adj.* approaching to redness; florid; flesh-colored: *v. t.* to make ruddy.
rude (*rōōd*), *adj.* rough; barbarous; uncultivated; harsh. [COARSE.]
rude-ness (*'nes*), *n.* the state of being rude; rude conduct; incivility; unskillfulness.
ru-di-ment (*rōō'di-ment*), *n.* first principle; anything in its first or undeveloped state: *v. t.* to instruct in first principles.
ru-di-men-ta-ry (*-men'tà-ri*), *adj.* pertaining to, or containing, first principles; in an undeveloped state. [Also *rudimental.*]
Rudolph (*rū'dolf*). From root of *Randolph* and *Rodolph.* Dutch, *Rudolf;* Fr., *Rodolphe;* Ger., *Rudolf;* It., *Rodolfo* or *Ridolfo;* Lat., *Rudolphus.*
rue (*rōō*), *v. t.* to lament or be sorry for; repent of: *n.* an herb of bitter taste and strong odor.
rue-ful (*rōō'fool*), *adj.* mournful; sad. [PITEOUS.]
ruff (*ruf*), *n.* a large frilled collar; anything plaited; a small fresh-water fish: *v. t.* to disorder or ruffle.
ruf-fian (*ruf'yan*), *n.* a brutal, boisterous fellow; any base, low character, as a robber.
ruf-fle (*'l*), *v. t.* to wrinkle, pucker, or disarrange; furnish or adorn with ruffles; annoy or vex: *v. i.* to grow rough or turbulent: *n.* agitation; discomposure.
Rufus (*rū'fus*). From the Latin, meaning "reddish," "having red hair." Lat., *Rufus.*
rug (*rug*), *n.* an adjustable floor covering, usually of a textile heavier than carpeting.
rug-ged (*rug'ed*), *adj.* having an uneven surface; rough; shaggy; brutal; uncouth; crabbed.
ru-in (*rōō'in*), *n.* overthrow; destruction; downfall; loss of happiness, etc.: *v. t.* to pull down, destroy. [DESTRUCTION, SUBVERT, ABUSE, FALL.]
ru-in-ous (*-us*), *adj.* fallen into ruin; decayed; consisting of ruins; destructive; hurtful.
rule (*rōōl*), *n.* standard or guide; maxim or precept; government; an instrument for drawing lines: *v. t.* to govern or control: *v. i.* to decide. [GOVERN.]
rul-er (*'ēr*), *n.* one who rules or governs; an instrument for ruling lines.
rul-ing (*'ing*), *p. adj.* governing or having control; marking with lines; predominant: *n.* a rule laid down by a judge or court.
rum (*rum*), *n.* spirit distilled from the fermented juice of the sugar cane: *adj.* strange; odd.
rum-ble (*'bl*), *v. i.* to make a low, heavy, continued sound: *n.* a rumbling sound.
ru-mi-nant (*rōō'mi-nant*), *adj.* chewing the cud: *n.* an animal that chews the cud.
ru-mi-nate (*'mi-nāt*), *v. i.* to chew the cud; meditate or muse; ponder: *v. t.* to chew again.
ru-mi-na-tion (*-nā'shun*), *n.* the act of chewing the cud; meditation.
rum-mage (*rum'āj*), *v. t.* to search carefully for; ransack: *v. i.* to make a careful search: *n.* a careful searching.
ru-mor (*rōō'mēr*), *n.* popular report; current story; *v. t.* to circulate by report. [FAME.]
rump (*rump*), *n.* the end of the backbone of an animal, with its adjacent parts: buttocks; fagend.
rum-ple (*rum'pl*), *n.* a fold or plait: *v. t.* to fold or plait; make uneven.
rum-pus (*'pus*), *n.* great disturbance.
run (*run*), *v. i.* to pass quickly with the legs over the ground; extend; flee for escape; contend in a race: *n.* the act of running; course run.
run-a-bout (*'a-bout*), *n.* a light, handy, open automobile adapted for ready service.
runes (*rōōnz*), *n. pl.* runic letters or poetry.
rung (*rung*), *n.* [*p. t.* of ring] step of a ladder; a floor-timber in a ship; spar.
ru-nic (*rōō'nik*), *adj.* pertaining to, or consisting of, runes: *n.* the alphabet of the earliest Teutonic nations.
run-ner (*'ēr*), *n.* one who runs; racer; messenger; keel to support a sleigh.
run-ning (*'ing*), *adj.* moving swiftly; kept for a race; being in motion: *n.* the act of moving swiftly; discharge of pus.
runt (*runt*), *n.* a dwarf animal; stump.
ru-pee (*rōō-pē'*), *n.* an East Indian coin, worth about 48 cents.
Rupert (*rū'pērt*). Etymologically the same name as *Robert.* Ger., *Ruprecht;* Lat., *Rupertus.*
rup-ture (*rup'tūr*), *n.* breach or interruption of friendly relations; hernia: *v. t.* to burst or break violently asunder: *v. i.* to suffer a breach or disruption.
ru-ral (*rōō'ral*), *adj.* pertaining to, or characteristic of, the country or agriculture; rustic.
Syn. RURAL, rustic. *Rural* applies to all country objects except man; it is, therefore, always connected with the charms of nature; *rustic* applies only to persons, or what is personal, in the country, and is, therefore, always associated with the want of culture.
ru-ral free de-liv-ery (*frē dē-liv'er-i*). A service of house-to-house free mail delivery maintained in the country by the government.
ru-ral-ist (*rōō'ral-ist*), *n.* one who leads a rural life.
Rurik. See *Roderick.*
ruse (*rōōz*), *n.* a trick; stratagem. [PRETENSE.]
rush (*rush*), *v. i.* to move or press forward with impetuosity: *n.* a driving forward with eagerness and haste; a plant of many species growing on wet ground.
rusk (*rusk*), *n.* a kind of light biscuit.
Russ. Same as *Russian.*
rus-set (*rus'et*), *adj.* reddish-brown; homespun; coarse: *n.* russet color; homespun cloth; a variety of apple.
Russia (*rush'à, rōō'shà*). Named from the *Roosi*, or *Russ*, a tribe of Norsemen in the ninth century.
Rus-sia leath-er (*rush'à leth'ēr*), a strong, soft leather prepared from the hides of sheep and cattle steeped in birch-oil.
rust (*rust*), *n.* the reddish matter formed on iron and steel; red oxide of iron: *v. i.* to contract rust.
rus-tic (*rus'tik*), *adj.* pertaining to, or characteristic of, the country; rural; unpolished; unadorned: *n.* a countryman; peasant. [RURAL.]
rus-ti-cate (*'ti-kāt*), *v. i.* to reside in the country: *v. t.* to banish for a time from college.
rus-ti-ca-tion (*-kā'shun*), *n.* residence in the country; temporary banishment from a college.
rus-tic-i-ty (*-tis'i-ti*), *n.* rural manners or simplicity; rudeness.
rus-tle (*rus'l*), *v. i.* to make a soft whispering sound, as the rubbing together of silk or dry leaves; to bestir one's self: *n.* a rustling.
rus-tler (*'ler*), *n.* one who rustles; an enterprising, successful man.
rus-tling (*'ling*), *n.* the soft whispering sound made by rubbing silk or dry leaves together; rustle.
rust-y (*rust'i*), *adj.* covered with rust; impaired by inactivity; rust-colored.
rut (*rut*), *n.* the copulation and sexual desire of deer and certain other animals; the track of a wheel; groove or hollow: *v. i.* to be moved with sexual desire, as deer, etc.
Ruth (*rōōth*). From the Hebrew *Ruth*, from *r'uth*, "appearance", "vision," "beauty."
ruth-less (*'les*), *adj.* cruel; pitiless.
ru-ti-lant (*rōō'ti-lant*), *adj.* shining.
ru-tile (*'til*), *n.* red oxide of titanium.
rye (*rī*), *n.* a hardy esculent plant closely allied to wheat; also its grain or seed.

S

sab-a-oth (*sab-ā'oth*), *n. pl.* armies; hosts.
Sab-bath (*'ath*), *n.* the seventh day of the week, observed by the Jews as a day of rest, commencing from sunset on Friday and ending at sunset on Saturday.
Sab-bat-ic-al year (*sab-bat'i-kal yēr*), *n.* among the ancient Jews, every seventh year, in which the lands and vineyards of the Israelites were allowed to remain fallow.
sa-ber, sa-bre (*sā'bēr*), *n.* a cavalry sword: *v. t.* to cut, wound, or kill with, or as with, a saber.
Sabina (*sà-bī'nà*). A feminine name derived from Sabina, wife of Adrian, celebrated for her private as well as her public virtues; one as chaste as a Sabine. Dutch, *Sabine;* Fr., *Sabine;* It., *Sabina;* Lat., *Sabina;* Sp., *Sabina;* Sw., *Sabina.*
Sabine (*sà-bēn'*) **river, La.** Some allege that it was so named by French voyagers, who applied the name *Sabine* because of a lively skirmish with the Indians on its banks, for wives. More likely it means "cypress," from the French word.
sa-ble (*sā'bl*), *n.* a kind of weasel valued for its handsome, dark, glossy fur.
sa-bot (*sà-bō'*), *n.* a wooden shoe worn by the peasantry of France, etc.
sac (*sak*), *n.* a bag or membranous receptacle; cyst.
sac-cade (*sak-kād'*), *n.* a sudden check with the bridle; strong pressure of the bow of a violin against the strings.
sac-cha-rine (*'à-rin*), *adj.* pertaining to, or having the qualities of, sugar: *n.* the uncrystallized sugar of maltwort.
sac-cha-rize (*'à-rīz*), *v. t.* to convert into sugar.
sac-cho-lac-tic (*-ō-lak'tik*), *adj.* obtained from the sugar of milk; mucic acid.
sac-cule (*'ūl*), *n.* a little sac or cyst.
sac-er-do-tal (*sas-ēr-dō'tal*), *adj.* pertaining to priests or to the priesthood; priestly.
sac-er-do-tal-ism (*-izm*), *n.* sacerdotal spirit or system; tendency to emphasize the priestly office or its sacred character.
sac-er-do-tal-ly (*-li*), *adv.* in a sacerdotal manner.
★**sa-chem** (*sā'chem*, not *sach'em*), *n.* a North American Indian chief.
sa-chet (*sà-shā'*), *n.* a small bag or cushion filled with a perfume.
sack (*sak*), *n.* a bag or pouch: *v. t.* to plunder or pillage; ravage.
sack-cloth (*'klôth*), *n.* coarse material of which sacks are made; coarse, rough cloth worn as a token of mourning.
sack-ful (*'fool*), *n.* the quantity a sack will hold.
sack-ing (*'ing*), *n.* coarse material used for making sacks.
Saco (*saw'kō*). River, and city in York county, Maine. Derived from an Indian word *sohk* or *sauk*, "pointing out"; hence the outlet or discharge of a river or lake.
★**sac-ra-ment** (*sak'rà-ment*, not *sā'krà-ment*), *n.* a sign or pledge of grace; an outward and visible sign of an inward and spiritual grace, instituted by Jesus Christ; holy baptism, the eucharist, Lord's supper.
sac-ra-men-tal (*-men'tal*), *adj.* pertaining to, or constituting, a sacrament; solemnly pledged.
Sacramento (*sak-rà-men'tō*). River, city, and county in California, named by the Spaniards, the word meaning "the sacrament."
sa-cred (*sā'kred*), *adj.* pertaining to religion or to religious uses; consecrated; inviolable. [HOLY.]
sac-ri-fice (*sak'ri-fīs*), *n.* the act of sacrificing or offering to a deity: *v. i.* to offer sacrifice.
sac-ri-fi-cial (*-ri-fish'al*), *adj.* pertaining to, consisting in, or offering, sacrifice. [Also *sacrificatory.*]
sac-ri-lege (*'ri-lej*), *n.* the crime of appropriating to one's self or to secular use what is consecrated to God or religion.
★**sac-ri-le-gious** (*sak-ri-lē'jus*, not *sak-ri-lij'us*), *adj* violating sacred things; guilty of sacrilege; profane.
sa-cring bell (*sā'kring bel*), *n.* the sanctus bell, rung when the Host is elevated at high mass.
sa-crist (*sā'krist*), *n.* a cathedral official who copies the music for the choir; minor canon; sacristan.
sac-ris-tan (*sak'ris-tan*), *n.* one who has the care of church vessels and movables.
sac-ris-ty (*'ris-ti*), *n.* an apartment in a church

where the sacred vessels, vestments, etc., are kept; vestry.

sac-ro-sanct (*sak'rō-sangkt*), *adj.* preëminently sacred or inviolable.

sa-crum (*sā'krum*), *n.* a triangular-shaped bone at the base of the vertebral column.

sad (*sad*), *adj.* [*comp.* sadder, *superl.* saddest], full of grief; mournful; sorrowful; sober or sedate; dark-colored. [DULL, GRIEF.]

sad-den ('*n*), *v. t.* to make sad or sorrowful; tone down: *v. i.* to become sad.

sad-dle ('*l*), *n.* a seat, usually of leather, for riding on horseback.

sad-dle-bow (*-bō*), *n.* the pieces which form the pommel or arched part of a saddle.

sad-dler-y ('*lĕr-i*), *n.* the business of a saddler; articles made by a saddler.

Sad-du-cee ('*yū-sē*), *n.* one of the ancient Jewish sect or school that adhered to the written law and denied the resurrection of the dead.

safe (*sāf*), *adj.* free from danger, injury, or damage; secure: *n.* a fire or burglar proof iron chest.

Syn. SAFE, secure. We may be *safe* without using any particular measure; but none can reckon on any degree of *security* without great precaution; a person may be very *safe* on the top of a coach, in the daytime; but if he wish to *secure* himself, at night, from falling off, he must be fastened.

Ant. EXPOSED, lost.

safe-con-duct (*-kon'dukt*), *n.* a guard or passport which insures a safe passage.

safe-guard ('*gärd*), *n.* one who, or that which, guards or protects; defense; protective warrants granted to a foreigner: *v. t.* to protect or guard safely.

safe-ty ('*ti*), *n.* freedom from danger, injury, or damage; safe-keeping; a bicycle with medium-sized wheels of equal height.

safe-ty lamp (*lamp*), a wire-gauze covered lamp used in mines.

safe-ty valve (*valv*), an automatic valve in a boiler which opens when the steam exceeds a certain pressure.

saf-fron (*saf'run*), *n.* a bulbous plant of the genus Crocus, the dried stigmas of which yield a deep yellow dye; deep yellow: *adj.* saffron-colored.

sag (*sag*), *v. i.* to sink down or yield; incline from an upright or horizontal position.

★**sa-ga-cious** (*sā-gā'shus*, not *sā'gash-us*), *adj.* mentally quick and discerning; judicious; wise; acute.

sa-gac-i-ty (*-gas'i-ti*), *n.* a readiness of apprehension; discriminative intelligence.

sag-a-more (*sag'ā-mōr*), *n.* a North American Indian chief

sa-gas (*sā'gaz*), *n. pl.* a class of prose epics embodying the myths and heroic tales of the ancient Scandinavians.

sage (*sāj*), *adj.* wise; discerning; well-judged; discriminating: *n.* a man of experienced wisdom; an aromatic herb.

Sag Harbor. Village in Suffolk county, New York. Derived from the Indian word *saggaponack*, "place where the ground nuts grow."

Saginaw (*sag'i-naw*). River, county, bay, and city in Michigan. Said to derive its meaning from an Indian word, *sauk-sahcoon*, "pouring out at the mouth," or "an outlet."

sa-go (*sā'gō*), *n.* a kind of granulated food starch from the pith of certain palms.

Sahara (*sa-hä'rä*). The great African desert; the word is simply an Arabic term for "desert."

sail (*sāl*), *n.* a sheet of canvas spread to catch the wind, by means of which a vessel is driven forward in the water; an excursion in some vessel: *v. t.* and *v. i.* to pass over in a ship; navigate.

sail-er ('*ĕr*), *n.* a vessel that sails, with special reference to its speed, or manner of sailing.

sail-ing ('*ing*), *n.* the art of navigation; the art of moving through water, or of setting sail.

sail-or ('*ĕr*), *n.* a mariner; seaman. [SEAMAN.]

saint (*sānt*), *n.* a holy or sanctified person; one eminent for piety and virtue.

St. Anthony, Minn. Named *St. Anthony* by Hennepin in July, 1680; a reference to his being a recollet of the province of St. Anthony in Artois, France. Indian name *Owahmenah*, "falling water."

St. Augustine (*sānt aw'gus-tēn*). A town in Florida, the oldest European settlement in the United States. Don Pedro Menendez de Aviles, sent by Philip II. of Spain in 1565 to drive out the French Protestant refugees, who, three years before, had reached Albemarle sound, arrived off the coast of Florida on St. Augustine's day, August 28th, and gave the name of the saint to the city which he founded shortly afterward.

St. Bernard (*sānt bĕr-närd'*), **Great.** An Alpine pass leading from Martigny, Valais, Switzerland, to Aosta, Italy, and connecting the valleys of the Rhone and the Dora Baltea. It was traversed by armies in Roman and mediæval times. The passage by the French army under Napoleon in May, 1800, is especially noteworthy.

St. Clair (*sānt klär'*) **river, Mich.** Also the lake, was named in honor of the founder of the Franciscan nuns, from the fact that La Salle reached it on the day consecrated to her (August 12th). He therefore named it *Sainte Claire* (St. Clara.)

St. Croix (*sānt kroi'*) **river, Me.** Means "holy cross," and was named by De Monts, from a circumstance in the two rivers of its mouth forming a cross.

St. Croix river, Wis. Le Seur says it was originally named *Madelaine* after Madelaine Radisson; then changed to *St. Croix*, after Monsieur St. Croix, who was drowned at its mouth, while exploring, about 1700. Indian name *hoganwauke-kim*, "the place where the fish lies."

Saint Elias. Mountain in Alaska, named for the saint upon whose day it was discovered.

St. George's channel. Named after the patron saint of England.

St. Helena (*sānt he-lē'nä*). An island in the South Atlantic belonging to Great Britain. Napoleon was exiled there, and resided at Longwood from 1815 until his death in 1821.

St. James' palace. A palace in London, adopted as a royal residence by Henry VIII., enlarged by Charles I., damaged by fire in 1809, and since restored. Though no longer occupied by the sovereign, it gives its name officially to the British court.

St. John river, Me. The name given by Pierre de Monts; Indian name *looshtook*, "long river."

Saint Johnsbury. Town in Caledonia county, Vermont, named for St. John de Crèvecœur, French consul at New York, and a benefactor of Vermont.

St. John's river, Fla. Indian name, *Yeacas* or *Walaka*, "river of many lakes." French named the stream *Riviere Mai*, Ribault having entered its waters in that month. The Spaniard, Francisco Gordillo, called it *Rio San Juan*, having reached it on June 24, 1521, "the day was set apart to honor the precursor of Christ." The word was afterward Anglicized by the English to *St. John's river*.

St. Lawrence river, N. Y. Named from the gulf, which received its name, *St. Lawrent* or *St. Lawrence*, from the French navigator Jacques Cartier, who entered its water August 10, 1535 (St. Lawrence's day).

St. Louis (*sānt lōō'is* or *lōō'i*), **Mo.** Named in honor of Louis XV. of France; the name originally applied to a depot established at this point February 15, 1764, by Pierre Laclede Siguest.

Ste. Marie, Sault (*sōō sānt mā'ri*, French *sō sant mä-rē'*), **Mich.** Schoolcraft says the French call a cascade, a *leap* or *sault*, but *sault* alone would not be distinctive; therefore, in conformity with their general usage, they added the name of a patron saint to the term by calling it *Sault de Sainte Marie*, that is, "leap of St. Marie," to distinguish it from other *leaps* or *saults*.

St. Paul. A city of Minnesota, named from the Chapel of St. Paul, a log chapel erected there by Roman Catholics. Prior to the adoption of *St. Paul*, it was known as *Pig's Eye*, from the nickname applied to a corpulent "one-eyed" Frenchman who located a "saloon-shanty" at that point. Indian name, *imnijaska*, "white rock," a reference to the sandstone bluff on which the city stands.

St. Petersburg. See *Petersburg*.

saint-ed (*sānt'ed*), *p. p.* canonized: *adj.* pious; holy; departed to heaven.

saint-ly ('*li*), *adj.* like, or befitting, a saint. [HOLY.]

sake (*sāk*), *n.* end; purpose; cause; account; regard; reason.

sa-laam (*sä-lām'*), *n.* an Oriental form of salutation or respect, meaning "peace."

sal-a-ble (*sāl'ä-bl*), *adj.* marketable.

sa-la-cious (*sä-lā'shus*), *adj.* lustful; impure.

sa-lac-i-ty (*-las'i-ti*), *n.* lustfulness. [Also *salaciousness*.]

sal-ad (*sal'ad*), *n.* raw herbs cut up and dressed with vinegar, oil, etc.

sal-ad days (*dāz*), years of youthful inexperience.

sal-a-man-der (*sal'ä-man-dĕr*), *n.* an amphibious animal resembling a newt, and fabled by the ancients to live in fire.

sal-a-man-drine ('*drin*), *adj.* resembling a salamander; fire-resisting or fire-enduring.

sal-a-ried (*sal'ä-rid*), *p. adj.* having a salary.

sal-a-ry ('*ä-ri*), *n.* recompense, usually periodical, for services rendered; stipend.

sale (*sāl*), *n.* the act of selling; exchange of a commodity for an agreed price; market; auction; demand.

Salem (*sā'lem*). City in Essex county, Massachusetts, so named by its early settlers because they hoped to enjoy peaceful security there. An Indian word meaning "peace."

Sal-ic law (*sal'ik law*). The law of the Salian Franks excluding females from the succession to the French throne.

sa-li-ence (*sā'li-ens*), *n.* the state of being salient.

sa-li-ent ('*li-ent*), *adj.* leaping; prominent; noting any angle less than two right angles; in heraldry, in a leaping position.

sa-line (*sā'lin*), *adj.* consisting of, containing, or like, salt: *n.* a salt spring.

sa-li-va (*sä-lī'vä*), *n.* the watery fluid or spittle secreted in the mouth.

sal-i-vate (*sal'i-vāt*), *v. t.* to produce an abnormal secretion in the mouth of.

sal-let (*sal'et*), *n.* a light helmet.

sal-low ('*ō*), *adj.* of a pale, sickly, yellow color: *n.* a small tree of the willow kind.

sal-ly ('*i*), *n.* [*pl.* sallies ('*iz*)], a sudden rushing forth of troops to attack the besiegers; sudden outburst of wit or fancy: *v. i.* to issue or rush forth suddenly.

sal-ma-gun-di (*-mä-gun'di*), *n.* a compound of chopped meats with other ingredients, seasoned, etc.; medley

★**salm-on** (*sam'un*, not *sä'mun*), *n.* a marine fish of the genus Salmo, which ascends fresh-water rivers to spawn.

salm-on trout (*trout*), a sea trout, resembling the salmon, but of smaller size.

Salome (*sä-lōm'*, *sä-lō'mē*). A feminine name, from the Hebrew *Solomon*, "peaceful."

sa-lon (*sä-lōn'*), *n.* a saloon; fine art gallery: *pl.* fashionable circles or assemblages. [*French*.]

sa-loon (*sä-lōōn'*), *n.* a hall or state apartment; large reception room; fine art exhibition; barroom or grogshop.

sal-pinx (*sal'pingks*), *n.* the Eustachian tube.

sal-si-fy (*sal'si-fi*), *n.* a plant of the aster family, which from the flavor of its edible root is called *oyster-plant* and *vegetable oyster*.

salt (*sawlt*), *n.* chloride of sodium, used for seasoning and the preservation of meat: *v. t.* to sprinkle or season with salt: *adj.* flavored, seasoned, or impregnated, with salt.

sal-tant (*sal'tant*), *adj.* leaping; dancing; in heraldry, same as salient.

sal-ta-tion (*-tā'shun*), *n.* a leaping or dancing.

sal-ta-to-ry ('*tä-tō-ri*), *adj.* dancing.

Salt Lake. County, and city in same county, in Utah, named for the famous lake of that state.

salt-less (*sawlt'les*), *adj.* without salt; insipid.

sa-lu-bri-ous (*sä-lū'bri-us*), *adj.* healthy. [HEALTHY.]

sal-u-ta-ry (*sal'ū-tā-ri*), *adj.* healthful; wholesome; beneficent. [HEALTHY.]

sal-u-ta-tion (*-ū-tā'shun*), *n.* act or manner of saluting; greeting, or act of paying respect. [SALUTE.]

sa-lute (*sä-lūt'*), *n.* a mark of military respect shown by raising the hand to the helmet, etc.; a kiss; greeting; salvo of artillery: *v. t.* to address with kind wishes; to make a salute.

Syn. SALUTE, salutation, greeting. A *salute* may consist either of a word or an action; *salutations* pass from one friend to another; the *salute* may be either direct or indirect; the *salutation* is always direct and personal; guns are fired by way of a *salute;* bows are given in the way of a *salutation; greeting* is frequently a particular mode of *salutation* adopted on extraordinary occasions, indicative of great joy or satisfaction in those who *greet*. [See *address*.]

sal-va-ble (*sal'vä-bl*), *adj.* capable of being saved.

sal-vage ('*vāj*), *n.* compensation given to those who assist at saving a vessel or cargo at sea; the goods or vessel saved.

sal-va-tion (*-vā'shun*), *n.* the act of saving; preservation from destruction; rescue.

Sal-va-tion Ar-my (*är'mi*). A religious organization formed on a quasi-military model.

★**salve** (*sav*), *n.* a healing ointment; a remedy or soothing application.

sal-ver (*sal'vĕr*), *n.* a tray on which anything is presented.

sal-vo ('*vō*), *n.* a discharge of a number of pieces of artillery, intended as a salute; general, simultaneous cheering.

Sa-mar-i-tan (*sä-mar'i-tan*), *adj.* pertaining to, or characteristic of, Samaria, or the Samaritans.

same (*sām*), *adj.* identical in kind or degree; exactly alike; before-mentioned.

same-ness ('*nes*), *n.* identity; similarity.

sam-o-var (*sam'ō-vär*) *n.* a Russian tea urn.

sam-phire ('*fir* or '*fĕr*), *n.* a marine plant growing usually on cliffs, and used as a pickle.

sam-ple ('*pl*), *n.* a specimen; model; pattern: *v. t.* to take a sample of.

sam-pler ('*plĕr*), *n.* a pattern; a piece of ornamental needlework for practice, etc.

Samson or **Sampson** (*sam'sn* or *samp'sn*). From the Hebrew *shimshon*, "illustrious sun"; "solar, like the sun;" "one who resembles the sun." Danish, *Samson;* Dutch, *Samson;* Fr., *Samson;* Lat., *Samson;* Port., *Sansao;* Sp., *Sanson;* Sw., *Simson*.

Samuel (*sam'ū-el*). From the Hebrew *sh'mu-El*, "heard of God." Danish, *Samuel;* Dutch, *Samuel;* Fr., *Samuel;* Hungarian, *Samuel;* It., *Samuele;* Lat., *Samuel;* Sp., *Samuel*.

San Antonio (*san an-tō'ni-ō*). City in Bexar county, Texas, named for the Roman Catholic mission, *San Antonio de Velero*, otherwise the *Alamo*.

san-a-to-ri-um (*san-ä-tō'ri-um*), *n.* a health retreat; an institution for the treatment of particular diseases.

san-a-to-ry ('*ä-tō-ri*), *adj.* conducive to health.

sanc-ti-fi-ca-tion (*sangk-ti-fi-kā'shun*), *n.* the act of sanctifying; state of being sanctified; consecration.

sanc-ti-fi-er ('*ti-fi-ĕr*), *n.* one who sanctifies.

sanc-ti-mo-ni-ous (*-ti-mō'ni-us*), *adj.* having the appearance of, or affecting, sanctity; hypocritical.

sanc-tion ('*shun*), *n.* the act of ratifying, or giving authority to, an act or opinion; authority; custom: *v. t.* to give sanction to; countenance. [COUNTENANCE].

sanc-ti-ty ('*ti-ti*), *n.* purity; inviolability; sacredness; solemnity; a saint. [HOLINESS.]

sanc-tu-a-ry ('*tū-ä-ri*), *n.* [*pl.* sanctuaries (*-riz*)], the most retired and sacred part of a temple, inviolable asylum; shelter; refuge.

sanc-tum ('*tum*), *n.* a sacred or private place.

sanc-tum sanc-to-rum (*sangk-tō'rum*), a most holy place; in the Jewish temple, the Holy of Holies; a place of the utmost privacy.

sanc-tus bell (*sangk'tus bĕl*), a bell rung at the more solemn parts of the mass.

sand (*sand*), *n.* fine particles of crushed or worn rock: *pl.* tracts of sand: *v. t.* to sprinkle with sand.

san-dal (*san'dăl*), *n.* a kind of shoe fastened by straps to the foot; a loose slipper.

san-dal-wood (*-wood*), *n.* a white-colored, odoriferous wood, used in cabinetmaking.

San Diego (*săn dē-ā'gō*), **Cal.** From the bay, which was named by Sebastian Vizcaino, Spanish navigator, who entered it November 12, 1603, in honor of the day saint, *San Diego d'Alcala.* A coincidence being that Vizcaino's vessel also was named *San Diego.*

sand-pi-per (*sand'pĭ-pĕr*), *n.* a name for various birds of the snipe and woodcock family.

Sandusky (*san-dus'ki*). Town in Illinois, county, river, and city in Ohio, whose name by some authorities is said to be derived from the Indian word *outsandouke,* "there is pure water here"; or *saanduste,* "large bodies or pools of water." Another authority states that it was named for Jonathan Sandousky, a Polish trader of the vicinity.

sand-wich (*sand'wich*), *n.* two thin slices of bread with ham, etc., between.

Sandwich Islands. Islands in the South Pacific, named by Captain Cook in compliment to Lord Sandwich, first lord of the admiralty.

sand-y (*'i*), *adj.* composed of, abounding in, of the color of, or covered with, sand; shifting; unstable.

Sandy. A Scottish name corrupted from *Alexander.*

Sandy Hook, N. Y. Namely, "sandy point," *Hook* being applied from the Dutch *haak,* "point."

sane (*săn*), *adj.* mentally sound or healthy. [SOUN.D]

sane-ness (*'nes*), *n.* the state or quality of being sane.

San Francisco. Bay, county, and city in same county, in California, said by some to have been named for the old Spanish mission of *San Francisco de Assisi,* by others to have been named for the founder of the order to which Father Junipero, the discoverer of the bay, belonged.

san-guif-er-ous (*sang-gwif'ĕr-us*), *adj.* conveying blood.

san-gui-fy (*'gwi-fī*), *v. i.* to form or produce blood: *v. t.* to convert into blood.

san-gui-na-ry (*'gwi-nā-ri*), *adj.* attended with much bloodshed; bloodthirsty; murderous; cruel.

san-guine (*'gwin*), *adj.* warm and ardent in temper; hopeful; confident: *n.* blood color: *v. t.* to stain with blood.

san-guin-e-ous (*-gwin'ē-us*), *adj.* pertaining to, abounding with, or constituting, blood; of a blood color.

San-he-drim (*san-hē'drim*), *n.* the great judicial council of the ancient Jews, composed of 71 priests, scribes, and elders, presided over by the high priest.

san-i-ta-ri-an (*san-i-tā'ri-an*), *adj.* having regard to the public health: *n.* an advocate or promoter of sanitary measures.

san-i-ta-ri-um (*-tā'ri-um*), *n.* a sanatorium, especially one where the treatment is prophylactic instead of therapeutic.

san-i-ta-ry (*san'i-tā-ri*), *adj.* pertaining to, connected with, or tending to promote, health, especially by legislative enactment.

san-i-ta-tion (*-tā'shun*), *n.* hygiene.

san-i-ty (*'i-ti*), *n.* saneness.

San Joaquin (*săn hō-ä-kēn'*). County and river in California. A Spanish phrase meaning "whom Jehovah has appointed."

San José (*săn hō-sā'*). City in Santa Clara county, California, named for the patron saint of Mexico, St. Joseph.

San Salvador (*săn săl-vä-dōr'*). Means "Holy Savior." This was the first land sighted by Columbus (October 11, 1492); he therefore gave it this name as a token of thanksgiving.

Sanskrit, (*san'skrit*). From the Hindu *sanscritu,* "polished," the learned language of the Hindustani and of the Brahmins, which was current at the time of Solomon. It is the parent of most modern languages. It contains the roots of Greek, Latin, Celtic, Slavonic, and German, and as it contains no exotic terms must be one of the primitive tongues.

Santa Barbara. County, and city in same county, in California, named for an old Spanish mission, which, in turn, probably received its name from the Santa Barbara channel, designated by Vizcaino as *Canal de Santa Barbara,* he having sailed through its waters, December 4, 1603, the day being St. Barbara's.

Santa Claus (*san'tä klawz*) or **Santa Klaus.** A modern adaptation of the Dutch *Sant Nikolaas* (St. Nicholas). As is now very well known, St. Nicholas was the patron saint of children and dispensed gifts to them on Christmas eve.

Santa Cruz (*săn'tä krōōs'*). Counties in Arizona and California, city and island in the latter state. A Spanish word meaning "holy cross."

Santa Fé (*săn'tä fā'*). County and city in same county, in New Mexico; city in Haskell county, Kansas, and town in Monroe county, Missouri. A Spanish phrase meaning "holy faith." The name originally given by Antonio de Espejo, in 1582, was *La Ciudad de la Santa Fé de San Francisco,* "the city of the holy faith of St. Francis."

Santiago (*săn-tē-ä'gō*). The capital of Chile, was founded in 1541 by Pedro de Valdivia, and placed under the protection of the patron saint of Spain. Iago is a form of Jacobus, and Santiago of Spain was St. James the Great, the elder brother of St. John.

sap (*sap*), *n.* the watery circulating juice of a plant; vital fluid: *v. t.* to deprive of vitality; undermine.

sap-id (*'id*), *adj.* savory.

sa-pi-ence (*sā'pi-ens*), *n.* knowledge; wisdom.

sa-pi-ent (*'pi-ent*), *adj.* wise; sagacious.

sap-ling (*sap'ling*), *n.* a young tree.

sap-o-na-ceous (*-ō-nā'shus*), *adj.* resembling, or having the qualities of, soap; unctuous.

sa-pon-i-fy (*sä-pon'i-fī*), *v. t.* [*p. t.* and *p. p.* saponified, *p. pr.* saponifying], to convert into soap by combination with an alkali.

sap-o-ros-i-ty (*sap-ō-ros'i-ti*), *n.* that quality in a substance which excites the sensation of taste.

sap-o-rous (*'ō-rus*), *adj.* having, or stimulating, flavor.

sap-per (*'ĕr*), *n.* one who saps; a soldier employed in sapping or digging trenches.

sap-phire (*saf'ir*), *n.* a precious stone of a blue color, a variety of corundum.

sap-py (*'i*), *adj.* full of sap; juicy.

Sara. A feminine name derived from the Italian form of *Sarah.*

sar-a-band (*sar'ä-band*), *n.* a Spanish dance; music for such a dance.

Saracen (*sar'ä-sen*). Is a term loosely used by mediæval writers to denote the Moslem races, and especially the foes of the Crusaders. It is a Greek corruption of the Arabic *sharqin,* "eastern" people, as opposed to the *maghrabī* or "western" people.

Saragossa (*sä-rä-gos'sä*). An ancient city of Spain; name corrupted from Cæsarea Augusta; its Basque name was *Saluba,* "the sheep's ford."

Sarah or **Sara** (*sā'rä*). From the Hebrew *Sarah,* variously rendered "female ruler, "governor," "princess," "noble lady," "leader," "commander." Dutch, *Sara;* Fr., *Sara;* Ger., *Sara;* It., *Sara;* Lat., *Sara;* Port., *Sara;* Sp., *Sara;* Sw., *Sarah.*

Saranac (*sar'ä-nak*) **Lake.** Village in Franklin county, New York. An Indian word meaning "river that flows under a rock."

Saratoga (*sar-ä-tō'gä*), **N. Y.** Uncertain. Termination *oga* or *aga* said to signify "place," the first part of the word thought by some to imply "hillside"; by others, a reference to the springs, *soragh* in some Indian dialects being the name for "salt"; *seitake* is given, meaning "on the heel," but no reason further than a probable corruption in pronunciation of the word. *Assarat,* "sparkling," *oga,* "place," is mentioned by Schoolcraft.

Sarawak (*sä-rä'wäk*). Malay *Sarakaw,* "the cove," or bay. British protectorate of western Borneo.

sar-casm (*sär'kazm*), *n.* a bitter, cutting, satirical expression.

sar-cas-tic (*-kas'tik*), *adj.* bitterly satirical. [Also *sarcastical.*]

sar-co-derm (*'kō-dĕrm*), *n.* the fleshy layer between the interior and exterior covering of a seed.

sar-coph-a-gus (*-kof'ä-gus*), *n.* a limestone used by the Greeks for coffins; a stone coffin.

sard (*särd*), *n.* a precious stone, a deep blood-red variety of carnelian.

sar-dine (*-dēn'*), *n.* a species of pilchard, abundant in the Mediterranean, and preserved in oil for exportation.

Sardinia (*sär-din'i-ä*). Italian, *Sardegna.* Bears the name of the *Sardi,* its early inhabitants, who may possibly be identified with the *Shardina,* or *Shardana,* one of the northern races who attacked Egypt in the reign of Meneptah. Another view is that it expresses the "land of the sardonion," a Greek term for a plant indigenous to this island.

sar-don-ic (*-don'ik*), *adj.* forced, bitter, or heartless: said of a laugh or smile.

sar-do-nyx (*'dō-niks*), *n.* a variety of agate.

sar-sa-pa-ril-la (*-sä-pä-ril'ä*), *n.* a twining shrub found in Mexico, etc., the root of which is used as a medicine.

sar-to-ri-al (*-tō'ri-al*), *adj.* pertaining to a tailor.

sash (*sash*), *n.* a band, ribbon, or scarf; a frame for holding panes of glass: *v. t.* to furnish with sashes.

Saskatchewan (*sas-kach'ē-won*). A river in British North America. The name is derived from the Indian, meaning "swift river."

sas-sa-fras (*'ä-fras*), *n.* a tree allied to the laurel, with a fragrant root, wood, and flowers.

Sa-tan (*sā'tan*), *n.* the Devil.

sa-tan-ic (*sä-tan'ik*), *adj.* pertaining to, or resembling, Satan; diabolical; infernal; very malicious.

satch-el (*sach'el*), *n.* a small bag for carrying books, papers, etc.; any handbag.

sate (*sāt*), *v. t.* to satisfy the appetites or desires of.

sat-een (*sat-ēn'*), *n.* a woolen or cotton fabric made in imitation of satin.

sat-el-lite (*sat'el-it*), *n.* a small planet revolving round a larger one; an obsequious attendant.

sa-ti-ate (*sā'shi-āt*), *v. t.* to fill, or gratify fully; surfeit; glut: *adj.* glutted.

sa-ti-e-ty (*sā-tī'ē-ti*), *n.* fullness of gratification beyond desire; repletion.

★**sat-in** (*sat'in,* not *sat'n*), *n.* a closely woven glossy silk: *adj.* made of, or like, satin.

sat-ire (*sat'ir*), *n.* a species of poetry in which contemporary vice and folly are held up to ridicule; sarcasm; ridicule.

sa-tir-ic (*sä-tir'ik*), *adj.* pertaining to, or containing, satire; addicted to satire. [Also *satirical.*]

sat-ir-ist (*sat'ĕr-ist*), *n.* a writer of satire; one who satirizes.

sat-ir-ize (*sat'ĕr-īze*), *v. t.* to assail or ridicule with satire.

sat-is-fac-tion (*sat-is-fak'shun*), *n.* the act of satisfying; the state of being satisfied; contentment. [CONTENTMENT, COMPENSATION.]

sat-is-fac-to-ry (*'tō-ri*), *adj.* giving satisfaction or content; making redress.

sat-is-fy (*'is-fī*), *v. t.* to gratify to the fullest degree; pay in full; discharge: *v. i.* to give satisfaction.

Syn. SATISFY, please, gratify. What *satisfies* is not always calculated to *please;* nor is that which *pleases* that which will always *satisfy;* plain food *satisfies* a hungry person, but does not *please* him when he is not hungry; *to gratify* is *to please* in a high degree, to produce a vivid *pleasure;* we may be *pleased* with trifles; but we are commonly *gratified* with such things as act strongly either on the senses or the affections.

sat-u-rate (*'ū-rāt*), *v. t.* to soak or imbue.

sat-u-ra-tion (*-rā'shun*), *n.* impregnation of one substance by another until the latter can contain no more.

Saturday. The day of Saturn, one of the planets of the solar system.

sat-ur-nine (*-ur'nin*), *adj.* under the influence of the planet Saturn; dull; morose; gloomy; phlegmatic.

sa-tyr (*sā'tĕr*), *n.* a sylvan Greek deity, attendant on Bacchus, represented with long, pointed ears, short horns, a man's body, and the legs of a goat.

sauce (*saws*), *n.* a liquid condiment or seasoning for food; pertness: *v. t.* to put sauce into.

sauce-box (*'boks*), *n.* a pert, impudent person.

sau-cer (*saw'sĕr*), *n.* a shallow piece of china, etc., in which a tea or coffee cup is placed.

sau-ci-ness (*'si-nes*), *n.* impudent pertness or boldness.

sau-cy (*'si*), *adj.* [*comp.* saucier, *superl,* sauciest], pert; impudent.

sauer-kraut (*sour'krout*), *n.* a pickle of chopped cabbage packed in layers with salt between, which causes fermentation.

Saugatuck (*saw'gä-tuk*), **Conn.** Indian *sauketuck,* "at the mouth of the stream with tides."

saul (*sawl*), *n.* an Indian timber tree, used for building purposes, and yielding the resin called dammar.

Saul. From the Hebrew *Shaul,* which Simonis translates "exoratus," *i. e.,* obtained by entreaty; and others, "asked for, or desired." Fr., *Saul;* Lat., *Saulus.*

Sault Ste. Marie, Mich. See *St. Marie, Sault.*

saun-ter (*sän'tĕr* or *sawn'tĕr*), *v. i.* to wander about idly; loiter; linger: *n.* a place for sauntering; idle walk or ramble. [LINGER].

sau-sage (*saw'säj*), *n.* the gut of an animal stuffed with seasoned minced meat.

sau-terne (*-tärn'*), *n.* a French white wine.

sav-a-ble (*säv'ä-bl*), *adj.* capable of being saved.

★**sav-age** (*sav'äj*), *adj.* uncivilized; wild; cruel; fierce; pitiless: *n.* barbarian. [CRUEL, FEROCIOUS.]

sav-age-ry (*'äj-ri*), *n.* the state of being wild or uncivilized; barbarism; brutal roughness.

sa-van-nah (*sä-van'ä*), *n.* an extensive open plain or meadow. [Also *savanna.*]

Savannah (*sä-van'nä*). Town in Wayne county, New York, and city and river in Georgia. The name derived from the Spanish word *savanne,* meaning "grassy plain."

sa-vant (*-vänn*), *n.* a man of learning or science. [*French.*]

save (*säv*), *v. t.* to bring out of danger or preserve from evil; rescue; lay by; take advantage of: *v. i.* to be economical: *prep.* except; not including. [DELIVER, KEEP.]

sav-in (*sav'in*), *n.* an evergreen tree or shrub with a dark foliage and bluish-green berries.

sav-ing (*säv'ing*), *adj.* preserving; frugal; parsimonious: *n.* an exception or reservation. [FRUGALITY, PENURIOUS.]

sav-ior (*säv'yĕr*), *n.* one who saves.

Sav-ior, Sav-iour, *n.* Jesus Christ, the Redeemer (with *the*).

sa-vor (*sā'vĕr*), *n.* flavor; taste; relish; scent: *v. i.* to have a particular flavor or smell.

sa-vor-y (*'vĕr-i*), *n.* an aromatic plant.

sa-voy (*sä-voi'*), *n.* a kind of winter cabbage with crisp curled leaves.

saw (*saw*), *n.* a cutting steel instrument with a toothed edge: *v. t.* to cut with, or as with, a saw: *v. i.* to be cut with a saw: *p. t.* of *see.*

saw-yer (*'yĕr*), *n.* one who saws timber into planks.

Saxon. Comes from the word *seax,* a short crooked sword; and so "the men of the sword."

Saxony (*saks'un-i*). A modern German kingdom, called *Sachsen* in German; the country of the Saxons.

sax-o-phone (*'ō-fōn*), *n.* a brass musical instrument with a single reed and clarinet mouthpiece.

say (*sā*), *v. t.* [*p. t.* and *p. p.* said (*sed*), *p. pr.* saying], to utter in words; declare; speak; decide: *v. i.* to speak; relate; answer: *imper.* tell me: *n.* speech. [SPEAK, ALLEGE, ANNOUNCE.]

scab (*skab*), *n.* an incrustation formed over a wound; a workman who takes the place abandoned by a striker.

scab-bard (*'ĕrd*), *n.* the sheath in which the blade of a sword is kept: *v. t.* to put into a scabbard.

scab-by (*skab'i*), *adj.* covered with, or full of, scabs; affected with scab.
scad (*skad*), *n.* the shad or horse mackerel.
scaf-fold (*skaf'ōld*), *n.* a temporary timber stage or structure; an elevated platform for the execution of a criminal: *v. t.* to furnish or support with a scaffold.
scaf-fold-ing (*-ing*), *n.* a scaffold; materials for erecting scaffolds; framework.
scal-a-ble (*skāl'ā-bl*), *adj.* capable of being scaled.
scal-a-wag (*skal'ā-wag*), *n.* a scamp; scapegrace.
scald (*skawld*), *v. t.* to burn with hot liquid or steam; injure by contact with any hot fluid: *n.* a burn or injury to the skin or flesh from a hot liquid or steam.
scald-ic (*'ik*), *adj.* pertaining to, or composed by, the scalds or Norse poets. [Also *skaldic*.]
scald-ing (*'ing*), *p. adj.* burning, as with a hot liquid or steam.
scale (*skāl*), *n.* a balance; the small bony or horny plates covering a fish, certain reptiles, and insects: *v. t.* to strip or clear of scales; clamber up; ascend by steps or by climbing: *v. i.* to separate and come off in thin layers.
★**sca-lene** (*skā-lēn'*, not *skā'lēn*), *adj.* having the sides and angles unequal: said of a triangle.
scal-lop (*skol'up*), *n.* a marine bivalve fish; a curving or recess: *v. t.* to cut the edge or border of in scallops or curves.
scal-loped oys-ters (*'upt ois'tērz*), *n. pl.* oysters baked with bread crumbs, etc.
scalp (*skalp*), *n.* the skin on the top of the head from which the hair grows: *v. t.* to deprive of the scalp.
scalp-el (*'el*), *n.* a small keen-edged knife.
scalp-er (*'ēr*), *n.* one who scalps; a person who buys and sells the unused parts of railway tickets.
scal-y (*skāl'i*), *adj.* covered with, or like, scales; mean; caddish.
scamp (*skamp*), *n.* a rascal; worthless fellow; rogue.
scam-per (*skam'pēr*), *v. i.* to run with speed; hasten away: *n.* a hasty flight.
scan (*skan*), *v. t.* to examine by counting the metrical feet or syllables; scrutinize or examine carefully.
scan-dal (*'dal*), *n.* something uttered that is false and injurious to the reputation of a person; opprobrium; defamation; disgrace. [DISCREDIT.]
scan-dal-ize (*-iz*), *v. t.* to offend by some supposed improper action or conduct.
scan-dal-ous (*-us*), *adj.* giving offense to the conscience or moral sense; exciting condemnation or opprobrium. [INFAMOUS.]
Scandinavia (*skan-di-nā'vi-ā*). A convenient name for the Swedish and Norwegian peninsula adopted from a passage in Pliny where the correct reading is probably *Scadinavia*, which Mr. Bradley refers to the Teutonic *shadino*, "dark." *Scadinavia*, the "land of darkness," was possibly at first a mythical name for the dark north, which was afterward applied to the Swedish peninsula.
Scan-di-na-vi-an (*-di-nā'vi-an*), *adj.* pertaining to Scandinavia, its language, literature, or people. [Also *Scandian*.]
scant (*skant*), *adj.* [*comp.* scanter, *superl.* scantest], not full or abundant; scarcely sufficient: *v. t.* to stint; treat illiberally; limit: *v. i.* to fail or become diminished.
scant-ling (*'ling*), *n.* a piece of timber cut or sawed of small size; the size to which a piece of timber is to be cut.
scant-y (*'i*), *adj.* [*comp.* scantier, *superl.* scantiest], narrow; barely sufficient; scant. [BARE.]
scape (*skāp*), *n.* the shaft of a column where it leaves the base.
scape-goat (*'gōt*), *n.* one who bears the blame for others.
scape-grace (*'grās*), *n.* a graceless, unprincipled fellow.
scap-ple (*skap'l*), *v. t.* to rough dress (stone) preparatory to hewing.
scap-u-la (*'ū-lā*), *n.* the shoulder blade.
scar (*skär*), *n.* a mark caused by a wound; mark or blemish: *v. t.* to mark with, or as with, a scar: *v. i.* to form a scar.
scar-ab (*skar'ab*), *n.* a lamellicorn beetle, scarabæus; a gem or seal cut in the form of a beetle, worn as a charm by the ancient Egyptians.
scarce (*skärs*), *adj.* not common; not plentiful; not equal to the demand. [RARE.]
scarce-ly (*'li*), *adv.* seldom; rarely; with difficulty. [HARDLY.]
scare (*skär*), *v. t.* to strike with sudden terror; frighten: *n.* a sudden fright or panic.
scare-crow (*'krō*), *n.* anything fantastic set up to scare away birds; a vain cause of terror; a guy.
scarf (*skärf*), *n.* a light handkerchief or tie for the neck; sash: *v. t.* throw on loosely; dress with a scarf.
scar-i-fy (*skar'i-fī*), *v. t.* to scratch or cut; to stir up and prepare for planting: as, to *scarify* the soil.
scar-la-ti-na (*skär-lā-tē'nā*), *n.* scarlet fever of a mild form.
scar-let (*'let*), *n.* a bright red color; cloth of such a color: *adj.* of a scarlet color.
scar-let fe-ver (*fē'vēr*), a contagious febrile disease characterized by a scarlet eruption.
scarp (*skärp*), *n.* a slope or declivity, nearly perpendicular: *v. t.* to cut perpendicularly or nearly so.
scath-ing (*skath'ing*), *adj.* injurious; hurtful; very severe or bitter.
scat-ter (*skat'ēr*), *v. t.* to strew or throw loosely about; disperse or dissipate: *v. i.* to be dispersed.
scat-ter-brained (*-brānd*), *adj.* giddy.
scav-enge (*skav'enj*), *v. t.* to cleanse, as streets, from mud and filth.
scav-en-ger (*'en-jēr*), *n.* a man employed to clean the streets; any animal that devours refuse or any other deleterious matter.
sce-na-ri-o (*shā-nā'rē-ō*), *n.* the sketch of a plot or chief incidents of a libretto or play.
scene (*sēn*), *n.* the time, place, or circumstance, etc., in which anything occurs: spectacle; exhibition.
scen-er-y (*'ēr-i*), *n.* the appearance of anything presented to the vision; general aspect.
scen-ic (*sen'ik*), *adj.* pertaining to scenery or to the stage; dramatic. [Also *scenical*.]
sce-no-gra-phy (*sē-nog'rā-fi*), *n.* the art of drawing in perspective.
scent (*sent*), *n.* odor; sense of smell; chase followed by means of the scent: *v. t.* to perceive by the olfactory nerves; smell; perfume.
scep-ter, scep-tre (*sep'tēr*), *n.* a staff borne by a sovereign as the emblem of authority; royal mace.
sched-ule (*sked'ūl*), *n.* a written or printed paper or parchment containing a list, or inventory: *v. t.* to place in a schedule.
scheme (*skēm*), *n.* plan; contrivance; purpose; plot: *v. t.* to design or plan; plot: *v. i.* to form a scheme or plan.
Schenectady (*sken-ek'tā-di*), **N. Y.** Originally spelled *Schenectada*, from the Indian *Schaunaughtada*, "river valley through or beyond the pine trees," there being a portage across the woodland neck, from the present site of Albany to the Mohawk river, at this point.
schism (*sizm*), *n.* a split or division.
schis-mat-ic (*siz-mat'ik*), *adj.* pertaining to, characteristic of, or implying, schism: *n.* one who creates or takes part in a schism.
schist (*shist*), *n.* any rock that splits into slates or slabs.
Schoharie (*skō-har'i*), **N. Y.** Corruption of the Indian *to-wos-sho'her*, "drift wood," from its collecting at this point, where the Line Kil and Little Schoharie flowed into the main stream.
schol-ar (*skol'ēr*), *n.* a student; disciple; man of letters; an undergraduate on the foundation of a college.
schol-ar-ly (*-li*), *adj.* like a scholar: *adv.* in the manner of a scholar.
schol-ar-ship (*'ēr-ship*), *n.* learning; erudition; maintenance for a scholar, awarded by an educational institution.
scho-las-tic (*skō-las'tik*), *adj.* pertaining to a scholar or to schools; scholar-like.
scho-las-ti-cism (*'ti-sizm*), *n.* the scholastic philosophy of the mediæval age.
Schönbrunn (*shön'broon*). Near Vienna, the suburban residence of the Austrian emperors, so called from a "beautiful spring" in the grounds of the palace, was erected in 1744 by Maria Theresa on the site of a former hunting seat.
school (*skōōl*), *n.* a place where instruction is given; scholars or pupils collectively; disciples of a particular teacher: *v. t.* to train or instruct. [TEACH.]
school-man (*'man*), *n.* [*pl.* schoolmen (*'men*)], one of the divines and philosophers in the middle ages.
schoon-er (*skōōn'ēr*), *n.* a vessel with 2 masts, sometimes 3, rigged fore and aft; a tall beer glass.
★**schot-tische** (*shot-ēsh'*), *n.* a kind of polka.
Schroon (*skrōōn*) **lake, N. Y.** Said to be a corruption of *Scharon*, and to have been applied in honor of the duchess of Scharon, favorite of Louis XIV. Others derive it from an Adirondack Indian word signifying "a child or daughter of the mountain."
Schuylkill (*skōōl'kil*) **river, Pa.** From the Dutch *schuylen-kill*, "hidden creek." The Swedes called it *Skierkillen*. Indian name was *ganshowehanne*, "the roaring stream."
sci-ag-ra-phy (*sī-ag'rā-fi*), *n.* the art or science of projecting or delineating shadows as they fall in nature.
sci-at-ic (*-at'ik*), *adj.* pertaining to, or affecting, the hip.
sci-at-i-ca (*'i-kā*), *n.* neuralgia of the sciatic nerve.
sci-ence (*'ens*), *n.* systematized knowledge of any one department of mind or matter. [KNOWLEDGE.]
sci-en-tif-ic (*-en-tif'ik*), *adj.* pertaining to, used in, or skilled in, science; skillful.
sci-en-tist (*'en-tist*), *n.* one skilled in, or devoted to, science.
scim-i-tar (*sim'i-tēr*), *n.* an Oriental sword with a curved blade having its edge on the convex side. [Also *scimeter*.]
scin-til-late (*sin'til-āt*), *v. i.* to emit sparks, fire, or igneous particles; twinkle.
sci-on (*sī'on*), *n.* the sprout or shoot of a plant; a descendant; heir.
sci-op-tic (*-op'tik*), *adj.* pertaining to the art of exhibiting luminous images in a darkened room or camera obscura.
Scioto (*sī-ō'tō*) **river, Ohio.** Shawnoese Indian word meaning "hairy," its waters at flood in the spring being filled with hairs, attributed to the herds of deer drinking or bathing in the water at the season of shedding their coats.
scis-sors (*siz'ērz*), *n. pl.* a cutting instrument resembling shears but smaller.
scle-rot-ic (*sklē-rot'ik*), *adj.* hard; noting the firm white outermost membrane of the eyeball.
scoff (*skôf*), *n.* an expression of scorn or contempt; ridicule; derision: *v. i.* to exhibit scorn or contempt: *v. t.* to treat or address with derision.
scold (*skōld*), *v. i.* to chide sharply or rudely: *v. t.* to find fault with: *n.* one who habitually scolds.
sconce (*skons*), *n.* a bulwark; small fort; protection.
scoop (*skōōp*), *n.* a large ladle; deep shovel; kind of scuttle: *v. t.* to take out, or up, with a scoop.
scoot (*skōōt*), *v. i.* to walk or run hastily.
scope (*skōp*), *n.* room or opportunity for free outlook or action; aim or intention; design: *suffix* meaning *an instrument for viewing*, as microscope.
scor-bu-tic (*skôr-bū'tik*), *adj.* pertaining to, or affected by, scurvy.
scorch (*skôrch*), *v. t.* parch, shrivel, or affect painfully with heat: *v. i.* to be scorched.
score (*skôr*), *n.* a notch or incision, especially one made as a reckoning; the number 20: *v. t.* to make a score of.
sco-ri-a (*skō'ri-ā*), *n.* [*pl.* scoriæ (*-ē*)], volcanic cinder; slag formed after the fusion of metallic ores.
sco-ri-a-ceous (*-ā'shus*), *adj.* pertaining to, or resembling, scoria.
scorn (*skôrn*), *n.* extreme and lofty contempt; haughty disdain: *v. t.* to hold in extreme contempt or disdain. [CONTEMN.]
scorn-ful (*'fool*), *adj.* full of scorn; contemptuous; disdainful.
scor-pi-on (*skôr'pi-un*), *n.* an individual of the genus Scorpio, furnished with lobster-like claws, and armed with a poisonous sting in the tail; a painful scourge.
scotch, *n.* a wedge, etc., to prevent slipping or rolling; a slight cut or incision: *v. t.* to cut or wound superficially.
sco-ti-a (*skō'shi-ā*), *n.* the hollow molding in the base of an Ionic column.
Scotland. Originally *Caledonia*, meaning, literally, the hilly country of the Caels, or Gaels, signifying "a hidden rover."
Scotland Yard. A short street in London, near Trafalgar square. Here formerly were the headquarters of the metropolitan police, now removed to new Scotland Yard on the Thames embankment, near Westminster bridge.
scoun-drel (*skoun'drel*), *n.* a man without honor or virtue; low, worthless fellow.
scour (*skour*), *v. t.* to clean by friction; cleanse from grease, dirt, and make bright; search thoroughly; purge.
scourge (*skûrj*), *n.* a whip with thongs used as a punishment: *v. t.* to whip severely; afflict or harass greatly.
scout (*skout*), *n.* a person sent out to obtain and bring in information, especially of the movements, etc., of an enemy: *v. i.* to act as a scout.
scow (*skou*), *n.* a large flat-bottomed boat with square ends: *v. t.* to transport in a scow.
scowl (*skoul*), *v. i.* look sullen or angry: *n.* the wrinkling of the brows in displeasure or anger; frown.
scrab-ble (*skrab'l*), *v. i.* to scrawl or scribble; make irregular, unmeaning marks: *v. t.* to mark with irregular lines or letters.
scrag (*skrag*), *n.* anything thin, lean, or rough; something merely skin and bones.
scrag-gy (*'i*), *adj.* lean, thin, and rough; rough, with irregular points.
scram-ble (*skram'bl*), *v. i.* to clamber with the hands and feet: *v. t.* to toss together at random: *n.* a rude, eager struggle.
scrap (*skrap*), *n.* a small or detached piece; fragment; a scrimmage: *v. i.* to engage in a scrimmage.
scrap-book (*'book*), *n.* a blank book for the pasting in of newspaper extracts, etc.
scrape (*skrāp*), *v. t.* to make a harsh or grating noise on; rub with something sharp; clean by rubbing: *n.* the act, noise, or effect of scraping; difficulty; perplexity.
scratch (*skrach*), *v. t.* to mark or tear the surface of with something pointed; wound slightly: *v. i.* to use the nails or claws in tearing or digging.
scrawl (*skrawl*), *v. t.* and *v. i.* to write or draw irregularly or hastily; scribble: *n.* hasty, irregular, or illegible writing; scribble.
screak (*skrēk*), *n.* a shriek; screech.
scream (*skrēm*), *n.* a sharp, shrill cry, as of fear or pain: *v. i.* to utter such a cry.
screech (*skrēch*), *n.* a harsh, shrill cry: *v. i.* to utter a harsh, shrill cry.
screed (*skrēd*), *n.* loud, shrill sound; a piece of poor prose or verse.
screen (*skrēn*), *n.* a light movable partition for protection; coarse sieve: *v. t.* to shelter or conceal; protect. [COVER.]
screw (*skrōō*), *n.* a cylinder of metal or wood grooved spirally: *v. t.* apply a screw to; twist.
screw pro-pel-ler (*-prō-pel'ēr*), a spiral-bladed wheel at the stern of a steam vessel for propelling it; the vessel thus propelled.
scrib-ble (*skrib'l*), *v. t.* to write hastily and carelessly: *v. i.* write carelessly and without regard to correctness: *n.* hasty, careless writing.
scribe (*skrīb*), *n.* a writer; clerk; amanuensis; a teacher or copyist of the Jewish law: *v. t.* to adjust.
scrim (*skrim*), *n.* a kind of fabric of cotton or linen for making blinds, etc.
scrim-mage (*'āj*), *n.* a general quarrel or fight.

scrimp (*skrimp*), *v. t.* to make small, narrow, or short: *v. i.* to be parsimonious or miserly: *adj.* curtailed: *n.* a niggard or miser. [FRUGALITY.]
scrip (*skrip*), *n.* a satchel; schedule; certificate; writing.
script (*skript*), *n.* a piece of writing; style of writing.
scrip-tur-al (*skrip'tūr-al*), *adj.* pertaining to, contained in, or according to, the Scriptures; biblical.
Scrip-ture (*'tūr*), *n.* sacred writing; biblical text: *pl.* the books of the Old and New Testaments; the Bible.
scrive-ner (*skriv'nĕr*), *n.* one who draws up contracts, prepares writings, etc.
scrof-u-la (*skrof'ū-lä*), *n.* a disease caused by the formation and deposition of tubercle in the organs and tissues of the body.
scrof-u-lous (*-lus*), *adj.* pertaining to, of the nature of, or affected with, scrofula.
scroll (*skrōl*), *n.* a roll of paper or parchment; a convoluted spiral ornament.
scro-tum (*skrō'tum*), *n.* the pouch which contains the testes.
scrouge (*skrouj*), *v. t.* to crowd or squeeze.
scrub (*skrub*), *v. t.* to rub hard; wash with rubbing or a wet brush: *v. i.* to clean or scour: *n.* one who labors hard and lives meanly.
scrub-by (*'i*), *adj.* mean and small; stunted in growth; covered with brushwood; unshaven.
scrump-tious (*skrump'shus*), *adj.* nice; excellent; fine.
scru-ple (*skrōō'pl*), *n.* 1-3 of a dram, or 20 grains; hesitation, especially from conscientious motives: *v. i.* to hesitate from conscientious motives.
scru-pu-lous (*'pū-lus*), *adj.* full of scruples; conscientious; exact; careful; strict.
scru-ti-nize (*'ti-nīz*), *v. t.* to inspect or examine closely.
scru-ti-ny (*'ti-ni*), *n.* close inspection or examination; minute inquiry.
scud (*skud*), *v. i.* to run quickly; run before a gale of wind with little or no sail spread: *n.* the act of scudding.
scuf-fle (*skuf'l*), *v. i.* to fight or struggle confusedly: *n.* a struggle for mastery with close grappling.
scull (*skul*), *n.* one of a pair of short oars; an oar used at the stern of a boat with a scull or sculls: *v. i.* to impel a boat with a scull or sculls.
scul-ler-y (*'ĕr-i*), *n.* [*pl.* sculleries (*-iz*)], a place where culinary utensils, etc., are kept and cleansed.
scul-lion (*'yun*), *n.* a servant employed in the menial work of a scullery.
sculp-tor (*skulp'tĕr*), *n.* one who practices the art of sculpture.
sculp-tur-al (*'tūr-al*), *adj.* pertaining to sculpture.
sculp-ture (*'tūr*), *n.* the art of carving, cutting, or hewing stone or other material; carved work: *v. t.* to represent in, or fashion by, sculpture.
scum (*skum*), *n.* extraneous matter or impurities which rise to the surface of liquids; anything worthless or vile.
scup-per (*skup'ĕr*), *n.* a hole or tube in the side of a ship to carry off deck water.
scurf (*skĕrf*), *n.* minute, white, flaky scales; loosely adherent matter.
scurf-y (*'i*), *adj.* [*comp.* scurifier, *superl.* scurfiest], pertaining to, producing, covered with, or like, scurf.
scur-rile (*skur'il*), *adj.* befitting a buffoon or vulgar jester.
scur-ril-ous (*'il-us*), *adj.* using the low, indecent language of the vulgar; mean.
scur-ry (*skur'i*), *v. i.* [*p. t.* and *p. p.* scurried, *p. pr.* scurrying], to hasten or move rapidly along: *n.* hurried movement.
scur-vy (*'vi*), *adj.* affected by scurvy; vile; contemptible: *n.* a disease; a condition of anæmia.
Scutari (*skōō'tä-rē*). In Turkey, from *uskudar*, "a messenger," having been in remote periods, what it is to this day, a station for Asiatic couriers.
scutch (*skuch*), *v. t.* to dress (flax or cotton) by beating.
scutch-eon (*'un*), *n.* an escutcheon; shield for a keyhole.
scut-tle (*skut'l*), *v. i.* to hasten or hurry: *v. t.* to cut a hole or holes in (a ship) to sink it: *n.* a pan for holding coals; hatchway or small opening.
scythe (*sīth*), *n.* a curved cutting instrument used for mowing grass, etc.
sea (*sē*), *n.* an expanse of salt water; the ocean; swell of the ocean.
sea bear (*'bâr*), the polar bear.
sea calf (*'käf*), the seal.
sea cow (*'kou*), walrus.
sea cu-cum-ber (*'kū-kum-bĕr*), the trepang.
sea dev-il (*'dev-il*), a fish with a large head and great mouth.
sea dog (*'dog*), an old sailor.
sea el-e-phant (*'el-ē-fant*), a variety of seal.
sea-far-ing (*'fär-ing*), *adj.* following the occupation of a sailor.
seal (*sēl*), *n.* a carnivorous marine mammal, valuable for its skin and oil; a stamp or die engraved with some device; wax or other soft substance; that which seals or fastens: *v. t.* to fasten with a seal; ratify or confirm.
sea li-on (*sē' li-un*), a name for several large species of seals.
seam (*sēm*), *n.* line of junction or union; thin layer: *v. t.* to form a seam upon or of; scar: *v. i.* to crack open.
sea-man (*sē'man*), *n.* one engaged in navigation.
Syn. SEAMAN, waterman, sailor, mariner. All these words denote persons occupied in navigation. The *seaman*, as the word implies, follows his business on the *sea;* the *waterman* is one who gets his livelihood on fresh *water;* the *sailor* and the *mariner* are both specific terms to designate the *seaman;* every *sailor* and *mariner* is a *seaman;* although every *seaman* is not a *sailor* or *mariner;* the former is one who is employed about the laborious part of the vessel; the latter is one who traverses the ocean to and fro, who is attached to the *water* and passes his life upon it.
sea mew (*sē' mū*), a species of gull.
seam-stress (*sēm'stres*), *n.* a needlewoman.
seam-y (*'i*), *adj.* showing, or like, seams.
seam-y side (*sīd*), the worst side.
★**sé-ance** (*sē'ans*, French *sā'äNs*), *n.* a meeting of spiritualists.
sear (*sēr*), *v. t.* cauterize; brand; render callous or insensible.
search (*sĕrch*), *v. t.* to seek for: *v. i.* to make inquiry; seek: *n.* the act of seeking or looking for something. [SEEK.]
search war-rant (*'wor-ant*), *n.* a warrant to search a house.
seared (*sērd*), *adj.* hardened; callous; indifferent; cauterized.
sea-son (*sē'zn*), *n.* any particular time as distinguished from others: *v. t.* to mature; spice: *v. i.* to become mature, acclimated, inured. [TIME.]
sea-son-a-ble (*-ä-bl*), *adj.* occurring, or done, in proper time. [TIMELY.]
sea-son-ing (*-ing*), *n.* that which is added to give relish to food.
seat (*sēt*), *n.* that on which any one sits; post or authority; site; residence: *v. t.* to place on a seat; cause to sit down; install; fix.
Seattle (*sē-at'l*). City in King county, Washington, named for the chief of the Duwamish tribe of Indians, *See-aa-thl.*
Sebago (*sē-bā'gō*) **pond, Me.** From the Indian, meaning "great water," or "place or region of river lake."
Sebastian (*sē-bas'chan*, Spanish *sā-bäs-tē-än'*). From the Greek rendering of Augustus, and signifying "to be venerated or reverenced", "venerable." Dutch, *Sebastiaan;* Fr., *Sebastien;* It., *Sebastiano;* Lat., *Sebastianus;* Port., *Sebastiao;* Russ., *Sevastian;* Sp., *Sebastian;* Sw., *Sebastian.*
Sebastopol (*sē-bas'tō-pōl*). The "august" or "imperial city," was founded and named by Potemkin soon after the conquest of the Crimea in 1783.
se-cant (*sē'kant*), *adj.* cutting into two parts.
se-cede (*sē-sēd'*), *v. i.* to withdraw from fellowship, communion, or association.
se-ces-sion (*-sesh'un*), *n.* the act of seceding.
se-clude (*-klōōd'*), *v. t.* to keep apart.
se-clu-sion (*-klōō'zhun*), *n.* separation or withdrawal from the society of others; privacy. [PRIVACY.]
se-clu-sive (*'siv*), *adj.* keeping in seclusion.
sec-ond (*sek'und*), *adj.* immediately following the first; inferior; subordinate: *n.* one, or that, next the first; one who attends on the principal at a duel; backer; the 1-60th part of a minute of time or of a degree: *v. t.* to follow; assist; support. [ABET.]
sec-ond-a-ry (*'und-ā-ri*), *adj.* succeeding next in order to the first; subordinate; inferior.
se-cre-cy (*sē'krē-si*), *n.* [*pl.* secrecies (*-siz*)], the state or quality of being hidden; concealment.
se-cret (*'kret*), *adj.* hidden or concealed; silent; private: *n.* that which is concealed.
Syn. SECRET, hidden, latent, occult, mysterious. What is *secret* is known to some one; what is *hidden* may be known to no one; it rests in the breast of an individual to keep a thing *secret;* it depends on the course of things if anything remains *hidden.* The *latent* is the *secret* or concealed, in cases where it ought to be open; a *latent* motive is that which a person intentionally, though not justifiably, keeps to himself; an *occult* science is one that is hidden from the view of persons in general, which is attainable by but few; *occult* causes or qualities are those which lie too remote to be discovered by the inquirer; the operations of Providence are said to be *mysterious,* as they are past finding out. [See *clandestine, mysterious.*]
Ant. APPARENT, obvious, open, known.
★**sec-re-ta-ry** (*sek'rē-tä-ri*, not *sek'ē-tä-ri*), *n.* [*pl.* secretaries (*-riz*)], a person employed to assist another in correspondence, etc.; an escritoire.
se-crete (*sē-krēt'*), *v. t.* to hide or conceal; separate from the blood, sap, etc. [CONCEAL.]
se-cre-tion (*-krē'shun*), *n.* the act of secreting; any substance secreted.
se-cret-ive (*-krēt'iv*), *adj.* tending to keep secret.
se-cret-ive-ness (*-krēt'iv-nes*), *n.* the quality of being secretive.
se-cre-to-ry (*-krē'tō-ri*), *adj.* performing, or connected with, the office of secretion.
sect (*sekt*), *n.* a number of persons united by some particular religious doctrines.
sec-ta-ri-an (*sek-tā'ri-an*), *adj.* pertaining to, or characteristic of, a sect: *n.* a member of a sect.
sec-ta-ri-an-ism (*-an-izm*), *n.* the spirit, tendency, or principles of a sect; adherence to some particular sect.
sec-tion (*'shun*), *n.* the act of cutting, or separation by cutting; part or division; 1-36th of a township.
sec-tion-al-ism (*'shun-al-izm*), *n.* local patriotism.
sec-tor (*sek'tĕr*), *n.* that part of a circle included between two radii and the arc.
sec-u-lar (*sek'ū-lĕr*), *adj.* worldly; temporal: *n.* a layman.
sec-u-lar-ism (*-izm*), *n.* the principles or tenets of the secularists.
sec-u-lar-ist (*-ist*), *n.* one who objects to religious teaching in elementary schools.
sec-u-lar-i-ty (*-lar'i-ti*), *n.* worldliness.
sec-u-lar-ize (*'ū-lĕr-īz*), *v. t.* to render worldly or unspiritual.
se-cure (*sē-kūr'*), *adj.* free from danger; safe; protected; confident: *v. t.* to make safe; protect; confine; gain possession of. [CERTAIN.]
se-cur-i-ty (*'i-ti*), *n.* [*pl.* securities (*-tiz*)], the state or quality of being secure; assurance; certainty; pledge. [DEPOSIT.]
se-dan (*-dan'*), *n.* a portable covered chair or vehicle carried by two men by means of a pole on either side. [Also *sedan chair.*]
se-date (*sē-dāt'*), *adj.* calm; composed; quiet; serious; unruffled. [CALM, COMPOSED.]
sed-a-tive (*sed'ä-tiv*), *adj.* allaying nervous irritation and irritability; assuaging pain: *n.* medicine having such an effect.
sed-en-ta-ry (*'en-tä-ri*), *adj.* characterized by much sitting; inactive.
sedge (*sej*), *n.* a coarse grass of the genus Carex.
sedg-y (*'i*), *adj.* overgrown with sedge.
sed-i-ment (*sed'i-ment*), *n.* dregs; lees.
★**sed-i-men-ta-ry** (*-i-men'tä-ri*), *adj.* pertaining to, or formed by, or consisting of, sediment.
se-di-tion (*sē-dish'un*), *n.* any offense against the state less grave than insurrection or treason; the stirring up of such. [INSURRECTION.]
se-di-tious (*'us*), *adj.* pertaining to, of the nature of, or characterized by, sedition. [FACTIOUS.]
se-duce (*-dūs'*), *v. t.* to entice from the paths of rectitude, duty, or virtue.
se-du-cer (*-dū'sĕr*), *n.* one who seduces.
se-du-ci-ble (*'si-bl*), *adj.* capable of being seduced.
se-duc-tion (*-duk'shun*), *n.* the act or crime of seducing.
se-duc-tive (*'tiv*), *adj.* tending to seduce or lead astray; enticing.
se-duc-tive-ness (*-nes*), *n.* the state or quality of being seductive.
sed-u-lous (*sed'ū-lus*), *adj.* steadily industrious and persevering; diligent; untiring.
see (*sē*), *n.* diocese or jurisdiction of an archbishop or bishop: *v. t.* to perceive by the eye; observe; perceive mentally; pay a visit to; escort or accompany: *v. i.* to have the faculty of sight or of perceiving; take care or heed.
Syn. SEE, perceive, observe. The eye *sees* when the mind is absent; the mind and the eye or other senses *perceive* in conjunction; hence, we may say that a person *sees,* but does not *perceive;* we *observe* not merely by a simple act of the mind, but by its positive and fixed exertion.
seed (*sēd*), *n.* that part of a plant that contains the embryo of the future plant; semen; first principle or source; offspring: *v. i.* to sow, or shed the seed: *v. t.* to sprinkle with seed.
seed-y (*'i*), *adj.* abounding with, or run to, seeds; shabby.
see-ing (*sē'ing*), *n.* the act or power of sight: *conj.* inasmuch as; considering; since.
seek (*sēk*), *v. t.* [*p. t.* and *p. p.* sought, *p. pr.* seeking], to go in search of; look for; resort to; inquire for: *v. i.* to make search or inquiry; try or endeavor.
seem (*sēm*), *v. i.* to appear; look; pretend.
Syn. SEEM, appear. *Seem* is said of that which is dubious, contingent, or future; *appear,* of that which is actual, positive, and past. A thing *seems* strange which we are led to conclude as strange from what we see of it; a thing *appears* clear when we have a clear conception of it.
seem-ly (*'li*), *adj.* fit or becoming; decent; proper; comely.
seer (*sēr*), *n.* prophet; one who sees.
see-saw (*sē'saw*), *n.* a reciprocating motion; a game played with a balanced plank: *v. i.* to move up and down with a reciprocating motion.
seethe (*sēth*), *v. t.* to boil: *v. i.* to be hot; be in a condition of boiling.
seg-ment (*seg'ment*), *n.* a part divided or set off; section.
seg-men-ta-tion (*-men-tā'shun*), *n.* the act of dividing into segments; state of being divided into segments.
seg-re-gate (*seg'rē-gāt*), *v. t.* to separate from others.
seign-ior (*sēn'yĕr*), *n.* a title of honor in use in southern Europe.
seign-ior-age (*'yĕr-āj*), *n.* something claimed or taken by virtue of sovereign prerogative.
seine (*sān*), *n.* a large fishing net.
seis-mic (*sīs'mik*), *adj.* pertaining to, or produced by, an earthquake.
seis-mo-graph (*'mō-gräf*), *n.* an instrument for recording seismic disturbances.
seis-mol-o-gy (*-mol'ō-ji*), *n.* the scientific study of earthquakes.
seiz-a-ble (*sēz'ä-bl*), *adj.* capable of being seized.
seize (*sēz*), *v. t.* to take possession of forcibly; grasp; snatch; take hold of. [LAY, ABDUCT.]
seiz-ure (*'ūr*), *n.* the act of seizing; sudden attack, as of a disease.
Selah. A masculine name derived from the Hebrew *shelah,* signifying a "weapon," "missile."
sel-dom (*sel'dum*), *adv.* rarely.
se-lect (*sē-lekt'*), *adj.* chosen or picked out: *v. t.* choose. [CHOOSE.]

se-lec-tion (*sē-lek'shun*), *n.* the act of selecting; the thing selected.
se-lect-man (*-lekt'man*), *n.* [*pl.* selectmen (*'men*)], one of a board of town officials.
se-le-ni-um (*-lē'ni-um*), *n.* a nonmetallic elementary substance, resembling lead.
sel-e-nog-ra-phy (*sel-ē-nog'rä-fi*), *n.* a description of the moon; the art of delineating the moon's surface.
self (*self*), *n.* [*pl.* selves (*selvz*)], one's own person; personal interest; personality: *adj.* very; particular.
self-ish (*'ish*), *adj.* attentive only to one's own interests.
se-li-um (*sē'li-um*), *n*, a metal claimed to have been discovered by Edward Mollard, a Frenchman. It is stated to have a density of 2.6, to be one-twelfth the cost of aluminium and lighter and stronger, melting point 600° C., is stronger than iron, but weaker than steel.
sell (*sel*), *v. t.* [*p. t.* and *p. p.* sold, *p. pr.* selling], to transfer to another for an equivalent: *v. i.* to practice selling; be sold: *n.* a hoax; an imposition.
selt-zer wa-ter (*selt'sĕr waw'tĕr*), a mineral water, mildly stimulative.
sel-vage (*sel'vej*), *n.* the edge of cloth; woven border. [Also *selvedge.*]
sem-a-phore (*sem'ä-fōr*), *n.* a telegraphic apparatus for signaling by means of arms, lanterns, flags, etc.
sem-blance (*'blans*), *n.* likeness; resemblance; exterior. [PRETENSE.]
se-men (*sē'men*), *n.* sperm.
sem-i, *prefix* meaning *half, partially.*
sem-i-co-lon (*'i-kō-lon*), *n.* a mark in punctuation (;).
sem-i-nal (*'i-nal*), *adj.* pertaining to, containing, or consisting of, seed.
sem-i-na-ry (*sem'i-nä-ri*), *n.* [*pl.* seminaries (*-riz*)], a place of education.
Se-mit-ic (*sē-mit'ik*), *adj.* pertaining to Shem, or to his descendants; noting, or belonging to, one of the great divisions of races and languages.
sen (*sen*), *n.* a small Japanese coin.
sen-ate (*sen'ät*), *n.* the upper house of Congress or of a state legislature.
sen-ate (*sen'ät*), *n.* an assembly or body of elders.
sen-a-tor (*'ä-tĕr*), *n.* a member of a senate.
sen-a-to-ri-al (*-tō'ri-al*), *adj.* pertaining to, or befitting, a senator or a senate.
send (*send*), *v. t.* [*p. t.* and *p. p.* sent, *p. pr.* sending], to throw, cast, or impel; cause to go: *v. i.* to dispatch a messenger.
Seneca (*sen'ē-kä*) **lake, N. Y.** From a tribe of Indians, the *Senecas;* known as the "great hill people" from a tradition that they broke out of the earth from a large mountain, on Canandaigua lake, known as *ge-nun-de-wah* or "great hill."
Senegambia (*sen-ē-gam'bi-ä*). A region of central Africa, so named because of its situation between the Senegal and Gambia rivers.
se-nile (*sē'nīl*), *adj.* pertaining to, characteristic of, or occasioned by, old age.
sen-ior (*sēn'yĕr*), *adj.* prior in age, dignity, rank, or office: *n.* one older than another; one older in dignity, rank, or office.
sen-na (*sen'ä*), *n.* the dried leaves of several plants of the genus Cassia.
sen-sate (*sen'sāt*), *adj.* perceived by, or through, the senses.
sen-sa-tion (*-sā'shun*), *n.* perception by the senses; an impression; state of excited feeling.
sen-sa-tion-al (*-al*), *adj.* pertaining to, having, es causing, sensation; emotional.
sen-sa-tion-al-ism (*-izm*), *n.* sensational writing or language.
sense (*sens*), *n.* the faculty by which objects are perceived; discernment; understanding; conviction; good mental capacity; correct judgment; opinion; meaning; signification; moral perception.
sense-less (*'les*), *adj.* incapable of sensation; foolish; stupid. [ABSURD.]
sen-si-bil-i-ty (*sen-si-bil'i-ti*), *n.* [*pl.* sensibilities (*-tiz*)], the state or quality or capacity of being sensible; delicacy of feeling.
sen-si-ble (*'si-bl*), *adj.* capable of being perceived by the senses or the mind; delicate; reasonable; intelligent. [FEEL, PHYSICAL.]
sen-si-tive (*'si-tiv*), *adj.* having keen sense or feeling; easily affected or moved; pertaining to, or depending upon, sensation.
sen-si-tize (*-tiz*), *v. t.* to render sensitive, etc.
sen-su-al (*'shū-al*), *adj.* pertaining to, consisting in, or affecting, the senses; carnal; voluptuous.
sen-su-al-ism (*-izm*), *n.* sensuality.
sen-su-al-ist (*-ist*), *n.* one who is sensual.
Syn. SENSUALIST, voluptuary, epicure. The *sensualist* lives for the indulgence of his *senses;* the *voluptuary* is devoted to his pleasures, and, as far as these pleasures are the pleasures of *sense,* the *voluptuary* is a *sensualist;* the *epicure* is one who makes the pleasures of *sense* his god, and in this sense he is a *sensualist* and a *voluptuary.* In the application of these terms, however, the *sensualist* is one who is a slave to the grossest appetites; the *voluptuary* is one who studies his pleasures so as to make them the most valuable to himself; the *epicure* is a species of *voluptuary* who practices more than ordinary refinement in the choice of his pleasures.
sen-su-al-i-ty (*-al'i-ti*), *n.* the state or quality of being sensual; indulgence of carnal gratifications.
sen-su-al-ize (*'shū-al-īz*), *v. t.* to make sensual.
sen-su-ous (*'shū-us*), *adj.* pertaining to, or addressed to, the senses; connected with sensible objects; full of passion.
sen-tence (*sen'tens*), *n.* judgment, opinion, or decision; series of words so arranged as to convey a complete thought: *v. t.* to condemn by judgment of a court. [DECISION, CONDEMN.]
sen-ten-tious (*-ten'shus*), *adj.* short and energetic; terse.
sen-ti-ence (*'shi-ens*), *n.* the state or quality of being sentient. [Also *sentiency.*]
sen-ti-ent (*'shi-ent*), *adj.* having the faculty or faculties of sensation and perception.
sen-ti-ment (*'ti-ment*), *n.* a thought prompted by passion or feeling; opinion; thought; maxim; a toast.
sen-ti-men-tal (*-men'tal*), *adj.* having, expressing, or given to, sentiment; romantic.
sen-ti-men-tal-ism (*-izm*), *n.* the quality of being sentimental. [Also *sentimentality.*]
sen-ti-nel (*'ti-nel*), *n.* one who watches or guards.
sen-try (*'tri*), *n.* [*pl.* sentries (*'triz*)], a sentinel, guard or watch.
se-pal (*sē'pal* or *sep'al*), *n.* one of the leaf-like divisions of the calyx of a flower.
sep-a-ra-bil-i-ty (*sep-ä-rä-bil'i-ti*), *n.* the quality of being separable or divisible.
sep-a-ra-ble (*'ä-rä-bl*), *adj.* capable of being separated or divided.
sep-a-rate (*'ä-rāt*), *v. t.* to part or divide; disunite; disconnect; set apart: *v. i.* to part; withdraw: *adj.* divided from the rest; disconnected; distinct. [ABSTRACT, DIVIDE.]
se-pi-a (*sē'pi-ä*), *n.* [*pl.* sepias (*-äz*)], a dark-brown [pigment.
se-poy (*'poi*), *n.* [*pl.* sepoys (*'poiz*)], an Indian native employed as a soldier in the British service in India.
sep-sine (*sep'sin*), *n.* ptomaines of septic poisoning.
sep-sis (*sep'sis*), *n.* infection by pathogenic bacteria; a putrefactive condition.
sept (*sept*), a *prefix* meaning 7, as *sept*angular: *adj.* having 7 angles.
September. The seventh month of the old Roman calendar, counted from March, which commenced the year previous to the addition of January and February by Numa in the year 713 B. C.
sep-ten-ni-al (*sep-ten'i-al*), *adj.* occurring once in, or containing, 7 years.
sep-tet (*sep-tet'*), *n.* a musical composition for 7 voices. [Also *septette.*]
sep-tic (*'tik*), *adj.* having the power to promote putrefaction: *n.* a substance having such an effect.
sep-til-lion (*-til'yun*), *n.* in the French system of numeration, followed in the United States, a number expressed by unity with 24 ciphers annexed; in the English system a number expressed by unity with 42 ciphers annexed.
sep-tu-a-ge-na-ri-an (*-tū-ä-jē-nā'ri-an*), *n.* a person 70 years old.
sep-ul-cher, sep-ul-chre (*sep'ul-kĕr*), *n.* a grave or tomb; place of burial: *v. t.* to bury; entomb.
se-pul-chral (*sē-pul'kral*), *adj.* pertaining to a sepulcher; deep, grave, or hollow toned.
sep-ul-ture (*'ul-tūr*), *n.* burial. [BURIAL.]
se-quel (*sē'kwel*), *n.* succeeding part or result.
Syn. SEQUEL, close. When a work is published in distinct parts, those which follow at the end may be termed the *sequel;* if it appears all at once, the concluding pages are the *close.*
se-quence (*'kwens*), *n.* order of succession; series; result.
se-ques-ter (*-kwes'tĕr*), *v. t.* to separate from the owner for a time: *v. i.* to renounce. [Also *sequestrate.*]
seq-ues-tra-tion (*sek-wes-trā'shun*), *n.* the act of sequestering; retirement; seclusion.
Se-quoi-a (*sē-kwoi'ä*), *n.* a genus of gigantic trees of the cypress family, comprising the redwood and "big tree" of California.
se-ragl-io (*sē-ral'yō*), *n.* the palace of the sultan of Turkey at Constantinople; a harem.
ser-aph (*ser'af*), *n.* [*pl.* seraphs (*afs*), seraphim (*'a-fim*)], an angel of the highest order.
se-raph-ic (*sē-raf'ik*), *adj.* pertaining to, composed of, or like, seraphs; sublime; angelic.
sere (*sēr*), *adj.* dry; wiltered.
Serena. A feminine name derived, perhaps, from Serena, a daughter of Theodosius; from the Latin *serenus,* "cheerful, quiet, calm."
ser-e-nade (*ser'ē-nād*), *n.* evening music in the open air; music sung or played by a lover: *v. t.* to entertain with a serenade.
se-rene (*sē-rēn'*), *adj.* clear and calm; unclouded; placid. [CALM.]
se-ren-i-ty (*-ren'i-ti*), *n.* the state or quality of being serene; calmness; equanimity. [Also *serenenness.*]
serf (*sĕrf*), *n.* the lowest class of servants or slaves in the middle ages; formerly in Russia, one of the peasant class.
serf-age (*'äj*), *n.* the state or condition of a serf. [Also *serfdom; serfism.*]
serge (*sĕrj*), *n.* a twilled woolen stuff.
ser-geant (*sär'jent*), *n.* a onncommissioned officer ranking next above a corporal.
ser-geant ma-jor (*mä'jĕr*), a warrant officer who is attached to each company or troop.
se-ri-al (*sē'ri-al*), *adj.* pertaining to, or consisting of, a series; published in successive parts or numbers: *n.* a periodical; tale issued in parts.
se-ries (*sē'rēz*), *n.* a number of things or events standing or succeeding in order; sequence.
se-ri-o-com-ic (*sē-ri-ō-kom'ik*), *adj.* having a mixture of seriousness and comicality.
se-ri-ous (*'ri-us*), *adj.* grave in manner or disposition; in earnest. [GRAVE.]
ser-mon (*sĕr'mun*), *n.* a discourse on a text of Scripture; serious exhortation.
ser-mon-ize (*-iz*), *v. i.* to compose or write a sermon; preach: *v. t.* to preach a sermon to.
se-rous (*sē'rus*), *adj.* pertaining to serum; thin, watery.
ser-pent (*sĕr'pent*), *n.* a reptile of the order Ophidia, with a very long body without feet.
ser-pen-tine (*'pen-tīn*), *adj.* pertaining to, like, or having the qualities of, a serpent; subtle: *n.* a rock composed of a hydrated silicate of magnesia.
ser-ried (*ser'id*), *adj.* crowded; pressed together.
se-rum (*sē'rum*), *n.* the thin yellowish watery fluid secreted by the serous membranes.
serv-ant (*sĕrv'ant*), *n.* one who serves, or is in the service of, another.
Syn. SERVANT, domestic, menial, drudge. In the term *servant* is included the idea of the service performed; in the term *domestic,* the idea of one belonging to the house or family; in the word *menial* is included the idea of labor; and the term *drudge,* that of *drudgery.*
serve (*sĕrv*), *v. t.* to work for; perform duties for; supply with, as food, etc.; treat or requite; present (a writ): *v. i.* to be a servant; suit or be convenient; be in subjection.
Servia (*sĕr'vi-ä*). A kingdom of the Balkan peninsula, known by the Romans as *Suedia,* district peopled by the Suevi, who afterward settled in the territory now called Sweden.
serv-ice (*sĕrv'is*), *n.* the condition or occupation of a servant; duty required or performed; course of dishes at table.
serv-ice-a-ble (*'is-ä-bl*), *adj.* useful; beneficial.
serv-ile (*'il*), *adj.* pertaining to, characteristic of, or befitting, a slave or servant; meanly submissive or obsequious.
ser-vil-i-ty (*sĕr-vil'i-ti*), *n.* mean submission; baseness. [Also *servileness.*]
serv-i-tude (*sĕrv'i-tūd*), *n.* the condition of a servant or slave.
★**ses-a-me** (*ses'ä-mē*), *n.* a plant yielding flat seeds from which an oil is expressed.
ses-a-moid bones (*'ä-moid bōnz*), small bones formed at the articulation of the great toes, fingers, etc.
ses-qui, a *prefix* meaning *a whole and a half,* as *sesqui*oxide, an oxide containing 3 atoms of oxygen, 2 atoms of a metal.
ses-sion (*sesh'un*), *n.* the actual sitting or assembling of a court, council, or legislative body.
ses-terce (*ses'tĕrs*), *n.* an ancient Roman coin, value about 4 cents.
ses-ter-ti-um (*-tĕr'shi-um*), *n.* a sum of 1,000 sesterces.
ses-tet (*'tet*), *n.* the last 6 lines or the second division of a sonnet.
set (*set*), *v. t.* to place or put in any position; render motionless; replace; regulate or adjust: *v. i.* to sink below the horizon; strike root; congeal; start (with *out*): *adj.* fixed or established; firm; formal; obstinate: *n.* the act of setting; clique; number of things of the same kind intended for use together; a young plant for growth; descent below the horizon. [PUT, CLASS.]
Seth. From the Hebrew *Sheth,* signifying "appointed." Fuerstius writes the name *S'et,* and renders it "war bustle or noise."
set-tee (*set-tē'*), *n.* a long seat with a back, made to seat several persons at once.
set-ter (*'ĕr*), *n.* one who, or that which, sets; a species of hunting dog.
set-ting (*'ing*), *n.* the act of one who, or that which, sets; that which sets or holds; hardening.
set-tle (*set'l*), *v. t.* to place or set in a fixed state; establish; free from uncertainty; pay; make pure or clear; colonize: *v. i.* to become fixed, or permanent; grow calm or clear; sink; adjust differences or accounts. [COMPOSE.]
set-tle-ment (*-ment*), *n.* the act or state of being settled; subsidence; a colony newly settled.
set-tler (*'lĕr*), *n.* a colonist; something that finally settles or decides a contest.
set-to (*tōō'*), *n.* a contest in boxing; argument.
sev-en (*sev'n*), *n.* the sum of six and one; the symbol representing 7 units: *adj.* consisting of one more than 6.
sev-en-fold (*-fold*), *adv.* 7 times as much.
sev-en-teen (*-tēn*), *adj.* one more than sixteen.
sev-en-ti-eth (*'n-ti-eth*), *adj.* next in order after the sixty-ninth: *n.* one of 70 equal parts.
sev-en-ty (*-ti*), *n.* [*pl.* seventies (*-tiz*)], the sum of 10 times 7; the symbol representing 70 units.
sev-er (*sev'ĕr*), *v. t.* to divide or se[illegible] with violence; keep distinct or apart: *v. i.* [illegible]ke a separation or distinction.
★**sev-er-al** (*sev'ĕr-al*), *adj.* distinct; separate; consisting of a number more than t[illegible]ut not many;
sev-er-ance (*-ans*), *n.* the act of severing; the state of being severed; separation; partition.
se-vere (*sē-vēr'*), *adj.* strictly adhering to rule; strict; austere; rigid; harsh; grave; serious. [STRICT].
se-ver-i-ty (*-ver'i-ti*), *n.* the quality of being severe; harshness; rigor. [AC[illegible]TY.]
Sè-vres (*sā'vr*), *n.* china or por[illegible]ufactured at Sèvres, France.
Sèvres. A city of France near [illegible]ed from

the two rivers which traverse it; anciently called *Villa Savara.*

sew (*sō*), *v. t.* to unite or fasten together with a needle and thread: *v. i.* to practice sewing.

sew-age (*sū'āj*), *n.* the foul matter carried off by a sewer.

sew-er (*'ĕr*), *n.* a pipe or channel to carry off the used or surface water and foul matter of a town, etc.; (*sō'ĕr*) one who sews.

sew-er-age (*-āj*), *n.* drainage by sewers.

sex, a *prefix* meaning *six*, as *sexennial*, *adj.* occurring once in, or lasting, six years.

sex (*seks*), *n.* the physical distinction between male and female.

sex-a-ge-na-ri-an (*-ȧ-jē-nā'ri-an*), *n.* one who is sixty years old.

sex-tant (*'tant*), *n.* the sixth part of a circle; an instrument for measuring angular distances between objects.

sex-til-lion (*-til'yun*), *n.* in the French system of enumeration, followed in the United States, the 7th power of a thousand, equal to 1 with 21 ciphers annexed; in the English system, a million raised to the 6th power, equal to 1 with 36 ciphers annexed.

sex-ton (*'tun*), *n.* an inferior official of a church whose duty it is to attend to burials, the church, etc.

sex-u-al (*'ū-al*), *adj.* pertaining to, characteristic of, based on, or distinguishing, sex.

sex-u-al-i-ty (*-al'i-ti*), *n.* the state or quality of being distinguished by sex.

sex-u-al-ize (*'ū-al-iz*), *v. t.* to attribute sex to.

shab-by (*shab'i*), *adj.* threadbare or worn; mean; despicable.

shack (*shak*), *n.* hut; log cabin.

shac-kle (*shak'l*), *n.* fetters; handcuffs: *v. t.* to fetter, embarrass or hinder; unite or fasten with a shackle.

shad (*shad*), *n.* an anadromous fish, valued as food.

shade (*shād*), *n.* comparative obscurity caused by the interception of the rays of light; darkness; screen or cover; the soul: *v. t.* to screen from light or heat; darken or obscure; shelter.

Syn. SHADE, shadow. Both these terms express that darkness which is occasioned by the sun's rays being intercepted by any body; but *shade* simply expresses the absence of the light, and *shadow* signifies also the figure of the body which thus intercepts the light.

shad-ow (*shad'ō*), *n.* shade within defined limits; dark part of a picture; obscurity or darkness; reflected image; faint representation; small degree: *v. t.* to shade; darken or cloud; conceal or screen; attend closely as a shadow. [SHADE.]

shad-ow-y (*'i*), *adj.* full of, or causing, shade or shadows; sheltered from light or heat; dim.

shad-y (*shād'i*), *adj.* [*comp.* shadier, *superl.* shadiest], abounding in, or causing, shade; sheltered from the glare of light or heat.

shaft (*shaft*), *n.* an arrow; anything resembling an arrow; the long, narrow entrance to a mine; carriage pole; handle; body of a column.

shaft-ing (*'ing*), *n.* a system of shafts for transmitting power.

shag (*shag*), *n.* a kind of tobacco; rough, woolly hair.

shag-gy (*'i*), *adj.* rough with long hair or wool; rough; rugged.

sha-green (*shȧ-grēn'*), *n.* the skins of various animals, grained to resemble the skins of sharks; the rough skin of sharks and dogfishes: *adj.* made of shagreen.

shah (*shȧ*), *n.* the sovereign of Persia.

shake (*shāk*), *v. t.* [*p. t.* shook, *p. p.* shaken, *p. pr.* shaking], to cause to shiver; move with a quick, short motion; agitate: *v. i.* to tremble or quake.

shake-down (*'down*), *n.* a temporary bed; money or other consideration given, generally under coercion, as for immunity from arrest or from legal punishment.

shak-y (*shāk'i*), *adj.* [*comp.* shakier, *superl.* shakiest], in a shaking condition; feeble.

shale (*shāl*), *n.* a laminated argillaceous rock.

shall (*shal*), *v. i.* and *auxil.* [*p. t.* should], to be under obligation, used in the future tense of the verb.

shal-low (*'ō*), *adj.* having little depth; not profound; superficial; trifling: *n.* shoal: *v. i.* to become shallow.

sham (*sham*), *n.* a trick, fraud, or make-believe: *adj.* feigned; false; unreal: *v. i.* to make false pretenses: *v. t.* to make a pretense of.

sham-ble (*sham'bl*), *v. i.* to walk awkwardly and unsteadily; shuffle: *n. pl.* a slaughterhouse; meat market.

shame (*shām*), *n.* a painful sensation caused by the sense of guilt, impropriety, or dishonor; that which causes shame; modesty or decorum: *v. t.* to make ashamed; cover with disgrace. [ABOMINATIO[illegible]BASE.]

shame-fac[illegible] (*[illegible]t*), *adj.* bashful.

shame-ful [illegible] *adj.* causing shame; disgraceful; indecent.

sham-poo (*-[illegible]*) [illegible] to cleanse and rub (the head) with soap, etc.: *n.* the act of shampooing.

sham-rock (*'rok*), *n.* a trefoil clover plant; the Irish national emblem.

shank (*shangk*), *n.* the leg from the knee to the ankle.

shan-ty (*shan'ti*), *n.* a rude hut.

shape (*shāp*) [illegible] form or figure of a thing: *v.* [illegible] to make [illegible]icular form. [FORM.]

shape-ly [illegible] well-formed; symmetrical; comely.

share (*shâr*), *n.* a portion or part: *v. t.* to part among two or more; take or possess in common: *v. i.* to have a share or part. [DIVIDE.]

shark (*shärk*), *n.* a large, voracious fish with sharp teeth; a rapacious, artful fellow.

sharp (*shärp*), *adj.* having a very thin edge or fine point; peaked or ridged; keen; severe; subtle: *n.* a character in music which raises a note a semitone.

Syn. SHARP, acute, keen. The general property expressed by these epithets is that of *sharpness*, or an ability to cut. The term *sharp* is generic and indefinite; the two others are modes of *sharpness* differing in the circumstance of the degree; the *acute* is not only more than *sharp* in the common sense, but signifies also *sharp*-pointed; a knife may be *sharp;* but a needle is properly *acute.* Things are *sharp* that have either a long or a pointed edge; but the *keen* is applicable only to the long edge; and that in the highest degree of *sharpness;* a common knife may be *sharp;* but a razor or a lancet are properly said to be *keen.* [See *acrimony.*]

sharp-en (*'en*), *v. t.* to make sharp or sharper; make more acute: *v. i.* to become sharp.

shat-ter (*shat'ĕr*), *v. t.* to break into many pieces at once; overthrow; dissipate: *n. pl.* broken fragments.

shave (*shāv*), *v. t.* to cut or pare off with a razor or other sharp-edged instrument; plunder or fleece: *v. i.* to use the razor in removing hair: *n.* a thin slice; the operation of shaving.

shawl (*shawl*), *n.* a loose, square cloth covering for the shoulders, etc.

sheaf (*shēf*), *n.* [*pl.* shavees (*shēvz*)], a bundle.

shear (*shēr*), *v. t.* to cut or clip: *v. i.* to use shears: *n. pl.* a cutting instrument like scissors.

shear steel (*'stēl*), a kind of fine steel, specially tempered, etc.

sheath (*shēth*), *n.* a scabbard; any sheath-like covering.

sheathe (*shēth*), *v. t.* to put into a sheath or scabbard; case with a protecting covering.

sheath gown (*shēth' goun*), a form of close-fitting gown for women slit up the side almost to the knee.

Sheboygan (*shē-boi'gan*) **river, Mich.** So called from the Indian *showbwawaygum,* "the stream that comes from the ground."

shed (*shed*), *v. t.* cause to flow out; emit: *v. i.* to let fall or cast off: *n.* a slight building. [POUR.]

sheen (*shēn*), *n.* brightness; splendor: *adj.* bright; glittering. [Also *sheeny.*] *v. i.* to shine or glisten.

sheep (*shēp*), *n. s.* and *pl.* any ruminant animal of the genus Ovis, valued for its wool and flesh.

sheer (*shēr*), *adj.* pure; unmixed; very thin or transparent; precipitous: *v. i.* to deviate from the proper course.

sheet (*shēt*), *n.* a large, thin slice of anything; broad piece of linen or paper; broad expanse or surface; rope attached to a sail.

sheik (*shēk* or *shāk*), *n.* the head of a Bedouin family, tribe, or clan.

shek-el (*shek'el*), *n.* an ancient Jewish coin: *pl.* money.

shelf (*shelf*), *n.* [*pl.* shelves (*shelvz*)], a flat ledge or board for holding anything.

shell (*shel*), *n.* a hard outside covering; any framework; projectile: *v. t.* to strip off or remove the shell of; take out of the shell; throw shells upon or into.

shel-lac (*-ak'*), *n.* crude resin lac melted and formed into thin plates.

shel-ter (*'tĕr*), *n.* that which protects or shields; security; defense: *v. t.* to protect or shield; conceal: *v. i.* to take or give shelter. [COVER.]

shelve (*shelv*), *v. t.* to place on a shelf; furnish with a shelf: *v. i.* slope.

shelv-ing (*'ing*), *n.* materials for shelves; shelves collectively.

Shenandoah (*shen-an-dō'ȧ*). County and river in Virginia, city in Page county, Iowa, borough in Schuylkill county, Pennsylvania, and town in Page county, Virginia. An Indian word, said by some to mean "the sprucy stream"; by others, "a river flowing alongside high hills and mountains"; and still another authority states that it means "daughter of the stars."

shep-herd (*shep'ĕrd*), *n.* one who tends sheep; a pastor.

sher-bet (*shĕr'bet*), *n.* a cooling beverage of water and fruit juices, sweetened, etc.

sher-iff (*sher'if*), *n.* the chief executive officer of a shire or county.

sher-ry (*'i*), *n.* a dry amber-colored wine, originally obtained from Xeres, Spain.

Sherwood forest. A forest in Nottinghamshire, England, fourteen miles north of Nottingham. It was formerly of large extent. It is the principal scene of the legendary exploits of Robin Hood.

Shetland isles. A group of islands north of Scotland. Norse for the "viking island," conformably with the native prenomen *hyalti,* "a viking." The term viking, meaning pirate, derived from the *wik,* or creek, in which he lay concealed.

shield (*shēld*), *n.* a piece of armor, carried on the arm; defense or protection; an escutcheon: *v. t.* to protect.

shift (*shift*), *n.* change; substitution; chemise: *v. t.* to change: *v. i.* resort to expedients; to alter or change.

shift-less (*'les*), *adj.* destitute of expedients; lazy; improvident.

shift-y (*shift'i*), *adj.* full of expedients; changeable.

shil-la-lah (*shil-ȧ'lȧ*), *n.* an oaken cudgel (*Irish.*) [Also *shillelah, shillelagh.*]

shil-ling (*'ing*), *n.* a silver British coin, value about 24 cents.

shil-ly-shal-ly (*'i-shal-i*), *adv.* in an irresolute, undecided manner.

shim-mer (*shim'ĕr*), *v. t.* to shine unsteadily or tremulously; flicker: *n.* a tremulous gleam; flicker.

shin (*shin*), *n.* the forepart of the leg between the ankle and knee: *v. i.* to climb a tree, etc.

shine (*shīn*), *v. i.* to emit rays of light; be bright; beautiful, eminent, or conspicuous: *v. t.* to cause to shine.

shin-gle (*shing'gl*), *n.* a thin piece of wood used for roofing: *v. t.* to cover or roof with shingles.

shin-y (*shīn'i*), *adj.* [*comp.* shinier, *superl.* shiniest], diffusing light; bright.

ship (*ship*), *n.* any large vessel for the conveyance of passengers or merchandise: *v. t.* to place on board a ship; carry by water: *v. i.* engage for service on board ship.

ship-board (*'bōrd*), *n.* the deck of a ship.

ship-shape (*'shāp*), *adj.* in good order: *adv.* neatly.

Shiraz (*shē'rȧz*), **Persia.** Name signifies "lion's paunch," because at one time, like the lion, it consumed much, but produced nothing.

Shirvan (*shir-vān'*). River and district of Persia, named after *Nieshirvan,* a king of Persia.

Shock (*shok*), *v. t.* to strike as with disgust or horror.

shock-er (*shok'ĕr*), *n.* one who, or that which, shocks.

shock-ing (*'ing*), *adj.* extremely offensive or disgusting. [FORMIDABLE.]

shod-dy (*shod'i*), *n.* old woolen fabrics remade with fresh wool: *adj.* not genuine; sham.

shoe (*shōō*), *n.* [*pl.* shoes (*shōōz*)], a low covering for the foot: *v. t.* [*p. t.* and *p. p.* shod, *p. pr.* shoeing], to furnish with a shoe or shoes.

shoot (*shōōt*), *v. t.* to let fly or discharge with a sudden force; hurl; emit: *v. i.* to be shot or propelled forcibly; rush along; sprout: *n.* a young branch or growth.

shop (*shop*), *n.* a building where goods are sold by retail; place where mechanics carry on their trade: *v. i.* to visit shops to purchase goods.

shop-lift-ing (*'lift-ing*), *n.* stealing goods from a shop.

shore (*shōr*), *n.* the coast or land adjacent to the sea, etc.; a prop or support: *v. t.* to support by a shore or shores.

short (*shôrt*), *adj.* not long, either in space or time; abrupt: *adv.* abruptly; quickly.

Syn. SHORT, brief, concise, succinct, summary. We may term a stick, a letter, or a discourse, *short;* but we speak of *brevity* only in regard to the mode of speech; *conciseness* and *succinctness* as to the matter of speech; *summary* as to the mode either of speaking or acting; the *brief* is opposed to the prolix; the *concise* and *succinct* to the diffuse; the *summary* to the circumstantial or ceremonious.

short-en (*'n*), *v. t.* to make short or shorter in time, extent, or measure. [ABBREVIATE.]

short-hand (*'hand*), *n.* a system of writing by abbreviated symbols.

short-ly (*'li*), *adv.* soon; quickly; curtly.

shot (*shot*), *n.* the act of shooting; discharge of a firearm, etc.; missile; a marksman; range of a missile.

shot-silk (*'silk*), *n.* a silk fabric of changeable tints.

shoul-der (*shōl'dĕr*), *n.* the articulation connecting the human arm, or the foreleg of a quadruped, to the body; that which resembles a shoulder: *v. t.* to take upon the shoulder; assume the responsibility of; jostle.

shout (*shout*), *n.* a loud and sudden cry: *v. i.* to utter a loud and sudden cry: *v. t.* to utter with a shout. [CALL.]

shove (*shuv*), *n.* a forcible push: *v. t.* to push along: *v. i.* to push forward or off.

shov-el (*'l*), *n.* an implement with a broad scoop and a handle: *v. t.* to take and throw up with a shovel.

show (*shō*), *v. t.* [*p. t.* showed, *p. p.* shown, *p. pr.* showing], to present to view; make clear: *v. i.* to appear: *n.* the act of showing; exhibition or spectacle; pretense.

Syn. SHOW, exhibition, representation, sight, spectacle. The *show* consists of that which merely pleases the eye; it is not a matter either of taste or art, but merely of curiosity; an *exhibition,* on the contrary, presents some effort of talent or some work of genius; and a representation sets forth the image or imitation of something by the power of art; hence we speak of a *show* of wild beasts, an *exhibition* of paintings, and a theatrical *representation. Sights* and *spectacles* present themselves to view. Whatever is to be seen to excite notice is a *sight;* a *spectacle* on the contrary, is that species of *sight* which has something in it to interest either the heart or the head of the observer; processions are *sights;* but battles or bull-fights are *spectacles.* [See *pretense.*]

show-er (*shou'ĕr*), *n.* a fall of rain or hail of short duration: *v. t.* to water copiously; bestow liberally: *v. i.* to rain in showers.

show-y (*shō'i*), *adj.* ostentatious; gay.

shred (*shred*), *n.* a long narrow piece torn or cut off: *v. t.* to tear into small pieces.

shrew (*shrōō*), *n.* a scolding, vexatious woman.

shrewd (*shrōōd*), *adj.* sharp-witted or clever in practical affairs. [ACUTE.]

Shrewsbury (*shrūz'ber-i*) **river, N. J.** Named from a town of England. Anglo-Saxon *scrobbes*, "of a bush," *buhr*, "a fortress," literally, "a fortress near which were many shrubs."

★**shriek** (*shrēk*, not *srēk*), *v. i.* to utter a shriek: *n.* a sharp, shrill outcry. [CALL.]

shrill (*shril*), *adj.* sharp and piercing in tone: *v. i.* to utter an acute, piercing sound.

shrimp (*shrimp*), *n.* a small shellfish allied to the lobster.

shrine (*shrīn*), *n.* a case or receptacle for sacred relics; an altar: *v. t.* to place in a shrine.

shrink (*shringk*), *v. i.* [*p. t.* shrank, *p. p.* shrunk, *p. pr.* shrinking], to contract spontaneously; recoil; *v. t.* to cause to contract: *n.* contraction; withdrawal.

shrink-age (*'āj*), *n.* the act of shrinking; decrease.

shriv-el (*shriv'l*), *v. i.* to be drawn into wrinkles; contract: *v. t.* to cause to contract into wrinkles.

shroud (*shroud*), *n.* anything that covers or conceals: *v. t.* to cover with, or as with, a shroud; conceal.

shrub (*shrub*), *n.* a woody plant of less size than a tree.

shrub-ber-y (*'ĕr-i*), *n.* [*pl.* shrubberies (*-iz*)], a collection of shrubs.

shrug (*shrug*), *v. t.* [*p. t.* and *p. p.* shrugged, *p. pr.* shrugging], to contract or draw up (the shoulders): *v. i.* to raise the shoulders: *n.* a raising of the shoulders.

shuck (*shuck*), *n.* a shell or husk: *v. t.* to deprive of shells or husks.

shud-der (*shud'ĕr*), *n.* a trembling with fear or horror: *v. i.* to feel a cold tremor; quake.

shuf-fle (*shuf'l*), *v. t.* to push from one to another; change the relative positions of: *v. i.* to change cards in a pack; drag the feet: *n.* the act of shuffling; irregular gait.

shun (*shun*), *v. t.* [*p. t.* and *p. p.* shunned, *p. pr.* shunning], to avoid; keep clear of.

shunt (*shunt*), *v. t.* to turn off, on, or as on, a side rail: *v. i.* to be turned aside: *n.* a turning off.

shut (*shut*), *v. t.* to close so as to prevent entrance or exit: *v. i.* to become closed: *adj.* closed. [CLOSE.]

shut-ter (*'ĕr*), *n.* one who, or that which, shuts.

shut-tle (*'l*), *n.* an instrument used in weaving.

shy (*shī*), *adj.* timid; cautious; modest: *v. i.* to start aside from fear: *v. t.* to throw sidewise with a jerk; fling: *n.* the act of starting aside from fear; a side throw.

shy-ster (*'stĕr*), *n.* one who carries on legal business in a mean and tricky manner.

Siam (*sī-am', sē-ăm'*). A kingdom of southeastern Asia; name corrupted from Malay *Siyam*, identical with the name *Shian* or *Shan* given by the Burmese to their eastern neighbors.

Siberia (*sī-bē'ri-ä*). A region of northern Asia belonging to Russia. In Russian, *Sibir* is so called from *Sibir* or *Ssibir*, a town on the Irtish near Tobolsk, which no longer exists. *Sibir* was the capital of a Tartar khanate of the same name, which was conquered in the 16th century by Yermak, the hetman of the Don Cossacks.

sib-i-lance (*sib'i-lans*), *n.* the state or quality of being sibilant. [Also *sibilancy*.]

sib-yl (*'il*), *n.* a woman endowed with a spirit of prophecy.

Sibyl. From Lat., meaning "wise old woman." Dutch, *Sibylla*; Fr., *Sibylle*; Gr., *Sibulla*; Lat., *Sibylla*.

★**sib-yl-line** (*-in*), *adj.* pertaining to, uttered, or written by, a sibyl.

Sicily (*sis'i-li*). The English form of *Sicilia*, so called from the *Siculi*, who possessed a great part of the island when the Greek colonists arrived.

sick (*sik*), *adj.* ill in health; affected with nausea; disgusted; indisposed.

Syn. SICK, sickly, diseased, morbid. *Sick* denotes a partial state, *sickly* a permanent state, of the body, a proneness to be *sick*; he who is *sick* may be made well; but he who is *sickly* is seldom really well. *Sickly* expresses a permanent state of indisposition unless otherwise qualified; but *diseased* expresses a violent state of derangement without specifying its duration; *sickly* and *morbid* are applied to the habitual state of the feelings or character; a *sickly* sentimentality; a *morbid* sensibility. *Morbid* is used in no other, except in a technical sense.

sick-en (*'n*), *v. i.* to become sick; fall ill; *v. t.* to make sick; disgust.

sick-le (*'l*), *n.* a reaping hook.

sick-ly (*'li*), *adj.* ailing; weak; habitually indisposed. [SICK.]

sick-ness (*'nes*), *n.* the state of being sick or in bad health.

side (*sīd*), *n.* one of the surfaces that define or limit a solid; edge; part between the shoulder and hip; aspect: *v. i.* to embrace the cause or tenets of a party.

side-board (*'bōrd*), *n.* a piece of dining-room furniture.

si-de-re-al (*si-dē'rē-al*), *adj.* pertaining to the stars.

side-wheel (*sīd'hwēl*), *n.* a paddle wheel at the side of a boat.

sid-ing (*'ing*), *n.* a railroad track by the side of the main track.

si-dle (*sī'dl*), *v. i.* to go or move side foremost.

siege (*sēj*), *n.* the surrounding of a place to compel its surrender; continued endeavor to obtain possession: *v. t.* to besiege.

si-en-na (*si-en'ä*), *n.* red or brown clay; used as a pigment.

Sierra (*sē-er'rä*). This is a Spanish word signifying "a saw." Its application to ranges of mountains, whose peaks, rising in succession, like those of the Sierra Nevada, resemble the teeth of a saw, is peculiarly picturesque and poetical.

Sierra Nevada (*sē-er'ra nē-vä'dä*, Spanish, *sē-er'rä nä-vä'thä*) **mountains.** In California. Spanish words *serrado*, "separate or saw-toothed," *nevada*, "snowy," *i. e.*, "snowy mountains," the application taken from the Sierra Nevada mountains of Granada, Spain.

sieve (*siv*), *n.* a utensil for separating the finer from the coarser parts of a substance.

sift (*sift*), *v. t.* to separate with, or as with, a sieve; scrutinize.

sigh (*sī*), *v. i.* to inhale and respire with a long, deep, and audible breathing; grieve; lament: *v. t.* to express by sighs; mourn: *n.* the act of sighing.

sight (*sīt*), *n.* the act of seeing; spectacle; view: *v. t.* to see; adjust the sight of. [SHOW.]

sight-ly (*'li*), *adj.* pleasing to the eye.

Sigismund (*sij'is-mund*). A masculine name from *sieg-mund*, "man of victory, triumphant man." Dutch, *Sigismundus*; Fr., *Sigismond*; Ger., *Sigis-mund* or *Sigmund*; Lat., *Sigismundus*; Sp., *Sigismundo*; Sw., *Sigismund*.

sign (*sīn*), *n.* that by which anything is known or represented; indication; omen: *v. t.* to affix a signature to: *v. i.* to make a sign or signal.

Syn. SIGN, signal. The *sign* enables us to recognize an object; it is, therefore, sometimes natural; *signal* serves to give warning; it is always arbitrary.

sig-nal (*sig'nal*), *n.* something to attract the eye or ear: *adj.* memorable; remarkable; pertaining to signals: *v. t.* to convey by signals; make signals to. [SIGN.]

sig-nal-ize (*-īz*), *v. t.* to make especially conspicuous.

sig-na-ture (*'nä-tūr*), *n.* name of a person written by himself; flats or sharps [*Music.*]

sig-net (*sig'net*), *n.* a seal.

sig-nif-i-cant (*-nif'i-kant*), *adj.* designed to signify; important.

sig-ni-fi-ca-tion (*-kā'shun*), *n.* the act of signifying; that which is signified; meaning.

sig-ni-fy (*'ni-fī*), *v. t.* to show by a sign, mark, or token: *v. i.* to be of consequence. [DENOTE.]

Silas (*sī'las*). A name corrupted from *Silvanus*.

si-lence (*sī'lens*), *n.* entire absence of sound; taciturnity: *v. t.* to make silent.

si-lent (*'lent*), *adj.* noiseless; taciturn.

Silesia (*sī-lē'shi-ä*). A region of central Europe. From *slezia*, "the bad land."

sil-hou-ette (*sil-ōō-et'*), *n.* the outline or profile filled in with black: *v. t.* to represent by a silhouette.

sil-i-con (*'i-kon*), *n.* a nonmetallic element.

silk (*silk*), *n.* a fine, soft, tenacious thread spun by certain caterpillars; cloth made of silk: *adj.* pertaining to, or made of, silk.

silk-en (*'en*), *adj.* made of, or like, silk.

silk-y (*'i*), *adj.* pertaining to, made of, or resembling, silk; silken.

sill (*sil*), *n.* a timber at the bottom of a door or window.

sil-ly (*'i*), *adj.* weak in intellect; foolish; indiscreet.

si-lo (*sī'lō*), *n.* a store pit for green fodder, potatoes, etc.

silt (*silt*), *n.* mud or sand deposited by running or standing water.

Silvanus (*sil-vā'nus*). From the Roman name *Silvanus* or *Sylvanus*; also the appellation of a god of forests and fields; from *silva*, *sylva*, "a forest," "wood." Dutch, *Silvanus*; Fr., *Sylvain* or *Silvain*; It., *Silvano*; Lat., *Silvanus*; Sp., *Silvano*.

sil-ver (*sil'vĕr*), *n.* a soft, white, metallic element; money; anything resembling silver: *adj.* pertaining to, or made of, silver; *v. t.* to cover or coat with silver.

Silvester, Sylvester (*sil-ves'tĕr*). A masculine name derived from the Latin *silvester*, "wild," "found in a wood"; from *silva*, "a wood." Fr., *Silvestre*; It., *Silvestro*; Lat., *Silvester*; Sp., *Silvestre*.

Silvia. See *Sylvia*.

Simeon (*sim'ē-on*). From the Hebrew *shama*, meaning "obedient," or "hearing with acceptance." Fr., *Siméon*; Ger., *Simeon*; It., *Simeone*; Lat., *Simeon*; Port., *Simeao*; Sp., *Simeon*.

sim-i-an (*sim'i-an*), *adj.* pertaining to, characteristic of, or like, an ape: *n.* an ape or monkey.

sim-i-lar (*'i-lĕr*), *adj.* having a general likeness or correspondence; alike.

sim-i-lar-i-ty (*-lar'i-ti*), *n.* resemblance. [LIKENESS.]

sim-i-le (*'i-lē*), *n.* [*pl.* similes (*-lēz*)], a likening by comparison to illustrate something.

sim-mer (*'ĕr*), *v. t.* and *v. i.* to boil gently.

Simon (*sī'mon*). Originally the same as *Simeon*. Dutch, *Simon*; Fr., *Simon*; Ger., *Simon*; Hung., *Simon*; It., *Simone*; Lat., *Simon*; Sp., *Simon*; Sw., *Simon*.

sim-o-ny (*sim'ō-nī*), *n.* the act or crime of buying or selling ecclesiastical preferment.

si-moom (*si-mōōm'*), *n.* a hot, dry, suffocating wind which blows from the deserts of Arabia, etc., laden with minute particles of sand. [Also *simoon*.]

sim-per (*sim'pĕr*), *v. i.* to smile in an affected or silly manner: *n.* affected or silly smile.

sim-ple (*sim'pl*), *adj.* [*comp.* simpler, *superl.* simplest], single, not complex; undivided; unadorned; clear; weak in intellect. [CANDID.]

Syn. SIMPLE, single, singular. We may speak of a *simple* circumstance as independent of anything; of a *single* instance; circumstance as unaccompanied by any other and a *singular* instance as one that rarely has itslike.

sim-ple-ton (*sim-pl-tun*), *n.* one who is foolish or of weak intellect. [CANDID.]

sim-plic-i-ty (*-plis'i-ti*), *n.* the state or quality of being simple.

sim-pli-fy (*'pli-fī*), *v. t.* to make simple.

sim-u-late (*'ū-lāt*), *v. t.* to pretend or counterfeit.

sim-u-la-tion (*-lā'shun*), *n.* the act of simulating or feigning.

Syn. SIMULATION, dissimulation. *Simulation* is the making one's self like what one is not; and *dissimulation* is the making one's self appear unlike what one really is. The hypocrite puts on the *semblance* of virtue to recommend himself to the virtuous; the *dissembler* conceals his vices when he wants to gain the simple or ignorant to his side. [See *pretense*.]

Ant. SINCERITY, unaffectedness.

si-mul-ta-ne-ous (*sī-mul-tā'nē-us*), *adj.* happening, done, or existing, at the same time.

sin (*sin*), *n.* neglect of morality and religion: *v. i.* to commit sin; transgress or offend. [CRIME.]

Sinai (*sī'nā, sī'nä-ī, sī'nī*). Is usually supposed to have been named from the Hebrew *seneh*, the "acacia tree," but is more probably the mountain of *Sin*, the moon-god of the Babylonians.

since (*sins*), *adv.* from that time; before this or now: *prep.* from the time of; after: *conj.* because; seeing that; considering.

sin-cere (*sin-sēr'*), *adj.* true; honest; frank; upright; pure. [HEARTY.]

sin-cer-i-ty (*-ser'i-ti*), *n.* the state or quality of being sincere. [Also *sincereness*.]

sin-ew (*sin'ū*), *n.* a tendon; anything supplying strength.

sin-ful (*'fool*), *adj.* full of sin; wicked; impious; unholy.

sing (*sing*), *v. i.* to utter melodious sounds: *v. t.* to celebrate in song.

Singapore (*sing-gä-pōr'*). An island and city in the Straits Settlements, Malay peninsula; name means the "lion city." The form *Singapore* was adopted by Sir Stamford Raffles for the city which he founded in 1819 on an island which since the middle ages had been called *Sinhapura*, from a town of that name built in the fourteenth century by Malay or Javanese settlers.

singe (*sinj*), *v. t.* to burn slightly or on the surface: *n.* a slight burn.

sin-gle (*sing'gl*), *adj.* consisting of one only; alone; separate; unmarried: *v. t.* to select: *n.* a unit. [SIMPLE.]

Sing Sing, N. Y. Mohegan Indian word *Sin-Sing* or *Sink-Sink*, said to signify "stone upon stone."

sing-song (*sing'song*), *adj.* monotonous.

sin-gu-lar (*'gū-lĕr*), *adj.* not complex or compound; noting one person or thing; uncommon; eminent; *n.* in grammar, the number denoting one person or thing. [SIMPLE, RARE.]

sin-gu-lar-i-ty (*-lar'i-ti*), *n.* [*pl.* singularities (*-tiz*)], the state or quality of being singular; peculiarity; oddity.

sin-is-ter (*sin'is-tĕr*), *adj.* inauspicious; unlucky; evil; on the left hand or side.

sink (*singk*), *v. i.* to fall or go downward; decline gradually; enter deeply; subside: *v. t.* to cause to sink: *n.* a drain to carry off water. [ABATE.]

sin-ner (*sin'ĕr*), *n.* one who sins.

sin-u-os-i-ty (*-ū-os'i-ti*), *n.* the character of being sinuous.

sin-u-ous (*'ū-us*), *adj.* bending in and out.

si-nus (*sī'nus*), *n.* a bay or recess; cavity or depression; fistula.

Sioux (*sōō*). Many places in the United States bear the name of this tribe of Indians, among them the counties in Iowa and Nebraska. The word means a "species of snake," the appellation of the tribe being "enemies."

sip (*sip*), *v. t.* to imbibe in small quantities: *v. i.* to drink a small quantity: *n.* the act of sipping; taste.

si-phon (*sī'fun*), *n.* a bent pipe or tube having one end longer than the other, used for drawing off liquids from a higher to a lower level: *v. t.* to convey or draw off by a siphon. [Also *syphon*.]

si-phon-age (*-āj*), *n.* the action of a siphon.

Sir (*sĕr*), *n.* the title of a baronet or knight; a term of respect.

sire (*sīr*), *n.* a title of respect; head of a family; male of beasts: *v. t.* to procreate.

si-ren (*sī'ren*), *n.* one of certain fabulous nymphs that lured mariners to their destruction, hence a woman dangerous from her fascinating, enticing wiles; a foghorn: *adj.* pertaining to, characteristic of, or like, a siren; bewitching.

Sir-i-us (*sir'i-us*), *n.* the dogstar.

sir-loin (*sĕr'loin*), *n.* the loin, or upper part of the loin, of beef.

sis-al grass (*sis'al gras*), the prepared fiber of the American aloe, used for cordage, etc.

sis-ter (*sis'tĕr*), *n.* a female born of the same parents as another person; nun; one of the same kind or condition.

sis-ter-hood (*-hood*), *n.* number of females belonging to the same religious society, etc.

sis-ter-in-law (*-in-law*), *n.* [*pl.* sisters-in-law], the

sister of one's husband or wife; wife of one's brother.

Sistine (*sis'tin*), or **Sixtine** (*siks'tin*) **chapel.** The papal private chapel in the Vatican constructed by Pope Sixtus IV., whence the name.

sit (*sit*), *v. i.* to rest on the lower part of the trunk of the body; rest or lie; occupy a seat officially: *v. t.* to sit upon.

site (*sit*), *n.* local position or situation; ground-plot.

Sitka, Alaska. Named from a tribe of Indians, the *Sitkayans.*

sit-ting (*sit'ing*), *adj.* resting on the haunches: *n.* the state, posture, or act of one who sits; a seat in a church, etc.; a session; time during which one sits; set of eggs.

sit-u-a-tion (*-ū-ā'shun*), *n.* position; locality; circumstances; office; employment.

six (*siks*), *adj.* one more than 5: *n.* the number greater by one than 5; the symbol representing 6 units.

six-pence (*'pens*), *n.* a small British silver coin, value 12 cents.

six-pen-ny (*'pen-i*), *adj.* worth sixpence.

six-teen (*'tēn*), *adj.* 15 and one more.

sixth (*siksth*), *adj.* first after the fifth.

six-ti-eth (*siks'ti-eth*), *adj.* next in order after the fifty-ninth.

six-ty (*'ti*), *n.* [*pl.* sixties (*'tiz*)], the product of 6 and 10: *adj.* 10 times 6.

siz-a-ble (*siz'ā-bl*), *adj.* of considerable or suitable size.

size (*siz*), *n.* a kind of thin, weak glue; magnitude or bulk: *v. t.* to prepare, or cover with, size.

siz-zle (*siz'l*), *v. i.* to make a hissing sound; fry: *n.* a hissing sound.

Skager Rack (*skag-ēr-rak', skag'ēr-rāk*). The channel between Norway and Jutland, means "cape strait." The word *rack* denotes a crooked channel, and the *Skager Rack* is so called from the town of *Skagen*, situated on Cape Skagen (*skabi*, a "promontory"), the *Skaw* of English sailors, which forms the northern point of Jutland.

Skaneateles (*skan-ē-at'les*). Lake, town, and village in Onondaga county, New York. An Indian word meaning "long lake."

skate (*skāt*), *n.* a kind of flatfish of the ray family; a metallic runner to slide over ice: *v. i.* to slide on skates.

ske-dad-dle (*skē-dad'l*), *v. i.* to run away, especially in terror.

skein (*skān*), *n.* a quantity of thread, silk, etc., coiled together.

skel-e-ton (*skel'ē-tun*), *n.* framework or bones of anything; outline.

skel-e-ton key (*kē*), a thin, light key to open many locks.

skep-tic (*skep'tik*), *n.* one who doubts the truth of any doctrine or system.

skep-tic-al (*'ti-kal*), *adj.* pertaining to, or characteristic of, a skeptic; characterized by skepticism.

skep-ti-cism (*'ti-sizm*), *n.* incredulity; doubt; unbelief in any particular doctrine or system.

sketch (*skech*), *n.* an outline; first rough draft: *v. t.* to draw the outline or give principal features of; *v. i.* to make sketches.

skew (*skū*), *adj.* oblique: *adv.* obliquely.

skew-er (*'ēr*), *n.* a pin of wood or metal for securing meat, etc.; *v. t.* to fasten with, or as with, a skewer.

ski (*skē*), *n. pl.* long narrow pieces of wood used as snowshoes.

skid (*skid*), *n.* a sliding wedge or drag to retard the motion of a vehicle. *v. t.* to cause to move on, retard by, or protect with, a skid: *v. i.* to slip along obliquely.

skiff (*skif*), *n.* a small, light boat.

skill (*skil*), *n.* expertness in any art or science; aptitude; power to discern and execute.

skil-let (*'et*), *n.* a small culinary vessel.

skill-ful (*skil'fool*), *adj.* having or displaying, skill. [CLEVER.]

skim (*skim*), *v. t.* to remove the scum from; brush the surface of lightly: *v. i.* to pass lightly over.

skim-mer (*'ēr*), *n.* one who, or that which, skims.

skimp (*skimp*), *v. t.* to do carelessly or superficially: *v. i.* to be parsimonious: *adj.* scanty.

skin (*skin*), *n.* the external covering of an animal body; anything resembling a skin: *v. t.* to remove or strip the skin from: *v. i.* to become covered over with skin.

skin-flint (*'flint*), *n.* a niggard.

skin-ny (*'i*), *adj.* consisting only of skin; very lean.

skip (*skip*), *v. t.* to leap lightly over; omit: *v. i.* to leap or bound lightly; pass without noticing: *n.* a light leap or bound; omission.

skip-per (*'ēr*), *n.* one who, or that which, skips; a sea captain.

skir-mish (*skēr'mish*), *n.* a slight combat or irregular fight between two small parties: *v. i.* fight irregularly.

skirt (*skērt*), *n.* the lower and loose part of a coat, dress, or other garment; margin or border: *v. t.* to cover with a skirt; border; run or pass along the edge of: *v. i.* to be on the border.

skit (*skit*), *n.* brief satire; burlesque.

skit-tish (*'ish*), *adj.* shy; easily frightened; vivacious.

Skowhegan (*skou-hē'gan*), **Me.** Indian word meaning "spearing."

skulk (*skulk*), *v. i.* to withdraw into a corner for concealment; lurk: *n.* a skulker.

skull (*skul*), *n.* the bony case inclosing the brain.

skunk (*skungk*), *n.* an American carnivorous animal allied to the weasel; a vile, contemptible fellow.

sky (*skī*), *n.* [*pl.* skies (*skiz*)], the apparent vault of the heavens.

sky-lark (*'lärk*), *n.* a species of lark.

sky-lark-ing (*-ing*), *n.* frolicking.

sky-scrap-er (*'skrāp-ēr*), *n.* a lofty building.

slab (*slab*), *n.* a flat piece of anything, especially marble or stone: *adj.* thick; glutinous.

slack (*slak*), *adj.* relaxed or loose; inattentive; not busy: *n.* that part of anything that hangs loose.

Syn. SLACK, loose. *Slack* is said only of that which is tied, or that with which anything is tied; while *loose* is said of any substances, the parts of which do not adhere closely.

Ant. TAUT, tight.

slack-en (*'n*), *v. i.* to become slack; be remiss or less diligent; become slower. [ABATE.]

slag (*slag*), *n.* the dross of a metal; vitrified cinders.

slake (*slāk*), *v. t.* to quench; extinguish; mix with water: *v. i.* to be mixed with water.

slam (*slam*), *v. t.* to shut or put down violently and with a loud noise: *v. i.* to strike violently or noisily: *n.* a violent and noisy banging.

slan-der (*slan'dēr*), *n.* verbal defamation: *v. t.* to defame or calumniate. [ABUSE.]

slan-der-ous (*-us*), *adj.* uttering slanders.

slang (*slang*), *n.* colloquial language or expression.

slant (*slänt*), *n.* an inclined plane: *v. t.* to give a sloping direction to: *adj.* inclined from a straight line.

Syn. SLANT, slope. *Slant* is said of small bodies only; *slope* is said indifferently of all bodies large and small; a book may be made *to slant* by lying in part on another book on a desk or a table; but a piece of ground is said *to slope.*

slap (*slap*), *n.* a blow given with the open hand: *v. t.* to strike with the open hand or with anything broad: *adv.* with a sudden, violent blow; direct; quick.

slap-jack (*'jak*), *n.* a kind of flat batter cake.

slash (*slash*), *n.* a long or random cut: *v. t.* to cut by striking violently and at random; cut into long slits: *v. i.* to strike violently and at random.

slat (*slat*), *n.* a thin, narrow strip of wood or metal.

slate (*slāt*), *n.* any rock that splits into thin plates; list of candidates: *v. t.* to cover with slate; register for office; criticise.

slat-tern (*slat'ērn*), *n.* a careless, slovenly woman.

slat-y (*slāt'i*), *adj.* like slate.

slaugh-ter (*slaw'tēr*), *n.* great destruction of life; killing of oxen, etc., for human food: *v. t.* to slay or kill. [CARNAGE.]

Slav (*slāv*), *n.* one of the great divisions of the Aryan family or language: *adj.* Slavonic.

slave (*slāv*), *n.* a human being held in bondage: *v. i.* to work like a slave.

slav-er-y (*'ēr-i*), *n.* [*pl.* slaveries (*-iz*)], the state of entire subjugation to the will of another; condition of a slave.

slav-ish (*'ish*), *adj.* pertaining to, befitting, or characteristic of, a slave.

slaw (*slaw*), *n.* sliced cabbage.

slay (*slā*), *v. t.* to kill or put to death suddenly or with violence.

sleave (*slēv*), *n.* the knotted or entangled part of silk or thread.

sled (*sled*), *n.* a carriage or vehicle on runners for traveling over snow or ice. [Also *sledge.*] *v. t.* to convey or transport on a sled or sledge.

sledge (*slej*), *n.* a large, heavy hammer; another form of *sled.*

★**sleek** (*slēk*, not *slik*), *adj.* smooth; glossy.

sleep (*slēp*), *n.* slumber; rest; death: *v. i.* to take rest in sleep; be motionless or inactive.

sleep-y (*'i*), *adj.* inclined to, or overcome by, sleep; sluggish.

sleet (*slēt*), *n.* rain mingled with snow or hail: *v. i.* to hail or snow with rain mingled.

sleeve (*slēv*), *n.* the part of a garment that covers the arm.

sleigh (*slā*), *n.* a variety of sled.

sleight (*slīt*), *n.* dexterity; cunning; artful trick.

slen-der (*slen'dēr*), *adj.* small or narrow in proportion to the length or height; feeble.

slice (*slis*), *n.* a thin, broad piece of anything: *v. t.* to cut into parts; divide.

slide (*slīd*), *v. i.* glide; slip: *v. t.* to thrust along; cause to slip: *n.* a smooth surface for sliding upon; smooth declivity; picture on glass for exhibition; fall of a mass of rock or snow. [SLIP.]

slight (*slīt*), *adj.* feeble; inconsiderable; unimportant; slender: *n.* neglect; oversight: *v. t.* to disregard; neglect. [CURSORY, DISREGARD.]

slim (*slim*), *adj.* of small diameter; weak; slender.

slime (*slīm*), *n.* glutinous mud.

slim-y (*slīm'i*), *adj.* consisting of, covered over with, or like, slime.

sling (*sling*), *n.* an instrument for throwing stones; hanging bandage: *v. t.* to hurl with, or as with, a sling; hang so as to swing.

slink (*slingk*), *v. i.* to creep away as if ashamed; sneak off.

slip (*slip*), *v. i.* miss one's foothold; escape observation; depart or escape: *v. t.* to cause to move quickly and smoothly; omit: *n.* the act of slipping; an oversight or omission; twig from a stock; petticoat.

Syn. SLIP, slide, glide. *To slip* is an involuntary, and *slide* a voluntary, motion; those who go on the ice in fear will *slip;* boys *slide* on the ice by way of amusement. *To slip* and *slide* are lateral movements of the feet; but *to glide* is the movement of the whole body, and just that easy motion which is made by *slipping, sliding,* flying, or swimming; a person *glides* along the surface of the ice when he *slides;* a vessel *glides* along through the water.

Ant. STAND, stand still.

slip-per (*slip'ēr*), *n.* one who, or that which, slips; a kind of loose shoe.

slip-per-y (*'ēr-i*), *adj.* nonadhesive; without firm hold or footing; unstable; smooth; cunning.

slip-shod (*'shod*), *adj.* slovenly; careless.

slit (*slit*), *v. t.* to cut lengthwise or into long strips; split: *n.* a long cut; narrow opening.

sliv-er (*sliv'ēr* or *slīv'ēr*), *v. t.* to cut into long thin, or very small pieces: *n.* a splinter.

slo-gan (*slō'gan*), *n.* the war-cry or gathering-cry of a highland clan.

sloop (*slōōp*), *n.* a one-masted vessel with a fore-and-aft rig.

slop (*slop*), *n.* water carelessly spilled; puddle: *pl.* dirty water: *v. t.* to soil by letting liquid fall upon.

slope (*slōp*), *n.* surface inclining gradually downward: *v. t.* to incline or slant; direct obliquely: *v. i.* to take an oblique direction. [SLANT.]

slop-py (*slop'i*), *adj.* wet; muddy; splashed.

slot (*slot*), *n.* narrow aperture: *v. t.* to groove.

sloth (*slōth*), *n.* idleness; habitual indolence; a South American arboreal quadruped.

slouch (*slouch*), *n.* ungainly, clownish gait; awkward, dull fellow: *v. t.* to cause to hang down; depress at the side: *v. i.* to walk in a clumsy manner.

★**slough** (*slou*), *n.* a bog.

★**slough** (*sluf*), *n.* the cast-off skin of a serpent: *v. i.* to separate dead matter from the sound flesh.

slov-en (*sluv'en*), *n.* one who is habitually untidy.

slow (*slō*), *adj.* not quick or rapid in motion; behind in time; not progressive.

slug (*slug*), *n.* a shell-less mollusk; a sluggard; a kind of oval bullet.

slug-gard (*'ērd*), *n.* one who is habitually lazy and idle.

slug-gish (*'ish*), *adj.* habitually lazy and idle; dull.

sluice (*slōōs*), *n.* a gate for excluding or regulating the flow of water in a canal, etc: *v. t.* to wash with water from, or as from, a sluice.

slum (*slum*), *n.* a low, dirty street or district of a city or town: *v. i.* to visit slums.

slum-ber (*'bēr*), *v. i.* to sleep lightly; doze; be in a state of inactivity or negligence.

slump (*slump*), *n.* a sudden fall, as of shares, etc: *v. i.* to fall or sink suddenly.

slur (*slēr*), *v. t.* to disparage; pronounce indistinctly: *n.* an insult; stigma.

slush (*slush*), *n.* half-melted snow.

sly (*slī*), *adj.* artfully cunning; underhand and crafty.

smack (*smak*), *n.* a quick, smart blow; quick, sharp noise with the lips; flavor; a one-masted coasting or fishing vessel: *v. t.* to kiss with a noise; strike with a smart blow: *v. i.* to make a noise with the lips.

small (*smawl*), *adj.* little in quantity or degree inconsiderable; not large in dimensions; mean. [LITTLE.]

small-pox (*'poks*), *n.* a contagious, feverish disease, characterized by eruptions.

smart (*smärt*), *adj.* causing a quick, sharp pain; sharp; brilliant; witty; showy: *n.* a quick, pungent, lively pain; poignant grief: *v. i.* to feel a lively, pungent pain; endure punishment.

smash (*smash*), *v. t.* to break in pieces by violence: *n.* a breaking to pieces.

smat-ter-ing (*smat'ēr-ing*), *n.* superficial knowledge.

smear (*smēr*), *v. t.* to overspread with anything unctuous, viscous, or adhesive; daub; pollute: *n.* a blot or stain.

smell (*smel*), *v. t.* to perceive by the nose; obtain the scent of: *v. i.* to affect the nose or olfactory nerves; exercise the sense of smell: *n.* odor.

smi-lax (*smī'laks*), *n.* a climbing plant of the lily family.

smile (*smīl*), *v. i.* to look gay, cheerful, or happy; favor: *v. t.* to express by a smile: *n.* the act of smiling; a look of pleasure, etc.

smirch (*smērch*), *v. t.* to smear; dirty.

smirk (*smērk*), *v. i.* to smile affectedly or conceitedly: *n.* an affected smile: *adj.* spruce.

smite (*smīt*), *v. t.* to strike, as with the hand or a weapon: *v. i.* to strike.

smith (*smith*), *n.* worker in metals.

smith-y (*'i*), *n.* a smith's workshop.

smock (*smok*), *n.* a chemise.

smock frock (*'frok*), a laborer's loose outer shirt.

smoke (*smōk*), *n.* the vapor or substance that escapes when a substance is burned; vapor; act of smoking pipe or cigar: *v. t.* to apply smoke to; inhale and puff out the smoke of; expel by smoke: *v. i.* to emit smoke; burn tobacco in a pipe, etc.

smok-y (*'i*), *adj.* giving out, or filled with, smoke.

smol-der (*smōl'dēr*), *v. i.* to burn slowly or smoke without vent; exist in a stifled condition.

smooth (*smōōth*), *adj.* not rough; even surfaced; frictionless; bland; flattering: *v. t.* to make smooth; calm: *v. i.* to become smooth. [CALM.]

smoth-er (*smuth'ēr*), *v. t.* to destroy the life of by suffocation; stifle; conceal: *v. i.* to be suffocated.

smoul-der. Same as *smolder.*

smudge (*smuj*), *n.* a smear or stain; suffocating smoke: *v. t.* to smear or stain; blacken or stifle with smoke.

smug (*smug*), *adj.* affectedly precise or prim; spruce; neat.

smug-gle (*'l*), *v. t.* to convey or introduce clandestinely: *v. i.* to practice smuggling.

smut (*smut*), *n.* a spot or stain made by dirty matter; obscenity: *v. t.* to soil or blacken with, or as with, smut: *v. i.* to become converted into smut; give off smut.

smut-ty (*'i*), *adj.* soiled or stained with smut; affected with smut.

snaf-fle (*snaf'l*), *n.* a bridle consisting of a joint in the middle and rings at the ends: *v. t.* to put a snaffle in the mouth of.

snag (*snag*), *n.* a short rough branch; trunk of a tree fixed in the bed of a river: *v. t.* to injure or destroy by contact with a snag.

snail (*snāl*), *n.* a slimy, slow-creeping gasteropod of the genus Helix; hence any slow-moving person.

snake (*snāke*), *n.* a serpent.

Snake river, Idaho. Name suggested by its windings and given to a tribe of Indians on its banks.

snap (*snap*), *v. i.* to break short or instantaneously; produce a sharp, sudden sound: *v. t.* to break at once; crack; bite suddenly and unexpectedly: *n.* the act of snapping; noise made by snapping; spring catch: *pl.* a kind of crisp cake.

snap-drag-on (*'drag-un*), *n.* a plant with a corolla that shuts with a snap when opened.

snare (*snār*), *n.* anything that entangles or entraps one; the gut across a drum: *v. t.* to catch or entangle with, or as with, a snare.

snarl (*snärl*), *v. i.* to growl like an angry dog; speak surlily: *v. t.* to complicate or entangle, as thread or hair: *n.* the act of snarling; angry contention or quarrel; a complicated entanglement of hair, etc.

snatch (*snach*), *v. t.* to take or seize abruptly and suddenly: *v. i.* to attempt to seize anything: *n.* a hasty catch or seizing. [LAY.]

sneak (*snēk*), *v. i.* to creep or steal away privately or meanly; slink: *n.* a mean, servile fellow.

sneer (*snēr*), *v. i.* to show contempt by some facial expression; insinuate; scoff: *n.* an indirect expression of contempt or scorn.

sneeze (*snēz*), *v. i.* to emit a sudden and violent rush of air through the mouth and nostrils, audibly and convulsively: *n.* the act of sneezing.

snick-er (*snik'ēr*), *n.* a half-suppressed laugh; a giggle: *v. i.* to laugh slyly; giggle.

sniff (*snif*), *v. i.* to draw in the breath through the nose: *v. t.* to smell or scent: *n.* the act of sniffing.

snip (*snip*), *v. t.* to cut or clip off: *n.* a single cut with scissors; small piece.

snipe (*snīp*), *n.* a long-billed fen fowl.

sniv-el (*sniv'el*), *v. i.* to run at the nose; cry, as a child.

snob (*snob*), *n.* a vulgar person who apes gentility; vulgar upstart.

snob-bish (*'ish*), *adj.* pertaining to, characteristic of, or like, a snob.

snooze (*snōōz*), *v. i.* to nap: *n.* a nap.

snore (*snōr*), *v. i.* to breathe with roughness or hoarseness in sleep: *n.* a noisy breathing in sleep.

★**snout** (*snout*, not *snōōt*), *n.* the projecting nose of a beast.

snow (*snō*), *n.* frozen particles of vapor in the atmosphere in the form of white feathery flakes: *v. i.* to fall in snow.

snub (*snub*), *v. t.* to check, treat, or reprimand with sarcasm or asperity: *n.* an intended slight.

snuff (*snuf*), *v. t.* to draw in through the nose: *v. i.* to snort or sniff; take snuff into the nostrils: *n.* powdered tobacco inhaled through the nose.

snuf-fle (*'l*), *v. i.* to speak or breathe hard through the nose: *n.* a speaking through the nose.

snug (*snug*), *adj.* concealed; lying close and warm; compact and convenient: *v. i.* to lie close and warm (with *up* or *together*).

snug-gle (*'l*), *v. i.* to lie close for warmth and comfort.

so (*sō*), *adv.* in a like manner or degree; in high degree; as has been stated; for this reason: therefore; more or less: *conj.* on condition that; if; therefore: *interj.* stop!

soak (*sōk*), *v. t.* to cause to suck in moisture; wet thoroughly: *v. i.* to become saturated or steeped in fluid.

Syn. SOAK, drench, steep. A person's clothes are *soaked* in rain when the water has penetrated every thread; he himself is *drenched* in the rain when it has penetrated, as it were, his very body; to *steep* is a species of *soaking* employed as an artificial process; *to soak* is, however, a permanent action by which hard things are rendered soft; *to steep* is a temporary action by which soft bodies become penetrated with a liquid; thus salt meat requires to be soaked; fruits are *steeped* in brandy.

soap (*sōp*), *n.* a compound used for washing and cleansing: *v. t.* to rub over, or wash, with soap.

soap-stone (*'stōn*), *n.* a variety of steatite.

soap-y (*'i*), *adj.* covered with, or like, soap; soft and smooth.

soar (*sōr*), *v. i.* to fly aloft, as a bird; rise in imagination: *n.* a lofty flight.

sob (*sob*), *v. i.* to sigh in a convulsive manner with tears: *v. t.* to utter with a sob: *n.* a convulsive sigh.

so-ber (*sō'bĕr*), *adj.* habitually temperate; calm; sedate: *v. t.* to make sober: *v. i.* to become sober.

so-bri-e-ty (*-brī'ĕ-ti*), *n.* habitual temperance; seriousness.

so-bri-quet (*sō-brē-kā'*), *n.* a nickname. [*French.*]

so-cia-ble (*sō'shä-bl*), *adj.* social; companionable; affable: *n.* a social gathering. [SOCIAL.]

so-cial (*'shal*), *adj.* pertaining to men as living in society; convivial.

Syn. SOCIAL, sociable. *Social* people seek others; *sociable* people are sought for by others. [See *convivial.*]

so-cial-ism (*-izm*), *n.* an economic theory or system of the reconstruction of society on the basis of coöperation of labor and community of property.

so-cial-ist (*-ist*), *n.* an advocate of socialism.

so-ci-e-ty (*-sī'ĕ-ti*), *n.* [*pl.* societies (*-tiz*)], a number of persons united for a common interest; the more cultivated portion of any community.

Society islands. A large group of islands in the South Pacific. Received their name from Captain Cook in honor of the Royal Society.

so-ci-ol-o-gy (*-shi-ol'ō-ji*), *n.* social science.

sock (*sok*), *n.* a short stocking.

sock-et (*'et*), *n.* a hollow into which something is fitted.

sod (*sod*), *n.* turf; sward: *v. t.* to cover with sod; turf.

so-da (*sō'dä*), *n.* impure carbonate of soda; sodium oxide.

so-da wa-ter (*waw-tĕr*), aërated water containing bicarbonate of soda.

sod-den (*sod'n*), *adj.* boiled; saturated: *v. i.* to be soaked or seethed: *v. t.* to saturate.

so-di-um (*sō'di-um*), *n.* a metallic element.

so-fa (*sō'fä*), *n.* a long seat with stuffed bottom, back, and arms.

Sofia. See *Sophia.*

soft (*sôft*), *adj.* easily yielding to pressure; malleable; smooth to the touch; not glaring; effeminate; quiet; easy; mild; weak in intellect: *adv.* softly; quietly: *interj.* gently! stop!

soft-en (*sôf'n*), *v. t.* to make soft or softer; tone down; assuage; make effeminate: *v. i.* to become soft or softened.

sog-gy (*sog'i*), *adj.* soaked; wet.

soil (*soil*). *n.* land; dirt; manure; stain: *v. t.* to make dirty; stain or mar: *v. i.* to become soiled. [STAIN.]

Soissons (*swäs-sôn'*). Town in France, was so named from the *Suessiones*, a Belgic tribe.

so-journ (*sō'jûrn* or *sō-jûrn'*), *v. i.* to dwell for a time: *n.* (*sō'jûrn*) a temporary residence. [ABIDE.]

★**sol-ace** (*sol'äs*, not *sō'lās*), *n.* comfort in sorrow; consolation: *v. t.* to comfort in sorrow.

so-lar (*'lĕr*), *adj.* pertaining to the sun.

so-lar-year (*-yēr*), *n.* the period during which the earth makes one complete revolution around the sun, 365 days 5 hours 48 minutes 52 seconds.

sold-er (*sod'ēr* or *sol'dēr*), *n.* a metallic alloy for uniting metals: *v. t.* to unite by solder.

sol-dier (*sōl'jēr*), *n.* a person engaged in military service: *v. i.* to serve or act as a soldier; make a pretense of work. [MARTIAL.]

sole (*sōl*), *n.* the underside of the foot; boot or shoe, etc.; a flatfish of the genus Solea: *v. t.* to furnish with, or as with, a sole: *adj.* alone; being or acting by one's self.

★**sol-e-cism** (*sol'ĕ-sizm*, not *sō'lē-sizm*), *n.* a breach of the rules of syntax, or idiom of a language; impropriety; absurdity.

sol-emn (*sol'em*), *adj.* inspiring awe; serious; devout; formal. [GRAVE.]

so-lem-ni-ty (*sō-lem'ni-ti*), *n.* [*pl.* solemnities (*-tiz*)], a religious rite or ceremony; ceremony adapted to inspire awe; gravity; impressiveness.

sol-em-nize (*'em-nīz*), *v. t.* to perform with ceremonies; celebrate.

so-lic-it (*sō-lis'it*), *v. t.* to ask for with earnestness; endeavor to obtain: *v. i.* to canvass. [BEG.]

so-lic-i-ta-tion (*-i-tā'shun*), *n.* importunity; allurring or enticing influence.

Syn. SOLICITATION, importunity. *Solicitation* is general; *importunity* is particular; it is *importunate* or troublesome *solicitation*. *Solicitation* is itself indeed that which gives trouble to a certain extent, but it is not always unreasonable; there may be cases in which we may yield to the *solicitations* of friends, to do that which we have no objection to be obliged to do; but *importunity* is that *solicitation* which never ceases to apply for that which it is not agreeable to give.

so-lic-it-or (*'it-ĕr*), *n.* one who solicits; an attorney; a canvasser.

so-lic-i-tous (*'i-tus*), *adj.* eager; anxious; apprehensive; concerned.

so-lic-i-tude (*'i-tūd*), *n.* the state of being solicitous; concern; anxiety; carefulness. [ANXIETY.]

sol-id (*sol'id*), *adj.* having the particles so close or firmly adhering as to resist impression; compact; not hollow; heavy: *n.* a body having its constituent particles firmly adhering together. [FIRM, HARD.]

sol-i-dar-i-ty (*-i-dar'i-ti*), *n.* community of interests and responsibilities.

so-lid-i-fy (*sō-lid'i-fī*), *v. t.* to make solid: *v. i.* to harden.

so-lid-i-ty (*'i-ti*), *n.* density; stability; truth; moral firmness.

so-lil-o-quize (*sō-lil'ō-kwīz*), *v. i.* to utter a soliloquy.

so-lil-o-quy (*'ō-kwi*), *n.* a talking or discourse to one's self.

sol-i-taire (*sol-i-târ'*), *n.* a game played by one person; precious stone in single setting.

sol-i-ta-ri-ly (*'i-tā-ri-li*), *adv.* in a solitary manner.

sol-i-ta-ry (*'i-tā-ri*), *adj.* lonely; single; done, passed, or suffered, alone; remote; unoccupied; gloomy.

Syn. SOLITARY, desert, desolate. *Solitary* simply denotes the absence of all beings of the same kind; thus a place is *solitary* to a man where there is no human being but himself; *desert* conveys the idea of a place made *solitary* by being shunned, from its unfitness as a place of residence; *desolate* conveys the idea of a place made *solitary*, or bare of inhabitants, and all traces of habitation, by violent means.

Ant. CROWDED, plural.

sol-i-tude (*sol'i-tūd*), *n.* the state of being by one's self; loneliness; seclusion; desert.

so-lo (*sō'lō*), *n.* [*pl.* solos (*'lōz*)], an air, or musical piece performed by a single instrument or performer.

so-lo-ist (*-ist*), *n.* one who performs or sings a solo.

Solomon (*sol'ō-mon*). From the Hebrew *Sh'lomoh*, signifying "peaceable." Arabic, *Soliman* or *Suleyman*; Dutch, *Salomo*; Fr., *Salomon*; Ger., *Salomon*; Gr., *Solomon*; Hungarian, *Salamon*; It., *Salomone*; Lat., *Salomon*; Polish, *Salomon*; Port., *Salomao*; Sp., *Salomon*.

sol-stice (*sol'stis*), *n.* that point in the ecliptic at which the sun is farthest from the equator.

sol-u-ble (*'ū-bl*), *adj.* capable of solution.

so-lu-tion (*sō-lū'shun*), *n.* the act of dissolving by means of a fluid; deliverance; explanation.

solv-a-ble (*solv'ä-bl*), *adj.* capable of being solved.

solve (*solv*), *v. t.* to explain; clear.

solv-ent (*solv'ent*), *n.* any liquid that dissolves another substance: *adj.* able to discharge debts; having the power of dissolving.

som-ber (*som'bĕr*), *adj.* dull; melancholy; dark; gloomy.

som-bre-ro (*sōm-brā'rō*), *n.* a kind of broad-brimmed hat.

some (*sum*), a *suffix* meaning *like*, *same*, as wins*ome*, glad*some*, etc.: *adj.* more or less; expressing an indeterminate number, person, or quantity; one or the other; about.

some-bod-y (*'bod-i*), *n.* some person; a person of importance.

some-how (*'how*), *adv.* in one way or another.

som-er-sault (*'ēr-sawlt*), *n.* a leap in which a person turns with his heels over his head.

some-thing (*'thing*), *n.* a thing unknown, or not specified; part or portion: *adv.* in some degree.

some-time (*'tim*), *adv.* at a time indefinitely; formerly; once.

some-what (*'hwhot*), *n.* more or less: *adv.* in some degree or extent.

some-where (*'hwâr*), *adv.* in one place or another.

som-nam-bu-lism (*som-nam'bū-lizm*), *n.* the act or practice of walking in sleep.

som-nam-bu-list (*-list*), *n.* a sleep-walker.

som-no-lent (*'nō-lent*), *adj.* inclined to sleep.

son (*sun*), *n.* a male child, or descendant; native or inhabitant.

★**so-na-ta** (*sō-nä'tä*), *n.* a musical composition for one instrument.

so-na-ti-na (*-nä-tē'nä*), *n.* a short, simple sonata.

song (*sông*), *n.* a lyrical poem or ballad; notes of birds; trifle.

son-in-law (*sun'-in-law*), *n.* [*pl.* sons-in-law (*sunz'*)], the husband of one's daughter.

son-net (*son'et*), *n.* a short lyric poem of fourteen lines.

son-net-eer (*-et-ēr'*), *n.* a composer of sonnets; minor poet: *v. i.* to compose sonnets.

so-no-rous (*sō-nō'rus*), *adj.* giving a clear sound; loud; deep-toned.

soon (*sōōn*), *adv.* in a short time; quickly; without delay.

soot (*soot*), *n.* finely divided carbon.

sooth (*sōōth*), *n.* truth.

soothe (*sōōth*), *v. t.* to please or calm; allay; pacify; assuage. [ALLAY.]

sooth-say-er (*-ēr*), *n.* one who foretells or prognosticates.

soot-y (*soot'i*), *adj.* pertaining to, producing, or like, soot; dusky, black.

sop (*sop*), *n.* anything steeped, dipped, or softened in a liquid; something given to pacify: *v. t.* to steep or dip in a liquid.

Sophia (*sō-fī'ä*). A name derived from the Greek *sophos*, "knowledge," "wisdom," prudence." Danish, *Sophie*; Dutch, *Sophie*; Fr., *Sophie*; Ger., *Sophie*; Gr., *Sophia*; It., *Sofia*; Lat., *Sophia*; Russ., *Sofia*; Sp., *Sofia*; Sw., *Sofia*.

Sophie. The French form of *Sophia*.

soph-ism (*sof'izm*), *n.* a specious but fallacious argument; fallacy.

soph-ist (*'ist*), *n.* one of a body of men in ancient Greece (5th century B. C.) who taught philosophy, eloquence, and politics; a fallacious or captious reasoner.

so-phis-tic-al (*sō-fis'ti-kal*), *adj.* pertaining to, or characteristic of, a sophist; fallacious. [Also *sophistic.*]

so-phis-ti-cate (*'ti-kāt*), *v. t.* to render worthless; pervert; vitiate.

soph-o-more (*sof'ō-mōr*), *n.* a student in his second academic year.

Sophronia (*sō-frō'ni-ä*). A feminine of *Sophronius*, formed from *Sophron*; means "sober," "modest," "discreet."

sop-o-rif-ic (*sop-ō-rif'ik*), *adj.* causing, or tending to induce, sleep: *n.* an opiate or anodyne.

★**so-pra-no** (*sō-prä'nō*, not *sō-pran'ō*), *n.* [*pl.* sopranos (*'noz*), soprani (*'nē*)], the highest kind of voice; a singer with such a voice.

Sorbonne (*sôr-bon'*). A famous Parisian school.

named from Robert de Sorbonne, almoner of St. Louis.

sor-cer-er (*sôr'sĕr-ĕr*), *n.* a magician, wizard, or enchanter. [Fem. *sorceress.*]

sor-cer-y (*-i*), *n.* [*pl.* sorceries (*-iz*)], divination by the aid of evil spirits; witchcraft; magic.

sor-did (*dĭd*), *adj.* mean; vile; base; niggardly; avaricious.

sore (*sōr*), *adj.* tender or painful; sensitive; grievous; severe: *adv.* grievously; severely: *n.* a painful or diseased part; ulcer; wound; sorrow; trouble.

sor-ghum (*sôr'gum*), *n.* a canelike grass resembling broom corn; molasses prepared from sorghum.

sor-rel (*sor'el*), *n.* a dock-like plant; a reddish-brown color.

sor-row (*'ō*) *n.* mental pain or uneasiness; grief; distress: *v. i.* to grieve; lament; be sad. [AFFLICTION, GRIEF.]

sor-ry (*'i*), *adj.* feeling regret for loss; vexed; pained; worthless.

sort (*sôrt*), *n.* a kind or species; class, rank, or order: *v. t.* to separate and place in different divisions or classes; select.

sot (*sot*), *n.* an habitual drunkard.

Soudan (*sōō-dăn'*). From the Arabic *Belad-ez-Suden*, the "district of the blacks."

★**sough** (*suf*), *n.* a hollow murmur or whistling: *v. i.* to murmur or whistle.

soul (*sōl*), *n.* the spiritual, rational, and immortal part in man; essence; human being.

sound (*sound*), *adj.* whole; unbroken; healthy; not decayed; founded on truth or right; firm; safe; strong; laid on with force: *n.* noise; report; a strait or narrow passage of water: *v. t.* to measure or ascertain the depth of; cause to make a noise; examine or try: *v. i.* to make a noise or sound.

Syn. SOUND, sane, healthy. *Sound* is extended in its application to all things that are in the state in which they ought to be, so as to preserve their vitality; thus, animals and vegetables are said to be *sound* when in the former there is nothing amiss in their breath, and in the latter in their root. *Healthy* expresses more than either *sound* or *sane;* we are *healthy* in every part, but we are *sound* in that which is essential for life. He who is *sound* may live, but he who is *healthy* enjoys life; *sane* is applicable to human beings, in the same sense, but with reference to the mind; a *sane* person is opposed to one that is *insane.*

soup (*sōōp*), *n.* a kind of broth.

sour (*sour*), *adj.* having an acid, sharp, or astringent taste; disagreeable; cross; morose: *v. t.* to cause to become sour: *v. i.* become sour.

source (*sôrs*), *n.* that from which anything arises or originates.

souse (*sous*), *n.* anything steeped or preserved in pickle; a plunging in water: *v. t.* to steep in pickle; plunge into water: *v. i.* to make a sudden attack.

south (*south*), *n.* that one of the four cardinal points of the compass directly opposite the north: *adv.* toward the south: *adj.* pertaining to the south.

South, *n.* the southern portion of the United States (with *the*).

South Carolina. One of the South Atlantic states of the Union. As provinces, the two divisions of Carolina were one tract originally.

south-ern (*suth'ĕrn*), *adj.* pertaining to, situated in, or proceeding from or toward, the south.

South-ern-er (*-ĕr*), *n.* a native of the South.

South Sea Bubble. A financial scheme which originated in England about 1711 and collapsed in 1720.

★**sou-ve-nir** (*sōō-ve-nĕr'*), *n.* a memento or keepsake.

sov-er-eign (*suv'ĕr-in* or *sov'*), *adj.* royal; supreme in power; effectual: *n.* a king, emperor, or queen; a British gold coin equal to 20 shillings, or about $4.86.

sov-er-eign-ty (*-ti*), *n.* supreme power or dominion.

sow (*sou*), *n.* a female pig.

sow (*sō*), *v. t.* to scatter, as seed upon the earth; disseminate; scatter on or over: *v. i.* to scatter seed for growth.

space (*spās*), *n.* extension; room; interval: *v. t.* to make intervals between.

spa-cious (*spā'shus*), *adj.* extending far and wide; roomy.

spade (*spād*), *n.* an implement for digging, etc., consisting of a broad blade of iron with a handle; one of a suit of cards: *v. t.* to dig or work with a spade.

Spain. A kingdom of southwestern Europe. Name is Eng. of *Hispania*, founded upon the Punic *span*, "a rabbit," from the number of wild rabbits found there.

span (*span*), *n.* a short space of time; spread or extent of an arch, etc.; yoke of oxen or horses: *v. t.* to measure by the span of the hand; reach (from one side to the other): *v. i.* to be matched for harness.

span-gle (*spang'gl*), *n.* a small plate or boss of shining metal; any glittering ornament: *v. t.* to set or adorn with, or as with, spangles.

Span-iard (*span'yĕrd*), *n.* a native of Spain.

span-iel (*'yel*), *n.* a variety of dog.

Span-ish (*'ish*), *adj.* pertaining to Spain, its language, or its inhabitants.

Spanish main. The southern banks of the West India islands, and the water extending for some distance into the Caribbean Sea, so called from the fact that the Spaniards confined their buccaneering enterprises to this locality.

spank (*spangk*), *v. t.* to strike with the open hand; slap: *n.* a sounding slap.

spar (*spär*), *n.* a lustrous crystalline mineral; a general name for a mast, yard, boom, etc.; a contest: *v. i.* to box; contest in words.

spare (*spâr*), *v. t.* to use in a frugal manner; part with; omit; treat tenderly: *v. i.* to live frugally; forbear or forgive: *adj.* thin or lean; scanty [FRUGALITY, PENURIOUS.]

spark (*spärk*), *n.* a small particle of fire or ignited substance; small shining body; gay young fellow.

spar-kle (*'l*), *v. i.* to emit sparks; glisten; scintillate; flash.

spar-row (*spar'ō*), *n.* a well-known small bird of the passerine family.

sparse (*spärs*), *adj.* thinly scattered; not dense.

Spar-tan (*spär'tan*), *adj.* pertaining to Sparta; hardy; undaunted.

spasm (*spazm*), *n.* a sudden, violent, involuntary contraction of the muscles.

spas-mod-ic (*spaz-mod'ik*), *adj.* pertaining to, or consisting in, spasms; convulsive; violent but short-lived. [Also *spasmodical.*]

spat-ter (*spat'ĕr*), *v. t.* to sprinkle with a liquid; defame: *v. i.* to undergo or cause scattering or splashing: *n.* a small splash.

spat-u-la (*spat'ū-lä*), *n.* a broad, flat, thin, flexible knife.

spav-in (*spav'in*), *n.* a disease of horses, characterized by a swelling in the hock joint.

spawn (*spawn*), *n.* the ova of fishes, oysters, etc.; offspring or product: *v. t.* to produce and deposit spawn.

speak (*spēk*), *v. i.* to utter articulate sounds; talk; say; sound: *v. t.* to utter articulately; declare or pronounce.

Syn. SPEAK, announce, articulate, chat, chatter, converse, declaim, declare, deliver, discourse, enunciate, express, pronounce, say, talk, tell, utter. To *speak* may simply consist in uttering an articulate sound; but *to say* is to communicate some idea by means of words; a child begins to *speak* the moment it opens its lips to utter any acknowledged sound; but it will be some time before it can *say* anything; to *say* is to communicate that which passes in our own minds, to express our ideas and feelings as they rise; to *tell* is to communicate. To *utter* is to give forth as an audible sound, articulate or not; to *talk* is to *utter* a succession of connected words; to *speak* is to give articulate utterance even to a single word; to *chat* is ordinarily to *utter* in a familiar, conversational way. [See *address, utter.*]

spear (*spēr*), *n.* a long-pointed weapon used for thrusting or throwing; a shoot, as of grass: *v. t.* to pierce, or kill, with a spear.

spe-cial (*spesh'al*), *adj.* designed for a particular purpose; distinctive; uncommon; appropriate; specific.

spe-cial-ism (*-izm*), *n.* devotion to a particular and restricted branch.

spe-cial-ist (*-ist*), *n.* one who devotes himself to a particular branch.

spe-cial-i-za-tion (*-al-i-zā'shun*), *n.* application to a special function or use; act of specializing.

spe-cial-ize (*'shal-iz*), *v. t.* to particularize; assign to a specific use.

★**spe-cial-ty** (*'al-ti*), *n.* that for which a person is noted or distinguished.

spe-cie (*spē'shi*), *n.* coined money.

spe-cies (*'shēz*), *n.* a subdivision of a genus; kind; sort.

spe-cif-ic (*spē-sif'ik*), *adj.* pertaining to a species; definite or particular; precise: *n.* a remedy for a particular disease.

spec-i-fi-ca-tion (*spes-i-fi-kā'shun*), *n.* the act of specifying; detailed statement of particulars.

spec-i-fy (*'i-fi*), *v. t.* to mention or name particularly; designate verbally.

spec-i-men (*'i-men*), *n.* a sample. [COPY.]

spe-cious (*spē'shus*), *adj.* plausible; ostensible.

speck (*spek*), *n.* a spot; flaw; blemish; particle: *v. t.* to spot. [BLEMISH.]

spec-kle (*'l*), *n.* a small spot in anything different in substance or color: *v. t.* to variegate with spots.

spec-ta-cle (*'tä-kl*), *n.* something exhibited to view, especially something unusual: *pl.* an optical instrument to assist the vision. [SHOW.]

spec-tac-u-lar (*-tak'ū-lĕr*), *adj.* pertaining to shows or exhibitions; adapted to excite wonder.

spec-ta-tor (*-tā'tĕr*), *n.* a beholder.

spec-ter, spec-tre (*spek'tĕr*), *n.* a ghost or apparition.

spec-tral (*'tral*), *adj.* ghostly; pertaining to, or produced by, the spectrum.

spec-trum (*'trum*), *n.* [*pl.* spectra (*'trä*)], the colored and other rays of light separated by refraction through a prism.

spec-trum a-nal-y-sis (*ä-nal'i-sis*), the determination of the composition of a body by means of the spectrum.

spec-u-late (*'ū-lāt*), *v. i.* to consider or meditate upon; purchase with a view to profit.

spec-u-la-tion (*-lā'shun*), *n.* intellectual examination; theory; purchase for future sale.

spec-u-la-tive (*'ū-lā-tiv*), *adj.* pertaining to, or given to, speculation; contemplative; risky.

spec-u-la-tor (*-tĕr*), *n.* one who engages in speculation.

speech (*spēch*), *n.* the faculty of uttering articulate sounds or words; act of speaking; formal discourse.

speed (*spēd*), *n.* velocity; swiftness; quickness; success: *v. i.* to make haste; move quickly; fare. [HASTEN.]

speed-om-e-ter (*spēd-om'ē-tĕr*), *n.* a speed indicator, as for an automobile.

speed-y (*'i*), *adj.* not dilatory or slow; prompt; quick; hasty.

spell (*spel*), *n.* a charm or incantation; time during which a person works; duration: *v. i.* to form words with the proper letters: *v. t.* to write, repeat, or point out, the proper letters of.

spelt (*spelt*), *n.* a kind of grain.

spend (*spend*), *v. t.* to lay out, as money; consume; drain of force or strength: *v. i.* to incur expense.

spend-thrift (*'thrift*), *adj.* prodigal; extravagant: *n.* one who is prodigal or lavish in expenditure.

sperm (*spĕrm*), *n.* the seminal fluid of animals; spermaceti.

sper-ma-ce-ti (*spĕr-mä-sē'ti*), *n.* a white waxy substance obtained from the head of the sperm whale.

sper-mat-ic (*-mat'ik*), *adj.* pertaining to semen. [Also *spermatical.*]

sper-ma-to-zo-ōn (*-mä-tō-zō'on*), *n.* the male germ cell in animals and plants.

spew (*spū*), *v. i.* to vomit.

sphere (*sfĕr*), *n.* a globe or globular body; circuit or range of knowledge, etc.

spher-ic-al (*sfer'i-kal*), *adj.* globular.

sphe-roid (*sfē'roid*), *n.* a body resembling a sphere.

sphinx (*sfingks*), *n.* [*pl.* sphinxes (*'sez*)], a fabled monster having the head of a woman and the body of a lioness; a person of enigmatical character or policy.

spice (*spīs*), *n.* any aromatic and pungent vegetable used for seasoning; relish: *v. t.* to season or flavor with, or as with, spice.

spick and span (*spik and span*), new.

spi-cy (*spī'si*), *adj.* flavored with, containing, or having the qualities of, spice; racy.

spi-der (*'dĕr*), *n.* any individual of the genus Arachnida that spins webs to ensnare its prey.

spig-ot (*spig'ot*), *n.* a pointed piece of wood used to stop the venthole of a cask.

spike (*spīk*), *n.* a large kind of nail: *v. t.* to fasten with spikes.

spike-nard (*'närd*), *n.* an aromatic plant from which an oil, the ancient *nardos*, is extracted.

spik-y (*'i*), *adj.* spike-like; set with spikes.

spill (*spil*), *n.* a thin strip of paper or wood for lighting a lamp, etc.; a tumble or overthrow: *v. t.* to suffer to run or fall out of a vessel: *v. i.* to fall out. [POUR.]

spin (*spin*), *v. t.* to draw out and twist into threads; protract; cause to whirl rapidly: *v. i.* to practice spinning; whirl; move swiftly: *n.* the act of spinning.

spin-ach (*'äj*), *n.* an esculent vegetable.

spi-nal (*spī'nal*), *adj.* pertaining to the spine.

spin-dle (*spin'dl*), *n.* the long, thin rod used on spinning wheels for twisting the thread; any axis of revolution.

spine (*spin*), *n.* in vertebrates, the backbone.

spin-et (*spin'et*), *n.* a keyed instrument, allied to the piano.

spin-ning jen-ny (*'ing jen-i*), a machine for spinning cotton.

spin-ster (*spin'stĕr*), *n.* an unmarried woman.

spi-ral (*spī'ral*), *adj.* winding around a center like the thread of a screw: *n.* a curve or curved line receding continually from the center.

spi-rant (*'rant*), *n.* a name applied to those consonants in which the breath is not entirely stopped in articulating.

spire (*spīr*), *n.* a tapering body; steeple.

Spires (*spīrz*) or **Speyer** (*spīr*). An historic place in Bavaria, Germany, so named from the river *Speyerbach.*

spir-it (*spir'it*), *n.* the soul; life; apparition; courage; vivacity; real meaning; essence; any liquid produced by distillation: *pl.* intoxicants; liveliness: *v. t.* to take away suddenly or secretly.

spir-it-u-al (*spir'it-ū-al*), *adj.* not material; possessing the nature or qualities of a spirit; pure; holy; heavenly-minded.

spir-it-u-al-ism (*-izm*), *n.* the state of being spiritual; the philosophical doctrine that nothing is real except soul or spirit.

spir-it-u-al-ist (*-ist*), *n.* a believer in spiritualism.

spir-it-u-al-i-ty (*-al'i-ti*), *n.* the state or quality of being spiritual.

spir-it-u-al-ize (*-iz*), *v. t.* to free from sensuality; make spiritual.

spir-it-u-ous (*spir'it-ū-us*), *adj.* having the quality of spirit; pure; immaterial; alcoholic; ardent.

spit (*spit*), *n.* a long, pointed rod on which meat is roasted: *v. t.* to thrust a spit through; impale: *v. i.* to eject saliva.

spite (*spīt*), *n.* ill will or hatred; petty malice: *v. t.* to try to injure; annoy.

spit-fire (*spit'fīr*), *n.* a very violent or passionate person.

spit-tle (*'l*), *n.* saliva; sputum.

Spitzbergen (*spits-bĕrg'en*). A group of islands in the Arctic Ocean. Name is literal Dutch for "sharp-pointed mountains," referring to the granite peaks of the mountains which are so characteristic of this group of islands.

splash (*splash*), *v. t.* to spatter: *v. i.* to dash water about: *n.* a noise as from water thrown up, or by anything striking in, or upon, a liquid.

splat-ter (*splat'ĕr*), *v. t.* to splash.
splay (*splā*), *v. t.* to dislocate, as the shoulder bone of a horse: *adj.* turned or spreading outward.
spleen (*splēn*), *n.* a soft vascular organ near the large extremity of the stomach; fit of ill humor, melancholy, or latent spite.
splen-did (*splen'did*), *adj.* magnificent; brilliant; famous; celebrated; sumptuous.
splen-dor (*'dĕr*), *n.* the appearance of anything splendid; pomp. [MAGNIFICENCE.]
splice (*splīs*), *v. t.* to unite, as two ropes, by interweaving the strands; connect; unite: *n.* the union of ropes, etc.
splint (*splint*), *n.* a splinter; a thin piece of wood to keep a broken bone, etc., in position.
splin-ter (*splin'tĕr*), *n.* a thin piece of wood, etc.; fragment: *v. t.* to split or rend into long, thin pieces; shiver: *v. i.* to be rent into splinters.
split (*split*), *v. t.* to divide lengthwise; cleave; rupture; disunite: *v. i.* betray confidence; throb or ache violently. [BREAK.]
splotch (*sploch*), *n.* a stain; daub.
splurge (*splĕrj*), *n.* a great display.
splut-ter (*splut'ĕr*), *v. i.* to speak hastily and confusedly: *n.* a confused noise.
spoil (*spoil*), *v. t.* to plunder; vitiate; ruin; destroy: *v. i.* to become useless; decay: *n.* pillage; plunder; booty. [BOOTY.]
spoke (*spōk*), *n.* one of the bars of a wheel connecting the center with the rim: *v. t.* to furnish with spokes: *p. t.* of speak.
spo-li-a-tion (*spō-li-ā'shun*), *n.* the act of plundering or robbery.
spon-dee (*spon'dē*), *n.* a poetic foot of two long syllables.
sponge (*spunj*), *n.* the porous, elastic, fibrous framework of any species of Spongida; any substance resembling sponge; parasite: *v. i.* to suck in like a sponge; live upon others: *v. t.* cleanse or wipe with a sponge.
spon-gy (*spun'ji*), *adj.* like a sponge; having the quality of imbibing fluids.
spon-sor (*spon'sĕr*), *n.* a surety; a godfather or godmother.
spon-ta-ne-i-ty (*-tā-nē'i-ti*), *n.* the quality of being spontaneous.
spon-ta-ne-ous (*-tā'nē-us*), *adj.* proceeding from natural disposition or impulses; acting by internal impulse or natural law.
spook (*spōōk*), *n.* a ghost.
spool (*spōōl*), *n.* a hollow cylinder surrounded with a ridge at each end on which thread, etc., are wound.
★**spoon** (*spōōn*, not *spoon*), *n.* a small domestic implement consisting of a hollow bowl and handle: *v. t.* to take up in, or as in, a spoon: *v. i.* to act the part of a demonstrative lover.
spoon-y (*'i*), *adj.* demonstratively fond.
spoor (*spōōr*), *n.* the track or trail of any wild animal.
spo-rad-ic (*spō-rad'ik*), *adj.* occurring separately or apart from others of the same kind. [Also *sporadical.*]
spo-rad-ic dis-ease (*diz-ēz'*), a disease, usually epidemic, attacking only a few.
spore (*spōr*), *n.* a minute grain in cryptogamous plants which performs the function of a seed.
sport (*spōrt*), *n.* diversion; mirth; mockery; recreation: *v. i.* to play or frolic: *v. t.* to divert.
sport-ing (*'ing*), *p. adj.* pertaining to, characteristic of, or engaging in, sport or sports.
sport-ive (*'iv*), *adj.* frolicsome; merry. [PLAYFUL.]
sports-man (*spōrts'man*), *n.* [*pl.* sportsmen (*'men*)], one who pursues the sports of the field, as hunting, etc. [Fem. *sportswoman.*]
spot (*spot*), *n.* a blot or mark; blemish; disgrace or reproach; locality; place: *v. t.* to mark with spots; discolor; stain; disgrace or blemish; detect. [BLEMISH.]
spot light (*'lit*), an adjustable calcium light for throwing a shifting light on a stage.
Spottsylvania. County in Virginia, named for Alexander Spotswood, early lieutenant governor.
spot-ty (*'i*), *adj.* marked with, or full of, spots.
spouse (*spouz*), *n.* a married person.
spout (*spout*), *n.* the projecting mouth of a vessel; pipe for conducting a liquid: *v. t.* to throw out forcibly and abundantly, as from a pipe: *v. i.* to issue with violence.
sprain (*sprān*), *n.* an excessive strain of the muscles or ligaments: *v. t.* to overstrain.
sprat (*sprat*), *n.* a small fish.
sprawl (*sprawl*), *v. i.* to stretch the body carelessly; lie awkwardly.
spray (*sprā*), *n.* a small shoot or branch of a tree; small particles of water, etc.: *v. t.* to throw spray upon.
spread (*spred*), *v. t.* to extend in all directions; unfurl; open; scatter: *v. i.* to be extended or propagated: *n.* extent; feast.
Syn. SPREAD, expand, diffuse. *To spread* may be said of anything which occupies more place than it has done, whether by a direct separation of its parts, or by an accession to the substance; but *to expand* is *to spread* by means of extending or unfolding the parts; a mist *spreads* over the earth; a flower *expands* its leaves; *diffusion* is that process of *spreading* which consists literally in pouring out in different ways. [See *announce.*]
Ant. COLLECT, gather.
spread ea-gle (*spred' ē-gl*), defiantly bombastic: *n.* the figure of an eagle with its wings elevated and its legs extended.
spree (*sprē*), *n.* a carousal.
sprig (*sprig*), *n.* a small twig or shoot; scion.
spright-li-ness (*'li-nes*), *n.* vivacity.
spright-ly (*'li*), *adj.* vivacious; brisk; animated; airy; gay: *adv.* with vivacity. [ACTIVE.]
spring (*spring*), *v. i.* to arise; originate; dart; start or rise up suddenly; issue or proceed: *v. t.* to cause to spring up; leap over: *n.* a leap or bound; an elastic body used for various mechanical purposes; a flying back; source; a fountain of water; one of the four seasons of the year.
springe (*sprinj*), *n.* a gin or noose.
Springfield, Mass. Named in honor of the English residence of its founder, William Pynchon (1640). Indian name *Agawam.*
spring-ing (*spring'ing*), *n.* the act or process of leaping; growth.
spring-tide (*'tīd*), *n.* springtime.
spring-y (*'i*), *adj.* elastic; light; spongy.
sprin-kle (*spring'kl*), *v. t.* to scatter in small drops: *v. i.* to rain in small drops: *n.* a sprinkling.
sprint (*sprint*), *n.* a run for a short distance at full speed: *v. i.* to run at full speed.
sprout (*sprout*), *v. i.* to germinate: *n.* a shoot; bud.
spruce (*sprōōs*), *n.* a fir tree of the genus Picea: *adj.* smart; trim; neat: *v. t.* and *v. i.* to dress with affected neatness.
spry (*sprī*), *adj.* nimble; sharp. [ACTIVE.]
spunk-y (*'i*). *adj.* mettlesome; plucky.
spur (*spûr*), *n.* a rowel with sharp points worn on the heel for inciting a horse; any incentive to action; something projecting: *v. t.* to prick with a spur; incite to action; hasten: *v. i.* to travel with haste; push on.
spu-ri-ous (*spū'ri-us*), *adj.* not genuine; counterfeit; illegitimate.
spurn (*spûrn*), *v. t.* to drive away, as with the foot; reject with contempt: *v. i.* to manifest contempt: *n.* disdainful rejection.
spurt (*spûrt*), *v. i.* to issue forth suddenly in a stream; make a sudden brief effort: *v. t.* to throw out in a stream: *n.* a sudden or forcible ejection of a liquid; brief, sudden effort.
sput-ter (*sput' ĕr*), *v. i.* to throw out in scattered drops; speak rapidly and indistinctly: *v. t.* to emit in small particles with a sputtering noise: *n.* moist matter thrown out in small drops.
spu-tum (*spū'tum*), *n.* saliva; spittle.
Spuyten Duyvil (*spī'ten di'vil*). Channel connecting the Hudson and Harlem rivers. So named on account of the oath sworn by a Dutch shipmaster that he would pass the mouth of the creek "in spite of the devil."
spy (*spī*), *v. t.* to gain sight of; detect; explore; examine secretly: *v. i.* to scrutinize; play the spy: *n.* one who keeps watch on others; secret agent. [EMISSARY.]
spy-glass (*'glăs*), *n.* a small telescope.
squab (*skwob*), *n.* a person of short, fat figure; nestling of a pigeon: *adj.* short and fat; bulky: *adv.* with a heavy fall.
squab-ble (*'l*), *v. i.* to wrangle or dispute in a noisy manner: *n.* a noisy wrangle; dispute.
squad (*skwod*), *n.* a small party (of soldiers).
squad-ron (*'run*), *n.* two troops of a regiment of cavalry; detachment of war vessels.
squal-id (*skwol'id*), *adj.* extremely dirty; foul; poverty-stricken.
squall (*skwawl*), *n.* a sudden and violent gust of wind; a loud scream: *v. i.* to scream or cry violently.
★**squa-lor** (*skwā'lôr*), *n.* foulness; dirt.
squan-der (*skwon'dĕr*), *v. t.* to spend lavishly or wastefully: *v. i.* to be wasteful.
square (*skwār*), *n.* a parallelogram having 4 equal sides and 4 right angles; anything nearly resembling a square; instrument for measuring right angles; product of a number multiplied by itself: *adj.* having 4 equal sides and 4 equal angles; forming a right angle; true; upright; honest; just; well-set: *v. t.* to form with 4 equal sides and 4 equal angles; multiply by itself; adjust; regulate; place at right angles: *v. i.* to accord or agree; assume a boxing attitude (with *off*).
square root (*'rōōt*), that number or quantity which, multiplied by itself, produces the given number or quanity, as 2 is the square root of 4.
squash (*skwosh*), *v. t.* to crush: *n.* something soft and easily crushed; shock of soft bodies; a gourd.
squash-y (*'i*), *adj.* easily crushed.
squat (*skwot*), *v. i.* to sit down on the hams or heels; settle on land without a title: *adj.* crouching: *n.* the posture of one who squats.
squat-ter (*'ĕr*), *n.* one who squats.
squaw (*skwaw*), *n.* a North American Indian woman or wife.
squawk (*skwawk*), *v. i.* to utter a loud, harsh noise: *n.* a harsh squeak.
squeak (*skwēk*), *v. i.* to utter a short, shrill, sharp noise; break silence; confess: *n.* a short, shrill, sharp or disagreeable noise.
squeal (*skwēl*), *v. i.* to cry with a sharp, shrill, prolonged sound: *n.* a sharp, shrill, prolonged sound.
squeam-ish (*skwēm'ish*), *adj.* sickish at stomach; easily disgusted; nice to excess; fastidious.
squeeze (*skwēz*), *v. t.* to press between two bodies; embrace forcibly; compress: *v. i.* to press; push between close bodies: *n.* the act of squeezing; compression between bodies; a forcible embrace. [PRESS.]
squelch (*skwelch*), *v. t.* to crush; silence.
squib (*skwib*), *n.* a kind of firework; petty lampoon: *v. i.* to use or write squibs or sarcastic reflections.
squill (*skwil*), *n.* a genus of plants allied to the lily.
squint (*skwint*), *adj.* looking obliquely: *v. i.* to see or look obliquely: *v. t.* to cause to squint: *n.* the act or habit of looking obliquely.
squirm (*skwĕrm*), *v. i.* to wriggle.
squir-rel (*skwĕr'el*), *n.* a small, agile rodent with a long bushy tail.
squirt (*skwĕrt*), *v. t.* to eject in a stream; spurt: *n.* a small stream or jet; an instrument for ejecting.
stab (*stăb*), *v. t.* to pierce with, or as with, a pointed weapon; kill or wound: *v. i.* to pierce; indict a wound: *n.* a thrust or wound with a sharp-pointed weapon.
sta-ble (*stā'bl*), *adj.* fixed; firm; constant: *n.* a building for lodging horses, cows, etc.: *v. t.* to put or keep in a stable: *v. i.* to dwell or shelter, as in a stable. [FIRM, PERMANENT.]
stack (*stăk*), *n.* a large quantity of hay, corn, wood, etc., piled up; number of chimneys standing together: *v. t.* to pile into a stack.
sta-di-um (*stā'di-um*), *n.* [*pl.* stadia (*-ȧ*)], a Greek linear measure equal to 606¾ ft.; a race course.
staff (*stăf*), *n.* a stick carried for support in walking, or for defense; support; handle; pole; stanza or a series of verses; the five lines and four spaces on which music is written; number of persons engaged in any undertaking.
Syn. STAFF, stay, prop, support. Anything may be denominated a *staff* which holds up after the manner of a *staff*, particularly as it respects persons; bread is said to be the *staff* of life; the *stay* makes a thing *stay* for the time being; it keeps it in its place; the *prop* keeps a thing up for a permanency: every pillar on which a building rests is a *prop; support* is a general term, and in its most general sense comprehends all the others as species; whatever *supports*, that is, bears the weight of an object, is a *support*, whether in a state of motion like a *staff*, or in a state of rest like a *stay* or *prop*.
stag (*stag*), *n.* the male of the red deer.
stage (*stāj*), *n.* an elevated platform; the theatrical profession; place of rest on a journey; field of action; degree of progress; coach: *v. t.* to put on the stage, as a play.
sta-ger (*stā'jĕr*), *n.* one who has long acted on the stage of life; one who is experienced; a player.
stag-ger (*stag'ĕr*), *v. i.* to totter or reel: *v. t.* to cause to totter or reel; shock; make less confident: *n.* a sudden reeling or tottering.
stag-ing (*stāj'ing*), *n.* a temporary structure of boards and posts; style of play production.
stag-nant (*stag'nant*), *adj.* not flowing, or running in a stream; motionless; not brisk; torpid; dull.
stag-nate (*'nāt*), *v. i.* to cease to flow or run; become torpid, dull or impure.
staid (*stād*), *adj.* sober; sedate; regular; steady.
stain (*stān*), *v. t.* to blot; spot; dye; tarnish; pollute: *v. i.* to take stains; become stained: *n.* discoloration; spot or blot; taint; cause of reproach.
Syn. STAIN, soil, sully, tarnish. All these terms imply the act of diminishing the brightness of an object, but the term *stain* denotes something grosser than the other terms, and is applied to inferior objects; things which are not remarkable for purity or brightness may be *stained*, as hands when *stained* with blood; nothing is *sullied* or *tarnished* but what has some intrinsic value; a fine picture or piece of writing may be easily *soiled* by a touch of the finger; the finest glass is the soonest *tarnished;* hence, in the moral application a man's life may be *stained* by the commission of some gross immorality; his honor may be *sullied*, or his glory *tarnished*.
stair (*stâr*), *n.* one of a series of steps for ascending to a higher level; a step: *pl.* a flight of steps.
stair-case (*'kās*), *n.* a set of steps in a house with railings, etc.
stake (*stāk*), *n.* a post or strong stick sharpened at one end and fixed in the ground; that which is pledged, wagered; prize contested for: *v. t.* to fasten or support, defend with, or mark out the limits of, with stakes; wager or pledge.
stal-ac-tite (*stal-ak'tit*), *n.* an icicle-like incrustation of carbonate of lime, etc., formed by percolation in caverns, etc.
stal-ag-mite (*-ag'mīt*), *n.* a cone of carbonate of lime, etc., formed on the floor of a cavern.
stale (*stāl*), *adj.* not fresh or new; vapid; tasteless; trite: *v. t.* to make stale; wear out.
stale-mate (*'māt*), *n.* the position of a king in chess, when he cannot move without being placed in check: *v. t.* to subject to stalemate.
stalk (*stawk*), *v. t.* to pursue stealthily and under cover: *v. i.* to walk with high and proud steps: *n.* the stem or main axis of a plant; anything like a stalk.
stall (*stawl*), *n.* that part of a stable where a horse or ox is kept and fed; small shelter where business is carried on: *v. t.* to place or keep in a stall: *v. i.* to kennel, as dogs.
stal-lion (*stal'yun*), *n.* an uncastrated male horse.
stal-wart (*stawl'wĕrt*), *adj.* sturdy; strong; tall and stout.
sta-men (*stā'men*), *n.* the male organ of a flower.
stam-i-na (*stam'i-nȧ*), *n. pl.* tone and vigor of the animal system

stam-i-nal (*stam'i-nal*), *adj.* pertaining to, or consisting in, stamens or stamina; tonic.
stam-mer (*stam'ĕr*), *v. i.* to hesitate or falter in speaking: *v. t.* to utter or pronounce with difficulty or hesitation: *n.* difficulty in speaking; stutter. [HESITATE.]
stamp (*stamp*), *v. t.* to strike with the sole of the foot by thrusting it downward; impress; fix deeply; affix a stamp to: *v. i.* to strike or beat the foot forcibly on the ground: *n.* the act of stamping; die; the impression made; small piece of paper to be affixed to a letter, document, etc.
stam-pede (*stam-pēd'*), *n.* a sudden panic; any sudden flight or rush: *v. t.* to cause to take to sudden flight: *v. i.* to start off in a panic.
stanch (*stänch*), *adj.* firm; constant; trustworthy; zealous: *v. t.* to stop the flowing of, as blood. [Also *staunch.*]
stan-chion (*stan'shun*), *n.* a support or post of iron or wood.
stand (*stand*), *v. i.* to be erect; occupy a certain position; be at rest or fixed; continue; continue in force: *v. t.* to endure; sustain; abide by; set in an erect position: *n.* a stop or halt; raised platform for spectators; small table; resistance.
stand-ard (*'ĕrd*), *n.* an ensign or flag; established rule or model; criterion. [CRITERION.]
stand-ing (*'ing*), *n.* the act of stopping or of being erect on the feet; reputation; rank or status: *adj.* remaining erect; stagnant; lasting; fixed.
Stanislaus (*stan'is-laws*). From the Slavonic *slawa*, signifying "the place of glory or fame." The Bohemian form of the name is *Stanislaw.*
stan-na-ry (*stan'ä-ri*), *n.* [*pl.* stannaries (*-riz*)], a tin mine or works: *adj.* pertaining to tin mines.
stan-nous (*'us*), *adj.* of, pertaining to, or containing, tin.
stan-za (*'zä*), *n.* a number of lines or verses, usually ending in a pause.
sta-ple (*stā'pl*), *n.* principal element or topic; unmanufactured or raw material; loop of metal for holding a bolt, etc.: *adj.* chief; regularly produced; established in commerce, etc.
star (*stär*), *n.* any celestial body, especially one that is self-luminous; anything resembling a star; a person of distinguished eminence, especially in the theatrical profession: *v. t.* to set or adorn with stars: *v. i.* to shine as a star; be preëminent.
star-board (*'bōrd*), *n.* the right-hand side of a vessel looking toward the bow: *adj.* pertaining to, or lying on, the right side of a vessel.
starch (*stärch*), *n.* a widely diffused vegetable substance: *v. t.* to stiffen with starch; make stiff.
starch-y (*stärch'i*), *adj.* consisting of starch; stiff; formal.
stare (*stär*), *n.* a fixed look with wide-open eyes: *v. i.* to look with fixed eyes wide open: *v. t.* to gaze at. [GAPE.]
stark (*stärk*), *adj.* stiff; strong: *adv.* wholly or completely.
star-ling (*stär'ling*), *n.* a passerine bird of the genus Sturnus.
star-ry (*'i*), *adj.* abounding in, consisting of, or proceeding from, stars; star-shaped.
start (*stärt*), *v. i.* to be moved or twitched suddenly; move abruptly; set out; commence: *v. t.* to originate or set going; rouse suddenly from concealment: *n.* the act of starting; outset; a sudden motion or twitch; starting post.
star-tle (*stär'tl*), *v. i.* to feel sudden alarm: *v. t.* to frighten suddenly; shock.
star-va-tion (*stär-vā'shun*), *n.* the state of being starved.
starve (*stärv*), *v. i.* to suffer extreme hunger: *v. t.* subdue by famine; destroy by want of any kind.
starve-ling (*'ling*), *adj.* hungry; weak; lean: *n.* a thin, weak, pining animal or plant.
state (*stāt*), *n.* circumstances or condition; pomp; whole body of people united under one government; civil power: *adj.* pertaining to the body politic; ceremonial: *v. t.* to express the details of; narrate. [See *announce, allege.*]
Syn. STATE, realm, commonwealth. The ruling idea in the sense and application of the word *state* is that of government in its most abstract sense; affairs of *state* may either respect the internal regulations of a country, or they may respect the arrangements of different *states* with each other. The term *realm* is employed for the nation at large, but confined to such nations as are monarchical and aristocratical; the term *commonwealth* refers rather to the aggregate body of men and their possessions, than to the government of a country; it is the business of the minister to consult the interests of the *commonwealth.*
state-li-ness (*'li-nes*), *n.* the state or quality of being stately; majestic appearance.
state-ly (*'li*), *adj.* grand; majestic; dignified; displaying state.
state-ment (*'ment*), *n.* the act of stating; that which is stated.
Staten (*stat'n*) **Island, N. Y.** An island forming part of the city of New York. Named by Henry Hudson *Stadten Nylandt*, that is, "island of the state," in compliment to the states-general, under whose flag he was sailing. The Indian name was *monachnong*, "place of the bad woods."
State of Franklin. An old name of Tennessee, under which it was organized in 1785.
States-general. The name given to the legislative assemblies of France before the revolution of 1789, and to those of the Netherlands.
states-man (*stāts'man*), *n.* one who is skilled in public affairs; politician.
states-man-ship (*-ship*), *n.* the qualification or skill of a statesman.
stat-ic (*stat'ik*), *adj.* pertaining to bodies at rest or in equilibrium. [Also *statical.*] *n. pl.* that branch of mechanics which treats of bodies at rest.
sta-tion (*stā'shun*), *n.* place where a person or thing stands; position; place on a railway for passengers or goods; police office: *v. t.* to place in a certain post, rank, or situation. [CONDITION.]
sta-tion-a-ry (*-ä-ri*), *adj.* fixed; not moving; not improving.
sta-tion-er (*'shun-ĕr*), *n.* one who sells paper, pens, pencils, etc.
sta-tion-er-y (*-ĕr-i*), *n.* stationer's articles.
sta-tis-tic (*stä-tis'tik*), *adj.* pertaining to statistics.
stat-is-ti-cian (*stat-is-tish'an*), *n.* one skilled in statistics.
sta-tis-tics (*stä-tis'tiks*), *n.* the science of the classification and arrangement of facts.
stat-u-a-ry (*stat'ü-ä-ri*), *n.* the art of carving statues; statues collectively.
stat-ue (*'ü*), *n.* the representation of a living being sculptured or modeled in some solid material: *v. t.* to form a statue of; place, as a statue.
stat-u-esque (*-ü-esk'*), *adj.* having the characteristics of a statue.
stat-u-ette (*-ü-et'*), *n.* a little statue.
stat-ure (*'ür*), *n.* the natural height.
sta-tus (*stā'tus*), *n.* condition; social standing or place; rank.
stat-ute (*stat'üt*), *n.* written law; an act of a corporation.
stat-u-to-ry (*'ü-tō-ri*), *adj.* enacted by statute; depending on statute for its authority.
stave (*stāv*), *n.* one of the thin, narrow strips of wood forming the sides of a cask: *v. t.* to break a hole in; burst.
stay (*stā*), *n.* stop or stand; prop or support; abode or continuance in a place: *v. t.* to hold up or support; sustain; endure; restrain; delay: *v. i.* to remain or abide; stand still; continue; cease. [STAFF, OBSTRUCT, CONTINUE.]
stead (*sted*), *n.* the place or room which another had or might have.
stead-fast (*'fast*), *adj.* firmly fixed or established; steady; constant; uniform. [PERMANENT.]
★**stead-y** (*sted'i*, not *städ'i*), *adj.* fixed; regular; firm; resolute; unwavering; uniform: *v. t.* to make or keep steady or firm; regulate: *interj.* be fixed!
steak (*stāk*), *n.* a slice of beef.
steal (*stēl*), *v. t.* to take by theft or feloniously; withdraw or convey clandestinely: *v. i.* to commit theft; slip in and out unperceived.
stealth (*stelth*), *n.* secret means employed; underhand procedure.
stealth-y (*'i*), *adj.* done or performed by stealth; clandestine.
steam (*stēm*), *n.* vapor into which water is changed when heated to boiling point; vapor: *v. i.* to emit steam; rise or pass off in steam: *v. t.* to apply steam to.
steam-er (*'ĕr*), *n.* a vessel propelled by steam; an apparatus for steaming.
steam tur-bine (*tur'bin*), a steam engine in which the steam acts upon a rotating turbine.
steed (*stēd*), *n.* a horse, especially one which is spirited.
steel (*stēl*), *n.* iron refined and combined with carbon; anything made of steel: *adj.* made of, or resembling, steel: *v. t.* to overlay, edge, or tip with steel; make hard or invulnerable.
steel-ing (*'ing*), *n.* the process of overlaying, edging, or pointing with steel; aciérage.
steel-y (*'i*), *adj.* made of, or like, steel; hard; inflexible.
steel-yard (*'yärd*), *n.* a kind of balance, consisting of a single weight moved along a graduated beam.
steep (*stēp*), *adj.* precipitous: *v. t.* to soak in a liquid; dip; imbue. [SOAK.]
steep-en (*'n*), *v. i.* to become steep or steeper.
stee-ple (*stē'pl*), *n.* a tower or turret tapering to a point; spire.
stee-ple-chase (*-chās*), *n.* a kind of cross-country horse race.
steer (*stēr*), *n.* a young male of the ox kind; bullock: *v. t.* to control; guide: *v. i.* to direct; move; be governed.
steer-age (*'āj*), *n.* the act or practice of steering; that part of a ship allotted to the poorer passengers.
Stella. A feminine name, from the Latin, signifying "a star."
stel-lar (*stel'ĕr*), *adj.* pertaining to stars; astral; starry. [Also *stellary.*]
stel-late (*'āt*), *adj.* starlike; radiated.
stel-lu-lar (*'ü-lĕr*), *adj.* radiated.
stem (*stem*), *n.* the principal axis of a tree or plant; anything resembling a stem; the unchangeable part of an inflected word: *v. t.* to resist or check; dam up: *v. i.* to move forward against an obstacle.
stench (*stench*), *n.* a strong offensive odor.
sten-cil (*sten'sil*), *n.* a thin plate of metal with a pattern, etc., cut out, used for marking, etc.; *v. t.* to mark or color with a stencil.
ste-nog-ra-pher (*stē-nog'rä-fĕr*), *n.* a shorthand writer. [Also *stenographist.*]
sten-o-graph-ic (*sten-ō-graf'ik*), *adj.* pertaining to, or written in, shorthand.
ste-nog-ra-phy (*stē-nog'rä-fi*), *n.* the art of writing in shorthand.
sten-to-ri-an (*sten-tō'ri-an*), *adj.* extremely loud.
step (*step*), *n.* pace; small distance; footstep; action; gait; stair: *pl.* stairs: *v. i.* to walk; advance or retire by pacing: *v. t.* to set, as the foot; measure by steps: *prefix* denoting *relation by marriage only.*
Stephen (*stē'vn*). From the Greek name signifying "a crown or garland." Danish, *Stephan;* Dutch, *Steven* or *Stephanus;* Fr., *Etienne;* Ger., *Stephan;* Gr., *Stephanos;* Hung., *Istvan;* Lat., *Stephanus;* Polish, *Sczepan;* Port., *Estevao;* Russ., *Stepan* or *Stefan;* Sp., *Esteban;* Sw., *Stefan.*
steppe (*step*), *n.* a name for the vast barren plains of Russia.
stereo, a *prefix* meaning *solid, firm,* as *stereogram,* a picture representing objects on a plane surface as if in relief: *n.* an *abbr.* of stereotype. [Also *stereograph.*]
ste-re-op-ti-con (*stē-rē-op'ti-kon*), *n.* a magic lantern showing photographic slides as if in relief.
ste-re-o-scope (*stē'rē-ō-skōp*), *n.* a binocular optical instrument by means of which two pictures appear as one.
ste-re-o-type (*-tīp*), *n.* a metal plate cast from a mold taken from a page of movable types: *v. t.* to cast or print in stereotype; fix permanently: *adj.* pertaining to, or done by, stereotype.
ster-ile (*ster'il*), *adj.* barren; destitute of ideas.
ste-ril-i-ty (*stē-ril'i-ti*), *n.* barrenness; infecundity.
ster-il-i-za-tion (*ster-il-i-zā'shun*), *n.* the act or process of rendering sterile.
ster-il-ize (*'il-iz*), *v. t.* to make sterile.
ster-ling (*stĕr'ling*), *adj.* pure; unadulterated; genuine; of high merit.
stern (*stĕrn*), *adj.* austere; unrelenting; steadfast; being in the stern: *n.* the after part of a vessel.
ster-num (*stĕr'num*), *n.* the breastbone.
stern-way (*'wā*), *n.* movement of a vessel backward.
ste-thom-e-ter (*stē-thom'ē-tĕr*), *n.* an apparatus for measuring the external movements of the chest.
steth-o-scope (*steth'ō-skōp*), *n.* an instrument for examining the chest, by sound produced in the thorax.
Stettin (*stet-ēn'*). From *zytyn*, "the place of green corn." A seaport of northern Prussia.
ste-ve-dore (*stē've-dōr*), *n.* one who loads or unloads a vessel.
stew (*stū*), *v. t.* to boil slowly or with a simmering heat: *v. i.* to be boiled slowly or gently: *n.* a dish prepared by stewing: *pl.* a brothel.
stew-ard (*'ĕrd*), *n.* one who manages the domestic concerns of a family or institution; a fiscal agent, etc.
stew-ard-ess (*-es*), *n.* a woman who attends to female passengers on board ship.
stick (*stik*), *n.* a small branch or shoot cut off a tree; walking stick; staff; printer's composing stick: *v. t.* to pierce; fasten; fix in; make to cohere: *v. i.* to be fixed; remain; cleave; adhere; hesitate (with *at*).
stic-kle (*'l*), *v. i.* to wrangle for something of little importance.
stick-y (*'i*), *adj.* adhesive; glutinous; viscous.
stiff (*stif*), *adj.* rigid; inflexible; stubborn; not liquid or fluid; not natural or easy; affected; formal.
stif-fen (*'n*), *v. t.* to make stiff: *v. i.* to become stiff; grow more obstinate.
stiff-necked (*'nekt*), *adj.* inflexibly obstinate; stubborn.
sti-fle (*stī'fl*), *v. t.* to suffocate; extinguish; suppress or conceal: *v. i.* to be suffocated.
stig-ma (*stig'mä*), *n.* [*pl.* stigmas (*'mäz*), stigmata (*'mä-tä*)], a mark; mark of infamy or disgrace: *pl.* the counterparts of the marks of the wounds in Christ's body.
stig-ma-tize (*'mä-tīz*), *v. t.* to mark with a stigma or brand.
stile (*stīl*), *n.* a set of steps to pass from one side of a fence or wall, etc., to the other.
sti-let-to (*sti-let'ō*), *n.* a small dagger with a thin blade.
still (*stil*), *adj.* at rest; without motion; silent: *adv.* nevertheless; always: *v. t.* to make still: *n.* an apparatus for distilling liquids. [CALM.]
stilt (*stilt*), *n.* a pole of wood with a rest for the foot, used in pairs in walking.
stim-u-lant (*stim'ü-lant*), *adj.* serving to stimulate; producing transient increase of vital energy: *n. pl.* medicines or alcoholic beverages having such an effect.
stim-u-late (*'ü-lāt*), *v. t.* to excite or rouse; excite greater vitality in: *v. i.* to act as a stimulus.
stim-u-la-tive (*'ü-lā-tiv*), *adj.* having the power of stimulating.
stim-u-lus (*'ü-lus*), *n.* [*pl.* stimuli (*-lī*)], that which stimulates.
sting (*sting*), *n.* the sharp-pointed, poisonous weapon with which certain animals and insects are furnished; anything that gives acute mental or physical pain; the thrust of a sting: *v. t.* to pierce or wound with, or as with, a sting.
sting-ing (*'ing*), *p. adj.* piercing, as with a sting; painful; pungent.
stin-gy (*stin'ji*), *adj.* close and covetous; miserly; niggardly.
stink (*stingk*), *v. i.* to emit a strong, offensive odor: *v. t.* to cause to stink: *n.* a strong, offensive odor.
stint (*stint*), *v. t.* to restrain within certain limits: *v. i.* to stop or cease: *n.* quantity assigned.
sti-pend (*stī'pend*), *n.* salary.
sti-pen-di-a-ry (*-pen'di-ä-ri*), *adj.* receiving stipend

or salary: *n.* one who performs services for a salary.

stip-ple (*stip'l*), *v. t.* to engrave or paint by means of dots.

stip-u-late (*'ū-lāt*), *v. i.* to arrange or settle definitely.

stip-u-la-tion (*-ū-lā'shun*), *n.* the act of stipulating; bargain; condition in a contract.

stir (*stĕr*), *v. t.* to put into motion; rouse; instigate: *v. i.* to be in motion: *n.* bustle; agitation; tumult.

Syn. STIR, move. We may *move* in any manner, but *to stir* is *to move* so as to disturb the rest and composure either of the body or mind. [See *awaken.*]

Stirling. From *Estrevelyn*, "the town of the Easterlings, from Flanders." A burgh and county of Scotland.

stir-rup (*stĕr'up* or *stir'up*), *n.* an iron hoop suspended by a strap in which a horseman sets his foot.

stitch (*stich*), *n.* a single pass of a needle and thread; sharp, local pain: *v. t.* to form stitches in; unite by stitches: *v. i.* to practice stitching.

stock (*stok*), *n.* the trunk or stem of a tree or plant; pillar, log, or post; race, family, or lineage; capital; cattle; stiff cravat; foundation of soups: *pl.* a wooden frame in which the legs of criminals were confined; shares of capital: *v. t.* to store up; fill; supply: *v. i.* to take in or obtain supplies: *adj.* kept in stock; permanent.

stock-ade (*-ād'*), *n.* a line of posts used as a barrier: *v. t.* to surround with, or defend by, a stockade.

Stockholm (*stok'hōlm*). The capital of Sweden is often said to have been so called because built like Venice on stocks or piles. According to the local legend, a stock or log floating up the Malar lake from Sigtuma guided the first settlers to the granite rocks on which Stockholm is built. The older form *Stakholm* explains the name as a *holm* or "island," in a *stak* or "sound."

stock-ing (*'ing*), *n.* a close-fitting covering for the foot and leg.

stock-job-ber (*'job-ĕr*), *n.* one who deals or speculates in stocks.

Stockton. City in California and Missouri and town in Chautauqua county, New York, named for Commodore R. F. Stockton, who took part in the conquest of California.

Sto-ic (*stō'ik*), *n.* a disciple of the Greek philosopher Zeno, who taught that a wise man should be governed by the reason; one who proposes such doctrines: *adj.* pertaining to the Stoics; indifferent to pleasure or pain. [Also *stoical.*]

★**sto-i-cism** (*stō'i-sizm*, not *stō'ik-izm*), *n.* the doctrines and maxims of the Stoics; real or assumed insensibility to pleasure or pain.

stoke (*stōk*), *v. t.* to maintain and tend fire: *v. i.* to act as a stoker.

stok-er (*'ĕr*), *n.* a fireman.

stole (*stōl*), *n.* a long, narrow scarf fringed at the ends: *p. t.* of steal.

stol-id (*stol'id*), *adj.* stupid; dull; impassive.

sto-lid-i-ty (*stō-lid'i-ti*), *n.* the state or quality of being stolid.

stom-ach (*stum'ak*), *n.* the principal organ of digestion in the body; inclination: *v. t.* to resent; put up with.

stom-ach-er (*'ak-ĕr*), *n.* an ornamental breast covering for women.

stone (*stōn*), *n.* a hard mass of earthy or mineral matter; gem; hard seed shell of certain fruits; a weight, 14 lbs. avoirdupois: *v. t.* to pelt or kill with stones; free from stones.

stone-blind (*'blind*), *adj.* quite blind.

stone-cut-ting (*'kut-ing*), *n.* hewing or dressing stone.

stone-ware (*'wâr*), *n.* a coarse kind of pottery baked hard and glazed.

Stonington, Conn. Named from an English town. *Ston*, "stone," *ing*, "field," *ton*, "town," "a town situated in a field of stone." It was first called *Southerton.*

ston-y (*'i*), *adj.* pertaining to, of the nature of, or like, stone; rocky; hard; pitiless.

stool (*stōōl*), *n.* a seat without a back for one person, usually supported with 3 legs.

stoop (*stōōp*), *v. i.* to bend the body downward and forward; submit; condescend: *n.* inclination downward and forward; condescension; veranda.

stop (*stop*), *v. t.* to hinder, check, or impede; render impassable; desist from: *v. i.* to cease from any motion or action: *n.* the act of stopping; cessation: *interj.* stay! cease! [HINDER, OBSTRUCT.]

stop-gap (*'gap*), *n.* a temporary expedient.

stop-page (*'āj*), *n.* the act of stopping; state of being stopped.

stop-per (*'ĕr*), *n.* one who, or that which, stops.

stop-ple (*'l*), *n.* a cork or plug: *v. t.* to close with a stopple.

stor-age (*stōr'āj*), *n.* safe keeping of goods in a warehouse, etc.; price for storage.

store (*stōr*), *n.* a large number or great quantity; abundance or plenty; shop: *pl.* naval and military arms, provisions, etc.: *v. t.* to furnish or supply with stores; accumulate; hoard.

sto-ried (*stō'rid*), *adj.* furnished with stories; told in a story.

stork (*stôrk*), *n.* a large wading bird with long legs and large pointed bill.

storm (*stôrm*), *n.* a violent atmospheric disturbance; tumult; calamity; violent assault: *v. t.* to attack with violence: *v. i.* to blow violently; be angry or rage. [BREEZE.]

storm-ing (*stôrm'ing*), *n.* the taking of a fortified place by a violent and open assault: *p. adj.* violently angry or raging.

storm-y (*'i*), *adj.* characterized by, or proceeding from, storms.

sto-ry (*stō'ri*), *n.* a fictitious narrative; stage or floor of a building.

Syn. STORY, tale. The *story* is either an actual fact or something feigned; the *tale* is always feigned; *stories* are circulated respecting the accidents and occurrences which happen to persons in the same place; *tales* of distress are told by many to excite compassion. [See *fiction.*]

stout (*stout*), *adj.* corpulent; lusty; brave; resolute: *n.* a strong kind of porter.

stove (*stōv*), *n.* an apparatus for inclosing a fire for cooking or heating: *p. t.* of stave.

stow (*stō*), *v. t.* to fill by packing closely; lay up; pack.

stow-age (*'āj*), *n.* the act of stowing; state of being stowed; accommodation for stowing things; money paid for stowage.

stow-a-way (*'ā-wā*), *n.* one who conceals himself on a vessel.

strad-dle (*strad'l*), *v. t.* to stand or sit astride of: *v. i.* to stand or walk with the legs wide apart: *n.* the act of standing, sitting, or walking with the legs wide apart.

strag-gle (*strag'l*), *v. i.* to wander from the direct course or way.

straight (*strāt*), *adj.* not crooked; direct; upright: *adv.* in a straight manner; direct; at once.

straight-en (*'en*), *v. t.* to make straight.

straight-for-ward (*-fôr'wĕrd*), *adj.* not deviating; honest; open. [CANDID.]

straight-way (*'wā*), *adv.* at once.

strain (*strān*), *n.* stock; race; descent; tune or melody; a violent effort; injury: *v. t.* to put to its utmost strength; stretch; injure by overtasking; make uneasy or unnatural; filter: *v. i.* to make violent efforts; be filtered.

strait (*strāt*), *adj.* narrow; distressful; difficult: *n. pl.* a narrow passage of water connecting two seas; difficulty; poverty.

strait-en (*'en*), *v. t.* to make narrow; confine; put into difficulties: *v. i.* to become narrow.

strait-jack-et (*'jak-et*), *n.* a kind of garment for confining mad or delirious persons.

strait-laced (*'lāst*), *adj.* strict in manners or morals.

Strait of Gibraltar. See *Gibraltar.*

strand (*strand*), *n.* the shore of a sea, ocean, or large lake; one of the twists of a rope: *v. t.* to run aground; bring into a state of embarrassment: *v. i.* to be driven ashore.

strange (*strānj*), *adj.* belonging to another country; unusual; unfamiliar. [RARE.]

stran-ger (*stān'jĕr*), *n.* a foreigner; one who is unknown or unacquainted.

stran-gle (*strang'gl*), *v. t.* to choke; suppress or stifle.

stran-gu-la-tion (*-gū-lā'shun*), *n.* the act of strangling; state of being strangled; suffocation.

strap (*strap*), *n.* a long, narrow piece of leather or cloth; razor strop: *v. t.* to fasten or bind with a strap; beat with a strap.

strap-hang-er (*'hang-ĕr*), *n.* one unable to obtain a seat in a crowded public conveyance, and who hangs to one of the straps provided for standing passengers.

strap-ping (*'ing*), *adj.* tall; strong; well-made; handsome.

strat-a-gem (*strat'ā-jem*), *n.* an artifice or plan for deception of any kind.

stra-te-gic (*strā-tē'jik*), *adj.* pertaining to, or effected by, strategy or artifice [Also *strategical.*] *n. pl.* the science of military warfare.

strat-e-gy (*strat'ē-ji*), *n.* strategics; use of artifice or strategem.

strat-i-fi-ca-tion (*-i-fi-kā'shun*), *n.* the process of being arranged or deposited in layers.

strat-i-fied (*'i-fīd*), *adj.* arranged in strata.

strat-i-fy (*'i-fī*), *v. t.* to form, deposit, or arrange, in strata.

★**stra-tum** (*strā'tum*), *n.* [*pl.* strata (*'tā*)], a bed of earth or rock consisting of a series of layers.

straw (*straw*), *n.* the stalk of grain.

straw-ber-ry (*'ber-i*), *n.* [*pl.* strawberries (*-iz*)], a plant of the genus Fragaria and its fruit.

stray (*strā*), *v. i.* to wander from limits or direct path; deviate; err: *v. t.* to mislead: *adj.* gone astray; wandering. [DEVIATE.]

streak (*strēk*), *n.* a line of color different from the ground color; stripe: *v. t.* to form, or mark with, streaks; stripe.

stream (*strēm*), *n.* a current of water or other fluid; river: *v. i.* to issue or flow in a stream.

Syn. STREAM, current, tide. All rivers are *streams*, which are more or less gentle according to the nature of the ground through which they pass; the force of the *current* is very much increased by the confinement of any water between rocks, or by means of artificial impediments; the *tide* is high or low, strong or weak, at different hours of the day; when the *tide* is high, the *current* is strongest.

stream-er (*'er*), *n.* a long narrow flag or pennon.

stream-let (*'let*), *n.* a little stream; a rivulet; a rill.

street (*strēt*), *n.* a public road in a city or town.

street Ar-ab (*ar'ab*), *a* neglected child of the streets.

street car (*strēt'kär*), a car that runs on a street railway.

street rail-way (*rāl'wā*), a railway laid on the surface of the streets.

strength (*strength*), *n.* the state or quality of being strong; active or passive power.

strength-en (*'en*), *v. t.* to make strong; confirm: *v. i.* to become stronger.

Syn. STRENGTHEN, fortify, invigorate. Whatever adds to the *strength*, be it in ever so small a degree, *strengthens;* exercise *strengthens* either body or mind; whatever gives *strength* for a particular emergency, *fortifies;* religion *fortifies* the mind against adversity; whatever adds to the *strength*, so as to give a positive degree of *strength*, *invigorates;* morning exercise in fine weather *invigorates.*

stren-u-ous (*stren'ū-us*), *adj.* ardent; zealous; strong; bold; earnest; valiant.

stress (*stres*), *n.* urgency; strain; pressure; force; importance; weight; accent.

stretch (*strech*), *v. t.* to draw out to a greater length or width; exaggerate: *v. i.* to be extended; reach: *n.* the act of stretching; state of being stretched; strain; effort.

stretch-er (*'ĕr*), *n.* one who, or that which, stretches; a frame or litter for carrying bodies.

strew (*strōō*), *v. i.* to spread by scattering; scatter loosely.

stri-ate (*strī'āt*), *adj.* marked, or formed with, striæ.

strict (*strikt*), *adj.* exact; severe; nice to an extreme; careful; rigidly interpreted.

Syn. STRICT, severe. He who has authority over others must be *strict* in enforcing obedience, in keeping good order, and a proper attention to their duties; but it is possible to be very *severe* in punishing those who are under us, and yet very lax in all matters that our duty demands of us.

Ant. MILD, gentle, lenient.

stric-ture (*strik'tūr*), *n.* a morbid contraction of any passage of the body.

stride (*strīd*), *n.* a long step; straddle: *v. i.* to walk with long steps; straddle: *v. t.* to pass by long steps.

stri-dent (*strī'dent*), *adj.* harsh; shrill; grating or creaking.

strife (*strif*), *n.* contention for superiority; discord; conflict.

Syn. STRIFE, contention. *Strife* is mostly used for verbal *strife*, where each party *strives* against the other by the use of contumelious or provoking expressions; *contention* is used for an angry *striving* with others, either in respect to matters of opinion or matters of claim, in which each party seeks the advantage. [See *discord, feud.*]

strike (*strik*), *v. t.* to hit with a blow or with force; collide; lower or take down; affect; light upon; make, as a bargain: *v. i.* to make a quick blow or thrust; hit; cease from work: *n.* cessation of work.

strik-ing (*'ing*), *adj.* affecting with strong emotions; impressive.

string (*string*), *n.* a small cord or line; series of things connected: *v. t.* to furnish with strings; file.

strin-gen-cy (*strin'jen-si*), *n.* the state or quality of being stringent.

strin-gent (*strin'jent*), *adj.* severe; rigid; strict; binding; tense.

string-i-ness (*string'i-nes*), *n.* the state or quality of being stringy.

string-y (*'i*), *adj.* consisting of, or like, string; filamentous.

strip (*strip*), *v. t.* to deprive of a covering; bereave; take away: *v. i.* to undress: *n.* a long, narrow piece.

stripe (*strīp*), *v. t.* to form stripes upon; *n.* a line or long, narrow division of anything of a different color from the ground; stroke made by a whip, etc.

strip-ling (*strip'ling*), *n.* a youth.

strive (*striv*), *v. i.* to make exertions or efforts; aim; struggle; contend. [ENDEAVOR.]

stroke (*strōk*), *n.* a knock or blow; sudden effect; hostile blow or attack; touch of a pencil or pen: *v. t.* to rub gently with the hand; soothe.

stroll (*strōl*), *v. i.* to wander on foot: *n.* a leisurely ramble.

strong (*strông*), *adj.* having strength; robust; healthy; vigorous; having power of endurance; ardent; well-fortified. [COGENT.]

strong-hold (*'hōld*), *n.* a fortress.

strop (*strop*), *n.* a strip of leather for sharpening razors: *v. t.* to sharpen on a strop.

stro-phe (*strō'fē*), *n.* that part of a song or dance in the ancient Greek drama performed by the chorus.

stro-phic (*strō'fik*), *adj.* pertaining to, or consisting of, strophes.

struc-tur-al (*struk'tūr-al*), *adj.* pertaining to structure.

struc-ture (*'tūr*), *n.* an edifice or building; form; make.

strug-gle (*strug'l*), *v. i.* to use violent efforts; be in pain or agony; contend: *n.* a violent effort; pain or agony; labor; contest. [ENDEAVOR.]

strum (*strum*), *v. t.* and *v. i.* to play badly and noisily on a stringed instrument.

strut (*strut*), *v. i.* to walk with affected dignity: *n.* a proud step or walk.

strych-nic (*strik'nik*), *adj.* pertaining to, derived from, or containing, strychnine.

strych-nine (*'nin*), *n.* a highly poisonous alkaloid extracted from nux vomica.

stub (*stub*), *n.* the stump of a tree; a stub nail: *v. t.* to strike against some fixed obstacle.

stubbed (*stubd*), *adj.* short and thick. [Also *stubby.*]

stub-ble (*stub'l*), *n.* short stalks of grain left after reaping.
stub-born (*'ērn*), *adj.* obstinate; refractory. [OBSTINATE, PERVERSE.]
stuc-co (*stuk'ō*), *n.* [*pl.* stuccoes (*'oz*)], plaster used as a coating for walls or internal decorations; work executed in stucco: *v. t.* to overlay, or decorate, with stucco.
stud (*stud*), *n.* a large-headed ornamental nail; an upright beam or scantling; collection of breeding horses and mares; place where they are kept: *v. t.* to adorn with, or as with, studs.
stud-ding (*'ing*), *n.* material for studs or joists; studs or joists collectively.
stu-dent (*stū'dent*), *n.* one who is engaged in study; scholar.
stud-horse (*stud'-hôrs*), *n.* a stallion.
stu-di-o (*stū'di-ō*), *n.* an artist's workroom.
stu-di-ous (*'di-us*), *adj.* devoted to study or the acquisition of knowledge.
stud-y (*stud'i*), *n.* the application of the mind to acquisition of knowledge; any particular branch of learning: *v. i.* to apply the mind closely to a subject: *v. t.* to examine closely.
stuff (*stuf*), *n.* materials out of which anything is made; nonsense: *v. t.* to fill by crowding into: *v. i.* to eat gluttonously.
stuff-y (*'i*), *adj.* close or ill-ventilated.
stul-ti-fi-ca-tion (*stul-ti-fi-kā'shun*), *n.* the act of stultifying; the state of being stultified.
stul-ti-fy (*'ti-fī*), *v. t.* to render foolish; make nugatory.
stum-ble (*stum'bl*), *v. i.* to trip up or fall in walking; light (with *on* or *upon*); slide into error or crime: *n.* a trip in walking or running; failure or blunder.
stump (*stump*), *n.* that part of a tree which remains in the ground after the trunk is cut down: *v. t.* to lop off; reduce to a stump; defeat: *v. i.* to travel about making speeches; to walk clumsily.
stump or-a-tor (*ôr'ā-tēr*), one who harangues the people.
stump speech (*'spēch*), an electioneering speech.
stump-y (*'i*), *adv.* full of stumps; short and thick.
stun (*stun*), *v. t.* to render senseless by, or as by, a blow; astonish.
stunt (*stunt*), *v. t.* to check in growth or progress: *v. i.* to become stunted: *n.* a check in growth; a performance.
stu-pe-fac-tion (*stū-pē-fak'shun*), *n.* state of being stupefied; insensibility. [STUPIDITY.]
stu-pe-fac-tive (*'tiv*), *adj.* causing stupefaction.
stu-pe-fy (*'pē-fī*), *v. t.* to deprive of sensibility; make stupid.
stu-pen-dous (*-pen'dus*), *adj.* overcoming the senses by its vastness; astonishing.
stu-pid (*'pid*), *adj.* deficient in understanding; insensible; dull. [ABSURD.]
stu-pid-i-ty (*'i-ti*), *n.* extreme dullness of perception or understanding; crass ignorance; folly.
Syn. STUPIDITY, apathy, dullness, insensibility, obtuseness, stupefaction, stupor. *Stupidity* is sometimes loosely used for temporary *dullness* or partial *stupor*, but chiefly for innate and chronic *dullness* and *sluggishness* of mental action; *obtuseness* of apprehension, etc. *Apathy* may be temporary.
stu-por (*'pēr*), *n.* numbness; lethargy; intellectual insensibility. [STUPIDITY.]
stur-dy (*stûr'di*), *adj.* hardy; robust; stout; strong; stubborn; vigorous.
stur-geon (*'jun*), *n.* a large, cartilaginous fish of the genus Acipenser.
stut-ter (*stut'ēr*), *v. i.* to speak with hesitation or stammering: *v. t.* to utter in a stammering manner: *n.* hesitation or stammering in speech. [HESITATE.]
sty (*stī*), *n.* a pen or inclosure for swine; a kind of boil upon the eyelid.
Styg-i-an (*stij'i-an*), *adj.* pertaining to the Styx, the river of Hades; hence infernal; hellish.
style (*stīl*), *n.* a pointed instrument used by the ancients for writing; appellation or title; distinctive manner: *v. t.* to designate or name.
styl-ish (*'ish*), *adj.* fashionable.
styl-ist (*'ist*), *n.* a master of literary style.
styp-tic (*stip'tik*), *adj.* stopping bleeding.
sua-si-ble (*swā'si-bl*), *adj.* easily persuaded.
sua-sion (*'zhun*), *n.* persuasion.
sua-sive (*'siv*), *adj.* persuasive.
suave (*swāv* or *swäv*), *adj.* pleasant in manner.
suav-i-ty (*swav'i-ti*), *n.* urbanity; gentleness.
sub. *prefix* meaning *under, beneath, below, slightly.*
sub-ac-id (*sub-as'id*), *adj.* slightly acid.
sub-al-tern (*-awl'tērn*), *n.* a commissioned officer under the rank of captain: *adj.* inferior.
sub-al-ter-nate (*-tēr'nāt*), *adj.* successive.
sub-due (*-dū'*), *v. t.* to overcome or conquer; vanquish; reduce.
sub-ja-cent (*sub-jā'sent*), *adj.* lying under or below.
sub-ject (*'jekt*), *adj.* subordinate; disposed; liable: *n.* one who is under the power or control of another; theme; topic; design: *v. t.* (*sub-jekt'*) to bring under the power or control of; expose.
sub-jec-tion (*-jek'shun*), *n.* the act of subjecting; state of being subjected.
sub-jec-tive (*'tiv*), *adj.* pertaining to the subject as opposed to the object.
sub-jec-tiv-ism (*-izm*), *n.* the philosophical doctrine that knowledge is relative or purely subjective.
sub-join (*-join'*), *v. t.* to affix. [ADD.]
sub-ju-gate (*'jū-gāt*), *v. t.* to conquer by force; bring under dominion.
sub-ju-ga-tion (*sub-jū-gā'shun*), *n.* the act of subjugating; state of being subjugated.
sub-junc-tive (*-jungk'tiv*), *adj.* noting a form of the verb expressive of contingency; conditional.
sub-li-mate (*'li-māt*), *v. t.* to convert (a solid) by heat into vapor.
sub-lime (*-līm'*), *adj.* awakening feelings of awe and reverence; exalted in nature, manner or style: *n.* that which is awe inspiring: *v. t.* to dignify or exalt; render noble: *v. i.* to be capable of sublimation. [GREAT.]
Sublime porte (*sub-līm' pōrt*). The synonym by which is designated the government of the sultan of Turkey. It is the French equivalent of *Bab-i-Humayoon*, "the high gate." The term contains an allusion to the Oriental custom of transacting public business at the principal gate of the city or palace, and from this practice the sultan's government is popularly styled in Turkey "the sultan's gate."
sub-lim-i-ty (*-lim'i-ti*), *n.* loftiness of style or sentiment; elevation; moral grandeur; excellence.
sub-ma-rine (*sub-mā-rēn'*), *adj.* under water.
sub-merge (*-mērj'*), *v. t.* to place under water; overwhelm: *v. i.* to be, or lie, under water.
sub-mer-sion (*-mēr'shun*), *n.* the act of submerging; state of being submerged. [Also *submergence.*]
sub-mis-sion (*-mish'un*), *n.* the act of submitting or yielding.
sub-mis-sive (*-mis'iv*), *adj.* obedient; humble. [HUMBLE, OBEDIENT, COMPLIANT.]
sub-mit (*-mit'*), *v. t.* to yield to the authority of another; surrender; refer to judgment; comply with: *v. i.* to be subject; yield. [COMPLY.]
sub-or-di-nate (*-ôr'di-nāt*), *adj.* inferior in rank, value, power, or importance: *n.* one who is inferior to another in rank, etc.: *v. t.* to place in a lower order.
sub-or-di-na-tion (*-nā'shun*), *n.* the act of subordinating or placing in a lower order; state of being subordinate.
sub-orn (*-ôrn'*), *v. t.* to procure or induce to commit perjury. [FORSWEAR.]
sub-or-na-tion (*-ôr-nā'shun*), *n.* the act of inducing a person to commit perjury.
sub-pœ-na (*-pē'nä*), *n.* a writ commanding the attendance of a person in court as a witness: *v. t.* to serve with a subpœna.
sub-scribe (*-skrib'*), *v. t.* to write or annex (one's name) to a paper or document: *v. i.* to give consent.
sub-scrip-tion (*-skrip'shun*), *n.* the act of subscribing; signature; sum of money subscribed.
sub-se-quent (*'sē kwent*), *adj.* following or coming after in time or order.
sub-serve (*-sērv'*), *v. t.* to be subservient to; promote; serve instrumentally.
sub-side (*-sīd'*), *v. i.* to sink or fall to the bottom; settle; abate; become tranquil or calm. [ABATE.]
sub-si-dence (*-sī'dens*), *n.* the act of subsiding or sinking down.
sub-sid-i-a-ry (*-sid'i-ä-ri*), *adj.* auxiliary; furnishing additional supplies: *n.* an auxiliary.
sub-si-dize (*'si-dīz*), *v. t.* to furnish with a subsidy.
sub-si-dy (*'si-di*), *n.* pecuniary aid granted by one government to another; public grant or subvention to aid an enterprise.
sub-sist (*-sist'*), *v. i.* to have existence; inhere; have the means of livelihood.
sub-sist-ence (*'ens*), *n.* means of support; maintenance; inherence.
sub-stance (*'stans*), *n.* matter or material; essential part of anything; purport.
sub-stan-tial (*-stan'shal*), *adj.* belonging to, or having, substance; solid; material.
sub-stan-ti-ate (*'shi-āt*), *v. t.* to establish the truth of.
sub-stan-tive (*'stan-tiv*), *adj.* expressing existence; real; essential: *n.* that part of speech which expresses the existence of anything material or immaterial; noun.
sub-sti-tute (*'sti-tūt*), *v. t.* to put in the place of another; *n.* one who, or that which, is put in the place of another. [CHANGE.]
sub-sti-tu-tion (*-tū'shun*), *n.* the act of substituting; state of being substituted.
sub-tend (*-tend'*), *v. t.* to extend under or be opposite to.
sub-ter-fuge (*'tēr-fūj*), *n.* an evasion or artifice; trick; shift. [PRETENSE.]
sub-ter-ra-ne-an (*-rā'nē-an*), *adj.* below the surface. [Also *subterraneous.*]
★**sub-tile** (*sub'til* or *sut'l*), *adj.* thin; delicately constructed; fine; refined; acute; cunning.
★**sub-tle** (*sut'l*) *adj.* artful; insinuating; crafty.
sub-tle-ty (*-ti*), *n.* acuteness of intellect; cunning.
sub-tract (*-trakt'*), *v. t.* to withdraw or take away; deduct.
sub-trac-tion (*-trak'shun*), *n.* the act of subtracting.
sub-tra-hend (*'trä-hend*), *n.* the quantity or number to be subtracted from another.
sub-urb (*sub'ûrb*), *n.* an outlying district of a city or town.
sub-ur-ban (*-ûr'ban*). *adj.* pertaining to, in, or living within, the suburbs.
sub-ven-tion (*-ven'shun*), *n.* a government grant or subsidy.
sub-ver-sion (*-vēr'shun*), *n.* the act of subverting; overthrow; ruin.
sub-vert (*sub-vert'*), *v. t.* to turn upside down; ruin; overthrow; corrupt.
Syn. SUBVERT, destroy, overthrow, overturn, ruin, supersede, supplant. To *subvert* is to *overthrow, destroy,* bring to *ruin.* To *supersede* implies the putting of something in the place of that which is removed; to *supplant,* often personal, signifies to take the place of another; one is *superseded* by authority, *supplanted* by a rival.
sub-way (*'wā*), *n.* an underground passage.
suc-ceed (*suk-sēd'*), *v. t.* to take the place of; follow: *v. i.* to follow in order; obtain one's wishes; be successful. [FOLLOW.]
suc-cess (*-ses'*), *n.* the prosperous termination of any enterprise; prosperity.
suc-cess-ful (*-fool*), *adj.* ending in success; prosperous; fortunate.
suc-ces-sion (*-sesh'un*), *n.* the act of following in order; lineage; act or right of coming in the place of another. [TIME.]
suc-ces-sive (*-ses'iv*), *adj.* following in uninterrupted order; consecutive.
Syn. SUCCESSIVE, alternate. The *successive* may be accidental or intentional; the *alternate* is always intentional; it may rain for three *successive* days, or a fair may be held for three *successive* days; trees are placed sometimes in *alternate* order.
suc-ces-sor (*'ēr*), *n.* one who succeeds or follows in the place or character of another.
suc-cinct (*-singkt'*), *adj.* tersely expressed. [SHORT.]
suc-cor (*'ēr*), *v. t.* to help or relieve when in difficulty or distress; aid: *n.* relief; aid. [HELP.]
suc-co-tash (*'ō-tash*), *n.* a dish of green maize and beans.
suc-cu-lent (*'ū-lent*), *adj.* juicy: said of plants replete with juices.
suc-cumb (*-kum'*), *v. i.* to yield; submit.
such (*such*), *adj.* the same that, or as referred to; denoting a particular person or thing; certain.
suck (*suk*), *v. t.* to draw in with the mouth: *v. i.* to draw milk from the breast: *n.* the act of sucking. [ABSORB].
suc-kle (*'l*), *v. t.* to nurse at the breast.
suck-ling (*'ling*), *n.* an unweaned child or animal.
suc-tion (*suk'shun*), *n.* the act or process of sucking.
sud-den (*sud'n*), *adj.* happening unexpectedly; instantaneous; without notice; quick.
suds (*sudz*), *n. pl.* soapy water.
sue (*sū*), *v. t.* to prosecute at law: *v. i.* to entreat; beg; petition; pay court.
su-et (*'et*), *n.* the hard fat around the kidneys and loins of cattle.
Suez (*sōō'ez, sōō-ez'*). Is a Portugese corruption of *Bir Suweis*, the Arabic name of a fortified well of brackish water about an hour's journey from the town, where the pilgrims waited to embark for Mecca. From this well, by a curious accident, the Gulf and Isthmus of Suez and the Suez canal take their names.
suf-fer (*suf'ēr*), *v. t.* to feel with a sense of pain; undergo; bear: *v. i.* to feel pain or punishment; be in distress; endure loss or injury. [ADMIT.]
suf-fer-a-ble (*ä-bl*), *adj.* that may be allowed or tolerated.
suf-fer-ance (*'fēr-ans*), *n.* patience under pain; toleration; permission.
suf-fice (*-īs'*), *v. i.* to be sufficient: *v. t.* to satisfy.
suf-fi-cien-cy (*-fish'en-si*), *n.* the state or quality of being sufficient; competence.
suf-fi-cient (*'ent*), *adj.* equal to any end or purpose; adequate. [ENOUGH.]
suf-fix (*'iks*), *n.* a letter or syllable added at the end of a word: *v. t.* (*suf-iks'*) to add.
suf-fo-cate (*'ō-kat*), *v. t.* to choke by stopping respiration.
suf-fo-ca-tion (*-kā'shun*), *n.* the act of suffocating; state of being suffocated.
suf-frage (*'rāj*), *n.* vote, or right to vote; franchise.
suf-fra-gette (*-rä-jet'*), *n.* a woman who advocates female suffrage.
suf-fuse (*-fūz'*), *v. t.* to spread over as with a fluid or a color.
suf-fu-sion (*-fū'zhun*), *n.* the act of suffusing; state of being suffused.
sug-ar (*shoog'ēr*), *n.* a sweet crystalline substance obtained from the sugar cane, beet, etc.: *adj.* pertaining to, like, made of, or yielding, sugar; sweet: *v. t.* to sprinkle or mix with sugar.
★**sug-gest** (*sug-jest'* or *sud-jest'*), *v. t.* hint; insinuate; allude or refer to: *v. i.* to make suggestions. [ALLUDE.]
sug-ges-tion (*-jes'chun*), *n.* the act of suggesting; thing suggested. [DICTATE.]
sug-gest-ive (*'iv*). *adj.* containing, or full of, suggestion.
su-i-ci-dal (*sū'i-si-dal*), *adj.* pertaining to, or partaking of, suicide; fatal to one's own interests.
su-i-cide (*'i-sīd*), *n.* a person who kills himself; self-murder; ruin of one's own interests.
★**suit** (*sūt*), *n.* a set of things correspondent to each other; petition or prayer; courtship; an action or process at law: *v. t.* to be fitted to; accommodate; please: *v. i.* to correspond or accord; agree.
suit-a-ble (*'a-bl*), *adj.* fitting; appropriate. [CONFORMABLE, CONVENIENT.]
suit case (*'kās*), a hand bag used as for carrying a dress suit. [Also *dress-suit case.*]
★**suite** (*swēt*, not *sūt*), *n.* a retinue or company; set, as of rooms.
suit-or (*sūt'ēr*), *n.* a petitioner; supplicant; lover.
sulk (*sulk*), *v. i.* to be sulky.

sulk-y (*sulk'i*), *adj.* silently sullen: *n.* a kind of two-wheeled carriage.
sul-len (*sul'en*), *adj.* morosely silent; gloomily angry; dismal.
sul-ly (*'i*), *v. t.* to tarnish or soil; dirty; stain: *n.* a tarnish or stain. [STAIN.]
sul-phur (*'fûr*), *n.* a nonmetallic element, brittle, and of a yellow color.
sul-phu-rate (*-fū-rāt*), *v. t.* to combine with, or subject to the action of, sulphur: *adj.* pertaining to, or of the color of, sulphur.
sul-phu-re-ous (*-fū'rē-us*), *adj.* consisting of, impregnated with, or having the qualities of, sulphur. [Also *sulphurous.*]
sul-phu-ret-ted (*'fū-ret-ed*), *adj.* combined with sulphur.
sul-phu-ric (*-fū'rik*), *adj.* obtained from, or containing, sulphur.
sul-phur-y (*'fûr-i*), *adj.* like sulphur.
sul-tan (*'tan*), *n.* the title of a Mohammedan sovereign, especially the sovereign of Turkey.
sul-try (*'tri*), *adj.* very hot, close, and oppressive; close and heavy with a moist heat.
sum (*sum*), *n.* whole; total; substance; utmost degree; arithmetical problem: *v. t.* to add into one amount; condense into few words. [ADD.]
su-mac (*sū'mak* or *shū'mak*), *n.* a plant or shrub the dried leaves and roots of which are used in tanning, dyeing, and medicine.
Sumatra (*sōō-mä'trä*). An island of Malay archipelago; name a corruption of *Trimatara*, which means "the happy land."
sum-ma-rize (*sum'ä-rīz*), *v. t.* to state concisely.
sum-ma-ry (*'ä-ri*), *adj.* brief; laconic; compendious: *n.* an abridgment; compendium. [ABRIDGMENT, SHORT.]
sum-ma-tion (*-ā'shun*), *n.* the act of forming a total; aggregate.
sum-mer (*'ER*), *n.* that part of the year which comprises the hottest months, June, July, and August: *v. i.* to pass the summer.
sum-mit (*'it*), *n.* the top, or highest point.
sum-mon (*'un*), *v. t.* command; invite: *n. pl.* a citation to appear in court; authoritative call.
sump-tu-a-ry (*sump'tū-ä-ri*), *adj.* pertaining to, or regulating, expense.
sump-tu-a-ry laws (*lawz*), laws to limit excessive expenditure on dress or other luxuries.
sump-tu-ous (*'tū-us*), *adj.* expensive; costly; luxurious; magnificent.
sun (*sun*), *n.* the luminous body around which the earth and other planets, etc., of the solar system revolve; sunshine: *v. t.* to expose to the sun's rays.
Sunapee (*sun'ä-pē*). Lake in New Hampshire, for which a town in Sullivan county and mountain in the same state are named. From an Indian word, *shehunknippe*, "wild goose pond."
Sunday. The first day of the week; word signifies the day upon which the sun was worshiped.
sun-der (*'dER*), *v. t.* to divide or rend.
sun-dry (*'dri*), *adj.* various; several.
sunk-en (*sungk'en*), *adj.* lying on the bottom of the sea; fallen or pressed down.
sun-ny (*'i*), *adj.* pertaining to, like, proceeding from, or exposed to, the sun; bright; warm; cheerful.
sun-shine (*'shīn*), *n.* the light or rays of the sun; warmth.
sun-stroke (*'strōk*), *n.* a kind of apoplexy, caused by the intense heat of the sun's rays.
sun-up (*'up*), *n.* sunrise.
sup (*sup*), *v. t.* to take into the mouth with the lips: *v. i.* to take supper: *n.* sip.
su-per-an-nu-at-ed (*sū-pER-an'ū-āt-ed*), *adj.* incapacitated by old age. [ANTIQUE.]
su-perb (*sū-pERb'*), *adj.* grand; proud; stately; elegant.
su-per-cil-i-a-ry (*-pER-sil'i-ä-ri*), *adj.* pertaining to, or situated above, the eyebrow.
su-per-cil-i-ous (*'i-us*), *adj.* haughty; proud; overbearing.
su-per-er-o-ga-tion (*-er-ō-gā'shun*), *n.* the performance of more than is required by duty.
su-per-e-rog-a-to-ry (*-ē-rog'ä-tō-ri*), *adj.* performed beyond what is required by duty.
su-per-fi-cial (*-fish'al*), *adj.* pertaining to, or being on, the surface; slight; not deep; unlearned.
su-per-fi-ci-al-i-ty (*-i-al'i-ti*), *n.* the state or quality of being superficial.
su-per-flu-i-ty (*-flōō'i-ti*), *n.* superabundance; excess. [EXCESS.]
su-per-flu-ous (*'flōō-us*), *adj.* more than enough or necessary.
su-per-in-duce (*-in-dūs'*), *v. t.* to bring in or upon as an addition to something else.
su-per-in-tend (*-in-tend'*), *v. t.* to have, or exercise, the charge of.
su-per-in-tend-ence (*-tend'en s*), *n.* supervision; oversight; control.
su-per-in-tend-ent (*'ent*), *n.* one who superintends; overseer.
su-pe-ri-or (*sū-pē'ri-ER*), *adj.* higher or above in place, position, rank, dignity, office, or excellence; beyond the power or influence of: *n.* one who is superior to others.
Superior. See *Lake Superior.*
su-pe-ri-or-i-ty (*-ri-or'i-ti*), *n.* the state or quality of being superior; preëminence; advantage.
su-per-la-tive (*-pER'la-tiv*), *adj.* superior to all others: *n.* a word expressing the highest degree of anything.
su-per-nal (*'nal*), *adj.* celestial.
su-per-nat-u-ral (*sū-pER-nat'ū-ral*), *adj.* beyond, or exceeding, the powers or laws of nature.
su-per-nat-u-ral-ism (*-izm*), *n.* the state or quality of being supernatural; the doctrine that revelation is the only means by which man acquires the knowledge of God.
su-per-nat-u-ral-ist (*-ist*), *n.* one who believes in the doctrine of supernaturalism.
su-per-nu-mer-a-ry (*-nū'mER-ä-ri*), *n.* a person or thing beyond the stated or required number: *adj.* exceeding the number stated or required.
su-per-scrip-tion (*-skrip'shun*), *n.* the act of superscribing; the address or direction. [DIRECTION.]
su-per-sede (*-sēd'*), *v. t.* to set aside by superior power; take the place of. [SUBVERT.]
su-per-sti-tion (*-stish'un*), *n.* reverence for, and belief in, the supernatural, or objects which are not worthy of worship.
su-per-sti-tious (*'us*), *adj.* pertaining to, characterized by, proceeding from, or addicted to, superstition.
su-per-struc-ture (*-struk'tūr*), *n.* anything built or founded on something else; a building.
su-per-vene (*-vēn'*), *v. i.* to come in as something extraneous.
su-per-vise (*-vīz'*), *v. t.* to oversee.
su-per-vi-sion (*-vizh'un*), *n.* the act of supervising; superintendence.
su-per-vis-or (*-vīz'ER*), *n.* an overseer.
su-per-vi-so-ry (*-vī'zō-ri*), *adj.* exercising supervision.
su-pine (*sū-pīn'*), *adj.* lying on the back; indolent; careless.
sup-per (*sup'ER*), *n.* the evening meal.
sup-plant (*-plant'*), *v. t.* to displace; supersede. [SUBVERT.]
★**sup-ple** (*sup'l*, not *sōō'pl*), *adj.* flexible; yielding: *v. t.* to make supple: *v. i.* to grow pliant. [FLEXIBLE.]
sup-ple-ment (*'lē-ment*), *v. t.* to add something to: *n.* something added to render anything more complete or supply defects or errors.
sup-pli-ant (*sup'li-ant*), *adj.* beseeching; entreating; suing: *n.* one who supplicates. [Also *supplicant*].
sup-pli-cate (*-kāt*), *v. t.* to ask or beg humbly and earnestly; address in prayer; beseech; implore. [BEG.]
sup-pli-ca-tion (*-kā'shun*), *n.* the act of supplicating; humble and earnest prayer or entreaty.
sup-ply (*-lī'*), *v. t.* to furnish with what is required; serve instead of: *n.* thing supplied; amount of money or food required for daily necessaries (usually *pl.*). [PROVIDE.]
sup-port (*-pōrt'*), *v. t.* to sustain; bear up; endure; uphold; favor: *n.* the act of supporting; that which supports. [COUNTENANCE, ABET, STAFF.]
sup-pose (*-pōz'*), *v. t.* to imagine; admit without proof. [APPREHEND, THINK.]
sup-po-si-tion (*-pō-zish'un*), *n.* the act of supposing; assumption.
sup-pos-i-ti-tious (*-poz-i-tish'us*), *adj.* supposed or imaginary; not genuine; counterfeit.
sup-press (*-pres'*), *v. t.* to subdue; crush; keep in or down; quell; conceal. [REPRESS.]
sup-pu-rate (*'ū-rāt*), *v. i.* to generate pus.
sup-pu-ra-tive (*'ū-rā-tiv*), *adj.* tending to produce, or accompanied by, suppuration: *n.* a medicine to promote suppuration.
su-prem-a-cy (*sū-prem'ä-si*), *n.* the state or quality of being supreme; highest authority.
su-preme (*-prēm'*), *adj.* highest in power or authority; most excellent; extreme; utmost.
sur, a *prefix* meaning *over, beyond, above, upon,* as *sur*charge (*sûr-chärj'*), *n.* an excessive charge, load, or burden: *v. t.* to charge more than is due; overload.
sur-cin-gle (*'sing-gl*), *n.* a girth, belt, or girdle for passing around the body of a horse.
surd (*sûrd*), *n.* a mathematical quantity that cannot be expressed by rational numbers, or has no root, as 3.
sure (*shōōr*), *adj.* fit to be depended upon; certain; reliable: *adv.* certainly; securely. [CERTAIN.]
sure-ty (*'ti*), *n.* certainty; guaranty; hostage; bail.
surf (*sûrf*), *n.* the swell of the sea.
sur-face (*sûr'fās*), *n.* the exterior part or upper face of anything.
surf-boat (*sûrf'bōt*), *n.* a strong, light boat for use in the surf.
sur-feit (*sûr'fit*), *n.* excess in eating or drinking: *v. t.* to feed to excess and sickness.
surge (*sûrj*), *n.* a large wave or billow; great roll; swell: *v. i.* to roll or rise high. [WAVE.]
sur-geon (*sûr'jun*), *n.* one who practices surgery.
sur-geon-cy (*-si*), *n.* the post of a surgeon in the army or navy.
sur-ger-y (*'jER-i*), *n.* the act and art of treating injuries or diseases by manual operations.
sur-li-ness (*'li-nes*), *n.* surly behavior.
sur-ly (*'li*), *adj.* gloomily morose; rough; uncivil.
sur-mise (*-mīz'*), *n.* guess or conjecture; suspicion: *v. t.* suspect; conjecture; fancy.
sur-mount (*-mount'*), *v. t.* to rise above; overcome; conquer.
sur-name (*'nām*), *n.* family name: *v. t.* to give the family name to.
sur-pass (*-pas'*), *v. t.* to exceed; excel.
sur-plice (*'plis*), *n.* the outer linen vestment with wide sleeves worn by officiating clergy and choristers.
sur-plus (*sûr'plus*), *n.* excess: *adj.* exceeding what is required. [EXCESS.]
★**sur-prise** (*sūr-prīz'*, not *sup-prīz'*), *n.* the act of taking unawares; astonishment: *v. t.* to take unawares; astonish.
sur-ren-der (*sur-ren'dER*), *v. t.* to yield to the power of another: *v. i.* to yield: *n.* the act of yielding; a yielding or giving up. [ABANDON.]
sur-rep-ti-tious (*-rep-tish'us*), *adj.* done by stealth or fraud.
sur-ro-gate (*sur'ō-gāt*), *n.* the deputy of a bishop.
sur-round (*-round'*), *v. t.* to inclose on all sides; encompass.
Syn. SURROUND, encompass, environ, encircle. We may *surround* an object by standing at certain distances all around it; in this manner a person may be *surrounded* by other persons; a garden is *surrounded* by a wall. *To encompass* is *to surround* in the latter sense, and applies to objects of a great extent; the earth is *encompassed* by the air. *To surround* is to go *round* an object of any form, whether square or circular, long or short; but *to environ* and *to encircle* carry with them the idea of forming a *circle* round an object; thus a town or a valley may be *environed* by hills, a basin of water may be *encircled* by trees, or the head may be *encircled* by a wreath of flowers.
sur-tout (*sûr-tōō'*), *n.* a wide-skirted coat reaching below the knees.
★**sur-veil-lance** (*sûr-vāl'yans* or *-vāl'lans*), *n.* watch; oversight; inspection.
sur-vey (*-vā'*), *v. t.* to inspect or take a view of; measure and estimate: *n.* (*sûr'vā*), the act of surveying; particular view or examination. [VIEW.]
sur-vey-or (*'ER*), *n.* one who surveys.
sur-vi-val (*-vī'val*), *n.* continuance beyond the life of another; any ancient use, custom, or belief continuing to the present day.
sur-vive (*-vīv'*), *v. t.* to live longer than; outlive: *v. i.* to remain alive.
sur-viv-or (*'ER*), *n.* one who outlives another.
Susa (*sōō'sä*). A city of ancient Persia, so called from the lilies in the neighborhood; name derived from *susa*, "a lily."
Susan (*sū'zan*) or **Susanna** (*sū-zan'nä*). The Hebrew word, derived from the Arabic *susan*, "a lily." Danish, *Susanna;* Dutch, *Susanna;* Fr., *Susanne;* Ger., *Susanne;* It., *Susanna;* Lat., *Susanna;* Sp., *Susana;* Sw., *Susanna.*
Susannah. See *Susan.*
sus-cept-i-bil-i-ty (*sus-sept-i-bil'i-ti*), *n.* the state or quality of being susceptible; impressibility.
sus-cept-i-ble (*'i-bl*), *adj.* easily acted upon; impressible.
sus-pect (*-pekt'*), *v. t.* to have a suspicion of; conjecture: *n.* (*sus'pekt*), a person suspected.
sus-pend (*-pend'*), *v. t.* to make to hang by anything; cause to cease for a time.
sus-pend-er (*'ER*), *n.* one who, or that which, suspends: *pl.* braces.
sus-pense (*-pens'*), *n.* a state of uncertainty, doubt, or anxiety; act of withholding. [DOUBT.]
sus-pen-sion (*-pen'shun*), *n.* the act of suspending.
sus-pi-cion (*-pish'un*), *n.* the act of suspecting; small quantity. [DISTRUST, JEALOUSY.]
sus-pi-cious (*'us*), *adj.* full of, open to, or exciting, suspicion; doubtful. [EQUIVOCAL.]
Susquehanna. River, county, and borough in Pennsylvania. From an Indian word, *suckahanne*, "water."
sus-tain (*-tān'*), *v. t.* to hold up or support; maintain. [ABET.]
sus-tained (*-tānd'*), *adj.* maintained at a certain pitch or level.
sus-te-nance (*'tē-nans*), *n.* that which supports life.
sus-ten-ta-tion (*-ten-tā'shun*), *n.* the act of sustaining; support or maintenance.
sut-ler (*sut'lER*), *n.* a person who follows an army and sells provisions, liquor, etc., to the troops.
su-ture (*sū'tūr*), *n.* the drawing together of the edges of a wound by sewing; lines of junction of the bones of the skull.
Suwanee (*sū-waw'nē*). County, town, and river in Florida, creek and town in Gwinnett county, Georgia. Interpretations of this Indian word are various; some stating that it is from *Shawnee*, the tribe, while others give its derivation as from *sawani*, meaning "echo," or "echo river"; others give it as a corruption of the name *San Juanita*, applied by the Spaniards to the stream, meaning "little St. John."
su-ze-rain (*sū'ze-rān*), *n.* a feudal lord, to whom fealty is due.
su-ze-rain-ty (*-ti*), *n.* the office, or dignity, of a suzerain.
swab (*swob*), *n.* a mop for cleaning decks, floors, etc.; clumsy person or lubber: *v. t.* to rub or clean with a swab.
swad-dle (*swod'l*), *v. t.* to swathe or bind tightly, especially infants.
swag (*swag*), *n.* an unequal, hobbling motion; thieves' booty.
swag-ger (*'ER*), *v. i.* to bully; strut haughtily: *n.* an affected manner of walking; noisy boastfulness.
swain (*swān*), *n.* a peasant; rustic lover; sweetheart.
swal-low (*swol'ō*), *n.* a well-known migratory passerine bird; as much as can be swallowed at once: *v. t.* to take into the stomach through the esophagus; absorb: *v. i.* to perform the act of swallowing. [ABSORB.]
swal-low-tailed (*-tāld*), *adj.* like a swallow's tail.

swamp (*swomp*), *n.* wet or boggy land: *v. t.* to plunge, overwhelm, or sink in, or as in, a swamp.
swamp-y ('*i*), *adj.* consisting of, or like, a swamp.
swan (*swon*), *n.* a web-footed bird of the genus Cygnus, with a very long neck.
swap (*swop*), *v. t.* to exchange or barter: *n.* barter.
sward (*swawrd*), *n.* the grassy surface of land.
swarm (*swawrm*), *v. i.* to throng together in a crowd: *n.* crowd or multitude in motion.
swarth-y (*swawrth'i*), *adj.* of a dark or tawny hue. [Also *swart, swarth.*]
swash (*swosh*), *n.* a dashing or splashing of water: *v. i.* to dash or splash water about.
swath (*swawth*), *n.* a line or ridge of grass or grain as cut down by the mower; sweep of a scythe in mowing.
swathe (*swāth*), *v. t.* to bind with a bandage or roller; wrap: *n.* a bandage or roller.
sway (*swā*), *v. t.* to move backward and forward; influence: *v. i.* to incline on one side: *n.* anything moving with power and bulk; authority; inclination or weight on one side.
swear (*swâr*), *v. i.* give evidence on oath; use profane language: *v. t.* to utter or affirm by appeal to God; cause to take, or bind by, an oath.
sweat (*swet*), *n.* the moisture which exudes from the pores of the skin: *v. i.* to exude moisture through the pores; perspire: *v. t.* to cause to sweat.
sweat-ing sys-tem (*'ing sis-tem*), the system by which middlemen employ people to work at their own homes for unfair wages.
Sweden (*swē'den*). A kingdom of northern Europe. A modern term made up of the Latin *Suedia*, signifying the land of the Suevi, a warlike tribe of the Goths, and the Anglo-Saxon *den*, testifying to its occupation by the Danes.
sweep (*swēp*), *v. t.* to brush, rub over, or clean, with a broom, etc.; drive or carry along or off: *v. i.* to pass with violence, speed, or pomp: *n.* the act of sweeping; extent.
sweep-stakes (*'stāks*), *n. pl.* the whole money or other things staked or won at gaming.
sweet (*swēt*), *adj.* pleasing to the senses, as smell, taste, etc.; tasting like sugar: *n.* a term of endearment: *n. pl.* confectionery.
sweet-bread (*'bred*), *n.* a calf's pancreas.
sweet-bri-er (*'brī-ēr*), *n.* a thorny shrub of the rose kind.
sweet corn (*'kôrn*), a kind of maize of a sweet taste.
sweet-en (*'n*), *v. t.* to make sweet; render mild, or pleasing: *v. i.* to become sweet.
sweet flag (*'flag*), an aromatic plant; calamus.
sweet-heart (*'härt*), *n.* a lover.
sweet-meat (*'mēt*), *n.* a confection made of sugar.
sweet po-ta-to (*pō-tā'to*), a plant and its edible root; yam.
sweet wil-liam (*wil'yam*), a beautiful flowering plant of the pink kind.
swell (*swel*), *v. i.* to expand or enlarge: *v. t.* to heighten; cause to rise or increase: *n.* extension of bulk; act or state of swelling; succession of large waves; fop: *adj.* dandified.
swel-ter (*'tēr*), *v. t.* to perspire profusely.
swel-try (*'tri*), *adj.* sultry.
swerve (*swêrv*), *v. i.* to turn aside; deviate; incline. [DEVIATE.]
swift (*swift*), *adj.* rapid; quick: *adv.* rapidly: *n.* a bird allied to the swallow.
swill (*swil*), *v. t.* to drink greedily or grossly: *n.* drink taken in excessive quantities; refuse or leavings of the kitchen.
swim (*swim*), *v. i.* to move progressively in the water by the hands and feet; be conveyed along by, or as by, a current: *v. t.* to cause to swim or float: *n.* the act of swimming.
swim-mer (*'ēr*), *n.* one who swims.
swim-ming (*'ing*), *n.* the act or art of floating or moving progressively in the water by the hands and feet.
swin-dle (*swin'dl*), *v. t.* to cheat under pretense of fair dealing: *n.* a gross fraud.
swine (*swīn*), *n.* any animal of the genus Sus with bristly skin and long snout; pig.
swing (*swing*), *v. i.* to wave or vibrate to and fro; be hanged: *v. t.* to move to and fro: *n.* the act or state of swinging; contrivance for swinging to and fro.
swin-ish (*swīn'ish*), *adj.* pertaining to, like, or characteristic of, swine; bestial.
swipe (*swīp*), *n.* a vigorous blow: *v. i.* and *v. t.* to deliver a strong blow; hit out with great force; purloin.
swirl (*swêrl*), *v. i.* to rush along in, or form, eddies: *n.* a whirling or eddying motion.
swish (*swish*), *v. t.* to lash; flog.
Swiss (*swis*), *adj.* pertaining to Switzerland, its language, or its inhabitants.
switch (*swich*), *n.* a thin, flexible rod; a movable rail for transferring a railway carriage, etc., from one line to another; a device for connecting one electric circuit with another: *v. t.* to lash or flog; shunt.
Switz-er (*swits'ēr*), *n.* An inhabitant of Switzerland.
Switzerland (*swit'zēr-land*). An Anglicized form of the native Schweitz, the name of the three forest cantons whose people asserted their independence of Austria, afterward applied to the whole country.
swiv-el (*swiv'l*), *n.* something fixed in another body so as to turn round in it: *v. t.* and *v. i.* to turn on a swivel or pivot.
swoon (*swōōn*), *v. i.* to sink into a fainting fit: *n.* the act of swooning.
swoop (*swōōp*), *v. t.* to fall upon and seize at once: *n.* a sudden falling upon and seizing.
sword (*sōrd*), *n.* a keen-edged weapon for cutting and thrusting.
Sybil (*sib'il*). An old name corrupted from *Isabella*.
syc-a-more (*sik'ä-mōr*), *n.* a tree of the maple family.
syc-o-phant (*'ō-fant*), *n.* a mean or servile flatterer; parasite. [FLATTERER.]
Sydney. The capital of New South Wales, was founded on January 26, 1788, and so named by Captain Phillip, after Thomas Townshend, first Lord Sydney, who, as home secretary, drew up, in 1786, a scheme for the transportation of convicts to New South Wales.
Sydney. A personal name corrupted from St. Denis, pronounced in French *san den-ē'*.
syl-lab-ic (*sil-ab'ik*), *adj.* pertaining to, or consisting of, a syllable.
syl-lab-i-ca-tion (*-i-kā'shun*) or **syl-lab-i-fi-ca-tion** (*-fi-kā'shun*), *n.* the formation of syllables.
syl-lab-i-fy (*'i-fi*), *v. t.* to form into syllables.
syl-la-ble (*'ä-bl*), *n.* that part of a word which can be uttered distinctly by a single effort of the voice.
syl-la-bus (*'ä-bus*), *n.* a table of contents; compendium of the heads of a discourse.
syl-lo-gism (*'ō-jizm*), *n.* an argument stated in logical form, consisting of three propositions, the first two being called the premises and the last the conclusion.
syl-lo-gis-tic (*-jis'tik*), *adj.* pertaining to, or consisting of, a syllogism.
sylph (*silf*), *n.* an imaginary being inhabiting the air; fairy.
syl-van (*sil'van*), *adj.* pertaining to, inhabiting, or growing in, a wood or grove.
Sylvanus. See *Silvanus.*
Sylvester. See *Silvester.*
Sylvia or **Silvia** (*sil'vi-ä*). A Roman name, feminine of *Sylvius.* Fr., *Silvie;* It., *Silvia;* Sp., *Silvia.*
Sylvius (*sil'vi-us*). A Roman name, from *sylva*, "a wood." *Sylvius* was the name of the brother of Ascanius, so called from being born in the woods.
sym-bol (*sim'bol*), *n.* an emblem or sign representing something else.
sym-bol-ic (*'ik*), *adj.* pertaining to, serving as, or of the nature of, a symbol: *n. pl.* the study of creeds. [Also *symbolical.*]
sym-bol-ism (*'bol-izm*), *n.* the use of, or the being represented by, symbols.
sym-bol-ize (*sim'bol-īz*), *v. t.* to represent by a symbol: *v. i.* to have a typical resemblance; agree.
sym-met-ric-al (*-met'ri-kal*), *adj.* having corresponding parts or relations. [Also *symmetric.*]
sym-me-trize (*'ē-trīz*), *v. t.* to make symmetrical.
sym-me-try (*'ē-tri*), *n.* the due proportion of the several parts of a body to each other.
sym-pa-thet-ic (*-pä-thet'ik*), *adj.* pertaining to, expressing, or inducing, sympathy; compassionate. [Also *sympathetical.*]
sym-pa-thize (*'pä-thīz*), *v. i.* to have a mutual feeling with another; be compassionate.
sym-pa-thy (*'pä-thi*), *n.* mutual feeling of pleasure or pain; compassion.
Syn. SYMPATHY, compassion, commiseration, condolence. *Sympathy* has the literal meaning of fellow-feeling, that is, a kindred or like feeling, or feeling in company with another; *compassion, commiseration,* and *condolence* signify a like suffering, or a suffering in company; *sympathy* preserves its original meaning in its application, for we laugh or cry by sympathy. *Compassion* is altogether a moral feeling, which makes us enter into the distresses of others; *commiseration* is awakened toward those who are in an abject state of misery; *condolence* supposes an entire equality, and is often produced by some common calamity.
sym-phon-ic (*-fon'ik*), *adj.* agreeing in sound; pertaining to a symphony. [Also *symphonious.*]
sym-pho-ny (*'fō-ni*), *n.* [*pl.* symphonies (*-niz*)], harmony of sound; a musical composition for a full band of instruments.
sym-po-si-um (*-pō'zi-um*), *n.* [*pl.* symposia (*-ä*)], a banquet; a drinking together.
sym-tom (*simp'tum*), *n.* token or sign.
symp-to-mat-ic (*-tō-mat'ik*), *adj.* pertaining to, serving as, or indicating, a symptom. [Also *symptomatical.*]
syn-a-gogue (*sin'ä-gog*), *n.* Jewish place of worship.
syn-chro-nism (*sing'krō-nizm*), *n.* concurrence in time of two or more events.
syn-chro-nize (*'krō-nīz*), *v. t.* to cause to agree in time: *v. i.* to happen simultaneously.
syn-chro-nous (*'krō-nus*), *adj.* happening at the same time. [Also *synchronal.*]
syn-co-pate (*'kō-pāt*), *v. t.* to contract by omitting a letter or letters from the middle of (a word).
syn-co-pa-tion (*-pā'shun*), *n.* the act of syncopating.
syn-co-pe (*'kō-pē*), *n.* the omission of a letter or letters from the middle of a word; fainting.
syn-dic (*sin'dik*), *n.* chief magistrate; municipal or other official.
syn-di-cate (*'di-kāt*), *n.* a body of syndics; a combination of capitalists.
syn-od (*'ud*), *n.* a council or meeting of ecclesiastics.
syn-o-nym (*'ō-nim*), *n.* a word having nearly the same root signification as another.
syn-op-sis (*-op'sis*), *n.* a general or collective view of any subject.
syn-op-tic (*sin-op'tik*), *adj.* giving a general view of the whole. [Also *synoptical.*]
syn-tac-tic (*-tak'tik*), *adj.* pertaining to, or arranged according to, the rules of syntax. [Also *syntactical.*]
syn-tax (*'taks*), *n.* that part of grammar which teaches of the proper construction and arrangement of words in a sentence.
syn-the-sis (*'thē-sis*), *n.* [*pl.* syntheses (*-sēz*)], composition or putting of two or more things together; opposed to analysis.
syn-thet-ic (*-thet'ik*), *adj.* pertaining to synthesis. [Also *synthetical.*]
syph-i-lis (*sif'i-lis*), *n.* venereal disease.
syph-i-lit-ic (*-lit'ik*), *adj.* pertaining to, of the nature of, or affected with, syphilis.
sy-phon. Another form of *siphon.*
Syracuse (*sir'ä-kūs*). The greatest Greek colony in Sicily, is believed to have replaced an older Phenician trading post which obtained its name from a marsh at the mouth of the Anapus called *Syraco*, "to stink."
Syracuse. City in Onondaga county, New York, named for the ancient city of Sicily, after passing through the names of Bogardus Corners, Milan, South Salina, Cossitt's Corners, and Corinth. In 1820, its present name was adopted at the suggestion of John Wilkinson, its first postmaster.
sy-ren. Another form of *siren.*
Syria (*sir'i-ä*). A country [of Asiatic Turkey; now called *Suristan* by the Turks and Persians, is the classical name which replaced the older name *Aram*, "the highlands." The name *Syria* first appears in Herodotus, and is doubtless a modification of the name *Assyria*, adopted by the Greeks at the time when Aram was included in the Assyrian empire. Assyria was thought to be the land of the deity *Assur* or *Asshur*, but it is now believed to have taken its name from the former capital *Assur*, a city on the Tigris, an Accadian name, meaning "the water bank."
Sy-rin-ga (*si-ring'gä*), *n.* a genus of plants, including the lilac.
★**syr-inge** (*sir'inj*, not *sir-inj'*), *n.* a small tube with a handle and worked like a pump: *v. t.* to inject or cleanse with a syringe.
★**syr-up** (*sir'up*), *n.* a saturated or medicated solution of sugar. [Also *sirup.*]
sys-tem (*sis'tem*), *n.* combination of parts in a whole; orderly arrangement. [BOD Y.]
sys-tem-at-ic (*-at'ik*), *adj.* methodical; according to system. [Also *systematical.*]
sys-tem-a-tize (*'tem-ä-tīz*), *v. t.* to reduce to a system.
sys-to-le (*'tō-lē*), *n.* the shortening of a long syllable.

T

tab (*tab*), *n.* a shoe latchet; tag; border of a woman's cap.
tab-ard (*'ērd*), *n.* a loose garment or mantle worn over armor.
tab-by (*'i*), *adj.* brindled; having a variegated, wavy, or watered appearance: *n.* a kind of wavy or watered silk; tabby cat; *v. t.* to water or cause to look wavy.
tab-by cat (*'ikat*), a brindled cat.
tab-e-fac-tion (*-ē-fak'shun*), *n.* the act or condition of wasting away.
tab-er-na-cle (*'ēr-nä-kl*), *n.* the movable structure or place of worship carried by the Israelites in the wilderness; receptacle for the consecrated Host in Roman Catholic churches; place of worship: *v. i.* to sojourn; take up a temporary residence.
tab-er-na-cle work (*wērk*), sculptured tracery or canopy work.
ta-bes (*tā'bēz*), *n.* a gradual wasting away of the body; atrophy.
Tabitha (*tab'i-thä*). A female name, from *Tabitha*, Aramæan name of a Christian female, Hebrew *zebia*, "a gazelle." Calmet, who translates the name "wild goat or kid," says the Syriac word *tabitha* signifies "clear sighted." Lat., *Tabitha.*
tab-la-ture (*'lä-tūr*), *n.* a painting on walls or ceilings.
ta-ble (*tā'bl*), *n.* a flat, smooth board, furnished with legs; flat surface; fare; tablet; index or syllabus: *pl.* collection of many particulars brought into view: *adj.* pertaining to a table: *v. t.* to catalogue or index.
tab-leau (*tab'lō*, French *tä-blō'*), *n.* [*pl.* tableaus (*'lōz*) or tableaux (*blō*)], a striking and vivid representation.
ta-ble-land (*tā'bl-land*), *n.* a plateau.
tab-let (*tab'let*), *n.* small flat cake, as of soap, sweetmeats, medicine, etc.
ta-boo (*tä-bōō'*), *n.* a religious rite formerly prevalent among the Polynesians by which persons and things were rendered sacred and inviolable; ban; prohibition: *v. t.* to forbid approach to, or use of. [Also *tabu.*]
ta-bor (*tā'bēr*), *n.* a small drum, beaten with one stick. [Also *tabour.*]
tab-ou-ret (*tab'ōō-ret*), *n.* an ornamental cushioned stool.
Tabriz (*tä-brēz'*). The commercial capital of Persia, was the classical and mediæval *Tauris*, "the mountain town."

tab-u-lar (*tab'ū-lĕr*), *adj.* pertaining to, or in the form of, a table.
tab-u-late (*'ū-lāt*), *v. t.* to reduce to, or arrange in, tables, or synopses.
ta-chom-e-ter (*tā-kom'ē-tĕr*), *n.* an instrument for measuring velocity.
tac-it (*tas'it*), *adj.* implied, but not expressed verbally.
tac-i-turn (*'i-tûrn*), *adj.* habitually silent.
tac-i-tur-ni-ty (*-tûr'ni-ti*), *n.* habitual silence.
tack (*tak*), *n.* a small broad-headed nail; direction of a vessel: *v. t.* to fasten with tacks; attach: *v. i.* to change the course of a vessel.
tac-kle (*'l*), *n.* apparatus for raising or lowering, consisting of pulleys and ropes; implements or gear: *v. t.* to seize or lay hold of; deal with, or attack, vigorously.
tac-kling (*'ling*), *n.* the furniture of the masts and yards of a vessel; instruments of action.
Tacoma (*tā-kō'mā*). City in Washington; so called from the Indian word *tahoma*, meaning "the highest," "near heaven."
tact (*takt*), *n.* nice discernment and delicate skill in saying and doing exactly what is expedient.
tac-ti-cian (*-tish'an*), *n.* one skilled in tactics.
tac-tics (*'tiks*), *n.* naval and military evolutions.
tac-tile (*'til*), *adj.* perceptible by the touch; capable of being touched.
tac-tu-al (*tak'tū-al*), *adj.* pertaining to the organs of touch.
tad-pole (*tad'pōl*), *n.* the young aquatic larva of an amphibian.
taf-fe-ta (*taf'ē-tā*), *n.* a fine, thin, glossy silken fabric.
taff-rail (*'rāl*), *n.* the upper flat part of the stern of a ship; rail round a ship's stern.
taf-fy (*'i*), *n.* molasses candy.
tag (*tag*), *n.* something small attached to another; a children's game: *v. t.* to fix a tag to; follow closely or persistently.
Tagus (*tā'gus*) or **Tejo** (*tā'zhōō*). Name of the longest river in the Spanish peninsula, meaning "the fish river."
Tahlequah (*tā-le-kwā'*). Former capital of Indian territory, is a Cherokee Indian word and properly spelled according to their pronunciation is *Talikwa*. The word as it stands probably means "place of two large towns."
tail (*tāl*), *n.* the end of the backbone of an animal's body, usually hanging loose; anything pendent.
tail-age (*'āj*), *n.* tax or toll. [Also *tillage.*]
tail-board (*'bōrd*), *n.* the movable board at the rear of a cart.
tai-lor (*tā'lĕr*), *n.* one whose business is to cut out and make men's clothes and women's costumes.
taint (*tānt*), *n.* corruption; infection; spot or stain; disgrace: *v. t.* to imbue or impregnate with anything noxious; *v. i.* to be corrupted. [CONTAMINATE.]
Taj Mahal (*tāzh mä-häl'*) or **Taj Mehal** (*tāzh mē-häl'*). The famous mausoleum erected at Agra, India, by Shah Jehan for his favorite wife. It literally means "gem of buildings."
take (*tāk*), *v. t.* to lay or seize hold of; obtain; choose; use or require; swallow; note or take down; make or perform: *v. i.* to have recourse; have the intended effect; please. [ABSORB.]
tal-bot (*tawl'bot*), *n.* a quick-scented hunting dog.
talc (*talk*), *n.* a hydrous silicate of magnesia.
tale (*tāl*), *n.* a narrative or story; fable; anecdote; reckoning. [STORY.]
tal-ent (*tal'ent*), *n.* among the ancients, a weight, coin, or sum of money of varying value; skill; cleverness; gift. [ABILITY, INTELLECT.]
tal-ent-ed (*'ent-ed*), *adj.* endowed with talents.
tal-is-man (*'is-man*), *n.* [*pl.* talismans (*-manz*)], a magical figure cut in metal or stone supposed to possess magical virtues in averting evil, etc.
talk (*tawk*), *v. i.* to utter words; converse; prattle: *v. t.* to utter; make a subject of conversation: *n.* familiar converse; colloquy. [SPEAK.]
talk-a-tive (*'ä-tiv*), *adj.* addicted to much talking.
tall (*tawl*), *adj.* high in stature; lofty; extravagant. [HIGH.]
Talladega (*tal-lä-dē'gä*), **Ala.** A Creek Indian word, *talua-atigi*, "the border town."
Tallahassee (*tal-lä-has'sē*). City in Florida, so named because it is supposed to have been the site of Indian cornfields in remote times. An Indian word, meaning "old town."
Tallahatchie (*tal-lä-hach'ē*). County in Mississippi, named from the principal branch of the Yazoo river in the same state. An Indian word, meaning "river of the rock."
Tallapoosa (*tal-lä-pōō'sä*). River in Georgia and Alabama, giving name to a county in Alabama and a city in Haraldon county, Georgia. An Indian word, meaning "swift current," or, according to some authorities, "stranger," "newcomer."
tal-low (*tal'ō*), *n.* the melted fat of oxen and sheep; candle grease: *v. t.* to grease with tallow.
tal-ly (*'i*), *n.* [*pl.* tallies (*'iz*)], one thing made to match or suit another: *v. t.* to make to correspond: *v. i.* to be fitted; match.
tal-ly-ho (*-hō*), *n.* a four-in-hand coach.
Tal-mud (*'mud*), *n.* the book which contains the whole body of the Jewish civil and canonical laws and traditions.
tal-on (*'un*), *n.* the claw of a bird of prey.
tal-us (*tā'lus*), *n.* the ankle bone; sloping part.
tam-a-ble (*tām'ä-bl*), *adj.* capable of being tamed.
ta-ma-le (*tä-mä'lä*), *n.* a kind of dumpling, made of minced chicken and corn meal, seasoned with red pepper, and wrapped in corn husks.
tam-a-rack (*tam'ä-rak*), *n.* the American black larch.
tam-a-risk (*'ä-risk*), *n.* a tree or shrub of the genus Tamarix.
tam-bour (*'bōōr*), *n.* a drum-like frame on which a kind of embroidery is worked; drum; inclosure of stockade work: *v. t.* to embroider with, or upon, a tambour.
tam-bour-ine (*-ēn'*), *n.* a small hand-drum with little cymbals inserted in the hoop.
tame (*tām*), *adj.* domesticated; spiritless; insipid: *v. t.* to subdue. [GENTLE.]
tame-less (*'les*), *adj.* wild; not capable of being tamed.
tamp (*tamp*), *v. t.* to drive in or down by repeated gentle strokes.
Tampa (*tam'pä*). Bay and city on the west coast of Florida. From the Indian word *itimpi*, "close to it," "near it." It was called by De Soto *Espiritu Santo*, "Holy Ghost."
tam-per (*'pĕr*), *v. i.* to meddle.
tam-pi-on (*'pi-un*), *n.* a stopper, especially for the mouthpiece of a cannon. [Also *tompion.*]
tan (*tan*), *n.* the bark of trees for tanning hides: *adj.* tan colored: *v. t.* to convert (a hide) into leather; make brown by exposure to the sun: *v. i.* to become sunburnt.
tan-dem (*'dem*), *adv.* with two horses or persons one before the other: *n.* a vehicle with two horses harnessed one before the other; a bicycle or tricycle for two, one riding before the other.
tang (*tang*), *n.* a strong taste or flavor: *v. i.* to make a ringing sound.
tan-gent (*tan'jent*), *adj.* touching: *n.* a straight line that meets or touches a circle or curve, but when projected, does not cut it.
tan-ger-ine (*-j ĕr-ēn'*), *n.* a small orange.
tan-gi-ble (*'ji-bl*), *adj.* perceptible to the touch; capable of being possessed or realized. [PHYSICAL.]
tan-gle (*tang'gl*), *v. t.* to interweave so as to render difficult to unravel; implicate; embarrass: *v. i.* to be entangled: *n.* a knot interwoven confusedly; complication; perplexity.
tank (*tangk*), *n.* a large cistern or reservoir.
tank-ard (*'ĕrd*), *n.* a drinking vessel with a lid.
tan-ner (*tan'ĕr*), *n.* one who tans hides.
tan-ner-y (*-i*), *n.* [*pl.* tanneries (*-iz*)], a place where hides are tanned; process of tanning.
tan-nic (*'ik*), *adj.* pertaining to, or obtained from, bark.
tan-nic ac-id (*as'id*), an astringent principle in oak bark, and nutgalls. [Also *tannin.*]
tan-ning (*'ing*), *n.* the process of converting hides into leather.
tan-sy (*'zi*), *n.* a bitter aromatic plant with small yellow flowers.
tan-ta-lize (*'tä-līz*), *v. t.* to tease or torment by exciting hopes or fears which will not be realized; provoke. [AGGRAVATE, TEASE.]
tan-ta-mount (*'tä-mount*), *adj.* equivalent in value or signification.
tan-trum (*'trum*), *n.* a sudden outburst of temper or passion.
tap (*tap*), *v. t.* to strike or touch lightly; to let out (a fluid); bore into: *n.* a gentle blow, or touch; pat; pipe through which liquor is drawn.
tape (*tāp*), *n.* a narrow band of linen or cotton cloth.
ta-per (*tā'pĕr*), *n.* small wax candle: *adj.* growing smaller or regularly narrowed toward the point: *v. i.* to become gradually more slender: *v. t.* to narrow to a point.
tap-es-try (*'ap'es-tri*), *n.* a textile fabric of wool or silk ornamented with a raised design, figures, etc., used for hangings: *v. t.* to hang, or adorn, with tapestry.
tap-es-try car-pet (*kär'pet*), a kind of carpet somewhat resembling Brussels.
tape-worm (*tāp'wĕrm*), *n.* a flat ribbon-like intestinal worm.
tap-i-o-ca (*tap-i-ō'kä*), *n.* a farinaceous food obtained from the root of the cassava.
tap-ping (*'ing*), *n.* a tap; act of tapping.
tap-root (*'rōōt*), *n.* the main root of a plant.
tar (*tär*), *n.* a thick, dark-brown, oily, viscous substance obtained by distillation from pine or fir trees, coal, etc.; a sailor: *v. t.* to smear with, or as with, tar.
tar-an-tel-la (*tar-an-tel'ä*), *n.* a wild, rapid Neapolitan dance.
ta-ran-tu-la (*tä-ran'tū-lä*), *n.* a large spider.
tar-di-ness (*tär'di-nes*), *n.* slowness of pace or motion; reluctance.
tar-dy (*'di*), *adj.* moving with a slow pace or motion; late.
tare (*tär*), *n.* darnel; weight of the cask, package, etc., which contains the commodity which is weighed with it and for which an allowance is made.
tar-get (*tär'get*), *n.* a small shield; butt or mark set up for rifle and artillery practice.
tar-iff (*tar'if*), *n.* a schedule or table of dutiable goods, specifying the customs rates, etc.; a duty levied: *v. t.* to fix a duty on.
tarn (*tärn*), *n.* a small mountain lake; marsh.
tar-nish (*tär'nish*), *v. t.* to diminish the luster of; sully: *v. i.* to lose luster; become dull. [STAIN.]
tar-pau-lin (*-paw'lin*), *n.* stout waterproof canvas.
Tarragona (*tär-rä-gō'nä*). Name of an important Spanish city, is derived from the ancient *Tarraco*, "the citadel or palace."
tar-ry (*tar'i*), *v. i.* to stay behind; delay; linger. [LINGER.]
Tarrytown. Village in Westchester county, New York. Modification of its former name of *Terwen*, "wheat town," given on account of its large crops of that cereal.
tar-sal (*tär'sal*), *adj.* pertaining to the tarsus.
tar-sus (*'sus*), *n.* the instep: *pl.* [tarsi (*'si*)], the connective cartilages of the eyelids; foot of an insect or crustacean.
tart (*tärt*), *adj.* sharp to the taste; acid; severe; keen: *n.* a small open pie.
tar-tan (*tär'tan*), *n.* woolen cloth, checkered with various colors: *adj.* made from, or like, tartan.
tar-tar (*'tĕr*), *n.* the white earthy substance deposited on the teeth.
tar-tar e-met-ic (*ē-met'ik*), antimony combined with potassium and tartaric acid.
tar-tar-ic ac-id (*-tar'ik as'id*), an acid found in the juice of grapes, berries, etc.
Tartary (*tär'tä-ri*). The old name, now falling into disuse, for Turkistan, the parts of central Asia which are inhabited by the nomads of Turkish race called *Tartars* or *Tatars*. The name is said to to have arisen out of the designation *tha-ta*, "robbers," applied by the Chinese to the Mongols.
ta-sim-e-ter (*tä-sim'ē-tĕr*), *n.* an electrical instrument for measuring minute variations.
task (*task*), *n.* business or study imposed by another; duty; burdensome employment: *v. t.* to impose a task upon; burden. [WORK.]
Tasmania (*taz-mä'ni-ä*). Island and British colony of Australasia; so named in 1853 after Abel Tasman, who discovered it in 1642; previously called Van Diemen's Land from the governor general of the Dutch East India company.
tas-sel (*tas'l*), *n.* a pendent ornament of silk, wool, etc.
taste (*tāst*), *v. t.* to perceive by the tongue and palate; participate in; experience: *v. i.* to try food or drink by the palate; have a flavor: *n.* the sensation produced on the tongue and palate by something taken into the mouth; intellectual relish or discernment; a sample.
Syn. TASTE, genius. *Taste* seems to designate the capacity to derive pleasure from an object; *genius* designates the power we have for accomplishing any object.
taste-ful (*'fool*), *adj.* savory; characterized by, or showing, good taste.
tast-y (*'i*), *adj.* showing taste; savory.
tat (*tat*), *n.* coarse cloth made from jute.
tatt (*tat*), *v. t.* to make by tatting.
tat-ter (*'ĕr*), *n.* a loose hanging rag: *pl.* rags: *v. t.* to make ragged; rend.
tat-ting (*'ing*), *n.* a kind of narrow lace for edging; art of making such kind of lace.
tat-tle (*'l*), *v. i.* to talk idly or triflingly; prate; tell tales or secrets: *n.* trifling or idle talk.
tat-too (*-tōō'*), *n.* a beat of drum; marks made by puncturing the skin with a needle and rubbing a stain or dye into the wounds: *v. t.* to mark permanently by puncturing and staining the wounds.
taunt (*tänt or tawnt*), *adj.* lofty; *n.* bitter or sarcastic reproach: *v. t.* to reproach; revile. [TEASE.]
tau-ri-form (*taw'ri-fôrm*), *adj.* having the form of a bull.
taut (*tawt*), *adj.* tight; stretched.
tau-to-log-ic-al (*aw-tō-loj'i-kal*), *adj.* of the nature of tautology.
tau-tol-o-gy (*-tol'ō-ji*), *n.* repetition of the same thing or idea in different words; sameness of words or of meaning.
tav-ern (*tav'ĕrn*), *n.* an inn or public house; a hotel.
taw-dry (*taw'dri*), *adj.* showy or fine without elegance; gaudily dressed.
taw-ny (*'ni*) *adj.* of a yellowish-brown color.
tax (*taks*), *n.* a rate or duty on income or property; excise; impost; burdensome or oppressive duty: *v. t.* to impose a rate or duty upon; burden or oppress; accuse.
tax-a-ble (*'ä-bl*), *adj.* subject or liable to taxation.
tax-a-tion (*-ā'shun*) *n.* the act of taxing; rate or tax imposed.
tax-i-cab (*tax'i-kab*), *n.* a motor cab of recent invention, having a mechanical device for registering time and distance traversed.
tax-i-der-mist (*'i-dĕr-mist*), *n.* one who is skilled in taxidermy.
tax-i-der-my (*'i-dĕr-mi*), *n.* the art of stuffing and arranging specimens of natural history.
tax-in (*'in*), *n.* the resinous substance obtained from the leaves of the yew tree.
Tay (*tā*), The largest river of Scotland, flows from Loch Tay, where, probably, was the *Tamia* or *Ptolemy*, a name explained by the Gaelic *tamh*, "tranquil," or "smooth," the equivalent of the Pictish *tau* and the Cymric *taw*, of which an oblique case may be the source of the name *Tava*, given by Tacitus to the Firth of Tay.
tea (*tē*), *n.* the prepared leaves of the tea plant (*Thea sinensis*); the beverage obtained by the infusion of the dried leaves; afternoon repast at which tea is served; an infusion of other substances, as beef.
teach (*tēch*), *v. t.* to impart knowledge to; cause to learn or acquire skill in: *v. i.* to give instruction.
Syn. TEACH discipline, drill, educate, enlighten, inculcate, indoctrinate, inform, initiate, instill, instruct, nurture, school, train, tutor. To

teach is simply to communicate knowledge; to *instruct* is to impart knowledge with special method and completeness; to *educate* is to draw out or develop harmoniously the mental powers, and, in the fullest sense, the moral powers as well. To *train* is to direct to a certain result powers already existing; *discipline* is a severe word, and is often used as a euphemism for *punish; nurture* is a more tender and homelike word than *educate*. [See *instruct*.]

teal (*tēl*), *n.* a species of small, wild, fresh-water ducks.

team (*tēm*), *n.* two or more horses, etc., harnessed to the same vehicle; number of persons associated together to form a side in a game, or to perform a certain piece of work.

team-ster (*'stēr*), *n.* the driver of a team.

tear (*tēr*), *n.* a small drop of fluid secreted by the eye; anything tearlike, or shaped like a tear: (*târ*) a rent: *v. t.* (*târ*) to rend; disrupt; lacerate: *v. i.* to be rent; rave or rant.

tear-ful (*tēr'fool*), *adj.* shedding tears.

tease (*tēz*), *v. t.* to irritate or annoy: *n.* one who teases.

Syn. TEASE, vex, taunt, tantalize, torment. *To tease* is applied to that which is most trifling; *torment* to that which is most serious. We are *teased* by a fly that buzzes in our ears; we are *vexed* by the carelessness and stupidity of our servants; we are *taunted* by the sarcasms of others; we are *tantalized* by the fair prospects which only present themselves to disappear again; we are *tormented* by the importunities of troublesome beggars.

teat (*tēt*), *n.* the nipple of the female breast; mammilla.

★**tech-nic** (*tek'nik*), *adj.* relating to art, science, or to a particular profession. [Also *technical*.] *n. pl.* those branches of learning which relate to the arts.

tech-nique (*-nēk'*), *n.* artistic execution.

tech-nol-o-gy (*-nol'ō-ji*), *n.* the science of the industrial arts.

tec-ton-ics (*tek-ton'iks*), *n.* the science or art of construction.

te-di-ous (*tē'di-us*), *adj.* wearisome by continuance; tiresome.

te-di-um (*'di-um*), *n.* wearisomeness.

tee (*tē*), *n.* the mark aimed at in quoits and curling; nodule of earth from which the ball is struck at golf.

teem (*tēm*), *v. i.* to be prolific; be full; be stocked to overflowing.

teen (*tēn*), *n.* sorrow: *pl.* years of one's age ending in *teen*.

teeth-ing (*tēth'ing*), *n.* dentition.

tee-to-tal (*tē-tō'tal*), *adj.* pertaining to teetotalers.

tee-to-tal-er (*-ēr*), *n.* a total abstainer.

tee-to-tum (*-tō'tum*), *n.* a child's toy used in games of chance.

teg-men (*teg'men*), *n.* [*pl.* tegmina (*'mi-nā*)], a covering; inner layer of the coating of a seed: *pl.* scaly coat of the leaf-buds of trees.

teg-u-ment (*'ū-ment*), *n.* natural covering or envelope; skin.

te-hee (*tē-hē'*), *n.* a titter: *v. i.* to titter.

tel-e-gram (*'ē-gram*), *n.* a telegraphic communication.

tel-e-graph (*'ē-graf*), *n.* an instrument or apparatus for communicating intelligence rapidly between certain points, especially by means of electricity: *v. t.* to convey by telegraph; signal: *v. i.* to send a telegraphic message.

te-leg-ra-pher (*tē-leg'rā-fēr*), *n.* one who sends telegraphic messages; telegraphist.

tel-e-graph-ic (*tel-ē-graf'ik*), *adj.* pertaining to, done by means of, or communicated by, telegraph.

★**te-leg-ra-phy** (*tē-leg'rā-fi*), *n.* the science or art of constructing and working telegraphs.

tel-e-ol-o-gy (*tel-ē-ol'ō-ji*), *n.* the doctrine of final causes.

te-lep-a-thy (*tē-lep'ā-thi*), *n.* the transference of thought from one person to another by the will.

tel-e-phone (*tel'ē-fōn*), *n.* an instrument for transmitting sound to a distance by means of electricity: *v. t.* and *v. i.* to communicate by telephone.

tel-e-phon-ic (*-fon'ik*), *adj.* pertaining to, or conveyed by means of, the telephone.

te-leph-o-ny (*tē-lef'ō-ni*), *n.* the science or art of transmitting sounds at a distance.

tel-e-pho-tog-ra-fy (*tel-ē-fō-tog'rā-fi*), *n.* the reproduction of photographs at a distance by aid of the telegraph.

tel-e-post (*tel'ē-pōst*), *n.* a new system of telegraphing by aid of a punched tape.

tel-e-scope (*tel'ē-skōp*), *n.* an optical instrument for viewing objects at a distance: *v. t.* to drive into one another.

tel-e-scop-ic (*-skop'ik*), *adj.* pertaining to, visible by, or like, a telescope. [Also *telescopical*.]

tel-e-sco-py (*tel'ē-skō-pi*), *n.* the art or science of using or constructing a telescope.

tell (*tel*), *v. t.* to narrate; enumerate; explain; confess: *v. i.* to give an account; act effectively. [SPEAK, ANNOUNCE.]

tell-er (*'ēr*), *n.* one who tells, narrates, or communicates; a bank clerk.

tell-tale (*'tāl*), *adj.* telling tales: *n.* a person who officiously or maliciously divulges the private concerns of others.

tel-lu-ri-um (*-lū'ri-um*), *n.* a rare element usually found associated with other metals.

tel-o-type (*tel'ō-tīp*), *n.* an electric telegraph that prints the message.

te-mer-i-ty (*tē-mer'i-ti*), *n.* foolhardiness; rashness; precipitancy. [RASHNESS.]

tem-per (*tem'pēr*), *v. t.* to modify or regulate; calm; bring to a due proportion; bring to a degree of hardness: *n.* due proportion of different qualities or ingredients; mental disposition; mood; passion; irritation. [HUMOR, DISPOSITION.]

★**tem-per-a-ment** (*tem'pēr-ā-ment*, not *tem'prā-ment*), *n.* natural constitution or organization; due mixture of opposite or different qualities.

★**tem-per-ance** (*'pēr-ans*), *n.* moderation, especially in respect to the appetites or passions.

tem-per-ate (*'pēr-āt*), *adj.* moderate; abstemious; calm.

tem-per-a-ture (*'pēr-ā-tūr*), *n.* state of a body with respect to sensible heat; degree of any quality.

tem-pered (*'pērd*), *adj.* constitutionally disposed; hardened.

tem-pest (*'pest*), *n.* wind rushing with great violence; tumult. [BREEZE.]

tem-pes-tu-ous (*-pes'tū-us*), *adj.* very stormy; pertaining to, or like, a tempest; violent.

Tem-plar (*'plēr*), *n.* one of a religious and military order, especially the Templars in the 12th century.

tem-plate (*'plāt*), *n.* a mold or pattern used by masons, etc., in cutting or setting out their work. [Also *templet*.]

tem-ple (*'pl*), *n.* an edifice for the worship of a deity or deities; the flat part of either side of the head above the cheek bones.

tem-po-ral (*'pō-ral*), *adj.* pertaining to time; secular; civil or political.

tem-po-ra-ry (*-rā-ri*), *adj.* existing or continuing for a limited time.

tem-po-rize (*'pō-rīz*), *v. i.* to parley; delay.

tempt (*tempt*), *v. t.* to put to trial; test; allure; entice.

temp-ta-tion (*temp-tā'shun*), *n.* the state of being tempted; enticement.

tempt-er (*tempt'ēr*), *n.* one who tempts; the devil (with *the*).

ten (*ten*), *adj.* denoting one more than 9 or twice 5: *n.* the sum of 5 and 5; ten units.

ten-a-bil-i-ty (*-ā-bil'i-ti*), *n.* the state or quality of being tenable. [Also *tenableness*].

ten-a-ble (*'ā-bl*), *adj.* capable of being held, or defended.

te-na-cious (*tē-nā'shus*), *adj.* holding fast or firmly; cohesive; tough; obstinate.

Syn. TENACIOUS, pertinacious. To be *tenacious* is to hold a thing close, to let it go with reluctance; to be *pertinacious* is to hold it out in spite of what can be advanced against it. A man of a *tenacious* temper insists on trifles that are supposed to affect his importance; a *pertinacious* temper insists on everything which is apt to affect his opinions.

te-nac-i-ty (*-nas'i-ti*), *n.* the state or quality of being tenacious; cohesiveness; adhesiveness.

ten-an-cy (*ten'an-si*), *n.* [*pl.* tenancies (*-siz*)], the holding of land or tenements; tenure.

ten-ant (*'ant*), *n.* one who holds lands or tenements; occupant: *v. t.* to hold as a tenant.

ten-ant-ry (*-ri*), *n.* tenants collectively.

tend (*tend*), *v. t.* to care for; attend; accompany: *v. i.* to move in a particular direction; contribute.

tend-en-cy (*tend'en-si*), *n.* inclination; aim; direction or course. [INCLINATION.]

ten-der (*ten'dēr*), *adj.* sensitive; soft; easily influenced; gentle; careful: *n.* a vehicle attached to a locomotive containing coal and water; an offer: *v. t.* to offer for acceptance: *v. i.* to make an offer to do certain work or supply certain goods for a specified price.

ten-der-foot (*'dēr-foot*), *n.* one who is new to life in a district.

ten-der-ness (*-nes*), *n.* kindness; sensibility; caution; soreness. [LOVE, MERCY.]

ten-don (*'dun*), *n.* the hard bundle of fibers which connects the muscles to the bones.

ten-dril (*'dril*), *n.* the slender, twining part of a plant.

ten-e-ment (*'ē-ment*), *n.* a house, shop, land, etc., held by a tenant.

Tenerife (*ten-ēr-if'*). One of the Canaries, is a Portuguese corruption of *Chinerfe* or *Tinerfe*, the name of the last Guanche chief. From its snow-clad peak, the Romans called it *Nivaria*, the "snowy."

★**ten-et** (*ten'et*, not *tē'net*), *n.* a doctrine, dogma, opinion, or belief held as true.

Syn. TENET, position. The *tenet* is the opinion which we hold in our minds; the *position* is that which we lay down for others. Our *tenets* may be hurtful, our *positions* false. [See *doctrine*.]

ten-fold (*'fōld*), *adj.* and *adv.* ten times as much or as many.

Tennessee. Tributary of the Ohio river, which gives name to a state of the Union. Three different derivations are given the name. From *Tanase*, the name of the most important village of the Cherokee Indians; from an Indian word meaning "a curved spoon"; or from *Taensa*, an Indian tribe of the Watchesan family.

ten-nis (*'is*), *n.* a game played with rackets and balls.

Tenochtitlan (*ten-ōch-tēt-lān'*). The chief city of the Aztecs, occupying the site of the modern City of Mexico.

ten-on (*'un*), *n.* the end of a timber cut wedge-shaped for fitting into a mortise in another timber: *v. t.* to form tenons in.

ten-or (*'ēr*), *n.* general tendency or drift; the highest kind of male voice: *adj.* pertaining to, or adapted for, tenor.

tense (*tens*), *adj.* drawn tightly; rigid; not lax: *n.* a modification in the inflection of a verb, expressing time of action.

ten-sion (*ten'shun*), *n.* the act of stretching or straining; the state of being stretched.

tent (*tent*), *n.* a temporary shelter or habitation, usually of canvas, supported by poles and ropes.

ten-ta-cle (*ten'tā-kl*), *n.* a process or organ in certain invertebrate animals used for feeling, prehension, or locomotion.

ten-tac-u-lar (*-tak'ū-lēr*), *adj.* pertaining to tentacles.

ten-ta-tive (*'tā-tiv*), *adj.* experimental.

ten-ter (*'tēr*), *n.* a frame for stretching cloth on by hooks; a tenter-hook: *v. t.* to hang or stretch on tenters.

ten-ter-hook (*-hook*), *n.* a sharp, hooked nail; anything that painfully strains.

tenth (*tenth*), *adj.* next in order after the ninth; the ordinal of ten.

te-nu-i-ty (*tē-nū'i-ti*), *n.* thinness; rarity.

ten-u-ous (*ten'ū-us*), *adj.* slender; not dense.

ten-ure (*'ūr*), *n.* conditions under which a tenement is held; term of holding.

tep-e-fac-tion (*tep-ē-fak'shun*), *n.* the act of warming or making tepid.

tep-e-fy (*'ē-fi*), *v. t.* to make tepid: *v. i.* to become tepid.

★**tep-id** (*tep'id*, not *tē'pid*), *adj.* moderately warm; lukewarm.

ter-cen-te-na-ry (*tēr-sen'tē-nā-ri*), *adj.* comprising 300 years; indicating an event three centuries old.

ter-e-binth (*ter'ē-binth*), *n.* the turpentine tree.

ter-e-bin-thine (*-bin'thin*), *adj.* pertaining to, of the nature of, or like, turpentine.

Terence (*ter'ens*). From the Latin name *Terentius*. Macrobius says the name of the *Terentia gens* is derived by Varro from the Sabine word *terenus*, soft.

Teresa. See *Theresa*.

ter-gi-ver-sa-tion (*tēr-ji-vēr-sā'shun*), *n.* evasion; subterfuge.

term (*tērm*), *n.* a limit or boundary; limited time; condition or arrangement; word or expression noting something: *pl.* conditions or stipulations: *v. t.* to name, designate, or express.

ter-ma-gant (*tēr'mā-gant*), *adj.* noisy and violent: *n.* a noisy, violent woman.

ter-mi-nal (*'mi-nal*), *adj.* pertaining to the end or extremity: *n.* a limit or boundary; end.

ter-mi-nate (*'mi-nāt*), *v. t.* to limit or bound; end: *v. i.* to be limited or ended. [END, COMPLETE.]

ter-mi-na-tion (*-nā'shun*), *n.* the act of terminating; a bound or limit; end; conclusion or result.

ter-mi-nol-o-gy (*-mi-nol'ō-ji*), *n.* the definition of technical terms.

ter-mi-nus (*'mi-nus*), *n.* [*pl.* termini (*-nī*)], a limit or boundary; station at the end of a railway.

ter-na-ry (*tēr'nā-ri*), *adj.* proceeding by, or consisting of, threes: *n.* the number 3.

ter-race (*ter'ās*), *n.* a raised level space or platform of earth; row of houses: *v. t.* to form into a terrace.

ter-ra cot-ta (*ā kot'ā*), a composition of fine clay and sand used for statues, etc., and hardened by heat.

ter-ra Ja-pon-i-ca (*jā-pon'i-kā*), pale catechu or gambier.

ter-ra-pin (*'ā-pin*), *n.* a species of fresh-water tortoise.

ter-ra-que-ous (*-rā'kwē-us*), *adj.* consisting of land and water.

Terre Haute (*ter'e hōt*, French *târ-hōt'*). City in Indiana, built upon a bank sixty feet above the river. French words, meaning "high land."

ter-res-tri-al (*-res'tri-al*), *adj.* pertaining to, existing on, or consisting of, earth; not celestial.

ter-ret (*'et*), *n.* one of the rings on a harness pad through which the driving reins pass.

ter-ri-ble (*ter'i-bl*), *adj.* exciting or causing fear or awe; dreadful. [FEARFUL, FORMIDABLE.]

ter-ri-er (*'i-ēr*), *n.* a breed of small dogs.

ter-ri-fy (*'i-fi*), *v. t.* to frighten or alarm exceedingly.

ter-ri-to-ri-al (*-i-tō'ri-al*), *adj.* pertaining to a territory; limited to a particular district.

ter-ri-to-ry (*'i-tō-ri*), *n.* [*pl.* territories (*-riz*)], the extent of land within the jurisdiction of a state, sovereign, city, etc.; large tract of land.

ter-ror (*'ēr*), *n.* extreme fear; fright; one who excites extreme fear.

Terry. A masculine name derived, like the French name Thierry, from *Theodoric*.

terse (*tērs*), *adj.* elegantly and forcibly concise.

ter-tian (*tēr'shan*), *adj.* occurring, or recurring, every third day.

ter-ti-a-ry (*'shi-ā-ri*), *adj.* of the third order, rank, or formation.

tes-sel-late (*tes'el-āt*), *v. t.* to lay with squares or checkered work.

test (*test*), *n.* that by which the nature of a substance is tried; standard; proof: *v. t.* to put to the proof; compare with a standard; try.

tes-ta-ceous (*tes-tā'shus*), *adj.* consisting of, or having, a hard shell.

tes-ta-cy (*'tā-si*), *n.* the state or fact of leaving a valid will.

tes-ta-ment (*'tā-ment*), *n.* will.

tes-ta-men-ta-ry (*-men'tā-ri*), *adj.* pertaining to, bequeathed by, or done by, a will. [Also *testamental*.]

tes-tate (*'tāt*), *adj.* having left a will.

tes-ta-tor (*tes-tā'tēr*), *n.* one who makes and leaves a will. [Fem. *testatrix.*]
tes-tes (*'tēz*), *n. pl.* the testicles.
tes-ti-cle (*'ti-kl*), *n.* one of the two glands which secrete the seminal fluid in males.
tes-ti-fy (*'ti-fī*), *v. i.* to bear witness: *v. t.* to bear witness to.
tes-ti-mo-ni-al (*-ti-mō'ni-al*), *n.* a writing or certificate bearing testimony to character, proficiency, etc.; a present given as a token of respect, etc.: *adj.* pertaining to, or containing, testimony.
tes-ti-mo-ny (*'ti-mō-ni*), *n.* [*pl.* testimonies (*-niz*)], evidence; proof; solemn declaration; profession.
Syn. TESTIMONY, affidavit, affirmation, deposition, evidence, proof, witness. *Testimony*, in legal as well as in common use, signifies the statements of witnesses; *deposition* and *affidavit* denote *testimony* reduced to writng; the *deposition* differs from the *affidavit;* the latter is voluntary and without cross-examination; the former is made under questionings and subject to cross-examination.
tes-ty (*tes'ti*), *adj.* peevish; morose; irritable.
tet-a-nus (*tet'a-nus*, not *tē'tā-nus*), *n.* lockjaw.
★**tête-à-tête** (*tāt-ä-tāt'*), *n.* private or confidential conversation; a kind of settee.
teth-er (*teth'ēr*), *n.* a rope for confining within certain limits; scope of freedom allowed: *v. t.* to confine within certain limits.
tet-ra-gon (*tet'rä-gon*), *n.* a plane figure with four sides.
te-tram-e-ter (*tē-tram'ē-tēr*), *n.* a verse or line consisting of four measures.
tet-ra-pod (*tet'rä-pod*), *n.* a four-footed insect.
te-trarch (*tē'trärk*), *n.* a Roman governor over the fourth part of a province.
tet-ter (*'ēr*), *n.* a cutaneous disease; herpes.
Teu-ton (*tū'ton*), *n.* one of the German race.
Teu-ton-ic (*'ik*), *adj.* pertaining to, or characteristic of, the Teutons or the Teutonic languages.
Texas. A southwest state of the Union, named from a small tribe of Indians that inhabited a village called *Tehas*, meaning "friendly." Name also means "the place of protection," referring to the fact that a colony of French refugees were afforded protection here by General Lallemont in 1817.
text (*tekst*), *n.* that on which a comment is written; topic.
text-book (*'book*), *n.* a standard book of instruction.
tex-tile (*teks'til*), *adj.* pertaining to. or formed by, weaving; capable of being woven.
tex-tu-al (*'tū-al*), *adj.* pertaining to, contained in, or serving for, a text.
tex-ture (*'tūr*), *n.* manner of weaving; web; filaments or fibers interwoven; tissue.
Thaddeus (*thad'ē-us*), **Thadeus** (*thad-ē'us*). From the Latin *Thaddæus*, in turn from the Hebrew, "one who praises and confesses." It., *Taddeo;* Lat., *Thadduæs;* Sp., *Tadeo.*
thal-as-sog-ra-phy (*thal-as-og'rä-fi*), *n.* the science of marine organisms.
Thames. River in England and America. (American *thāmz*, English *temz.*) The *Tamesis* of Cæsar, is a Celtic name meaning the "tranquil" or "smooth" river.
than (*than*), *conj.* used after the comparative degree of adjectives and adverbs expressing diversity or comparison.
than-a-tol-o-gy (*-ä-tol'ō-ji*), *n.* a treatise on, or the doctrine of, death.
thane (*thān*), *n.* a title of honor or dignity among the Anglo-Saxons, held by persons having large territorial possessions.
thank (*thangk*), *v. t.* to express gratitude or obligation to. [gratitude.
thank-ful (*'fool*), *adj.* grateful: also **thankfulness**, *n.*
Syn. THANKFULNESS, gratitude. Our *thankfulness* is measured by the number of our words; our *gratitude* is measured by the nature of our actions. A person appears very *thankful* at the tme who afterward proves very *ungrateful.*
thank-less (*'les*), *adj.* ungrateful; not obtaining, or deserving, thanks.
thanks (*thangks*), *n. pl.* an expression of gratitude or obligation.
thanks-giv-ing (*thangks-giv'ing*), *n.* the act of expressing gratitude for favors and mercies.
Thanks-giv-ing day (*dā*), *n.* a day set apart annually, usually the last Thursday in November, for thanksgiving to God.
that (*that*), *pron.* and *adj.* [*pl.* those (*thōz*)], not this but the other: *conj.* because; since.
thatch (*thach*), *n.* straw, reeds, etc., used for covering the roofs of cottages, stacks, etc.: *v. t.* to cover with, or as with, thatch.
thau-ma-tur-gic (*thaw-mä-tûr'jik*), *adj.* pertaining to, or done by, thaumaturgy.
thau-ma-tur-gy (*'mä-tûr-ji*), *n.* the act of performing miracles.
thaw (*thaw*), *v. i.* to melt or become liquid, as ice or snow: *v. t.* to dissolve: *n.* the melting of ice or snow.
★**the-a-ter, the-a-tre** (*thē'ä-tēr*, not *thē-ä'tēr*), *n.* a public building where dramatic representations are given; scene or sphere of action.
the-at-ric-al (*-at'ri-kal*), *adj.* pertaining to, or adapted for, a theater; resembling the manner of actors: *n. pl.* dramatic performances.
the-at-ro-phone (*'rō-fōn*), *n.* an automatic telephone connected with a theater.
The-ban (*thē'ban*), *adj.* pertaining to Thebes, or to its inhabitants.
Thebes (*thēbz*). In Bœotia, the Greek *Thebae*, is now *Pheba* or *Phiba.* The site of the acropolis was a small hill, and we learn from Varro that *teba* meant a "hill." In the name of the Egyptian *Thebes* we have a Greek corruption of the popular Egyptian designation of the city, which was called *t'ape*, "the capital."
theft (*theft*), *n.* the act of stealing; robbery.
the-ism (*thē'izm*), *n.* the belief in the existence of a God.
the-ist (*'ist*), *n.* one who believes in the existence of a God.
the-is-tic (*-is'tik*), *adj.* pertaining to theism or theists. [Also *theistical.*]
theme (*thēm*), *n.* the subject or topic of a discourse or dissertation; short essay.
then (*then*), *conj.* in consequence; therefore; in that case: *adv.* next; at that or another time; immediately.
thence (*thens*), *adv.* from that place or time.
Theobald (*thē'ō-bawld, tib'ald*). From the Old German *teut-bald*, "strong or bold leader." Danish, *Theobald;* Dutch, *Tiebout;* Fr., *Thibaut;* Ger., *Theobald;* It., *Teobaldo;* Lat., *Theobaldus;* Sp., *Teobaldo;* Sw., *Theobald.*
the-oc-ra-cy (*-ok'rä-si*), *n.* the government of a state by the immediate direction of God; the state thus governed.
the-oc-ra-sy (*'rä-si*), *n.* a mixture of the worship of different deities; the intimate union of the soul with God in contemplation.
the-o-crat (*'ō-krat*), *n.* one living under a theocracy.
the-o-crat-ic (*-krat'ik*), *adj.* pertaining to a theocracy.
the-od-i-cy (*-od'i-si*), *n.* a vindication of the dealings of divine Providence and the freedom of the human will.
Theodora (*thē-ō-dō'rä*). A feminine name derived from *Theodore.*
Theodore (*thē'ō-dōr*). From the Greek name *Theodorus*, signifying "the gift of God." Danish, *Theodor;* Dutch, *Theodorus;* Fr., *Théodore;* It., *Teodoro;* Lat., *Theodorus;* Port., *Theodoro;* Russ., *Feodor;* Sp., *Teodorio;* Sw., *Theodor.*
Theodoric (*thē-od'ō-rik*) or **Theoderick.** An Old German name from *teut-reich*, "powerful lord." Dutch, *Diederick;* Fr., *Théodoric;* Ger., *Theoderich* or *Dietrich;* It., *Teodorico;* Lat., *Theodoricus;* Sp., *Teodorico.*
Theodosia (*thē-ō-dō'shi-ä*). Fem. of *Theodosius.* Gr., *Theodosie;* It., *Teodosia;* Lat., *Theodosia.*
Theodosius (*thē-ō-dō'shi-us*). From the Greek, meaning "given by God." Fr., *Théodose;* It., *Teodosio;* Lat., *Theodosius;* Sp., *Teodosio.*
the-og-o-ny (*-og'ō-ni*), *n.* that branch of mythology which treats of the origin or genealogy of ancient deities.
the-o-lo-gi-an (*-ō-lō'ji-an*), *n.* one versed in theology.
the-o-log-ic-al (*-loj'i-kal*), *adj.* pertaining to theology.
the-ol-o-gy (*-ol'ō-ji*), *n.* [*pl.* theologies (*-jiz*)], the science that treats of the existence, nature, and attributes of God.
Theophilus (*thē-of'il-us*). From the Greek name signifying "a friend of God." Danish, *Gottlieb;* Dutch, *Theophilus;* Fr., *Théophile;* It., *Teofilo;* Lat., *Theophilus;* Port., *Theophilo;* Sp., *Teofilo.*
the-o-rem (*'ō-rem*), *n.* a proposition to be proved.
the-o-ret-ic-al (*-ō-ret'i-kal*), *adj.* pertaining to, or depending on, theory; not practical; speculative. [Also *theoretic.*]
the-o-rist (*'ō-rist*), *n.* one who theorizes; speculatist.
the-o-rize (*'ō-riz*), *v. i.* to form a theory or theories; speculate.
the-o-ry (*'ō-ri*), *n.* [*pl.* theories (*-riz*)], an exposition of the abstract principles of a science or art; hypothesis.
the-o-soph-ic (*-ō-sof'ik*), *adj.* pertaining to theosophy or theosophists. [Also *theosophical.*]
the-os-o-phism (*-os'ō-fizm*), *n.* pretension to divine wisdom or illumination.
the-os-o-phist (*'ō-fist*), *n.* a believer in theosophy. [Also *theosoph.*]
the-os-o-phy (*'ō-fi*), *n.* a system of philosophy which professes to investigate the unexplained laws of nature, the powers of man over nature, and the direct knowledge of God.
ther-a-peu-tic (*ther-ä-pū'tik*), *adj.* curative: *n. pl.* the art or science of curing diseases.
there (*thâr*), *adv.* in that place; at that point or stage.
there-fore (*thâr'* or *thēr'fōr*), *adv.* and *conj.* for that or this reason; for that reason or purpose.
Theresa (*the-rē'sä*). Probably from the Greek *theriso*, "to reap or gather in the crop." Dutch, *Theresia;* Fr., *Thérèse;* Ger., *Therese;* It., *Teresa;* Lat., *Theresa;* Sp. *Teresa;* Sw., *Theresa.*
ther-mal (*thēr'mal*), *adj.* pertaining to heat; warm.
ther-mom-e-ter (*-mom'e-tēr*), *n.* an instrument for measuring the degree of heat of bodies.
ther-mo-met-ric (*-mō-met'rik*), *adj.* pertaining to, made or ascertained by, a thermometer. [Also *thermometrical.*]
Thermopylæ (*thēr-mop'i-lē*). A mountain pass of central Greece; name means "the defile of the warm springs."
ther-mo-stat (*'mō-stat*), *n.* an automatic apparatus for regulating temperature.
the-sau-rus (*thē-saw'rus*), *n.* a storehouse or treasury: lexicon or dictionary.
the-sis (*the'sis*), *n.* [*pl.* theses (*'sēz*)], an essay or dissertation.
Thes-pi-an (*thes'pi-an*), *adj.* pertaining to Thespis, the founder of Greek drama, hence dramatic.
the-ur-gic (*thē-ēr'jik*), *adj.* pertaining to theurgy or magic.
thews (*thūz*), *n. pl.* muscles; strength.
they, *pl.* of he, she, or it.
Thian-shan (*tē-än'shän*). Mountain system of Asia. Chinese, meaning "the celestial mountains."
Thibet or **Tibet** (*tib'et, ti-bet'*). A region of central Asia; name possibly a corruption of *Thupo*, "high country," the country of the *Thou*, a people who founded an empire there in the sixth century.
thick (*thik*), *adj.* not thin; dense; dull; very intimate; crowded: *adv.* closely; indistinctly; to a great depth; fast.
Syn. THICK, dense. We speak of *thick* in regard to hard or soft bodies, as a *thick* board or *thick* cotton; solid or liquid, as a *thick* cheese or *thick* milk; but the term *dense* mostly in regard to the air in its various forms, as a *dense* air.
Ant. THIN, sparse.
thick-en (*'n*), *v. t.* to make thick or thicker; make dark or obscure: *v. i.* to become thick or thicker.
thick-en-ing (*'en-ing*), *n.* something added to a substance to make it thicker.
thick-et (*'et*), *n.* a close wood or cluster of trees.
thick-set (*'set*), *adj.* closely planted; having a thick body: *n.* a close, thick hedge.
thief (*thēf*), *n.* [*pl.* thieves (*thēvz*)], one who takes unlawfully what is not his own.
thieve (*thēv*), *v. t.* and *v. i.* to steal.
thiev-ish (*'ish*), *adj.* addicted to theft; dishonest.
thigh (*thī*), *n.* the thick muscular part of the leg above the knee.
thill (*thil*), *n.* the shaft of a cart or other vehicle.
thim-ble (*thim'bl*), *n.* a cup-shaped metallic protective cover for the finger in sewing; anything like a thimble.
thin (*thin*), *adj.* having little thickness; slim; slender; slight; meager: *adv.* not thickly: *v. t.* to make thin: *v. i.* to grow thin.
thine (*thīn*), *poss. pron.* and *adj.* belonging to, relating to, or being the property of, thee.
thing (*thing*), *n.* whatever is distinct, or conceived to be distinct; inanimate matter; part or portion: *pl.* clothes; furniture; luggage, etc.
think (*thingk*), *v. i.* to have the mind occupied on some subject; believe; judge: *v. t.* to imagine.
Syn. THINK, suppose, imagine, believe, deem. We *think* a thing right or wrong; we *suppose* it to be true or false; we *imagine* it to be real or unreal. I *think* that a man has acted wrong; *to suppose* is to take up an idea arbitrarily or at pleasure; *to imagine* is to take up an idea by accident, or without any connection with the truth or reality; *to deem* is to form a conclusion; things are *deemed* hurtful or otherwise in consequence of observation; we *think* as the thing strikes us at the time; we *believe* from a settled deduction.
third (*thērd*), *adj.* the next after the second; the ordinal of three; noting one of three equal parts: *n.* a third part of anything.
thirst (*thērst*), *n.* the sensation of a desire to drink; great desire for drink: *v. i.* to be thirsty.
thirst-y (*'i*), *adj.* [*comp.* thirstier, *superl.* thirstiest], feeling thirst.
thir-teen (*thēr'tēn*), *adj.* 10 and 3: *n.* the number of 10 and 3.
thir-ty (*'ti*). *adj.* three times more than 10: *n.* the sum of three tens.
Thirty, Battle of the. A fight between thirty Bretons and thirty Englishmen, pitted by Jean de Beaumanoir and Bemborough, an Englishman, against each other, to decide a contest. The fight is said to have taken place between the castles of Josselin and Ploermel in France in 1351. The English were beaten.
this (*this*), *pron.* and *adj.* [*pl.* these (*thēz*)], that which is present; that which is just now or last mentioned.
this-tle (*this'l*), *n.* a plant with a prickly stem and leaves, of the genus Carduus.
thith-er (*thith'ēr*), *adv.* to that place or end.
thole (*thōl*), *n.* a pin set in the gunwale of a boat to serve as a fulcrum for the oar.
Thomas (*tom'as*). From an Aramaic word, meaning "a twin." Danish, *Thomas;* Dutch, *Thomas;* Gr., *Thomas;* Ger., *Thomas;* Fr., *Thomas;* Hung., *Tamas;* It., *Tommaso;* Lat., *Thomas;* Polish, *Tomasz;* Port., *Thomas* or *Thomar;* Sp., *Tomas;* Sw., *Thomas.*
thong (*thōng*), *n.* a thin leather strap or string; striking part of a whip.
tho-rac-ic (*thō-ras'ik*), *adj.* pertaining to the thorax.
tho-rax (*'raks*), *n.* the chest, containing the heart, lungs, etc.
thorn (*thôrn*), *n.* a prickle or spine; prickly tree or shrub; anything that troubles or annoys; care.
thorn-y (*'i*), *adj.* full of thorns; harassing; annoying.
thor-ough (*thur'ō*), *adj.* passing through or to the end; complete.
thor-ough-bred (*-bred*), *adj.* of pure and unmixed breed; high-spirited.
thor-ough-fare (*-fâr*), *n.* a passage from one street opening to another; an unobstructed way.
thor-ough-ly (*-li*), *adv.* completely; fully.
those, *pl.* of that.
thou (*thou*), *pron.* [*pl.* you], *second per. sing.* of **I.**

though (*thō*), *conj.* granting, or supposing that; notwithstanding that; if: *adv.* nevertheless; however.
thought (*thawt*), *n.* the act of thinking; that which the mind thinks; meditation; study: *pt. t.* and *p. p.* of think. [IDEA.]
thought-ful (*'fool*), *adj.* full of thought; contemplative; attentive; considerate for others.
thought-less (*'les*), *adj.* unthinking; heedless; inattentive. [ABSTRACTED.]
thou-sand (*thou'zand*), *adj.* consisting of 1,000: *n.* 1,000; a large number.
Thrace. A region of southeastern Europe. Named from Greek *trachus*, meaning "the rough land."
thral-dom (*thrawl'dum*), *n.* serfdom; slavery.
thrall (*thrawl*), *n.* a slave; serf.
thrash (*thrash*), *v. t.* to beat out (grain) from the husk; flog soundly: *v. i.* to perform the operation of thrashing.
thread (*thred*), *n.* a very thin line or cord twisted and drawn out; uniform tenor: *v. t.* to pass through the eye of; pierce through.
thread-bare (*'bâr*), *adj.* worn to the threads; hackneyed.
threat (*thret*), *n.* a menace: *v. t.* and *v. i.* to menace.
Syn. THREAT, menace. We may be *threatened* with either small or great evils, but we are *menaced* only with great evils.
threat-en (*'n*), *v. i.* to use threats: *v. t.* to terrify by menaces. [See *imminent.*]
three (*thrē*), *adj.* noting the sum of 2 and 1: *n.* a number the sum of 2 and 1.
three-pence (*thrip'ens*), *n.* a small British silver coin, value 6 cents.
thren-o-dy (*thren'ō-di*), *n.* a dirge.
thresh. Same as *thrash.*
thresh-old (*thresh'ōld*), *n.* the sill of a door; entrance; door.
thrice (*thrīs*), *adv.* three times; repeatedly.
thrift (*thrift*), *n.* frugality; economical management; good husbandry. [FRUGALITY.]
thrift-y (*'i*), *adj.* characterized by economy and good management; frugal. [PENURIOUS.]
thrill (*thril*), *v. t.* to cause to have a shivering, tingling, or exquisite sensation: *v. i.* to penetrate, as something sharp; feel a sharp tingling or exquisite sensation: *n.* a thrilling sensation.
thrive (*thrīv*), *v. i.* to prosper by industry, economy, and good management; increase or flourish.
throat (*thrōt*), *n.* the fore-part of the neck of an animal containing the windpipe and gullet.
throat-y (*'i*), *adj.* guttural.
throb (*throb*), *v. i.* to beat with more than usual force; palpitate: *n.* a strong pulsation.
throe (*thrō*), *n.* agony; extreme pain: *v. i.* to be in agony.
throne (*thrōn*), *n.* a chair of state: *v. t.* to place upon a throne.
throng (*thrông*), *n.* a multitude; crowd: *v. t.* to crowd or press together: *v. i.* to come in multitudes.
throt-tle (*throt'l*), *v. t.* to strangle or choke: *n.* the windpipe.
throt-tle valve (*valv*), a valve in the steam pipe of a boiler for controlling the flow of steam.
through (*throō*), *prep.* from end to end of; between the sides of; in the midst of; among; by the agency of: *adv.* from end to end; from the beginning to the end.
throw (*thrō*), *v. t.* to fling or hurl; cast in any manner: *n.* the act of flinging or hurling; distance a missile can be thrown.
thrum (*thrum*), *n.* coarse yarn: *v. t.* to play idly or unskillfully on (a stringed instrument): *v. i.* to strum; drum.
thrush (*thrush*), *n.* a sweet-songed bird of the genus Merula.
thrust (*thrust*), *v. t.* to push or drive with force: *v. i.* to push forward; intrude: *n.* a violent or sudden push; stab.
thud (*thud*), *n.* a dull sound produced by a body falling on a comparatively soft substance.
thug (*thug*), *n.* one of a fraternity of robbers and assassins in India; a ruffian.
thumb (*thum*), *n.* the short, thick digit of the human hand: *v. t.* to handle awkwardly; soil with the thumb.
thumb-screw (*'skrōō*), *n.* a screw to turn with the finger and thumb; an instrument of torture.
thump (*thump*), *n.* a hard, heavy blow: *v. t.* to strike or beat with dull, heavy blows: *v. i.* to fall or strike with a dull, heavy blow.
thun-der (*thun'dĕr*), *n.* the noise accompanying a flash of lightning; loud noise: *v. i.* to produce thunder; make a loud noise: *v. t.* to utter with a loud and threatening voice.
thun-der-bolt (*-bōlt*), *n.* a shaft of lightning; a belemnite.
thun-der-ing (*-ing*), *adj.* emitting, or producing, a great noise like thunder: *n.* the report accompanying lightning.
thunder-struck (*-struk*), *p. adj.* astonished or struck dumb by sudden amazement, etc.
thu-ri-ble (*thū'ri-bl*), *n.* a censer.
thu-ri-fer (*'ri-fĕr*), *n.* one who attends the priest at mass, etc., and carries the thurible.
Thursday. The fifth day of the week. Literally the day of Thor, the son of Odin (or Wodin) and the god of thunder.
thus (*thus*). *adv.* in this or that manner; to this degree or extent; so: *n.* the resin of the spruce fir.
thwack (*thwak*), *v. t.* to strike with something flat and heavy: *n.* a heavy blow; thump.
thwart (*thwawrt*), *adj.* crosswise; oblique: *prep.* and *adv.* across: *n.* a seat in a boat extending from side to side: *v. t.* to oppose; run counter to; frustrate.
thy (*thi*), *pron. poss. case* of thou.
thyme (*tim*), *n.* a common aromatic herb of the genus Thymus.
thy-self. Emphatic for *thy.*
★ti-a-ra (*ti-ā'rā*, not *tē-ā'rā*), *n.* the triple crown worn by the pope; diadem.
Tiber (*tī'bĕr*), Italian **Tevere** (*tā-vā'rā*). A river of Italy; was the Roman *Tiberis.* From the name of the river was derived the Roman name *Tiberius.*
Tiberius (*tī-bē'ri-us*). Means "of the Tiber." Fr., *Tibère;* It., *Tiberio;* Lat. *Tiberius.*
tib-i-a (*tib'i-ā*), *n.* the inner and larger of the two leg bones.
tib-i-al (*'i-al*), *adj.* pertaining to the tibia.
tick (*tik*), *n.* a name for various parasites which infest dogs, etc.; a case for holding feathers, etc., for bedding; small mark; small, quick, distinct sound: *v. i.* to make a small, quick, distinct sound: *v. t.* to mark off by a tick.
tick-et (*'et*), *n.* a label or card giving its possessor some specific right; label; printed list of candidates: *v. t.* to distinguish by, or as by, a ticket.
tick-ing (*'ing*), *n.* cloth used for bed-ticks.
tic-kle (*'l*), *v. t.* to touch lightly so as to produce a thrilling sensation; gratify and amuse: *v. i.* to feel titillation.
tic-kler (*'lĕr*), *n.* one who, or that which, tickles.
tic-klish (*'lish*), *adj.* sensible to slight touches; easily tickled; precarious; difficult.
Ticonderoga (*ti-kon-dĕr-ō'gā*), **N. Y.** Indian *Cheonderaga*, signifying "brawling water," from the noise of the rapids in the outlet of Lake George as it falls into Lake Champlain.
tid-al (*tīd'al*), *adj.* pertaining to the tides; ebbing and flowing.
tide (*tīd*), *n.* the regular rising and falling of the sea, rivers, etc.; stream; time; season; turning point; tendency: *v. t.* to drive with the stream. [STREAM.]
ti-dings (*tī'dingz*), *n. pl.* news. [NEWS.]
tid-ol-o-gy (*tīd-ol'ō-ji*), *n.* the science of tides.
ti-dy (*tī'di*), *adj.* trim; neat; orderly: *n.* an ornamental cover for the back of a chair, etc.: *v. t.* to make neat or tidy.
tie (*ti*), *n.* a knot or fastening; bond; obligation; equality in numbers: *v. t.* to fasten; bind; restrict: *v. i.* to make an equal score.
tier (*tēr*), *n.* a row or rank, especially one of two or more rows placed one above the other.
Tierra del Fuego (*tē-er'rā del fwā'gō*). Spanish for "land of fire."
tiff (*tif*), *n.* a fit of anger; slight quarrel: *v. i.* to be in a pet.
ti-ger (*tī'gĕr*), *n.* a large, fierce, rapacious quadruped of the genus Felis.
ti-ger flow-er (*flou-ĕr*), a flower of the Iris order, spotted yellow and orange.
ti-ger lil-y (*lil-i*), a handsome lily having flowers spotted with orange.
tight (*tit*), *adj.* not loose; close; tenacious; taut; snug; parsimonious: *n. pl.* closely fitting underclothing.
ti-gress (*tī'gres*), *n.* the female of the tiger.
ti-grine (*'grin*), *adj.* tiger-like.
Tigris (*tī'gris*). A name rightly explained by Strabo, who says that it was so called from its "swiftness," for among the Medes *tigris* means "an arrow."
ti-grish (*'grish*), *adj.* resembling a tiger; fierce.
tile (*til*), *n.* a thin slab of baked clay, used for roofing, etc.; hat: *v. t.* to cover with tiles.
till (*til*), *n.* a money drawer in a desk or counter: *prep.* to the time of: *adv.* to the time when. *conj.* to the degree that; until: *v. t.* to prepare (land) for seed, etc.
till-age (*'āj*), *n.* land prepared for crops; husbandry; agriculture.
till-er (*'ĕr*), *n.* a husbandman; handle or lever for turning the rudder of a vessel.
tilt (*tilt*), *n.* a thrust; a mediæval military exercise with lances: *v. t.* to point or thrust with, or as with, a lance; raise on end; incline: *v. i.* to run or ride and thrust with a lance.
tilt-ing (*'ing*), *n.* inclination forward; act of one who, or that which, tilts.
tim-ber (*tim'bĕr*), *n.* the body or stem of a tree; wood suitable for buidings, etc.: *v. t.* to furnish or construct with timber.
tim-bre (*'bĕr*), *n.* tone or character of musical sound.
time (*tim*), *n.* measure of duration; particular period of duration; season; era; epoch; proper time; tense: *v. t.* to adapt to the time or occasion; regulate or measure: *v. i.* to keep or beat time.
Syn. TIME, age, date, duration, epoch, era, period, season, succession. *Sequence* and *succession* apply to events viewed as following one another; *time* and *duration* denote something conceived of as enduring while events take place and acts are done; *duration* and *succession* are more general words than *time;* we can speak of infinite or eternal *duration* or *succession*, but *time* is commonly contrasted with eternity.
time-li-ness (*'li-nes*), *n.* seasonableness.
time-ly (*'li*), *adj.* being or occurring in time; opportune.
Syn. TIMELY, seasonable. The former signifies within the *time*, that is, before the *time* is past; the latter according to the *season*, or what the *season* requires. A *timely* notice prevents that which would otherwise happen; a *seasonable* hint seldom fails of its effect because it is *seasonable.*
tim-id (*tim'id*), *adj.* wanting in courage; faint-hearted; fearful. [FAINT.]
ti-mid-i-ty (*ti-mid'i-ti*), *n.* want of courage.
tim-or-ous (*tim'ĕr-us*), *adj.* fearful of danger; full of scruples.
Timothy (*tim'ō-thi*). From the Greek name signifying "honoring or worshiping God." Danish, *Timotheus;* Dutch, *Timotheus;* Fr., *Timothée;* Ger., *Timotheus;* Gr., *Timotheos;* It., *Timoteo;* Lat., *Timotheus;* Port., *Timotheo;* Sp., *Tumoteo;* Sw., *Timotheus.*
tim-o-thy grass (*grás*), a valuable grass for fodder.
tin (*tin*), *n.* a silvery-white, soft, malleable, and fusible metal; vessel of tin: *v. t.* to cover with tin; put into tins for preservation.
tinc-to-ri-al (*tingk-tō'ri-al*), *adj.* pertaining to, or imparting, a color.
tinc-ture (*'tūr*), *n.* a tinge or shade; solution in or by means of spirits of wine: *v. t.* to dye or color; tinge.
tin-der (*tin'dĕr*), *n.* any inflammable material used to kindle a fire from a spark.
tine (*tīn*), *n.* a tooth or spike.
tin-foil (*tin'foil*), *n.* tin beaten into thin leaf.
tinge (*tinj*), *v. t.* to stain or color; dye: *n.* a slight degree of some color, taste, or quality imparted to a substance.
tin-gle (*ting'gl*), *v. i.* to feel a thrilling sensation or pain: *v. t.* to ring; cause to tingle: *n.* a thrilling sensation or pain.
tink-er (*tingk'ĕr*), *n.* a mender of metal pots, kettles, etc.: *v. t.* to patch up: *v. i.* to meddle in an officious manner.
tin-kle (*ting'kl*), *n.* a small, quick, sharp, ringing sound: *v. i.* to make such a sound: *v. t.* to cause to give out a tinkle.
tin plate (*tin' plāt*), iron plate coated with tin.
tin-sel (*'sel*), *n.* thin glittering metallic plate; anything showy but of little value: *adj.* showy to excess; superficial.
tint (*tint*), *n.* a slight coloring distinct from the principal color; hue or shade: *v. t.* to give a slight coloring to.
ti-ny (*ti'ni*), *adj.* very small.
tip (*tip*), *n.* a point or top; end; ferrule or nozzle; private hint; tilt: *v. t.* to form a point to; cover the end of; give private hint to; tilt up.
Tippecanoe (*tip-pē-ka-nōō'*) **river, Ind.** So called from the Indian name given to a fish living in this stream, "the long-lipped pike," or "buffalo fish."
tip-pet (*'et*), *n.* a narrow cape, or covering of cloth or fur for the neck or shoulders.
tip-ple (*'l*), *v. i.* to drink spirits or strong liquors habitually.
tip-staff (*'stâf*), *n.* a constable.
tip-sy (*'si*), *adj.* intoxicated.
tip-toe (*'tō*), *adv.* on tiptoe; stealthily: *v. i.* to walk or stand on tiptoe; be on the alert.
tip-top (*'top*), *n.* the highest point or degree; best of anything: *adj.* most excellent.
ti-rade (*ti-rād'*), *n.* a long, violent, declamatory speech.
tire (*tir*), *n.* a band or hoop of iron or rubber binding the felloes of wheels: *v. t.* to weary or fatigue: *v. i.* to become weary or fatigued.
tire-some (*'sum*), *adj.* wearisome; tedious; fatiguing.
tis-sue (*tish-ōō'*), *n.* any thin or delicate texture or fabric; thin cellular organization of parts: *v. t.* to form tissue of; interweave.
tis-sue pa-per (*pā-pĕr*), very thin, gauzelike paper.
tit (*tit*), *n.* morsel or bit; titmouse; name for various species of small singing birds.
tit-bit (*'bit*), *n.* a choice morsel.
tit for tat (*fôr tat*), *n.* exact equivalent or fair retaliation.
tithe (*tith*), *n.* the tenth part of anything; small part: *v. t.* to tax, or levy, a tithe of.
Titicaca (*tit-ē-kā'kā*). An island and lake near the peninsula of Copacabana, South America. It was a sacred place of the Incas, and "the birthplace of the sun," according to one of their legends.
tit-il-late (*tit'il-āt*), *v. t.* to tickle.
ti-tle (*ti'tl*), *n.* name; appellation of dignity, rank, distinction, or preëminence; claim of right.
ti-tle deed (*dēd*), the instrument or written evidence of right of ownership of property.
tit-mouse (*tit'mous*), *n.* a small, active, perching bird.
ti-tra-tion (*ti-trā'shun*), *n.* volumetric analysis.
tit-ter (*tit'ĕr*), *v. i.* to laugh with restraint: *n.* a restrained laugh.
tit-tle (*tit'l*), *n.* a small particle.
tit-tle-tat-tle (*-tat'l*), *n.* idle, trifling talk.
tit-u-lar (*'ū-lĕr*), *adj.* existing in name or title only: *n.* one who is invested with a title, but does not possess power.
Titus (*ti'tus*). From the Greek name signifying "honored." Fr., *Tite;* Ger., *Titus;* It., *Tito;* Lat., *Titus;* Sp., *Tito.*
to (*tōō*), *prep.* noting motion toward; in accordance with.
toad (*tōd*), *n.* a batrachian reptile, resembling the frog.
toad-eat-er (*'ēt-ĕr*), *n.* a sycophant.
toad-fish (*'fish*), *n.* a fish of the genus Batrachus, with a large head and wide mouth.

toad-stone (*tōd'stōn*), *n.* a local name for a kind of basaltic or igneous rock; bufonite.
toad-stool (*'stōōl*), *n.* a name of numerous species of fungi of the genus Agaricus.
toad-y (*'i*), *n.* a sycophant: *v. t.* to fawn upon as a sycophant: *v. i.* to play the sycophant.
toast (*tōst*), *n.* bread scorched or browned before the fire; one who is named when a health is drunk: *v. t.* to brown or heat at the fire; name when a health is drunk.
to-bac-co (*tō-bak'ō*), *n.* an American plant of the genus Nicotiana, the dried leaves of which are used for smoking, chewing, or as snuff.
to-bac-co-nist (*-nist*), *n.* a dealer in tobacco, cigars, etc.
Tobago (*tō-bā'gō*) **island.** An island of the British West Indies. So called by Columbus from its fancied resemblance to the *tobaco*, or inhaling tube of the aborigines, whence the word *tobacco* has been derived.
Tobias (*tō-bī'as*) or **Toby** (*to'bi*). From the Hebrew *tobh-mah*, which has been variously rendered "God's goodness" and "distinguished of the Lord." Danish, *Tobias;* Dutch, *Tobias;* Fr., *Tobie;* Ger., *Tobias;* It. *Tobia;* Lat. *Tobias;* Sp., *Tobias.*
to-bog-gan (*-bog'an*), *n.* a kind of sledge for sliding down snow-covered hills or inclines: *v. i.* to slide down hill.
toc-sin (*tok'sin*), *n.* an alarm bell.
tod-dle (*tod'l*), *v. i.* to walk with short, tottering steps like a child: *n.* a toddling walk.
toe (*tō*), *n.* one of the terminal members of the foot of a man or animal: *v. t.* to touch, reach, or strike with the toe.
to-ga (*tō'gȧ*), *n.* [*pl.* togas (*gȧz*), togæ (*'je*)], the loose outer garment worn by the Romans.
to-geth-er (*tōō-geth' ĕr*), *adv.* in company or association; mutually; in union or concert.
tog-ger-y (*tog' ĕr-i*), *n.* clothes; articles.
tog-gle (*'l*), *n.* a small wooden pin tapering toward both ends and grooved round its center.
toil (*toil*), *n.* labor oppressive to mind or body; snare; net: *v. i.* to labor or work. [WORK.]
toi-let (*toi'let*), *n.* dressing table; style or manner of dressing; attire.
toil-some (*toil'sum*), *adj.* laborious; wearisome.
to-ken (*tō'kn*), *n.* a mark or sign; a symbol of anything.
Tokio or **Tokyo** (*tō'kē-ō*). The capital of Japan; is the "eastern capital," in contradistinction to *Saikio*, the "western capital." Formerly called *Yeddo.*
Toledo (*tō-lē'dō*, Spanish *tō-lā'thō*). The capital of Gothic Spain; was the Roman *Toletum*, a name of unknown etymology, widely supposed to be of Phenician origin, meaning the "city of generations."
tol-er-a-ble (*tol' ĕr-ȧ-bl*), *adj.* endurable; supportable; fairly good.
tol-er-ance (*' ĕr-ans*), *n.* endurance; toleration.
tol-er-ant (*' ĕr-ant*), *adj.* disposed to, or favoring, toleration.
tol-er-ate (*' ĕr-āt*), *v. t.* to endure; permit; allow so as not to hinder. [ADMIT.]
tol-er-a-tion (*-ā'shun*), *n.* the act of tolerating; allowance; recognition of the right of private judgment; freedom from bigotry.
toll (*tōl*), *n.* the sound of a bell slowly repeated at short intervals; tax or duty paid for some privilege: *v. i.* to sound or ring slowly, as a bell.
to-lu (*tō'lū*), *n.* a balsam produced by a South American tree.
tom-a-hawk (*tom'ȧ-hawk*), *n.* a hatchet used by the North American Indians: *v. t.* to strike, or kill, with a tomahawk.
Tomas. See *Thomas.*
to-ma-to (*tō-mā'tō* or *tō-mȧ'tō*), *n.* [*pl.* tomatoes (*t'ōz*)], a plant and its well-known fleshy fruit. [Also *loveapple.*]
tomb (*tōōm*), *n.* a grave or vault; monument erected over the dead.
Tombigbee river, Fla. So called from the Choctaw Indian word *itumbibikpi;* the literal translation would be "an undertaker," it being a name given to the old men of the tribe who were employed in preparing their dead for the "bonehouses."
tom-boy (*tom 'boi*), *n.* a wild, romping girl.
tom-cat (*'kat*), *n.* a full-grown male cat.
tome (*tōm*), *n.* a large book.
tom-fool (*tom'fōōl*), *n.* a great fool; silly trifler.
tom-fool-er-y (*' ĕr-i*), *n.* nonsense; absurd trifles or ornaments.
Tommaso. See *Thomas.*
Tom, Mount, Mass. Named in honor of a neighboring resident, Rowland Thomas, probably familiarly known as "Tom."
tom-pi-on (*tom'pi-un*), *n.* the stopper or plug of a cannon. [Also *tampion.*]
tom-tom (*'tom*), *n.* a drum flat at one end and convex at the other. [Also *tam-tam.*]
ton (*tun*), *n.* 20 hundredweight; 40 cubic feet in ship measurement; (*tôn* prevailing fashion.
tone (*tōn*), *n.* sound, or character of sound; note; accent; harmony of the colors of a painting; interval of a sound: *v. t.* to bring to a required shade of color; mitigate.
tongs (*tôngs*), *n. pl.* a metal instrument with two jointed limbs for grasping anything.
tongue (*tung*), *n.* the chief instrument of speech, and the organ of taste; dialect; idiom; discourse; clapper of a bell; anything resembling a tongue.
ton-ic (*ton'ik*), *adj.* pertaining to, or based on, the keynote; strengthening: *n.* a strengthening medicine.
ton-nage (*tun'āj*), *n.* the weight of goods carried in a boat or ship; carrying capacity of a vessel.
ton-neau (*tō-nō'*), *n.* a barrel-like body of certain motor cars.
Tonquin (*ton-kēn'*), Chinese *Tang-king*, the eastern capital.
★**ton-sil-i-tis** (*ton-sil-ī'tis*, not *ton-sil-ē'tis*), *n.* inflammation of the tonsils.
ton-sils (*ton'silz*), *n. pl.* two almond-shaped glands situated one at each side of the fauces of the throat.
ton-so-ri-al (*ton-sō'ri-al*), *adj.* pertaining to shaving or to a barber.
ton-sure (*'shūr*), *n.* the act of clipping the hair or of shaving the crown of the head; corona thus worn by clerics: *v. i.* to give the tonsure to.
too (*tōō*), *adv.* more than enough; likewise; in addition; over and above; also.
tool (*tōōl*), *n.* an instrument of manual operation; one who acts as the instrument of another: *v. t.* to shape with a tool.
toot (*tōōt*), *v. t.* to sound, as a horn or flute: *n.* a blast on a horn.
tooth (*tōōth*), *n.* [*pl.* teeth (*tēth*)], one of the hard bony processes growing in the jaws for biting and chewing; any projection resembling a tooth: *v. t.* to indent or form into teeth.
tooth-some (*'sum*), *adj.* palatable.
top (*top*), *n.* the highest part; summit; upper side or surface; a child's toy: *v. t.* to cover or place on the top; rise to the top of; excel.
to-paz (*tō'paz*), *n.* a crystallized mineral of various colors used as a gem.
top-boots (*top'-bōōtz*), *n. pl.* high boots with light colored tops.
Topeka (*tō-pē'kȧ*), **Kan.** An Indian word, *topeakae*, "a good place to dig potatoes."
to-per (*'pĕr*), *n.* a drunkard.
To-phet (*tō'fet*), *n.* a place in the valley of Hinnom, where fire was burnt in honor of Moloch; hence hell.
top-ic (*top'ik*), *n.* a subject of discourse, conversation, or argument; theme.
top-ic-al (*'i-kal*), *adj.* pertaining to, or consisting of, a topic or topics; relating to a place; local.
top-mast (*'mȧst*), *n.* the second mast from the deck of a ship.
to-pog-ra-pher (*tō-pog'rȧ-fĕr*), *n.* one who describes particular places in writing.
to-pog-ra-phy (*tō-pog'rȧ-fi*), *n.* the scientific description of a particular place, etc.; the features of a region or locality.
top-ping (*top'ing*), *adj.* rising above; surpassing: *n.* the act of cutting off the top.
top-ple (*'l*), *v. t.* to overturn: *v. i.* to fall forward; tumble down.
top-sy-tur-vy (*'si-tûr'vi*), *adv.* in an inverted position; in confusion: *adj.* disordered; chaotic.
toque (*tōk*), *n.* a kind of bonnet.
torch (*tôrch*), *n.* a large light formed of resinous wood, flax, etc., soaked in some inflammable substance.
to-re-a-dor (*tō-rā-ȧ-dōr'*), *n.* a bullfighter.
tor-ment (*tôr'ment*), *n.* extreme pain; torture; anguish: *v. t.* (*tôr-ment'*) to put to extreme pain, physical or mental.
Syn. TORMENT, torture. *Torture* is an excess of *torment*. We may be *tormented* by a variety of indirect means; but we are mostly said to be *tortured* by the direct means of the rack, or similar instrument. [See *tease.*]
tor-na-do (*tôr-nā'dō*), *n.* [*pl.* tornadoes (*'dōz*)], a violent tempest or whirlwind.
Toronto (*tō-rŏn'tō*). Many towns and cities in the United States bear this Indian name, meaning "oak tree rising from the lake," which has been transferred to them from the city in Canada.
Toronto, Canada. Now the capital of the Canadian province of Ontario. The name at first denoted the country of the Huron tribe, to which the Bay of Toronto gives access. Here a French trading post was built on the site of the present city, and called *Fort Toronto.* In 1793, the name was changed to *York* in honor of the duke of York, but in 1834 the old name *Toronto* was revived.
tor-pe-do (*tôr-pē'dō*), *n.* [*pl.* torpedoes (*'dōz*)], a submarine apparatus for destroying ships by explosion; kind of firework: *v. t.* to destroy by a torpedo.
tor-pid (*'pid*), *adj.* numb; inactive.
tor-pi-fy (*'pi-fī*), *v. t.* to make torpid; benumb.
tor-por (*'pĕr*), *n.* numbness; inactivity.
tor-rent (*tor'ent*), *n.* a violent and rapid stream; heavy fall, as of rain.
tor-rid (*'id*), *adj.* dried with heat; extremely hot; burning.
tor-sion (*tôr'shun*), *n.* the act of turning or twisting.
tor-so (*'sō*), *n.* [*pl.* torsos (*'sōz*), torsi (*'sē*)], the trunk of a statue.
tort (*tôrt*), *n.* in law, any wrong, injury or damage.
tor-tile (*tôr'til*), *adj.* bent; twisted; wreathed.
tor-toise (*tôr'tis*), *n.* a reptile of the family Testudinidæ with a very hard shell or test; a testudo.
Tortugas (*tôr-tōō'gȧz*) **islands, Fla.** Spanish word meaning "tortoise," the name given by the Spaniards from the number of tortoise found on them.
tor-tu-ous (*'tū-us*), *adj.* crooked; twisted; wreathed; underhand.
tor-ture (*'tūr*), *n.* agony of mind or body; excruciating pain: *v. t.* to punish with, or as with, torture; vex; wrest from the true meaning. [TORMENT.]
To-ry (*tō'ri*), *n.* [*pl.* Tories (*'riz*)], in English politics, a Conservative: *adj.* pertaining to Conservatives.
toss (*tos*), *v. t.* to throw with the hand; throw upward; cause to rise and fall: *v. i.* to roll or tumble; be tossed: *n.* a throwing upward.
tot (*tot*), *n.* anything small or insignificant: *v. t.* to add; count up.
to-tal (*tō'tal*), *adj.* whole; complete; full; *n.* the whole sum or amount; completeness. [WHOLE.]
tote (*tōt*), *v. t.* to carry.
to-tem (*tō'tem*), *n.* an animal used as the symbol or name of a tribe or clan.
tot-ter (*tot' ĕr*), *v. i.* to shake as if about to fall; be unsteady.
touch (*tuch*), *v. t.* to come in contact with; perceive by feeling; reach; attain to; affect the senses or sensibility of: *v. i.* to be in contact: *n.* the act of touching; state of being touched.
touch-ing (*'ing*), *adj.* pathetic: *n.* the act of coming in contact with: *prep.* with respect to; concerning.
touch-stone (*'stōn*), *n.* Lydian stone or basanite, used for testing the purity of gold and silver; hence a criterion.
touch-wood (*'wood*), *n.* dried fungus or decayed wood, which easily ignites and burns slowly.
touch-y (*'i*), *adj.* irritable; peevish.
tough (*tuf*), *adj.* flexible without being brittle; not easily broken or fractured; strong; firm; tenacious; viscous; difficult: *n.* a rough.
tough-en (*'n*), *v. i.* to grow or become tough: *v. t.* to make tough.
Toulon (*tōō'lon*, French *tōō-lôN'*). French city; is from the ancient *Telonium* or *Telo Martius*, named after its founder.
tou-pee (*tōō-pē'*), *n.* a small wig.
★**tour** (*tōōr*), *n.* excursion; trip: *v. i.* to make a tour: *v. t.* to make a tour or circuit of. [EXCURSION.]
tour-ist (*'ist*), *n.* excursionist.
tour-na-ment (*'nȧ-ment*), *n.* a mock fight by knights on horseback; contest of skill. [Also *tourney.*]
tou-sle or **tou-zle** (*tou'zl*), *v. t.* to pull or tear; worry; put in disorder.
tout (*tout*), *v. i.* to look out for customers: *n.* one who secretly watches race horses in training, in order to give private information; a touter.
tout-er (*tout' ĕr*), *n.* one who hangs about to secure the custom of tourists for a particular hotel, etc.
tow (*tō*), *n.* the coarse part of flax or hemp: *v. t.* to drag, as a vessel, through the water by means of a rope.
tow-age (*'āj*), *n.* the act of towing; price paid for towing.
to-ward (*tō'ȧrd*), *prep.* in the direction of; with a tendency to; with respect to: *adv.* near; at hand. [Also *towards.*]
tow-el (*tou'el*), *n.* a cloth for wiping the hands, etc.
tow-er (*tou' ĕr*), *n.* a lofty building, square or circular, usually flat on the top: *v. i.* to rise to a great height.
town (*toun*), *n.* any collection of houses larger than a village, not being a city; township.
town-ship (*'ship*), *n.* the district or territory subordinate to the county.
tox-ic (*toks'ik*), *adj.* poisonous.
tox-i-col-o-gy (*-i-kol'ō-ji*), *n.* the science that treats of poisons.
tox-in (*toks'in*), *n.* a poison produced by the action of bacteria upon organic matter.
toy (*toi*), *n.* something of no real value; bauble; plaything: *v. i.* to dally amorously; trifle.
Toynbee (*toin'be*) **hall.** An institution in Whitechapel, London, founded in 1885, as the outcome of plans set on foot by the members of Oxford and Cambridge universities "to provide education and the means of recreation and enjoyment for the people of the poor districts of London," etc.
trace (*trās*), *n.* a mark left by anything passing; small quantity: *pl.* the straps, etc., by which a vehicle is drawn: *v. t.* to delineate by marks; follow by tracks or footsteps. [DERIVE, MARK.]
trace-a-ble (*'ȧ-bl*), *adj.* capable of being traced.
tra-che-a (*trȧ-kē'ȧ*), *n.* the windpipe.
track (*trak*), *n.* a mark or impression left by the foot; beaten path; course or way: *v. t.* to pursue by following the footprints or marks. [MARK.]
tract (*trakt*), *n.* a short treatise; region of indefinite extent.
tract-a-bil-i-ty (*-ȧ-bil'i-ti*), *n.* docility.
tract-a-ble (*'ȧ-bl*), *adj.* docile; easily instructed or managed.
tract-ate (*trakt'āt*), *n.* a small book or treatise.
trac-tion (*trak'shun*), *n.* the act of drawing; state of being drawn.
trade (*trād*), *n.* commerce; business; traffic; persons engaged in a particular business: *adj.* pertaining to, carried on by, or characteristic of, a trade: *v. i.* to sell or exchange. [BUSINESS.]
trade-mark (*'mȧrk*), *n.* a distinguishing device affixed by a merchant to his goods.
trade-price (*'prīs*), *n.* price of an article to the retailer.
trad-er (*'ĕr*), *n.* one engaged in trade or commerce; vessel engaged in trade.
trades un-ion (*trādz' ūn-yun*), *n.* an organized combination of workmen.
trade winds (*trād' windz*), certain ocean winds in or near the torrid zone that blow steadily from the same quarter periodically. [Also *trades.*]
tra-di-tion (*trȧ-dish'un*), *n.* the oral transmission of events, opinions, doctrines, practices, etc. through successive generations; that which is so handed down.

tra-di-tion-al (*trȧ-dish'un-ȧl*), *adj.* pertaining to, derived from, or handed down by, tradition.
tra-duce (*trȧ-dūs'*), *v. t.* to slander.
Trafalgar (*trȧ-fäl'gȧr*) **square.** One of the principal squares in London, about one and one-half miles west by south of St. Paul's. It contains the Nelson monument, and the site of Charing Cross and the National gallery faces on it.
traf-fic (*traf'ik*), *n.* business or trade; commerce; intercourse: *v. i.* to trade; bargain: *v. t.* to barter.
trag-a-canth (*trag'ȧ-kanth*), *n.* a gum obtained from various species of Astragalus.
tra-ge-di-an (*trȧ-jē'di-an*), *n.* an actor or writer of tragedies.
trag-e-dy (*traj'ē-di*), *n.* [*pl.* tragedies (*-diz*)], a dramatic poem having usually a fatal ending; a melancholy and fatal event.
trag-ic (*'ik*), *adj.* pertaining to tragedy; terrible. [Also *tragical.*]
trail (*trāl*), *v. t.* to draw or drag along the ground; hunt or follow by tracking: *v. i.* to be drawn out in length; fall or hang down: *n.* the track followed; scent left by a track; anything drawn out in length.
train (*trān*), *n.* a series of railway carriages or trucks coupled together; something drawn or dragged behind; retinue; suite; process: *v. t.* to drill; educate; draw along; discipline or tame for use: *v. i.* to prepare for contests or horse racing. [TEACH.]
train oil (*'oil*), oil obtained by boiling whale's blubber.
trait (*trāt*), *n.* a peculiar feature or characteristic; touch.
trai-tor (*trā'tẽr*), *n.* one who is guilty of treason; one who betrays any confidence; a deceiver. [Fem. *traitress* or *traitoress.*]
trai-tor-ous (*'tẽr-us*), *adj.* guilty of treason; perfidious.
tra-jec-to-ry (*trȧ-jek'tō-ri*), *n.* the curve described by a body in space.
tram (*tram*), *n.* a tramway; tramway car.
tram-mel (*'el*), *n.* anything that impedes progress, action, or freedom: *v. t.* to impede or hinder; shackle.
tramp (*tramp*), *v. t.* to tread upon forcibly and repeatedly; travel over on foot: *v. i.* to wander: *n.* a vagrant foot traveler; journey on foot; sound of tramping.
tram-ple (*'pl*), *v. t.* to tread under the feet: *v. i.* to stamp rapidly and repeatedly with the feet.
tram-way (*'wā*), *n.* a street railway; metal track for wagons or trucks. [Also *tramroad.*]
trance (*trans*), *n.* temporary suspension of sensation and volition while the heart and lungs continue to act: *v. t.* to place in, or as in, a state of trance.
tran-quil (*trang'kwil*), *adj.* calm; quiet; undisturbed. [CALM, PEACE.]
tran-quil-ize (*'kwil-iz*), *v. t.* to make tranquil or calm.
trans-act (*trans-akt'*), *v. t.* to manage, as business; negotiate.
trans-ac-tion (*-ak'shun*), *n.* the management of any business or affair; that which is done or performed. [PROCEEDING.]
tran-scend (*tran-send'*), *v. t.* to rise above; surpass; surmount.
tran-scend-en-cy (*'en-si*), *n.* the state or quality of being transcendent; supereminence. [Also *transcendence.*]
tran-scend-ent (*'ent*), *adj.* surpassing others in excellence.
tran-scen-den-tal (*-sen-den'tal*), *adj.* noting that which lies beyond the limits of experience, or is external to the senses. [MYSTERIOUS.]
tran-scen-dent-al-ism (*'al-izm*), *n.* the Kantian philosophy which affirms that the primary principles of knowledge are ascertained by the investigation of that which is *a priori*, or independent of experience; a religious movement in the United States, 1839, associated with Emerson and Channing.
tran-scribe (*-skrīb'*), *v. t.* to copy. [COPY.]
tran-script (*'skript*), *n.* a written copy from an original.
tran-scrip-tion (*-skrip'shun*), *n.* a copy.
tran-sept (*'sept*), *n.* that part of a church at right angles on either side to the chancel.
trans-fer (*trans-fẽr'*), *v. t.* to convey from one person or place to another: *n.* (*trans'fẽr*) conveyance of a right, title, property, etc.; deed by which such a transfer is executed; removal; drawing or writing printed off from one surface to another.
trans-fer-a-ble (*'ȧ-bl*), *adj.* capable of being transferred.
trans-fig-u-ra-tion (*-fig-ū-rā'shun*), *n.* a change of form or appearance.
trans-fig-ure (*-fig'ūr*), *v. t.* to change the outward form or appearance of.
Syn. TRANSFIGURE, transform, metamorphose. *Transfigure* is to make to pass over into another figure; *transform* and *metamorphose* are to put into another *form*. *Transformation* is commonly applied to that which changes its outward form; in this manner a harlequin *transforms* himself into all kinds of shapes and likenesses. *Metamorphosis* is applied to the form internal as well as external, that is, to the whole nature.
trans-fix (*-fiks'*), *v. t.* to pierce through.
trans-fix-ion (*-fik'shun*), *n.* the act of transfixing; state of being transfixed.
trans-form (*-fȯrm'*), *v. t.* to change the shape, appearance or character of; transmute. [TRANSFIGURE.]
trans-for-ma-tion (*trans-fȯr-mā'shun*), *n.* the act of transforming; state of being transformed.
trans-form-er (*-fȯrm'ẽr*), *n.* an induction coil for raising or lowering electrical pressure.
trans-fuse (*-fūz'*), *v. t.* to pour out of one vessel into another; instill.
trans-gress (*-gres'*), *v. i.* to offend by the violation or infraction of any law, rule, etc.; sin: *v. t.* to break or violate.
trans-gres-sion (*-gresh'un*), *n.* the act of violating any law or rule of moral duty.
tran-sient (*tran'shent*), *adj.* fleeting; brief.
tran-sit (*tran'sit*), *n.* a passage through or over.
tran-si-tion (*-sish'un*), *n.* the passage from one place or state to another.
tran-si-tive (*'si-tiv*), *adj.* noting an action passing from a subject to an object.
tran-si-to-ry (*'si-tō-ri*), *adj.* continuing but a short time.
trans-late (*trans-lāt'*), *v. t.* to render from one language into another; remove to another place or position.
trans-la-tion (*-lā'shun*), *n.* the act of translating; that which is translated. [DEFINITION.]
trans-lu-cent (*-lū'sent*), *adj.* semitransparent.
trans-mi-gra-tion (*-mi-grā'shun*), *n.* the passing of the soul after death from one body into that of another.
trans-mis-si-ble (*'i-bl*), *adj.* that may be passed from one to another, or through a body or substance.
trans-mis-sion (*-mish'un*), *n.* the act of transmitting; the things transmitted.
trans-mit (*-mit'*), *v. t.* to cause or suffer to pass over or through; send from one place or person to another.
trans-mu-ta-tion (*-mū-tā'shun*), *n.* change from one form, nature, substance, or species into another.
trans-mute (*-mūt'*), *v. t.* to change from one form, nature, substance, or species into another.
tran-som (*tran'sum*), *n.* a crossbeam over a door; horizontal mullion or crossbar in a window.
trans-par-en-cy (*trans-pȧr'en-si*), *n.* the state or quality of being transparent; a picture painted on a semitransparent material.
trans-par-ent (*'ent*), *adj.* having the property of transmitting rays of light; clear. [PELLUCID.]
tran-spire (*tran'spīr*), *v. i.* become known; come to pass; occur: *v. t.* to perspire; exhale.
trans-plant (*trans-plant'*), *v. t.* to remove and plant in another place; remove and establish.
trans-port (*-pȯrt'*), *v. t.* to carry across or from one place to another; carry away by violence of motion: *n.* (*trans'pȯrt*) conveyance for baggage or stores; a vessel employed for carrying troops, stores, etc.; rapture.
trans-pose (*-pōz'*), *v. t.* to change the place or order of, by putting each in the place of the other.
trans-po-si-tion (*-pō-zish'un*), *n.* the act of transposing; state of being transposed. [Also *transposal.*]
tran-sub-stan-ti-a-tion (*tran-sub-stan-shi-ā'shun*), *n.* the doctrine that after consecration the elements in the Eucharist are converted into the veritable body and blood of Christ.
Transvaal (*trans-vȧl'*). That territory in South Africa beyond the river Vaal.
trans-verse (*trans-vẽrs'*), *adj.* lying, or being, across or crosswise; broader than long.
trap (*trap*), *n.* an instrument shutting suddenly with a spring, for snaring game, vermin, and other animals; snare; ambush; stratagem; a carriage on springs; contrivance for preventing the escape of foul air from a drain: *pl.* baggage; portable articles: *v. t.* to catch in, or as in, a trap: *v. i.* to set traps for game.
tra-peze (*trȧ-pēz'*), *n.* a swinging horizontal bar.
tra-pe-zi-um (*-pē'zi-um*), *n.* a plane figure bounded by 4 straight lines, of which no two are parallel.
trap-e-zoid (*trap'e-zoid*), *n.* a plane figure with 4 sides, having 2 sides parallel to each other.
trap-per (*'ẽr*), *n.* one who traps animals.
trap-pings (*'ingz*), *n. pl.* ornamented articles.
trash (*trash*), *n.* refuse; worthless or useless matter; rubbish.
trash-y (*'i*), *adj.* worthless; useless.
trav-ail (*trav'ȧl* or *'il*), *n.* labor with pain; parturition: *v. i.* to suffer the pains of childbirth.
trav-el (*trav'el*), *v. i.* to journey; proceed; move: *v. t.* to journey over: *n.* the act of journeying. [JOURNEY.]
trav-el-er (*'el-ẽr*), *n.* one who travels.
trav-erse (*'ẽrs*), *adj.* lying or being across: *adv.* athwart; crosswise: *v. t.* to lay or place in a cross direction; travel or pass over: *v. i.* to turn as on a pivot; move round.
Traverse bay, Mich. Named by Marquette *Petit Traverse* and *Grand Traverse*, "little, small, and large breadth or crossings"; applied because of its being shorter to cross the bay than follow along the shores.
trav-es-ty (*'es-ti*), *n.* [*pl.* travesties (*-tiz*)], a burlesque or parody: *v. t.* to burlesque or parody.
trawl (*trawl*), *n.* a large net of peculiar construction: *v. i.* to fish with a trawl.
tray (*trā*), *n.* [*pl.* trays (*trāz*)], a broad, flat vessel for holding or carrying.
treach-er-ous (*trech'ẽr-us*), *adj.* betraying a trust; perfidious. [FAITHLESS.]
treach-er-y (*'ẽr-i*), *n.* treasonable or perfidious conduct; perfidy.
trea-cle (*trē'kl*), *n.* a sirup drained from sugar; molasses.
tread (*tred*), *v. i.* to step or walk: *v. t.* to walk on.
trea-dle (*tre'dl*), *n.* that part of a machine moved by the foot.
tread-mill (*'mil*), *n.* a large wheel driven by persons treading on the steps of the periphery.
trea-son (*trē'zn*), *n.* the offense of betraying the state.
treas-ure (*trezh'ūr*), *n.* accumulated wealth; abundance; plenty; something highly valued: *v. t.* to hoard; accumulate; value highly.
treas-ur-er (*-ẽr*), *n.* one who has the charge of a treasure.
treas-ur-y (*'ūr-i*), *n.* [*pl.* treasuries (*-iz*)], a place or building where the public revenues are deposited and the public debts discharged; collection of valuable information or facts.
treas-ur-y note (*nōt*), a demand note issued by the United States treasury.
treat (*trēt*), *v. t.* to handle or manage in a particular manner; behave toward; entertain with food or drink; discourse on: *v. i.* to discuss; negotiate; agree; give a gratuitous entertainment: *n.* an entertainment given; something which affords pleasure.
trea-tise (*trē'tis*), *n.* a written composition.
treat-ment (*trēt'ment*), *n.* act or manner of treating.
trea-ty (*trē'ti*), *n.* [*pl.* treaties (*'tiz*)], the act of treating for the adjustment of differences or for forming an agreement.
Trebizond (*treb-i-zond'*). A seaport on the Black Sea; named from the Greek *trapezus*, "table," so called from its form.
tre-ble (*treb'l*), *adj.* threefold; triple; pertaining to the highest vocal or instrumental part. [*Music.*] *n.* the highest vocal or instrumental part: *v. t.* to make threefold: *v. i.* to become threefold.
tree (*trē*), *n.* any woody plant having a single trunk and branches; anything resembling a tree: *v. t.* to drive to a tree; place in difficulty: *v. i.* to take refuge in a tree.
trel-lis (*trel'is*), *n.* a structure or frame of lattice-work.
trel-lis-work (*-wẽrk*), *n.* small bars nailed together crosswise.
trem-ble (*trem'bl*), *v. i.* to shake involuntarily, as with fear, cold, weakness, etc.: *n.* shiver.
trem-bling (*'bling*), *v. i.* agitated, shaking with fear.
Syn. TREMBLING, tremor, trepidation. *Trembling* expresses any degree of involuntary shaking of the frame, from the affection either of the body or the mind; cold, nervous affections, fear, and the like, are the ordinary causes of *trembling; tremor* is a slight degree of *trembling*, which arises mostly from a mental affectation; when the spirits are agitated, the mind is thrown into a *tremor* by any trifling incident; *trepidation* is more violent than either of the two.
tre-men-dous (*trē-men'dus*), *adj.* exciting fear or terror; dreadful. [FEARFUL.]
tre-mo-lo (*trā'mō-lō*), *n.* a tremulous or fluttering effect in music.
tre-mor (*trē'mor*), *n.* an involuntary trembling. [TREMBLING.]
trem-u-lous (*trem'ū-lus*), *adj.* trembling; quivering; shaking.
trench (*trench*), *n.* a long, narrow cut or ditch excavated in the earth: *v. t.* to form a ditch in.
trench-ant (*'ant*), *adj.* sharp; keen; severe.
trench-er (*'ẽr*), *n.* one who trenches; a large wooden plate.
trend (*trend*), *n.* inclination in a particular direction: *v. i.* to have a particular direction.
Trenton, N. J. First called *Trent Town*, so named from Col. William Trent of Philadelphia, a speaker of the house of assembly in 1720.
tre-pan (*trē-pan'*), *n.* a cylindrical saw of peculiar construction used in the operation of trepanning: *v. i.* to perform the operation of trepanning: *v. t.* to perforate with a trepan.
trep-i-da-tion (*trep-i-dā'shun*), *n.* an involuntary trembling. [TREMBLING.]
tres-pass (*tres'pas*), *v. i.* to commit any offense; sin; enter unlawfully upon the land of another: *n.* the act of trespassing; transgression; sin.
tress (*tres*), *n.* a lock of hair.
tres-tle (*tres'l*), *n.* a movable form for supporting anything.
tres-tle board (*bȯrd*), a draftsman's designing board.
tres-tle-work (*-wẽrk*), *n.* a viaduct, pier, or scaffold supported on trestles.
tri, a *prefix* meaning *three, threefold*, as *triangled*, *adj.* having 3 angles.
tri-ad (*trī'ad*), *n.* a union of 3.
tri-al (*trī'al*), *n.* an attempt or endeavor; test; proof; verification; judicial examination.
tri-an-gle (*'ang-gl*), *n.* a plane figure bounded by 3 lines, and having 3 angles; a musical instrument of steel in the form of a triangle.
tri-an-gu-lar (*-ang'gū-lẽr*), *adj.* having 3 angles; shaped like a triangle.
tri-an-gu-late (*'gū-lāt*), *v. t.* to divide into triangles, survey by means of triangles.
tri-an-gu-la-tion (*-lā'shun*), *n.* the act of triangulating.
Trianon, Grand (*grȧN trē-ȧ-nȯN'*). A small palace at Versailles of only one story but considerable length, built by Louis XIV. for Mme. de Maintenon, and since used by successive French sovereigns as a private residence.
Trianon, Petit (*pt̃ē trē-ȧ-nȯN'*). A graceful, neo-

classical villa in the park at Versailles, built by Louis XV., and closely associated with the memory of Marie Antoinette, whose favorite abode it was.

tri-bal (*trī'bal*), *adj.* pertaining to, or characteristic of, a tribe.

tri-bal-ism (*-izm*), *n.* the state of existing in tribes; tribal characteristics or feeling.

tribe (*trīb*), *n.* a family, race, or class, constituting a distinct portion of a people.

tri-brach (*trī'brak*), *n.* a poetic foot of 3 short syllables.

trib-u-la-tion (*trib-ū-lā'shun*), *n.* severe affliction; deep sorrow. [GRIEF.]

tri-bu-nal (*trī-bū'nal*), *n.* the seat of a judge; court of justice.

trib-une (*trib'ūn*), *n.* an ancient Roman official, elected by the people to safeguard their liberties.

trib-u-ta-ry (*trib'ū-tā-ri*), *adj.* paying tribute; yielding supplies; contributing to make up a greater object of the same kind: *n.* a state or government which pays tribute to a superior; river flowing into a larger one.

trib-ute (*'ūt*), *n.* an annual or stipulated sum of money, etc., paid; personal contribution made.

trice (*trīs*), *n.* an instant.

tri-ceps (*trī'seps*), *n.* the great three-headed extensor muscle of the arm.

★**tri-chi-na** (*tri-kī'nȧ*), *n.* [*pl.* trichinæ (*'nē*)], a parasitic worm which infests the muscles.

trick (*trik*), *n.* a stratagem or artifice; deception; imposition: *pl.* frolic: *v. t.* to cheat. [PRETENSE, CHEAT.]

trick-er-y (*'ēr-i*), *n.* deception; cheating; fraud; imposture.

tric-kle (*'l*), *v. i.* to flow gently down or in a small stream: *n.* a small gentle stream.

trick-ster (*'stēr*), *n.* a cheat; deceiver.

trick-y (*'i*), *adj.* given to tricks; knavish; shifty; artful; cunning.

tri-col-or (*trī'kul-ēr*), *n.* a national flag of 3 colors arranged in equal stripes.

★**tri-cy-cle** (*trī'si-kl*, not (*trī'sī-kl*), *n.* a three-wheeled modernized form of velocipede: *v. i.* to ride on a tricycle.

tri-dent (*'dent*), *n.* a scepter or spear with 3 prongs.

tri-en-ni-al (*trī-en'i-al*), *adj.* occurring in, or continuing for, three years.

tri-er (*'ēr*), *n.* one who tries or makes experiments; a judge; test.

tri-fle (*'fl*), *n.* anything of little value or importance: *v. i.* to act or talk with levity: *v. t.* to waste or fritter away.

trig (*trig*), *adj.* trim; neat.

trig-ger (*'ēr*), *n.* a catch which, when pulled, releases the hammer of a gun.

trig-o-nom-e-try (*-ō-nom'ē-tri*), *n.* the science of measuring the sides and angles of triangles.

tri-he-dron (*trī-hē'dron*), *n.* a figure having 3 sides.

tri-lat-er-al (*-lat'ēr-al*), *adj.* three-sided.

trill (*tril*), *n.* a shake or quaver of the voice: *v. t.* to sing with a quaver: *v. i.* to quaver.

tril-lion (*tril'yun*), *n.* in the French system of numeration, followed in the United States, a unit with 12 ciphers annexed; in the English system, a unit with 18 ciphers annexed.

tril-o-gy (*tril'ō-ji*), *n.* a series of three dramas, each complete in itself.

trim (*trim*), *adj.* neat; compact; in good order or service: *v. t.* to decorate or adorn; make trim.

trim-mer (*'ēr*), *n.* one who trims.

Trinidad (*trin-i-dad'*, Sp. *trē-nē-thȧth'*). Island of British West Indies. So named by Columbus from its three peaks, emblematic of the Holy Trinity.

Trin-i-ta-ri-an-ism (*-tā'ri-an-izm*), *n.* the doctrine that there are three persons in the Trinity.

Trin-i-ty (*'i-ti*), *n.* the union of the Father, the Son, and the Holy Ghost in one Godhead.

trin-ket (*tring'ket*), *n.* small ornament or jewel.

tri-o (*trē'ō*), *n.* a set of 3; 3 united; composition for 3 voices or instruments.

trip (*trip*), *v. i.* to run or step lightly or nimbly; stumble; err: *n.* stumble; mistake; journey. [EXCURSION.]

tri-par-tite (*trip'ȧr-tīt* or *trī-pȧr'tīt*), *adj.* divided into parts.

tripe (*trip*), *n.* the large stomach of a ruminating animal prepared for food.

tri-ph-thong (*trif'thong* or *trip'*), *n.* a combination of 3 vowels in one sound.

tri-plane (*trī'plān*), *n.* a form of aëroplane consisting of three planes arranged one above the other; distinguished from *monoplane* and *biplane*.

tri-ple (*trī'pl*), *adj.* threefold; consisting of 3 united; 3 times repeated: *v. t.* and *v. i.* to increase threefold.

trip-let (*'l*), *n.* 3 united: *pl.* 3 children at one birth.

tri-pod (*trī'pod*), *n.* a three-legged stool or table.

tri-sect (*trī-sekt'*), *v. t.* to divide into three equal parts.

Tristram (*trīs'tram*). From the Latin, meaning "sorrowful." Lat., *Tristramus*; Port., *Tristao*.

tri-syl-la-ble (*trī-sil'ȧ-bl*), *n.* a word of three syllables.

trite (*trīt*), adj. worn out; stale.

tri-the-ism (*trī'ē-izm*), *n.* the doctrine that the three persons in the Trinity are three distinct Gods.

trit-u-rate (*trit'ū-rāt*), *v. t.* to rub, grind, or bruise, to powder.

tri-umph (*trī'umf*), *n.* a grand procession in honor of one who has gained a decisive victory; state of joy at success; victory; conquest: *v. i.* to rejoice over success; obtain a victory.

tri-um-phal (*trī-um'fal*), *adj.* pertaining to, indicating, or in honor of, a triumph.

tri-um-phant (*'fant*), *adj.* rejoicing for victory; victorious.

tri-une (*'ūn*), *adj.* 3 in one.

triv-i-al (*triv'i-al*), *adj.* trifling; commonplace.

tro-che (*trō'kē*), *n.* a medicinal lozenge.

tro-chee (*'kē*), *n.* a metrical foot of 2 syllables, the first long, the second short.

trog-lo-dyte (*trog'lō-dīt*), *n.* a cave dweller: said of certain tribes.

troll (*trōl*), *n.* a giant or giantess of supernatural powers; reel on a fishing rod: *v. t.* to sing the parts of in succession: *v. i.* to fish.

trol-ley (*trol'i*), *n.* a kind of truck; a grooved metal wheel.

trom-bone (*trom'bōn*), *n.* a large brass instrument of the trumpet kind.

troop (*troop*), *n.* a multitude; small body of cavalry, usually 60; company of performers: *v. i.* to march in a body; collect in crowds.

troop-er (*'ēr*), *n.* a cavalryman; troop ship.

trope (*trōp*), *n.* a word or expression used in a sense different from its usual signification; figurative word.

tro-phy (*trō'fi*), *n.* [*pl.* trophies (*'fiz*)], a memorial of a victory; memento.

trop-ic (*trop'ik*), *n.* one of the two small circles of the celestial sphere, situated at each side of the equator, at a distance of 23° 28′ and parallel to it, within the limits of which the sun moves in its yearly course; region between the tropics.

trop-ic-al (*'i-kal*), *adj.* pertaining to, or situated within, the tropics; also used figuratively.

trot (*trot*), *v. i.* to move faster than a walk: *v. t.* to cause to trot: *n.* the pace of a horse a little faster than a walk.

troth (*trōth*), *n.* betrothal; fidelity.

trou-ba-dour (*trōō'ba-dōōr*), *n.* one of a class of lyric poets who flourished in the 11th to 13th centuries.

trou-ble (*trub'l*), *n.* mental agitation, distress, or worry: *v. t.* to distress, or worry. [ANXIETY.]

Syn. TROUBLE, disturb, molest. *Trouble* is the most general in its application; we may be *troubled* by the want of a thing, or *troubled* by that which is unsuitable; we are *disturbed* and *molested* only by that which actively *troubles*. Pecuniary wants are the greatest *troubles* in life. *Trouble* may be permanent; *disturbance* and *molestation* are temporary, and both refer to the peace which is destroyed; a *disturbance* ruffles or throws out of a tranquil state; a *molestation* affects either the body or the mind. [GRIEF.]

troub-le-some (*-sum*), *adj.* causing trouble.

trough (*trōf*), *n.* anything hollowed out.

trounce (*trouns*), *v. t.* to beat soundly.

troupe (*trōōp*), *n.* a company of performers.

trou-sers (*trou'zērz*), *n. pl.* a garment worn by men and boys, covering each leg separately.

★**trous-seau** (*trōō-sō'*), *n.* a bride's outfit.

trout (*trout*), *n.* a fresh-water fish allied to the salmon.

trow (*trō*), *v. i.* to believe; trust.

trow-el (*trou'el*), *n.* a flat, triangular tool.

Troy, N. Y. Prior to present name known as *Vanderheyden's*; the name *Troy* adopted at a town meeting, January 5, 1789, on the suggestion of Christopher Hutton.

troy weight (*troi' wāt*), a weight of 12 ounces to the pound.

tru-ant (*trōō'ant*), *n.* one who idly stays away from duty or business: *adj.* pertaining to, or characteristic of, a truant.

truce (*trooss*), *n.* a temporary peace or cessation.

truck (*truk*), *n.* a wheeled vehicle for carrying goods; vegetables: *v. t.* to send by truck; peddle; hawk: *v. i.* to barter; negotiate.

truc-kle (*'l*), *n.* a small wheel or caster: *v. t.* to trundle; move on rollers: *v. i.* to yield obsequiously.

tru-cu-lent (*trū'kū-lent*), *adj.* ferocious; of fierce aspect.

trudge (*truj*), *v. i.* to travel on foot.

true (*trōō*), *adj.* conformable to fact; faithful or loyal; genuine.

true-blue (*'blū*), *adj.* of inflexible honesty and fidelity.

truf-fle (*truf'l*), *n.* a fleshy underground fungus.

tru-ism (*trōō'izm*), *n.* a self-evident truth.

tru-ly (*'li*), *adv.* in agreement with truth or fact; precisely; sincerely; honestly.

trump (*trump*), *n.* a trumpet; a winning card; good fellow: *v. t.* to take with a trump card: *v. i.* to play a trump card.

trump-er-y (*'ēr-i*), *n.* worthless finery; rubbish: *adj.* worthless.

trump-et (*'et*), *n.* a metal wind instrument formed of a single curved tube: *v. t.* to publish by, or as by, the sound of trumpet.

trump-et-er (*'ēr*), *n.* one who sounds a trumpet.

trun-cheon (*trun'shun*), *n.* a short staff or cudgel: *v. t.* to beat with a truncheon.

trun-dle (*'dl*), *v. t.* to roll along; roll, as on small wheels: *n.* a little wheel; truck.

trun-dle-bed (*'bed*), *n.* a low bed that runs on casters.

trunk (*trungk*), *n.* main body of anything; elephant's proboscis; large traveling box or chest. [BODY.]

trunk hose (*'hōz*), large breeches reaching to the knees.

project from the opposite sides of a cannon.

truss (*trus*), *n.* a surgical apparatus; timbers fastened together for the support of a roof: *v. t.* to bind or pack close; skewer; make fast.

trust (*trust*), *n.* confidence; faith; credit; combination of capitalists; an estate held for the benefit of another: *v. t.* to place confidence in; rely upon; credit; sell upon credit to: *v. i.* to have trust in: *adj.* held in trust. [CONFIDE, COMMIT.]

trus-tee (*trus-tē'*), *n.* a person to whom management of property is committed for the benefit of others.

trust-y (*'i*), *adj.* justly deserving confidence; faithful. [FAITHFUL.]

truth (*trōōth*), *n.* agreement with reality; eternal principle of right, or law of order.

Syn. TRUTH, veracity. *Truth* belongs to the thing, *veracity* to the person; the *truth* of the story is admitted upon the *veracity* of the narrator.

truth-ful (*-'ful*)*a.* true, veracious. [CANDID.]

try (*trī*), *v. t.* to prove by experiment; test; examine; purify or refine: *n.* an attempt or experiment.

tryst (*trist*), *n.* a rendezvous; appointment to meet.

Tsarskoe Selo (*tsär'skō-yē sye-lō'*). A town in the government of St. Petersburg, Russia, about fifteen miles south of St. Petersburg. It contains a famous imperial palace, a favorite summer residence of the court.

tub (*tub*), *n.* a small cask; sponge bath: *v. t.* to place in a tub: *v. i.* to take a sponge bath.

tube (*tūb*), *n.* pipe: *v. t.* to furnish with a tube.

tu-ber (*tū'bēr*), *n.* a thickened, roundish, underground stem.

tu-ber-cu-lar (*'kū-lēr*), *adj.* full of small knobs or tubercles.

tu-ber-cu-lo-sis (*-lō'sis*), *n.* a disease accompanied by the formation of small tubercles.

tube-rose (*tūb'rōz* or *tū'bēr-ōs*), *n.* an odoriferous plant with a tuberous root.

tub-ing (*'ing*), *n.* material for tubes.

tuck (*tuk*), *n.* a fold in a dress: *v. t.* to thrust or press in; gather, or turn up.

tuck-er (*'ēr*), *n.* ornamental frilling or article of dress for covering the bosom of a woman.

Tucson (*tū-son'* or *tuk'sun*), **Ariz.** So called from a word in the Pima dialect, meaning "black spring."

Tuesday. The third day of the week; literally the day devoted to Tiw, the god of war.

tu-fa (*tōō'fȧ*), *n.* friable volcanic rock or scoriæ.

tuft (*tuft*), *n.* a collection of small things forming a knot or bunch: *v. t.* to separate into, or adorn with, tufts.

tug (*tug*), *n.* a pull with great effort; steam towing vessel: *v. t.* to pull or draw with continued effort; tow: *v. i.* to strain in labor. [DRAW.]

tu-i-tion (*tū-ish'un*), *n.* act or business of teaching; instruction; fee for instruction.

Tulare (*tōō-lär'*, Spanish *Loo-lä'rā*) **lake, Cal.** Called by the Spaniards *tagana Grande de los Tulares*, from a dense growth of "tule" found in its waters and on the shores.

tu-lip (*tū'lip*), *n.* a liliaceous plant.

tum-ble (*tum'bl*), *v. i.* to fall suddenly and violently; roll about: *v. t.* to throw down; turn over: *n.* a fall; a rolling over.

tum-brel (*'brel*), *n.* a cart that may be tilted up. [Also *tumbril*.]

tu-mid (*tū'mid*), *adj.* swollen; distended; bombastic; pompous.

tu-mor (*'mēr*), *n.* a morbid swelling of any part of the body.

tu-mult (*tū'mult*), *n.* the commotion of a multitude of people. [BUSTLE.]

tu-mul-tu-ous (*-mul'tū-us*), *adj.* characterized by, or full of, tumult; disorderly; agitated.

tu-mu-lus (*'mū-lus*), *n.* [*pl.* tumuli (*-lī*)], an artificial hillock.

tun (*tun*), *n.* a large cask; measure of wine equal to 252 gallons.

tun-a-ble (*tūn'ȧ-bl*), *adj.* capable of being tuned; harmonious.

tune (*tūn*), *n.* melody; short musical composition; just intonation; fit disposition or right mood: *v. t.* to cause to produce the proper sounds; harmonize.

tune-ful (*'fool*), *adj.* musical; harmonious.

tu-nic (*tū'nik*), *n.* loose kind of frock worn by women and boys; military coat.

Tunis (*tū'nis*). A city and district of northern Africa. Anciently known as *Tunentum*, "the land of the Tunes."

tun-nel (*tun'el*), *n.* a vaulted underground passage cut through a hill or under a river: *v. t.* to form a tunnel through or under.

Tu-ra-ni-an (*tū-rā'ni-an*), *adj.* noting generally those languages and peoples not included in the Aryan and Semitic families.

Turanian. A legendary ancestor of the Turanians. The word is loosely and indefinitely used to designate a family of languages and also an ethnological group.

tur-ban (*tûr'ban*), *n.* the headdress worn by Turkish men.

tur-bine (*'bin*), *n.* a wheel turning on a vertical axis and driven by steam or water.

tur-bu-lence (*'bū-lens*), *n.* disorder; agitation.

tur-bu-lent (*'bū-lent*), *adj.* tumultuous; violent; riotous.

tu-reen (*tū-rēn'*), *n.* a deep table vessel for holding soup.

turf (*tûrf*), *n.* the grassy surface of untilled land; to cover with turf.

turf-y (*'i*), *adj.* abounding in, or like, turf.

ur-ges-cent (*tûr-jes'ent*), *adj.* growing inflated.
ur-gid (*'jid*), *adj.* distended beyond the natural size: bombastic.
ur-gid-i-ty (*-jid'i-ti*), *n.* the state of being turgid. [Also *turgidness.*]
Turin (*tū'rin*), It. **Torino.** A city of northern Italy. Anciently *Augusta-Taurinorum,* named from the *Taurini, i. e.,* "dwellers among hills."
Turk (*tûrk*), *n.* a native of Turkey; Mohammedan.
Turkestan (*tōōr-kes-tăn'*). The country of the Turks. [See *Turkey.*]
tur-key (*tûr'ki*), *n.* a large gallinaceous bird.
Turkey. The English name of the Ottoman empire, appears to have been derived from *Turcia,* the Latinized form of the Arabic name *Al-Turkiyah,* the "land of the Turks." *Turkestan* in central Asia is a Persian form of the same name, denoting the land occupied by the Usbeks, the Kirghis, the Turcomans, and other Turkic races. The name *Turk* has been supposed to be a corruption of the name *Tu-kiu* of the Chinese historians, or from the Arabic *turkur,* "robbers." It is probably a Tartar word meaning "brave."
tur-moil (*'moil*), *n.* harassing labor; worrying confusion; noise.
turn (*tûrn*), *v. t.* to cause or make to go round; change the direction of; convert: *v. i.* be changed; move as on a pivot: *n.* the act of turning; bend or curve; change of direction; opportunity; short spell; form or cast; fright or shock.
Syn. TURN, bend, twist, distort, wring, wrest, wrench. We *turn* a thing by moving it from one point to another; thus we *turn* the earth over; *to bend* is simply to change its direction; thus a stick is *bent,* or a body may *bend* its direction to a certain point; *to twist* is *to bend* many times, to make many *turns; to distort* is *to turn* or *bend* out of the right course; thus the face is *distorted* in convulsions. *To wring* is *to twist* with violence; thus linen which has been wet is *wrung; to wrest* or *wrench* is to separate from a body by means of *twisting;* thus a stick may be *wrested* out of the hand, or a hinge *wrenched* off the door.
★**tur-nip** (*tûr'nip,* not *tûrn'up*), *n.* a well-known plant with a solid bulbous root.
turn-key (*tûrn'kē*), *n.* a prison warder.
turn-pike (*'pik*), *n.* a gate or bar to stop vehicles until toll is paid.
tur-pen-tine (*tûr'pen-tin*), *n.* the resinous juice of pine trees.
tur-pi-tude (*'pi-tūd*), *n.* moral depravity.
tur-quoise (*tûr'koiz*), *n.* a precious stone.
tur-ret (*tur'et*), *n.* a small tower.
tur-tle (*tûr'tl*), *n.* a large edible sea tortoise; the turtledove.
tur-tle-dove (*-duv*), *n.* a species of dove.
Tuscaloosa (*tus-kă-lōō'są*). County and city in Alabama named for an Indian chief, the name meaning "black warrior."
Tuscany (*tus'kă-ni*), It. **Tuscana.** A district of central Italy. It bears the name of its ancient inhabitants, the *Tusci* or *Etrusci.* The Etruscans were called *Tyrrheni* by the Greeks, whence the name Tyrrhenian Sea, given to that part of the Mediterranean which lies between the mainland and the islands of Corsica and Sardinia.
tush (*tush*), *interj.* an expression of contempt, rebuke, or silence.
tusk (*tusk*), *n.* the long, pointed tooth on each side of the upper jaw of certain mammals.
Tuskegee (*tus-kē'gē*). Town in Macon county, Alabama. Probably derived from the Indian word *taskialgi,* "warriors."
tus-sle (*'l*), *n.* a scuffle: *v. i.* to scuffle or struggle.
tut (*tut*), *interj.* hush! be quiet!
tu-te-lage (*tū'tē-lăj*), *n.* guardianship.
tu-tor (*'tēr*), *n.* a teacher; guardian: *v. t.* to instruct; discipline. [TEACH.]
Tuxedo (*tuks-ē'dō*). A few places in the United States bear this Indian name, which undoubtedly is derived from *P'tauk-seet-tough,* meaning "the place of bears."
twad-dle (*twod'l*), *n.* silly talk: *v. t.* to talk in a silly manner.
twain (*twān*), *n.* and *adj.* two.
twang (*twang*), *n.* a sharp, quick, vibrating sound; affected nasal tone of voice: *v. t.* and *v. i.* to sound with a vibrating noise.
twek (*twek*), *v. t.* to pinch or pull with a sudden jerk: *n.* a sudden sharp pull or pinch.
tweez-ers (*twē'zērz*), *n. pl.* small pinchers for pulling out hairs.
twelfth (*twelfth*), *adj.* next in order after the eleventh: *n.* one of 12 equal parts.
twen-ti-eth (*twen'ti-eth*), *adj.* the ordinal of 20: *n.* one of 20 equal parts.
twice (*twis*), *adv.* two times; doubly.
twid-dle (*twid'l*), *v. t.* to twirl in a light manner; touch lightly: *v. i.* to move with a quivering motion: *n.* a twist of the fingers.
twig (*twig*), *n.* a small shoot or branch: *v. t.* to notice; understand: *v. i.* to comprehend.
twi-light (*twī'līt*), *n.* the faint light before sunrise or after sunset: *adj.* obscure; shaded.
twill (*twil*), *n.* an appearance of diagonal lines in cloth fabrics; fabric woven with a twill.
twin (*twin*), *adj.* double; closely resembling: *n.* one born at a birth; any person or thing very like another.
twine (*twīn*), *v. t.* to twist; wind round; unite closely: *v. i.* to be closely united by twisting: *n.* a twist; a thread.
twinge (*twinj*), *v. t.* to affect with a sudden sharp pain; twitch: *v. i.* to suffer a twinge: *n.* a sudden sharp pain.
twin-kle (*twing'kl*), *n.* a quick motion of the eye; short, tremulous light; an instant: *v. i.* to blink; shine with a tremulous, sparkling light; quiver.
twirl (*twērl*), *v. t.* to move or turn round rapidly; whirl: *v. i.* to rotate rapidly: *n.* a quick, circular motion; convolution.
twist (*twist*), *v. t.* to unite or form by winding together; writhe or contort: *v. i.* to be contorted; move in a curve: *n.* the act of twisting; manner of twisting; cord or thread. [TURN.]
twit (*twit*), *v. t.* to annoy by reminding of a fault, etc.
twitch (*twich*), *v. t.* to pull with a sudden jerk: *v. i.* to contract or move quickly or spasmodically: *n.* a sudden jerk or pull.
twit-ter (*twit'ēr*), *v. i.* to make a succession of small, tremulous sounds: *n.* a small, tremulous noise.
two (*tōō*), *adj.* one and one: *n.* the number of one and one.
two-pen-ny (*tup'en-i*), *adj.* of the value of twopence; trumpery.
two-ply (*tōō'plī*), *adj.* of two thicknesses.
tym-pa-num (*tim'pă-num*). *n.* the membranous wall which separates the internal from the external ear; the drum of the ear.
type (*tīp*), *v. t.* to typify; reproduce by a typewriter: *n.* an emblem, sign, or symbol; general form or structure; original design; a letter in metal or wood for printing from. Different sizes of printing types are indicated by distinguishing names and by means of a unit of type measurement, which in the United States is one-twelfth of a pica.
type met-al (*'met-al*), an alloy of lead, antimony, and tin.
type-writer (*'rī-tēr*), *n.* a mechanical contrivance for producing letters by means of an inked ribbon and types; an operator of a typewriting machine.
ty-phoid (*ti'foid*), *adj.* pertaining to, or like, typhus: *n.* an enteric fever.
ty-phoon (*-foon'*), *n.* a violent tornado at sea.
ty-phus (*'fus*), *n.* a contagious fever.
typ-ic-al (*tip'i-kal*), *adj.* figurative.
typ-i-fy (*'i-fī*), *v. t.* to represent by an image or emblem.
typ-ist (*tip'ist*), *n.* one who operates a typewriting machine.
ty-pog-ra-pher (*ti-pog'ra-fēr*), *n.* a printer.
ty-pog-ra-phy (*-pog'ra-fi*), *n.* the art of printing.
ty-ran-nic-al (*-ran'i-kal*), *adj.* pertaining to, or characteristic of, a tyrant; despotic; cruel. [ABSOLUTE.]
tyr-an-nize (*tir'an-īz*), *v. i.* to act like a tyrant.
tyr-an-ny (*'ăn-i*), *n.* the government or conduct of a tyrant; severity; absolute monarchy.
ty-rant (*ti'rănt*), *n.* an oppressor; despot.
ty-ro (*ti'rō*), *n.* a beginner; novice.

U

u-biq-ui-ty (*ū-bik'wi-ti*), *n.* omnipresence.
ud-der (*ud'dēr*), *n.* the glandular organ of a mammal which secretes the milk.
ug-ly (*ug'li*), *adj.* that which is offensive to the eye; deformed.
u-kase (*ū-kās'*), *n.* a Russian imperial decree.
ul-cer (*ul'sēr*), *n.* a sore.
ul-cer-ate (*-āt*), *v. t.* to affect with an ulcer: *v. i.* to be formed into an ulcer.
ul-na (*'nă*), *n.* the larger of the two bones that form the forearm.
ul-ster (*ul'stēr*), *n.* a long, loose overcoat of coarse cloth.
ul-te-ri-or (*-tē'ri-ēr*), *adj.* lying beyond or on the further side; more distant.
ul-ti-mate (*'ti-māt*), *adj.* being the last; utmost; furthest; extreme; final.
★**ul-ti-ma-tum** (*ul-ti-mā'tum,* not *ul-ti-mā'tum*), *n.* [*pl.* ultimatums (*'tumz*), ultimata (*'tă*)], final conditions offered as the basis of an agreement.
ul-ti-mo (*'ti-mō*), *adv.* in the month preceding the present.
ul-tra (*'trā*), *adj.* extreme.
ul-tra-ma-rine (*-trā-mā-rēn'*), *n.* a permanent, blue pigment.
ul-u-la-tion (*ul-ū-lā'shun*), *n.* a howling like a dog.
Ulysses (*ū-lis'ēz*). A masculine baptismal name, the Latin form of the Greek *Odysseus,* "to cause pain." Fr., *Ulysse;* Gr., *Odysseus;* It., *Ulisse;* Lat., *Ulysses* or *Ulyxes.*
Umatilla (*ū-mă-til'lă*). River and county in Oregon, said by some to be named for a tribe of Indians. Others state that it is derived from *U-a-talla,* meaning "the sand blew bare in heaps," this part of the country having ridges of sand alternating with bare ground.
Umbagog (*um-bā'gog*). Lake lying partly in New Hampshire and partly in Maine. An Indian word, said to mean "doubled up." Other authorities favor "clear lake, shallow," or "great waters near another."
um-ber (*'bēr*), *n.* a brown pigment: *adj.* of an olive-brown color.
um-bil-ic-al (*-bil'i-kal*), *adj.* pertaining to, or formed like, the navel.
um-brage (*'brăj*), *n.* screen of trees or foliage; offense.
um-bra-geous (*-brā'jus*), *adj.* shady.
★**um-brel-la** (*um-brel'ă,* not *um-bēr-el'ă*), *n.* a covered sliding frame carried in the hand as a screen against the rain.
um-pire (*um'pir*), *n.* a third party to whom a dispute is referred for settlement: *v. i.* to act as umpire.
Una (*ū'nă*). A Gaelic feminine name, corrupted from Winifred.
un-an-i-mous (*-nan'i-mus*), *adj.* agreeing in opinion.
un-bend (*-bend'*), *v. i.* to free from flexure; relax: *v. i.* to become relaxed; act with freedom or condescension.
un-be-lief (*-bē-lēf'*), *n.* lack of belief; incredulity.
Syn. UNBELIEF, infidelity, incredulity. The Jews are *unbelievers* in the mission of our Savior; the Turks are *infidels,* inasmuch as they do not believe in the bible; deists and atheists are likewise *infidels,* inasmuch as they set themselves up against divine revelation; well-informed people are always *incredulous* of stories respecting ghosts and apparitions. [See *disbelief.*]
un-can-ny (*-kan'i*), *adj.* weird; mysterious; dangerous.
un-cer-tain (*-sēr'tin*), *adj.* not certain. [EQUIVOCAL.]
un-cle (*ung'kl*), *n.* the brother of one's parent; husband of one's aunt.
un-con-cern (*un-kon-sērn'*) *n.* want of concern. [INDIFFERENT.]
un-con-di-tion-al (*-dish'un-al*), *adj.* not conditional.
un-con-scion-a-ble (*un-kon'shun-ă-bl*), *adj.* out of all reason or expectation.
un-cov-ered (*kuv'ērd*), *adj.* not covered.
unc-tion (*ungk'shun*), *n.* the act of anointing; ointment; anything soothing; suavity.
★**unc-tu-ous** (*ungk'tū-us*), *adj.* oily; soothing.
un-daunt-ed (*dănt'ed*), *adj.* not daunted. [BOLD.]
un-der (*'dēr*), *prep.* beneath; subordinate to; in subjection to; less than; during the time of.
un-der-go (*-gō'*), *v. t.* to pass through or experience; suffer.
un-der-grad-u-ate (*-grad'ū-āt*), *n.* a member of a university who has not taken his first degree.
un-der-hand (*-hand'*), *adj.* done by meanness or fraud; clandestine.
un-der-stand (*-dēr-stand'*), *v. t.* to perceive by the mind: *v. i.* to have understanding; be informed. [CONCEIVE.]
un-der-stand-ing (*'ing*), *n.* the rational faculties; intellect; skill.
Syn. UNDERSTANDING, intellect, intelligence. *Understanding* is employed to describe a familiar and easy power or operation of the mind in forming distinct ideas of things. *Intellect* is employed to mark the same operation in regard to higher and more abstruse objects. The *understanding* applies to the first exercise of the rational powers; *intellect,* being a matured state of the *understanding,* is most properly applied to the efforts of those who have their powers in full vigor; we speak of *understanding* as the characteristic distinction between man and brute; *intellect* is applied merely to human power, and *intelligence* to the spiritual power of higher beings; when applied to human beings, it is taken in the most abstract sense for the *intellectual* power; hence we speak of *intelligence* as displayed in the countenance of a child whose looks evince that he has exerted his *intellect,* and thereby proved that it exists.
un-der-take (*-tāk'*), *v. t.* to take under one's management; assume; attempt; answer for: *v. i.* to take upon one's self.
un-der-tak-er (*'dēr-tāk-ēr*), *n.* one who undertakes; one who manages funerals.
un-der-write (*-rīt*), *v. t.* to subscribe one's name to: *v. i.* to follow the calling of an underwriter.
un-der-wri-ter (*-ēr*) *n.* one who sells insurance.
un-due (*un-dū'*), *adj.* improper.
un-du-late (*'dū-lāt*), *v. t.* and *v. i.* to wave, or move like waves.
un-du-la-tion (*-lā'shun*), *n.* a waving motion or vibration.
un-du-ly (*'li*), *adv.* excessively; improperly.
un-earned in-cre-ment (*-ērnd' in'krē-ment*), the increase of the value of land or property without labor or expenditure on the part of the proprietor.
un-e-qual (*-ē'kwal*), *adj.* not equal; not regular or uniform; ill-matched; disproportionate.
un-e-quiv-o-cal (*-kwiv'ō-kal*), *adj.* not equivocal.
un-e-ven (*-ē'vn*), *adj.* not even.
un-feel-ing-ness (*-fēl'ing-ness*), *n.* the state of being without feeling or sympathy.
un-guent (*ung'gwent*), *n.* an ointment.
un-hap-py (*-hap'i*), *adj.* not happy.
uni, a *prefix,* meaning *one,* or *producing one,* as *unicellular: adj.* formed of one cell.
u-ni-corn (*ū'ni-kōrn*), *n.* a fabled animal resembling a horse, but with a straight horn projecting from the forehead.
u-ni-form (*'ni-fōrm*), *adj.* having only one form; same in form, manner, or character; equable: *n.* an official or regulation dress. [EQUAL.]
u-ni-fy (*'ni-fi*), *v. t.* to form into one; make a unit of.
un-ion (*ūn'yun*), *n.* the act of uniting or making one; concord; conjunction; harmony in color.
un-ion-ize (*-īze*), *v. t.* [*p. t.* and *p. p.* unionized (*-īzd*), *p. pr.* unionizing (*-iz-ing*)] to cause to join a trades union, as the members of a handicraft

un-ion jack (*ūn'yun-jak*), the national flag of Great Britain.
u-ni-ped (*ū'ni-ped*), *adj.* one-footed.
u-nique (*-nēk'*), *adj.* without another of the same kind. [RARE.]
u-ni-son (*'ni-sun*), *n.* accordance of sound; concord; harmony. [ard.
u-nit (*'nit*), *n.* one; a single person or thing; stand-
U-ni-ta-ri-an (*-ni-tā'ri-an*), *n.* one who denies the doctrine of the Holy Trinity, regarding the God-head as unipersonal: *adj.* pertaining to Unitarians.
u-nite (*-nīt'*), *v. t.* to incorporate into one; join by a legal or moral bond: *v. i.* to become one; combine. [CONNECT.]
u-ni-ty (*'ni-ti*), *n.* the state of being one; concord; uniformity.
u-ni-ver-sal (*-ni-vĕr'sal*), *adj.* all-pervading; embracing or comprehending the whole; general. [GENERAL.]
U-ni-ver-sal-ism (*-izm*), *n.* the doctrine that all mankind will ultimately be saved.
u-ni-verse (*'ni-vĕrs*), *n.* the whole system of created things; world.
u-ni-ver-si-ty (*-vĕr'si-ti*), *n. pl.* universities (*-tiz*)], an assemblage of colleges.
un-kempt (*un-kempt'*), *adj.* uncombed; rough.
un-kind-ness (*-kind'nes*), *n.* the quality or act of being unkind. [ACRIMONY.]
un-learned (*-lĕrnd'*), *adj.* not educated. [IGNORANT.]
un-less (*-les'*), *conj.* except; if not.
Syn. UNLESS, except. *Unless*, which is equivalent to if less, if not, or if one fail, is employed only for the particular case; but *except* has always a reference to some general rule, of which an *exception* is hereby signified; I shall not do it *unless* he asks me; no one can enter *except* those who are provided with tickets.
un-let-tered (*-let'ĕrd*), *adj.* untaught. [IGNORANT.]
un-like (*-lik'*), *adj.* dissimilar. [DIFFERENT.]
un-lim-it-ed (*-lim'it-ed*), *adj.* not limited. [BOUNDLESS.]
un-mer-ci-ful (*-mĕr'si-fool*), *adj.* not merciful.
un-prin-ci-pled (*-prin'si-pld*), *adj.* being without principles. [ABANDONED.]
un-qual-i-fied (*-kwol'i-fid*), *adj.* not qualified.
un-ques-tion-a-ble (*-kwes'chun-ā-bl*), *adj.* not questionable. [INDUBITABLE.]
un-rea-son-a-ble (*-rē'zn-ā-bl*), *adj.* not reasonable. [ABSURD.]
un-re-lent-ing (*-rē-lent'ing*), *adj.* not relenting.
un-ru-ly (*-rū'li*), *adj.* disregarding restraint or authority; turbulent.
un-sex (*-seks'*), *v. t.* to deprive of the characteristic qualities of sex.
un-speak-a-ble (*-spēk-ā-bl*), *adj.* unutterable; that which cannot be expressed.
Syn. UNSPEAKABLE, ineffable, unutterable, inexpressible. The *unspeakable* is said of objects in general, particularly of that which is above human conception, and surpasses the power of language to describe, as the *unspeakable* goodness of God; *ineffable* is said of such objects as cannot be painted in words with adequate force; as the *ineffable* sweetness of a person's look; *unutterable* and *inexpressible* are extended in their signification to that which is incommunicable by signs from one being to another; thus grief is unutterable which it is not in the power of the sufferer by any sounds to bring home to the feelings of another; grief is *inexpressible* which is not to be *expressed* by looks, or words, or any sign.
Unter den Linden (*oon'tĕr den lin'den*). A famous street in Berlin which extends from the Brandenburg gate eastward about three-fifths of a mile. Bordering it are the imperial and princely palaces, the university, the academy, the statue of Frederick the Great, etc. Literally "under the lindens."
un-to (*'too*), *prep.* to.
un-truth (*-trōōth'*), *n.* the quality of being untrue.
un-ut-ter-a-ble, *adj.* inexpressible. [UNSPEAKABLE.]
un-vor-thy (*-vĕr'thi*), *adj.* not worthy.
Syn. UNWORTHY, worthless. *Unworthy* is a term of less reproach than *worthless*; for the former signifies not to be *worthy* of praise or honor; the latter signifies to be without all *worth*, and consequently in the fullest sense bad. There are many *unworthy* members in every religious community; but every society that is conducted upon proper principles will take care to exclude *worthless* members.
Ant. WORTHY, valuable.
up (*up*), *adv.* on high; above the horizon; from a lower to a higher position.
up-braid (*up-brād'*), *v. t.* to reproach. [BLAME.]
up-cast (*'kast*), *adj.* directed upward.
up-heave (*-hēv'*) *v. t.* to lift up from beneath.
up-hold (*-hōld'*), *v. t.* to hold up.
up-hol-ster-er (*hōl'stĕr-ĕr*), *n.* one who provides and places curtains, carpets, etc.
up-hol-ster-y (*-stĕr-i*), *n.* the business of an upholsterer; articles of house furnishing.
up-on (*-on'*), *prep.* on; resting on the top or surface; relating to; noting assumption, security, or time.
up-per (*'ĕr*), *adj.* higher in place, rank, or dignity.
up-pish (*'ish*) *adj.* arrogant; assuming.
up-right (*'rīt*) *adj.* erect; just; honest; timber supporting a raft.
up-roar (*'rōr*), *n.* noisy disturbance; bustle and clamor. [BUSTLE.]
up-set (*up-set'*), *v. t.* to overthrow; put out of normal condition: *n.* (*up'set*) the act of upsetting; state of being upset: *adj.* fixed.
up-shot (*'shot*), *n.* final result.
up-start (*'stārt*), *n.* one who suddenly rises from a humble position to wealth or influence: *adj.* suddenly raised to a position of wealth and influence.
up-turn (*-tūrn'*), *v. t.* and *v. i.* to turn up.
up-ward (*'wĕrd*), *adv.* toward a higher place or source. [Also *upwards*.]
Ural (*ū'ral*). The mountan chain dividing Europe from Asia, means the "girdle" or "belt," *ural-tau* being a Turkic word meaning a "mountain chain," while *urr* means a "chain" in Ostiah. The Russians call the *Ural* mountains by the translated name *Poyas*, the "girdle." The mountains have given their name to the river *Ural*, which flows from them into the Caspian.
u-ra-ni-um (*-rā'ni-um*), *n.* a metallic element from which radium is extracted.
u-ra-nog-ra-phy (*-rā-nog'rā-fi*), *n.* a description of the heavens; the construction of celestial maps, globes, etc.
ur-ban (*ûr'ban*), *adj.* pertaining to a city or town.
Urban. From the Latin *urbanus*, signifying "civil," courteous," "polite," "refined"; literally, "of, or belonging to, a city" (*urbs*). Dan., *Urban;* Dutch, *Urbanus* or *Urbaan;* Fr., *Urbain;* Ger., *Urban;* It., *Urbano;* Lat., *Urbanus;* Sp., *Urbano;* Sw., *Urban.*
ur-bane (*-bān'*), *adj.* polite; refined.
ur-chin (*'chin*), *n.* a pert or rough little fellow: *adj.* mischievous.
urge (*ûrj*), *v. t.* to incite; impel; provoke: *v. i.* to act with earnestness; insist upon; allege proofs. [PERSUADE.]
ur-gent (*ûr'jent*), *adj.* pressing; calling for immediate attention.
Uriah (*ū-rī'ā*). From the Hebrew, meaning "light of Jehovah," or "fire of the Lord." Fr., *Urie;* Ger., *Urias;* It., *Uria;* Lat., *Urias.*
u-ri-nal (*'ri-nal*), *n.* a place of convenience.
u-ri-na-ry (*'ri-nā-ri*), *adj.* pertaining to, or like, urine.
u-rine (*'rin*), *n.* the excretion from the kidneys.
urn (*ûrn*), *n.* a roundish vessel of various materials, bulging in the middle, usually with a foot or pedestal.
ur-sine (*ûr'sin*), *adj.* pertaining to, or resembling, a bear.
Ursula (*ûr'sū-lā*). A feminine name derived from the Latin *ursula*, "a young, or small, she-bear." Dutch, *Ursula;* Fr., *Ursule;* Ger., *Ursula;* It., *Ursula;* Lat., *Ursula;* Sp., *Ursula;* Sw., *Ursulo.*
Uruguay (*ū'roo-gwā*, Spanish *oō-roo-gwī'*). Name of a river in South America, meaning "the golden water."
us-a-ble (*ūz'ā-bl*), *adj.* that can be used.
us-age (*'āj*), *n.* mode of using; treatment; habitual or long continued use or custom.
Syn. USAGE, custom, prescription. The *usage* is what one has been long used to do; *custom* is what one generally does; *prescription* is what is *prescribed* by usage to be done. The *usage* acquires force and sanction by dint of time; the *custom* acquires sanction by the frequency of its being done or the numbers doing it; the *prescription* acquires force by the authority which *prescribes*.
use (*ūs*), *n.* the act of using; application of anything to a particular purpose; custom or practice: *v. t.* (*ūz*) to make use of; employ; habituate: *v. i.* to be accustomed. [EMPLOY.]
use-ful (*ūs'fool*), *adj.* full of use, profit, or advantage; beneficial.
use-less (*'les*), *adj.* having, or being of, no use.
ush-er (*ush'ĕr*), *n.* a doorkeeper; an officer who introduces strangers: *v. t.* to introduce or escort.
u-su-al (*ū'zhū-al*), *adj.* habitual; customary; usually. [COMMONLY.]
u-su-fruct (*'zū-frukt*), *n.* the temporary use and enjoyment of lands and tenements belonging to another.
u-sur-er (*'zhūr-ĕr*), *n.* one who lends money at an exorbitant rate of interest.
★**u-surp** (*ū-zĕrp'*, not *ū-s ĕrp'*), *v. t.* to take possession of by force, or without right.
u-surp-er (*-zĕrp'ĕr*), *n.* one who usurps.
u-su-ry (*'zhū-ri*), *n.* interest on money beyond the current rate of interest; practice of lending money at exorbitant interest.
Utah (*ū'tä, ū'taw*). State in the Union, county and lake in same state, named for the Ute Indians, the word meaning "home, or location, on the mountain top."
u-ten-sil (*-ten'sil*), *n.* an implement.
u-ter-ine (*'tĕr-in*), *adj.* pertaining to the womb.
u-ter-us (*'tĕr-us*), *n.* the womb.
Utica (*ū'ti-kā*). City in New York, named for the ancient city in Africa; town in Livingston county, Missouri, and Hinds county, Mississippi, and village in Macomb county, Michigan, named for the above.
u-til-i-ta-ri-an-ism (*ū-til-i-tā'ri-an-izm*), *n.* the doctrine that virtue is defined and enforced by its tendency to promote the highest happiness of mankind.
u-til-i-ty (*-til'i-ti*), *n.* usefulness; intrinsic value.
u-til-ize (*'til-iz*), *v. t.* to make useful or profitable.
ut-most (*ut'mōst*), *adj.* in the greatest degree; most distant; furthest; extreme: *n.* the extreme limit or extent.
U-to-pi-an (*ū-tō'pi-an*), *n.* pertaining to the imaginary island, described by Sir [illegible] *Utopia*, where the most perfe[illegible] and institutions existed; hence ideal, [illegible]
ut-ter (*ut'ĕr*), *adj.* entire; absolute; unqu[illegible]tal: *v. t.* to speak.
Syn. UTTER, speak, articulate, pronounce. *Utter* signifies to put out; that is, to send forth a sound. We may *utter* a groan; we *speak* words only, or that which is intended to serve as words. *To speak*, therefore, is only a species of utterance; a dumb man has *utterance*, but not *speech*. *Articulate* and *pronounce* are modes of *speaking; to articulate*, is *to pronounce* distinctly the letters or syllables of words; which is the first effort of a child beginning to speak. *To pronounce* is a formal mode of speaking. [See *speak*.]
Ant. BE SILENT.
ut-ter-ance (*-ans*), *n.* vocal expression; speech.
ut-ter-most (*'ĕr-mōst*), *adj.* extreme; in the furthest, greatest, or highest degree: *n.* the furthest extent or degree.
u-vu-la (*ū'vū-lā*), *n.* the fleshy, conical body attached to the soft palate.
ux-o-ri-ous (*uks-ō'ri-us*), *adj.* foolishly or excessively fond of a wife.
Uzziah (*uz-zī'ā*). From the Hebrew, signifying, the strength of the Lord." Lat., *Uzzias.*

V

va-can-cy (*vā'kan-si*), *n.* state of being vacant or empty; listlessness; open or unoccupied space.
va-cant (*'kant*), *adj.* empty; free from thought or reflection; not occupied.
va-cate (*'kāt*), *v. t.* to make vacant; annul; give up the possession of. [ABOLISH.]
va-ca-tion (*-kā'shun*), *n.* the act of vacating; intermission of a stated employment, or judicial proceedings.
vac-ci-nate (*vak'si-nāt*), *v. t.* to inoculate with vaccine matter.
vac-cine (*'sin*), *n.* a liquid taken from a cow affected with cowpox.
vac-il-late (*vas'il-āt*), *v. i.* to be unsteady; waver.
va-cu-i-ty (*vā-kū'i-ti*), *n.* emptiness.
vac-u-ous (*vak'ū-us*), *adj.* empty; vacant.
vac-u-um (*-um*), *n.* a space devoid of all matter; void.
vag-a-bond (*vag'ā-bond*), *adj.* without fixed habitation; roaming; idle: *n.* a vagrant; scamp.
★**va-ga-ry** (*vā-gā'ri*, not *vā'gā-ri*), *n.* a wild freak; whim.
va-gi-na (*-ji'nā*), *n.* the canal which leads from the external orifice to the uterus; sheath.
va-gran-cy (*vā'gran-si*), *n.* a state of wandering without a settled home; habits and life of a vagrant.
★**va-grant** (*vā'grant*, not *vāg'rant*), *adj.* wandering from place to place: *n.* a tramp.
vague (*vāg*), *adj.* indefinite; unsettled.
vain (*vān*), *adj.* empty; unreal; deceitful; producing no results; conceited.
vain-glo-ri-ous (*-glō'ri-us*), *adj.* elated by one's achievements. [PRIDE.]
vale (*vāl*), *n.* a valley.
val-e-dic-to-ry (*val-ē-dik'tō-ri*), *adj.* bidding farewell. [FAREWELL.]
va-lence (*vā'lens*), *n.* the degree of combining power of an atom.
Valencia (*vā-len'shi-a*, Spanish *vā-lān'thē-ā*). City in Spain, was the ancient *Valentia*, "the powerful."
Valenciennes (*vā-len-si-enz'*, French *vā-lāN-sy-en'*), also **Valenza** and **Valence.** A city of France. Said to have been named after the western Roman emperor, Valentinian.
Valentina (*val-en-tī'nā*). Feminine name derived from *Valentine.*
val-en-tine (*val'en-tin*), *n.* a sweetheart chosen on St. Valentine's day; love missive sent on February 14th.
Valentine. A name derived from St. Valentine, from the Latin *Valentinus*, of, or belonging to *Valentia*, one of the ancient names of Rom[illegible] also of towns in Spain, Italy, and Sardinia, a[illegible] the appellation of a goddess worshipped at O[illegible]ulum in Italy; originally from *valens*, "puissan[illegible] "mighty," "strong." Danish, *Valentin;* Dutch, *entijn;* Fr., *Valentin;* Ger., *Valentin;* It., *Valent[illegible]* Lat., *Valentinus;* Port., *Valentin;* Sp., *Vale[illegible]* Sw., *Valentin.*
Valeria (*vā-lē'ri-ā*). The feminine of *Valeriu[illegible]* *Valerie;* It., *Valerie;* Lat., *Valeriæ.*
Valerian (*vā-lē'ri-an*). From the Latin *vale[illegible]* be strong, healthy." Dutch, *[illegible]erianus;* Fr., *[illegible]lerien;* It., *Valeriano;* Lat., *Valerianus.*
Valerie. See *Valeria.*
val-et (*val'ā*), *n.* a servant who attends on a gen[illegible]man's person: *v. t.* to act as valet to.
val-e-tu-di-na-ri-an (*-ē-tū-di-nā'ri-an*), *adj.* sic[illegible] seeking to recover health: *n.* an invalid.
val-iant (*'yant*), *adj.* brave; heroic.
val-id (*'id*), *adj.* having legal force; not weak or defective.
va-lise (*vā-lēs'*), *n.* a small portmanteau.
val-ley (*val'i*), *n.* [*pl.* valleys (*'iz*)], a tract of lan[illegible] situated between mountains.
Valley Forge. Village in Chester county [illegible]vania, so named because situated at the [illegible] Valley creek, where a forge was erected i[illegible] antedating the Revolution, by Isaac Po[illegible]
val-or (*val'ĕr*), *n.* bravery. [BRAVER[illegible]

[illegible], *adj.* brave.

[illegible]), *adj.* possessing useful qualities; [illegible] or worth: *n.* a thing of value.

[illegible]), *n.* that which renders anything useful or [illegible]able; price: *v. t.* to estimate the worth of; esteem.

Syn. VALUE, prize, esteem. *To value* is to set any *value*, real or suppositious, relative or absolute, on a thing; in this sense men *value* gold above silver, or an appraiser *values* goods. *Prize* and *esteem* are taken only as mental actions; the former in reference to sensible or moral objects, the latter only to moral objects; we may *value* books according to their market price, or we may *value* them according to their contents; we *prize* books only for their contents, in which sense *prize* is a much stronger term than *value*.

Ant. THINK LIGHTLY OF.

valve (*valv*), *n.* a lid or cover opening in one direction and shutting in another.

va-mose (*vȧ-mōs'*), *v. i.* to decamp.

vamp (*vamp*), *n.* the upper leather of a boot or shoe: *v. t.* to furnish with an upper leather.

vam-pire (*vam'pīr*), *n.* a fabled demon or ghost that sucks the blood of persons asleep.

van (*van*), *n.* the front of an army or fleet; a large covered wagon for moving.

Vancouver (*van-kōō'vĕr*). A rising city which forms the western terminus of the Canadian Pacific railway, bears the name of Captain George Vancouver, R. N., who, as a midshipman in Cook's last voyage, visited the coast in 1776, and surveyed it in 1792.

Vancouver Island. Named in memory of Captain Vancouver, a midshipman under Captain Cook, who discovered it in 1792, while cruising about in search of a river on the west coast of North America.

van-dal (*van'dal*), *n.* one who ruthlessly destroys.

vane (*vān*), *n.* a weathercock.

van-guard (*van'gärd*), *n.* the advance guard of an army.

va-nil-la (*vȧ-nil'ȧ*), *n.* the dried fruit of an orchid, used for flavoring.

van-ish (*van'ish*), *v. i.* to disappear. [DISAPPEAR.]

van-i-ty (*'i-ti*), *n.* [*pl.* vanities (*-tiz*)], love of indiscriminate admiration; empty pride or conceit; idle show; emptiness. [PRIDE.]

★**van-quish** (*vang'kwish*, not *van'kwish*), *v. t.* to conquer; subdue.

van-tage (*'tāj*), *n.* advantage; in lawn tennis, the first point after deuce.

va-por (*vā'pĕr*), *n.* steam; mist: *v. i.* to pass off in vapor; bully.

va-por-ize (*vā'pĕr-iz*), *v. t.* to convert into vapor.

va-por-ous (*'pĕr-us*), *adj.* full of, or like, vapor; unreal.

va-ri-a-ble (*'ȧr-i-ȧ-bl*), *adj.* changeable; inconstant; fickle.

va-ri-ance (*'ri-ans*), *n.* difference; quarrel.

va-ri-ant (*'ri-ant*), *adj.* variable; different: *n.* a different form of substantially the same thing.

va-ri-a-tion (*-ri-ā'shun*), *n.* a partial change; difference. [DIFFERENCE.]

var-i-co-cele (*var'i-kō-sēl*), *n.* a swelling of the veins.

var-i-cose (*'i-kōs*), *adj.* abnormally swollen or enlarged.

va-ried (*vā'rid*), *adj.* altered; partially changed; various.

va-ri-e-gate (*vā'ri-ē-gāt*), *v. t.* to mark with different colors.

va-ri-e-ty (*vȧ-rī'e-ti*), *n.* [*pl.* varieties (*-tiz*)], intermixture or succession of different things; diversity. [DIFFERENCE.]

va-ri-o-rum (*vā-ri-ō'rum*), *adj.* noting an edition of a book with the notes of various commentators.

va-ri-ous (*'ri-us*), *adj.* different; several.

var-let (*vär'let*), *n.* formerly a servant, footman, or page; a scoundrel.

var-nish (*'nish*), *n.* a viscid, resinous liquid used for giving a gloss to wood or metal work: *v. t.* to cover with varnish; give a gloss to or over; palliate.

vary (*vā'ri*), *v. t.* to change; make of different kinds; alter: *v. i.* to undergo a change; disagree.

vas-cu-lar (*vas'kū-lĕr*), *adj.* consisting of, or containing, vessels.

vase (*vās* or *vāz*), *n.* a vessel for various purposes.

vas-line (*vas'ē-lin*), *n.* petroleum jelly.

vash-ti. (*vash'-ti*). Feminine name, so called from [illegible], wife of Ahasuerus, signifying "beauty," [illegible]iness."

Vasili. See *Basil*.

vas-sal (*vās'al*), *n.* a feudal tenant; bondman: *adj.* [illegible]vile.

vas-sal-age (*-āj*), *n.* the state of being a vassal; [illegible]ritory held in vassalage.

vast (*vȧst*), *adj.* of great extent; great in number or [illegible]ree; very spacious; immense: *n.* boundless [illegible]ce.

vat (*vat*), *n.* a large tub or vessel.

Vat-i-can (*vat'i-kan*), *n.* the palace of the pope at Rome; the papal authority.

Vatican. A hill of Rome, on the right bank of the Tiber, opposite the Pincian. On it stands St. Peter's and the Vatican palace.

vaude-ville (*vōd'vēl'*), French *vōd-vēl'*), *n.* a light, [illegible]cal song; a short drama with comic [illegible]ied dramatic entertainment.

vault (*vȧlt*), *n.* an arched roof; cellar; prison; cavern; [illegible] *v. t.* to shape as a vault; arch: *v. i.* to [illegible], or bound.

vaunt (*vȧnt* or *vawnt*), *v. i.* to boast: *v. t.* to brag of; display boastfully: *n.* a boast. [GLORY.]

veal (*vēl*), *n.* calf's flesh.

vec-tor (*vek'tĕr*), *n.* a directive quantity, as a straight line, force, or velocity.

Ve-da (*vā'dȧ*), *n.* [*pl.* Vedas (*'dȧz*)], one of the four oldest sacred books or collection of hymns of the Hindus.

veer (*vēr*), *v. i.* to change direction, as the wind; wear: *v. t.* to turn; direct to a different course.

veg-e-ta-ble (*vej'ē-tȧ-bl*), *adj.* pertaining to, having the nature of, produced by, or consisting of, plants: *n.* a plant or root cultivated for the table, etc.

veg-e-ta-ri-an (*-tā'ri-an*), *n.* one who abstains from a meat diet: *adj.* pertaining to vegetarians or vegetarianism.

veg-e-tate (*'ē-tāt*), *v. i.* to grow, as a plant.

veg-e-ta-tion (*-tā'shun*), *n.* plants or vegetables collectively.

veg-e-ta-tive (*'ē-tā-tiv*), *adj.* growing, as plants.

★**ve-he-ment** (*vē'hē-ment*), *adj.* very violent or forcible; passionate. [VIOLENT, EAGER.]

ve-hi-cle (*vē'hi-kl*), *n.* any kind of carriage or conveyance.

ve-hic-u-lar (*-hik'ū-lĕr*), *adj.* pertaining to, or serving as, a vehicle.

veil (*vāl*), *n.* curtain or covering for concealment: *v. t.* to cover with, or as with, a veil; hide, conceal.

vein (*vān*), *n.* one of the vessels which convey blood from the arteries to the heart; branching rib of a leaf; seam of rock filled with metallic or mineral matter; particular disposition, genius, or style: *v. t.* to fill or cover with, or as with, veins.

vein-ous (*vān'us*, not *vē'nus*), *adj.* full of, or provided with, veins.

vel-lum (*vel'um*), *n.* fine parchment.

ve-loc-i-pede (*vē-los'i-pēd*), *n.* a light carriage propelled by the feet.

ve-loc-i-ty (*'i-ti*), *n.* [*pl.* velocities (*-tiz*)], speed; rate of movement.

vel-vet (*vel'vet*), *n.* a silk fabric with short, close, soft nap.

vel-vet-een (*-ēn'*), *n.* imitation velvet.

ve-nal (*vē'nal*), *adj.* mercenary; of, or pertaining to, the veins.

vend (*vend*), *v. t.* to sell.

ven-det-ta (*ven-det'ȧ*), *n.* a kind of blood-feud. [*Italian.*]

ven-dor (*'dȧr*), *n.* the seller. [Also *vender*.]

ve-neer (*vē-nēr'*), *v. t.* to overlay with a thin slice of ornamental or more valuable wood.

ven-er-a-ble (*ven'ĕr-ȧ-bl*), *adj.* worthy of being venerated or reverenced.

ven-er-ate (*'ĕr-āt*), *v. t.* to regard with the highest respect. [ADMIRE.]

ve-ne-re-al (*vē-nē'rē-al*), *adj.* pertaining to, or arising from, sexual intercourse.

Venezuela (*ven-ez-wē'lȧ*, Spanish *vā-neth-wā'lȧ*). A republic of northern South America. Name is the Spanish for "Little Venice," which designation was given to this country owing to the discovery of some Indian villages built upon piles after the manner of the "Silent City" on the Adriatic Sea.

venge-ance (*venj'ans*), *n.* the infliction of pain on another for an injury received.

venge-ful (*'fool*), *adj.* vindictive; retributive.

ve-ni-al (*vē'ni-al*), *adj.* pardonable.

Syn. VENIAL, pardonable. *Venial* is applied to what may be tolerated without express disparagement to the individual, or direct censure; but the *pardonable* is that which may only escape severe censure, but cannot be allowed; garrulity is a *venial* offense in old age; levity in youth is *pardonable* in single instances.

Venice (*ven'is*). It., *Venezia;* Ger., *Venedig*. Is the French name for the city founded on the east coast of Italy by fugitives from the Roman province of Venetia. The word means "blessed."

ven-i-son (*ven'i-zn*), *n.* deer's flesh.

ven-om (*'um*), *n.* poison introduced into the system by a bite or sting; spite. [POISON.]

ven-om-ous (*-us*), *adj.* poisonous; malignant.

★**ve-nous** (*vē'nus*, not *vā'nus*), *adj.* pertaining to veins.

vent (*vent*), *n.* a small opening for the escape of air, etc.; utterance: *v. t.* to give an opening to.

ven-ti-late (*ven'ti-lāt*), *v. t.* to open to the free passage of air.

ven-tri-cle (*'tri-kl*), *n.* a small cavity in an animal body.

ven-tril-o-quism (*-tril'ō-kwism*), *n.* the act or art of speaking as from another source than the voice.

ven-tril-o-quist (*-kwist*), *n.* one who practices ventriloquism.

ven-ture (*'tūr*), *n.* an undertaking of chance or danger: *v. t.* send on a venture: *v. i.* to dare. [HAZARD.]

ven-ue (*ven'ū*), *n.* the place where an action in law is laid.

ve-ra-cious (*vē-rā'shus*), *adj.* truthful.

ve-rac-i-ty (*-ras'i-ti*), *n.* truthfulness; truth. [TRUTH.]

ve-ran-da (*-ran'dȧ*), *n.* a kind of covered balcony or open portico supported by light pillars.

verb (*vĕrb*), *n.* that part of speech which signifies to be, to do, or to suffer.

ver-bal (*vĕr'bal*), *adj.* expressed in words: *n.* a noun derived from a verb.

★**ver-ba-tim** (*vĕr-bā'tim*, not *vĕr-bat'im*), *adv.* word for word.

ver-bi-age (*'bi-āj*) *n.* superabundance of words.

ver-bose (*-bōs'*), *adj.* wordy.

ver-dant (*uĕr'dant*), *adj.* green; inexperienced.

ver-dict (*'dikt*), *n.* the finding of a jury on a trial.

ver-di-gris (*'dȧ-grēs*), *n.* the blue-green substance which forms on copper or brass: used as a pigment.

ver-dure (*'dūr*), *n.* freshness of vegetation.

verge (*vĕrj*), *n.* a rod, mace, etc.; shaft of a column; spindle of a watch-balance; border or limit: *v. i.* to approach or come near something.

ver-i-fi-ca-tion (*ver-i-fi-kā'shun*), *n.* the act of proving to be true; confirmation.

ver-i-fy (*'i-fi*), *v. t.* to prove to be true.

ver-i-ly (*'i-li*), *adv.* in truth.

ver-i-si-mil-i-tude (*-i-si-mil'i-tūd*), *n.* the appearance of truth; probability.

ver-i-ta-ble (*'i-tȧ-bl*), *adj.* true; genuine.

ver-i-ty (*'i-ti*), *n.* [*pl.* verities (*-tiz*)], agreement with fact.

ver-mi-cel-li (*-mi-sel'i*), *n.* a stiff paste or dough of fine flour made into tubes.

ver-mil-ion (*-mil'yun*), *n.* a brilliant red pigment: *v. t.* to color or dye with vermilion.

ver-min (*'min*), *n.* noxious small animals or insects, as rats, fleas.

Vermont. When the French were in possession of the St. Lawrence valley they called the mountains of the southern section *Vertmont*, *vert*, "green," *mont*, "mountain," and the inhabitants of that section in their Declaration of Independence, January 16, 1777, adopted the name for the state. One of the New England states.

ver-nac-u-lar (*-nak'u-lĕr*), *adj.* pertaining to, or characteristic of, one's native country or language: *n.* native idiom.

ver-nal (*'nal*), *adj.* pertaining to the spring.

Veronica (*vē-ron'i-kȧ*). From the Greek word meaning, "true picture." Fr., *Veronique;* It., *Veronica*.

Versailles (*vĕr-sälz'*, French *ver-sä'yi*), **Palace of.** A famous royal palace in the French city of the same name, a great part of which is now occupied by the Museum of French History, consisting chiefly of paintings; but some of the apartments are still preserved with the fittings of a royal residence.

ver-sa-tile (*'sȧ-til*), *adj.* turning with ease from one thing, subject, or opinion to another.

verse (*vĕrs*), *n.* a measured line of poetry.

versed (*vĕrst*), *adj.* skilled; conversant.

ver-si-fi-ca-tion (*vĕr-si-fi-kā'shun*), *n.* the art or practice of composing metrical verses.

★**ver-sion** (*vĕr'shun*, not *vĕr'zhun*), *n.* a translation from one language into another; particular account or description.

ver-te-bra (*'te-brȧ*), *n.* [*pl.* vertebræ (*-brē*)], a single bone of the spinal column.

ver-te-bral (*'tē-brȧl*), *adj.* pertaining to, or forming part of, the vertebræ.

Ver-te-bra-ta (*-brā'tȧ*), *n. pl.* one of the great divisions of the animal kingdom.

ver-tex (*'teks*), *n.* [*pl.* vertices (*'ti-sēz*)], the top, summit, or crown.

ver-ti-cal (*'ti-kal*), *adj.* perpendicular to the plane of the horizon.

ver-ti-go (*'ti-gō*), *n.* giddiness.

verve (*vĕrv*), *n.* the enthusiasm which animates a poet or artist; spirit; energy.

ver-y (*ver'i*), *adj.* real; actual; true: *adv.* extremely.

ves-i-ca-tion (*ves-i-kā'shun*), *n.* the process of raising blisters on the skin.

ves-i-cle (*'i-kl*), *n.* a bladder-like vessel or cavity.

ves-pers (*ves'pĕrz*), *n. pl.* evening songs.

★**ves-sel** (*ves'el*, not *ves'l*), *n.* a utensil for holding something, especially liquids; hollow structure made to float on water; ship; tube or canal in which the fluids of a body are contained.

vest (*vest*), *n.* body garment, usually with short sleeves: *v. t.* to clothe with, or as with, a garment; give fixed right of possession.

ves-tal (*ves'tal*), *adj.* chaste; pure: *n.* a virgin; nun.

vest-ed (*vest'ed*), *adj.* clothed; fixed.

ves-ti-bule (*ves'ti-būl*), *n.* porch or entrance into a house.

ves-tige (*'tij*), *n.* a mark left in passing. [MARK.]

vest-ment (*vest'ment*), *n.* a garment.

ves-try (*ves'tri*), *n.* [*pl.* vestries (*'triz*)], a room in a church where ecclesiastical vestments, etc., are kept.

ves-ture (*'tūr*), *n.* clothing; covering.

Vesuvius (*vē-sū'vi-us*), **Mt.** The only active volcano on the continent of Europe, and the most noted one in the world, situated on the Bay of Naples, Italy. The Italian form is *Vesuvio*, and the French form, *Vesuve;* the word originally meant "emitter of smoke."

vet-er-an (*vet'ĕr-an*), *adj.* long exercised or experienced, especially in military life: *n.* one thus experienced.

★**vet-er-i-na-ry** (*vet'ĕr-i-nȧ-ri*, not *vet'rin-ȧ-ri*), *adj.* pertaining to the art of healing the diseases of domestic animals.

ve-to (*vē'tō*), *n.* the right of stopping or preventing the enactment of a law: *v. t.* to reject by veto.

vex (*veks*), *v. t.* to irritate by small annoyances or provocations. [TEASE.]

vex-a-tion (*-ā'shun*), *n.* the act of vexing.

vex-a-tious (*'shus*), *adj.* causing vexation.

vexed (*vekst*), *adj.* much debated or contested, but not settled.

vi-a-duct (*vī'ȧ-dukt*), *n.* an arched structure for conveying a railway, road, etc., over low ground.

vi-al (*'al*), *n.* a small glass bottle or vessel: *v. t.* to put in a vial.

vi-ands (*vī'andz*), *n. pl.* dressed meat; food.
vi-brate (*'brāt*), *v. i.* to move backward and forward; oscillate: *v. t.* to cause to quiver.
vi-bra-tion (*-brā'shun*), *n.* the act of vibrating; oscillation.
vic-ar (*vik'ĕr*), *n.* a deputy.
vi-ca-ri-ous (*vī-kā'ri-us*), *adj.* substituted, or performed, in the place of another.
vice (*vis*), *n.* immoral practice or habit. [CRIME.]
vice, *prefix* meaning *in place of, second in rank.*
vice-ge-rent (*-jē'rent*), *n.* one deputed by superior authority to exercise the functions of another.
vice-roy (*'roi*), *n.* a governor of a country ruling in the name, and by the authority, of the sovereign.
Vi-chy wa-ter (*vē'shi waw'tĕr*), a mineral effervescent water.
vi-cin-i-ty (*vi-sin'i-ti*), *n.* nearness in place; proximity. [NEIGHBORHOOD.]
vi-cious (*vish'us*), *adj.* characterized by vice or blemish. [ABANDONED.]
vi-cis-si-tude (*vi-sis'i-tūd*), *n.* change.
Vicksburg. City in Mississippi, named for Neivitt Vick, its founder.
★**vic-tim** (*vik'tim*, not *vik'tum*), *n.* a living being sacrificed to a deity; some person or thing destroyed or injured in the pursuit of some object, or by some accident.
vic-tim-ize (*-īz*), *v. t.* to make a victim of. [ABUSE.]
vic-tor (*'tĕr*), *n.* conqueror; one who wins or gains an advantage. [CONQUERER.]
Victoria (*vik-tō'ri-ā*). From the Latin, meaning "victory." Fr., *Victoire;* It., *Vittoria;* Lat., *Victoria;* Sp., *Vitoria.*
vic-to-ri-ous (*-tō'ri-us*), *adj.* having conquered in battle or contest.
vic-to-ry (*'tō-ri*), *n.* [*pl.* victories (*-riz*)], the defeat of an enemy in battle, or an antagonist in a contest.
vict-ual (*vit'l*), *v. t.* to supply or store with provisions for food: *n. pl.* food; meat.
★**vi-cu-ña** (*vē-kōōn'yā*), *n.* an animal of Mexico and Chili, allied to the llama, furnishing a fine long, reddish wool.
vie (*vī*), *v. i.* to strive for superiority; rival.
Vienna (*vi-en'ā*). Ger., *Wien;* Fr., *Vienne.* Capital of Austro-Hungary. Originally, *Vindobona,* a name probably of Celtic origin, meaning either "white castle," or "town of the Wends."
view (*vū*), *v. t.* to look upon; see; survey mentally: *n.* the act of seeing; prospect; purpose; sketch or picture; judgment; opinion.
Syn. VIEW, survey, prospect. We take a *view* or *survey;* the *prospect* presents itself; the *view* is of an indefinite extent; *the survey* is always comprehensive in its nature. Ignorant people take but narrow *views* of things; the capacious mind of a genius takes a *survey* of all nature; our *prospects* are very delusive. Sometimes our *prospects* depend upon our *views;* erroneous *views* of a future state has but a wretched *prospect.*
vig-il (*vij'il*), *n.* a watching; eve preceding a feast of the church.
vig-i-lant (*'i-lant*), *adj.* attentive to discover and avoid danger; alert; cautious. [WAKEFUL.]
vi-gnette (*vin-yet'*), *n.* a portrait of the head and bust only.
vig-or (*vig'ĕr*), *n.* physical or mental strength and energy; force. [ENERGY.]
vig-or-ous (*'ĕr-us*), *adj.* full of physical or mental strength and energy; robust; forcible. [ACTIVE.]
vi-king (*vī'king*), *n.* one of the old Scandinavian pirates.
vile (*vīl*), *adj.* worthless; despicable. [ABANDONED.]
vil-i-fy (*'i-fī*), *v. t.* to defame; debase by slander. [ABUSE.]
vil-la (*'ā*), *n.* a country seat; suburban residence.
vil-lage (*'āj*), *n.* a small assemblage of houses, less than a town but larger than a hamlet.
vil-lain (*'in* or *'ān*), *n.* scoundrel.
vil-lan-age (*'an-āj*), *n.* the state or condition of a serf.
vil-lous (*'us*), *adj.* covered with long, thin, soft hairs.
Vincennes (*vin-senz'*, French *vaN-sen'*). City in Indiana, named from the fort built by Sieur de Vincennes.
Vincent (*vin'sent*). From the Latin name, *Vincentius,* from *vincere,* "to conquer." Dutch, *Vincentius;* Fr., *Vincent;* It., *Vincente;* Lat., *Vincentius;* Port., *Vicente;* Sp., *Vicente* or *Vincente.*
vin-di-cate (*vin'di-kāt*), *v. t.* to defend successfully; assert a right to; justify. [DEFEND, ASSERT.]
vin-di-ca-tion (*-kā'shun*), *n.* justification against denial, censure, or oppression.
vin-dic-tive (*-dik'tiv*), *adj.* given to, or prompted by, revenge.
vine (*vin*), *n.* any woody, climbing plant of the genus Vitis.
vin-e-gar (*vin'ē-gĕr*), *n.* an acid obtained by fermentation from wine, beer, etc.; hence anything sour.
vi-ner-y (*vī'nĕr-i*), *n.* a place where grapes are cultivated artificially.
vine-yard (*vin'yĕrd*), *n.* a plantation of vines producing grapes.
vi-nous (*vī'nus*), *adj.* pertaining to wine.
vin-tage (*vin'tāj*), *n.* the yearly crop or produce of the grape.
vi-ol (*vī'ol*), *n.* a four-stringed musical instrument played with a bow.
vi-o-la (*vī'ō-lā* or *vē-ō'lā*), *n.* the tenor violin.
Viola (*vī'ō-lā*, Italian *vē-ō'lā*). A feminine name derived from the Latin *viola,* "a violet."
Violante. A feminine name derived from the name *Violet.*
vi-o-late (*'ō-lāt*), *v. t.* to transgress; ravish; treat with irreverence. [ABUSE.]
vi-o-la-tion (*-lā'shun*), *n.* the act of violating, infringing, or injuring.
vi-o-lence (*'ō-lens*), *n.* physical or moral force; unjust strength or power applied to any purpose. [FORCE.]
vi-o-lent (*'ō-lent*), *adj.* urged or driven by force.
Syn. VIOLENT, furious, boisterous, vehement, impetuous. A man is *violent* in his opinions, *violent* in his measures, *violent* in his resentments; he is *furious* in his anger, or has a *furious* temper; he is *vehement* in his affections or passions, *vehement* in love, *vehement* in zeal, *vehement* in pursuing an object; *violence* transfers itself to some external object on which it acts with force; but *vehemence* respects that species of *violence* which is confined to the person himself; *impetuosity* is rather the extreme of *violence* or *vehemence;* an *impetuous* character is an excessively *vehement* character. *Boisterous* is said of the manner and the behavior rather than the mind.
Ant. GENTLE, mild, calm, controlled.
vi-o-let (*'ō-let*), *n.* a plant of the genus Viola; a color like that of the violet.
Violet. A feminine name derived from French *violette,* from the Latin *viola.*
Violetta. A diminutive of the name *Violet,* or direct from Italian *Violetta.*
vi-o-lin (*-ō-lin'*), *n.* a four-stringed musical instrument, played with a bow.
vi-o-lon-cel-lo (*vē-ō-lon-chel'ō* or *sel'ō*), *n.* a large four-stringed instrument of the viol class.
vi-per (*vī'pĕr*), *n.* a venomous serpent of various species.
vi-ra-go (*vi-rā'gō*), *n.* a bold, turbulent woman.
Vergil or **Virgil** (*vĕr'jil*). Derived, like the surname *Vergil,* from the bard of Mantua. Angelus Politianus writes the poet's name *Vergilius;* Pierius, *Virgilius.* The name has been variously derived from *Vergiliæ,* the stars called the Pleiades, and from *virga,* "a garland or laurel."
vir-gin (*vĕr'jin*), *n.* a woman who has preserved her chastity; maiden: *adj.* pertaining to, or becoming, a virgin.
Virginia (*vĕr-jin'i-ā*). A Roman name, feminine of *Virginius,* from root of *virgo,* "a virgin." Dutch, *Virginie;* Fr., *Virginie;* Ger., *Virginia;* It., *Virginia;* Lat., *Virginia.*
vir-gin-al (*'jin-al*), *adj.* maidenly; chaste: *n.* a 16th century musical instrument.
vir-ile (*vir'il*), *adj.* pertaining to mature manhood.
vir-tu-al (*vĕr'tū-al*), *adj.* in essence or effect, though not in fact.
vir-tue (*'tū*), *n.* rectitude, strength; efficacy; valor; chastity; legal force.
vir-tu-o-so (*-tū-ō'sō*), *n.* [*pl.* virtuosi (*'sē*)], one skilled in the fine arts, or in antiquities.
vir-tu-ous (*'tū-us*), *adj.* possessing, or exhibiting, virtue.
vir-u-lence (*vir'ū-lens*), *n.* the state or quality of being virulent. [ACRIMONY.]
vir-u-lent (*'ū-lent*), *adj.* very poisonous or venomous; actively injurious to life or health.
vis-age (*viz'āj*), *n.* the countenance.
vis-ce-ra (*vis'ē-rā*), *n. pl.* the intestines.
vis-cid (*'id*), *adj.* sticky.
vis-count (*vī'kount*), *n.* a nobleman next in rank below an earl.
vis-cous (*vis'kus*), *adj.* adhesive.
vise (*vīs*), *n.* a two-jawed instrument for holding work.
vis-i-ble (*viz'i-bl*), *adj.* perceptible by the eye; in view. [APPARENT, PHYSICAL.]
vi-sion (*vizh'un*), *n.* the act or sense of seeing; object of sight.
vi-sion-a-ry (*-ā-ri*), *adj.* existing only in the imagination: *n.* an unpractical schemer.
vis-it (*viz'it*), *n.* the act of calling to see another: *v. t.* to call upon: *v. i.* to be in the habit of making calls.
vis-i-tor (*viz'i-tĕr*), *n.* one who visits. [GUEST.]
vis-or. See *vizor.*
vis-ta (*vis'tā*), *n.* [*pl.* vistas (*'tāz*)], a view.
vis-u-al (*vizh'ū-al*), *adj.* pertaining to sight.
vi-tal (*vī'tal*), *adj.* pertaining to life; essential.
vi-tal-i-ty (*-tal'i-ti*), *n.* vital force.
vi-tal-ize (*'tal-īz*), *v. t.* to endow with life.
vi-tals (*'talz*), *n. pl.* the organs of the body essential to life, as the heart, lungs, etc.
vi-ti-ate (*vish'i-āt*), *v. t.* to render faulty or defective.
vit-i-cul-ture (*vit'i-kul-tūr*), *n.* vine culture.
vitreo, a *prefix* meaning *pertaining to,* or *like, glass,* as *vitreo*-electric, exhibiting positive or vitreous electricity.
vit-re-ous (*vit'rē-us*), *adj.* consisting of, like, or obtained from, glass.
vi-tres-cent (*vi-tres'ent*), *adj.* capable of being turned into, or becoming like, glass.
vit-ri-fy (*vit'ri-fī*), *v. t.* to convert by heat and fusion into glass: *v. i.* to be converted into glass.
★**vit-ri-ol** (*vit'ri-ul*, not *vit'rul*), *n.* the popular name for sulphuric acid.
vi-tu-per-ate (*vī-tū'pĕr-āt*), *v. t.* to censure abusively. [ABUSE.]
vi-va-cious (*vī-vā'shus*), *adj.* lively; gay.
vi-vac-i-ty (*-vas'i-ti*), *n.* liveliness; animation.
vi-va vo-ce (*vī'vā vō'sē*), orally.
Vivian, Vyvian (*viv'i-an*). A Cornish name derived from locality, from *vy-vian,* "the small water." Fr., *Vivien;* Lat., *Vivianus.*
viv-id (*viv'id*), *adj.* lifelike; realistic; forming brilliant images. [CLEAR.]
viv-i-fy (*viv'i-fī*), *v. t.* to endue with life; quicken.
viv-i-sect (*-i-sekt'*), *v. t.* to dissect the living body of.
viz-en (*viks'n*), *n.* a female fox; quarrelsome, ill-tempered woman.
viz. (*viz*), *adv.* namely.
viz-or (*viz'ĕr*), *n.* the upper movable part of a helmet; the forepiece of a cap.
vo-ca-ble (*vō'kā-bl*), *n.* a word; term.
vo-cab-u-la-ry (*-kab'ū-lā-ri*), *n.* [*pl.* vocabularies (*-riz*)], a collection of words of a language, science, etc., arranged alphabetically and explained; words used. [DICTIONARY.]
vo-cal (*vō'kal*), *adj.* pertaining to, full of, or endowed with, voice or speech; oral.
vo-ca-tion (*-kā'shun*), *n.* calling; occupation.
voc-a-tive (*vok'ā-tiv*), *adj.* noting the case of a noun, adjective, or pronoun in which a person or thing is addressed: *n.* the vocative case.
vo-cif-er-ate (*vō-sif'ĕr-āt*), *v. i.* to clamor; bawl: *v. t.* to utter loudly. [CALL.]
vogue (*vōg*), *n.* fashion.
voice (*vois*), *n.* utterance or mode of utterance; faculty of speech; language; expressed opinions: *v. t.* to give utterance or expression to.
void (*void*), *adj.* empty; wanting: *v. t.* to nullify; to emit or send out: *n.* a vacuum.
★**vol-a-tile** (*vol'ā-til*, not *vol'ā-tēl* or *vol'ā-til*), *adj.* easily passing into the aëriform state.
vol-can-ic (*-kan'ik*), *adj.* pertaining to, proceeding from, or produced by, a volcano.
vol-ca-no (*-kā'nō*), *n.* [*pl.* volcanoes (*'nōz*)], a conical hill or mountain from which the products of volcanic action are ejected with great heat in the form of lava, etc.
Volga (*vol'gā*). The greatest European river; bears a name which is from the Old Slavonic *wolkoi* or *wolkoia,* "great."
vo-li-tion (*vō-lish'un*), *n.* the act or power of willing or exerting choice.
vol-plane (*vōl-plāne*), *v. i.,* the act of alighting, like a bird, by gently floating down from a height; said of an aeroplane.
volt (*vōlt*), *n.* standard unit of electro-motive force.
vol-ta-ic (*vol-tā'ik*), *adj.* pertaining to electricity generated by chemical action or galvanism.
vol-u-ble (*'ū-bl*), *adj.* fluent in speech.
★**vol-ume** (*'ūm*), *n.* a single book; space occupied, measured in cubic units; mass or bulk: *pl.* a great deal.
vo-lu-mi-nous (*vō-lū'mi-nus*), *adj.* extensive; copious.
★**vol-un-ta-ri-ly** (*vol'un-tā-ri-li*, not *vol-un-tā'ri-li*), *adv.* spontaneously.
vol-un-ta-ry (*'un-tā-ri*), *adj.* acting from choice or free will: *n.* an organ solo. [GRATUITOUS.]
vol-un-teer (*-un-tēr'*), *n.* one who enters into any service of his own free will: *v. i.* to offer one's services voluntarily: *v. t.* to offer or bestow.
vo-lup-tu-a-ry (*vō-lup'tū-ā-ri*), *n.* one given to sensual enjoyments or luxury: *adj.* devoted to luxury. [SENSUALIST.]
vo-lup-tu-ous (*'tū-us*), *adj.* given to the enjoyment of sensual pleasures or luxury; sensual.
vo-lute (*vō-lūt'*), *n.* a spiral scroll.
vom-it (*vom'it*), *v. i.* to eject the contents of the stomach by the mouth: *v. t.* to throw up from the stomach; discharge with violence.
voo-doo (*vōō-dōō'*), *n.* a system of magic and superstitious rites, said to be accompanied with cannibalism and human sacrifices, prevalent among certain negro races.
vo-ra-cious (*vō-rā'shus*), *adj.* greedy in eating; ravenous. [RAPACIOUS.]
vor-tex (*vôr'teks*), *n.* [*pl.* vortices (*'ti-sēz*)], the hollow and circular form assumed by a liquid when set in rotation; whirlpool.
vo-ta-ry (*vō'tā-ri*), *n.* one addicted to some particular pursuit or condition of life.
vote (*vōt*), *n.* an expression of choice or preference by ballot or other method of suffrage; decision by the majority: *v. t.* to choose by suffrage: *v. i.* to give a vote.
vo-tive (*vō'tiv*). *adj.* given, consecrated, or promised by vow.
vouch (*vouch*), *v. t.* to attest.
vouch-safe (*-sāf'*), *v. t.* to condescend to grant; concede.
vow (*vou*), *n.* a solemn promise or pledge; pledge of fidelity or affection: *v. t.* to promise solemnly: *v. i.* to make a solemn promise.
vow-el (*'el*), *n.* a simple vocal sound; a letter representing such a sound: *adj.* vocal.
voy-age (*voi'āj*), *n.* a journey by water from one country or place to another: *v. i.* to make a voyage: *v. t.* to travel or pass over. [JOURNEY.]
vul-can-ize (*vul'kan-īz*), *v. t.* to change the properties of (india rubber) by combination with sulphur, white lead, and other substances, rendering it hard and nonelastic.
vul-gar (*'gĕr*), *adj.* common; general; unrefined; coarse; mean: *n.* the uneducated or unrefined class.
vul-gar-ism (*-izm*), *n.* a vulgar phrase or expression.
vul-gar-i-ty (*-gar'i-ti*), *n.* coarseness [illegible] or language.
Vul-gate (*'gāt*), *n.* an ancient [illegible] Scriptures in use in the R[illegible]

made originally by St. Jerome: *adj.* pertaining to, or contained in, the Vulgate.

vul-ner-a-ble (*vul'nĕr-ȧ-bl*), *adj.* capable of being wounded; susceptible of wounds or injury.

vul-ture (*'tūr*), *n.* a large, carnivorous, voracious bird of prey.

W

Wabash (*waw'bȧsh*). County in Indiana and Illinois, river flowing through both states, and city in Indiana. From the Indian word *Ouabache*, "cloud borne by an equinoctial wind," or, according to another authority, "white water."

wab-ble. Same as *wobble.*

wad (*wod*), *n.* small mass of tow, etc., used for keeping the powder, etc., in place in a gun; a kind of plumbago: *v. t.* to form into, or stuff with, a wad.

wad-ding (*'ing*), *n.* a soft stuff of loose texture used for stuffing garments, etc.

wad-dle (*'l*), *v. i.* to move from side to side in walking: *n.* a clumsy, rocking gait.

wade (*wād*), *v. i.* to walk through any substance that yields to the feet, as water, snow, etc.: *v. t.* to ford.

wa-fer (*wā'fĕr*), *n.* small disk of unleavened bread used in the Eucharist in the Roman Catholic church.

waf-fle (*wof'l*), *n.* a soft indented cake, baked in an iron utensil over a flame or coals.

waft (*wȧft*), *v. t.* to bear along on a buoyant medium: *v. i.* to float.

wag (*wag*), *v. i.* to move backward and forward: *v. t.* to cause to oscillate: *n.* the act of wagging; a humorous, witty person.

wage (*wāj*), *v. t.* to engage in, or carry on, especially war; venture: *n.* payment for service rendered.

wa-ger (*wā'jĕr*), *n.* a subject on which bets are laid: *v. t.* to hazard; to stake: *v. i.* to bet.

wag-ger-y (*wag'ĕr-i*), *n.* mischievous merriment; tricks of a wag; good-humored sarcasm.

wag-gish (*'ish*), *adj.* humorous, sportive.

wag-gle (*'l*), *v. i.* and *v. t.* to move from side to side: *n.* a movement from side to side.

wag-on (*'un*), *n.* a four-wheeled heavy vehicle for carrying goods, agricultural produce, etc.

waif (*wāf*), *n.* anything found without an owner; a homeless wanderer.

wail (*wāl*), *v. t.* to lament: *v. i.* to express sorrow audibly: *n.* loud lamentation. [Also *wailing.*]

wain (*wān*), *n.* a wagon.

wain-scot (*'skot*), *n.* paneled wooden lining on walls: *v. t.* to line with paneled boarding.

waist (*wāst*), *n.* the narrowest part of the body just below the ribs; middle part.

waist-coat (*wāst'kōt*, colloq. *wes'kut*), *n.* a short, sleeveless men's garment covering the chest and waist.

wait (*wāt*), *v. i.* to stay in expectation; lie in ambush; watch; remain quiet: *v. t.* to await; postpone.

wait-er (*'ĕr*), *n.* a servant in attendance at table; salver or tray. [Fem. *waitress.*]

waits (*wāts*), *n. pl.* nocturnal musicians who perform in the streets of English towns at Christmastide.

waive (*wāv*), *v. t.* to give up a claim to; forego.

wake (*wāk*), *v. i.* to be roused from sleep; cease to sleep; be active: *v. t.* to rouse from sleep; revive; watch: *n.* a vigil.

wake-ful (*'fool*), *adj.* remaining awake.

Syn. WAKEFUL, watchful, vigilant. *Wakefulness* is an affair of the body, and depends upon the temperament; *watchfulness* is an affair of the will, and depends upon the determination; some persons are more *wakeful* than they wish to be; few are as *watchful* as they ought to be. *Vigilance* expresses a high degree of *watchfulness;* a sentinel is *watchful* who on ordinary occasions keeps good *watch;* but it is necessary for him, on extraordinary occasions, to be *vigilant.*

wale (*wāl*), *n.* a mark left by the stroke of a whip, etc.: *v. t.* to mark with a wale.

Wales. A principality of Great Britain in the southwest corner of England. Name derived from *Wealas*, "foreigners," or "Welsh," a name given by the Anglo-Saxon invaders to the natives of Britain. Wales is a plural form denoting the people, which afterward acquired a territorial significance.

walk (*wawk*), *v. i.* to advance by alternate steps; go at a moderate pace: *v. t.* to traverse; cause to walk: *n.* act or manner of walking; place for pedestrian exercise. [CARRIAGE.]

wall (*wawl*), *n.* a structure of stone, brick, etc.; side of a building; rampart; means of protection: *v. t.* to inclose with, or as with, a wall.

Walla Walla (*wol'lȧ wol'lȧ*), **Wash.** The Indian *walawala* means "waving," "throwing up waves," "ripples."

wal-let (*wol'et*), *n.* a bag or knapsack; a pocketbook.

wall-eye (*wawl'-i*), *n.* an eye, the iris of which is white (said of horses).

wall-flow-er (*'flou-ĕr*), *n.* a plant of the genus Cheiranthus with sweet-scented flowers; one who, at a ball or party, takes no part.

Wall of Antoninus. A rampart erected in the southern part of Scotland, in the reign of Antoninus Pius, to check the barbarians in the north of [illegible] tended from the Firth of Forth to [illegible]

[illegible] A people found chiefly in [illegible] tern Belgium, also in the neighboring parts of France, and in a few places in Rhenish Prussia near Malmedy. They are descended from the ancient Belgæ, mixed with Germanic and Roman elements.

wal-lop (*wol'up*), *v. i.* to boil with a continued bubbling: *v. t.* to beat soundly: *n.* a blow.

wal-low (*'ō*), *v. i.* to tumble or roll in anything soft; live in vice or filth: *n.* a place to which an animal resorts to wallow.

wal-nut (*wawl'nut*), *n.* a tree of the genus Juglans, yielding an edible fruit and valuable wood.

wal-rus (*wol'rus*), *n.* a large, carnivorous marine mammal with powerful tusks.

Wall street. A street in the lower part of New York city which extends from Broadway, opposite Trinity church, to the East river, famous as a financial and speculative center. A figurative term for the money power of the country.

Walter. From the Ger. *walt-her*, "powerful lord"; literally, a "wood-master." Dutch, *Wouter;* Fr., *Gautier;* Ger., *Walter;* It., *Gualterio;* Lat., *Gualterus;* Port., *Gualter;* Sp., *Gualterio;* Sw., *Walter.*

waltz (*wawlts*), *n.* a kind of dance; music for such a dance: *v. i.* to dance a waltz.

wam-pum (*wom'pum*), *n.* beads made of shells, used by the North American Indians as money and for ornamental belts.

wan (*won*), *adj.* pale; sickly.

wand (*wond*), *n.* a long, slender rod; staff of authority.

wan-der (*won'dĕr*), *v. i.* to ramble about aimlessly; stroll; depart from; be delirious. [DEVIATE.]

wane (*wān*), *v. i.* to grow less; fail: *n.* the decrease of the illuminated part of the moon. [ABATE.]

want (*wawnt*), *n.* deficiency; necessity; penury: *v. t.* to have need of; desire: *v. i.* to be deficient; come short.

Syn. WANT, need, lack. *To want* is to be without that which contributes to our comfort, or is an object of our desire; *to need* is to be without that which is essential for our existence or our purposes; *to lack* expresses little more than the general idea of being without, unaccompanied by any collateral idea; it is usual to consider what we *want* as artificial, and what we *need* as natural and indispensable.

Ant. HAVE, hold, possess.

wan-ton (*won'tun*), *adj.* licentious; lustful; unrestrained; roving; sportive; luxurious; trifling: *n.* a lascivious man or woman.

war (*wawr*), *n.* a contest between states carried on by force; armed conflict: *v. i.* to fight; strive violently. [MARTIAL.]

war-ble (*wawr'bl*), *v. t.* and *v. i.* to sing in a trilling or quavering manner: *n.* a soft, sweet flow of melodious sounds; carol.

ward (*wawrd*), *v. t.* to guard; defend from danger: *v. i.* to be vigilant; act on the defensive: *n.* defense; particular division of a city or town.

ward-en (*'en*), *n.* a guardian; keeper; head official; churchwarden.

ward-robe (*'rōb*), *n.* portable closet for clothes; wearing apparel.

ware-house (*wâr'hous*), *n.* a building for storing goods: *v. t.* to deposit in a warehouse.

wares (*wârz*), *n.* merchandise; goods.

war-fare (*wawr'fâr*), *n.* hostilities; war; contest; military life or service.

warm (*wawrm*), *adj.* having heat in a moderate degree; subject to heat; zealous; excited: *v. t.* to make warm. [HEARTY.]

warmth (*wawrmth*), *n.* moderate heat; earnestness or irritability.

warn (*wawrn*), *v. t.* to give notice of possible danger; caution; expostulate; summon by authority.

warp (*wawrp*), *n.* the threads which extend lengthwise in the loom, and are crossed by the woof; towing rope: *v. t.* to turn or twist out of shape: *v. i.* to swerve or deviate.

war-rant (*wor'ant*), *v. t.* to guarantee; give assurance to; authorize; maintain; mark as safe: *n.* writ for arresting a person.

war-rior (*wawr'y ĕr, wor'i-ĕr*), *n.* a soldier; fighter.

Warsaw. Formerly *Varsovia* (Polish *Warszawa*), takes its Slavonic name from a "castle," or "fortified place," built in the ninth century by Conrad, duke of the surrounding palatinate of Mazovia. Here originated the mazurek, a dance of the Polish peasantry, which we call the mazurka.

wart (*wawrt*), *n.* a dry excrescence on the human skin and certain animals.

wa-ry (*wā'ri*), *adj.* [*comp.* warier, *superl.* wariest], cautious; circumspect. [CAUTIOUS.]

wash (*wosh*), *v. t.* to cleanse with water; cover with water: *v. i.* to cleanse by washing: *n.* the act of washing; cosmetic lotion.

wash-er (*'ĕr*), *n.* one who, or that which, washes; ring of metal, leather, etc., used to secure the tightness of a joint, screw, etc.

Washington. The name of two places in England, one in Durham, the other in Sussex (Anglo-Saxon *Hwessingatun* and *Wassingatun*), which signifies the *tun*, or "town," of the Hwessings or Wassings. From the Durham village the ancestors of George Washington, the first president of the United States (1789-1797), are believed to have derived their territorial surname. In his honor the city of Georgetown, in Maryland, selected in 1790 for the Federal capital, was renamed *Washington.*

wasp (*wosp*), *n.* a winged insect with a sharp sting; peevish, irritable person.

waste (*wāst*), *v. t.* to destroy wantonly; diminish; squander; impair: *v. i.* to be diminished: *adj.* lying unused; unproductive: *n.* useless expenditure; refuse. [DESTROY, EXCESS.]

waste-ful (*'fool*), *adj.* causing waste; spending property extravagantly or uselessly. [EXCESS.]

watch (*woch*), *n.* close observation; guard; vigilance; sentry; pocket timepiece: *v. i.* to keep guard: *v. t.* to tend; keep in view. [GUARD, OBSERVE.]

watch-ful, *adj.* vigilant. [WAKEFUL.]

watch-word (*'wĕrd*), *n.* a password.

★**wa-ter** (*waw'tĕr*, not *wot'ĕr*), *n.* a colorless, inodorous, transparent fluid; rain; sea; any collection of water: *v. t.* to supply with water; irrigate.

wa-ter-man, *n.* boatman. [SEAMAN.]

Watervliet (*waw-tĕr-vlēt'*). City on the Hudson, in Albany county, New York. From the Dutch, meaning "flowing stream."

wa-ter-y (*'tĕr-i*), *adj.* pertaining to, or like, water; transparent or thin; tasteless; tearful.

watt (*wot*), *n.* an electrical unit of power.

wat-tle (*'l*), *n.* a twig or flexible rod; fleshy lobe under the throat of a fowl, turkey: *v. t.* to twist or interweave (twigs or rods) one with another.

waul (*wawl*), *n.* the cry of a cat.

wave (*wāv*), *n.* the alternate rising and falling of water above its natural level; state of vibration propagated through a system of particles or elastic medium: *v. i.* to move like a wave: *v. t.* to brandish; beckon.

Syn. WAVE, billow, surge, breaker. Those *waves* which swell more than ordinarily are termed *billows;* those *waves* which rise higher than usual are termed *surges;* those *waves* which dash against the shore, or against vessels, with more than ordinary force, are termed *breakers.*

wav-er (*'ĕr*), *v. i.* to move to and fro; vacillate; hesitate or be undetermined. [FLUCTUATE.]

wav-y (*'i*), *adj.* rising and swelling in waves; full of waves; undulating.

wax (*waks*), *n.* beeswax; any tenacious substance like beeswax: *v. t.* to smear, rub, or join, with wax.

wax-en (*'en*), *adj.* made of, like, or consisting of, wax.

wax-y (*'i*), *adj.* consisting of, or like, wax; adhesive.

way (*wā*), *n.* a road; route; progression; motion; course; manner.

way-lay (*'lā*), *v. t.* to beset by the road or in ambush.

way-ward (*'wĕrd*), *adj.* perverse; froward. [PERVERSE.]

we (*wē*), *pron. pl.* of I.

weak (*wēk*), *adj.* wanting strength, vigor, spirit, discernment, or wisdom.

Syn. WEAK, feeble, infirm. We may be *weak* in body or mind; but we are commonly *feeble* and *infirm* only in the body; we may be *weak* from disease, or *weak* by nature, it equally conveys the gross idea of a defect; but the terms *feeble* and *infirm* are qualified expressions for weakness; an old man is *feeble* from age; the latter may likewise be *infirm* in consequence of sickness. [See *faint.*]

weal (*wel*), *n.* welfare; prosperity.

wealth (*welth*), *n.* riches; affluence.

wealth-y (*'i*), *adj.* [*comp.* wealthier, *superl.* wealthiest], rich; affluent.

wean (*wēn*), *v. t.* to accustom and reconcile to a want or deprivation of the breast; alienate, as the affections from any object or habit.

weap-on (*wep'n*), *n.* any instrument of offense or defense.

wear (*wâr*), *v. t.* [*p. t.* wore, *p. p.* worn, *p. pr.* wearing], to impair or waste by time, usage, friction, etc.: carry as covering on the body: *v. i.* to last under use: *n.* the act of wearing.

wea-ri-some (*wē'ri-sum*), *adj.* fatiguing; tedious.

wea-ry (*'ri*), *adj.* [*comp.* wearier, *superl.* weariest], worn out physically or mentally; irksome: *v. t.* to harass by something irksome: *v. i.* to become weary, tired, or fatigued. [FAINT, FATIGUE.]

wea-sel (*'zel*), *n.* a small carnivorous animal with short legs and a long body.

weath-er (*weth'ĕr*), *n.* the state of the atmosphere with respect to cold, heat, wet, dryness, etc: *v. t.* to expose to, or season by exposure to, the air.

weath-er-cock (*-kok*), *n.* a vane.

weave (*wēv*), *v. t.* to twist or interlace, as threads, together; compose or fabricate: *v. i.* to practice weaving; work with a loom.

wea-zen (*wē'zn*), *adj.* sharp and thin; withered.

web (*web*), *n.* texture of threads, or threadlike materials; tissue or texture: *v. t.* to unite or surround with, or as with, a web; entangle.

wed (*wed*), *v. t.* [*p. t.* and *p. p.* wedded or wed, *p. pr.* wedding], to marry; unite together: *v. i.* to contract marriage. [ADDICTED.]

wed-ding (*'ing*), *n.* marriage; nuptial ceremonies or festivities.

wedge (*wej*), *n.* a piece of wood or metal, thick at one end and thin at the other, used for rending or compressing, etc.: *v. t.* to cleave, force, drive, or fasten, with a wedge.

wed-lock (*wed'lok*), *n.* matrimony.

Wednesday. The fourth day of the week. Formerly the day set apart for the worship of Odin, or Wodin, the norse All-Father, father of gods and men.

wee (*wē*), *adj.* very small.

weed (*wēd*), *n.* any plant growing uncultivated or noxious to cultivated crops: *v. t.* to free from weeds.

weed-y (*wēd'i*), *adj.* pertaining to, or consisting of, weeds; long-legged, thin, and lank.

Weehawken (*wē-haw'ken*), **N. J.** Named from the Delaware Indian name *weachin*, "maize lands."

week (*wēk*), *n.* a period of seven days.

week-day (*-dā*), *n.* any day of the week except Sunday.

week-ly (*'li*), *adj.* continuing for, produced within, or happening in, a week: *adv.* once a week: *n.* [*pl.* weeklies (*'liz*)], a periodical issued once a week.

ween (*wēn*), *v. i.* to think, fancy.

weep (*wēp*), *v. i.* to express grief by shedding tears: *v. t.* to lament; pour forth. [CRY.]

weft (*weft*), *n.* the woof or piling of cloth crossing the warp.

weigh (*wā*), *v. t.* to ascertain the weight of; reflect on carefully: *v. i.* to have weight; bear heavily: *n.* a certain quantity by weight.

weight (*wāt*), *n.* gravity; quantity of matter as ascertained by the balance; pressure; power; importance.

Syn. WEIGHT, burden, load. A person may sink under the *weight* that rests upon him; a platform may break down from the *weight* upon it; a person sinks under his *burden* or *load*; a cart breaks down from the *load*.

Ant. LIGHTNESS.

weight-y (*'i*), *adj.* [*comp.* weightier, *superl.* weightiest], heavy; ponderous; momentous; important.

weir (*wēr*), *n.* a dam across a stream to raise the level of the water; inclosure of twigs, etc., for catching fish.

weird (*wērd*), *adj.* pertaining to, or connected with, fate or destiny; supernatural.

wel-come (*wel'kum*), *adj.* received with gladness or hospitality: *n.* kind reception to a guest or newcomer: *v. t.* to salute with kindness. [ACCEPTABLE.]

weld (*weld*), *v. t.* to unite together by hammering or fusion, as two pieces of heated iron.

wel-fare (*wel'fâr*), *n.* prosperity; happiness.

wel-kin (*'kin*), *n.* the sky.

well (*wel*), *n.* a spring or fountain; shaft sunk to reach a supply of water or other liquid: *v. i.* to flow or issue forth: *adv.* right; justly; favorably: *adj.* fortunate; sound in body; healthy; safe.

well-be-ing (*-bē'ing*), *n.* well-conditioned existence; moral or physical welfare.

well-bred (*'bred*), *adj.* refined in manners; cultivated.

Wellsburg, W. Va. Named in honor of Alexander Wells, an early settler.

Welsh (*welsh*), *adj.* pertaining to Wales, its inhabitants, or language: *n.* the people of Wales collectively; the language of Wales.

Welsh rab-bit (*rab'it*), melted cheese mixed with ale and condiments spread upon toast.

welt (*welt*), *n.* a narrow strip of leather around a shoe between the upper leather and sole: *v. t.* to furnish with a welt.

wel-ter (*wel'tĕr*), *v. t.* to roll in mud or foul matter; wallow: *v. t.* to cause to rise and fall, as waves: *n.* that in which any person or animal welters: *adj.* pertaining to, or noting, the most heavily weighted race of a meeting.

wen (*wen*), *n.* a fleshy and movable tumor.

wench (*wench*), *n.* a young girl or maiden: usually in an invidious or bad sense.

wend (*wend*), *v. i.* to go; pass: *v. t.* to direct (one's way or course).

Wes-ley-an-ism (*wes'li-an-izm*), *n.* the doctrines and church polity of the sect of Arminian Methodists, founded by John Wesley, 1739; Methodism.

west (*west*), *n.* one of the 4 cardinal points, exactly opposite the east; point where the sun appears to set: *adv.* toward the west.

west-ern (*west'ĕrn*), *adj.* tending to, or passing toward, the west.

Western Reserve, The. When, by the treaty of 1783, Great Britain relinquished the territory south of the Great Lakes and east of the Mississippi river, disputes arose among the states of Virginia, New York, Massachusetts, and Connecticut as to the right of occupancy in that locality. The difficulty was finally settled by the cession of the whole to the federal government, but Connecticut reserved a tract of nearly 4,000,000 acres on Lake Erie. That state finally disposed of this in small lots to colonists, and so accumulated a magnificent school fund.

Westminster hall. A structure adjoining the British houses of Parliament on the west, forming part of the ancient palace of Westminster.

Westminster palace, London. The houses of Parliament. A palace is supposed to have existed at Westminster in the reign of Canute (1017-35). Its importance, however, begins with Edward the Confessor (1042-66), and the name has been conferred upon the great legislative edifice of the British empire.

West Virginia. See *Virginia* for the word *Virginia*; the western division of Virginia separated from the eastern, owing to civil war issues, as provided in amnesty proclamation of President Lincoln, December 8, 1863, affecting section of states in rebellion. It was proposed at one time to call the state *Kanawha*, from its principal river.

west-ward (*'wĕrd*), *adv.* toward the west. [Also *westwards*.]

wet (*wet*), *v. t.* to make wet, with water or some other liquid: *n.* water; moisture: *adj.* containing, consisting of, or soaked with, water or some other liquid; very damp; rainy or misty.

wet nurse (*wet''nûrs*), a nurse who suckles the child of another.

Wetterhorn (*vet'tĕr-hôrn*). A mountain of the Bernese Alps, canton of Bern, Switzerland, situated near Grindelwald, fourteen miles east-southeast of Interlaken. Means, literally, "storm peak."

Wettin (*vet-tēn'*). A town in the province of Saxony, Prussia, situated on the Saale, thirty-two miles northwest of Leipzig. It contains the ancestral castle of the Saxon line of *Wettin*, from which King Edward VII. of England is descended.

whack (*hwak*), *n.* a smart resounding blow; large piece: *v. t.* to strike with a smart resounding blow.

whale (*hpāl*), *n.* a large mammal of the Cetacea, many species of which yield oil and whalebone; a fish of great size.

wharf (*hwawrf*), *n.* [*pl.* wharfs (*hwawrfs*), or wharves (*hwawrvz*)], a quay or erection on the shore of a harbor, river, etc., for discharging or taking in cargoes, passengers, etc.

what (*hwot*), *pron.* that which; the thing that; how great; something: *adj.* of what sort, character, etc.

what-not (*'not*), *n.* an article of furniture with shelves for books, ornaments, etc.

wheat (*hwēt*), *n.* an annual cereal grain from which flour is manufactured.

wheat-en (*'n*), *adj.* made of wheat.

whee-dle (*hwē'dl*), *v. t.* to entice with flattering words; cajole; coax.

wheel (*whēl*), *n.* a circular frame or solid piece of wood or metal turning on its own axis: *v. t.* to cause to rotate: *v. i.* to turn on, or as on, an axis.

Wheeling. City in West Virginia, so named because the Indians placed the head of a white victim on a pole and gave the place the name of *weal-ink*, "a place of a human head." The present name of the place is a corruption of the Indian name.

wheel-wright (*'rit*), *n.* a maker of wheels and wheeled carriages.

wheeze (*hwēz*), *v. i.* to breathe hard and audibly: *n.* a puffing or blowing, as in labored breathing.

whelm (*hwelm*), *v. t.* to overwhelm.

whelp (*hwelp*), *n.* the young of a dog, lion, fox, etc.; cub: *v. i.* to bring forth young.

when (*hwen*), *adv.* at, or after, the time that; at what time; although.

whence (*hwens*), *adv.* from what place, source, or origin; how.

where (*hwâr*), *adv.* at which place or places; whither.

where-as (*-az'*), *adv.* when in fact or truth; since.

where-fore (*'fôr*), *adv.* for which or what reason; why.

whet (*hwet*), *v. t.* [*p. t.* and *p. p.* whetted, *p. pr.* whetting], to sharpen, especially by rubbing or friction; stimulate.

wheth-er (*hweth'ĕr*), *pron.* which of two: *conj.* which of two alternatives (followed by *or*).

whet-stone (*hwet'stōn*), *n.* a stone for sharpening edged tools, etc.

whey (*hwā*), *n.* the thin, sweet, watery part of milk, after separation from the curd.

★**which** (*hwich*, not *wich*), *pron.* a word of interrogation in all genders; the relative serving as the neuter of *who*.

whiff (*hwif*), *n.* a sudden breath of air, smoke, etc., as from the mouth; light puff: *v. t.* to puff or emit in whiffs.

whif-fle-tree. Same as *swingletree*.

Whig (*hwig*), *n.* one of a political party in the United States that favored a protective tariff, and was succeeded by the present Republican party: *adj.* pertaining to Whigs.

while (*hwil*), *n.* space of time; duration: *conj.* during the time that: *v. t.* to cause to pass; spend: usually followed by *away*.

whim (*hwim*), *n.* a capricious fancy; freak; notion.

whim-per (*'pĕr*), *v. t.* to utter in a low, whining, or crying tone: *v. i.* to cry with a low, whining, broken voice.

whim-si-cal (*'zi-kal*), *adj.* full of whims, fantastical; odd in appearance. [FANCIFUL.]

whine (*hwin*), *v. i.* to express sorrow by a plaintive cry; murmur in an unmanly manner: *n.* a plaintive tone.

whin-ny (*hwin'i*), *v. i.* to utter a sound like the cry of a horse: *n.* the act of whinnying: *adj.* abounding in whin, or furze.

whip (*hwip*), *v. t.* to strike or punish with a lash; flog; lash with sarcasm: *v. i.* to move nimbly: *n.* an instrument for driving horses or for correction.

whip-poor-will (*hwip'-poor-wil*), *n.* a small American bird, named from its cry.

whir (*hwĕr*), *v. i.* to revolve quickly with a whizzing noise: *n.* a whizzing noise.

whirl (*hwĕrl*), *v. t.* to turn round rapidly: *v. i.* to turn or move round with velocity: *n.* rapid rotation.

whirl-i-gig (*'i-gig*), *n.* a child's toy which is whirled or spun round.

whirl-pool (*'pōōl*), *n.* a body of water moving with a circular motion, forming a vortex or gulf.

whirl-wind (*'wind*), *n.* a violent wind moving spirally; sudden violent rush.

★**whisk** (*hwisk*, not *wisk*), *v. t.* to sweep or stir rapidly; move, or carry off, nimbly: *v. i.* to move rapidly and nimbly: *n.* the act of whisking.

whisk-ers (*'ĕrz*), *n. pl.* the hair on a man's cheeks; the bristly hairs on the upper lip of a cat, etc.

whis-ky (*hwis'ki*), *n.* an intoxicant distilled from barley, rye, etc. [Also *whiskey*.]

whis-per (*hwis'pĕr*), *v. i.* to speak in a low voice: *v. t.* to say under the breath: *n.* a low, soft tone of voice, audible only to the listener.

whist (*hwist*), *n.* a card game: *interj.* hush!

whis-tle (*hwis'l*), *v. i.* to make a shrill sound by forcing the breath through the contracted lips: *v. t.* to call or signal by a whistle: *n.* small wind instrument.

whit (*hwit*), *n.* the smallest particle.

white (*hwit*), *adj.* being without color, hence pure; innocent: *n.* a white man; albumen of an egg.

white-cap (*'kap*), *n.* a redstart; one of a self-constituted tribunal of persons who visit the houses of offenders against morality and punish them by whipping.

Whitechapel. A quarter in the eastern part of London, named from a certain chapel from which distances out of London used to be measured.

Whitehall. In modern London, the main thoroughfare between Trafalgar square and the houses of Parliament.

Whitehall palace. A palace in London, England, originally built by Hubert de Burgh in the reign of Henry III.

White House, The. The official residence of the president of the United States in Washington. It is a handsome mansion in the English Renaissance. Its classical details are sober and well designed, both outside and inside.

white lie (*'lī*), pious fraud.

white-liv-ered (*'liv-ĕrd*), *adj.* cowardly.

White mountains, N. H. Named from the color of the tops; being covered with snow (white), this has always been the groundword of various appellations. The first English explorers (1632) called them the *Crystal hills*. The Indian name was *Waumbekket*.

whit-en (*'en*), *v. t.* to make white; blanch.

White Sea. An arm of the Atlantic Ocean: so called from its proximity to the sterile regions of snow and ice.

white-wash (*whīt'wosh*), *n.* a composition for whitening ceilings, etc.: *v. t.* to whiten with whitewash.

whith-er (*hwith'ĕr*), *adv.* to what place; to what; how far.

Whitney. Loftiest peak of the Sierra Nevadas, named for Prof. J. D. Whitney, state geologist of California.

Whit-sun (*'sun*), *adj.* pertaining to, or observed at, Whitsuntide, or the season of Pentecost.

Whit-sun-day (*'sun-dā*), *n.* the seventh Sunday after Easter, commemorating the day of Pentecost.

whit-tle (*hwit'l*), *v. t.* to cut, dress, or sharpen with a knife.

whiz (*hwiz*), *v. i.* to make a humming or hissing noise: *n.* a humming or hissing noise.

who (*hōō*), *pron.* referring to one or more persons: used relatively and interrogatively.

who-ev-er (*-ev'ĕr*), *pron.* every one who; whatever person.

★**whole** (*hōl*, not *hŏl*), *adj.* containing all; complete; not defective; hale and sound; unbroken.

Syn. WHOLE, entire, complete, total, integral. *Whole* excludes subtraction; *entire* excludes division; *complete* excludes deficiency; a *whole* orange has had nothing taken from it; an *entire* orange is not yet cut; and a *complete* orange is grown to its full size; *total* is the opposite of partial; *integral* is applied now to parts or numbers not broken.

Ant. PART, division, share, portion.

whole-sale (*'sāl*); *n.* sale of goods by the piece or in large quantity: *adj.* buying or selling in large quantities.

whole-some (*'sum*), *adj.* sound; salubrious; salutary. [HEALTHY.]

whom (*hōōm*), *pron. objective* of who.

whoop (*hōōp*), *v. i.* to utter a loud, shrill, and prolonged cry; shout: *n.* a loud shout of, or as of, pursuit or attack.

★**whoop-ing-cough** (*hōōp'ing-kôf*, not *hoop'ing-*) *n.* a violent, convulsive cough, characterized by its whooping sound.

whop-per (*hwop'ĕr*), *n.* something unusually large; a monstrous lie.

whorl (*hwĕrl* or *hwôrl*), *n.* any set of organs or appendages arranged in a circle round an axis, as flowers or leaves.

whor-tle-ber-ry (*hwĕr'tl-ber-i*), *n.* a small shrub and its edible blue fruit.

whose (*hōōz*), *pron. poss.* of who or which.

why (*hwī*), *adv.* for what cause, reason, or purpose: *interj.* used emphatically: *n.* the reason or cause.

wick (*wik*), *n.* the cotton or substance of a candle or lamp which supplies the flame.

wick-ed (*'ed*), *adj.* evil in principle or practice; sinful; immoral; roguish.

Syn. WICKED, iniquitous, nefarious. It is *wicked* to deprive another of his property unlawfully, under any circumstances; but it is *iniquitous* if it be done by fraud and circumvention; and *nefarious* it if involves any breach of trust.

Ant. RIGHTEOUS, upright, moral, noble.

wick-er (*'ĕr*), *n.* a pliant osier: *adj.* made of plaited osiers.

wick-et (*'et*), *n.* a small gate; the three upright stumps in cricket at which the ball is bowled.

wide (*wīd*), *adj.* extended far each way; broad; vast: *adv.* to a great distance; far apart: *n.* a ball bowled outside the bowling crease. [LARGE.]

wid-en (*wīd'en*), *v. t.* to make wide; throw open: *v. i.* to enlarge.

★**wid-ow** (*wid'ō*, not *wid'u*), *n.* a woman bereaved of her husband and remaining unmarried.

wid-ow-er (*-ĕr*), *n.* a man bereaved of his wife and remaining unmarried.

width (*width*), *n.* extent of a thing from side to side.

wield (*wēld*), *v. t.* to use or employ with the hand; control or sway; handle.

wife (*wif*), *n.* [*pl.* wives (*vīvz*)], a woman united in lawful wedlock to a ma i.

wig (*wig*), *n.* false hair worn on the head.

wig-gle. Same as *wriggle.*

wight (*wīt*), *n.* a human being.

wig-wag (*wig'wag*), *n.* a signaling flag: *v. t.* and *v. i.* to wave to and fro.

wig-wam (*wig'wawm*), *n.* an Indian hut.

wild (*wild*), *adj.* living in a state of nature; untamed; passionate; unreasonable; reckless: *n.* a desert. [ABSURD.]

wild-cat (*wild'kat*), *adj.* unsafe; speculative; running without control.

wil-der-ness (*wil'dĕr-nes*), *n.* a region or tract of land uncultivated and uninhabited; desert.

wile (*wīl*), *n.* a sly artifice; trick: *v. t.* to cause to pass pleasantly; cajole. [PRETENSE.]

Wilford. A name corrupted from *Wilfred.*

Wilfred, Wilfrid. This name has been translated "much peace," or "resolute peace," but the name is rather from *viel-frid*, "powerful protector."

Wilhelm. See *William.*

Wilhelmina (*vil-hel-mē'nä*). A feminine name derived from the German name *Wilhelmine*, from *Wilhelm.*

Wilhelmine (*wil'hel-mēn'*, German *vil-hel-mē'-nē*). A feminine name derived from *Wilhelm.* It., *Guglielma.*

Wilkesbarre (*wilks'bar-i*). City in Luzerne county, Pennsylvania, named for two members of the British Parliament, American sympathizers, John Wilkes and Colonel Barre.

will (*wil*), *n.* the faculty of the mind by which one chooses or determines; legal disposition of one's property at death: *v. i.* to decree: *v. t.* to determine in the mind.

Syn. WILL, wish. We can *will* nothing but what we can effect; we may *wish* for many things which lie above our reach.

Ant. DEPRECATE.

William. A name corrupted from the Old German name *Wilhelm*, derived from *weil-helm*, "protector of rest," "defender of tranquillity," or *vil-helm*, "strong protector." Danish, *Wilhelm;* Dutch, *Willem;* Fr., *Guillaume;* Ger., *Wilhelm;* It., *Guglielmo;* Lat., *Gulielmus, Wilhelmus*, or *Willielmus;* Sp., *Guillermo;* Sw., *Wilhelm.*

Willamette (*wil-ä'met*). River in Oregon. Indian word said to have originally been *Wallamet*, derived from the same root as *Walla Walla* and *Wallula;* when applied to water, meaning "running." Another authority gives its definition as "the long and beautiful river."

Willimantic (*wil-li-man'tik*). River, and a city in Windham county, Connecticut. Indian word, meaning a "good lookout," or, according to another authority, "good cedar swamps."

will-ing (*'ing*), *adj.* inclined to do or grant; complying; spontaneous; voluntary.

will-ing-ly (*-li*), *adv.* in a willing manner; voluntarily; cheerfully.

Wilmington. City in Delaware, the present name a corruption of the name *Willington*, given it in honor of Thomas Willing.

Wilmington, N. C. Named in honor of the earl of Wilmington, England; orginally called *Newton.*

Wil-ton car-pet (*wil'tun kär'pet*), a kind of carpet manufactured in England.

wi-ly (*wi'li*), *adj.* cunning; crafty.

wim-ple (*wim'pl*), *n.* a kind of silk or linen head-covering formerly worn by women.

win (*win*), *v. t.* [*p. t.* and *p. p.* won, *p. pr.* winning], to gain by superiority in a contest or competition: *v. i.* to be successful; triumph. [PERSUADE.]

wince (*wins*), *v. i.* to twist or turn as in pain or uneasiness; shrink; kick: *n.* the act of wincing.

winch (*winch*), *n.* the crank of a wheel or axle.

wind (*wind*), *n.* air in perceptible motion; breath; idle words: *v. t.* render scant of breath: *v. i.* (*wind*) to turn round something; twist; meander: *v. t.* to coil or encircle.

wind-fall (*'fawl*), *n.* fruit blown down by the wind; unexpected good fortune.

wind-ing sheet (*wind'ing shēt*), a cerecloth.

wind-lass (*wind'las*), *n.* a horizontal cylinder or roller by means of which heavy weights, etc., are raised.

★**win-dow** (*win'dō*, not *win'du*), *n.* an aperture, usually glazed, in a building to admit light; frame in such an opening; anything resembling a window.

wind-pipe (*wind'pīp*), *n.* the trachea.

Windsor (*win'zŏr*). A contraction of the Anglo-Saxon name *Windlesofra, Windelsora, Wendelsore*, or *Windelesore*, is usually explained as the place by the "winding shore."

Windsor castle. A famous royal residence, founded by William the Conqueror, extended by his successors, especially by Edward III., and restored by Queen Victoria as a memorial of her husband. The interior is decorated in so lavish a manner that it forms one of the most remarkable existing examples of such work.

wind-ward (*wind'wĕrd*), *n.* the direction from which the wind blows: *adv.* toward the wind: *adj.* on the side toward the point from which the wind blows.

wind-y (*wind'i*), *adj.* [*comp.* windier, *superl.* windiest], pertaining to, like, or consisting of, wind; boisterous; windward; flatulent.

wine (*win*), *n.* liquor made from the juice of certain fruits.

wing (*wing*), *n.* one of the two anterior limbs of a bird, or insect, by which it flies: *v. t.* to furnish with, or as with, wings: *v. i.* to fly.

Winifred (*win'i-fred*). A feminine name, which some consider a Saxon compound signifying "winning peace"; it comes rather from the Old German *win-frid*, "beloved protector." Dutch, *Winfried;* Fr., *Winifred;* Lat., *Winfreda;* Sw., *Winfrid.*

wink (*wingk*), *v. i.* to close and open the eyelids with a quick motion: *n.* act of winking; hint given.

Winnepesaukee (*win-ē-pē-saw'kē*). Lake in New Hampshire. Indian word *winnepesaukee*, meaning "good water discharge," or "the beautiful lake of the highland."

Winnipeg (*win'i-peg*) **city.** The capital of the Canadian province of Manitoba; is built on a spit at the junction of the Red river and the Assiniboine, whose united waters after a course of forty-five miles reach Lake Winnipeg, which bears an Algonquin name meaning "the muddy water," the water being discolored by the Saskatchewan, which brings down much clay in solution.

win-now (*win'ō*), *v. t.* to separate and drive the chaff from (grain) by the wind; fan; sift or examine: *v. i.* to separate chaff from grain.

Winona (*wi-nō'nä*), **Minn.** A Dakota name applied to the first born, if a daughter, hence, "first born." If a boy, he is spoken of as *Chaske.*

Winooski (*wi-nōōs'ki*) **river, Vt.** Composed of two Algonquin words meaning "land of onions." The stream is often called the *Onion river*, also *French river*, the latter term from the circumstance of this valley being the line of travel of the French and Indians (1755).

win-some (*win'sum*), *adj.* attractive; pretty.

win-ter (*'tĕr*), *n.* the cold season of the year: *v. i.* to pass the winter; hibernate: *v. t.* to feed or maintain during the winter.

Winter palace. An imperial palace at St. Petersburg, Russia. The interior is remarkable for its series of Russian historical paintings and portraits, and for the splendid state apartments. The crown jewels are kept in this palace.

win-ter sol-stice (*'tĕr sol-stis*), the solstice when the sun enters Capricorn, about December 21.

wipe (*wīp*), *v. t.* to rub or dust the surface of with something soft; dry by rubbing: *n.* act of cleansing by rubbing.

wire (*wīr*), *n.* a metallic thread of uniform diameter: *v. i.* and *v. t.* to send a telegram.

wire-less (*'les*), *adj.*, without wires; not using wires, as *wireless telegraphy.*

wire-less te-leg-ra-phy (*wīr'les tē-leg'rä-fi*), any form of telegraphic communication effected by means of electricity without the use of wire circuits.

wire-less te-leph-o-ny (*tē-lef'ō-ni*), telephonic communication without the use of wire circuits.

wire-pull-ing (*'pool-ing*), *n.* secret influence or intrigue, especially for political purposes.

wir-y (*'i*), *adj.* made of, or like, wire; strong and flexible; lean and sinewy.

Wisby or **Visby** (*vēs'bü*). A famous old town on the west coast of the island of Gotland, Sweden. It contains a cathedral and ruined churches, towers, and walls.

Wisconsin (*wis-kon'sin*). From its principal river named by Marquette as *Masconsin*, "wild rushing channel," changed to *Ouisconsin*, then to *Wisconsin.* Present spelling from a misprint; all the early French documents have *Ouisconsing* or *Misconsing.*

wis-dom (*wiz'dum*), *n.* knowledge practically applied to the best ends; natural sagacity; prudence.

Syn. WISDOM, prudence. *Wisdom* directs all matters present or to come; *prudence*, which acts by foresight, directs what is to come. Rules of conduct are framed by *wisdom*, and it is the part of *prudence* to apply these rules to the business of life.

Ant. FOLLY, recklessness, rashness.

wis-dom tooth (*tōōth*), the name popularly given to the third molar in each jaw, appearing between the ages of 17 and 25.

wise (*wiz*), *adj.* possessing wisdom; skillful; learned; discreet.

wise-a-cre (*'ä-kĕr*), *n.* a would-be wise person; pretender to learning.

wish (*wish*), *v. i.* to have a strong desire: *v. t.* to desire or long for: *n.* strong or eager desire. [WILL, DESIRE.]

wish-ing bone (*'ing bōn*), the merrythought. [Also *wishbone.*]

wisp (*wisp*) *n.* a handful or small bundle, as of straw or hay.

Wissahickon (*wis-sä-hik'on*) **creek, Pa.** From the Delaware Indian word *misamękhan*, "catfish stream."

wist-ful (*wist'fool*), *adj.* sadly longing; pensive.

wit (*wit*), *v. i.* to know: *n.* knowledge; sagacity; talent; ingenuity; humorist. [INGENUITY.]

witch (*wich*), *n.* a woman supposed to have formed a compact with evil spirits, by whose means she possessed supernatural powers; sorceress; fascinating young woman: *v. t.* to bewitch; enchant.

witch-er-y (*'ĕr-i*), *n.* witchcraft; fascination.

witch-ha-zel (*wich'hä-zl*) *n.* a shrub or small tree of the genus Hamamelis.

Witenagemote (*wit'ē-nä-gē-mōt*). In Anglo-Saxon history, the great Saxon council or parliament, consisting of the king with his dependents and friends and sometimes the members of his family, the earl-dormen, and the bishops and other ecclesiastics.

with (*with*), *prep.* denoting nearness or connection: *prefix* meaning *opposition, departure, privation*, as *with*stand, *with*hold, etc.

with-draw (*draw'*), *v. i.* to depart; retreat.

withe (*with*), *n.* a tough flexible twig, especially of willow; band of twigs twisted together.

with-er (*with'ĕr*), *v. t.* to cause to fade and become dry; decay: *v. i.* to become sapless.

with-ers (*with'ĕrz*), *n. pl.* the highest part of a horse's back, between the shoulder blades.

with-in (*-in'*), *prep.* inside; in reach of: *adv.* inwardly.

wit-ness (*wit'nes*), *n.* attestation of a fact or event; testimony; evidence: *n.* one who attests: *v. t.* to have direct knowledge of; see: *v. i.* to give evidence. [DEPONENT, TESTIMONY.]

wit-ti-cism (*'i-sizm*), *n.* a witty remark.

wit-ting-ly (*'ing-li*), *adv.* with knowledge.

wit-ty (*'i*), *adj.* [*comp.* wittier, *superl.* wittiest], smartly or cleverly facetious; characterized by, or possessed of, wit; satirical.

wiz-ard (*wiz'ĕrd*), *n.* one supposed to possess supernatural powers; enchanter; sorcerer.

wiz-en (*'en*), *adj.* dried up; shriveled: *v. i.* and *v. t.* to dry up or shrivel.

woe (*wō*), *n.* sorrow; grief; misery. [GRIEF, PITEOUS.]

wolf (*woolf*), *n.* [*pl.* wolves (*woolvz*)], a fierce carnivorous animal of the dog kind, hence a person noted for rapacity or cruelty.

wol-ver-ene (*wool-vĕr-ēn'*), *n.* a carnivorous quadruped; the glutton. [Also *wolverine.*]

★**wom-an** (*woom'an*), *n.* [*pl.* women (*wim'en*)], an adult person of the female sex; female attendant; wife.

womb (*wōōm*), *n.* the uterus of a female; place where anything is produced; large or deep cavity: *v. t.* to breed in secret.

won-der (*wun'dĕr*), *n.* astonishment; cause of wonder; marvel; miracle; prodigy: *v. i.* to feel wonder; be astonished at.

Syn. WONDER, miracle, marvel, prodigy, monster. *Wonders* are natural; *miracles* are supernatural. The whole creation is full of *wonders;* the bible contains an account of the *miracles* which happened in those days. *Wonders* are real; *marvels* are often fictitious; *prodigies* are extravagant and imaginary; *monsters* are violations of the laws of nature. [See *admire.*]

Ant. APATHY, calmness, indifference.

won-der-ful (*-fool*), *adj.* exciting wonder; strange. [Also *wondrous.*]

wont (*wunt*), *adj.* used or accustomed: *n.* habit or custom.

wont-ed (*'ed*), *adj.* habitual; usual.

woo (*wōō*), *v. t.* to solicit in love; invite with importunity: *v. i.* to court. [ADDRESS.]

wood (*wood*), *n.* a large and thick collection of growing trees; solid part of trees.

wood-cock (*'kok*), *n.* a wild fowl allied to the snipe.

wood-en (*'n*), *adj.* made, or consisting of, wood; produced as from wood; stiff; awkward.

wood-man (*'man*), *n.* a forest officer; forester; one who fells timber; a hunter.

wood-peck-er (*'pek-ĕr*), *n.* a bird that taps the trunks of trees to discover insects.

wood-y (*'i*), *adj.* abounding in woods; consisting of, or composed of, or like, wood.

woof (*wōōf*), *n.* the weft or cross-threads in weaving; texture.

wool (*wool*), *n.* the soft, fine hair which covers sheep, goats, etc.; fine fiber resembling wool; soft, thick hair.

wool-en (*'en*), *adj.* made of wool: *n.* cloth made of wool: *pl.* woolen goods.

wool-ly (*'i*), *adj.* consisting of, like, or clothed with, wool.

Worcester (*woos'tĕr, wōōs'tĕr*), **England.** Named from the ancient *Huic-wara-ceaster*, "the camp of the *Huiecl*, or *Hwiccos*," a Celtic tribe.

Worcester (*wōōs'tĕr, woos'tĕr*), **Mass.** County and city in Massachusetts, named for the county in England.

word (*wĕrd*), *n.* an articulate sound, or combination of sounds, expressing an idea; tidings; promise: *pl.* language; speech: *v. t.* to express in words; phrase. [PROMISE.]

word paint-ing (*'pānt-ing*), the description of an event, etc., in vivid, realistic language.

word-y (*'i*), *adj.* pertaining to, consisting of, or containing many, words; verbose.

work (*wĕrk*), *n.* physical or intellectual effort directed to some end; labor; employment; duty: *pl.* moving parts of a mechanism; industrial manufacturing establishment: *v. i.* to perform; act; ferment.

Syn. WORK, labor, toil, drudgery, task. Every member of society must *work* for his support if he is not in independent circumstances; the poor are obliged to *labor* for their daily subsistence; some are compelled to *toil* incessantly for the pittance which they earn; *drudgery* falls to the lot of those who are the lowest in society. A man wishes to complete his *work;* he is desirous of resting from his *labor;* he seeks for a respite from his *toil;* he submits to *drudgery.* *Task* is a *work*

imposed by others, and is, consequently, more or less burdensome. [See *performance.*]
Ant. PLAY, pleasure.

work-house (*wĕrk'hous*), *n.* a poorhouse; a house where convicts are confined to labor.

world (*wĕrld*), *n.* the earth and its inhabitants; whole system of created things; universe.

world-ling (*'ling*), *n.* one who is devoted to the pleasures and advantages of the present.

world-ly (*'li*), *adj.* pertaining to, or devoted to, this life and its enjoyments and advantages.

worm (*wĕrm*), *n.* any small creeping animal entirely destitute of feet: *v. i.* to work slowly, secretly, and gradually: *v. t.* to undermine by slow and secret means.

worm-wood (*'wood*), *n.* the bitter plant Absinthium, used as a powerful tonic; source of bitterness.

wor-ri-ment (*wur'i-ment*), *n.* anxiety; trouble.

wor-ri-some (*'i-sum*), *adj.* causing worry.

wor-ry (*'i*), *v. t.* to harass with anxiety or care; vex or annoy; tease: *v. i.* to be fretful: *n.* anxiety; perplexity. [ANXIETY.]

worse (*wĕrs*), *adj.* [*comp.* of bad], less good: *n.* loss; defeat; inferior state or condition: *adv.* bad in a greater degree.

wor-ship (*wĕr'ship*), *n.* act of paying divine honor to God: *v. t.* to reverence with great respect: *v. i.* to perform acts of homage or adoration.

worst (*wĕrst*), *adj.* [*superl.* of bad], bad or evil in the highest degree: *n.* the most evil or calamitous state.

worst-ed (*woost'ed*), *n.* twisted thread spun out of woolen yarn: *adj.* made of worsted.

worth (*wĕrth*), *n.* value; price; moral excellence: *adj.* equal in value to; having estate or wealth to the value of; deserving of. [DESERT.]

worth-less (*wĕrth'les*), *adj.* having no value, virtue, or excellence; morally bad; contemptible. [UNWORTHY.]

wor-thy (*wĕr'thi*), *adj.* [*comp.* worthier, *superl.* worthiest], having worth or excellence; estimable.

would-be (*wood'-bē*), *adj.* pretending, or desirous of being thought, to be: *n.* a vain pretender.

wound (*wōond* or *wound*), *n.* hurt; injury: *v. t.* to make a wound in; lacerate; injure; hurt the feelings of.

Wouter. See *Walter.*

wrack (*rak*), *n.* seaweed cast ashore; ruin; destruction.

wraith (*rāth*), *n.* the supposed ghost of a person in his exact likeness seen immediately before, or at the time of, his death.

wran-gle (*rang'gl*), *v. i.* to dispute angrily or noisily: *n.* an angry or noisy dispute.

wran-gler (*'glĕr*), *n.* one who wrangles; an angry or noisy disputant.

wrap (*rap*), *v. t.* to roll or wind together; involve; conceal by enveloping: *n.* a wrapper; shawl.

wrap-per (*'ĕr*), *n.* one who, or that which, wraps; loose over or upper garment.

★**wrath** (*rāth*, not *rath*), *n.* violent anger; indignation. [ANGER.]

wrath-ful (*'fool*), *adj.* violently angry.

wreak (*rēk*), *v. t.* to execute in vengeance or passion; inflict.

wreath (*rēth*), *n.* anything curled or twisted; garland or chaplet.

wreathe (*rēth*), *v. t.* to twist into a wreath; intertwine: *v. i.* to be interwoven.

wreck (*rek*), *n.* the destruction of a ship by being driven ashore, or on a rock; remains of anything ruined; destruction: *v. t.* to ruin or destroy.

wreck-age (*'āj*), *n.* remains of a wrecked vessel; act of wrecking; state of being wrecked.

wreck-er (*'ĕr*), *n.* one who plunders, or causes, wrecks; one who removes the cargo from a wrecked vessel.

wrench (*rench*), *v. t.* to wring or pull with a twist; strain: *n.* a violent twist; sprain; instrument for exerting a twisting strain. [TURN.]

wrest (*rest*), *v. t.* to twist, wrench, or force from by violence; distort: *n.* violent pulling or twisting. [TURN.]

★**wres-tle** (*res'l*, not *rest'l*), *v. i.* to contend, by grappling with, or striving to trip or throw down, another; strive earnestly: *v. t.* to contend against in wrestling.

wretch (*rech*), *n.* a despicable or worthless person; one sunk in the deepest woe.

wretch-ed (*'ed*), *adj.* miserable; unhappy; worthless; of miserable quality or character.

wrig-gle (*rig'l*), *v. i.* to twist to and fro: *v. t.* to move by, or as by, wriggling: *n.* a wriggling motion.

wring (*ring*), *v. t.* to twist; turn and strain; force or compress; extort: *n.* a forcible twist. [TURN.]

wrin-kle (*ring'kl*), *n.* a small ridge or furrow on a smooth surface; crease: *v. t.* to form or cause wrinkles; crease: *v. i.* to become wrinkled.

wrist (*rist*), *n.* the joint uniting the hand to the arm.

writ (*rit*), *n.* anything written; a written document to enforce obedience to an order of a court of justice.

write (*rit*), *v. t.* [*p. t.* wrote, *p. p.* written, *p. pr.* writing], to form with a pen or similar instrument on paper, etc.; express in writing: *v. i.* to form letters with the pen.

writ-er (*'ĕr*), *n.* one who, or that which, writes; clerk or amanuensis; author; journalist.

Syn. WRITER, author. *Writer* refers us to the act of *writing; author* to the act of inventing. There are, therefore, many *writers* who are not *authors;* but there is no *author* of books who may not be termed a *writer;* compilers and contributors to periodical works are properly *writers,* though not always entitled to the name of *authors.* Poets and historians are properly termed *authors* rather than *writers.*

writhe (*rīth*), *v. t.* to twist with violence; pervert: *v. i.* to contort the body.

wrong (*rông*), *adj.* not morally right; false; unjust; mistaken: *adv.* unjustly; erroneously. [INJUSTICE, ABUSE.]

wrong-ful (*'fool*), *adj.* contrary to moral law or justice; injurious.

wroth (*rawth*), *adj.* much exasperated.

wry (*rī*), *adj.* distorted; twisted; perverted; false.

Wyoming (*wī-ō'ming*). A western state of the Union. Name carried to the west by emigrants from the Wyoming valley of eastern Pennsylvania. In its native location, the word derived from the Delaware expression, *maugh-wauwame,* meaning "the large plains."

X

xan-the-in (*zan'thē-in*), *n.* the yellow coloring matter of certain plants and flowers.

xantho, a *prefix,* meaning *yellow,* as *xantho*carpous: *adj.* having yellow fruit.

xan-thous (*'thus*), *adj.* yellow; noting races having brown, flaxen, or red hair and blue eyes.

xe-bec (*zē'bek*), *n.* a small three-masted vessel with lateen and square sails.

xeno, a *prefix,* meaning a *stranger,* as *xeno*genesis, heterogenesis.

xe-non (*zē'non*), *n.* a newly discovered gas, associated with argon.

xe-ro-der-ma (*zē-rō-dĕr'mä*), *n.* a disease of the skin characterized by dryness.

xe-roph-thal-mi-a (*-rof-thal'mi-ä*), *n.* abnormal dryness of the eyeball, accompanied by redness and irritation.

x rays (*eks' rāz*), the Roentgen rays.

xylo, a *prefix,* meaning *wood.*

xy-lo-graph (*zī'lō-gräf*), *n.* an engraving on wood; an impression from such an engraving.

xy-log-ra-phy (*-log'rä-fi*), *n.* the art or process of making prints from the natural grain of wood; a kind of decorative painting on wood.

xy-lon-ite (*'lōn-īt*), *n.* a kind of compressed gun cotton, resembling ivory.

xy-lo-phone (*'lō-fōn*), *n.* a musical instrument.

xys-ter (*zis'tĕr*), *n.* a surgical instrument for scraping bones.

xys-tos (*'tos*), *n.* a long covered portico for athletic exercises. [Also *xystus.*]

Y

★**yacht** (*yot*), *n.* a light and quick-sailing vessel used for pleasure or racing: *v. i.* to sail or cruise about in a yacht.

Yadkin (*yad'kin*). County in North Carolina, said to be named for a tribe of Indians, though some authorities favor the idea that it was named for an early settler.

ya-hoo (*yä-hōō'*), *n.* a savage, from the race of brutes in Gulliver's Travels.

yam (*yam*), *n.* a large edible tuber of various climbing plants of the genus Dioscorea.

Yang-tse-Kiang (*yang-tsē-kī-äng'*) **river.** "The son of the great water." The largest river of China.

yank (*yangk*), *v. t.* to jerk or twist: *v. i.* to work cleverly and pushingly: *n.* a jerk or twist.

Yan-kee (*yang'kē*), *n.* the popular name of New England Americans: *adj.* pertaining to, or characteristic of, citizens of the United States.

Yankee. This word is believed to have been derived from the manner in which the Indians endeavored to pronounce the word English, which they rendered *Yenghees,* whence the word *Yankee.*

Yan-kee-ism (*-izm*), *n.* a Yankee idiom, practice, or custom.

Yankton (*yangk'tun*), **S. D.** Named from the Dakotah Indian word, *eyank-ton-wah,* "people of the sacred or spirit lake."

yap (*yap*), *v. i.* [*p. t.* and *p. p.* yapped, *p. pr.* yapping], to yelp or bark, as a dog: *n.* a yelp or bark.

yard (*yärd*), *n.* a standard measure of length equal to 3 feet; an inclosure adjoining, or attached to, a house.

yarn (*yärn*), *n.* spun thread; a sailor's story, especially one of doubtful veracity: *v. i.* to tell a story.

yaw (*yaw*), *v. i.* to steer wildly; deviate from the right course: said of a ship; rise in blisters or white froth.

yawl (*yawl*), *n.* a light, decked, two-masted boat; jolly-boat: *v. i.* to howl.

yawn (*yawn*), *n.* an involuntary opening of the jaws through drowsiness, etc.: *v. i.* to gape involuntarily.

yawp (*yawp*). Same as *yelp.*

Yazoo (*yaz'ōō*). County and river in Mississippi, named for a tribe of Indians, the name said to mean "to blow on an instrument"; another definition is given as "the ruins."

y-cleped (*i-klept'*), *adj.* called. [Also *yclept.*]

ye (*yē*), *pron.*; *nom. pl.* of thou.

yea (*yā*), *adv.* yes; truly.

year (*yĕr*), *n.* the period during which the earth makes one complete revolution around the sun (365¼ days): *pl.* age; old age.

yearn (*yĕrn*), *v. i.* to feel an earnest desire; be filled with eager longing or desire. [EAGER.]

yeast (*yēst*), *n.* the barm or ferment of beer; any preparation for raising dough.

yell (*yel*), *n.* a sharp, discordant cry, as of agony: *v. t.* to scream: *v. i.* to utter a sharp, discordant cry. [CALL.]

★**yel-low** (*yĕl'lō*, not *yel'lu*), *adj.* of a bright, pure color resembling gold; jaundiced.

Yellow Sea. Arm of Pacific ocean lying between China and Korea. Named from the color of the water caused by the nature of its muddy soil.

Yellowstone. River in Montana and Wyoming. Name derived from its original French name, *roche. jaune,* "yellow rock or stone," though by some said to be from the Indian *mi-tsi-a-da-zi,* "rock yellow river."

yelp (*yelp*), *v. i.* to utter a sharp bark: *n.* a sharp bark.

Yemassee (*yem-ä-sē'*) **river, Ga.** From a tribe of Indians, *Yamassi,* signifying "peaceable."

Yenisei (*yen-ē-sā'ē*). The great river of Siberia, also written *Jenissy, Genisei,* or *Gelissy,* has been explained as "the water which flows down," or the river which "brings down ice."

yeo-man (*yō'man*), *n.* [*pl.* yeomen (*'men*)], in England, a man possessed of a small landed estate; farmer.

yes (*yes*), *adv.* yea: opposed to no.

yes-ter-day (*'tĕr-dā*), *n.* the day last past; recent time: *adv.* on the day last past.

yet (*yet*), *adv.* in addition; still; moreover: *conj.* nevertheless; however.

★**yew** (*yū*), *n.* a large evergreen tree of the genus Taxus: *adj.* pertaining to yew trees.

Yid-dish (*yid'dish*), *n.* a kind of composite language spoken by foreign Jews in England.

yield (*yēld*), *v. t.* to submit; produce; concede: *v. i.* to assent; *n.* product; return. [BEAR, COMPLY.]

yield-ing (*'ing*), *adj.* inclined to give way or comply; accommodating: *n.* the act of producing; submission; compliance. [COMPLIANT.]

yo-del. Same as *jodel.*

yoke (*yōk*), *n.* a piece of hollowed timber for connecting two draft oxen together; service; mark of slavery: *v. t.* to join together; couple; enslave.

yo-kel (*yō'kl*), *n.* a rustic.

Yokohama (*yō-kō-hä'mä*). Now the chief port in Japan, was before 1854 a small fishing village. The name is believed to mean the "cross shore."

★**yolk** (*yōk*, not *yōlk*), *n.* yellow part of an egg; vitellus, the oily secretion from the skin of a sheep which renders the wool soft and pliable.

yon-der (*yon'dĕr*), *adj.* being at a distance within view: *adv.* at that place; there. [Also *yon.*]

Yonkers (*yong'kĕrz*). City in New York, named for a manor house built by the Dutch, the word meaning "young lord," and first applied in this country to Adrien Van der Douck, a patentee.

yore (*yōr*), *adv.* in old time; long ago.

York river, Va. After the duke of York; prior to this it was noted on the maps as *Salt river.* The Indian name was *Pamawnkee* or *Pamaunk.*

Yosemite (*yō-sem'it-ē*). An Anglicized or corrupted form of the Indian *a-hom-e-ta,* meaning "grizzly bear;" supposed to have been the title of a chief, and generally applied to a tribe that inhabited the region.

you (*ū*), *pron. nom.* and *obj. pl.* of thou: now used for thou and thee.

Youghiogheny (*yok-ō-gā'ni*) **river, Pa.** From the Indian *yukwiakhanna,* "a stream taking a roundabout course."

young (*yung*), *adj.* being in the early part of life or growth; inexperienced; not matured; raw: *n.* offspring collectively.

young-ster (*'stĕr*), *n.* a young person; lad.

Youngstown. City in Ohio, named for John Young, an early resident.

youn-ker (*'kĕr*), *n.* a young fellow; stripling.

your (*yūr*), *pron. poss. pl.* of thou or you. [Also *yours.*]

your-self (*-self'*), *pron.* [*pl.* yourselves (*-selvz'*)], you in your own person.

youth (*yūth*), *n.* [*pl.* youths (*yūths*)], early life: a young person; condition of being young.

youth-ful (*'fool*), *adj.* pertaining to youth or the early part of life; fresh; vigorous.

Syn. YOUTHFUL, juvenile, puerile. *Youthful* signifies full of *youth,* or in the complete state of *youth; juvenile* signifies the same; but *puerile* signifies literally boyish. Hence the first two terms are taken in an indifferent sense; but the latter in a bad sense, or at least always in the sense of what is suitable to a boy only. We expect nothing from a youth but what is *juvenile;* we are surprised and dissatisfied to see what is *puerile* in a man.
Ant. AGED, old, hoary, venerable, senile.

yowl (*youl*), *n.* a howl: *v. i.* to howl or yell.

Ypsilanti (*ip-sil-an'ti*). City in Michigan, named for a Greek prince.

Yucatan (*yōō-kä-tän'*). A compound Indian word meaning "what do you say?" which was the only answer the Spaniards could obtain from the natives to their inquiries concerning a description of the country.

Yukon (*yōō'kon*) **river, Alaska.** Named from the *Yakuts,* a Tartar tribe.

Yule (*yūl*) **N.** Christmas.

yule log (*yūl' log*), a large block of wood formerly put upon the hearth on Christmas eve to form the basis of the Christmas fire.
yule-tide (*'tīd*), *n.* Christmastide.
Yuste (*yōōs'tā*). A convent in Spain, east of Plasencia. It is noted as the place of retirement of the Emperor Charles V. after his abdication.

Z

Zaccheus (*zak-ē'us*). From the Hebrew *Zakkay*, "pure," "innocent." Others render it "pure of the Lord," making the last letter stand for *Yah*. Fr., *Zacchée;* It., *Zacheo;* Lat., *Zaccheus*.
Zachariah (*zak-ȧ-rī'ȧ*). From the Hebrew *Zakhar-Yah*, meaning "remembering the Lord." Danish, *Zacharias;* Dutch, *Zacharias;* Fr., *Zacharie;* Ger., *Zacharias;* It., *Zaccaria;* Lat., *Zacharias;* Sp., *Zacarias;* Sw., *Zacharias*.
Zachary (*zak'ȧ-rĭ*). Same derivation as *Zachariah*.
Zadok (*zā'dok*). Means "righteous." Fr., *Zadoc;* Lat., *Zadocus*.
Zambezi (*zăm-bē'zē*, pop., *zam-bē'zĭ*). Is the "great river" of eastern Africa, whose upper waters and chief affluents are called *Jambaji* and *Luambezi*, dialectic forms of the same name.
Zanesville (*zānz'vĭl*). City in Ohio, named for Ebenezer Zane, who, with John McIntire, founded the city.
za-ny (*zā'nĭ*), *n.* a buffoon; merry-andrew.
Zanzibar (*zăn-zĭ-bär'*). The name of an East African island, was used before the fifteenth century in a more general sense to denote the East African coast south of the river Jubb. *Zanzibar* is a Port. form of the Arab. *Zanjebar*, which is itself a corruption of the Persian *Zangibar*, or *Zenquebar*, which means "the coast or region of the blacks," the name being formed like *Hindubar*, "the land of the Hindus," or *Malebar*, "the land of the mountains."
zeal (*zēl*), *n.* ardor for a cause; fervor.
Syn. ZEAL, ardor, fervor. *Zeal*, in reference to these other synonyms, is specific, while they are characteristic or habitual; *zeal* is passionate *ardor* in favor of a person or a cause; *ardor* is simply warmth or heat of passion in love, pursuit, or exertion; *fervor* denotes the constitutional state or temperament of individuals. We speak of the *fervor* of passion, declamation, supplication, desire, as demonstrative of warmth. *Ardor* is more deeply seated; as *ardent* friendship, love, *zeal*, devotedness.
Zealand (*zē'land*). A province in the Netherlands, "land surrounded by the sea."
zeal-ot (*zel'ot*), *n.* an enthusiast; fanatic.
Zeal-ot, *n.* one of a fanatical sect of Jews which carried on a desperate struggle with the Romans until the fall of Jerusalem (70 A. D.).
zeal-ous (*'us*), *adj.* ardent in the pursuit of an object; enthusiastic. [EAGER.]
ze-bra (*zē'brȧ*), *n.* a wild animal of Africa of the genus Equus, with black and white stripes.
Zebulon (*zeb'ū-lon*). From the Hebrew, meaning "dwelling." Fr., *Zabulon;* Lat., *Zabulon*.
ze-na-na (*zē-nä'nȧ*), *n.* in India, that part of a house reserved exclusively for women.
ze-nith (*zē'nĭth*), *n.* the point in the heavens directly over the head of the spectator; greatest height.
Zeph-yr, (*zef'ēr*), *n.* the west wind; soft, gentle breeze.
Zepp-e-lin (*tsĕp'e-lĭn'*), a large airship invented by Count von Zeppelin, cylindrical in shape, and containing a number of separate compartments filled with gas. It has a large carrying capacity and, therefore, most formidable for war purposes.
ze-ro (*zē'rō*), *n.* a cipher; nothing; neutral point (0) between any ascending or descending scale or series.
zest (*zest*), *n.* relish; keen enjoyment.
zig-zag (*zig'zag*), *adj.* having short, sharp turns: *n.* something with short, sharp turns.
zinc (*zingk*), *n.* a bluish-white metal.
zin-cog-ra-phy (*zing-kog'rȧ-fĭ*), *n.* the art of drawing upon, or printing from, zinc plates.
Zion (*zī'on*) or **Sion** (*sī'on*), **Mount.** A hill on which was situated the old city of Jerusalem; the "city of David." Now used symbolically of the Christian church and of heaven.
Zi-on-ism (*-izm*), *n.* a project for the reëstablishment of the Jews as a nation in Palestine.
zith-er (*zĭth'ēr*), *n.* a stringed musical instrument, consisting of a sounding box and 28 to 31 strings.
zo-di-ac (*zō'dĭ-ak*), *n.* an imaginary broad belt in the heavens, containing the 12 constellations or signs of the zodiac, which the sun traverses annually.
★**zo-di-a-cal** (*zō-dī'ȧ-kal*, not *zō'dĭ-ak-al*), *adj.* pertaining to, or situated within, the zodiac.
Zoe (*zō'ē* or *zō*). From the Greek name, signifying "life."
Zo-la-ism (*'lȧ-izm*), *n.* excessive realism in the literary treatment of the worse side of human life or nature, from Emile Zola, the French realistic novelist.
zone (*zōn*), *n.* one of the 5 great belts into which the surface of the earth is divided with respect to latitude and temperature; a girdle or belt: *v. t.* to encircle with, or as with, a zone.
zoö, a *prefix* meaning *animal*, as *zoöchemistry*, animal chemistry.
zoo (*zōō*), *n.* a park or other large inclosure in which live animals are kept for public exhibition.
zo-ō-ge-og-ra-phy (*zō-ō-jē-og'rȧ-fĭ*), *n.* the study of the geographical distribution of animals.
zo-ōg-ra-phy (*-og'rȧ-fĭ*), *n.* the description of animals, their forms and habits.
zo-ōl-o-gy (*-ol'ō-jĭ*), *n.* that part of biology that treats of animals, their structure, classification, habits, and distribution.
zo-ō-mor-phism (*-ō-môr'fizm*), *n.* the representation of a deity in the form, or with the attributes, of an animal.
zo-ōph-i-list (*-of'ĭ-list*), *n.* a lover of animals.
zo-ō-phyte (*'ō-fīt*), *n.* an animal of low organization, bearing some external resemblance to a plant.
zo-ōt-o-my (*-ot'ō-mĭ*), *n.* the dissection or anatomy of animals.
zou-ave (*zōō-āv'*), *n.* a soldier of a light infantry corps of the French army, wearing an Arab dress.
Zu-lu (*zōō'lōō*), *n.* one of a warlike tribe of Kaffirs, north of Natal.
Zululand (*zōō'lōō-land*). The country of Zulus.
Zurich (*zōō'rik*). A canton and city of Switzerland. Named from the ancient *Thiouricum*, "the town of the Thuricii," who built it after it had been destroyed by Attila.
Zuyder Zee (*zī'dĕr zē*, Dutch *zoi'der-zā*). The Dutch for the "South Sea," in relation to the North Sea or German Ocean, of which it is an arm.
Zwinger (*tsving'ēr*). A famous museum in Dresden. Its picture gallery contains about 2,500 paintings, also collections of drawings, casts, etc.
zyme (*zīm*), *n.* the germ supposed to be the poisonous cause of zymotic diseases.
zym-ic (*zĭm'ik*), *adj.* produced by fermentation.
zy-mol-o-gy (*zī-mol'ō-jĭ*), *n.* the doctrine of fermentation.
zy-mo-sis (*zī-mō'sĭs*), *n.* a fermentation.
zy-mot-ic (*-mot'ik*), *adj.* producing fermentation, or a disease in which a virus works through the body like a ferment, as cholera.
zy-mur-gy (*zī'mûr-jĭ*), *n.* that branch of industrial chemistry which deals with the processes of fermentation in brewing, wine-making, etc.

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ABBREVIATIONS: Outlines of History, (hist. out.); Outlines of Literature, (lit. out.); Tabulation, (tab.); Chemical Elements (ch. el.); Dictionary of Education, (dict. edu.); Biography (biog.); Illustration (Illus.); Figure (fig.)

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